

Filter Backwash Hydraulic Valve

3X2 Double Chamber, Metal Body

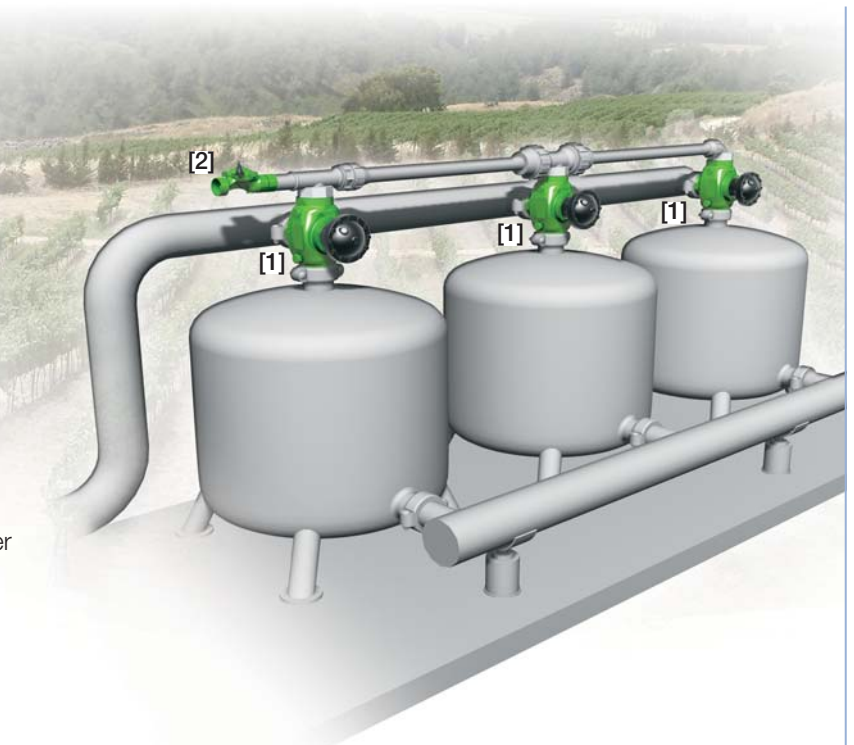
IR-3x2DC-350

The BERMAD Model IR-3x2DC-350 is an angle flow, compact 3-port valve, in a T configuration. It is double chambered, hydraulically operated, and diaphragm actuated. Designed for automatic backwashing of filtration systems.



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
- Cast Iron Body
 - Rigid construction, high stress resistance
- 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



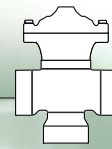
Typical Applications

- Automatic Backwash of Filter Batteries
 - Gravel Filters
 - Sand Filters
 - Disk Filters
 - Screen Filters
- Single Filter Autonomic Backwash System

[1] BERMAD Model IR-3x2DC-350 allows flow into the filter, and switches closed upon pressure rise command, thereby blocking inlet to filter and enabling backwash flow from the filter.

[2] BERMAD Model IR-470-beKU Limit system backwash flow, preventing flushing out of grains

BERMAD Irrigation

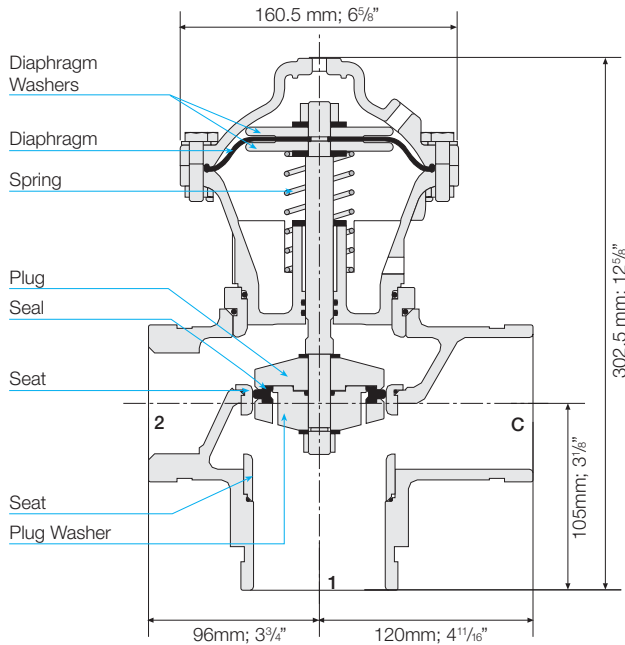


IR-3x2DC-350

350 Series

Filter Stations

Technical Specifications



Weight: 9.0 Kg; 20.0 lbs.

Technical Data

- Control Chamber Displacement Volume:** 0.34 liter; 0.09 gallon
- Operating Pressure:** 0.7-10 bar; 10-145 psi
- External Operating Pressure:** 85%-100% of operating pressure
- Maximum Temperature:** 65°C; 150°F
- End Connections:** Inlet (port 1) & Outlet (C): Grooved 3". Drain (2): Threaded 2"
- Flow Patterns:** Angled Flow
- Materials**
 - Valve Body:** Cast Iron
 - Separating Partition & Cover:** Polyamide 6 – 30GF Black
 - 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

Hydraulic Data

	Filtration 1⇒C	Backwash C⇒2
Angle Flow		
	Kv=120 Cv=140	Kv=60 Cv=70

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

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

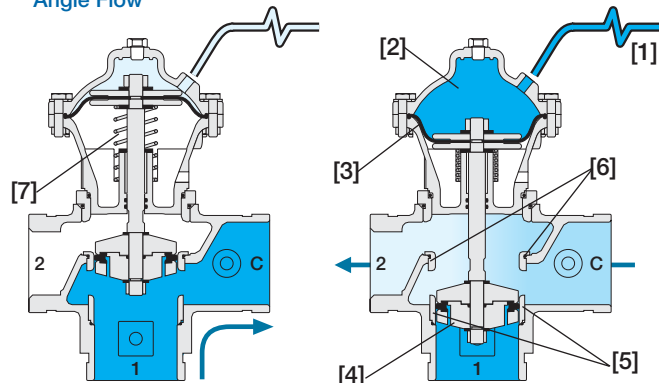
$$\Delta P = \left(\frac{Q}{Cv}\right)^2$$

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

Cv = 1.155 Kv

Operation

Angle Flow



Filtration

Backwash

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.

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/Flow Option	Construction Materials	Drain Connections	End Connections	Additional Attributes	Coating	Voltage & Position	Tubing & Fittings
IR	3X2DC	350	00	A	I	BP	VI	-	PG	00	PP
Angle Flow	A	3" Grooved & 2" Threaded BSP 3" Grooved & 2" Threaded NPT	BP NP	Grooved ANSI C 606-81	VI	Polyester Green RAL 6017 Polyester Blue RAL 5010 Polyester Red RAL 3000	PG PB PR	Plastic Tubing & Fittings Plastic Tubing & Brass Fittings	PP PB		



info@bermad.com • www.bermad.com

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