



## Level Control Valve with Modulating Vertical Float

- 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.



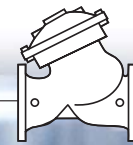
### Features and Benefits

- **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.



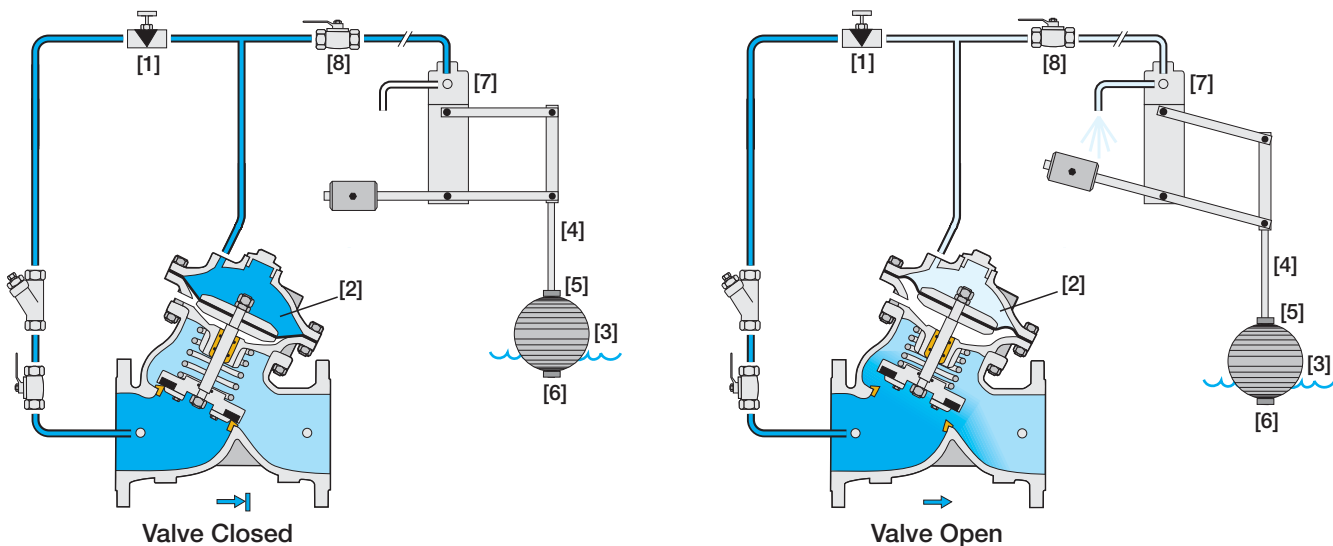
### Operation

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.



### Engineer Specifications

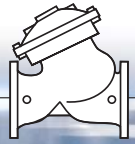
The Level Control Valve shall control reservoir filling to maintain constant water level regardless of fluctuating demand.

**Main Valve:** The main valve shall be a center guided, diaphragm actuated globe valve of either oblique (Y) or angle pattern design. The body shall have a replaceable, raised, stainless steel seat ring. The valve shall have an unobstructed flow path, with no stem guides, bearings, or supporting ribs. The body and cover shall be ductile iron. All external bolts, nuts, and studs shall be Duplex® coated. All valve components shall be accessible and serviceable without removing the valve from the pipeline.

**Actuator:** The actuator assembly shall be double chambered with an inherent separating partition between the lower surface of the diaphragm and the main valve. The entire actuator assembly (seal disk to top cover) shall be removable from the valve as an integral unit. The stainless steel valve shaft shall be center guided by a bearing in the separating partition. The replaceable radial seal disk shall include a resilient seal and shall be capable of accepting a V-Port Throttling Plug by bolting.

**Control System:** The control system shall consist of a 2-Way, adjustable vertical float pilot assembly, a needle valve, isolating cock valves, and a filter. All fittings shall be forged brass or stainless steel. The assembled valve shall be hydraulically tested.

**Quality Assurance:** The valve manufacturer shall be certified according to the ISO 9001 Quality Assurance Standard. The main valve shall be certified as a complete drinking water valve according to NSF, WRAS, and other recognized standards.



