

Series 43 Feature

General:

Series 43 V-Notch ball valve is exclusively designed for excellent proportional control as much as glove type control valves. Series 43 have special shape of disc which is suitable for accurate throttling control not only general fluids but also critical condition in slurry, gummy, fibrous material and other fluids having special characteristics.

Performance:

- High Cv body size ratio.
- Controls through 90°rotation.
- High Cv to valve weight ratio compared conventional control valves.
- Excellent flow control range ability.

Design flexibility:

- Swing through and tight shut-off seated trim designs.
- Modular construction design available.
with arrange of different end connections and style.
- Full range of body and trim material options,
with available of hard facings
- Seat change ability
- Dual characteristics.
- Double-eccentric disc options.
- Self-centering and tight seating.

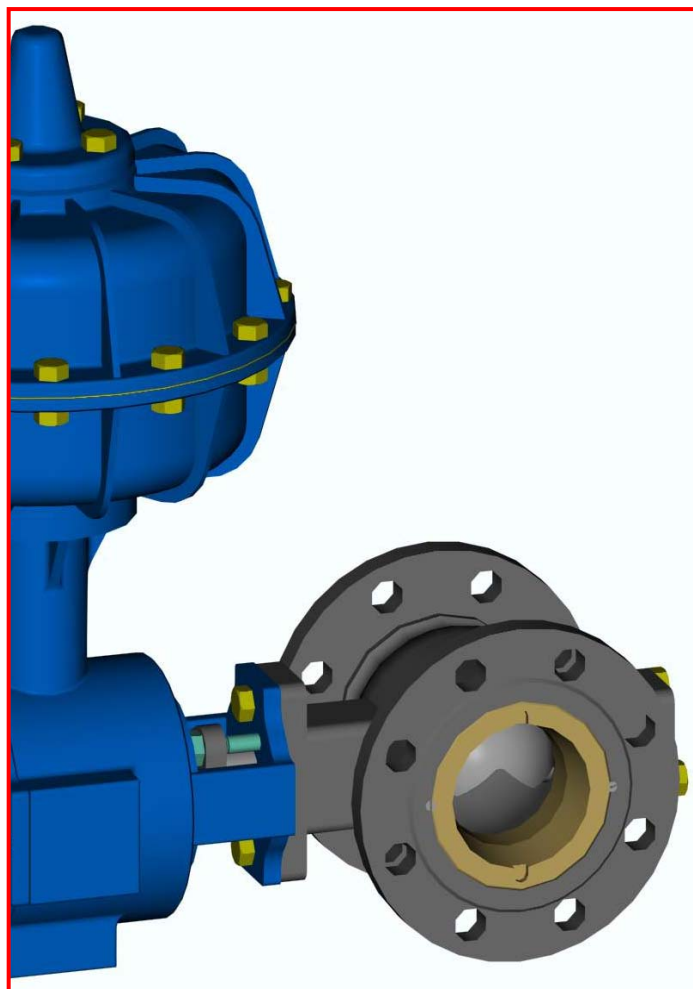


Figure 1. Series 43 V-notch Valve

Maximum Leakage rates:

Soft seat : Class VI
Laminated seat : Class V
Metal seat : Class IV

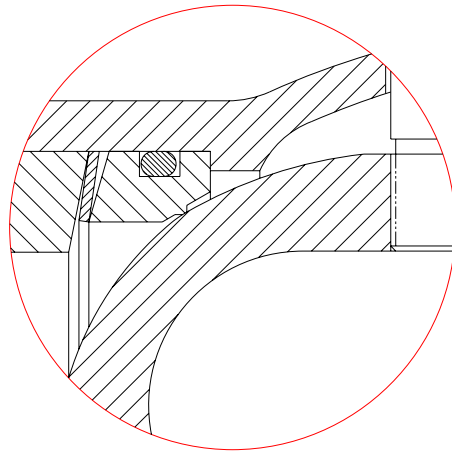
Actuation:

Various types of actuation are available including Series 43 spring opposed pneumatic diaphragm, series 43 spring opposed pneumatic piston cylinder, series 43 double acting pneumatic piston cylinder. In addition electric, electro-hydraulic and manually operated version are available

