

700 Series

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.





700 Series Model 750-67

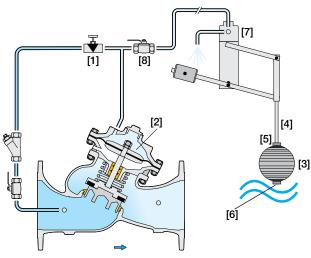
Operation

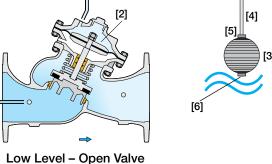
The Model 750-67 is a float controlled valve equipped with an adjustable, 2-Way vertical float pilot assembly.

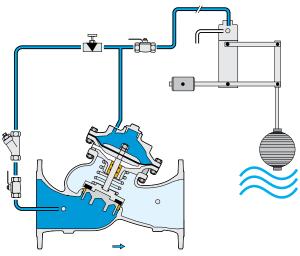
The needle valve [1] continuously allows flow from valve inlet into the upper control chamber [2]. The float [3] is locked on the float assembly rod [4] between two adjustable stoppers [5] and [6].

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.







High Level - Closed Valve

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





Model 750-67 700 Series

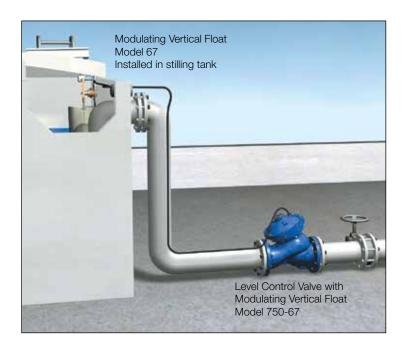
Typical Applications

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.

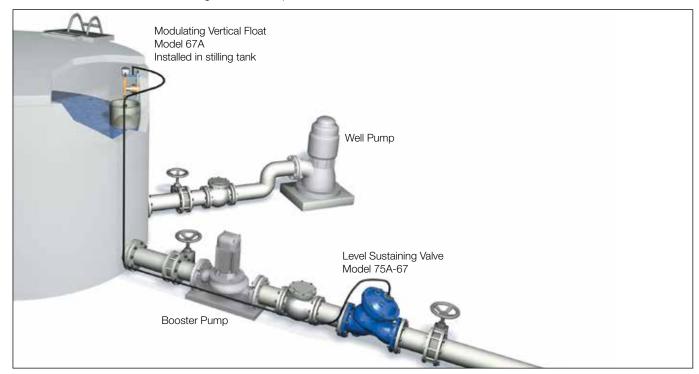


Pump Flow Control According to Balancing Reservoir Level

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.







700 Series

Technical Data

Size Range: DN40-900 ; 11/2-36" 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)

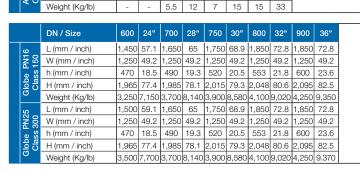
 $Q = Flow rate (m^3/h; gpm)$

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	700ES	Kv / Cv - Flat	54	62	57	66	60	69	65	75	145	167	395	456	610	705	905	1,045	1,520	1,756	-	-	2,250	2,599	-	-	4,070	4,701
		Kv / Cv - V-Port	46	53	48	56	51	59	55	64	123	142	336	388	519	599	769	888	1,292	1,492	-	-	1,913	2,209	-	-	3,460	3,996
	700 & 700EN	Kv / Cv - "Y" Flat	42	49	50	58	55	64	115	133	200	230	460	530	815	940	1,250	1,440	1,850	2,140	1,990	2,300	3,310	3,820	3,430	3,960	3,550	4,100
		Kv / Cv - "Y" V-Port	36	41	43	49	47	54	98	113	170	200	391	450	693	800	1,063	1,230	1,573	1,820	1,692	1,950	2,814	3,250	2,916	3,370	3,018	3,490
700-ES	PN16; 25	L (mm / inch)	230	9.1	230	9.1	290	11.4	310	12.2	350	13.8	480	18.9	600	23.6	730	28.7	850	33.5	-	-	1,100	43.3	-	-	1,250	49.2
		W (mm / inch)	150	5.9	165	6.5	185	7.3	200	7.9	235	9.3	300	11.8	360	14.2	425	16.7	530	20.9	-	-	626	24.6	-	-	838	33
		h (mm / inch)	80	3.1	90	3.5	100	3.9	105	4.1	125	4.9	155	6.1	190	7.5	220	8.7	250	9.8	-	-	320	12.6	-	-	385	15.2
	E	H (mm / inch)	240	9.4	250	9.8	250	9.8	260	10.2	320	12.6	420	16.5	510	20.1	605	23.8	725	28.5	-	-	895	35.2	-	-	1,185	46.7
		Weight (Kg/lb)	10	22	10.8	23.8	13.2	29	15	33	26	57.2	55	121	95	209	148	326	255	561	-	-	437	960	-	-	1,061	2,334
700-EN	PN16; 25	L (mm / inch)	-	-	-	-	-	-	310	12.2	350	13.8	480	18.9	600	23.6	730	28.7		33.5	-	-	-	-	-	-	-	-
		W (mm / inch)	-	-	-	-	-	-	200	7.9	235	9.3	320	12.6	390	15.4	480	18.9		21.7	-	-	-	-	-	-	-	-
		h (mm / inch)	-	-	-	-	-	-	100	3.9	118	4.6	150	5.9	180	7.1	213	8.4	243	9.6	-	-	-	-	-	-	-	-
		H (mm / inch)	-	-	-	-	-	-	305	12	369	14.5	500	19.7	592	23.3	733	28.9	841	33.1	-	-	-	-	-	-	-	-
		Weight (Kg/lb)	-	-	-	-	-	-	21	46.2	31	68.2	70	154	115	253	198	436	337	741	-	-	-	-	-	-	-	-
700 Flanged	N16 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		,	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		21.7	550	21.7	740	29.1	740	29.1	740	29.1
	" P	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
	₽ S	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	_	1,108	43.6	1,127		1,167	45.9
	"Y" PN25 Class 300	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		2,083		2,121
		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		,	
		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	389	15.3
		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		33.8	893		1,133	44.6	1,165		, .	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	1984	967	2,132	986	2,174
	8 8	L (mm / inch)	155	6.1	155	6.1	212	8.3	250	9.8										_								



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7.9 202 8

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201

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122

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122

40

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1.6 48

W (mm / inch)

h (mm / inch)

H (mm / inch)

Weight (Kg/lb)

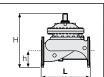
L (mm / inch)

W (mm / inch)

R (mm / inch)

h (mm / inch)

H (mm / inch)





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



122 4.8

18 | 17 | 37

1.9 55

225 | 8.9 | 242 | 9.5 | 294 | 11.6

209 8.2 264

4.8 122 4.8

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