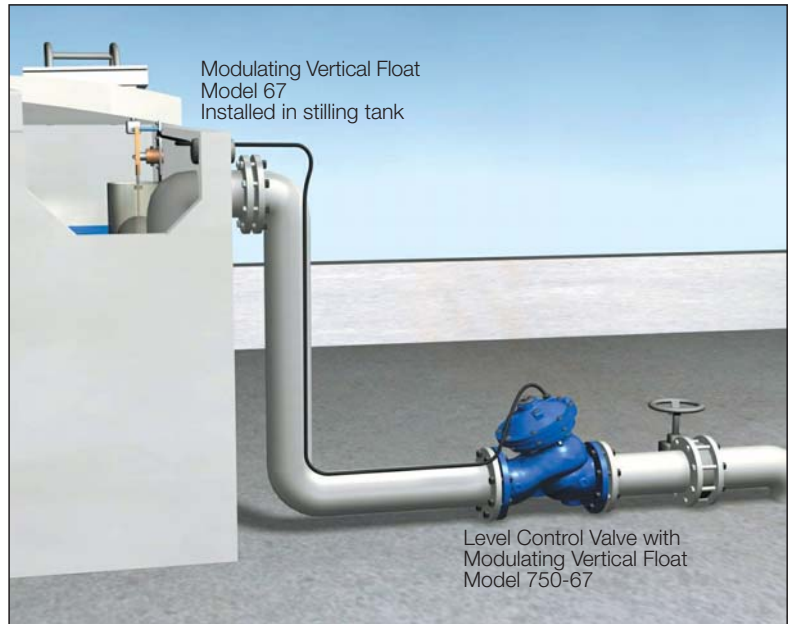
### Typical Applications

#### 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.

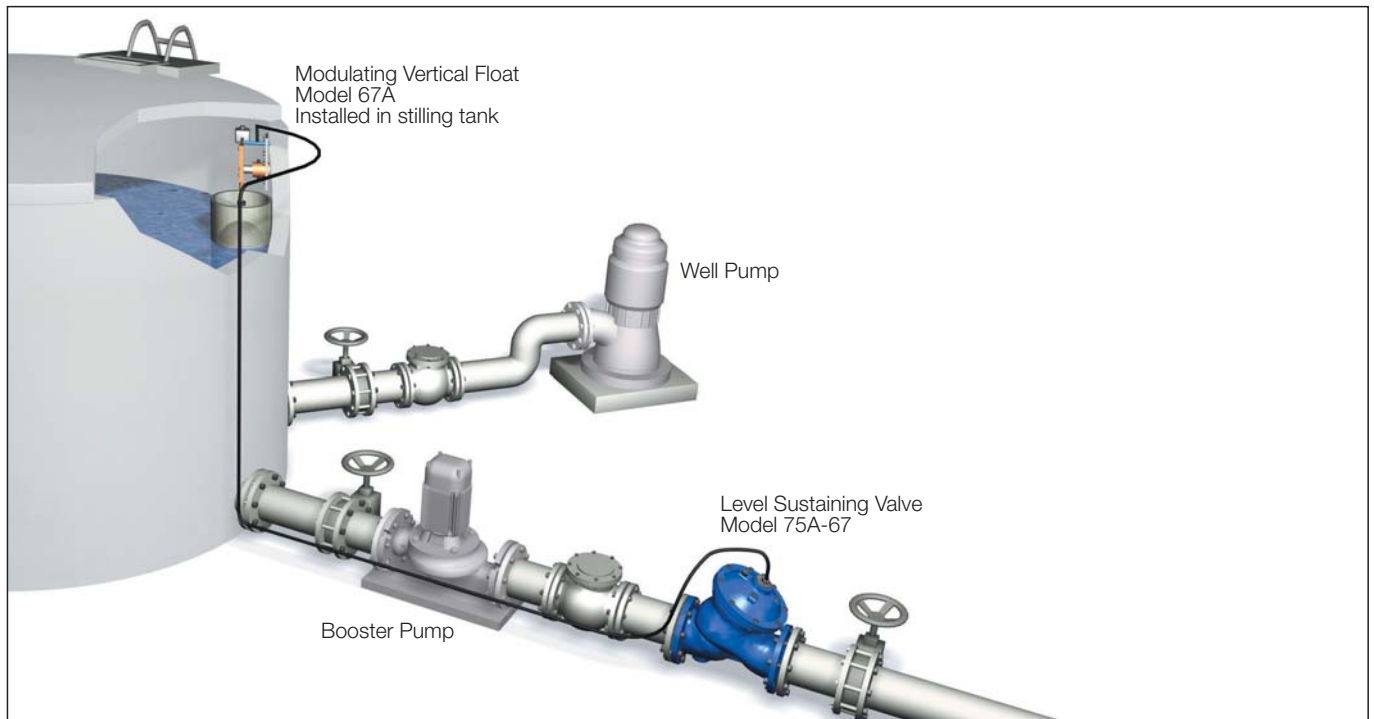


#### Pump Flow Control According to Balancing Reservoir Level

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.

