

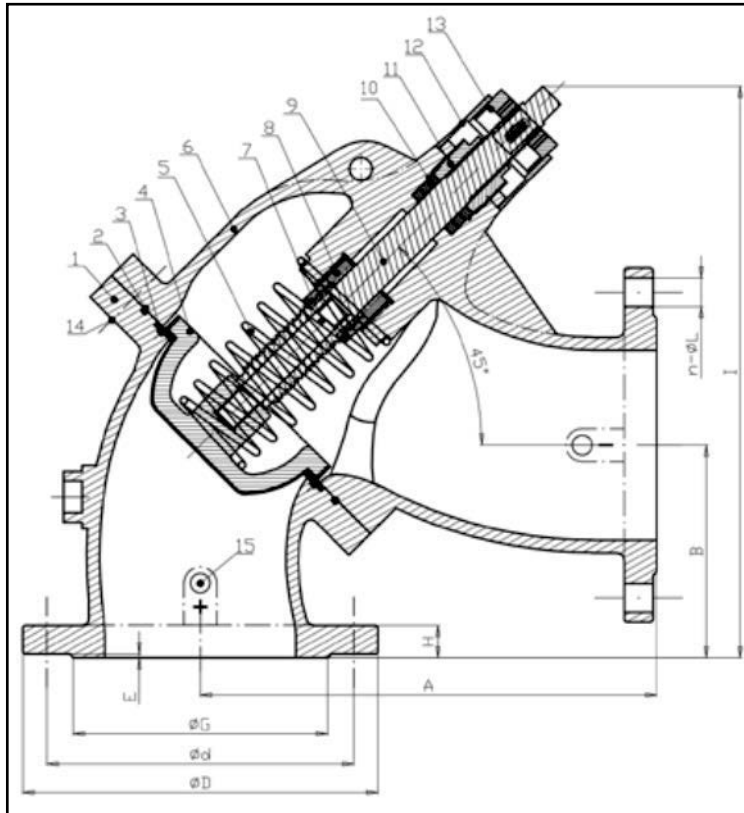


**Barmesa<sup>®</sup>**  
**Pumps**

# **Multifunction Valve**

Triple duty valves





No.	Name	Qty.	Material
1	Lower Body	1	DI
2	O Ring	1	NBR/EPDM
3	Seat	1	Casting Brass
4	Disc	1	CI+EPDM
5	Spring	1	SS302
6	Upper Body	1	DI
7	Disc Shaft	1	SS410
8	Shaft Nut	1	Brass
9	Shaft	1	SS410
10	Packing	3	Graphit
11	Gland	1	SS410
12	Accessories	1	Plastic
13	Accessories	1	Plastic
14	Bolt & Nut	8	WCB
15	Plug/Testing Point	4	WCB/HPb59-1

## Technical

Pressure:

