

# Irrigation



Irrigation

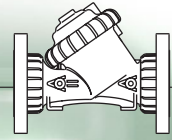
BERMAD Irrigation

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**100 Series - hYflow**  
High Performance Plastic Valves



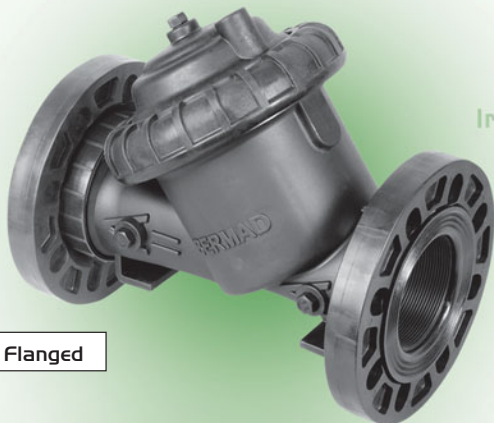


## 100 Series hYflow

### High Performance Plastic Hydraulic Control Valves

#### Features and Benefits

- ▶ **Durable industrial grade** valve design and construction uses glass-filled Nylon material to **meet rough service conditions**.
- ▶ **Ultra-high flow capacity** with a minimal pressure loss.
- ▶ **Valve design for service on a wide range of pressure and flow conditions**, from dripping to maximum flow conditions.
- ▶ Simple design with few parts guarantees **in-line inspection and service**.
- ▶ Positive guided valve plug provides **accurate motion and smooth regulation**. Avoids chattering and slamming closed.
- ▶ **Versatile end connection** allows mix of different sizes and connection types. Female thread, Flanged or PVC 'Slip-on' Glue or Grooved adapter (as add-on option).
- ▶ **Articulated flang connections** isolates the valve from line bending and pressure stresses

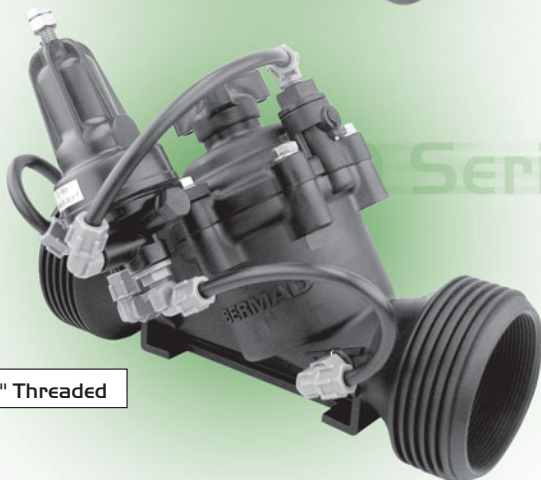


hYflow - 4" Flanged

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hYflow - 3" L Threaded

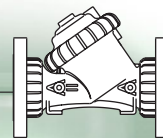


hYflow - 3" Threaded



hYflow - 2" Threaded





## Main models

### 1. hYflow Basic Hydraulic Valve, Model 105-Z

Model 105-Z, is a hydraulically self-operated, diaphragm-actuated valve, which uses the hydraulic force of the existing line pressure, or any external hydraulic command (water or air), to open and close.

Recommended for all On\Off applications, Model 105-Z is particularly suitable for agricultural irrigation heads, and filter stations.

Model 105-Z with Flow Stem is available on request.



### 2. hYflow Electric Valve, Model 110-2W-N

Model 110-2W-N, is a hydraulically self-operated, diaphragm-actuated, solenoid-controlled valve. The valve opens fully and closes drip-tight in response to an electric signal, which causes the solenoid to open or close the valve's internal hydraulic loop.

It operates with a variety of solenoid voltage ranges: 24VAC, 24VDC or 9VDC, 12VDC-latch.

Recommended for all electric On\Off applications, Model 110-2W-N is particularly suitable for turf irrigation heads, and industrial greenhouse irrigation.

The Model 110-2W-N also features a manual override.

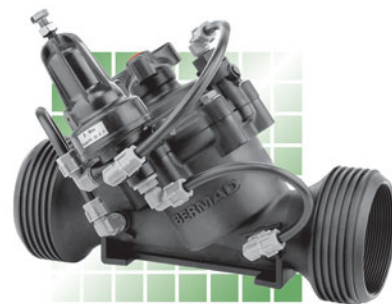


### 3. hYflow Pressure Reducing Valve, Model 120-bZ

120-bZ, is a hydraulically self-operated, diaphragm-actuated control valve, which uses the hydraulic force of the line pressure to reduce higher upstream pressure to lower constant downstream pressure, regardless of fluctuating demand or varying upstream pressure.