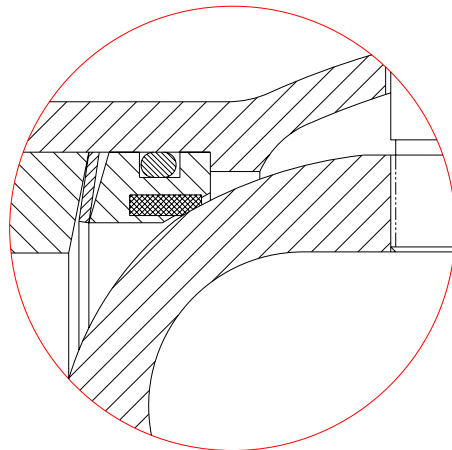
Standard Material of Construction :

Body : Carbon Steel (ASTM A216 WCB)
Stainless Steel (ASTM A351 CF8, CF8M)
Segmented ball : Stainless Steel (ASTM A351 CF8, CF8M)
Seat * Soft : Teflon, Reinforced teflon
* Laminate : Stainless steel (316L)
* Metal : Stainless steel (304ss, 316ss.) with
stellite
Stem : Stainless Steel (316 S.S. 17-4PH)
Inboard Bearing : Stainless Steel/Teflon
Packing : Teflon Fiber
Graphite
Other materials : Combinations are available to suit more arduous or
Corrosion resistant duties. Please contact our factory.

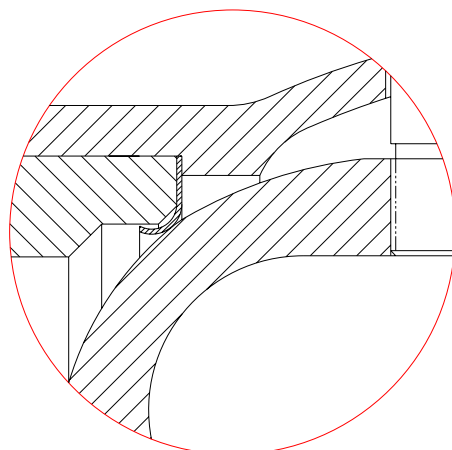
Flow characteristics : Inherent Equal percentage, Linear



Metal Seat



Soft Seat



Laminate Seat

Flow Coefficient (Cv)

The value detailed in the table are stated in U.S. Units.

The Figures by definition are related to the flow of water(SG = 1)

Through the valve in U.S. Gallons per minute with a pressure drop of 1 lb/in²

Table 1. Equal Percentage Characteristics.

Valve Size Inch mm	Reactive Travel %					
	10	30	50	70	90	100
1 25	0.32	1.5	4.9	9.8	21.0	27
1½ 40	0.81	5.00	14.0	26.5	53	79.0
2 50	1.27	7.80	21.0	39.5	78.5	130
2½ 65	2.95	12.9	33.25	64.5	133	215
3 80	3.88	17.5	47.4	90.6	185	300
4 100	4.05	28.5	77.2	150	285.9	473
5 125	7.05	40.5	105.5	210.5	411	675
6 150	12.8	52.6	134	258	525	860
8 200	16.3	85.5	220	430	855	1400
10 250	25.7	132	340	670	1330	2200
12 300	33.6	192	477.5	955	1910	3150

Figure 6. Characteristic Curve.

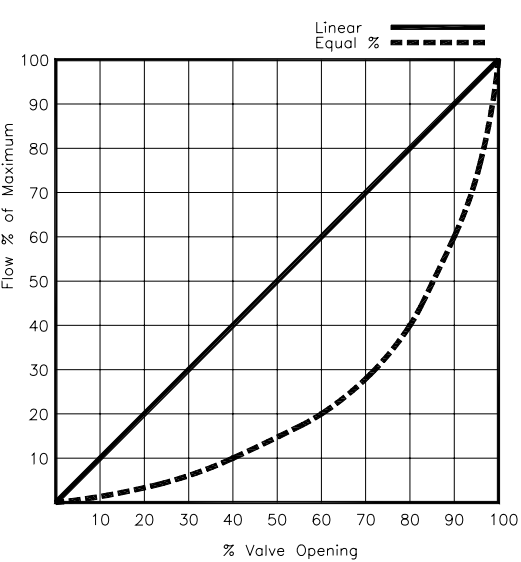


Table 2. Linear Characteristics.

