

## Level Control Valve with Modulating Horizontal Float

### Model 750-60

- Reservoir filling
  - Low volume reservoirs
  - Large surface area reservoirs

The Model 750-60 Level Control Valve with Modulating Horizontal Float is a hydraulically controlled, diaphragm actuated control valve that controls reservoir filling to maintain constant water level, regardless of fluctuating demand.



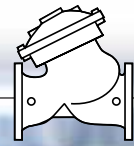
### Features and Benefits

- **Line pressure driven** – Independent operation
- **Modulating hydraulic float control**
  - “Always Full” reservoir
- **Double chamber**
  - Full powered closing
  - Non-slam closing characteristic
  - Protected diaphragm
- **External installation**
  - Easy access to valve and float
  - 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 – 753-60
- Flow control – 757-60-U
- Electric float backup – 750-60-65

See relevant BERMAD publications.



## Operation

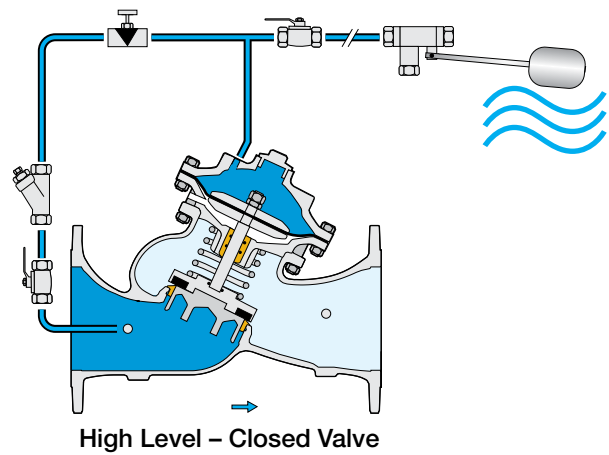
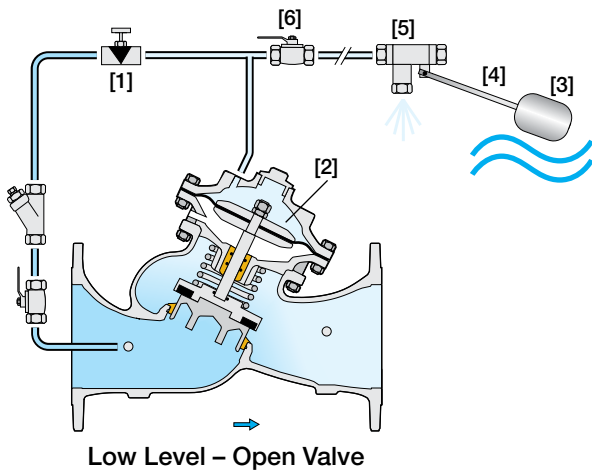
The Model 750-60 is a float controlled valve equipped with a 2-Way, horizontal float pilot assembly.

The needle valve [1] continuously allows flow from valve inlet into the upper control chamber [2]. The float [3] is attached to the float pilot arm [4]. The location of the float assembly & the position of the float determines the level setting.

Should level rise towards setting, the float pilot [5] throttles, pressure in the upper control chamber accumulates causing the main valve to throttle closed, reducing filling rate, and eventually closing drip tight.

Should 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. The cock valve [6] enables manual closing.



## Pilot System Specifications

### Standard Materials:

#### Float Pilot:

Body: Stainless Steel or Brass

Internals: Plastic

#### Tubing & Fittings:

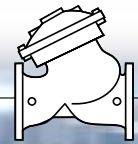
Stainless Steel 316 or Copper & Brass

#### Accessories:

Stainless Steel 316, Bronze, Brass and Synthetic Rubber Elastomers

### Notes:

- Working temperature: Water up to 50°C (125°F)
- Float pressure rating: 16 bar (230 psi)
- Recommended continuous flow velocity: 0.3-6.0 m/sec ; 1-20 ft/sec
- Minimum operating pressure: 0.7 bar ; 10 psi.  
For lower pressure requirements consult factory