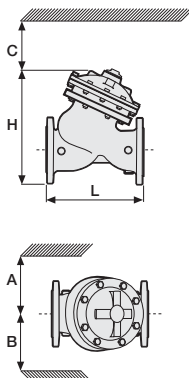




## Technical Data

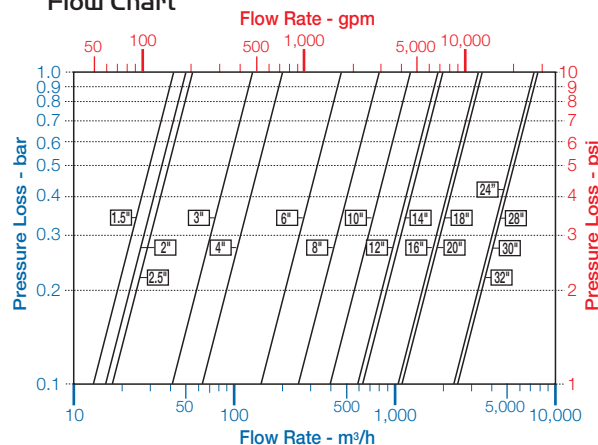
### Dimensions and Weights

| Size |        | A, B |      | C   |      | L    |      | H    |      | Weight |      |
|------|--------|------|------|-----|------|------|------|------|------|--------|------|
| mm   | inch   | mm   | inch | mm  | inch | mm   | inch | mm   | inch | kg     | lbs  |
| 40   | 1 1/2" | 350  | 14   | 180 | 7    | 205  | 8.1  | 239  | 9.4  | 9.1    | 20   |
| 50   | 2"     | 350  | 14   | 180 | 7    | 210  | 8.3  | 244  | 9.6  | 10.6   | 23   |
| 65   | 2 1/2" | 350  | 14   | 180 | 7    | 222  | 8.7  | 257  | 10.1 | 13     | 29   |
| 80   | 3"     | 370  | 15   | 230 | 9    | 250  | 9.8  | 305  | 12.0 | 22     | 49   |
| 100  | 4"     | 395  | 16   | 275 | 11   | 320  | 12.6 | 366  | 14.4 | 37     | 82   |
| 150  | 6"     | 430  | 17   | 385 | 15   | 415  | 16.3 | 492  | 19.4 | 75     | 165  |
| 200  | 8"     | 475  | 19   | 460 | 18   | 500  | 19.7 | 584  | 23.0 | 125    | 276  |
| 250  | 10"    | 520  | 21   | 580 | 23   | 605  | 23.8 | 724  | 28.5 | 217    | 478  |
| 300  | 12"    | 545  | 22   | 685 | 27   | 725  | 28.5 | 840  | 33.1 | 370    | 816  |
| 350  | 14"    | 545  | 22   | 685 | 27   | 733  | 28.9 | 866  | 34.1 | 381    | 840  |
| 400  | 16"    | 645  | 26   | 965 | 38   | 990  | 39.0 | 1108 | 43.6 | 846    | 1865 |
| 450  | 18"    | 645  | 26   | 965 | 38   | 1000 | 39.4 | 1127 | 44.4 | 945    | 2083 |
| 500  | 20"    | 645  | 26   | 965 | 38   | 1100 | 43.3 | 1167 | 45.9 | 962    | 2121 |



Data is for Y-pattern, flanged, PN16 valves  
 Weight is for PN16 basic valves  
 "C" enables removing the actuator in one unit  
 "L", ISO standard lengths available  
 For more dimensions and weights tables, refer to Engineering Section

### Flow Chart



Data is for Y-pattern, flat disk valves  
 For more flow charts, refer to Engineering Section

