

# S<sub>4</sub> WAFER CHECK VALVE - PVC, PP, PVDF

## SPECIFICATIONS:

- Sizes:	2" to 20"
- Dimensions:	DN 50 - DN 500
- Body Materials:	PVC-u - PP - PVDF
- O-rings:	EPDM, Viton, Teflon
- With or without return spring	

## RETURN SPRING (S<sub>4</sub>.70)

Material:	- 316 Stainless Steel
	- Hastelloy-C (WST 24610)

Spacer Ring required for sch.80 pipes (contact factory)

## Applications:

- Water and waste water treatment
- Contaminated and aggressive fluids
- Chemical industry
- Process technology
- Environmental technology
- Systems engineering

## FEATURES:

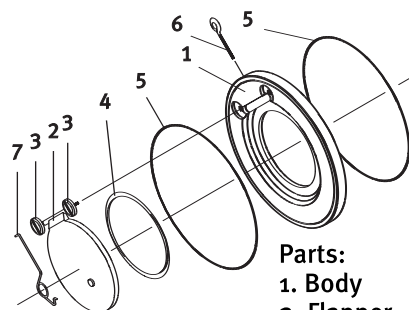
- ✚ Compact - Requires little space in piping system
- ✚ Economical - Simple and robust construction
- ✚ Easy installation - Wafer body slips between standard flanges
- ✚ Light weight
- ✚ chemical resistant
- ✚ no corrosion
- ✚ Available with or without spring
- ✚ Type S<sub>4</sub> 60: without return spring
- ✚ Type S<sub>4</sub> 70: with return spring

## MOUNTING INSTRUCTIONS:

- ✚ The valve's wafer body slips between standard flanges and can be used in either vertical or horizontal installation.
- ✚ Use spring assisted type S<sub>4</sub> 70 valve for pulsating flow and horizontal piping.
- ✚ Use S<sub>4</sub> 60 valve for applications where it is not desirable for the process stream 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).
- ✚ JJD offers full range of plastic spacer rings which are required for installation with SCH 80 pipe (the disc will open fully inside the spacer cavity and not slam against the inside pipe wall).



optional SPACER RING



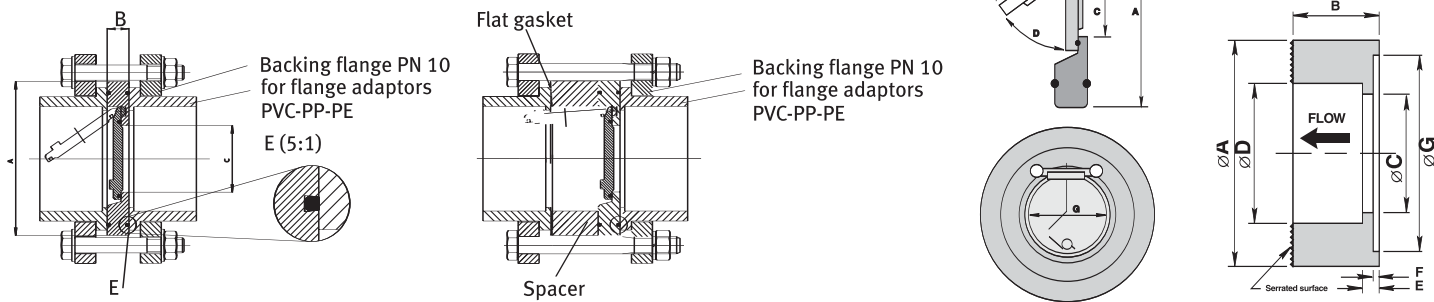
### Parts:

1. Body
2. Flapper
3. Flapper mounting screw
4. O-Ring
5. O-Ring
6. Installation device
7. Spring

size	Weights LB		Cv Values	
	Without Spacer	With Spacer	Sch 40 Without Spacer	Sch 80 With Spacer
2"	0.5	0.9	58	74
2.5"	0.6	2.1	77	108
3"	0.7	1.6	105	203
4"	1.1	3.1	224	300
6"	2.3	4.7	718	949
8"	4.5	11.0	980	1175
10"	7.0	17.4	1880	2050
12"	11.5	28.3	2520	2940