Valve Size Inch mm	Reactive Travel %					
	10	30	50	70	90	100
1 25	4.91	13.82	22.73	31.64	40.55	45
1½ 40	11.99	33.77	55.55	77.33	99.11	110
2 50	19.62	55.26	89.90	126.54	162.18	180
2½ 65	21.80	61.40	101.00	140.60	180.20	200
3 80	45.78	128.94	212.10	295.26	378.42	420
4 100	67.58	190.34	313.10	435.86	558.62	620
5 125	100.28	282.44	464.60	646.76	828.92	920
6 150	137.34	386.82	636.30	885.78	1135.26	1260
8 200	221.27	623.21	1025.15	1428.09	1829.93	2030
10 250	349.89	985.47	1621.05	2258.63	2892.21	3210
12 300	488.32	1375.36	2262.40	3149.44	4036.48	4480

ΔP LIMITATION FOR V-NOTCH BALL VALVE**A0-5500 ROTARY DIAPHRAGM ACTUATOR**SUPPLY AIR : 4.0 kgf/cm²G.SPRING RANGE : 1~3 kgf/cm²G.

SIZE		PRESSURE (kgf/cm2G)			
Inch	mm				
1	25				
1.1/2	40				
2	50			32	
2.1/2	65	17	30	T-3	
3	80				
4	100			25	42
5	125				
6	150				
8	200				
10	250				
12	300				
14	350				

ΔP LIMITATION FOR V-NOTCH BALL VALVE

A0-3900 SPRING RETURN CYLINDER ACTUATOR (Air To Open)

SUPPLY AIR : 5.0 kgf/cm2G.

SPRING RANGE : 2~3 kgf/cm2G.

SIZE		PRESSURE (kgf/cm2G)			
Inch	mm	10	20	30	40
1	25			28	48
1.1/2	40	AC08S 13	22	AC10S	
2	50	12	AC10S	28	
2.1/2	65	AC10S	14	AC13S	AC15S 41
3	80	11		29	35
4	100	AC15S	18	AC17S	28
5	125	AC17S	17	AC20SD	30
6	150	AC17SD	14	AC25SD	27
8	200	AC20SD 6	AC25SD 15		
10	250	AC25SD	8	AC30SD	
12	300	5			
14	350				

ΔP LIMITATION FOR V-NOTCH BALL VALVE

A0-3900 SPRING RETURN CYLINDER ACTUATOR (Air To Close)

SUPPLY AIR : 5.0 kgf/cm2G.

SPRING RANGE : 2~3 kgf/cm2G.

SIZE		PRESSURE (kgf/cm2G)			
Inch	mm	10	20	30	40
1	25				
1.1/2	40		21	AC08S	34
2	50		11	18	AC10S
2.1/2	65	9	AC10S		32
3	80		11	16	AC13S
4	100	9	AC15S	18	
5	125	AC15S 5	12	AC17S	AC17SD
6	150		11	AC20SD	31
8	200	AC17SD	14	AC25SD	33
10	250	9		20	AC30SD
12	300	AC25SD	12		
14	350				

Figure 7. Series 43 V-Notch Ball Valves ANSI Class 150 – 300(PN20 – PN50), with Diaphragm Actuator.

