

WP Series Wafer Check Valves



SERIES: WP

SIZES: 2" – 12"¹

SEALS: EPDM, FPM (Viton®), PTFE²

SPRING: 316 Stainless Steel, Hastelloy



The Chemline **WP Series** Wafer Check Valve is a non-return valve ideal for limited space installations. These valves are economical and available for large pipe sizes, 2" to 12" and larger¹. They are available in two versions – with or without disc springs. The spring adds force for faster, more silent closing.

Features

NSF 61 Approved Materials

- PVC/EPDM and PVDF/EPDM valves are made of NSF approved materials

Compact

- Requires little space in piping systems

Light Weight

- 10" PP valve weighs only 7 lbs.

Easy Installation

- Wafer body slips between standard flanges

High Chemical Resistance

- A selection of materials of construction for every application

Horizontal or Vertical Operation³

Bubble Tight Shut-off

- Provided by replaceable o-ring seal

Available With Disc Springs

- Faster disc closure reduces amount of back flow and consequent water hammer
- Maximum closure is obtained with low pressure differential
- Recommended for pulsating flows and horizontal piping

Available Without Disc Spring

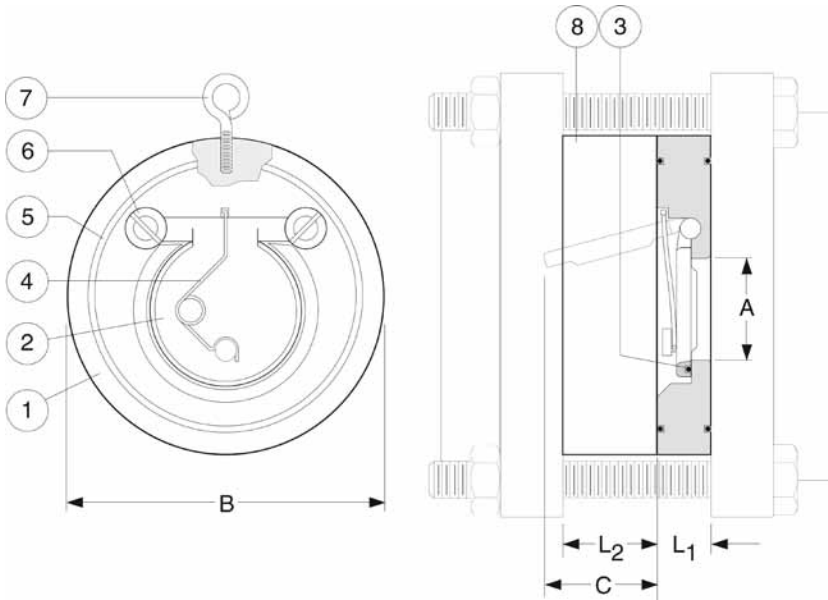
- For applications where no metals are desired
- Lower cost

¹ Valve sizes up to 24" are available special order.

² PTFE O-rings are PFA encapsulated FPM (Viton®).

³ Disc spring should be used for horizontal piping.

WP Series Wafer Check Valves



PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body	1	PVC, PP, PVDF
2	Disc	1	PVC, PP, PVDF
3▲	Disc O-Ring	1	EPDM, FPM(Viton®), PTFE
4▲	Disc Spring	1	316 SS, Hastelloy ¹
5▲	Body O-Ring	2	EPDM, FPM(Viton®), PTFE
6	Hinge Plug	2	PVC, PP, PVDF
7	Eye Bolt	1	304 SS
8	Spacer ²	1	PVC, PP, PVDF

¹ Hastelloy springs are normally supplied on valves with PTFE O-rings. 316 SS springs are supplied with EPDM or FPM (Viton®) O-rings.

² Valves up to 8" require spacers for full disc opening and are supplied as standard with all PVC and PP valves. Spacers are optional for 10" and 12" valves.

VACUUM RATING

• 29.9 inches mercury

INSTALLATION PRECAUTIONS

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

- Never install the valve directly to a pump
- Never install the valve directly to a bend or elbow
- Install all wafer check valves 5 to 10 times the nominal pipe diameter **downstream** of pumps, elbows or valves

WORKING PRESSURE PSI

DIMENSIONS INCHES

WEIGHTS LB.

Cv VALUES

Size	PVC & PP		PVC		PP		PVDF					L ₁	L ₂	A	B	C	Without Spacer		Sch 40 Sch 80	
	20°C 68°F	40°C 104°F	60°C 140°F	60°C 140°F	80°C 176°F	20°C 68°F	40°C 104°F	60°C 140°F	80°C 176°F	100°C 212°F	Without Spacer						With Spacer	Without Spacer	With Spacer	
2"	145	130	65	50	20	145	140	130	100	60	0.8	1.0	1.3	4.1	1.8	0.5	0.9	58	74	
2-1/2"	145	130	65	50	20	145	140	130	100	60	0.8	1.5	1.6	4.8	2.0	0.6	2.1	77	108	
3"	145	130	65	50	20	145	140	130	100	60	0.8	1.6	2.0	5.4	2.9	0.7	1.6	105	203	
4"	145	110	50	50	20	145	140	130	100	60	0.9	2.0	2.8	6.5	3.6	1.1	3.1	224	300	
6"	145	110	45	50	20	145	140	110	90	60	1.0	2.0	4.4	8.7	5.8	2.3	4.7	718	949	
8"	100	87	45	30	15	100	100	87	68	30	1.4	3.5	5.9	10.9	7.5	4.5	11.0	980	1,175	
10"	87	60	36	30	15	87	87	60	45	30	1.6	3.9	7.5	13.0	9.0	7.0	17.4	1,880	2,050	
12"	87	60	36	30	15	87	87	60	45	30	1.8	5.9	8.5	15.0	10.2	11.5	28.3	2,520	2,940	

Working pressures of PVC and PP valves fitted with PTFE seals are lower than above. Consult Chemline.

Temperature Ranges: PVC 0 to 60°C (32 to 140°F), PP -20 to 90°C (-4 to 194°F), PVDF -40 to 120°C (-40 to 250°F)

ORDERING EXAMPLE

Chemline Wafer WP Check Valves	A	030	E	S
Valve Material	A - PVC B - PP K - PVDF			
Size	020 - 2" 025 - 2-1/2" 030 - 3" 040 - 4" 060 - 6" 080 - 8" 100 - 10" 120 - 12"			
Seals	E - EPDM V - FPM (Viton®) P - PTFE			
Spring	S - 316 SS H - Hastelloy® Blank - without			

Example: Wafer Check Valve, PVC, 3", with EPDM seals and 316 SS spring.

PRESSURE TO OPEN PSI

SEALING PRESSURES MAXIMUM ALLOWABLE FLOW RATES

Size	With Spring			With or Without Spring	At Start-Up & Shut-Down	
	With Spring	Without Spring			Down	Running
	Horiz.	Horiz.	Vert.			
2"	0.3	0.1	0.2	1.0	50	60
2-1/2"	0.3	0.1	0.2	1.0	70	80
3"	0.3	0.1	0.2	1.0	110	125
4"	0.3	0.1	0.2	1.0	200	250
6"	0.3	0.1	0.2	1.0	320	400
8"	0.3	0.1	0.3	1.0	400	750
10"	0.3	0.1	0.3	1.0	600	1100
12"	0.3	0.1	0.3	1.0	750	1,500

Above data is from tests using water on valves with EPDM disc facing.