

Style DD

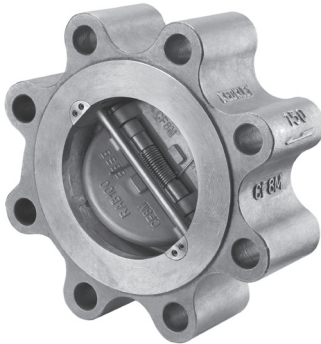
Cast Iron (ASTM A 126, Class B)
125 lb. Class

Carbon Steel (ASTM A 216, Grade WCB)
150 lb. Thru 1500 lb. Class

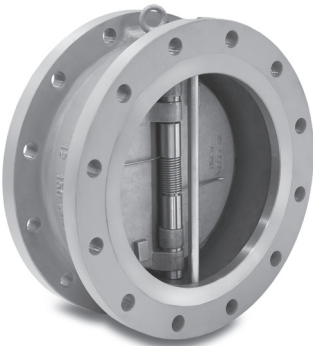
Stainless Steel (ASTM A 351, Grade CF8M)
150 lb. Thru 1500 lb. Class



Style DL



Style DF



Wafer Double Disc Check Valve

APPLICATIONS

Flow reversal solutions for Liquid and Gas applications where protection from flow reversal in a pipeline is required

CONSTRUCTION

Keckley Style DD wafer body double disc check valves are produced by the investment casting process. These castings are thoroughly inspected and machined to exacting specifications. Reference individual technical data pages for standard materials utilized in the construction of valve components.

FEATURES

- A short face-to-face dimension.
- The spring loaded double disc design creates a low cracking pressure and allows for the valve discs to close prior to any flow reversal minimizing water hammer and/or surges in the media.
- Tension on the specially designed spring with extended spring legs allows the disc center section to lift off the seat prior to the outside edge opening preventing seat wear in the center “heel” section of the seating surface.
- Standard elastomeric seats can produce zero leakage when correctly specified, loaded, and installed. Metal seating surfaces are precision machined and lapped to a mirror finish to provide a long lasting seal which meets or exceeds the API 598 leakage standard.
- Retainerless design check valves have no body penetrations eliminating potential leak paths.
- Allows for interchangeability of the hinge pin and stop pin.
- Epoxy coating is standard.
- Field serviceable without the need for special tools.

INSTALLATION

The Style DD can be installed in both vertical and horizontal applications. Contact Keckley for all downward vertical flow installations.

ORDERING

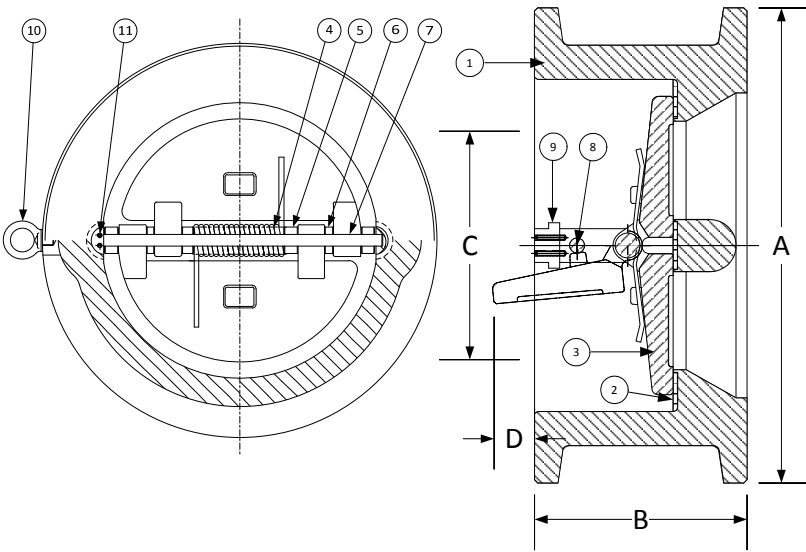
Reference page C2 for Keckley Check Valve Product Numbers.

