

Cavity Free Ball Valves



SERIES: SL

SIZES: PVC, PP: 1/2" – 2"
PVC: 2-1/2" – 6"²

ENDS: Flanged, Socket, Butt³, Threaded

SEATS: PTFE

SEALS: FPM (Viton®), EPDM



4" & 6" Sizes



1/2" to 2" Sizes

Chemline **SL Series** Cavity Free Ball Valves are molded-in-place full port 1/2" to 6", available in PVC and PP with a polyethylene ball. The 6" size is a full port alternative to a 4" ball valve with ends increased to 6".

Features

No Cavity between Body and Ball

- The low dead volume eliminates sediment build-up and prevents larger particles from being trapped behind the ball

Abrasion Resistant⁴

- PE ball provides superior abrasion resistance

Full Port up to 6"

- Low Pressure Loss – 6" has Cv value of 1,878
- No Obstruction to Flow – No possible hang-up of debris – Suitable for lines where "pigging" is required

Compact Dimensions – Minimal flange face-to-face dimensions: 6" has 10-1/2" face-to-face length

- Will fit where other ball valves will not

Light Weight

- Easy installation
- Minimal stress on piping system

No Flange Gaskets Required for 2-1/2" to 6" sizes

- Flange face o-rings are included

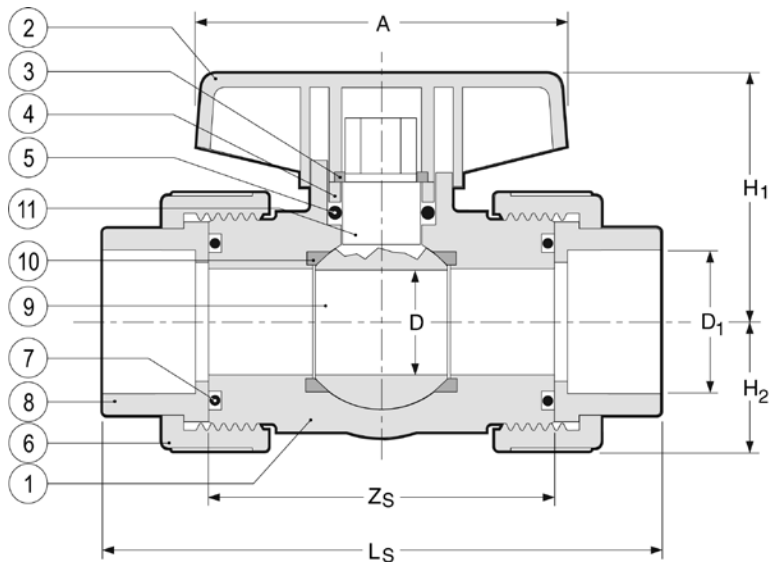
¹ All valves have PE ball

² ANSI flanges are standard for 4" and 6" valves, DIN flanges are standard for 2-1/2" and 3" valves

³ Butt ends for fusion to Chemline metric PP piping

⁴ Valve performance on slurries or abrasive services will depend on the particle size and hardness, pipe configuration and fluid velocity

SL Series Cavity Free Ball Valves 1/2" to 2"



PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body ¹	1	PVC, PP
2	Handle	1	PVC
3	Clip	1	PVDF
4	O-Ring Retainer	1	PP
5▲	Stem O-Ring	1	EPDM, FPM (Viton®)
6	Union Nut	2	PVC, PP
7	Face O-Ring	2	EPDM, FPM (Viton®)
8	End Connector	2	PVC, PP
9	Ball ¹	1	PE
10	Ball Seat ¹	1	PTFE
11	Stem ¹	1	PVC, PP

¹Parts are for identification only and cannot be replaced.

VACUUM RATING

- 29.9 inches mercury

DIMENSIONS INCHES

Size	D Bore	A	D ₁	H ₁	H ₂		Z _s	L _s	
					PVC	PP		PVC	PP
1/2"	0.53	2.36	0.79	1.65	0.81	0.90	2.52	4.02	3.90
3/4"	0.73	3.35	0.98	2.17	1.00	1.10	2.99	4.72	4.49
1"	0.93	3.35	1.26	2.17	1.14	1.30	3.19	5.16	4.84
1-1/4"	1.20	4.72	1.57	2.76	1.42	1.56	3.62	5.91	5.47
1-1/2"	1.52	4.72	1.97	2.76	1.57	1.71	3.74	6.42	5.83
2"	1.91	5.71	2.48	3.31	1.97	2.11	4.53	7.76	6.89

NET WEIGHTS LB.

