



FILTER BACKWASH HYDRAULIC VALVE

2X2 PLASTIC

2x2-350-P

The BERMAD Model 2x2-350-P is a compact 3-port valve, in a T configuration. It is double chambered, hydraulically operated, and diaphragm actuated.

Designed for automatic backwashing of filtration systems, the BERMAD Model 2x2-350-P is available in Angle flow (A) and Straight flow (S) configurations.



Angle Flow



Straight Flow

Features and Benefits

- Line Pressure Driven
- Double Chambered Design
 - Wide application range
 - Requires low actuation pressure
 - Protected diaphragm
- Dynamic Sealing
 - Seals at very low pressure
 - Prevents seal friction and erosion
- Engineered Plastic Valve Design
 - Highly durable, chemical and cavitation resistant
- Short Valve Travel
 - Smooth changes of flow direction
 - Eliminates mixing of supply and waste water
- User-Friendly
 - Can be installed in various orientations
 - Simple in-line inspection and service

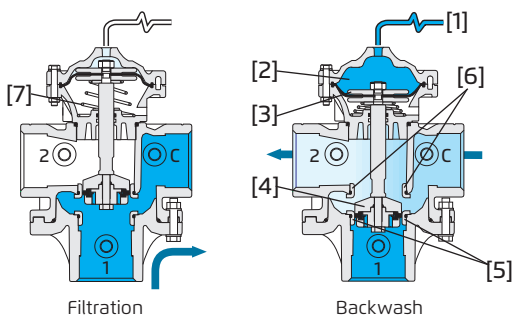
Typical Applications

- Automatic Backwash of Filter Batteries
 - Gravel Filters
 - Sand Filters
 - Disk Filters
 - Screen Filters
- Single Filter Autonomic Backwash System
- Angled or Straight Installations



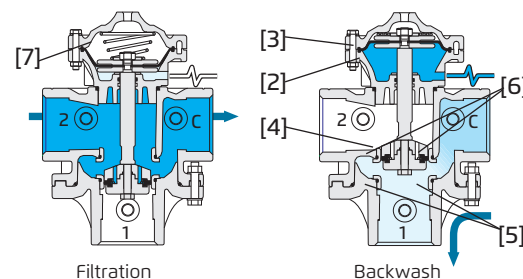
NSF 61 and 372 Certified

Operation - Angle Flow



A Hydraulic Command [1], which pressurizes the Upper Control Chamber [2], forces the Diaphragm [3] actuated Plug Assembly [4] to move towards the Supply Port Seat [5], eventually sealing it drip tight. This allows flow from the filter through the Drain Port Seat [6]. Venting the upper control chamber causes the line pressure, together with the Spring [7] force, to move the Valve back to filtration mode.

Operation - Straight Flow

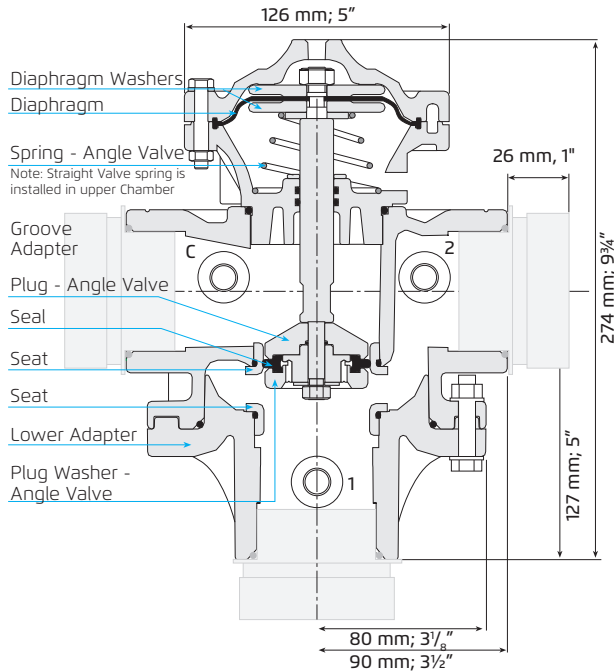


A Hydraulic Command [1], which pressurizes the Lower Control Chamber [2], forces the Diaphragm [3] actuated Plug Assembly [4] to move towards the Supply Port Seat [5], eventually sealing it drip tight. This allows flow from the filter through the Drain Port Seat [6]. Venting the upper control chamber causes the line pressure, together with the Spring [7] force, to move the Valve back to filtration mode.

Note: control chamber water must be vented to waste.



Technical Specifications



Hydraulic Data

Angle Flow	Filtration 1→C	Backwash C→2
Straight Flow	Filtration 2→C	Backwash C→1
	Kv=52 Cv=60	Kv=48 Cv=56
	Kv=46 Cv=53	Kv=60 Cv=70

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

Kv = m³/h @ ΔP of 1 bar
Q = m³/h
ΔP = bar

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

Cv = gpm @ ΔP of 1 psi
Q = gpm
ΔP = psi

Cv = 1.155 Kv

Technical Data

- Control Chamber Displacement Volume:** 0.13 liter; 0.04 gallon
- Operating Pressure:** 0.7-10 bar; 10-145 psi
- External Operating Pressure:** 85%-100% of operating pressure
- Maximum Temperature:** 65°C; 150°F
- Weight:** 2.8 kg; 6.2 lbs
- Note:** Grooved Adaptors add 0.5 Kg; 1.1 lbs to valve weight
- End Connections:** Threaded, Grooved (with adaptors)
- Flow Patterns:** Angled Flow, Reverse Angled Flow, Straight Flow, Reverse Straight Flow

Materials

- Valve Body, Separating Partition & Lower Adapter:** Polyamide 6 – 30GF Black
- Cover:** Polyamide 6 – 30GF, Angle Flow – Black, Straight Flow – Gray
- Diaphragm:** NR-AL52 Nylon Fabric Reinforced
- Seats, Diaphragm Washers:** Brass
- Plug, Plug Washer:** Acetal Copolymer Black
- Stopper Disk:** PVC-U
- Seal, O-Rings:** NBR
- Spring:** Stainless Steel AISI 302
- Shaft:** Stainless Steel AISI 303
- External Bolts, Studs, Nuts & Disks:** Stainless Steel

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	Compatibility	Pattern / Flow Option	Construction Materials	Drain Connections	End Connections	Additional Attributes	Coating	Voltage & Position	Tubing & Fittings
WW	2x2	350	00	P2	S	P	V	VI	-	UC	00*	PP
		No Additional Feature 3-Way Hydraulic Relay Solenoid Controlled	00 54 55	Angle Flow Straight Flow Straight & Reverse Flow Angle & Reverse Flow	A S S-O A-O	Threaded BSP Threaded NPT Grooved	P N V	Threaded BSP Threaded NPT Grooved ANSI C606-81	BP NP VI	Uncoated UC	Plastic Tubing & Fillings	PP
		Potable Water Approved Unregistered	P2 P0									

*Consult factory for available options