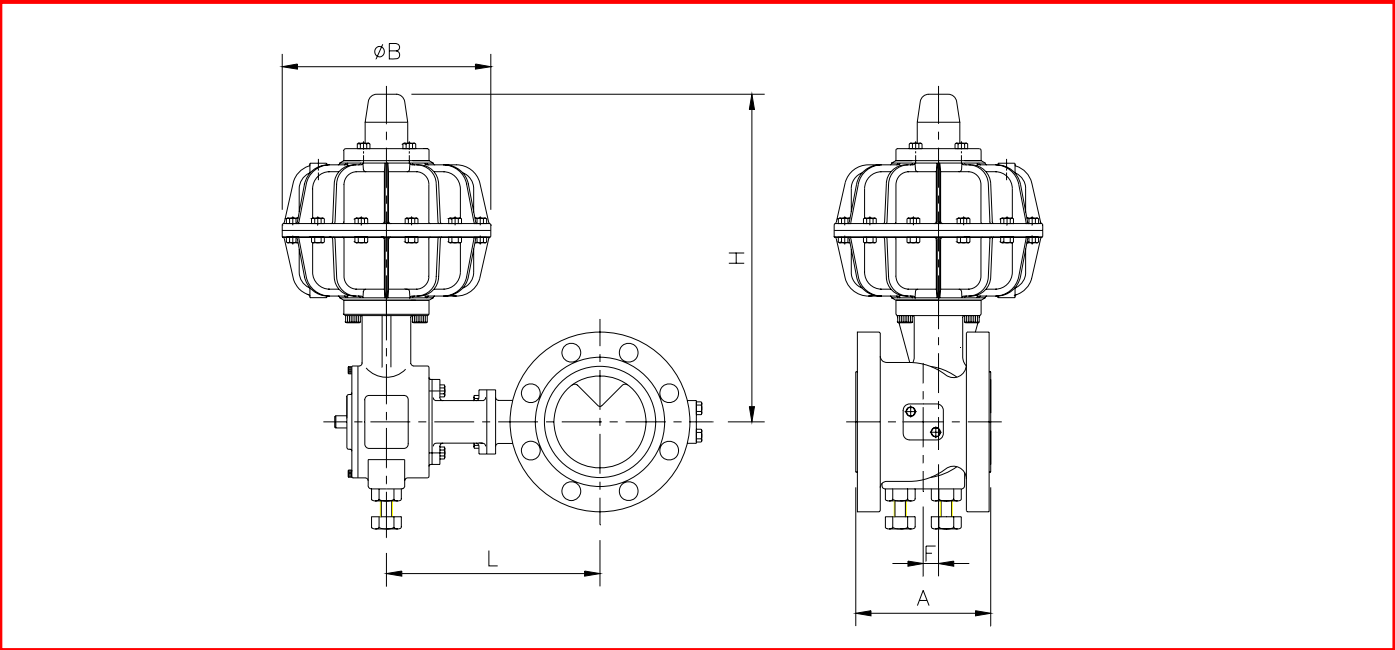


Table 5. Dimension.

Unit: mm

Valve Size Inch	mm	ANSI 150# RF	(B	F	H	L	Actuator Size
1	25	102	280	19	426	218	T - 2
1.1/2	40	114	280	19	426	228	T - 2
2	50	124	280	19	426	233	T - 2
2.1/2	65	143	280	19	426	243	T - 2
3	80	165	330	25	522	285	T - 3
4	100	194	330	25	426	295	T - 3
5	125	213	330	25	426	320	T - 3
6	150	229	400	50	760	390	T - 4
8	200	243	400	50	760	425	T - 4
10	250	297	500	50	821	485	T - 5
12	300	338	500	50	821	505	T - 5

Figure 8. Series 43 V-Notch Valve Mounting Actuator Position

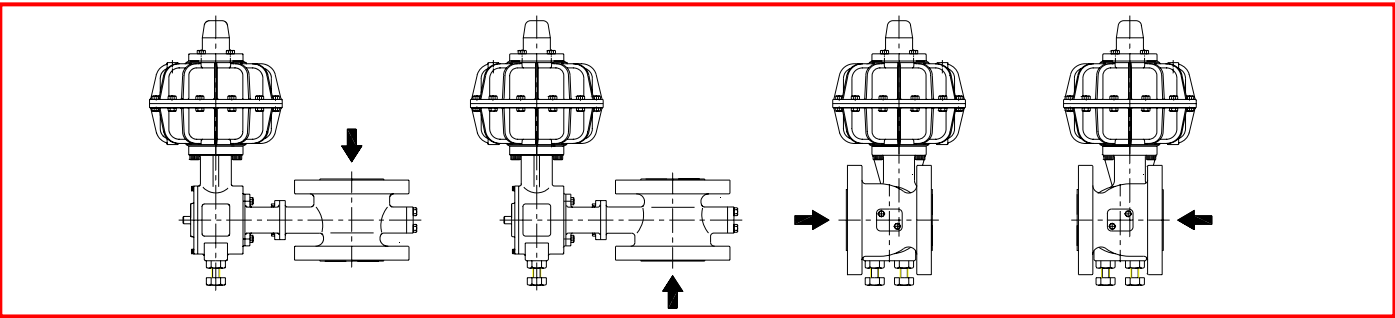


Figure 9. Series 43 V-Notch Ball Valves ANSI Class 150 – 300(PN20 – PN50), with Cylinder Actuator.

