

CHAMPION VALVES, INC.

SINGLE DISC SPRING LOADED WAFER CHECK VALVES

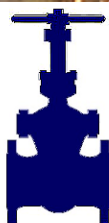
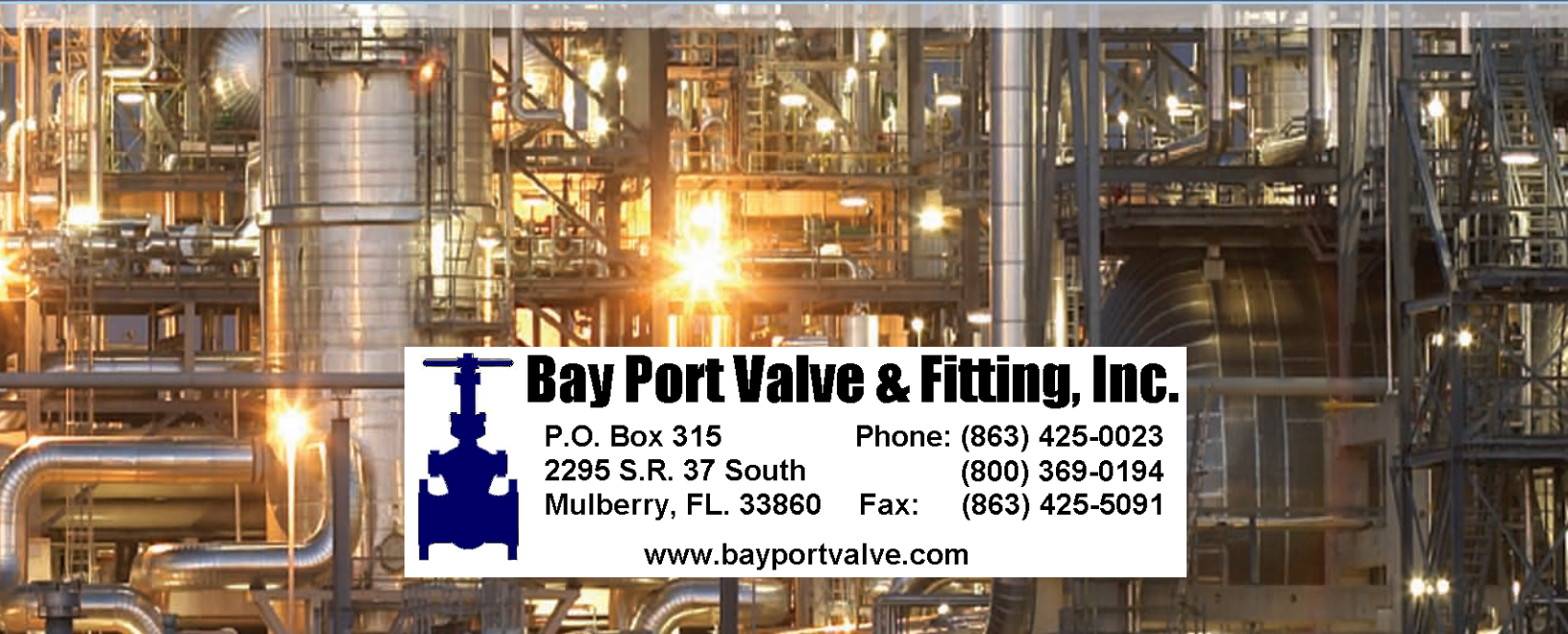
QUALITY PRODUCTS, SERVICE & RELIABILITY