861.25 kPa - 1033.5 kPa

124.88 PSI - 149.82 PSI

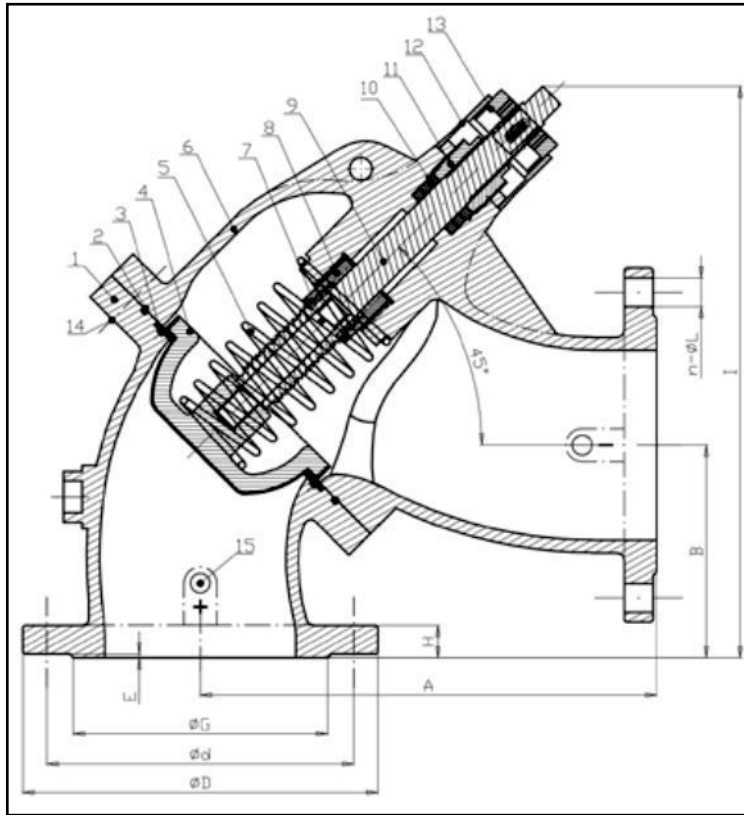
ANSI B16.1

☐ PN10 : 125-150 lbs

☐ PN16 : 225-250 lbs

√	SIZE	Dimensions (INCHES)									
		Ø D	Ø d	H	n-ØL	ØG	E	A	B	Open	Close
	2½	7.01	5.5	0.69	4-Ø.75	-	-	7.36	4.61	11.77	12.91
	DN65	7.28	5.71	0.88		4.65	0.12				
	3	7.5	6	0.75	8-Ø.75	-	-	8.19	3.86	12.28	13.62
	DN80	7.87	6.3	0.94		5.2	0.12				
	4	9.02	7.5	0.94	8-Ø.75	-	-	9.61	4.37	12.56	13.9
	DN100	8.66	7.09	0.75		6.14	0.12				
	5	10	8.5	0.94	8-Ø.91	-	-	12.01	5.51	16.1	18.11
	DN125	9.84	8.27	0.75	8-Ø.75	7.24	0.12				
	6	11	9.5	1	8-Ø.91	-	-	14.13	6.61	17.76	20.00
	DN150	11.22	9.45	0.75		8.31	0.12				
	8	13.5	11.75	1.12	8-Ø.91	-	-	18.94	9.17	24.09	27.44
	DN200	13.39	11.61	0.79		12-Ø.91	10.47				
	10	16	14.25	1.18	12-Ø1.02	-	-	20.31	9.76	27.44	31.46
	DN250	15.55	13.78	0.87	12-Ø.91	12.56	0.12				
	12	19	17	1.25	12-Ø1.02	-	-	24.06	14.02	33.94	38.62
	DN300	17.52	15.75	0.96	12-Ø.91	14.57	0.16				
		18.11	16.14	0.96	12-Ø1.1						

\*See next page for measures in millimeters.



No.	Name	Qty.	Material
1	Lower Body	1	DI
2	O Ring	1	NBR/EPDM
3	Seat	1	Casting Brass
4	Disc	1	CI+EPDM
5	Spring	1	SS302
6	Upper Body	1	DI
7	Disc Shaft	1	SS410
8	Shaft Nut	1	Brass
9	Shaft	1	SS410
10	Packing	3	Graphit
11	Gland	1	SS410
12	Accessories	1	Plastic
13	Accessories	1	Plastic
14	Bolt & Nut	8	WCB
15	Plug/Testing Point	4	WCB/HPb59-1

## Technical

Pressure:

861.25 kPa - 1033.5 kPa

124.88 PSI - 149.82 PSI

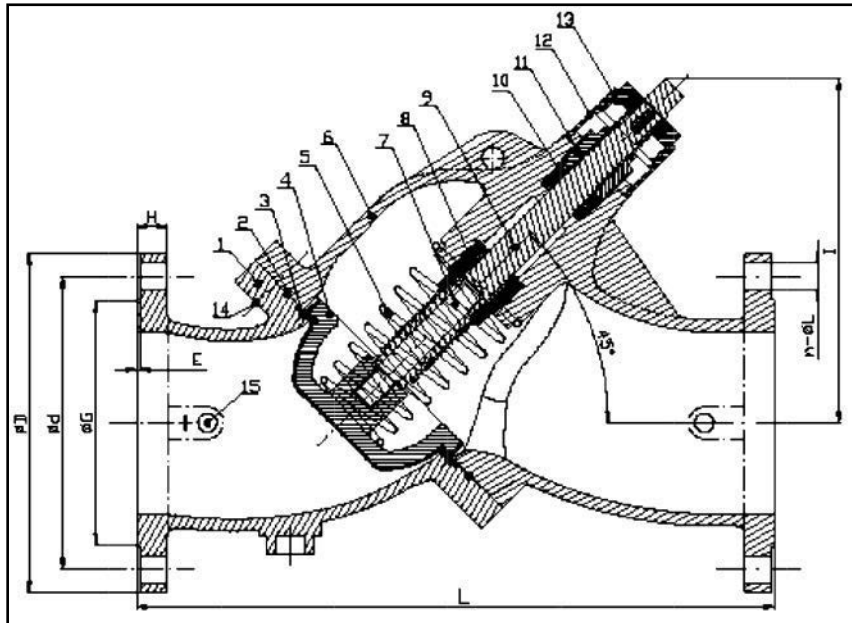
ANSI B16.1

☐ PN10 : 125-150 lbs

☐ PN16 : 225-250 lbs

√	SIZE	Dimensions (mm)									
		Ø D	Ø d	H	n-ØL	ØG	E	A	B	Open	Close
	2½	178	139.7	17.6	4-Ø19	-	-	187	117	299	328
				22.4							
	DN65	185	145	19	8-Ø19	118	3	208	98	312	346
	3	190.5	152.4	19.1		-	-				
	DN80	200	160	19	8-Ø19	132	3	244	111	319	353
	4	229	190.5	24		-	-				
	DN100	220	180	19	8-Ø23	156	3	305	140	409	460
	5	254	215.9	23.9		-	-				
	DN125	250	210	19	8-Ø23	184	3	359	168	451	508
	6	279.4	241.3	25.5		-	-				
	DN150	285	240	19	8-Ø23	211	3	481	233	612	697
	8	342.9	298.5	28.5		-	-				
	DN200	340	295	20	8-Ø23	266	3	516	248	697	799
					12-Ø23						
	10	406.4	362	30	12-Ø26	-	-	611	356	862	981
	DN250	395	350	22	12-Ø23	319	3				
			405	355	22	12-Ø28	-	-			
	12	482.6	431.8	31.8	12-Ø26	-	-	370	4	611	356
	DN300	445	400	24.5	12-Ø23	370	4				
			460	410	24.5	12-Ø28	-	-			

\* See previous page for measures in inches.



No.	Name	Qty.	Material
1	Lower Body	1	DI
2	O Ring	1	NBR/EPDM
3	Seat	1	Casting Brass
4	Disc	1	CI+EPDM
5	Spring	1	SS302
6	Upper Body	1	DI
7	Disc Shaft	1	SS410
8	Shaft Nut	1	Brass
9	Shaft	1	SS410
10	Packing	3	Graphit
11	Gland	1	SS410
12	Accessories	1	Plastic
13	Accessories	1	Plastic
14	Bolt & Nut	8	WCB
15	Plug/Testing Point	4	WCB/HPb59-1

### Technical

Pressure:

861.25 kPa - 1033.5 kPa

124.88 PSI - 149.82 PSI

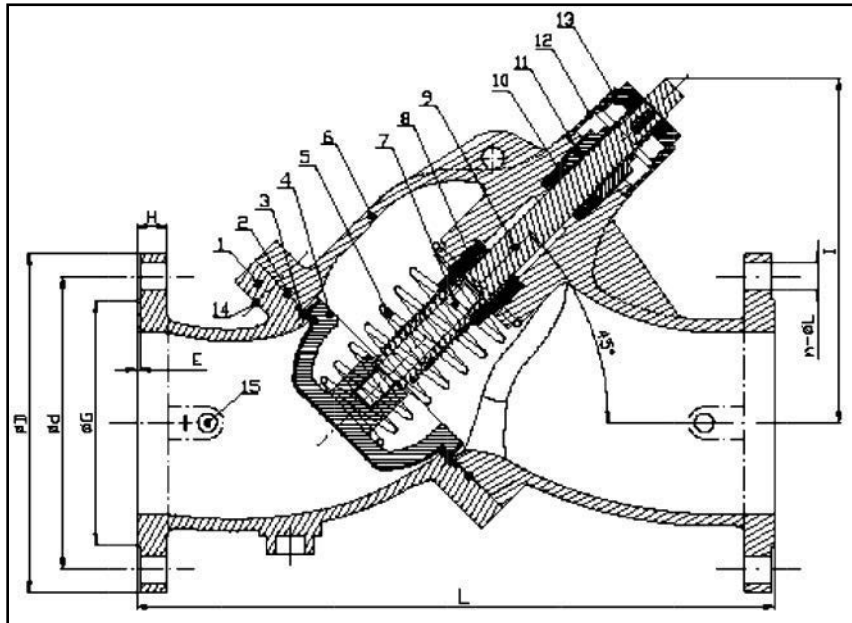
ANSI B16.1

PN10 : 125-150 lbs

PN16 : 225-250 lbs

√	SIZE	Dimensions (INCHES)								
		Ø D	Ø d	H	n-ØL	ØG	E	L	Open	Close
	2½	7.01	5.5	0.69	4-Ø.75	-	-	11.97	7.17	8.31
				0.88						
	DN65	7.28	5.71	0.75	4-Ø.75	4.65	0.12	12.01	8.43	9.76
	3	7.5	6	0.75		-	-			
	DN80	7.87	6.3	0.75	8-Ø.75	5.2	0.12	13.98	8.19	9.53
	4	9.02	7.5	0.94		-	-			
	DN100	8.66	7.09	0.75	8-Ø.91	-	-	17.52	10.55	12.56
	5	10	8.5	0.94						
	DN125	9.84	8.27	0.75	8-Ø.75	7.24	0.12	20.67	11.18	13.43
	6	11	9.5	1		-	-			
	DN150	11.22	9.45	0.75	8-Ø.91	8.31	0.12	28.19	14.92	18.27
	8	13.5	11.75	1.12		-	-			
	DN200	13.39	11.61	0.79	8-Ø.91	10.47	0.12	30	17.72	22.4
	10	16	14.25	1.18	12-Ø.91					
	DN250	15.55	13.78	0.87	12-Ø.91	12.56	0.12	38.07	19.96	24.65
		15.94	13.98	0.87	12-Ø.1.1					
	12	19	17	1.25	12-Ø1.02	-	-			
	DN300	17.52	15.75	0.96	12-Ø.91	14.57	0.16	38.07	19.96	24.65
		18.11	16.14	0.96	12-Ø1.1					

\*See next page for measures in millimeters.



No.	Name	Qty.	Material
1	Lower Body	1	DI
2	O Ring	1	NBR/EPDM
3	Seat	1	Casting Brass
4	Disc	1	CI+EPDM
5	Spring	1	SS302
6	Upper Body	1	DI
7	Disc Shaft	1	SS410
8	Shaft Nut	1	Brass
9	Shaft	1	SS410
10	Packing	3	Graphit
11	Gland	1	SS410
12	Accessories	1	Plastic
13	Accessories	1	Plastic
14	Bolt & Nut	8	WCB
15	Plug/Testing Point	4	WCB/HPb59-1

### Technical

Pressure:

861.25 kPa - 1033.5 kPa

124.88 PSI - 149.82 PSI

ANSI B16.1

PN10 : 125-150 lbs

PN16 : 225-250 lbs

√	SIZE	Dimensions (mm)								
		Ø D	Ø d	H	n-ØL	ØG	E	L	Open	Close
	2½	178	139.7	17.6	4-Ø19	-	-	304	182	211
				22.4						
	DN65	185	145	19	8-Ø19	118	3	305	214	248
	3	190.5	152.4	19.1		-	-			
	DN80	200	160	19	8-Ø19	132	3	355	208	242
	4	229	190.5	24		-	-			
	DN100	220	180	19	8-Ø23	156	3	445	268	319
	5	254	215.9	23.9		-	-			
	DN125	250	210	19	8-Ø23	184	3	525	284	341
	6	279.4	241.3	25.5		-	-			
	DN150	285	240	19	8-Ø23	211	3	716	379	464
	8	342.9	298.5	28.5		-	-			
	DN200	340	295	20	8-Ø23	266	3	762	450	569
	10	406.4	362	30	12-Ø23					
	DN250	395	350	22	12-Ø23	319	3	967	507	626
		405	355	22	12-Ø28					
	12	482.6	431.8	31.8	12-Ø26	-	-			
	DN300	445	400	24.5	12-Ø23	370	4			
		460	410	24.5	12-Ø28					

\*See previous page for measures in inches.



### **Low Pressure Drop**

The multi-function valve streamlined design results in low pressure drop making it extremely energy efficient.

### **Control**

Greater range of control allows precise flow control versus On-Off throttling valves.

### **Positive Shut-Off**

Without valve chattering. These valves are positive shut-off valves, when using MFV valves, other types of valves are not required.

### **Calibrated Nameplate**

The multifunction valve allows you to return to the balance position after shutting it off.

### **Durability**

Bronze seat and disc with stainless steel stem construction ensure long life and reliability.

### **Design**

The multifunction valve is a double regulating, control and shut-off valve with a built in pressure drop measuring in-line flow. Balancing problems are quite evident in a system, like central air conditioning plants and in process heat exchangers. The MFV valve is a combination of a shut-off valve (gate / plug / ball / butterfly valve) plus a flow regulating (globe style valve), a flow measuring station. It is not merely a valve but a system control valve in itself. It provides a scientific basis for flow balancing in a system with database. The valves are used HVAC systems and other process applications wherever balancing is required. Balancing is done to improve the performance of a closed circuit, forced circulation water in the system for heating and cooling. Balancing makes the building provide the desired indoor climate under all operating conditions at minimum energy cost. Balancing is a matter of adjusting pressure drops to get the precise required flow of water in a circuit. Balancing reduces energy costs by almost 10% to 40% by reducing average temperature in a heating system and increasing average temperature in a cooling system with less energy for pumping. Replacing three valves with one MFV-F (flange) or MFV-G (grooved) valves can dramatically reduce your up-front material and labor costs.

### **Spring Loaded Clapper**

Allows the Multifunction valve to be installed horizontally or vertically upward. In-line

