



WCV Series Wafer Check Valve Product Guide

define
design
deliver

WCV Series Full Pattern Wafer Check Valve

2" TO 8" PVC, CPVC AND GFPP

NEW

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 disc seat design 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.

KEY FEATURES AND BENEFITS

- Robust Wide Pattern Body in PVC – No Need for Spacers or specialty flanges.
- One-Piece Disc and Shaft Design
- Designed for ANSI150 and PN10 Flanges
- High Cv Rating Equal to Metal Check Valves
- 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 Return

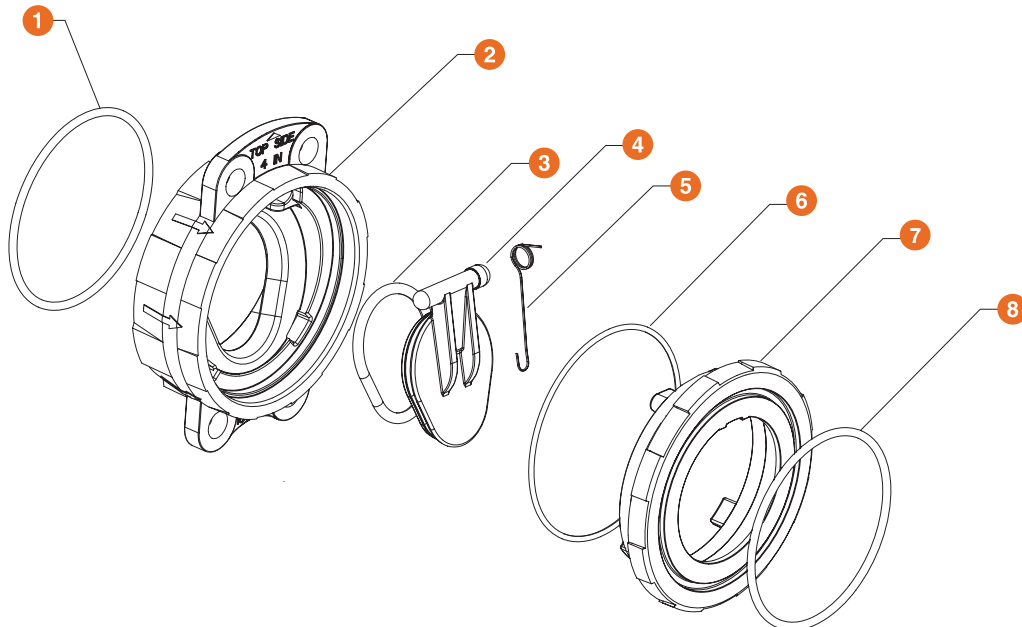
TYPICAL APPLICATIONS

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

MATERIALS

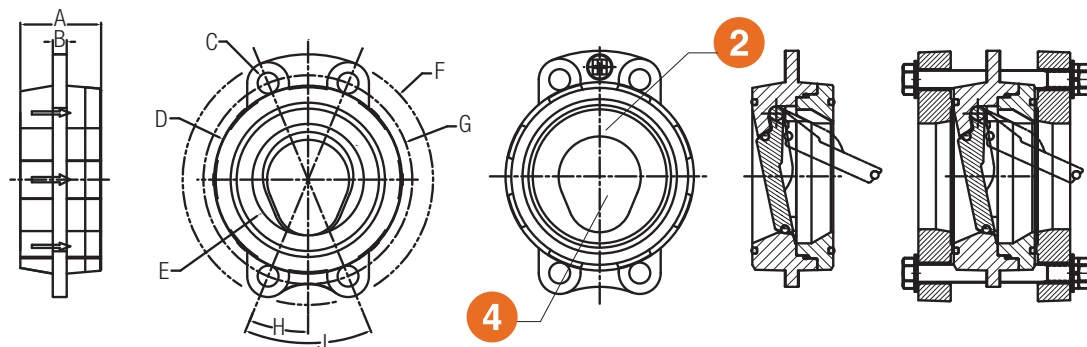
- PVC per ASTM D1784 Cell Class 12454
- CPVC per ASTM D1784 Cell Class 23447
- GFPP per ASTM D4101 Cell Class 85580
- FPM and EPDM Gasket and Disc Seals

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	I 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 (ESTIMATED)	SEALING PRESSURE (WITH OR WITHOUT SPRING)*
2 / 50	1.0	3.0
2-1/2 / 65	1.0	3.0
3 / 80	1.0	3.0
4 / 100	1.0	3.0
6 / 150	1.0	3.0
8 / 200	1.0	3.0