The pilot continuously senses the downstream valve pressure and controls the valve's opening and closing rate accordingly, by increasing or decreasing the flow from the valve control chamber to downstream.

The quick and accurate response of Model 120-bZ prevents line fill-up surges and pressure peaks, which are lethal damaging, especially to thin wall tape irrigation systems. The unique hYflow design makes the Model 120-bZ the best and most cost-effective solution for agricultural irrigation heads in large and medium scale blocks, where flow is high and upstream pressure is liable to drop very low.



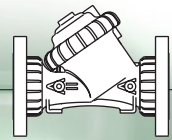
### 4. hYflow Electric Pressure Reducing Valve, Model 120-55-bZ

120-55-bZ, is a hydraulically self-operated, diaphragm-actuated control valve which uses the hydraulic force of the line pressure to reduce higher upstream pressure to lower constant downstream pressure, regardless of fluctuating demand or varying upstream pressure. The added solenoid enables the opening and shut-off of the valve by an irrigation controller.

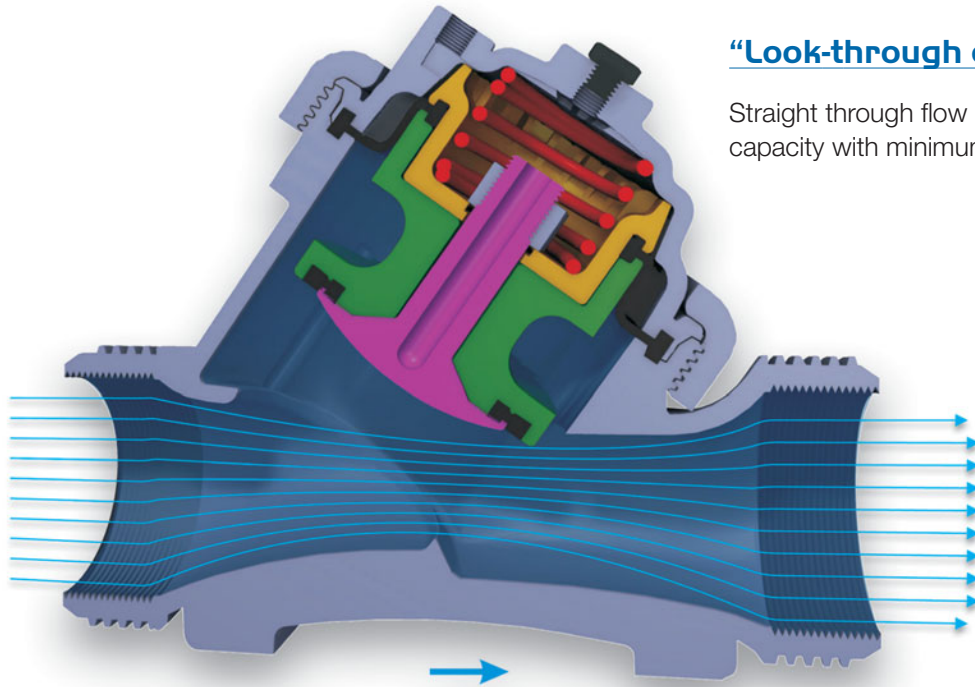
Pressure reducing performance of the Model 120-55-bZ is similar to that of the Model 120-bZ, thus providing protection for the irrigation equipment whenever the valve opens and throughout irrigation.

Model 120-55-bZ operates with a variety of solenoid voltage ranges: 24VAC, 24VDC or 9VDC, 12VDC-latch.