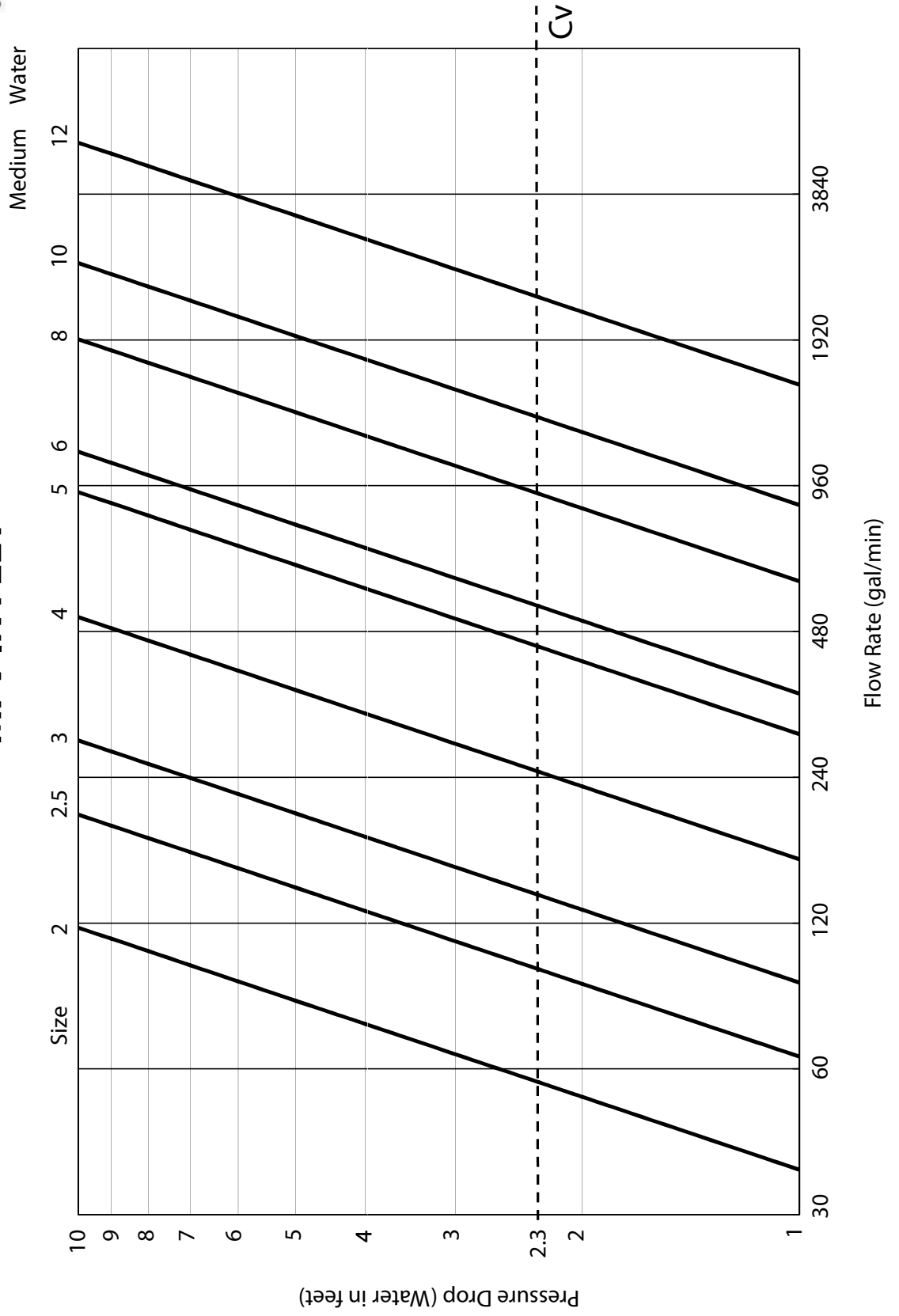
### **Serviceability**

Allows easy maintenance and replacement without disturbing the piping.