# S4 WAFER CHECK VALVE, PVC, PP, PVDF



pipe size	inch	2	2 1/2	3	4	6	8	10	12	14	16	18	20
pipe size DN	mm	50	65	80	100	150	200	250	300	350	400	450	500
A	mm	109	123	137	164	220	275	330	380	440	491	541	596
A	in	4.3	4.85	5.39	6.45	8.66	10.82	12.99	14.96	17.32	19.33	21.3	23.46
B	mm	20	20	20	22	26	35	40	45	49	65	68	78
B	in	.787	.787	.787	.866	1.02	1.377	1.57	1.77	1.93	2.56	2.67	3
C	mm	32	40	52	70	112	150	190	216	266	310	350	400
C	in	1.26	1.57	2.04	2.76	4.4	5.9	7.48	8.62	10.47	12.2	13.78	15.75
Dj opening angle	deg	68	73	75	73	72	77	73	74	70	70	70	70
E	mm	46	58	60	72	76	105	140	195	N/A	N/A	N/A	N/A
E	in	1.81	2.28	2.36	2.83	2.99	4.13	5.5	7.67	N/A	N/A	N/A	N/A
F (with spring)	in	1.8	2.0	2.9	3.6	5.8	7.5	9.0	10.2	9.64	11.22	13	15.15
G (disc diameter)	mm	45	60	72	90	132	176	222	260	300	340	390	440
G (disc diameter)	in	1.77	2.36	2.83	3.54	5.19	6.93	8.74	10.23	11.81	13.38	15.35	17.32
Pressure PN	bar	10	10	10	10	10	10	10	10	3	3	2	2
Pressure rating	PSI	145	145	145	145	145	145	145	145	43.5	43.5	27	27

Working Pressure PSI	PVC				PP				PVDF							
	20°C	40°C	60°C	80°C	20°C	40°C	60°C	80°C	20°C	40°C	60°C	80°C				
	68°F	104°F	140°F	176°F	68°F	104°F	140°F	176°F	68°F	104°F	140°F	176°F				
Size	2"	2-1/2"	3"	4"	6"	8"	10"	12"	2"	2-1/2"	3"	4"	6"	8"	10"	12"
Pressure	145	130	65	20	145	130	50	20	145	130	50	20	145	110	50	20

Spacer Dimensions PVC/PP/PVDF

Valve Size/Inch	A mm	B mm	C mm	D mm	E mm	F mm	G mm
2"	105	25	59	59	0	0	0
2.5"	123	38	79	79	4	0	0
3"	136	40	99	99	0	0	0
4"	174	50	108	114	8	4	165
6"	220	50	157	172	7	0	0
8"	277	90	213	217	7	0	0
10"	330	100	260	260	0	0	0
12"	400	150	300	340	10	0	0
14"	450	160	340	378	10	0	0
16"	492	160	400	410	10	0	0

Pressure to Open PSI	Sealing Pressure			Max. Allowable Flow Rates	
	With Spring	Without Spring		At Start-Up & Shut Down	Running
Size	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 / 1500

Kv Values (1/min at delta P of 1 bar)

Valve Size inch	DIN PIPE PN 10 w/o spacer PVC	ANSI PVC SCH 40 w/o spacer	ANSI PVC SCH 80 with spacer
2"	950	825	1050
2.5"	1255	1105	1540
3"	1650	1505	2905
4"	3190	3200	4290
6"	9500	10260	13550
8"	14100	13990	16800
10"	26900	26900	29300
12"	32000	36000	42000
14"	50000	50000	53000
16"	60500	60500	64000
20"	80500	80500	85000

Note: 2" through 12" are measured values.  
14" through 20" are estimated values.

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416.236.1884    Toronto, ON    JJDOWNS.COM