

Level Control Valve

with Bi-Level Vertical Float

WW-750-66-B

- Reservoir filling
 - Very low supply pressure
 - Low noise generation
 - Energy cost critical systems
 - Systems with poor water quality
- Reservoir outlet
 - Distribution routing
 - Sewerage “fill and flush” systems

The Model 750-66-B Level Control Valve with Bi-Level Vertical Float is a hydraulically controlled, diaphragm actuated, double chambered control valve. The valve is hydraulically powered to fully open at pre-set reservoir low level, and to shut off at pre-set high level regardless of valve differential pressure.

Features and Benefits

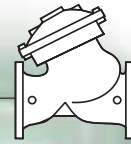
- **Line pressure driven** – Independent operation
- **Bi-level hydraulic float control**
 - On/Off service
 - Low cavitation damage
 - Suitable for low quality water
 - Inherent reservoir refreshing
- **Double chamber**
 - Full powered opening and closing
 - Decreased pressure loss
 - No throttling noise
 - 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 – **753-66**
- Electric float backup – **750-66-65**
- Flow control – **757-66-U**
- Closing surge prevention – **750-66-49**
- Level sustaining – **75A-66**

See relevant BERMAD publications.



Operation

The Model 750-66-B is a float controlled valve equipped with a 4-Way, “last position”, bi-level float pilot assembly.

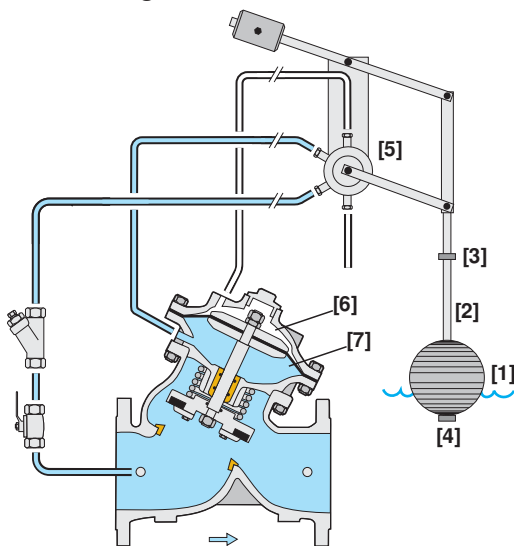
The float [1] slides along the rod [2]. When the float reaches either the adjustable high [3] or low [4] level stoppers, it either pulls the rod assembly down or pushes it up, switching the float pilot [5] position. When the float is between the adjustable stoppers, the main valve remains in its last position.

At high level, the float pilot applies pressure to the upper control chamber [6], and vents the lower control-chamber [7], powerfully shutting off the main valve.

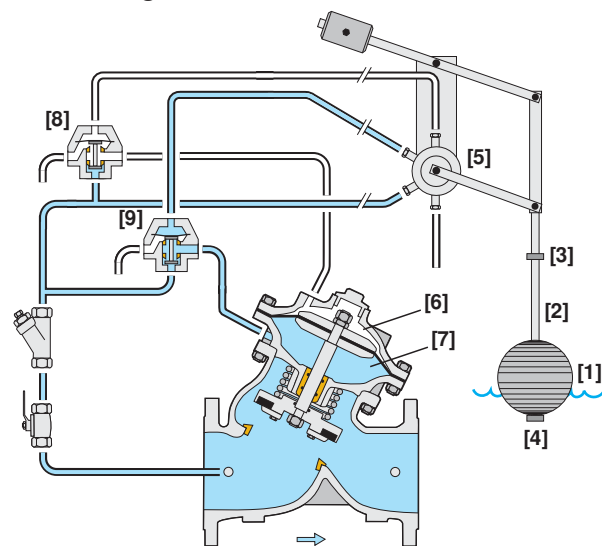
At low level, the float pilot applies pressure to the lower control chamber, and vents the upper control chamber, powerfully opening the main valve.

For 10” valves and larger, two accelerators [8 & 9] quicken valve response.

Size range-1 1/2-8”



Size range-10-20”



Engineer Specifications

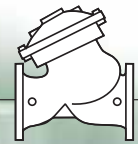
The Level Control Valve shall be double chambered to power fully open at pre-set low level, and to shut off at pre-set high level regardless of valve differential pressure.

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 4-Way, “last position”, adjustable bi-level, hydraulic float pilot assembly, an isolating cock valve, (for 10” valves and larger: two accelerators), 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.