CHAMPION WAFER CHECK VALVES · SIZE RANGE 2"– 48" · ASME CLASS 125 – 2500



MATERIALS: CAST IRON · CARBON STEEL · STAINLESS STEEL · ALLUMINUM BRONZE · ALLOY 20 · MONEL · NICKEL



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SINGLE DISC SPRING LOADED WAFER CHECK VALVES

FEATURES	BENEFITS
<ul style="list-style-type: none"> Light weight, versatile design — 80% to 90% less than conventional full-body swing check valves 	<ul style="list-style-type: none"> Simplifies piping Reduces thermal and seismic considerations Optimizes space utilization Lowers installation costs Reduces pipe supports Requires less number of man-hours
<ul style="list-style-type: none"> Single Disc opening 	<ul style="list-style-type: none"> Unobstructed flow Stable disc at lower flow velocities
<ul style="list-style-type: none"> Single integrated arm/disc assembly 	<ul style="list-style-type: none"> No shearing of disc from arm Non-rotating disc for longer life No nut to back-off disc stem
<ul style="list-style-type: none"> Spring-loaded disc calculated to increase the responsiveness of the disc 	<ul style="list-style-type: none"> Alleviates water hammer and resultant damaging effects
<ul style="list-style-type: none"> Elastomer o-ring seat secured in body with dove-tail groove 	<ul style="list-style-type: none"> Field replaceable seat Seat is out of the direct flow stream
<ul style="list-style-type: none"> Integrated body seat 	<ul style="list-style-type: none"> Seat will not come out of valve
<ul style="list-style-type: none"> Non-blow out shaft design 	<ul style="list-style-type: none"> Improved safety to personnel and surrounding equipment Complies with OSHA/EPA No. 550-97-002F Alert, "Shaft Blow-Out Hazard of Check and Butterfly Valves"
<ul style="list-style-type: none"> Outside mounted accessories externally supported 	<ul style="list-style-type: none"> Increased control of valve performance Long body seal life Enhanced fugitive emissions control

GENERAL APPLICATION

- General service piping systems
- Water, oil, gasoline
- Gas (compressible gases)
- Air (compressed air & blower)

INSTALLATION

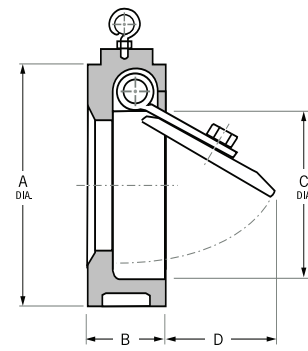
Champion wafer check valves are designed for installation in flanged piping systems, between two flanges. Valves may be installed in vertical or horizontal piping. Vertical up flow is always a good installation. Consult factory for vertical down flow.

To insure maximum service life it is recommended to have 5 pipe diameters of straight pipe in front of the valve and installed as shown on the following page.

INDUSTRY STANDARDS

- ASME B16.1, B16.5, B16.34, B16.47 and B31.1
- API 594 and 598
- MSS-SP-25, MSS-SP-55
- API 6A and 6D (as applicable)
- MSS-SP-61 (standard for the resilient seated, metal seated when required)

DIAGRAM



STYLE: SD

CLASS 125

Size in	A in	B in	C in	D in	Weight lbs	Cv GPM
2	4 ⁷ / ₈	1 ³ / ₄	2 ¹ / ₁₆	1 ³ / ₁₆	4	70
2 ¹ / ₂	4 ⁷ / ₈	1 ⁷ / ₈	2 ¹⁵ / ₃₂	1 ¹ / ₁₆	6	190
3	5 ³ / ₈	2	3 ¹ / ₁₆	1 ⁵ / ₈	9	225
4	6 ⁷ / ₈	2 ¹ / ₄	4 ¹ / ₃₂	2 ¹ / ₄	13	295
5	7 ³ / ₄	2 ¹ / ₂	5 ¹ / ₃₂	3	19	430
6	8 ³ / ₄	2 ³ / ₄	6 ¹ / ₁₆	3 ³ / ₄	24	700
8	11	2 ⁷ / ₈	7 ³ / ₃₂	4 ¹⁹ / ₃₂	32	1270
10	13 ³ / ₈	3 ¹ / ₈	10	6 ⁷ / ₁₆	58	2350
12	16 ¹ / ₈	3 ¹ / ₂	12	8 ¹ / ₈	85	3850
14	17 ³ / ₄	4 ¹ / ₄	13 ¹ / ₄	6 ³ / ₄	350	4250
16	20 ¹ / ₄	4 ¹ / ₄	15 ¹ / ₄	7 ³ / ₃₂	410	7000
18	21 ⁵ / ₈	4 ¹ / ₄	17 ¹ / ₄	9 ³ / ₈	450	9550
20	23 ³ / ₈	5 ¹ / ₂	19 ¹ / ₄	11 ⁷ / ₁₆	775	13000
24	28 ¹ / ₄	6	23 ¹ / ₄	15	925	25000

STYLE: SD & SDA (API 594)

