

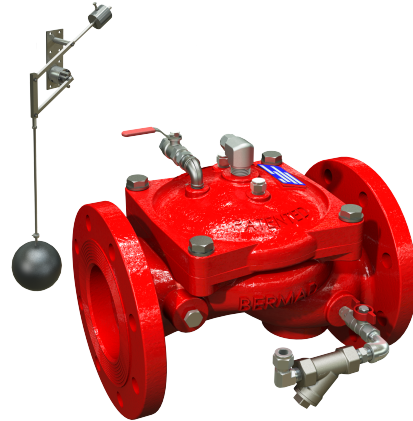
LEVEL CONTROL VALVE WITH BI-LEVEL VERTICAL FLOAT

Model FP-450-66

The Model FP 450-66 is a Water Level Control Valve for automatic filling of fire protection water reservoirs.

The FP-450-66 includes a Bi-Level Vertical Float with a pilot that operates a hydraulically controlled, diaphragm actuated control valve. This controls a reservoir water level in response to a hydraulic on/off pressure command from the float.

The Valve opens at pre-set low level and closes at a pre-set high level, offering quiet operation, extended operational life and low energy demand.



Features & Benefits

- Safety and reliability
 - Main valve with no mechanical moving parts
 - Time proven, simple Fail Open design
 - Single piece, rugged elastomeric diaphragm seal - VRSD technology
 - Obstacle-free, uninterrupted flow path
 - Non modulating On/Off operation, increasing valve life
- High performance
 - Quiet and Smooth operation
 - Low headloss design - Increased safety at reduced pressure supply
 - Very low opening & closing pressure requirement
- Specifically-designed for fire protection
 - Compact space saving dimensions
 - Quiet and Smooth operation
- Quick and easy maintenance
 - In-line serviceable
 - Fast and easy cover removal

Approvals



ABS
American Bureau of Shipping
Type Approval
Sizes 1½" - 12"



Det Norske Veritas
Type Approval
Sizes 1½" to 12"

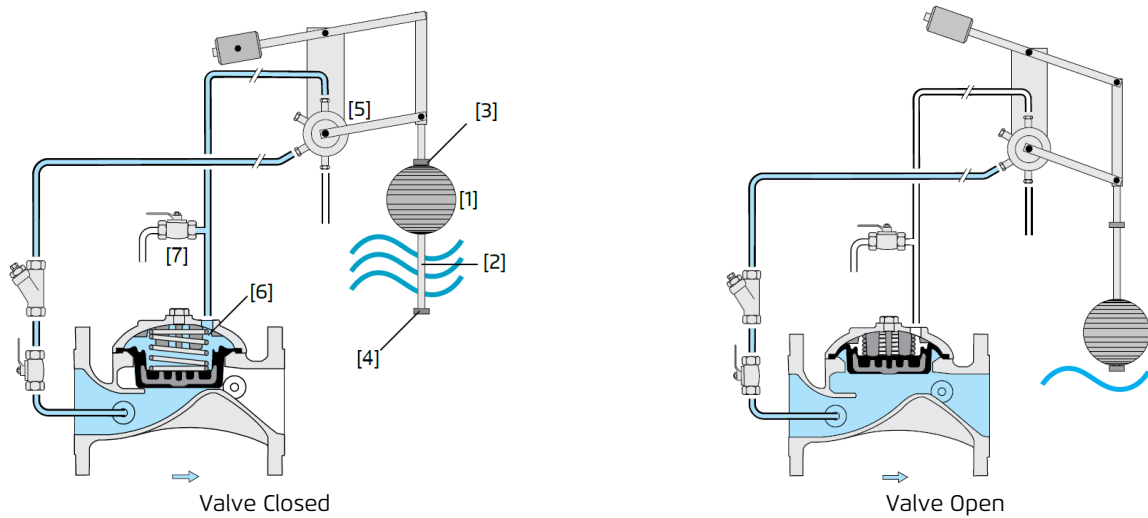


Lloyd's Register
Type Approval
Sizes 1½" - 10"

