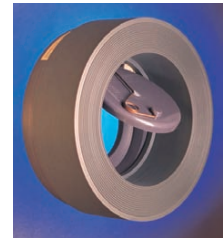


WC Series

Wafer Check Valve

- Material:** PVC, PP, PVDF
Size: 2" - 20"
Pressure Rating: 150psi @ 73° F
Seals: EPDM, Viton, or Teflon
***Return Spring:** 316 Stainless Steel, Hastelloy- C(WST 24610)
Connections: Wafer



Optional Spacer Ring



ISO 9002 CERTIFIED

*Optional

Engineering Guide Specification

Materials of Construction:

- PVC:** Class 12454B per ASTM D1784
PP: Class PP 110B76383 per ASTM D4101
PVDF: Type 1 per ASTM D3222

Special Features

- Compact - Requires Little Space In Piping System
- Economical - Simple And Robust Construction
- Easy Installation - Wafer Body Slips Between Standard Flanges
- Light Weight
- Chemical Resistant
- No Corrosion
- Available With Or Without Spring

Flow Rate in Gallons Per Minute

| C _v Values | | | | | | | | |
|-----------------------|----|------|-----|-----|-----|------|------|------|
| Size | 2" | 2.5" | 3" | 4" | 6" | 8" | 10" | 12" |
| Without Spacer | 58 | 77 | 105 | 224 | 718 | 980 | 1880 | 2520 |
| With Spacer | 74 | 108 | 203 | 300 | 949 | 1175 | 2050 | 2940 |

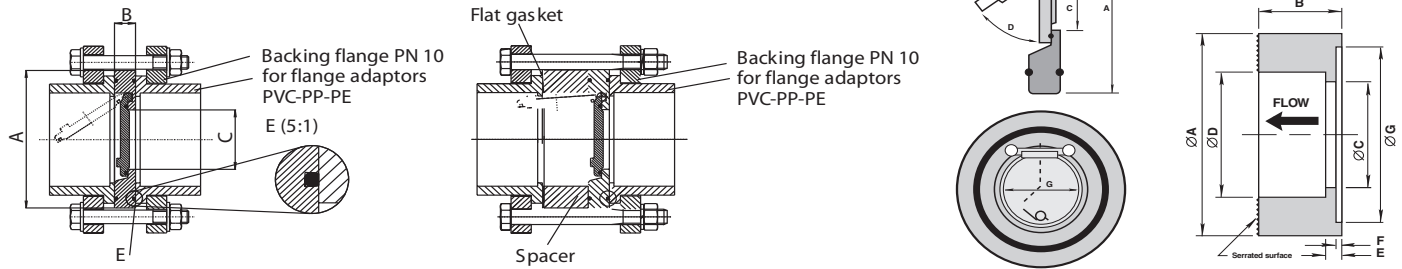
C_v is the number of gallons per minute of water at a temperature of 68°F that will flow through a valve with a 1 psi pressure differential at a specified travel.

Pressure/Temperature Graph: Working PSI/Fahrenheit

| SIZE | Working Pressure PSI | | | | | | | | | | |
|-----------|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | PVC | | | PP | | | | PVDF | | | |
| | 5° C | 30° C | 50° C | 40° C | 60° C | 80° C | 90° C | 50° C | 80° C | 100° C | 120° C |
| | 41° F | 86° F | 122° F | 104° F | 140° F | 176° F | 194° F | 122° F | 176° F | 212° F | 248° F |
| 1¼" - 12" | 7.252 | 43.511 | 14.504 | 58.015 | 29.008 | 13.053 | 7.252 | 87.023 | 43.511 | 14.504 | 7.252 |
| 14" - 20" | 4.351 | 21.756 | 7.252 | 36.259 | 14.504 | 7.252 | 1.450 | 43.511 | 14.504 | 7.252 | 1.450 |
| 24" | 1.450 | 7.252 | 1.450 | 20.305 | 7.252 | 4.351 | 1.450 | 21.756 | 7.252 | 4.351 | 1.450 |

