



CHAMPION VALVES INC

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MODEL SDX™
SINGLE DISC

WAFER CHECK VALVE
EXTERNAL SPRING, LEVER, WEIGHT

FEATURES

- **Inlet Port** – The angular shape of the inlet port accelerates the line media through the valve
- **Conical Disc** – The disc’s angle and convex profile allows fluid to travel faster around the disc, creating lift. The velocity above the disc is higher than the velocity below, which also creates lift.
- **External Spring, Lever and Weight Assembly** – May be provided in Right- or Left-Hand configuration



DESIGN

EXTERNAL SPRING, LEVER & WEIGHT

- The adjustable tension spring provides additional external force to assist closure.
- The addition of an external Lever allows manual operation of the valve disc, for example, in back flush applications. It also provides a visual indicator of disc position.
- The weight and spring may be adjusted to increase both the cracking pressure and closing force to the disc.

SELECTION CHART

Size	Body	Disc	Seals	ASME Class
2" - 24"	316 SS (ASTM A351 CF8M)	316 SS	Integral Metal (except Ductile Iron)	150
	Carbon Steel (ASTM A216, Gr. WCB)	316 SS	Buna-N EPDM Viton®	
	Ductile Iron (ASTM A395 Gr. 60-40-18)	304 SS	Teflon® Others POA	

PARTS DESCRIPTION

Component	Material	Component	Material
(1) Body	DI or CS or 316 SS	(9) O-Ring	Rubber
(2) Disc	304/316 Stainless	(10) Pin	Stainless Steel
(3) Shaft	316 Stainless	(11) Plug	Body Material
(4) Spring	Stainless Steel	(12) Gasket	Nylon
(5) Bracket	Carbon Steel	(13) Set Screws	Alloy Steel
(6) Spring Adapter	Stainless Steel	(14) Nut	Alloy Steel
(7) Seat	Rubber	(15) Lever Arm	Ductile Iron
(8) Bushing	Bronze	(16) Weight Plate	Ductile Iron

Note: Optional component materials may be available.



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FIGURE NUMBER INFORMATION

Order Example: Specifications for 10" Champion Valves Single Disc Wafer Check Valve Style SDX, ASME Class 150, 316 Stainless Steel Body with 316 Stainless Steel Disc; Buna-N Seat; 316 Stainless Steel Spring; Plain Face End Connection; Right-Hand External Spring & Weight

SIZE	MODEL	PRESSURE CLASS		BODY	DISC	SEAT	SPRING		END CONNECTION	ACCESSORY
10	SDX	15	-	S	S	B	S	-	P	2

ORDER SYMBOL	SIZE	BODY & DISC	B/D	ORDER SYMBOL	SPECIFICATION	ORDER SYMBOL	SPRING	OPERATING TEMPERATURE		
2	2"	Carbon Steel	B	C	ASTM A216 Gr. WCB	S	316 SS	°C	°F	
3	3"	Ductile Iron	B	L	ASTM A395 Gr. 60-14-18			260	500	
4	4"	316 Stainless Steel	B/D	S	ASTM A351 Gr. CF8M					
6	6"	304 Stainless Steel	D	T	ASTM A351 Gr. CF8	ORDER SYMBOL	END CONNECTION			
8	8"					P	Plain Face			
10	10"					R	Serrated Raised Face			
12	12"	ORDER SYMBOL	SEAT	OPERATING TEMPERATURE				ORDER SYMBOL	ACCESSORY	
				°C		°F				
		MIN	MAX	MIN	MAX					
ORDER SYMBOL	MODEL	B	Buna-N	-57	120	-70	250	1	Right-Hand External Spring	
SDX	Single Disc Wafer	E	EPDM	-18	135	0	300	2	Right-Hand External Spring & Weight	
		H	Silicone	-40	204	-40	400	3	Right-Hand External Spring & Lever	
		L	Stellite®	-40	204	-40	400	4	Left-Hand External Spring	
		N	Neoprene®	-40	120	-40	250	5	Left-Hand External Spring & Weight	
		P	Integral Metal	-40	204	-40	400	6	Left-Hand External Spring & Lever	
		S	316 SS	-40	204	-40	400			
		T	Teflon®	-40	149	-40	300			
		V	Viton®	-40	204	-40	400			
PRESSURE CLASS	ORDER SYMBOL	150	15							
300	30									
600	60									

RATINGS AND DIMENSIONS

Dimensions			
ID	Face to Face		
NPS/IN	DN/MM	IN	MM
2	50	1 ¾	44.45
3	80	2	50.80
4	100	2 ¼	57.15
6	150	2 ¾	152.40
8	200	2 ¾	203.20
10	250	3 ¼	254.00
12	300	3 ½	304.80

Approximate weight and dimensions. Apply for certified drawings

Lever Information			External Weight Information		
Valve Size	Lever Weight (LBF)	Cracking Pressure (PSI)	Weight Kit	Item	Weight (LBF)
2"	0.227	0.50	A, B	A	0.06
3"	0.227	0.35	B, C, D	B	0.12
4"	0.227	0.29	D, E, F	C	0.28
6"	2.209	0.46	B, E, F	D	0.42
8"	2.209	0.33	F, G, H	E	0.85
10"	2.755	0.33	F, G, H	F	1.40
12"	2.755	0.29	G, I, J	G	3.50
				H	5.60
				I	7.78
				J	12.00

A weight kit is supplied with every valve. The smallest weight in the kit increases total cracking pressure to 0.5 psi. Subsequent weights increase cracking pressure to 0.75 psi and 1.00 psi. For example, for a 4" SDX valve, Weights D (0.50), E (0.75) & F (1.0) are supplied. Selecting Weight E results in a total cracking pressure of 0.75 psi. The 2" SDX initially has a cracking pressure of 0.5 psi, thus only including the weights for 0.75 psi and 1.00 psi cracking pressure.



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