

WCV Series Full Pattern Wafer Check Valve Product Guide

define
design
deliver

FLOW DIRECTION

WORKING PRESSURE (PSI)

PVC

WCV Series Full Pattern Wafer Check Valve

2" TO 8" PVC AND CPVC



The new patent-pending WCV Series Full Pattern Wafer Check Valve features a robust thermoplastic construction with industry leading flow rates, and eliminates the need for spacers or specialty flanges.

Made from thermoplastic materials, the WCV has a lighter weight than a metal equivalent and excellent corrosion resistance. The unique angle seat and disc seat allows for high flow rates and excellent sealing properties. No exposed fasteners or clips in the media to retain the disc which can break off in the line.

Designed also for global use, the WCV fits ANSI and DIN/EN flange patterns. It also provides a pressure rating of 150 PSI across all sizes where most other plastic wafer check or swing check valves do not. Best of all, the WCV is made in the U.S.A.!

KEY FEATURES AND BENEFITS

- Robust Full Pattern Body – No Need for Spacers or specialty flanges.
- One-Piece Disc and Shaft Design
- Designed for ANSI150 and PN10 Flanges
- Contoured Inlet Port for easy flow
- High Cv Rating Equal to Metal Check Valves, saves on energy and pump wear
- Lower Closing Pressure Than Swing Check Valves
- Integral Bolt Eyes for Ease of Installation for Large Sizes
- Can be Installed in Vertical or Horizontal Position
- FPM or EPDM Gasket and Face Seal
- Pressure Rated to 150 PSI / PN10 In All Sizes

OPTIONS

- 316 Stainless Steel or Hastelloy® Disc Spring

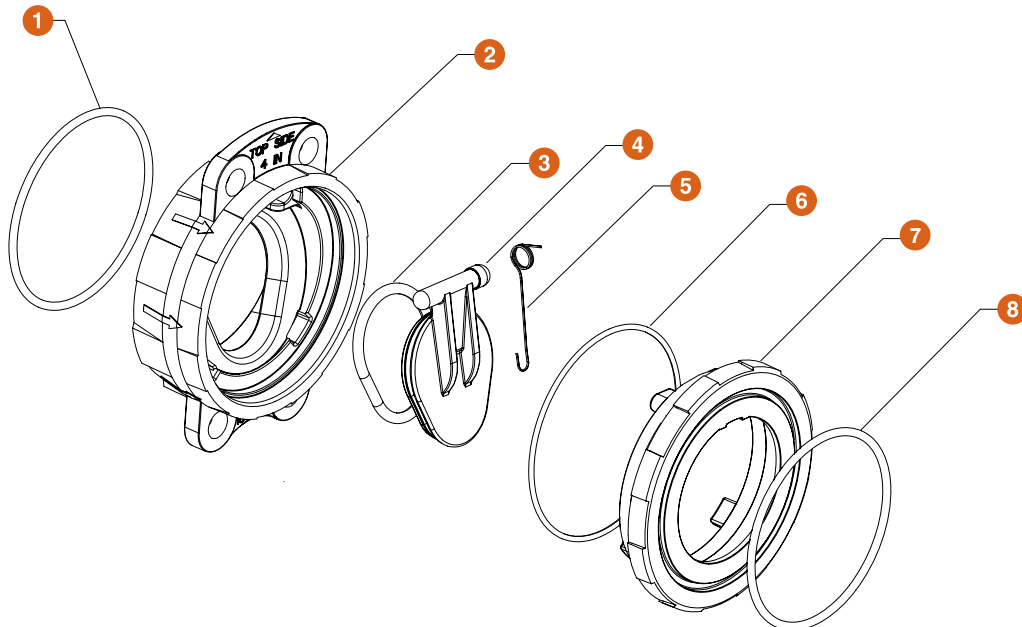
TYPICAL APPLICATIONS

- Water and Wastewater Treatment
- Water / Theme Parks
- Aquatic and Animal Life Support Systems
- Chemical Processing
- Marine and Corrosive Environments
- Mining
- Landfills

