

Style DD

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

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

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



Style DL



Style DF



Wafer Double Disc Check Valve

APPLICATIONS

Liquid or gas where protection from flow reversal in a pipeline is required.

CONSTRUCTION

The Keckley Wafer Double Disc Check Valves are constructed from rugged castings that are machined to exacting specifications. Reference individual technical data pages for standard disc, shaft, spring, and elastomer seat.

FEATURES

- A short face-to-face dimension.
- Lighter weight, by 80-90% than non-conventional full-body check valves.
- Spring-loaded, double disc design has a low cracking pressure.
- The tension spring performs a lifting motion on the disc to prevent excessive wear on the “heel” area of the elastomer seat.
- The independent, dual shaft design allows interchangeability of shafts. The stop shaft stabilizes the discs during high flow rates.
- Epoxy coating is standard.
- Field serviceable without the need for special tools.

INSTALLATION

The Keckley Wafer Double Disc Check Valves are used in both vertical and horizontal applications. For horizontal flow applications the shaft should be vertically oriented. Contact Keckley for downward vertical flow installations.

ORDERING

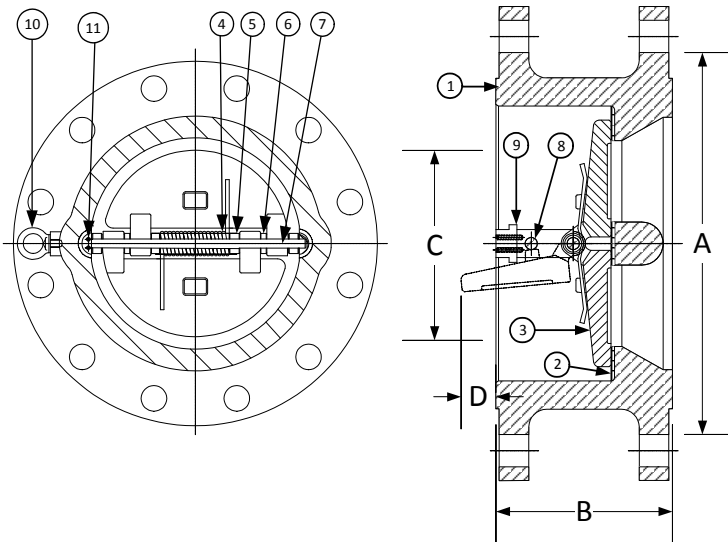
Reference page [C2](#) for Keckley Check Valve Product Numbers.

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 DF

**Retainerless Wafer Double Flange Body
 Double Disc Check Valve, 150 lb.
 Nickel Aluminum Bronze (ASTM B 148, C95800)**


PARTS LIST

| ITEM | DESCRIPTION | MATERIAL |
|------|----------------|--|
| 1 | Body | Cast Nickel Aluminum Bronze (ASTM B 148, C95800) |
| 2 | Seat | Buna-N O-Ring |
| 3 | Disc | Cast Nickel Aluminum Bronze (ASTM B 148, C95800) |
| 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 – **DF2F-NA-NA1IX**

 Other Options - Reference **C2** for available materials.

| SIZE | | DIMENSIONS | | | | | | WEIGHTS | |
|------|------|------------|------|--------|-----|--------|------|---------|------|
| | | A | | B | | C* | | | |
| in | mm | in | mm | in | mm | in | mm | lbs | kgs |
| 8 | 200 | 11 | 279 | 5 | 127 | 7-5/8 | 194 | 93 | 42 |
| 10 | 250 | 13-3/8 | 340 | 5-3/4 | 146 | 9-9/16 | 243 | 189 | 86 |
| 12 | 300 | 16-1/8 | 410 | 7-1/8 | 181 | 11-3/8 | 289 | 308 | 140 |
| 14 | 350 | 17-3/4 | 451 | 7-1/4 | 184 | 12-1/2 | 318 | 352 | 160 |
| 16 | 400 | 20-1/4 | 514 | 7-1/2 | 191 | 15 | 381 | 496 | 225 |
| 18 | 450 | 21-5/8 | 549 | 8 | 203 | 16-7/8 | 428 | 551 | 250 |
| 20 | 500 | 23-7/8 | 606 | 8-5/8 | 219 | 8-7/8 | 480 | 661 | 300 |
| 24 | 600 | 28-1/4 | 718 | 8-3/4 | 222 | 22-5/8 | 575 | 860 | 389 |
| 30 | 750 | 34-3/4 | 883 | 12 | 305 | 29-1/4 | 743 | 1512 | 687 |
| 36 | 900 | 41-1/4 | 1048 | 14-1/2 | 368 | 35 | 889 | 2525 | 1145 |
| 42 | 1050 | 48 | 1219 | 17 | 432 | 41 | 1041 | 4163 | 1888 |
| 48 | 1200 | 54-1/2 | 1384 | 20-5/8 | 524 | 47 | 1194 | 5880 | 2667 |

*Minimum companion flange bore.

Available with thru-hole bolting or threaded bolt holes.

 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 B16.24 |
| • Testing API 598 |
| • Conforms to API 594 & 6D |
| • MSS SP – 6 |
| • MSS SP – 25 |
| • MSS SP – 55 |

FLOW COEFFICIENTS

| Size | 8" | 10" | 12" | 14" | 16" | 18" |
|-------|-------|-------|-------|-------|-------|--------|
| C_v | 1800 | 2600 | 4300 | 5500 | 7200 | 9400 |
| Size | 20" | 24" | 30" | 36" | 42" | 48" |
| C_v | 12600 | 19000 | 37500 | 60000 | 89000 | 124000 |

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.