### Main Valve

- Valve Patterns:** "Y" (globe) & angle
- Size Range:** 1 1/2"-32" (40-800 mm)
- End Connections (Pressure Ratings):**  
**Flanged:** ISO PN16, PN25 (ANSI Class 150, 300)  
**Threaded:** BSP or NPT
- Others:** Available on request
- Working Temperature:**  
 Water up to 80°C (180°F)
- Standard Materials:**  
**Body & Actuator:** Ductile Iron  
**Internals:** Stainless Steel, Bronze & coated Steel  
**Diaphragm:** NBR Nylon fabric-reinforced  
**Seals:** NBR
- Coating:**  
 Fusion Bonded Epoxy, RAL 5005 (Blue)  
 NSF & WRAS approved or Electrostatic Polyester Powder, RAL 6017 (Green)

### Control System

- Standard Materials:**  
**Accessories:** Bronze, Brass, Stainless Steel & NBR  
**Tubing:** Copper or Stainless Steel  
**Fittings:** Forged Brass or Stainless Steel
- Float Standard Materials**  
**Pilot body:** Brass  
**Seals:** NBR  
**Internals:** Stainless Steel & Brass  
**Lever system:** Brass  
**Float:** Plastic  
**Float rod:** Stainless Steel  
**Base plate:** Fusion bonded epoxy coated Steel  
**Optional materials:** Stainless Steel metal parts and float, FPM (Viton®) seals

- 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
- See BERMAD float installation recommendations
- If inlet pressure is below 0.7 bar (10 psi) or above 10 bar (150 psi), consult factory

## How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide)

| Sector     | Size         | Primary Feature   | Additional Feature  | Pattern   | Body Material  | End Connections  | Coating              | Voltage & Position   | Tubing & Fittings | Additional Attributes  |
|------------|--------------|---|---|---|--|--|----------------------|--|-------------------|--|
| WW         | 6"           | 750   | 67  | Y   | C  | 16   | EB                   | -  | CB                | VI   |
| Waterworks | 1 1/2" - 32" | Level Control   | Oblique (up to 20")<br>Angle (up to 18")<br>Globe (24-32" only) | Y<br>A<br>G   | Epoxy FB Blue<br>Polyester Green<br>Polyester Blue<br>Uncoated | 24VAC/50Hz - N.C.<br>24VAC/50Hz - N.O.<br>24VDC - N.C.<br>24VDC - N.O.<br>220VAC/50-60Hz N.C.<br>220VAC/50-60Hz N.O. | EB<br>PG<br>PB<br>UC | Copper Tubing & Brass Fittings<br>Plastic Tubing & Brass Fittings<br>St. St. 316 Tubing & Fittings | CB<br>PB<br>NN    | Double Chambered<br>Valve Position Indicator<br>Large Control Filter<br>V-Port Throttling Plug<br>Orifice Assembly<br>Electric Limit Switch<br>St. St. 316 Control Accessories<br>St. St. 316 Internal Trim (Closure & Seat)<br>St. St. 316 Actuator Internal Assembly<br>Delrin Bearing<br>Viton Elastomers for Seals & Diaphragm |
|            |              | Closing Surge Prevention<br>Modulating Horizontal Float<br>Bi-Level Electric Float<br>Bi-Level Vertical Float<br>Modulating Vertical Float<br>Altitude Pilot<br>Modulating Altitude Pilot<br>Sustaining Altitude Pilot<br>Bi-Level Altitude Control | 49<br>60<br>65<br>66<br>67<br>80<br>82<br>83<br>86              | Ductile Iron Standard<br>Cast Steel<br>St. Steel 316<br>Nickel Alumin. Bronze | C<br>S<br>N<br>U   | 4AC<br>4AO<br>4DC<br>4DO<br>4DP<br>2AC<br>2AO  |                      |  |                   | B<br>I<br>F<br>V<br>U<br>S<br>N<br>T<br>D<br>R<br>E  |
|            |              | 2-14 Meter Setting Altitude Pilot<br>5-22 Meter Setting Altitude Pilot<br>15-35 Meter Setting Altitude Pilot<br>25-70 Meter Setting Altitude Pilot  | M6<br>M5<br>M4<br>M8  | ISO-16<br>ISO-25<br>ANSI-150<br>ANSI-300<br>JIS-16<br>JIS-20                  | 16<br>25<br>A5<br>A3<br>J6<br>J2                               |  |                      |  |                   |  |

Multiple choices permitted

Use when additional electric control feature is selected

Multiple choices permitted

