



Specifications

Sizes: 1/2" - 2"
Models: Socket, Threaded and Flanged
Operator: Manual Lever
Bodies: PVC
Seats: PTFE
Seals: EPDM or FKM

Type-21a SST Technology Flow Control Ball Valve

Standard Features (Sizes 1/2" - 2")

- PVC body
- EPDM or FKM seals
- True union design
- Equal percentage flow characteristics
- Precision machined flow control ball and seat design
- SST - Seat Support Technology
- Degreed indicator plate (manual type)
- Indicator line on handle (manual type)
- Flow direction arrow label
- Handle doubles as carrier adjustment tool
- ISO 5211 top flange bolt pattern
- Integrally molded base pad for panel mounting
- Dual stem O-rings

Options

- Electric actuation with 4-20 mA control
- Pneumatic actuation with 4-20mA control
- Stem extension
- 2" square operating nut

Parts List (Sizes 1/2" - 2")

PARTS			
NO.	DESCRIPTION	PCS.	MATERIAL
1	Body	1	PVC
2	Ball	1	PVC
3	Carrier	1	PVC
4	End Connector	2	PVC
5	Union Nut	2	PVC
6	Stem	1	PVC
7	Seat	2	PTFE
8	O-Ring (A)	2	EPDM or FKM
9	O-Ring (B)	1	EPDM or FKM
10	O-Ring (C)	1	EPDM or FKM
11	O-Ring (D)	2	EPDM or FKM
12	O-Ring (E)	2	EPDM or FKM
13	Stop Ring*	1	PVDF
14C	Handle	1	ABS
151	Indicator Plate	1	AES
63	Flow Direction Label	2	-

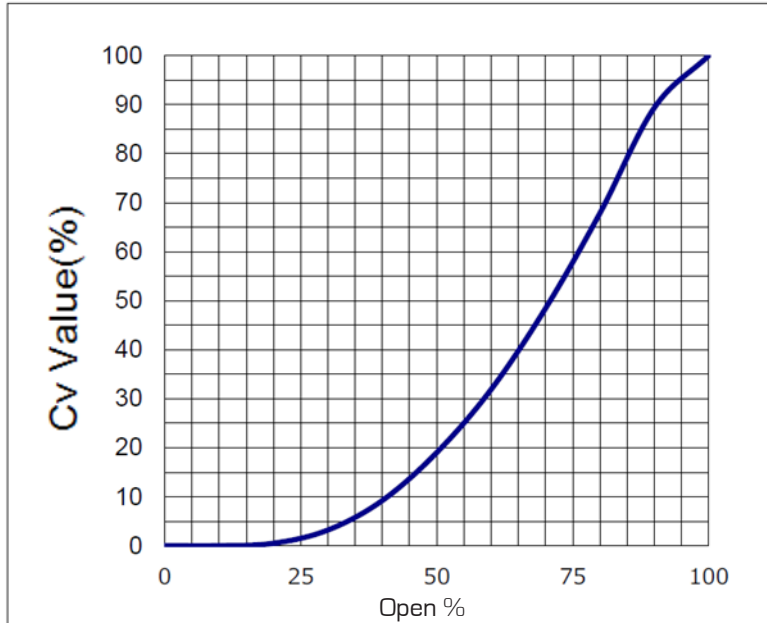
* Used for Flanged Ends



Type-21/21A SST Flow Control Ball Valves

Pressure Vs. Temperature

Nominal Size		30° F	71° F	106° F	121° F
Inches	mm	70° F	105° F	120° F	140° F
1/2" - 2"	15 - 50	230	170	150	30



Weight (Lbs.)