Additional Features

- Large control filter
- Valve Position Indicator
- Corrosion resistant zinc based high build epoxy coating

Operation



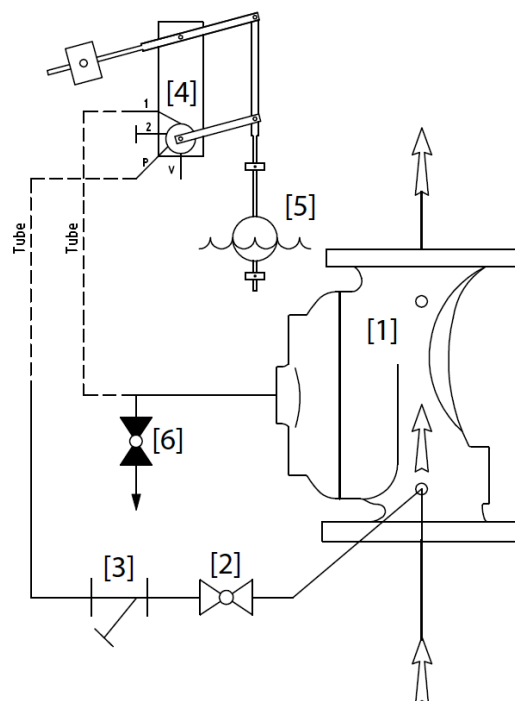
The Model FP 450-66 is a float controlled valve equipped with a 4-way, "last position", bi-level float pilot assembly. The float [1] slides along the rod [2]. When the float reaches either the adjustable high [3] or low [4] level stoppers, it either pulls the rod assembly down or pushes it up, switching 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 control chamber [6], powerfully shutting off the main valve.

At low level, the float pilot vents the control chamber, powerfully opening the main valve.

In accordance with safety requirements an emergency manual override valve [7] is provided.

System P&ID



	Components
1	Main valve
2	Priming Ball valve
3	Priming Strainer
4	Bi-Level Float Pilot Valve
5	Bi-Level Float
6	Emergency Release Valve

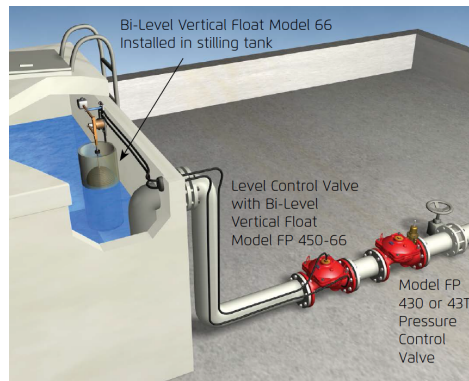
System Installation

The BERMAD level control valve is suited for rooftop as well as basement fire water reservoirs.

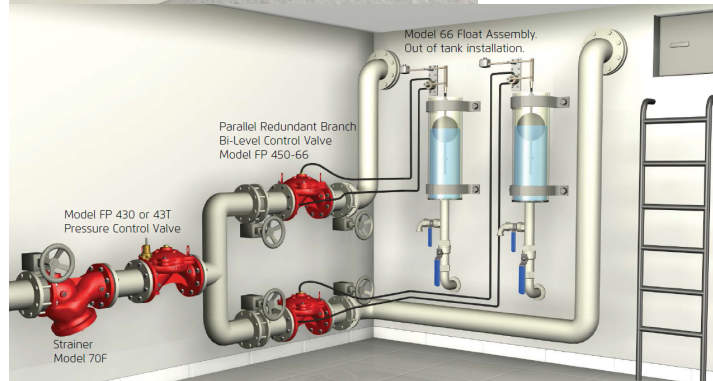
Whilst the float assembly must be installed at the reservoir level, the main valve should be installed in a place that facilitates service and maintenance.

