

# Level Control Valve with Bi-Level Vertical Float

## Model MN-750-66-B

Hydraulically operated, diaphragm actuated, control valve that controls reservoir filling and level. Reservoir filling occurs in response to a hydraulically controlled non-modulating bi-level vertical float that opens at a pre-set reservoir low level, and shuts off drip-tight at a pre-set high level.

Bermad 700 Series valves are hydraulic, oblique pattern, globe valves with a seat assembly and double chamber unitized actuator that can be disassembled from the body as a separate integral unit. Its double chamber actuator allows the valve to be powered to fully open and closed even at very low pressure.

The valve's hydrodynamic body is designed for unobstructed flow path and provides high flow capabilities.

The 700 Series operate under difficult operation conditions with minimal cavitation and noise. They are made of the highest quality materials suitable for different mining applications.



### Features and Benefits

- Bi-level hydraulic float control
  - ON/OFF Service
  - No cavitation damage
  - Suitable for low quality fluids
  - Inherent reservoir refreshing
- Designed to stand up to the toughest conditions
  - Tamper resistant
  - Drip tight sealing
- Double chamber actuator design
  - Full powered opening and closing
  - Protected diaphragm
  - Simplified maintenance as it can be removed as a single unit. In-line serviceable
- Flexible design - Easy addition of features
- Obstacle free flow path

### Major Additional Features

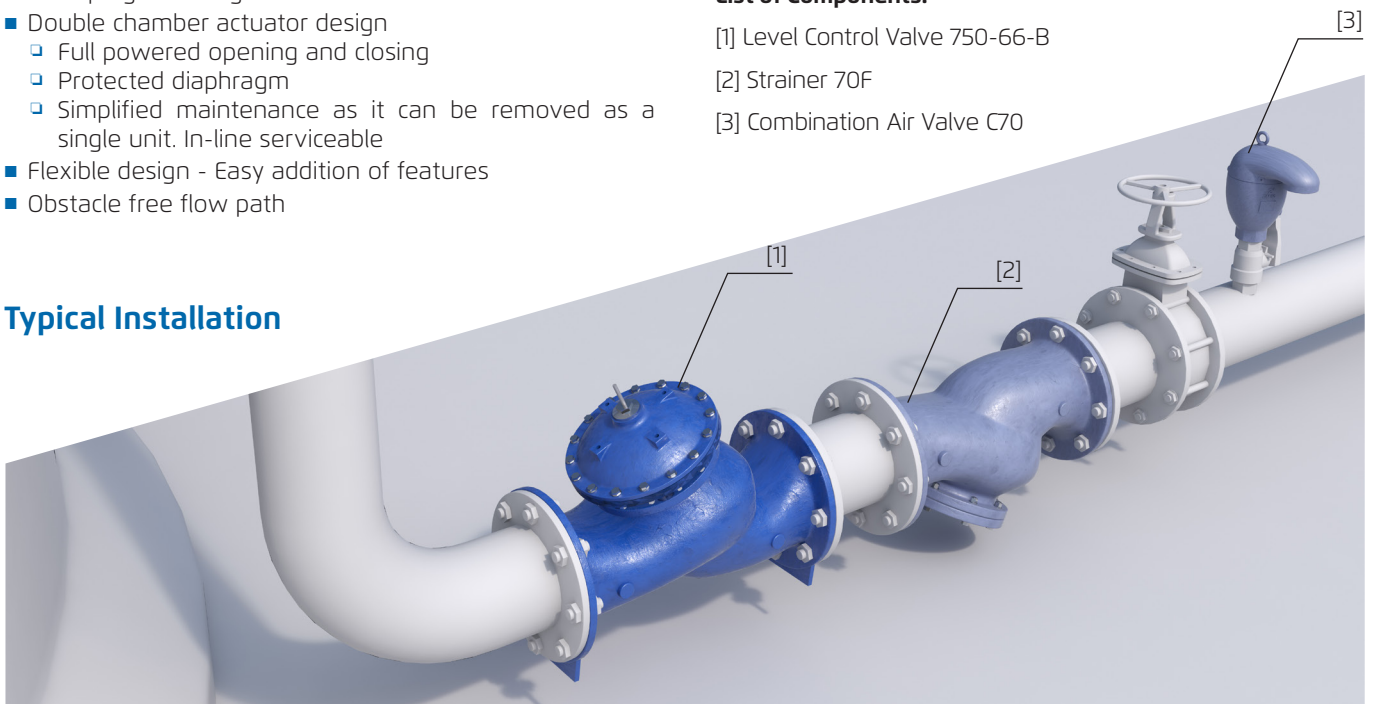
- Pressure Sustaining - **753 - 66 - B**
- Flow Control - **757 - 66 - U - B**
- Electric float backup - **750 - 66 - 55 - B**