*Sealing Pressure Preliminary and subject to change

FLOW RATES - IN GPM

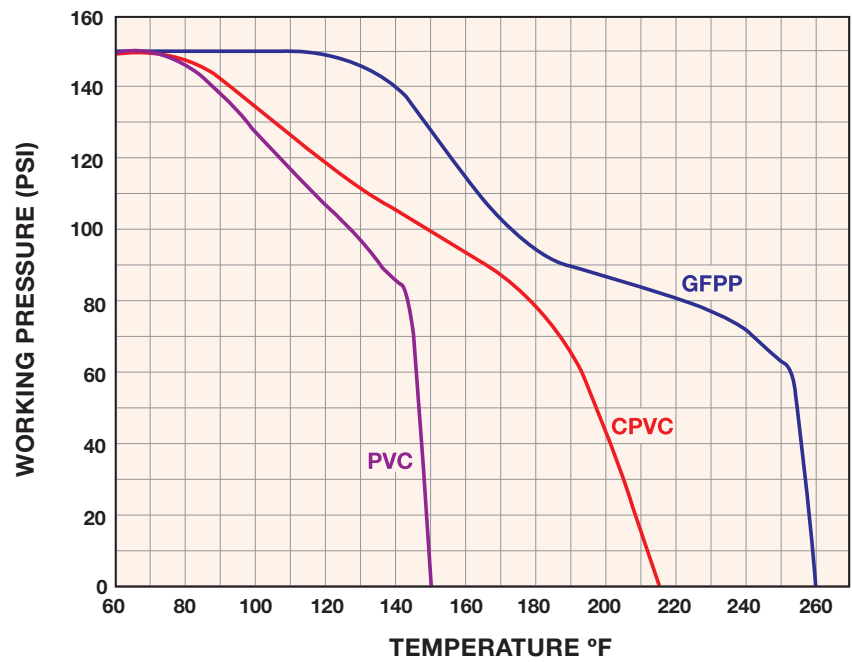
NOMINAL SIZE in / DN	CV
2 / 50	90
2-1/2 / 65	155
3 / 80	220
4 / 100	315
6 / 150	1000
8 / 200	1225

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

.....

PRESSURE / TEMPERATURE CHART



.....

PART NUMBER MATRIX

A		B		C		D		E		F	
WCV		1		1		200		E		S	
VALVE SERIES	SUFFIX A	BODY MATERIAL	SUFFIX B	DISC MATERIAL	SUFFIX C	SIZE INCH / DN	SUFFIX D	LINER	SUFFIX E	SPRING	SUFFIX F
WCV Wafer Check	WCV	PVC	1	PVC	1	2 / 50	200	EPDM	E	316SS	S
		CPVC	2	CPVC	2	2-1/2 / 65	250	FPM	V	Hastelloy	H
		GFPP	4	PP	4	3 / 80	300				
						4 / 100	400				
						6 / 150	600				
						8 / 200	800				

WCV Series Full Pattern Wafer Check Valve

2" TO 8" PVC, CPVC AND GFPP

SAMPLE SPEC

All thermoplastic wafer check valves shall be single-disc type (not butterfly type) manufactured with PVC per ASTM D1784 Cell Classification 12454, CPVC per ASTM D1784 Cell Class 23447, or Glass Filled Polypropylene (GFPP) per ASTM D4101 Cell Class 85580.

Valve body shall be one-piece full pattern design (requiring no additional spacers or specialty flanges for downstream disc clearance).

Valves shall have a single disc and shaft design suitable for either horizontal or vertical installations.

Valve seals shall be FPM or EPDM with field-replaceable internal assembly.

For spring-assisted discs, spring material shall be 316 stainless steel as standard, with Hastelloy® springs as an option.

All 2" – 8" thermoplastic wafer check valves shall be rated up to 150 PSI at 70°F (non-shock), as manufactured by Hayward® Flow Control.

INSTALLATION INSTRUCTIONS

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

Observe flow direction before installing valve.

Handle valve carefully and do not drop valve—large PVC valves are very sensitive to drop impact.

Use eyebolt supplied to lift valve and for inserting between flanges. Eyebolt must be in upward position when valve is installed in horizontal pipes.

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

WCV Series 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. 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 symmetrical pattern like the one below.

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 width 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

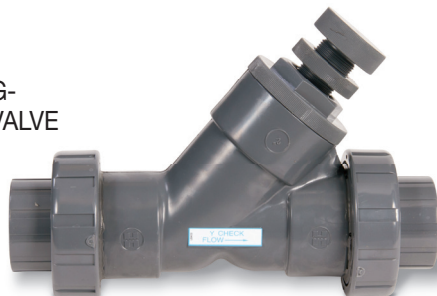
- Available in PVC, CPVC, Eastar™ and GFPP
- Size Range 1/2" – 4" for all Materials
- 6" and 8" in PVC and CPVC only.
- Protect Your Investment
- Remove Damage Causing Particulate Matter From Process Media Before it Reaches Your Pump
- Simplex and Duplex Configurations



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



BY SERIES BUTTERFLY VALVES

KEY FEATURES

- Available in PVC, CPVC and PP
- Size Range 1-1/2" – 12"
- Rated to 150 PSI for all Sizes
- Optional SSTL Lugs
- 316 Stainless Steel Shaft
- Pneumatic or Electric Actuators
- Blowout-Proof Shaft
- Gear Operators Available
- Stem Extensions



Hayward is a registered trademark of Hayward Industries, Inc.
© 2012 Hayward Industries, Inc.

– Eastar is a trademark of Eastman.
– Hastelloy is a registered trademark of Haynes International, Inc.

WCV0512

22551SA042312KW