CLASS 150

Size in	A in	B-SD in	B-SDA in	C in	D in	Weight lbs	Cv GPM
2	4 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈	2 ¹ / ₁₆	1 ³ / ₁₆	4	70
2 ¹ / ₂	4 ⁷ / ₈	1 ⁷ / ₈	-	2 ¹⁵ / ₃₂	1 ¹ / ₁₆	6	190
3	5 ³ / ₈	2	2 ⁷ / ₈	3 ¹ / ₁₆	1 ⁵ / ₈	9	225
4	6 ⁷ / ₈	2 ¹ / ₄	2 ⁷ / ₈	4 ¹ / ₃₂	2 ¹ / ₄	13	295
5	7 ³ / ₄	2 ¹ / ₂	-	5 ¹ / ₃₂	3	19	430
6	8 ³ / ₄	2 ³ / ₄	3 ⁷ / ₈	6 ¹ / ₁₆	3 ³ / ₄	24	700
8	11	2 ⁷ / ₈	5	7 ³ / ₃₂	4 ¹⁹ / ₃₂	32	1270
10	13 ³ / ₈	3 ¹ / ₈	5 ³ / ₄	10	6 ⁷ / ₁₆	58	2350
12	16 ¹ / ₈	3 ¹ / ₂	7 ¹ / ₈	12	8 ¹ / ₈	85	3850
14	17 ³ / ₄	4 ¹ / ₄	7 ¹ / ₄	13 ¹ / ₄	6 ³ / ₄	350	4250
16	20 ¹ / ₄	4 ¹ / ₄	7 ¹ / ₂	15 ¹ / ₄	7 ³ / ₃₂	410	7000
18	21 ⁵ / ₈	4 ¹ / ₄	8	17 ¹ / ₄	9 ³ / ₈	450	9550
20	23 ³ / ₈	5 ¹ / ₂	8 ⁵ / ₈	19 ¹ / ₄	11 ⁷ / ₁₆	775	13000
24	28 ¹ / ₄	6	8 ³ / ₄	23 ¹ / ₄	15	925	25000

CLASS 300

Size in	A in	B-SD in	B-SDA in	C in	D in	Weight lbs	Cv GPM
2	4 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈	2 ¹ / ₁₆	1 ³ / ₁₆	7	70
2 ¹ / ₂	5 ¹ / ₈	1 ⁷ / ₈	-	2 ¹⁵ / ₃₂	1 ¹ / ₁₆	10	190
3	5 ⁷ / ₈	2	2 ⁷ / ₈	3 ¹ / ₁₆	1 ⁵ / ₈	13	225
4	7 ¹ / ₈	2 ¹ / ₄	2 ⁷ / ₈	4 ¹ / ₃₂	2 ¹ / ₄	17	295
5	8 ¹ / ₂	2 ¹ / ₂	-	5 ¹ / ₃₂	3	30	430
6	9 ¹ / ₈	2 ³ / ₄	3 ⁷ / ₈	6 ¹ / ₁₆	3 ³ / ₄	53	700
8	12 ¹ / ₈	2 ⁷ / ₈	5	7 ³ / ₃₂	4 ¹⁹ / ₃₂	143	1270
10	14 ¹ / ₄	3 ¹ / ₈	5 ³ / ₄	10	6 ⁷ / ₁₆	58	2350
12	16 ⁵ / ₈	3 ¹ / ₂	7 ¹ / ₈	12	8 ¹ / ₈	210	3850

Approximate weights and dimensions – apply for certified drawings. Dimensions for valves with accessories and cracking pressures are available upon request.

FIGURE NUMBER INFORMATION

STYLES: SD AND SDA – SINGLE DISC WAFER BODY

ORDER EXAMPLE: Specifications for 6”(150mm), Champion Valves’ Single Disc Wafer Check Valve Style SD, ASME Class 150, 316 Stainless Steel Body with 316 Stainless Steel Disc; 316 Stainless Steel Seat; 316 Stainless Steel Spring; Raised Face End Connection with External Mounted Spring.

