

# Level Control Valve with Modulating Vertical Float

## Model MN-750-67

Hydraulically operated, diaphragm actuated, control valve that controls reservoir filling and level. Reservoir filling occurs in response to a hydraulically controlled modulating vertical float which maintains a constant water level, regardless of fluctuating demand.

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.

The valve's hydrodynamic body is designed for unobstructed flow path and provides excellent and highly effective modulation capacity for high differential pressure applications.

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



### Features and Benefits

- Designed to stand up to the toughest conditions
  - Tamper resistant
  - Excellent anti-cavitation properties
  - High stability and accuracy
  - Drip tight sealing
- Double chamber actuator design
  - Protected diaphragm
  - Provide rapid response to sudden changes in system conditions
  - Simplified maintenance as it can be removed as a single unit. In-line serviceable
- Flexible design - Easy addition of features
- Optional V-Port Throttling Plug - Allows for low flow stability
- Obstacle free flow path

### Major Additional Features

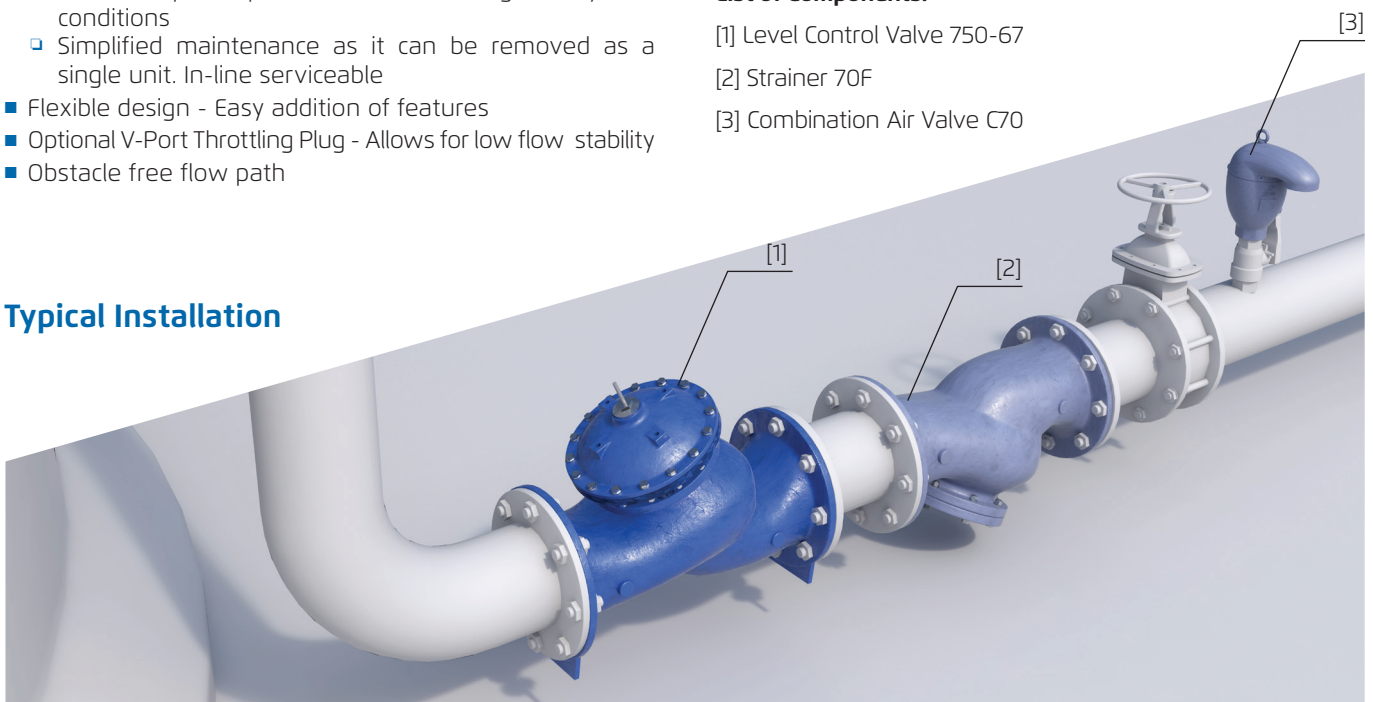
- Pressure Sustaining - **753 - 67**
- Flow Control - **757 - 67 - U**
- Electric float backup - **750 - 67 - 55**

See relevant BERMAD publications

### List of Components:

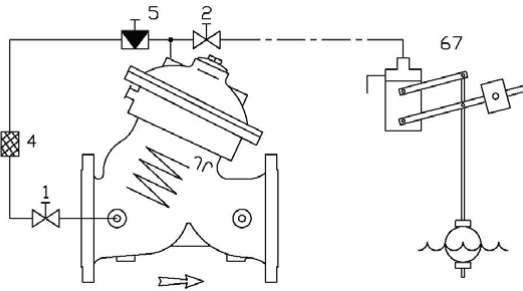
- [1] Level Control Valve 750-67
- [2] Strainer 70F
- [3] Combination Air Valve C70

### Typical Installation





**Control Schematic (\*)**



**Standard Configuration**

- 1 2W Isolation Valve
- 2 2W Isolation Valve
- 4 Control Filter
- 5 Needle valve
- #67 Modulating float

**Additional features (OPTIONAL)**

- V V-Port Plug
- F Large Control Filter
- F1 Extra Large Control Filter
- I Visual Position Indicator
- S Electric Limit Switch
- U Orifice Plate

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

**Operation**

- The needle valve continuously allows flow from the valve inlet into the upper control chamber.
- The float is locked on the float assembly rod between its two adjustable stoppers at the desired level.
- Should the level rise towards setting, the float pilot throttles, pressure in the upper control chamber accumulates causing the main valve to throttle closed, reducing filling rate, and eventually closing drip tight.
- Should the 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.



**Float Options:**

- Rod length: 21"; 540 mm.
- Each extension rod adds: 22"; 560 mm.
- One extension rod is supplied.
- Extra counterweight might be required according to rod length and high operating pressure.
- If inlet pressure is below 7 psi/0.5 bar, or above 150 psi/10 bar, consult factory.

**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
		Stainless Steel	Stainless Steel	Stainless Steel 316	Stainless Steel 316
	Rod	Stainless Steel	Stainless Steel	Stainless Steel 316	Stainless Steel 316
	Float	Plastic	Plastic	Plastic	Plastic
Elastomers	Synthetic rubber	Synthetic rubber	Synthetic rubber	Viton	
Control Loop Accessories	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, SMO-254 6-MO. Others by request.

**Notes:**

- Inlet pressure, outlet pressure and flow rate are required for optimal sizing and cavitation analysis.
- Recommended average flow velocity: 0.1-3.5m/sec; 0.3-11ft/sec. Intermittent flow velocity: 7.5m/sec-23ft/sec
- Minimum operating pressure: 0.7 bar / 10 PSI. For lower pressure requirements consult factory.