WORKING PRESSURES - NON SHOCK

NOM. RATING	BODY MATERIAL	MEDIA	2" to 12"	14" to 24"
125#	CAST IRON (ASTM A 126, CLASS B)	W.O.G.	200 PSI @ 150°F	150 PSI @ 150°F
NOM. RATING	BODY MATERIAL	MEDIA	2" to 24"	
150#	CARBON STEEL (ASTM A 216, GRADE WCB)	W.O.G.	285 PSI @ 100°F	
	STAINLESS STEEL (ASTM A 351, GRADE CF8M)	W.O.G.	275 PSI @ 100°F	
NOM. RATING	BODY MATERIAL	MEDIA	2" to 24"	
300#	CARBON STEEL (ASTM A 216, GRADE WCB)	W.O.G.	740 PSI @ 100°F	
	STAINLESS STEEL (ASTM A 351, GRADE CF8M)	W.O.G.	720 PSI @ 100°F	

Style DD

Retainerless Wafer Body
Double Disc Check Valve, 600 lb.
Alloy 20 (ASTM A 351, Grade CN7M)



PARTS LIST		
ITEM	DESCRIPTION	MATERIAL
1	Body	Alloy 20 (ASTM A 351, Grade CN7M)
2	Seat	Viton O-Ring
3	Disc	Alloy 20 (ASTM A 351, Grade CN7M)
4	Spring	Inconel X-750
5	Spring Plate	Stainless Steel (ASTM A 182, Grade F-316)
6	Thrust Washer	Stainless Steel (ASTM A 182, Grade F-316)
7	Hinge Pin	Stainless Steel (ASTM A 182, Grade F-316)
8	Stop Pin	Stainless Steel (ASTM A 182, Grade F-316)
9	Locating Piece	Stainless Steel (ASTM A 182, Grade F-316)
10	Lifting Lug	Carbon Steel
11	Screw	Stainless Steel (316)

Above "Standard" Product Number – **DD5R-A2-A24IX**
Other Options - Reference **C2** for available materials.

SIZE		DIMENSIONS								WEIGHTS	
		A		B		C*		D			
in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs
2	50	4-3/8	111	2-3/8	60	1-15/16	49	-	-	7	3
2-1/2	65	5-1/8	130	2-5/8	67	2-11/32	60	1/8	3	11	5
3	80	5-7/8	149	2-7/8	73	2-29/32	74	1/4	6	15	7
4	100	7-5/8	194	3-1/8	79	3-53/64	97	7/8	22	26	12
5	125	9-1/2	241	4-1/8	105	4-13/16	122	1	25	50	23
6	150	10-1/2	267	5-3/8	136	5-49/64	146	1-7/16	36	80	36
8	200	12-5/8	321	6-1/2	165	7-5/8	194	2	51	135	61
10	250	15-3/4	400	8-3/8	213	9-9/16	243	2-9/32	58	238	108
12	300	18	457	9	229	11-3/8	289	3-15/32	88	333	151
14	350	19-3/8	492	10-3/4	273	12-1/2	318	2-3/4	70	455	206
16	400	22-1/4	565	12	305	14-5/16	364	4-5/16	110	640	290
18	450	24-1/8	613	14-1/4	362	16-1/8	410	3-11/16	94	890	404
20	500	26-7/8	386	14-1/2	368	17-15/16	456	5-5/16	135	1120	508
24	600	31-1/8	791	17-1/4	438	21-9/16	548	6-9/16	167	2040	925
30	750	38-1/4	972	19-7/8	505	28-3/4	730	9-9/16	243	3375	1531
36	900	44-1/2	1130	25	635	33-3/4	857	11-15/16	303	6300	2858
42	1050	48	1219	27-5/8	702	39-1/2	1003	14-1/4	362	8447	3832

*Minimum companion flange bore.

Sizes 30" and larger fit **Series A** flanges.

Seat Material	Operating Temperature**	
	°F	°C
Buna-N	-20 to 250	-29 to 121
Viton	-20 to 400	-29 to 204
EPDM	-40 to 300	-40 to 149

**Subject to limitations of body material.

Applicable Standards
• Design ASME B16.5
• Design ASME B16.34
• Testing API 598
• Conforms to API 594 & 6D
• MSS SP – 6
• MSS SP – 25
• MSS SP – 55

FLOW COEFFICIENTS						
Size	2"	2½"	3"	4"	5"	6"
C _v	48	98	170	290	495	720
Size	8"	10"	12"	14"	16"	18"
C _v	1800	2600	4300	5500	7200	9400
Size	20"	24"	30"	36"	42"	
C _v	12600	19000	37500	60000	89000	

PRESSURE DROP CHART

Wafer Double Disc Check Valve (Style DD, DL, and DF)

This pressure drop chart is based on the flow of clean water through the Keckley Double Disc Check Valve. The Keckley Style DD has a cracking pressure equal to or less than 0.3 psi when mounted horizontally. Check valves should be placed at a distance equal to 5 to 10 pipe diameters from any turbulence producing device such as elbows, pumps, etc.

TO USE CHARTS:

Find your desired rate of flow (GPM) on the left hand side of the chart. Follow its corresponding horizontal line to the point where it intersects the diagonal line indicating the check valve pipe size. From this point of intersection, follow the vertical line down to the bottom of the chart to determine the approximate pressure drop.