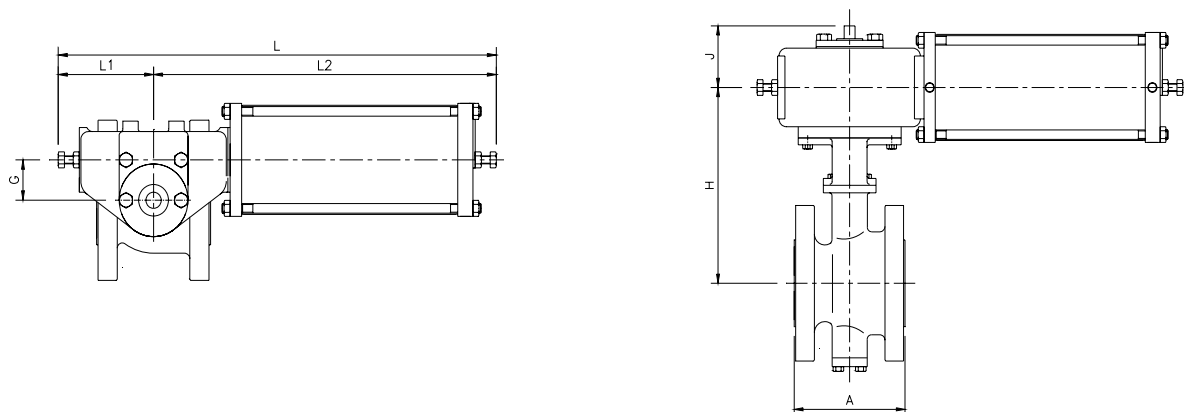


Table 6. Dimension.

Unit:mm

Valve Size Inch mm	Body			Cylinder Actuator				
	ANSI 150# RF	H	J	L	L1	L2	G	Size
1 25	102	243 243	77 77	381 481	123 123	258 358	34 34	AC08 AC08S
1.1/2 40	114	253 253	77 77	381 481	123 123	258 358	34 3.4	AC08 AC08S
2 50	124	258 258 262	77 77 85	381 501 683	123 123 164	258 378 519	34 34 50	AC08 AC10S AC13S
2.1/2 65	143	268 268 272 272	77 77 85 85	381 391 683 697	123 123 164 164	258 268 519 533	34 34 50 50	AC08 AC10 AC13S AC15S
3 80	165	278 282 282	77 85 85	391 683 697	123 164 164	268 519 533	34 50 50	AC10 AC13S AC15S
4 100	194	288 317 317 317	77 85 85 85	391 521 693 697	123 164 164 164	268 357 519 533	34 50 50 50	AC10 AC13 AC13S AC15S
5 125	213	342 342 342	85 85 85	521 693 697	164 164 164	357 519 533	50 50 50	AC13 AC13S AC15S
6 150	229	397 397 397	85 85 85	521 693 697	164 164 164	357 519 533	50 50 50	AC13 AC13S AC15S
8 200	243	432 432 518 518	85 85 85 129	521 521 697 834	164 164 164 204	357 357 533 630	50 50 50 71	AC13 AC15 AC15S AC17S
10 250	297	492 578 578 578	85 129 129 129	521 674 834 866	164 204 204 204	357 470 630 662	50 71 71 71	AC15 AC17 AC17S AC20S
12 300	338	512 598 598 598	85 129 129 129	521 674 834 866	164 204 204 204	357 470 630 662	50 71 71 71	AC15 AC17 AC17S AC20S