## Typical Applications

### Infrastructure Installation

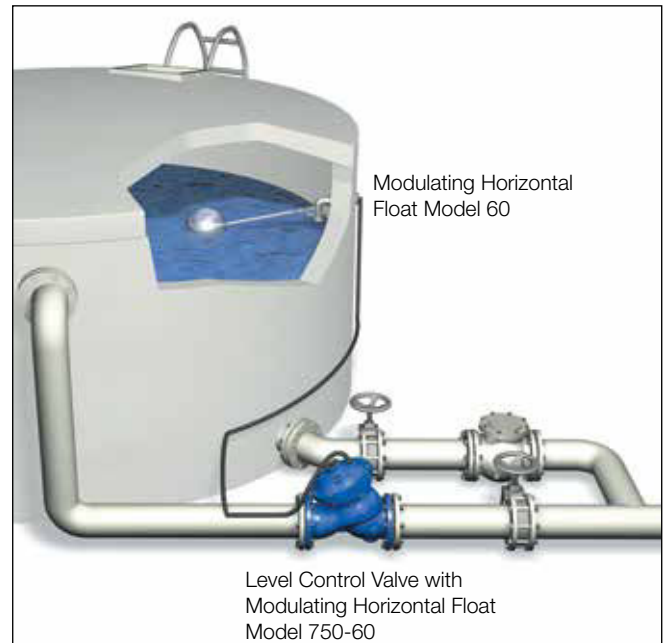
Ordinary mechanical level control valves present various problems:

- Valves are often at inaccessible locations
- Float and arm assemblies are heavy and cumbersome
- Relatively low maximum pressure
- Tendency for mechanical devices to leak
- Increased valve corrosion due to humid environment inside the tank
- Difficult maintenance

The Model 750-60 overcomes these difficulties by separating the mechanical float from the hydraulic valve itself.

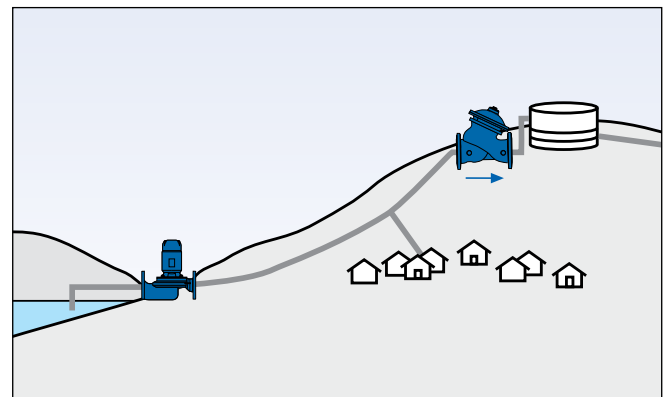
Consider replacing the “60” horizontal float assembly with the “67” vertical float assembly for:

- Heavy-duty service
- Easy level setting
- Resistance to aggressive or corrosive fluids



### Pumping to Uphill Reservoir

In a reservoir system, where a **pump provides pressure**, consumers are prioritized over reservoir filling by installing the **Model 753-60** Level Control and Pressure Sustaining Valve.

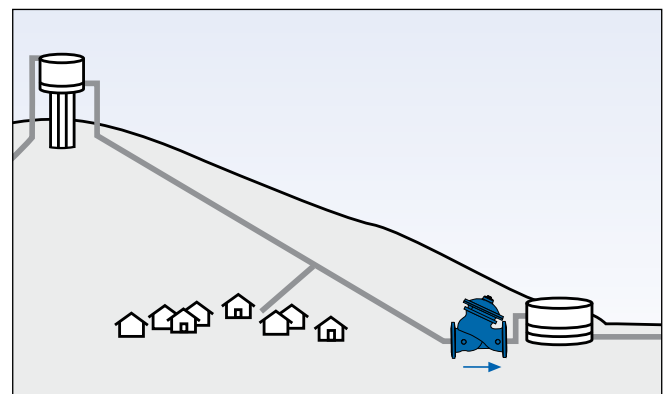


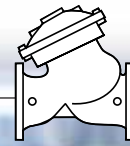
### Gravity Filling a Downhill Reservoir

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 757-60-U** Level and Flow Control Valve.





### Technical Data

**Size Range:** DN40-900 ; 1 1/2-36"

**End Connections (Pressure Ratings):**

**Flanged:** ISO PN16, PN25 (ANSI Class 150, 300)

**Threaded:** BSP or NPT

**Others:** Available on request

**Valve Patterns:** "Y" (globe) & angle, globe (DN600-900 ; 24"-36")

**Working Temperature:** Water up to 80°C ; 180°F

**Standard Materials:**

**Body & Actuator:** Ductile Iron

**Internals:** Stainless Steel, Bronze & coated Steel

**Diaphragm:** Synthetic Rubber Nylon fabric-reinforced

**Seals:** Synthetic Rubber

**Coating:** Fusion Bonded Epoxy, RAL 5005 (Blue) approved for drinking water or Electrostatic Polyester Powder

### Differential Pressure Calculation

$$\Delta P = \left( \frac{Q}{Kv; Cv} \right)^2$$

$\Delta P$  = Differential Pressure for fully open valve (bar; psi)