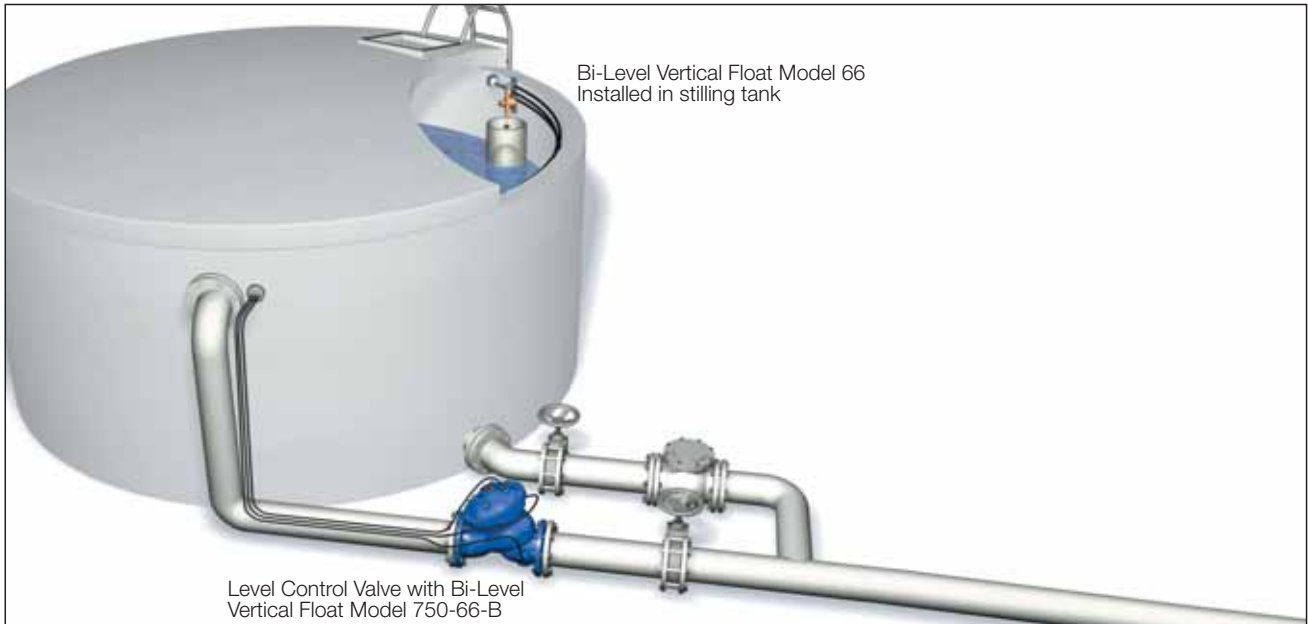


Typical Applications

Infrastructure Reservoirs

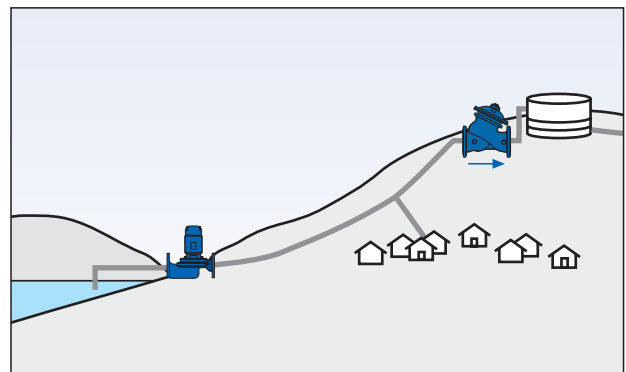
Optimal design of reservoir systems requires specifying a level control valve that reduces pumping costs by minimizing the extra pumping pressure required to operate standard valves.

Even at very low pressure, the Model 750-66-B ensures full opening, maximum flow capacity, and secure closing. It should be included during the system design phase or with changing needs.



Pumping to Uphill Reservoir

In a reservoir system where a **pump provides pressure**, consumers are prioritized over reservoir filling by installing the **Model 753-66** Level Control and Pressure Sustaining Valve.



Gravity Filling a Downhill Reservoir

Where a **reservoir provides pressure** to consumers and fills a low lying reservoir, the consumers should be prioritized over filling the lower reservoir.

Defining the pressure set point for the standard level control and pressure sustaining valve is usually impossible, as there is only a very small potential differential pressure to operate the valve.

The solution: Rather than controlling the pressure during filling, control the filling flow ensuring sufficient pressure for consumers.

Install the **Model 757-66-U** Level and Flow Control Valve.