Nominal Size		PVC
Inches	mm	Soc/Thrd
1/2"	15	0.44
3/4"	20	0.66
1"	25	1.10
1-1/2"	40	2.45
2"	50	4.18



CV Value

Open %	VALVE SIZES				
	1/2"	3/4"	1"	1-1/2"	2"
0	0	0	0	0	0
10	0	0	0	0	0
20	0	0	0	0.5	1.4
30	0.2	0.1	0.3	2.2	4.5
40	0.3	0.8	1.5	4.9	10.0
50	0.9	1.9	3.0	9.2	17.3
60	1.9	3.2	5.0	14.8	27.0
70	3.0	5.1	7.9	21.0	39.0
80	4.2	7.2	11.6	29.8	53.8
90	5.3	9.0	15.8	40.0	70.7
100	5.5	9.6	18.0	46.0	81.0

% of CV Value

Open %	VALVE SIZES				
	1/2"	3/4"	1"	1-1/2"	2"
0	0	0	0	0	0
10	0	0	0	0	0
20	0	0	0	1	2
30	3	1	1	5	6
40	6	8	8	10	12
50	17	20	17	20	21
60	35	34	27	32	33
70	55	53	44	45	48
80	77	74	64	64	66
90	96	94	87	86	87
100	100	100	100	100	100

Position Indication from Closed to Open



0% Open



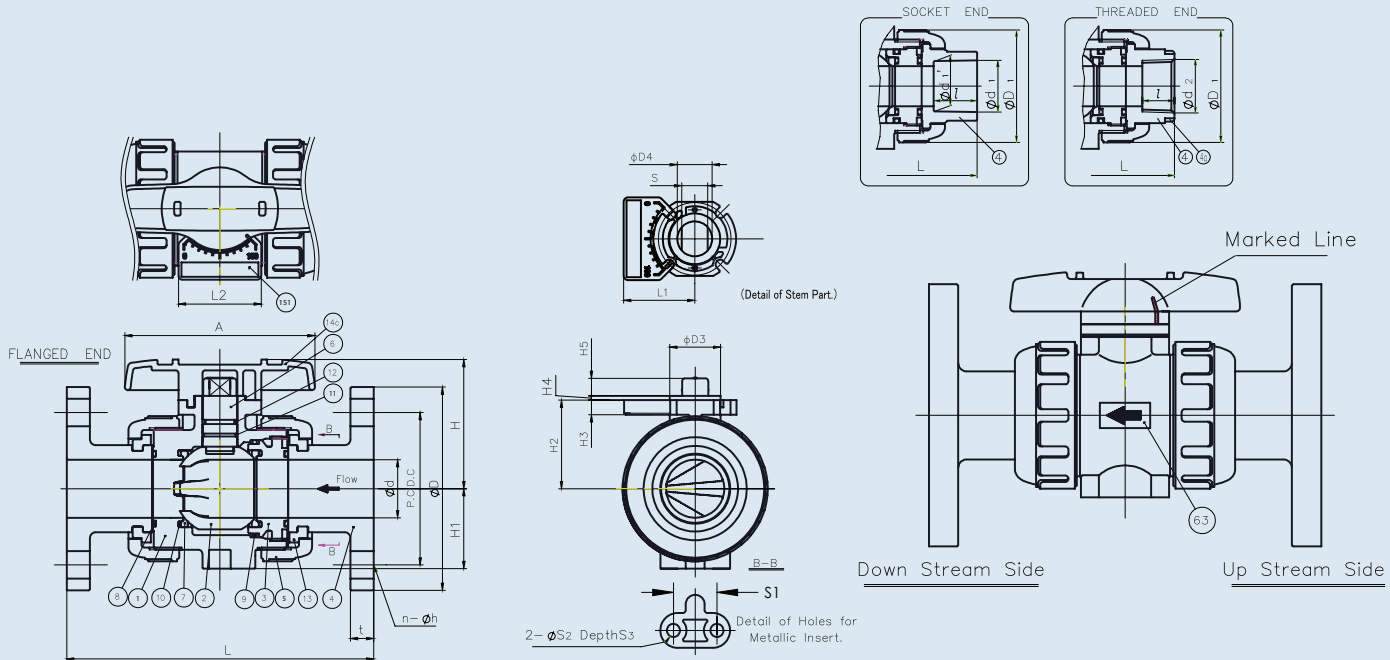
50% Open



100% Open

Type-21/21A SST Flow Control Ball Valves

NEW PRODUCT BULLETIN



Dimensions (Sizes 1/2" – 2") (in.)

