

## Filter Backwash Flow Control Valve

IR-170-beU

The BERMAD Filter Backwash Flow Control Valve is a hydraulically operated, diaphragm actuated control valve that limits filter system backwash flow to a constant preset maximum. This eliminates the risk of filtration element collapse or of filter grains being flushed out.



### Features and Benefits

- Line pressure driven Hydraulic Flow Control
  - Prevents flushing out of grains or filtration element collapse
- Servo Flow Pilot Controlled
  - Dynamic integrated needle valve
  - Very low hysteresis
  - Easy flow setting
- Engineered Plastic Valve with Industrial Grade Design
  - Highly durable, chemical and cavitation resistant
  - No internal bolts and nuts
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity – Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and Guided Plug
  - Accurate and stable regulation with smooth closing
  - Requires low actuation pressure
  - Prevents diaphragm erosion and distortion
- Hydraulic Flow Sensor (upstream installation)
  - No moving parts
  - No need for flow straightening

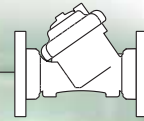


### Typical Applications

- Filter Stations
- Systems Subject to Varying Supply Pressure

[1] BERMAD Model IR-170-beU Limits system backwash flow, preventing flushing out of grains.

[2] BERMAD Filter Backwash Hydraulic Valve Model IR-3x2-350-A-I



## IR-170-beU

For full technical details, refer to Engineering Section.

## 100 Series hYflow

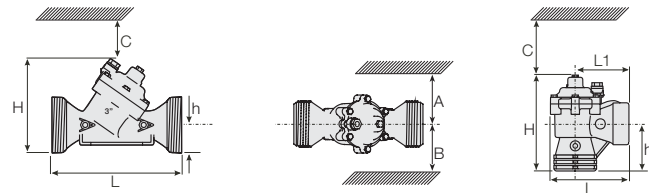
Filter Stations

### Technical Specifications

#### Dimensions and Weights

Pattern Size	Angle	Y (Oblique)				
		80-T 3-T	50-T 2-T	65-T* 2 1/2-T*	80-T 3-T	80L-T 3L-T
L (L1)	mm	187 (130)	230	230	298	300
	inch	7.4 (5.1)	9.1	9.1	11.7	11.8
H (Hf)	mm	235 (245)	170 (185)	170 (185)	180 (195)	240
	inch	9.3 (9.6)	6.7 (7.3)	6.7 (7.3)	7.1 (7.7)	9.5
C	mm	53	140	140	140	180
	inch	2.1	6	6	6	8
h	mm	117	40	40	50	60
	inch	4.6	1.6	1.6	2.0	2.4
A; B	mm	320	135	135	190	190
	inch	12.6	6	6	8	8
Weight	Kg	1.6	1.35	1.4	1.6	3.0
	ib.	3.5	3.0	3.1	3.5	6.6

The orifice assembly adds to valve length.



### Technical Data

#### Valve Configurations and Sizes:

Oblique: 2, 2½, 3 & 3"L & 4"; DN50, 65, 80 & 80L

Angle: 3"; DN80

#### End connections:

Threaded: 2, 2½, 3 & 3"L; DN50, 65, 80 & 80L

Flanged: 3 & 3"L; DN80 & 80L

Pressure Rating: 10 bar; 145 psi

Operating Pressure Range: 0.5-10 bar; 7-145 psi

Setting Range: ±20% from valve predetermined flow

Orifice diameter is calculated in accordance with desired ΔP at predetermined flow.

#### Materials:

Body, Cover and Plug: Glass-Filled Nylon

Diaphragm: NR, Nylon Fabric Reinforced

Seals: NR

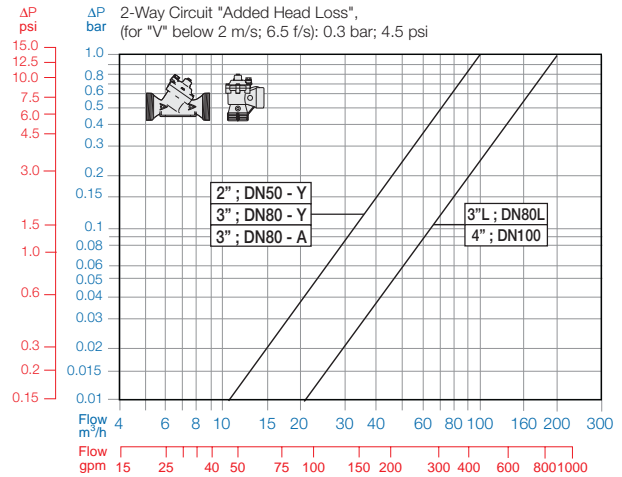
Spring: Stainless Steel

Cover Bolts: Stainless Steel

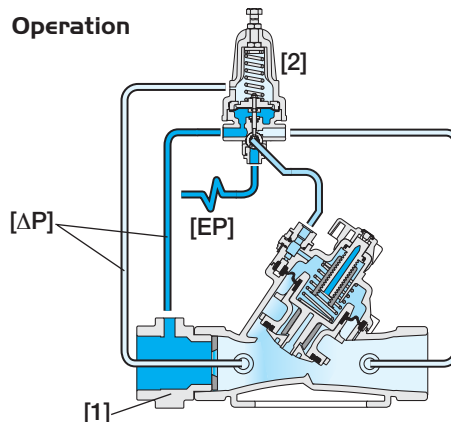
Control Accessories: Plastic

Tubing and Fittings: Plastic

### Flow Chart



### Operation



Pressure Differential [ΔP] across the Orifice Assembly [1] is in direct proportion to backwash flow rate.

The Flow Pilot [2] continuously senses [ΔP] and commands the Valve to throttle closed should backwash flow rate rise above pilot setting.

External Control Pressure [EP] delivered from the filtration system downstream manifold, ensures valve functioning.

### How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes
IR	2-4" <small>Other sizes available on request.</small>	170	00	Y	P	FF	2W-3W	-	beU
		Oblique Angle (3"; DN80 Only)	Y A		Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona")	BP NP FF CC	Servo External Control Pressure Orifice Assembly Manual Selector Flow Stem Flow Stem with Position Indicator		b e U Z M MP
					* Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D				Other attributes available on request