### **Benefits**

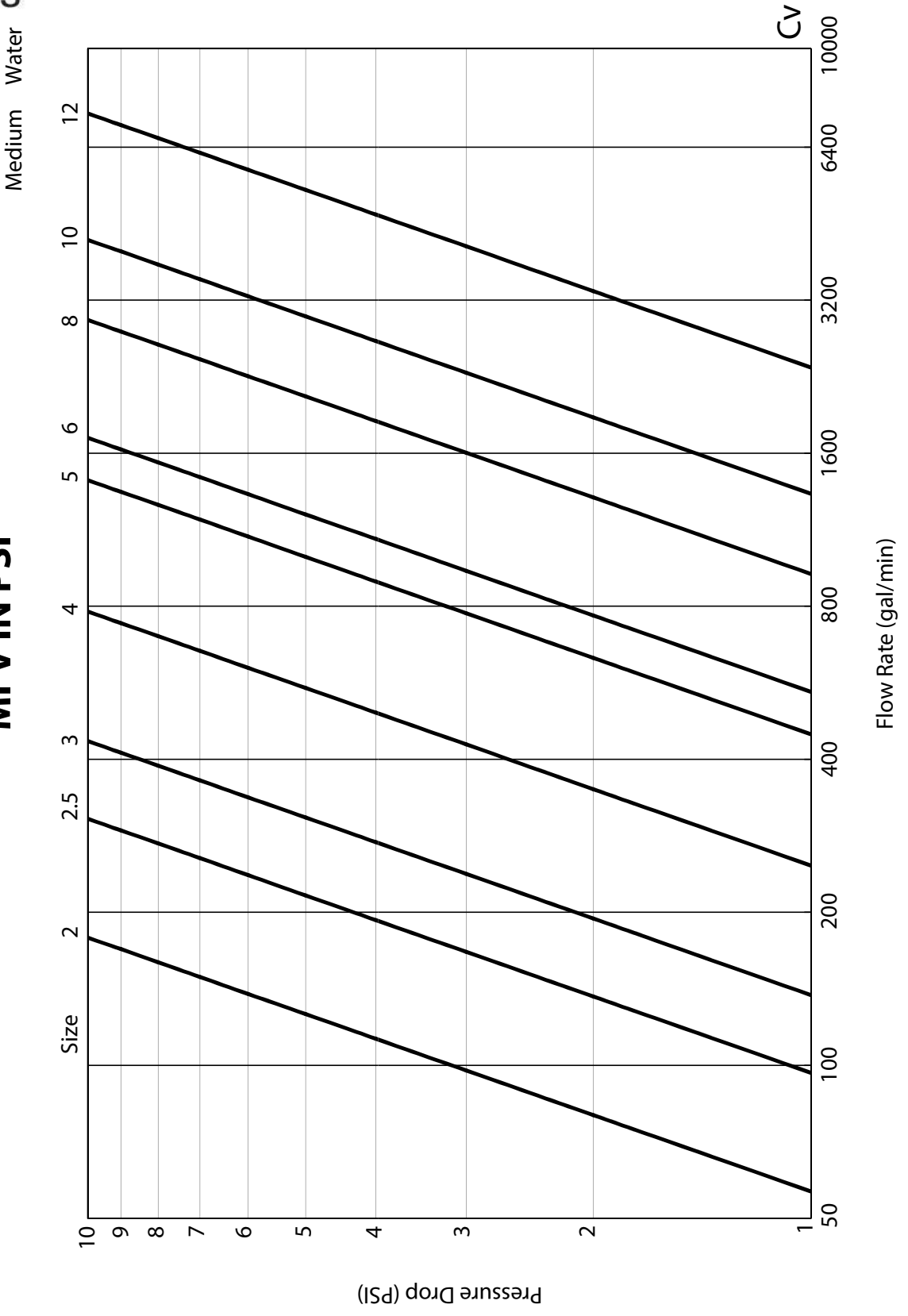
1. Using a multifunction valve avoid user's complaints with unbalanced heating or cooling systems in different parts of the building.
2. Easy correction of system design and installation errors.
3. Better accuracy of flow measurement.
4. Economic; system components like boilers chillers don't have to be oversized for possible errors and varying conditions. A balanced system only needs the actually required flows which is usually less than system when not balanced.

## MFV IN FEET



NOTE: MULTIFUNCTION VALVES PROVIDES REGULATION AND FLOW MEASUREMENT WITHIN ACCURACY OF +-5%

**MFV IN PSI**



NOTE: MULTIFUNCTION VALVES PROVIDES REGULATION AND FLOW MEASUREMENT WITHIN ACCURACY OF +-5%