NOMINAL SIZE		FLANGED						SOCKET				THREADED		
		ANSI CLASS 150						ASTM SCH 80						
INCHES	mm	D	C	n	h	L	t	d1	d2	l	L	d2	l	L
1/2	15	3.50	2.38	4	0.62	5.63	0.47	0.848	0.836	0.875	4.45	1/2 - 14NPT	0.59	4.02
3/4	20	3.88	2.75	4	0.62	6.77	0.55	1.058	1.046	1.000	5.08	3/4 - 14NPT	0.67	4.72
1	25	4.25	3.12	4	0.62	7.36	0.55	1.325	1.310	1.125	5.75	1 - 1-1/2 NPT	0.79	5.16
1-1/4	32	4.62	3.50	4	0.62	7.48	0.63	1.670	1.655	1.250	6.46	1-1/4 - 1-1/2 NPT	0.87	5.91
1-1/2	40	5.00	3.88	4	0.62	8.35	0.63	1.912	1.894	1.375	7.24	1-1/2 - 1-1/2 NPT	0.98	6.42
2	50	6.00	4.75	4	0.75	9.21	0.63	2.387	2.369	1.500	8.23	2 - 1-1/2 NPT	1.10	7.76

NOMINAL SIZE		d	L1	L2	D1	D3	D4	H	H1	H2	H3	H4	H5	A	S	S1	S2	S3
INCHES	mm	0.59	1.57	1.65	1.89	0.98	0.53	2.03	1.14	1.18	0.24	0.12	0.31	3.62	0.41	0.75	0.29	0.43
1/2	15	0.79	1.57	1.65	2.36	0.98	0.59	2.34	1.38	1.44	0.24	0.12	0.39	3.94	0.43	0.75	0.29	0.43
3/4	20	0.98	1.57	1.65	2.76	0.98	0.59	2.68	1.54	1.71	0.24	0.12	0.39	4.33	0.43	0.75	0.29	0.43
1	25	1.26	1.73	1.89	3.23	1.18	0.75	3.17	1.85	2.07	0.31	0.12	0.39	4.76	0.59	1.18	0.35	0.59
1-1/4	32	1.57	1.93	2.24	3.94	1.38	0.91	3.50	2.17	2.40	0.39	0.12	0.47	5.16	0.71	1.18	0.35	0.59
1-1/2	40	2.01	1.93	2.24	4.96	1.38	0.91	4.04	2.60	2.85	0.39	0.12	0.47	6.26	0.71	1.18	0.35	0.59
2	50																	

NOTE: The shape and appearance of assembly differ a little with nominal size and material compared to the above drawing

Type-21/21A SST Flow Control Ball Valves

Sample Specification

All SST Flow Control Type-21a ball valves sized 1/2" - 2" shall be of True-Union design with 2-way blocking capability. Specialized PTFE seats shall have elastomeric backing cushions to provide smooth even stem torque and to compensate for wear. Valve ball shall be machined with SST (Seat Support Technology) detail on downstream side of ball. Upstream side of ball shall be full bore opening. Valves shall feature molded ISO mounting top flange for actuation installation. Manual valve shall be equipped with AES (acrylonitrile ethylene styrene) position indication plate with 0% - 100% legend agreeing with white indication line on valve handle. Valve shall require directional installation and be equipped with flow direction arrow label. A panel mount feature on bottom of valve is provided and shall accept SS inserts to provide M5 (1/2" - 1") or M6 (1-1/2" - 2") threads for securing to panel, bracket or skid structure. The handle shall double as the spanner wrench for maintenance and carrier adjustment.