WC Series

Dimensional Data



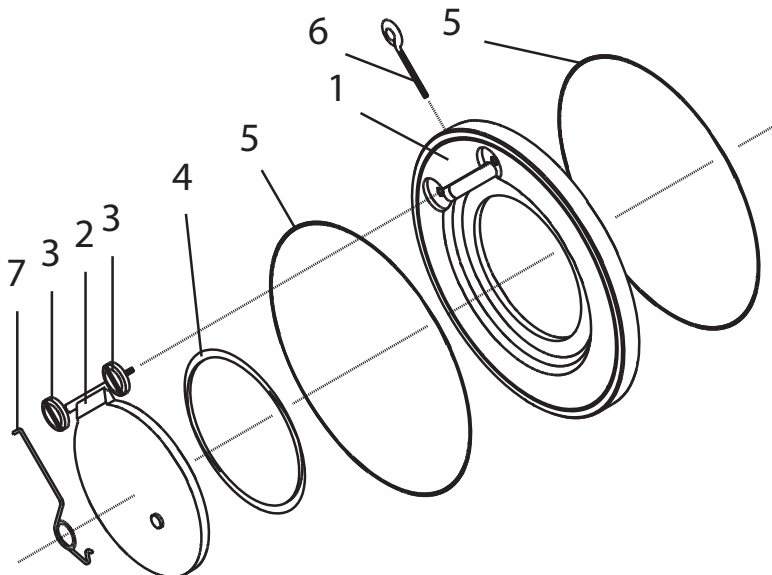
Wafer Check Dimensional Data

| Size | A In | B In | C In | D Deg | E In | F In | G In |
|------|---------|---------|---------|----------|---------|---------|---------|
| 2" | 4.291 | 0.787 | 1.260 | 68.0 | 1.81 | 1.80 | 1.77 |
| 2½" | 4.843 | 0.787 | 1.575 | 73.0 | 2.28 | 2.00 | 2.36 |
| 3" | 5.394 | 0.787 | 2.047 | 75.0 | 2.36 | 2.90 | 2.83 |
| 4" | 6.457 | 0.866 | 2.756 | 73.0 | 2.83 | 3.60 | 3.54 |
| 6" | 8.661 | 1.024 | 4.409 | 72.0 | 2.99 | 5.80 | 5.20 |
| 8" | 10.827 | 1.378 | 5.906 | 77.0 | 4.13 | 7.50 | 6.93 |
| 10" | 12.992 | 1.575 | 7.480 | 73.0 | 5.51 | 9.00 | 8.74 |
| 12" | 14.961 | 1.772 | 8.504 | 74.0 | 7.68 | 10.20 | 10.24 |
| 14" | 17.323 | 1.929 | 10.472 | 70.0 | N/A | 9.64 | 11.81 |
| 16" | 19.331 | 2.559 | 12.205 | 70.0 | N/A | 11.22 | 13.39 |
| 18" | 21.299 | 2.677 | 13.780 | 70.0 | N/A | 13.00 | 15.35 |
| 20" | 23.465 | 3.071 | 15.748 | 70.0 | N/A | 15.15 | 17.32 |

Spacer Dimensional Data

| Size | A In | B In | C In | D In | E In | F In | G In |
|------|---------|---------|---------|---------|---------|---------|---------|
| 2" | 4.134 | 0.984 | 2.323 | 2.323 | n/a | n/a | n/a |
| 2½" | 4.843 | 1.496 | 3.110 | 3.110 | 0.157 | n/a | n/a |
| 3" | 5.354 | 1.575 | 3.898 | 3.898 | n/a | n/a | n/a |
| 4" | 6.850 | 1.969 | 4.252 | 4.488 | 0.315 | 0.157 | 6.496 |
| 6" | 8.661 | 1.969 | 6.181 | 6.772 | 0.276 | n/a | n/a |
| 8" | 10.906 | 3.543 | 8.386 | 8.543 | 0.276 | n/a | n/a |
| 10" | 12.992 | 3.937 | 10.236 | 10.236 | n/a | n/a | n/a |
| 12" | 15.748 | 5.906 | 11.811 | 13.386 | 0.394 | n/a | n/a |
| 14" | 17.717 | 6.299 | 9.449 | 14.882 | 0.394 | n/a | n/a |
| 16" | 19.370 | 6.299 | 15.748 | 16.142 | 0.394 | n/a | n/a |

Parts Listing



| | Parts Listing: | Material |
|---|------------------------|---------------------|
| 1 | Body | PVC / PP / PVDF |
| 2 | Flapper | PVC / PP / PVDF |
| 3 | Flapper mounting screw | PVC / PP / PVDF |
| 4 | O-Ring | EPDM / VITON (FPM) |
| 5 | O-Ring | EPDM / VITON (FPM) |
| 6 | Installation device | SUS |
| 7 | Spring* | 316 SUS / Hastelloy |

* Optional

WC Series

Pressure to Open / Close:

| Pressure to Open - PSI | | | | Sealing Pressure | Max Allowable Flow Rates* | |
|------------------------|-------------|-----------------|-------|------------------|---------------------------|-----------------------|
| Size | With Spring | With Out Spring | | | With or Without Spring | At Startup & Shutdown |
| | | Horiz | Vert. | | | |
| 2" | 0.3 | 0.1 | 0.2 | 1.0 | 50.0 | 60.0 |
| 2½" | 0.3 | 0.1 | 0.2 | 1.0 | 70.0 | 80.0 |
| 3" | 0.3 | 0.1 | 0.2 | 1.0 | 110.0 | 125.0 |
| 4" | 0.3 | 0.1 | 0.2 | 1.0 | 200.0 | 250.0 |
| 6" | 0.3 | 0.1 | 0.2 | 1.0 | 320.0 | 400.0 |
| 8" | 0.3 | 0.1 | 0.3 | 1.0 | 400.0 | 750.0 |
| 10" | 0.3 | 0.1 | 0.3 | 1.0 | 600.0 | 1100.0 |
| 12" | 0.3 | 0.1 | 0.3 | 1.0 | 750.0 | 1500.0 |

* Based on 5 feet per sec velocity.

Caution: Flow velocity should not exceed 5 feet per second.

Installation Instructions:

- The valve's wafer body slips between standard flanges and can be used in either vertical or horizontal position.
- Use spring assisted type valve for pulsating flow and horizontal piping.
- Use the non spring valve for applications where it is not desirable for the processstream to come in contact with metals.
- In case of mounting on a pump (at pressure side) please note the following:
 - no direct mounting on pump flange or following elbow
 - for velocity relief zone allow 5 times the pipe diameter (ie: install 4" valve at least 20" away from pump discharge.)
- SIMTECH offers full range of plastic spacer rings which are required for installation with SCH80 pipe (the disc will open fully inside the spacer cavity and not slam against the inside pipe wall).

Applications of Service:

- Water And Waste Water Treatment
- Contaminated And Aggressive Fluids
- Chemical Industry
- Process Technology
- Environmental Technology
- Systems Engineering

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Web site: www.SimtechUSA.com

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