$Q$  = Flow rate (m<sup>3</sup>/h; gpm)

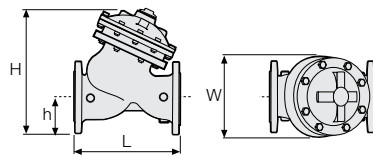
$Kv$  = Metric system - valve flow coefficient  
(flow in m<sup>3</sup>/h at 1 bar  $\Delta P$  with 15°C water)

$Cv$  = US system - Valve flow coefficient  
(flow in gpm at 1 psi  $\Delta P$  with 60°F water)

$$Cv = 1.155 Kv$$

### Flow Data & Dimensions Table

| DN / Size      |                               | 40                   | 1.5" | 50 | 2" | 65 | 2.5" | 80 | 3" | 100 | 4" | 150 | 6" | 200 | 8" | 250 | 10" | 300 | 12" | 350 | 14" | 400 | 16" | 450 | 18" | 500 | 20" |    |    |      |      |      |     |     |      |     |      |     |      |     |      |     |      |       |       |       |       |       |       |       |       |       |       |       |       |   |
|----------------|-------------------------------|----------------------|------|----|----|----|------|----|----|-----|----|-----|----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|------|------|------|-----|-----|------|-----|------|-----|------|-----|------|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| Flow Data      | 700 & 700ES                   | Kv / Cv - Flat       |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 54   | 62   | 57   | 66  | 60  | 69   | 65  | 75   | 145 | 167  | 395 | 456  | 610 | 705  | 905   | 1,045 | 1,520 | 1,756 | -     | -     | 2,250 | 2,599 | -     | -     | 4,070 | 4,701 |   |
|                | 700 & 700EN                   | Kv / Cv - V-Port     |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 46   | 53   | 48   | 56  | 51  | 59   | 55  | 64   | 123 | 142  | 336 | 388  | 519 | 599  | 769   | 888   | 1,292 | 1,492 | -     | -     | 1,913 | 2,209 | -     | -     | 3,460 | 3,996 |   |
|                | 700 & 700EN                   | Kv / Cv - "Y" Flat   |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 42   | 49   | 50   | 58  | 55  | 64   | 115 | 133  | 200 | 230  | 460 | 530  | 815 | 940  | 1,250 | 1,440 | 1,850 | 2,140 | 1,990 | 2,300 | 3,310 | 3,820 | 3,430 | 3,960 | 3,550 | 4,100 |   |
| 700-ES         | PN16; 25                      | Kv / Cv - "Y" V-Port |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 36   | 41   | 43   | 49  | 47  | 54   | 98  | 113  | 170 | 200  | 391 | 450  | 693 | 800  | 1,063 | 1,230 | 1,573 | 1,820 | 1,692 | 1,950 | 2,814 | 3,250 | 2,916 | 3,370 | 3,018 | 3,490 |   |
|                |                               | L (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 230  | 9.1  | 230  | 9.1 | 290 | 11.4 | 310 | 12.2 | 350 | 13.8 | 480 | 18.9 | 600 | 23.6 | 730   | 28.7  | 850   | 33.5  | -     | -     | 1,100 | 43.3  | -     | -     | 1,250 | 49.2  |   |
|                |                               | W (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 150  | 5.9  | 165  | 6.5 | 185 | 7.3  | 200 | 7.9  | 235 | 9.3  | 300 | 11.8 | 360 | 14.2 | 425   | 16.7  | 530   | 20.9  | -     | -     | 626   | 24.6  | -     | -     | 838   | 33    |   |
|                |                               | h (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 80   | 3.1  | 90   | 3.5 | 100 | 3.9  | 105 | 4.1  | 125 | 4.9  | 155 | 6.1  | 190 | 7.5  | 220   | 8.7   | 250   | 9.8   | -     | -     | 320   | 12.6  | -     | -     | 385   | 15.2  |   |
|                |                               | H (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 240  | 9.4  | 250  | 9.8 | 250 | 9.8  | 260 | 10.2 | 320 | 12.6 | 420 | 16.5 | 510 | 20.1 | 605   | 23.8  | 725   | 28.5  | -     | -     | 895   | 35.2  | -     | -     | 1,185 | 46.7  |   |
| Weight (Kg/lb) |                               |                      |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     | 10 | 22 | 10.8 | 23.8 | 13.2 | 29  | 15  | 33   | 26  | 57.2 | 55  | 121  | 95  | 209  | 148 | 326  | 255   | 561   | -     | -     | 437   | 960   | -     | -     | 1,061 | 2,334 |       |       |   |
| 700-EN         | PN16; 25                      | L (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | -    | -   | -   | -    | 310 | 12.2 | 350 | 13.8 | 480 | 18.9 | 600 | 23.6 | 730   | 28.7  | 850   | 33.5  | -     | -     | -     | -     | -     | -     | -     | -     |   |
|                |                               | W (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | -    | -   | -   | -    | 200 | 7.9  | 235 | 9.3  | 320 | 12.6 | 390 | 15.4 | 480   | 18.9  | 550   | 21.7  | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | h (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | -    | -   | -   | -    | 100 | 3.9  | 118 | 4.6  | 150 | 5.9  | 180 | 7.1  | 213   | 8.4   | 243   | 9.6   | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | H (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | -    | -   | -   | -    | 305 | 12   | 369 | 14.5 | 500 | 19.7 | 592 | 23.3 | 733   | 28.9  | 841   | 33.1  | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | Weight (Kg/lb)       |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | -    | -   | -   | -    | 21  | 46.2 | 31  | 68.2 | 70  | 154  | 115 | 253  | 198   | 436   | 337   | 741   | -     | -     | -     | -     | -     | -     | -     | -     | - |
| 700 Flanged    | "Y" PN16 Class 150            | L (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 205  | 8.1  | 210  | 8.3 | 222 | 8.7  | 250 | 9.8  | 320 | 12.6 | 415 | 16.3 | 500 | 19.7 | 605   | 23.8  | 725   | 28.5  | 733   | 28.9  | 990   | 39    | 1,000 | 39.4  | 1,100 | 43.3  |   |