C_v VALUES

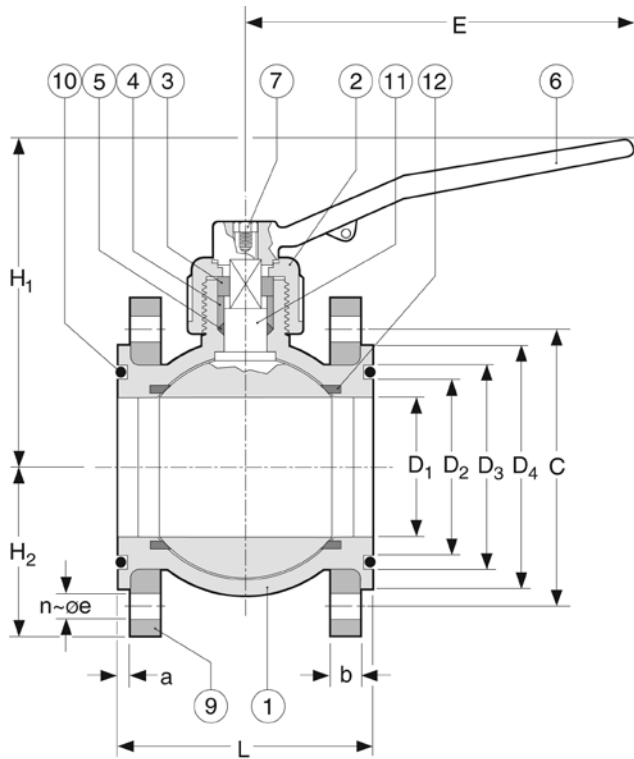
Size	Socket Valves		USGPM Flow at 1 psi ΔP
	PVC	PP	
1/2"	0.29	0.24	13
3/4"	0.53	0.46	25
1"	0.64	0.60	49
1-1/4"	1.21	1.06	70
1-1/2"	1.35	1.17	119
2"	2.32	1.90	217

WORKING PRESSURES PSI

Material	20°C	30°C	40°C	50°C	60°C	80°C
	68°F	86°F	104°F	102°F	140°F	176°F
PVC	145	101	58	29	14.5	–
PP	145	116	101	78	58.0	29

Temperature Ranges: PVC -10 to 60°C (14 to 140°F), PP 10 to 80°C (50 to 176°F)

SL Series Cavity Free Ball Valves 2-1/2" to 6"



PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body	1	PVC
2	Gland Nut	1	PVC
3	Travel Stop	1	PVDF
4	Gland	1	PVC
5▲	Stem O-Ring ¹	1	FPM (Viton®), EPDM
6	Hand Lever	1	Epoxy Coated Steel
7	Socket Head Bolt	1	304 SS
9	Flange ²	2	GRP ³
10	Face O-Ring ¹	2	FPM (Viton®), EPDM
11	Ball/Stem	1	PE/304 SS
12	Ball Seat	2	PTFE

¹ FPM (Viton®) is supplied standard

² ANSI flanges are standard for 4" and 6" valves, DIN flanges are standard for 2-1/2" and 3" valves

³ GRP=Glass reinforced polyester

VACUUM RATING

• 29.9 inches mercury

DIMENSIONS INCHES

Size	D ₁ Bore	D ₂	D ₃	D ₄	C	E	H ₁	H ₂	L	a	b	e	n
2-1/2"	2.5	3.1	3.6	4.8	5.7	12.6	7.5	3.6	5.4	0.2	0.7	0.7	4
3"	3.1	3.8	4.4	5.4	6.3	12.6	7.5	3.9	5.7	0.3	0.8	0.7	8
4"	3.7	4.5	6.2	5.2	7.1	12.6	8.7	4.3	6.6	0.3	0.8	0.7	8
6"	5.9	6.8	7.5	7.9	9.4	18.9	11.2	5.6	10.5	0.4	1.1	0.9	8

NET WEIGHTS LB. WORKING PRESSURES PSI

C_v VALUES

Size	Lbs.	20°C 68°F	30°C 86°F	40°C 104°F	50°C 102°F	60°C 140°F	USGPM Flow at 1 psi ΔP
2-1/2"	7.9	145	116	87	58	29	357
3"	9.3	145	116	87	58	29	498
4"	12.1	145	116	87	58	29	1,250
6"	25.6	87	72.5	58	43.5	29	1,878

Temperature Range: 0 to 60°C (32 to 140°F)

ORDERING EXAMPLE

Chemline SL Series Cavity Free Ball Valves	SL	A	060	E	F
Body Material	A – PVC B – PP				
Size	005 – 1/2" 007 – 3/4" 010 – 1" 012 – 1-1/4" 015 – 1-1/2" 020 – 2" 025 – 2-1/2" 030 – 3" 040 – 4" 060 – 6"				
Seals	E – EPDM V – FPM (Viton®) (Standard)				
Ends	1/2" to 2" – Socket, Threaded, Flanged, Butt ¹ 2-1/2" to 6" – Flanged (ANSI flanges are standard for 4" and 6" valves, DIN flanges are standard for 2-1/2" and 3" valves)				

Example: Chemline SL Series Cavity Free Ball Valve, PVC, 6" with EPDM seals, DIN flanged ends, PTFE seats.