Flow Control Valve

IR-470-bKUZ

The BERMAD Flow Control Valve is a hydraulically operated, diaphragm actuated control valve that limits system demand to a constant preset maximum flow rate.

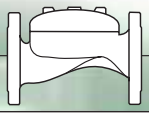
Features and Benefits

- Line Pressure Driven, Hydraulically Controlled
  - Limits fill-up rate and consumer over-demand
- 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
- User-Friendly Design
  - Easy pressure setting
  - Simple in-line inspection and service
  - Easy addition of control features

Typical Applications

- Multiple Independent Consumer Systems
- Line Fill-Up Control Solutions
- Systems Subject to Varying Supply Pressure

[1] BERMAD Model IR-470-bKUZ limits fill-up rate and system over-demand.
[2] BERMAD Relief Valve Model IR 43Q-R
[3] BERMAD Air Valve Model ARA-A-P-P
[4] BERMAD Vacuum Breaker Model ½"-ARV



IR-470-bKUZ

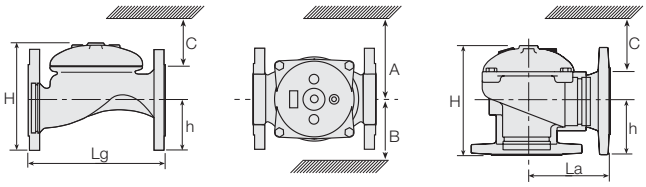
For full technical details, refer to Engineering Section.

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 20 mm.to valve length.



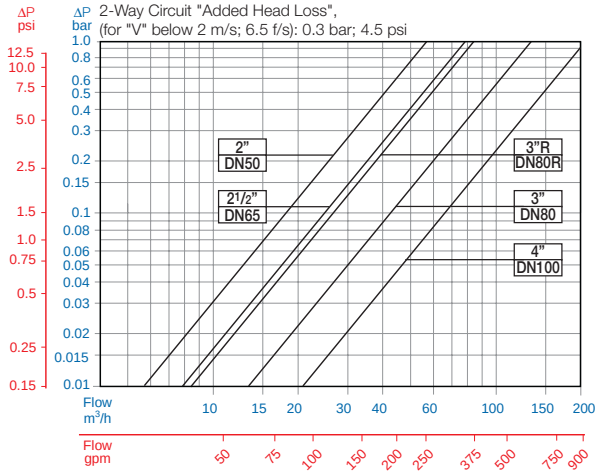
Technical Data

End connections:

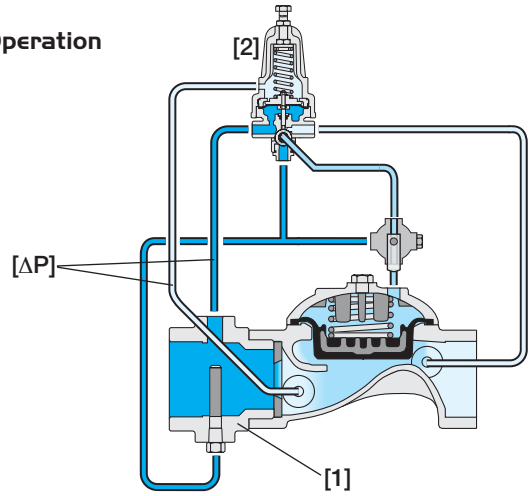
Size		1½"	2"	2½"	3"R	3"	4"
		DN40	DN50	DN65	DN80R	DN80	DN100
Threaded	Globe	■	■	■	■	■	
	Angle		■	■		■	
Flanged	Globe		■	■	■	■	■
	Angle		■			■	■
Grooved	Globe		■			■	■
	Angle					■	■

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.
Although the standard calculated ΔP is 0.4 bar; 5.5 psi, the actual head loss is 0.2 bar; 2.8 psi.

Flow Chart



Operation



Pressure Differential **[ΔP]** across the Orifice Assembly **[1]** is in direct proportion to demand. The Flow Pilot **[2]** continuously senses **[ΔP]** and commands the Valve to throttle closed should demand rise above pilot setting and to modulate open when demand drops below setting. The Manual Selector **[3]** enables local manual closing.

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	-	PP	bKUZ

Other sizes available on request.

Globe	G
Angle	A

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

For available end connections/sizes, see End Connections Table above.

Plastic Tubing & Fittings	PP
Plastic Tubing & Brass Fittings	PB

Servo	b
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 additional attributes are optional.
Please consult full-stop

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