

WP Series Wafer Check Valves



SERIES: WP

SIZES: 2" to 12"^{1,4}

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

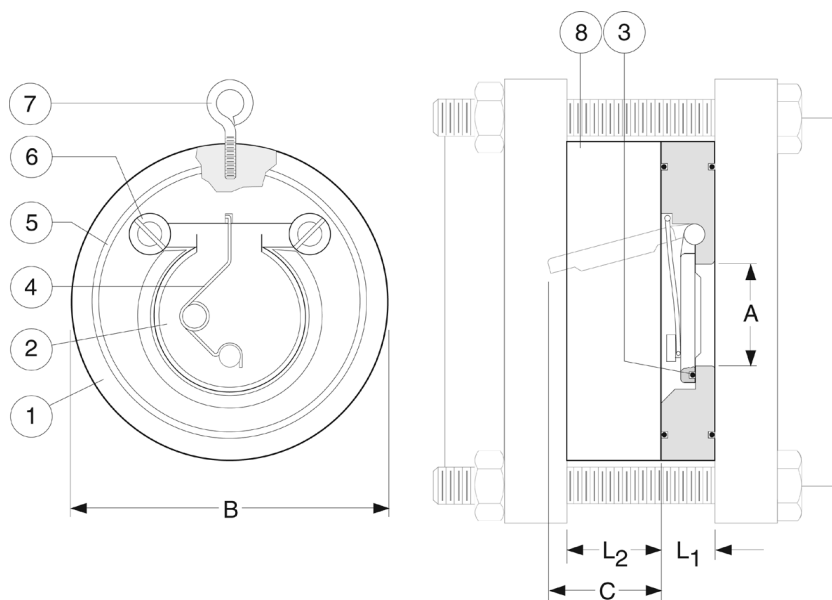
¹ Valve sizes up to 24" and larger are available special order

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

³ Disc spring should be used for horizontal piping

⁴ PVC valves are only available in 10" and 12" sizes

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
- Installation between raised face flanges may require additional flanges

WORKING PRESSURE PSI

DIMENSIONS INCHES WEIGHTS LB. Cv VALUES

WORKING PRESSURE (PSI)												DIMENSIONS (INCHES)					WEIGHTS (LB.)		CV VALUES	
Size	PVC ³			PP				PVDF				L ₁ L ₂ A B C					Without Spacer	With Spacer	Sch 40 Without Spacer	Sch 80 With Spacer
	20°C 68°F	40°C 104°F	60°C 140°F	20°C 68°F	40°C 104°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									
2"	150	130	65	150	130	50	20	150	130	50	20	0.8	1.0	1.3	4.1	1.8	0.5	0.9	58	74
2-1/2"	150	130	65	150	130	50	20	150	130	50	20	0.8	1.5	1.6	4.8	2.0	0.6	2.1	77	108
3"	150	130	65	150	130	50	20	150	130	50	20	0.8	1.6	2.0	5.4	2.9	0.7	1.6	105	203
4"	150	110	50	150	110	50	20	150	110	50	20	0.9	2.0	2.8	6.5	3.6	1.1	3.1	224	300
6"	150	110	45	150	110	50	20	150	110	50	20	1.0	2.0	4.4	8.7	5.8	2.3	4.7	718	949
8"	100	87	45	100	87	30	15	100	87	30	15	1.4	3.5	5.9	10.9	7.5	4.5	11.0	980	1,175
10"	87	60	36	87	60	30	15	87	60	30	15	1.6	3.9	7.5	13.0	9.0	7.0	17.4	1,880	2,050
12"	87	60	36	87	60	30	15	87	60	30	15	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)

³PVC valves are only available in 10" and 12" sizes

ORDERING EXAMPLE

Chemline Wafer WP Check Valves		B	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: Chemline WP Series Wafer Check Valve, PP, 3", with EPDM seals and 316 SS spring

PRESSURE TO OPEN PSI

SEALING PRESSURES

MAXIMUM ALLOWABLE FLOW RATES

USGPM

Size	With Spring	Without Spring		With or Without Spring	At Start-Up & Shut-Down	
	Horiz.	Horiz.	Vert.		Down	Running ¹
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

¹ Equivalent to approximately 5 ft/sec. fluid velocity

WP Series.DS.04.10.26