To ensure a constant supply pressure to upper floor consumers or the fire protection system, install the Model FP 430 or 43T Pressure Control Valve upstream from the Model FP 45066.

Rooftop Installation



Basement Installation



Suggested Specifications

The Level Control Valve shall hydraulically open at a pre-set low level, and close at a pre-set high level.

Main Valve: The main valve shall be an elastomeric type globe (or angle) valve with a rolling diaphragm.

The valve shall have an unobstructed flow path, with no stem guide or supporting ribs. The body and cover construction material shall be ductile iron. All external bolts and nuts shall be of stainless steel 316. All valve components shall be accessible and serviceable without removing the valve from the pipeline.

Actuation: Valve actuation shall be accomplished by a fully peripherally supported, single piece, balanced rolling-diaphragm, vulcanized with a rugged radial seal disk. The diaphragm assembly shall be the only moving part. The assembled valve shall be hydraulically tested.

Quality Assurance: The valve manufacturer shall be certified according to the ISO 9000 and 9001 Quality Assurance Standard.

Technical Data

Available Sizes:

Flanged- 1½, 2, 2½, 3, 4, 6, 8, 10 & 12"

Grooved- 2, 3, 4, 6, & 8"

Pressure Rating:

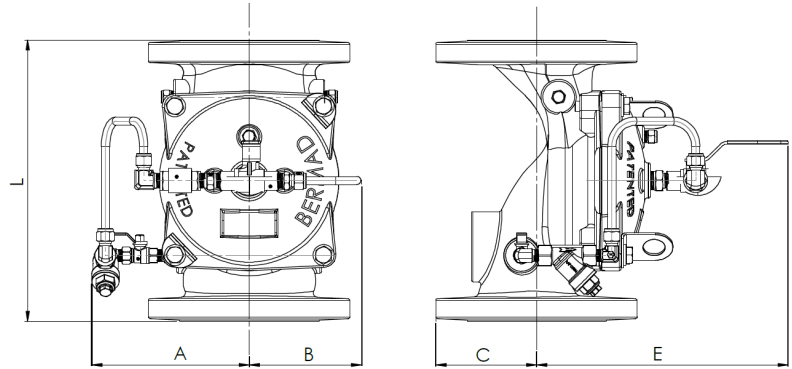
ANSI#150 - 17.2 bar | 250 psi

Grooved - 17.2 bar | 250 psi

Elastomer:

HTNR - Fabric Reinforced High Temperature

Compound - See engineering data



Valve Size	L #150 mm in	L Grooved mm in	A mm in	B mm in	C mm in	øD in	E mm in	F mm in	G mm in	Weight #150 kg lb
DN40 1½"	205 8.1	-	284 11.2	175 6.9	64 2.5	-	210 8.3	-	-	14 31
DN50 2"	205 8.1	205 8.1	284 11.2	175 6.9	78 3	-	210 8.3	-	-	15 33
DN65 2½"	205 8.1	-	284 11.2	180 7	92 3.6	-	210 8.3	-	-	17 37
DN80 3"	257 10.1	250 9.8	300 11.8	217 8.5	97 3.8	-	215 8.5	-	-	26 57
DN100 4"	320 12.6	320 12.6	313 12.3	224 8.8	119 4.7	-	243 9.6	-	-	38 84
DN150 6"	415 16.3	415 16.3	341 13.4	252 9.9	145 5.7	-	315 12.4	-	-	82 181
DN200 8"	500 19.7	-	415 25.4	285 10.6	174 14.3	-	315 12.4	-	-	145 320
DN250 10"	605 23.8	-	443 17.4	295 11.6	210 8.3	-	382 15	-	-	161 354
DN300 12"	725 28.5	-	481 18.9	363 14.3	252 9.9	-	430 16.9	-	-	249 549

IMPORTANT: Dimensions for the trim envelope or extents refer to a vertical orientation and may vary with specific component positioning - Apart from the "L" dimension, allow a tolerance of at least ±15%

Valve Code Designations