SIZE	STYLE	PRESSURE CLASS	BODY	DISC	SEAT	SPRING	END CONNECTION	ACCESSORY	MODIFICATION NUMBER
6"	SD	15	S	S	P	S	R	1	Assigned by Factory

STYLE
SD - Single Door Wafer
SDA - Single Door Wafer API 594

PRESSURE CLASS
12 = 125 Class
15 = 150 Class
30 = 300 Class
60 = 600 Class

BODY & DISC		
ORDERING LETTER	MATERIAL	SPECIFICATION
C	Carbon Steel	ASTM A216 Gr. WCB
L	Ductile Iron	ASTM A536 Gr. 65-45-12
S	316 Stainless Steel	ASTM A351 Gr. CF8M
T	304 Stainless Steel	ASTM A351 Gr. CF8

SEAT			
ORDERING LETTER	MATERIAL	OPERATING TEMPERATURE	
		°C	°F
B	Buna-N®	- 57 to 120	- 70 to 250
E	EPDM	-18 to 135	0 to 300
H	Silicone	-18 to 260	0 to 500
J	410 SS	- 267 to 537	- 450 to 1000+
L	Stellite®	-267 to 537	- 450 to 1000+
N	Neoprene®	- 40 to 120	- 40 to 250
P	Integral Metal	- 267 to 537	- 450 to 1000+
S	316 SS	- 267 to 537	- 450 to 1000+
T	Teflon®	- 40 to 149	- 40 to 300
V	Viton®	- 40 to 204	- 40 to 400

SPRING			
ORDERING LETTER	MATERIAL	OPERATING TEMPERATURE	
		°C	°F
S	316 SS	260	500
X	Inconel® X-750	593	1100

END CONNECTION	
ORDERING LETTER	CONNECTIONS
P	Plain Face
R	Serrated Raised Face
J	Ring Joint

ACCESSORIES	
ORDERING LETTER	DESCRIPTION
None(Blank)	Internal Spring
1	External Spring
2	External Weight and Lever
3	Hydraulic Dampener



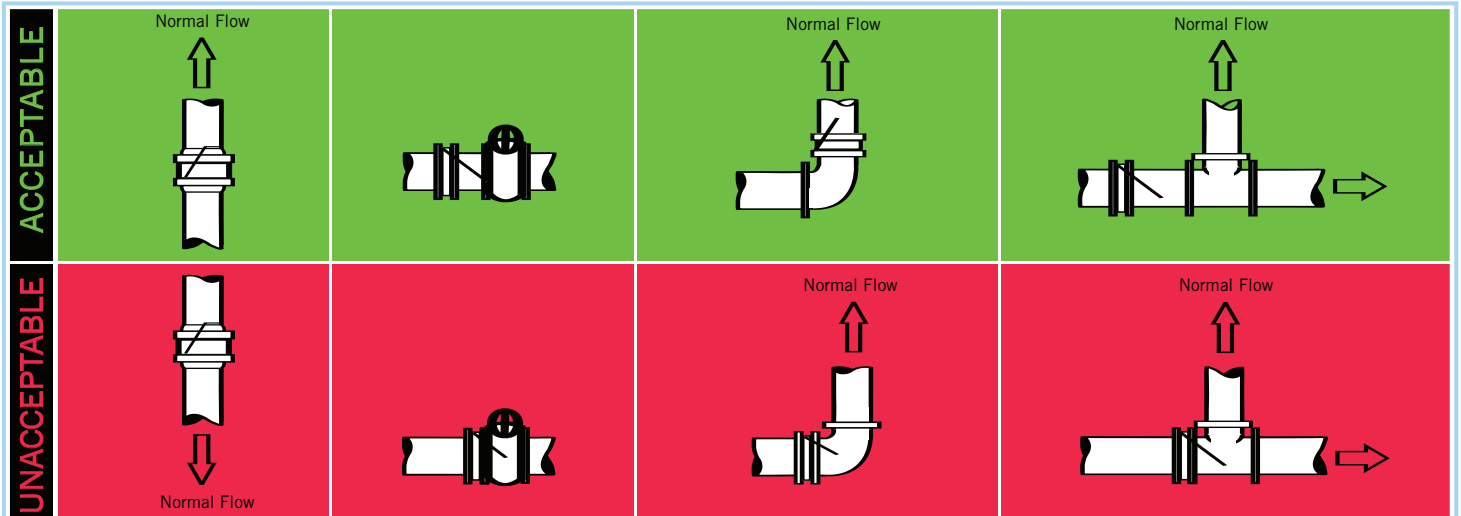
EXTERNAL SPRING



EXTERNAL WEIGHT & LEVER



HYDRAULIC DAMPENER



EXCEPTIONAL QUALITY, SERVICE & RELIABILITY



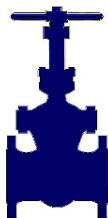
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REPRESENTED BY:



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