Filter Backwash Flow Control Valve

IR-470-beKU

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 grains being flushed out.

Features and Benefits

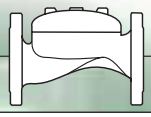
- Line pressure driven Hydraulic Flow Control
  - Prevents flushing out of grains or filtration element collapse
- Servo Flow Pilot Controlled
  - Dynamic integrated needle valve
  - Very low hysteresis
  - Easy flow setting
- Advanced Globe Hydro-Efficient Design
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
- Fully Supported & Balanced Diaphragm
  - Requires low opening and actuation pressure
  - Excellent low flow regulation performance
  - Progressively restrains valve closing
  - Prevents diaphragm 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-470-beKU Limits system backwash flow, preventing flushing out of grains.
[2] BERMAD Filter Backwash Hydraulic Valve Model IR-3x2-350-A-I

BERMAD Irrigation



IR-470-beKU

400 Series

Filter Stations

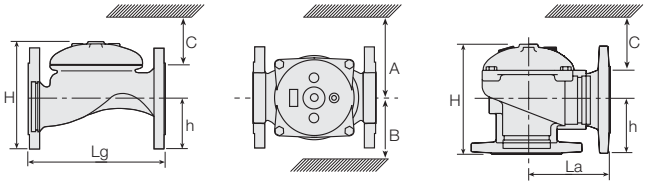
For full technical details, refer to Engineering Section.

Technical Specifications

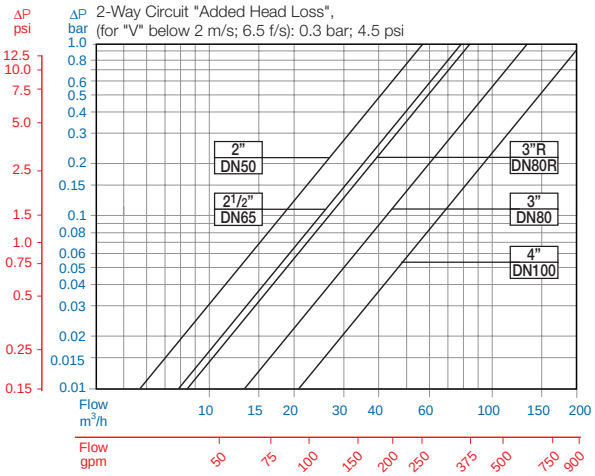
Dimensions and Weights

Pattern		Globe						Angle				
Connections		Threaded					Fl.	Threaded				Fl.
Size DN	Inch	40	50	65	80R	80	100	50	65	80R	80	100
		1½"	2"	2½"	3"R	3"	4"	2"	2½"	3"R	3"	4"
Lg	mm	153	180	210	210	255	320	N.A.	N.A.	N.A.	N.A.	N.A.
	inch	6	7.1	8.3	8.3	10.0	12.6	N.A.	N.A.	N.A.	N.A.	N.A.
La	mm	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	86	110	110	110	160
	inch	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	3.4	4.3	4.3	4.3	6.3
H	mm	87	114	132	140	165	242	136	180	178	184	223
	inch	3.4	4.5	5.2	5.5	6.5	9.5	5.4	7.1	7	7.2	8.8
C	mm	52	68	80	84	100	145	82	108	107	110	134
	inch	2	2.7	3.1	3.3	3.9	5.7	3.2	4.2	4.2	4.3	5.3
h	mm	29	39	45	53	55	112	61	93	91	80	112
	inch	1.1	1.5	1.8	2.1	2.2	4.4	2.4	3.7	3.6	3.1	4.4
A; B	mm	130	130	130	140	175	312	130	130	140	175	312
	inch	5	5	5	6	7	12.3	5.1	5.1	5.5	6.9	12.3
Weight	Kg	2	4	5.7	5.8	13	28	4.4	5.8	7	11	26
	lb.	4.4	8.8	12.6	12.8	28.7	61.7	9.7	12.8	15.4	24.3	57.3

The orifice assembly adds to valve length.



Flow Chart



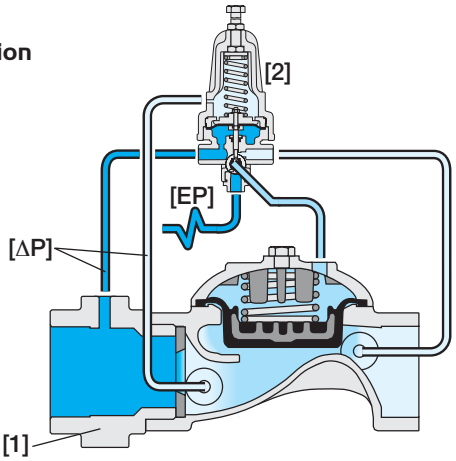
Technical Data

End connections:

Size		3" DN80	4" DN100	6" DN150	8-16" DN200-400
Threaded	Globe	■			
	Angle	■			
Flanged	Globe	■	■	■	■
	Angle	■	■		
Grooved	Globe	■	■	■	
	Angle	■	■		

Pressure Rating: 10 bar; 145 psi
Operating Pressure Range: 0.5-10 bar; 7-145 psi
For lower pressure requirements, consult factory
Setting Range: ±20% from valve predetermined flow
Orifice diameter is calculated in accordance with desired ΔP at predetermined flow.

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	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additonal Attributes
IR	1½-4"	470	00	-	G	I	BP	PG	-	PB	beKU

Other sizes available on request.

Globe	G
Angle (up to 4"; DN100)	A

Cast Iron (up to 6"; DN150)	I
Ductile Iron (8"; DN200 & above)	C

BSP	BP
NPT	NP
ISO-16	16
ISO-10	10
IS 14 (ISO 10/4 Holes)	14
ANSI-125	A1
JIS-10	J1
BST-D	BD
Grooved	VI

Other end connections available on request

Plastic Tubing & Brass Fittings	PB
Copper Tubing & Brass Fittings	CB

Servo	b
External Control Pressure	e
Plastic Control Accessories	K
Orifice Assembly	U
Manual Selector	Z
Valve Position Indicator(1)	I
Flow Stem(1)	M

(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M.
Other attributes available on request.

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