See relevant BERMAD publications

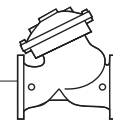
### List of Components:

- [1] Level Control Valve 750-66-B
- [2] Strainer 70F
- [3] Combination Air Valve C70

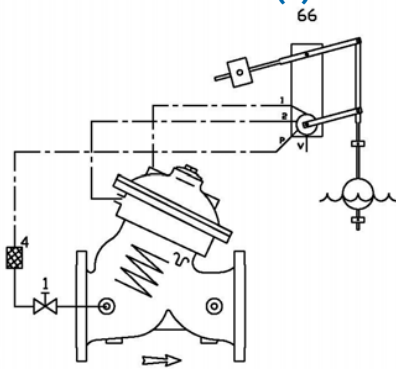
### Typical Installation



All images in this catalog are for illustration only



## Control Schematic (\*)



### Standard Configuration

- 1 2W Isolation Valve
- 4 Control Filter
- #66 Bi-level float

### Additional features (OPTIONAL)

- F Large Control Filter
- F1 Extra Large Control Filter
- I Visual Position Indicator
- S Electric Limit Switch

(\*) As a reference only. Components may vary based on valve's size and class.

## Operation

- The float #66 slides along its rod. When the float reaches either the adjustable high or low level stoppers, it either pushes the rod assembly up or pulls it down, switching the float pilot position. When the float is between the adjustable stoppers, the main valve remains in the last position.
- At high level, the float pilot applies pressure to the upper control chamber, and vents the lower control chamber; thereby shutting off the main valve.
- At low level, the float pilot applies pressure to the lower control chamber, and vents the upper control chamber; thereby opening the main valve.



## Float Options:

- Minimum level differential: 6"; 150 mm.
- Maximum level differential: 21"; 540 mm.
- Each extension rod adds: 22"; 560 mm.
- One extension rod is supplied
- Extra counterweight is required if second extension rod is used.
- If inlet pressure is below 7 psi/0.5 bar, or above 150 psi

## Pressure Rating

	Class 150			Class 300		
Max. Recommended Pressure	250 PSI			400 PSI		
Available End Connection	Flanged ANSI#150	Grooved ANSI/AWWA C606	Threaded	Flanged ANSI#300	Grooved ANSI/AWWA C606	Threaded

## Materials

Components		Water Applications	Thermal Shock Applications	Base Solutions Applications	Acid Solutions Applications (**)
Main Valve	Body & Cover	Ductile Iron	Carbon Steel	Ductile Iron	Stainless Steel 316
	Internals	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel 316
		Brass/Coated Steel	Brass/Coated Steel	Coated Steel	
	Elastomers	Synthetic rubber	Synthetic rubber	Synthetic rubber	Viton
Coating	Fusion Bonded Epoxy	Fusion Bonded Epoxy	Fusion Bonded Epoxy	Uncoated	
Float Assy.	Body	Brass/Bronze	Brass/Bronze	Stainless Steel 316	Stainless Steel 316
	Internals	Brass/Stainless Steel	Brass/Stainless Steel	Stainless Steel 316	Stainless Steel 316
	Rod	Stainless Steel	Stainless Steel	Stainless Steel 316	Stainless Steel 316
	Float	Plastic	Plastic	Plastic	Plastic
Control Loop Accessories	Elastomers	Synthetic rubber	Synthetic rubber	Synthetic rubber	Viton
	Accessories	Brass/Bronze	Stainless Steel 316	Stainless Steel 316	Stainless Steel 316
	Tubing & Fittings	Brass	Stainless Steel 316	Stainless Steel 316	Stainless Steel 316

(\*\*) For highly aggressive acid solutions: Super Duplex, Hastelloy C-276, SM0-254 6-MO. Others by request.

### Notes:

- Inlet pressure and flow rate are required for optimal sizing.
- Maximum recommended flow velocity: 6m/sec; 18ft/sec. Intermittent: 7.5m/sec; 21ft/sec.
- Minimum operating pressure: 0.7 bar / 10 PSI. For lower pressure requirements consult factory.

