

# Level Control Valve with Bi-Level Electric Float

## Model MN-750-65

Hydraulically operated, diaphragm actuated, control valve that controls reservoir filling and level. Reservoir filling occurs in response to an electric float switch signal, opening at a pre-set low level and shutting off 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 close even at very low pressure.

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

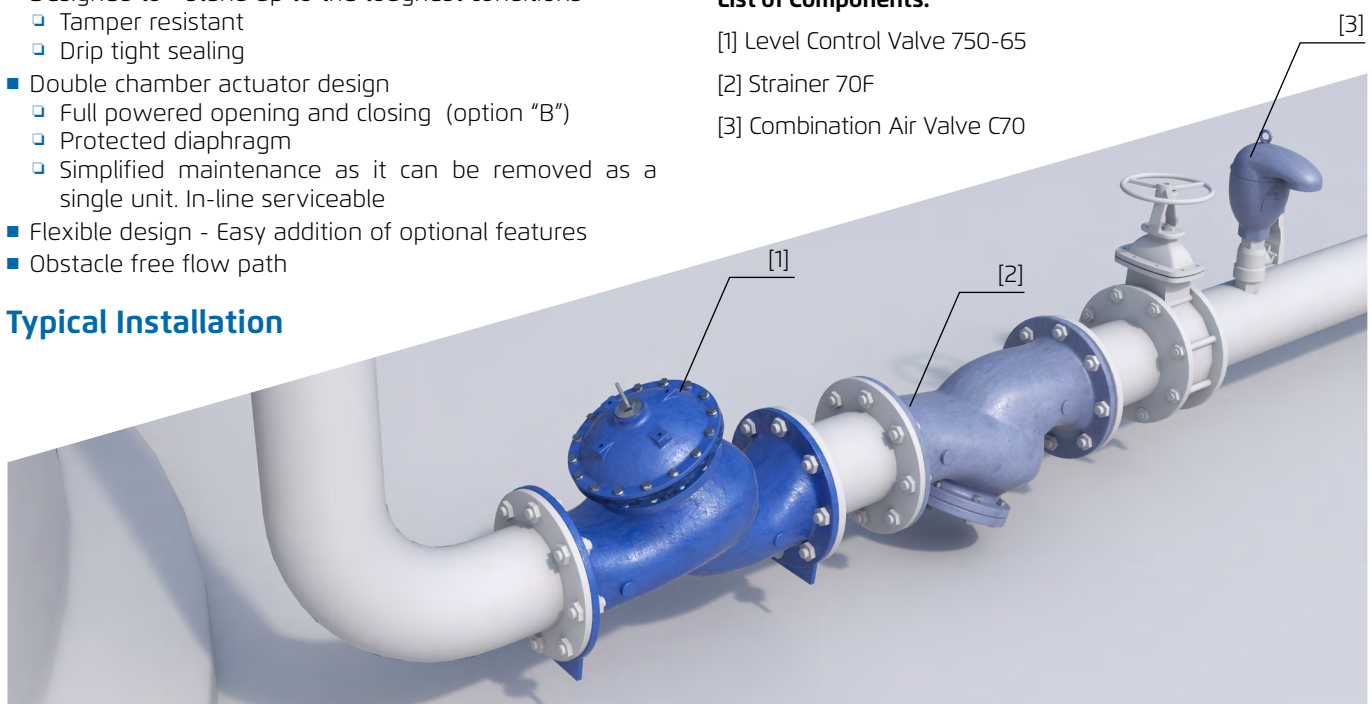
The 700 Series operate under difficult operation conditions with minimal cavitation and noise. They are made of the highest quality materials suitable for different mining applications.



### Features and Benefits

- Bi-level electric float switch
  - No hydraulic sensing tubes
  - ON/OFF Service
  - No cavitation damage
  - Simplified float installation and setting
- Electric controlled
  - Low power consumption
  - Normally Open or Normally Closed main valve
- Designed to - stand up to the toughest conditions
  - Tamper resistant
  - Drip tight sealing
- Double chamber actuator design
  - Full powered opening and closing (option "B")
  - Protected diaphragm
  - Simplified maintenance as it can be removed as a single unit. In-line serviceable
- Flexible design - Easy addition of optional features
- Obstacle free flow path

### Typical Installation



### Major Additional Features

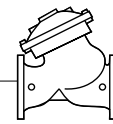
- Pressure Sustaining - **753 - 65**
- Flow Control - **757 - 65 - U**
- Full powered opening & closing - **750 - 65 - B**
- Hydraulic float backup - **750 - 65 - 66**
- Altitude pilot backup - **750 - 65 - 80**

See relevant BERMAD publications

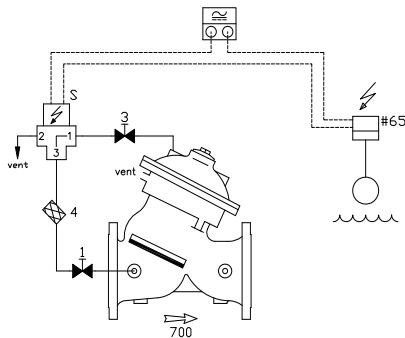
### List of Components:

- [1] Level Control Valve 750-65
- [2] Strainer 70F
- [3] Combination Air Valve C70

All images in this catalog are for illustration only



## Control Schematic (\*)



### Standard Configuration

- 1 2W Isolation Valve
- 3 2W Isolation Valve
- 4 Control Filter
- 5 Solenoid/Motorized Ball Valve
- #65 Bi-level electric float switch

### 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. For poor quality fluids, motorized ball valve option is highly recommended

## Operation

- The bi-level float switch closes at a pre-set low level, and opens at a pre-set high level, activating the solenoid - motorized ball valve MBV - in both cases.
- Should the level drop, the solenoid - MBV - vents the upper control chamber, opening the main valve.
- Should the level rise, the solenoid - MBV - applies the upstream pressure to the upper control chamber to close the main valve.

## Electrical Data

### Solenoid Data:

**Voltages:** (AC): 24, 110, 220  
(DC): 12, 24, 110, 220

### Power Consumption:

(AC): 30VA, inrush; 15VA (8W) holding  
(DC): 8W

### Motorized Ball Valve Data:

**Voltages:** (AC): 24, 110, 220  
(DC): 24

### Power Consumption:

(AC/DC): 45W



## 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                    |                                  |
| Solenoid                 | Body                | Brass               | Brass                      | Stainless Steel 316         | Stainless Steel 316              |
|                          | Internals           | Stainless Steel     | Stainless Steel            | Stainless Steel 316         | Stainless Steel 316              |
| Motorized Ball Valve     | Body/Internals      | Stainless Steel 316 | Stainless Steel 316        | Stainless Steel 316         | Stainless Steel 316              |
|                          | 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 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.