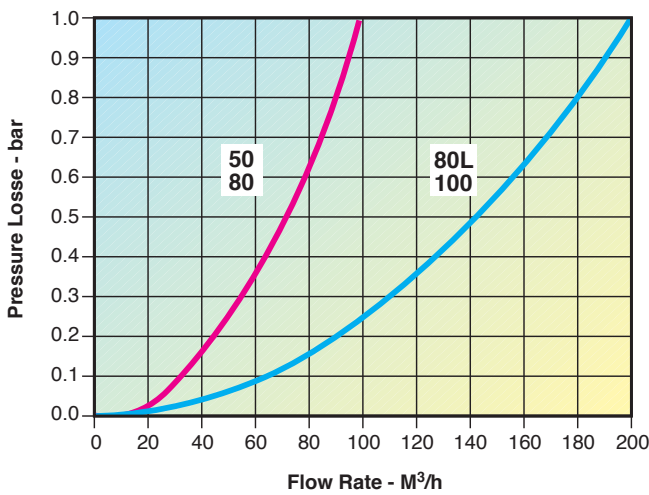
## Technical information



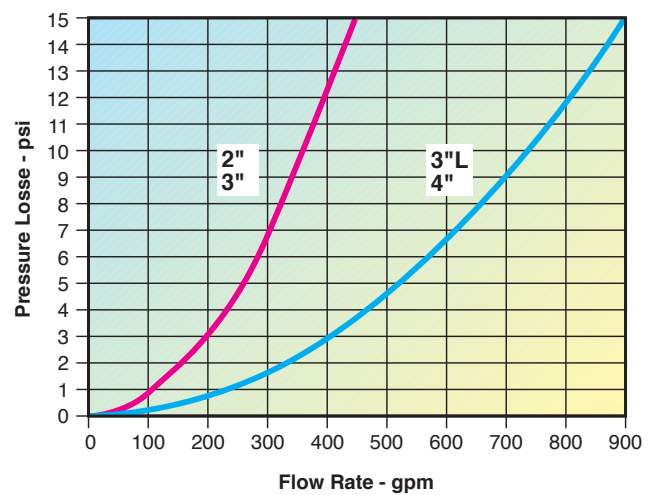
### “Look-through design”

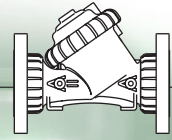
Straight through flow results in ultra-high flow capacity with minimum pressure loss.

100 Series DN, 50-80 ; 80L-100  
Flow Charts (Metric)



100 Series 2"- 3" ; 3"L- 4"  
Flow Charts (US)





### Dimensions and Weights

	2" (50)		3" (80)		3"L (80L)		4" (100)	
	mm	inch	mm	inch	mm	inch	mm	inch
LT	230	9 1/16	298	11 3/4	300	11 13/16	-	-
LF	-	-	308	12 1/8	310	12 3/16	350	13 13/16
HT	185	7 5/16	195	7 11/16	240	9 7/16	-	-
HF	-	-	240	9 7/16	280	11	290	11 7/16
hT	43	1 1/16	53	2 1/8	53	2 1/8	-	-
hF	-	-	100	4	100	4	110	4 5/16
WT	1.3 kg	2.8 lb	1.6 kg	3.6 lb	2.9 kg	6.4 lb	-	-
WFP	-	-	2.6 kg	5.6 lb	3.8 kg	8.4 lb	4.5 kg	9.9 lb
WFC	-	-	4.5 kg	9.9 lb	5.7 kg	12.6 lb	7.2 kg	15.9 lb

### Technical Specifications

- **Sizes:** 2", 3", 4" (DN 50, 80, 100)
- **Ends connections:** NPT ; BSPT female threads
- **Pressure ratings:** ISO PN 10 ; 150 PSI ; JIS 10K
- **Working pressure range:** 0.5-10bar ; 7-150 psi
- **Temperature:** Water up to 80°C ; 180°F

#### Materials:

**Body, Cover, Valve Plug** – Glass Filled Nylon  
**Diaphragm** - NBR [Buna-N], Nylon fabric reinforced  
**Seals** - NBR [Buna-N]  
**Spring** - Stainless steel  
**Cover bolts** - Stainless Steel

### Tender Specifications

- The control valve shall have a 'Y' pattern body and be hydraulically actuated with a Semi-Roll type diaphragm.
- The 'Y' valve body will allow a significant 'Look through' from end to end and provide flows of no less than:  
 2"- 3" = Kv 100 [Cv 115]  
 3"L - 4" = Kv 200 [Cv 230]
- Construction material for Body Cover and Valve plug Assy, shall be Glass Filled Nylon
- The diaphragm shall not be the sealing surface.
- The Diaphragm and Valve plug seal shall be replaceable
- The diaphragm shall be Nylon fabric reinforced NBR

### End Connections Selection

#### ► For 2" and 3" Valves

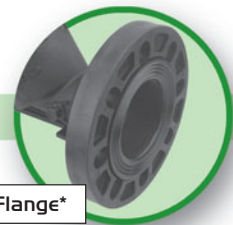
2" Female Thread



3" Female Thread



3" Plastic Flange\*



#### ► For 3"L and 4" Valves

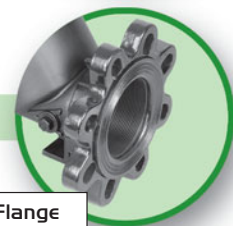
3" Female Thread



4" Plastic Flange\*



4" Metal Flange



\* Apply Plastic Counter-Flanges for Plastic-Flanged Valves.



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Hydraulic Control Valves

  
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