MATERIALS

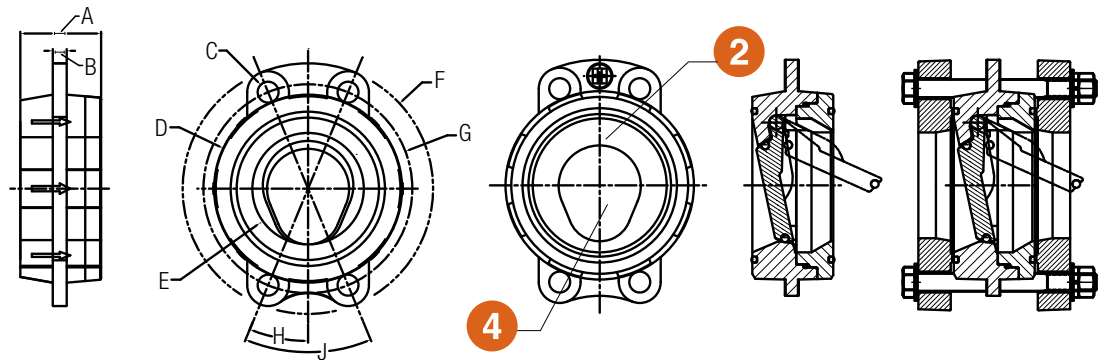
- PVC per ASTM D1784 Cell Class 12454
- CPVC per ASTM D1784 Cell Class 23447
- FPM and EPDM Gasket and Disc Seals

EXPLODED VIEW



PARTS LIST

1. Face Seal O-Ring
2. Body
3. Wafer Disc O-Ring
4. Wafer Disc
5. Wafer Disc Spring
6. Body O-Ring
7. Body
8. Face Seal O-Ring



TECHNICAL INFORMATION

DIMENSIONS – INCHES / MILLIMETERS

SIZE in / DN	A in / mm	B in / mm	C in / mm	D in / mm	E in / mm	F in / mm	G in / mm	H in / mm	J in / mm
2 / 50	1.80 / 45	.25 / 6	—	4.00 / 101	2.03 / 51	5.25 / 133	—	—	—
2-1/2 / 65	2.30 / 58	.25 / 6	—	4.75 / 120	2.43 / 61	6.00 / 152	—	—	—
3 / 80	2.40 / 61	.25 / 6	—	5.25 / 133	3.00 / 76	6.50 / 165	—	—	—
4 / 100	2.90 / 73	.50 / 12	.75 / 19	6.75 / 171	4.00 / 101	9.00 / 228	.75 / 190	22.50 / 572	45.00 / 1143
6 / 150	3.00 / 76	.50 / 12	.88 / 22	8.63 / 219	5.77 / 146	11.13 / 282	9.50 / 241	22.50 / 572	45.00 / 1143
8 / 200	4.93 / 125	.75 / 19	.95 / 24	10.88 / 276	7.63 / 193	13.38 / 339	11.75 / 298	22.50 / 572	45.00 / 1143

Pressure Rating for ALL Sizes – 150 PSI @ 70°F Non-Shock
Consult Hayward for DN100 Wafer Check Dimension

OPENING / SEALING PRESSURE - PSI

SIZE in / DN	OPENING PRESSURE WITH SPRING	SEALING PRESSURE (WITH OR WITHOUT SPRING)*
2 / 50	0.5	3.0
2-1/2 / 65	0.5	3.0
3 / 80	0.5	3.0
4 / 100	0.5	3.0
6 / 150	0.5	3.0
8 / 200	0.5	3.0

*Sealing Pressure Preliminary and subject to change

FLOW RATES - IN GPM

NOMINAL SIZE in / DN	Cv
2 / 50	93
2-1/2 / 65	144
3 / 80	187
4 / 100	346
6 / 150	848
8 / 200	1643

PRODUCT WEIGHTS

NOMINAL SIZE in / DN	LBS/KG
2 / 50	1.01 / .46
2-1/2 / 65	1.62 / .73
3 / 80	1.93 / .87
4 / 100	3.73 / 1.69
6 / 150	6.34 / 2.88
8 / 200	14.05 / 6.37

WCV Series Full Pattern Wafer Check Valve

2" TO 8" PVC AND CPVC

SAMPLE SPECIFICATION

All thermoplastic wafer check valves shall be manufactured with PVC (ASTM D1784, Cell Classification 12454) or CPVC (ASTM D1784, Cell Class 23447).

Valve body shall be full pattern design, requiring no additional spacers or specialty flanges for downstream disc clearance.

Valve shall be self-cleaning design with contoured inlet. Valve disc shall be one-piece, tear-drop design. Valve shall contain tilted-disc design to achieve better seating characteristics.