|                |                               | W (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 155  | 6.1  | 165  | 6.5 | 178 | 7    | 200 | 7.9  | 223 | 8.8  | 320 | 12.6 | 390 | 15.4 | 480   | 18.9  | 550   | 21.7  | 550   | 21.7  | 740   | 29.1  | 740   | 29.1  | 740   | 29.1  |   |
|                |                               | h (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 78   | 3.1  | 83   | 3.3 | 95  | 3.7  | 100 | 3.9  | 115 | 4.5  | 143 | 5.6  | 172 | 6.8  | 204   | 8     | 242   | 9.5   | 268   | 10.6  | 300   | 11.8  | 319   | 12.6  | 358   | 14.1  |   |
|                |                               | H (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 239  | 9.4  | 244  | 9.6 | 257 | 10.1 | 305 | 12   | 366 | 14.4 | 492 | 19.4 | 584 | 23   | 724   | 28.5  | 840   | 33.1  | 866   | 34.1  | 1,108 | 43.6  | 1,127 | 44.4  | 1,167 | 45.9  |   |
|                |                               | Weight (Kg/lb)       |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 9.1  | 20   | 10.6 | 23  | 13  | 29   | 22  | 49   | 37  | 82   | 75  | 165  | 125 | 276  | 217   | 478   | 370   | 816   | 381   | 840   | 846   | 1,865 | 945   | 2,083 | 962   | 2,121 |   |
|                | "Y" PN25 Class 300            | L (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 205  | 8.1  | 210  | 8.3 | 222 | 8.7  | 264 | 10.4 | 335 | 13.2 | 433 | 17   | 524 | 20.6 | 637   | 25.1  | 762   | 30    | 767   | 30.2  | 1,024 | 40.3  | 1,030 | 40.6  | 1,136 | 44.7  |   |
|                |                               | W (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 155  | 6.1  | 165  | 6.5 | 185 | 7.3  | 207 | 8.1  | 250 | 9.8  | 320 | 12.6 | 390 | 15.4 | 480   | 18.9  | 550   | 21.7  | 570   | 22.4  | 740   | 29.1  | 740   | 29.1  | 750   | 29.5  |   |
|                |                               | h (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 78   | 3.1  | 83   | 3.3 | 95  | 3.7  | 105 | 4.1  | 127 | 5    | 159 | 6.3  | 191 | 7.5  | 223   | 8.8   | 261   | 10.3  | 295   | 11.6  | 325   | 12.8  | 357   | 14.1  | 389   | 15.3  |   |
|                |                               | H (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 239  | 9.4  | 244  | 9.6 | 257 | 10.1 | 314 | 12.4 | 378 | 14.9 | 508 | 20   | 602 | 23.7 | 742   | 29.2  | 859   | 33.8  | 893   | 35.2  | 1,133 | 44.6  | 1,165 | 45.9  | 1,197 | 47.1  |   |
|                |                               | Weight (Kg/lb)       |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 10   | 22   | 12.2 | 27  | 15  | 33   | 25  | 55   | 43  | 95   | 85  | 187  | 146 | 322  | 245   | 540   | 410   | 904   | 434   | 957   | 900   | 1,984 | 967   | 2,132 | 986   | 2,174 |   |
| 700 Threaded   | Angle PN16; 25 Class 150; 300 | L (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 155  | 6.1  | 155  | 6.1 | 212 | 8.3  | 250 | 9.8  | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |   |
|                |                               | W (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 122  | 4.8  | 122  | 4.8 | 122 | 4.8  | 163 | 6.4  | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | h (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 40   | 1.6  | 40   | 1.6 | 48  | 1.9  | 56  | 2.2  | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | H (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 201  | 7.9  | 202  | 8   | 209 | 8.2  | 264 | 10.4 | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | Weight (Kg/lb)       |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | 5.5  | 12   | 5.5  | 12  | 8   | 18   | 17  | 37   | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | L (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | 121  | 4.8 | 140 | 5.5  | 159 | 6.3  | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | - |
|                |                               | W (mm / inch)        |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |    | -    | -    | 122  | 4.8 | 122 | 4.8  | 163 | 6.4  | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | - |
| R (mm / inch)  |                               |                      |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     | -  | -  | 40   | 1.6  | 48   | 1.9 | 55  | 2.2  | -   | -    | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |       |   |
| h (mm / inch)  |                               |                      |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     | -  | -  | 83   | 3.3  | 102  | 4   | 115 | 4.5  | -   | -    | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |       |   |
| H (mm / inch)  |                               |                      |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     | -  | -  | 225  | 8.9  | 242  | 9.5 | 294 | 11.6 | -   | -    | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |       |   |
| Weight (Kg/lb) |                               |                      |      |    |    |    |      |    |    |     |    |     |    |     |    |     |     |     |     |     |     |     |     |     |     |     |     | -  | -  | 5.5  | 12   | 7    | 15  | 15  | 33   | -   | -    | -   | -    | -   | -    | -   | -    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |       |   |