Figure 10. Series 43 V-Notch Ball Valves DIMENSION TABLE

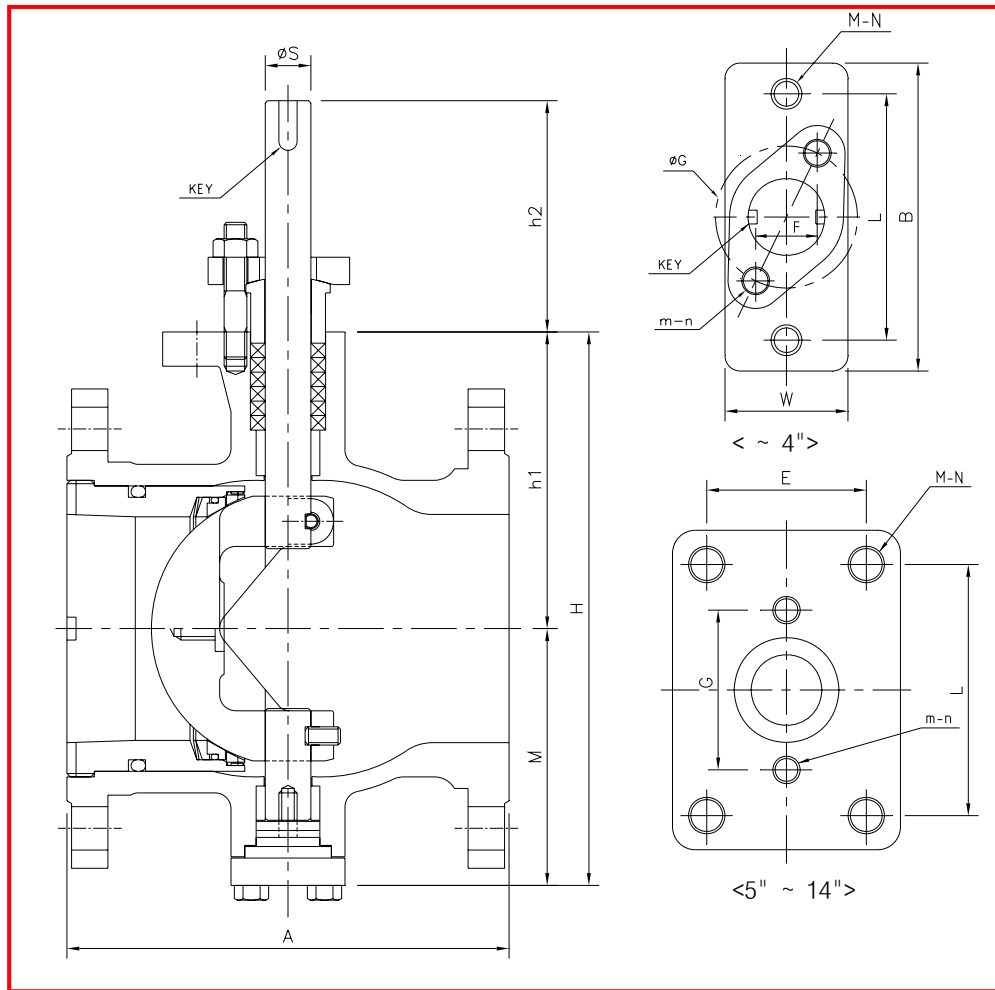


Table 7. Dimension.

SIZE	A	h1	h2	M	H	ØS	KEY	W	B	L	E	N-M	F	ØG	n-m
1" 25A	102	85.5	70	65	150.5	15	5x5	40	100	80	-	2-M10	20	46	2-M8
1 1/2" 40A	114	95	70	70	165	15	5x5	40	100	80	-	2-M10	20	46	2-M8
2" 50A	124	100	70	85	185	15	5x5	40	100	80	-	2-M10	20	46	2-M8
2 1/2" 65A	143	110	70	90	200	15	5x5	40	100	80	-	2-M10	20	46	2-M8
3" 80A	165	120	85	107	227	20	6x6	50	110	80	-	2-M12	30	55	2-M10
4" 100A	194	130	85	112	242	20	6x6	50	110	80	-	2-M12	30	55	2-M10
5" 125A	213	155	110	145	300	25	8x7	100	140	110	70	4-M16	-	60	2-M12
6" 150A	229	185	110	170	355	25	8x7	100	140	110	70	4-M16	-	60	2-M12
8" 200A	243	220	110	190	410	30	8x7	100	140	110	70	4-M16	-	60	2-M12
10" 250A	297	280	110	240	520	35	10x8	180	180	140	140	4-M16	-	80	2-M12
12" 300A	338	300	130	260	560	40	12x8	160	200	150	110	4-M20	90	-	2-M16
14" 350A	381	315	130	280	595	45	14x9	180	200	150	110	4-M20	100	-	2-M16