For spring-assisted discs, spring material shall be 316 stainless steel as standard, or Hastelloy® as required. Valve seals shall be FPM as standard, or EPDM as required.

All 2" – 8" valves shall be rated for 150 PSI at 70°F non-shock, as manufactured by Hayward® Flow Control Products. Valves shall carry 2-year warranty.

INSTALLATION INSTRUCTIONS

All WCV Series Full Pattern Wafer Check Valves are designed to fit between raised or flat face flanges, 150 lbs rated.

Observe flow direction before installing valve per flow arrows molded on body.

Handle valve carefully and do not drop valve—large PVC valves can be sensitive to impact.

Use bolt eyes to secure valve and for inserting between flanges. Make sure to have valve in upward position when valve is installed in horizontal pipes. "TOP" is molded into valve body to designate orientation.

Refer to technical data sheet for recommended maximum flow rates and start-up flow rates.

WCV Series Full Pattern Wafer Check Valves contain a gasket and disc seal and do not require low-torque flange seals.

Center by means of body rim (external) diameter.

Assemble between ANSI150 or DIN/EN PN10 flanges. If desired, use soft gaskets and tighten.

Flange bolts should be well lubricated. With plastic flanges, it is important to use washers.

Tighten bolts with a torque wrench evenly and in a crossing pattern.

The following should be observed when assembling onto the discharge side of the pump:

- A. Never assemble directly onto pump flange.
- B. Never assemble onto a bend or an elbow.
- C. Allow an additional distance of 5 – 10 times the nominal pipe diameter from the pump discharge or from elbows before installing the wafer check valve.

Additional Hayward Check Valves and Related Pipeline Products

TC SERIES BALL CHECK VALVES

KEY FEATURES

- Available in PVC, CPVC and PP
- Size Range 1/4" – 6"
- Prevents Loss of Prime and/or Draining of the System
- Foot Valves Option
- Spring-Loaded Y-Checks available
- All Thermoplastic – No Corrosion or Sticking



SW SERIES SWING CHECK VALVES

KEY FEATURES

- Available in PVC, CPVC and GFPP
- Size Range 3" – 8"
- For Horizontal and Vertical Installations
- Two-in-One Seat Design
- Built-in Flanged Seals
- Two Drain Ports
- Self-Aligning Clapper Seals



YC SERIES Y-CHECK VALVES

KEY FEATURES

- Available in PVC and CPVC
- Size Range 1/2" – 4"
- Full Flow Design
- Minimum Pressure Drop
- PVC or CPVC Coil to Guide Piston to a Positive Seat
- Minimum Back Pressure Required to Seat Piston
- True Union End Connections



SB SERIES BASKET STRAINERS

KEY FEATURES

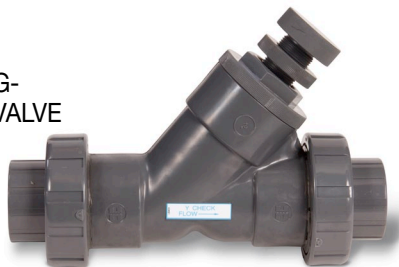
- Available in PVC, CPVC, Eastar™ and GFPP
- Size Range 1/2" – 4" for all Materials
- 6" and 8" in PVC and CPVC only.
- Protect Your Investment
- Remove Damage-Causing Particulate Matter From Process Media Before it Reaches Your Pump
- Simplex and Duplex Configurations



SLC SERIES SPRING-LOADED Y-CHECK VALVE

KEY FEATURES

- Available in PVC
- Size Range 1" – 4"
- Full Flow Design
- Closes with No Back Pressure
- Adjustable – Opens from 2 to 15 PSI
- Easy Maintenance
- Opens in Any Position



BYV SERIES BUTTERFLY VALVES

KEY FEATURES

- One Piece Injection Molded PVC, CPVC or GFPP Body
- Size Range 2" - 12"
- PVC, CPVC or GFPP Hydro-dynamic Disc
- Viton®, EPDM and Nitrile Seat Materials
- Available with 316SS Overmolded Lugs
- Hand Lever with 19 Lockable Stop Positions
- All Sizes Meet ANSI B16.10 / ISO 5752 Narrow Face-to-Face Dimensions



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Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com
Visit us at: haywardflowcontrol.com