



FILTER BACKWASH HYDRAULIC VALVE

4X4 PLASTIC

4x4-350-P

The BERMAD Model 4x4-350-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 4x4-350-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
 - Quick and smooth mode change
 - 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
- Long Valve Travel
 - Higher flow and lower head loss
 - 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

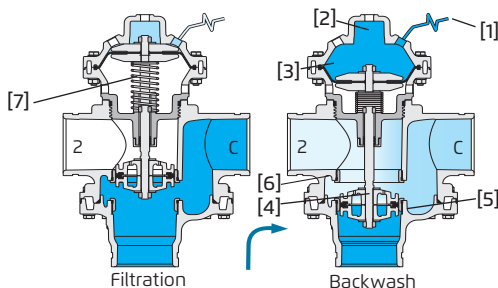
Typical Applications

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



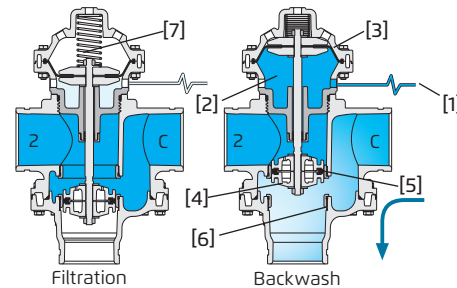
NSF 61 and 372 Certified

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

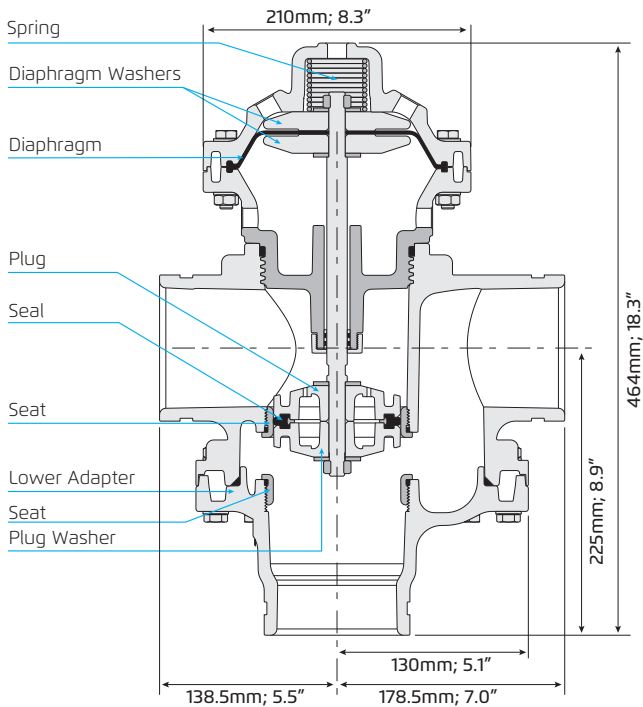


A Hydraulic Command [1], which pressurizes the Lower Control Chamber [2], forces the Diaphragm [3] actuated Plug Assembly [4] to move towards the Supply Port Seat [5], eventually sealing it drip tight. This allows flow from the filter through the Drain Port Seat [6]. Venting the upper control chamber 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
	Kv=225 Cv=260	Kv=205 Cv=237
Straight Flow	Filtration 2→C	Backwash C→1
	Kv=190 Cv=220	Kv=250 Cv=290

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

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:

0.55 liter; 0.15 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: 9.9 kg; 21.8 lbs

End Connections:

- Ports C & 2: Grooved 4"
- Port 1: Grooved 4"; Union Connector (Havazelet) 75mm or Grooved 4" x Int. Thread 3"

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: Stainless Steel 304

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	4x4	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		Grooved ANSI C606-81	VI	Uncoated	UC	Plastic Tubing & Fillings	PP
		Potable Water Approved Unregistered	P2 P0		Grooved 4" Union Connector (Havazelet) 75mm Grooved 4" x Int. Thread 3"	V H VT						

*Consult factory for available options