### Specify when ordering:

- Size
- Main model
- Additional features
- Pattern
- Body material
- End connection
- Coating
- Voltage & main valve position
- Tubing & Fittings materials
- Operational data (according to model)
- Pressure data
- Flow data
- Reservoir level data
- Settings

\* Use BERMAD's Waterworks Ordering Guide

| DN / Size            |                | 600   | 24"   | 700   | 28"   | 750   | 30"   | 800   | 32"   | 900   | 36"   |
|----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Globe PN16 Class 150 | L (mm / inch)  | 1,450 | 57.1  | 1,650 | 65    | 1,750 | 68.9  | 1,850 | 72.8  | 1,850 | 72.8  |
|                      | W (mm / inch)  | 1,250 | 49.2  | 1,250 | 49.2  | 1,250 | 49.2  | 1,250 | 49.2  | 1,250 | 49.2  |
|                      | h (mm / inch)  | 470   | 18.5  | 490   | 19.3  | 520   | 20.5  | 553   | 21.8  | 600   | 23.6  |
|                      | H (mm / inch)  | 1,965 | 77.4  | 1,985 | 78.1  | 2,015 | 79.3  | 2,048 | 80.6  | 2,095 | 82.5  |
|                      | Weight (Kg/lb) | 3,250 | 7,150 | 3,700 | 8,140 | 3,900 | 8,580 | 4,100 | 9,020 | 4,250 | 9,350 |
| Globe PN25 Class 300 | L (mm / inch)  | 1,500 | 59.1  | 1,650 | 65    | 1,750 | 68.9  | 1,850 | 72.8  | 1,850 | 72.8  |
|                      | W (mm / inch)  | 1,250 | 49.2  | 1,250 | 49.2  | 1,250 | 49.2  | 1,250 | 49.2  | 1,250 | 49.2  |
|                      | h (mm / inch)  | 470   | 18.5  | 490   | 19.3  | 520   | 20.5  | 553   | 21.8  | 600   | 23.6  |
|                      | H (mm / inch)  | 1,965 | 77.4  | 1,985 | 78.1  | 2,015 | 79.3  | 2,048 | 80.6  | 2,095 | 82.5  |
|                      | Weight (Kg/lb) | 3,500 | 7,700 | 3,700 | 8,140 | 3,900 | 8,580 | 4,100 | 9,020 | 4,250 | 9,370 |

