









NSV® Industrial Valve Solutions

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NSV® NSV VALVE

Tilting Disc & Non-Slam Check Valve

A non-slam check valve is an automatic one-way valve that opens and closes automatically based on the flow direction and pressure of the medium.A tilting disc check valve adopts an obliquely installed disc as the key opening and closing part with a simple and compact structure.



PRODUCT

NSV Valve Series

Use

Tilting disc check valve adopts the use of bi-eccentric discwhich enables the disc tough the seat gradually without noise and slam when closing.Resiient metal seat it used to ensure excellent sealing performance

Structure Features

1.Butterfly type disc design

2.Quick close and open, long life span

Technical Specifications

Design Basis		BS 1868
Design Standard		BS 1868
Design Basis		ASME B16.10
Connection End	langed	ASME B16.5
	Butt-Welding	ASME B16.25
Test and Check		API 598

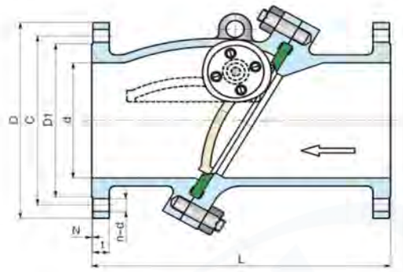
Main Parts and Materials

Conventional Type

Part Name	Carbon Steel		Low Temp Steel		Stainless Steel	
	GB	ASTM	GB	ASTM	GB	ASTM
Body	WCB	A216-WCB	LCB LCC	A352-LCB A352-LCC	CF8 CF8M	A351-CF8 A352-CF8M
Disc	WCB	A216-WCB	LCB LCC	A352-LCB A352-LCC	CF8 CF8M	A351-CF8 A351-CF8M
Body	WCB	A216-WCB	LCB LCC	A352-LCB A352-LCC	CF8 CF8M	A351-CF8 A351-CF8M
Hinge pin	20Cr13	A276-420	20Cr13	A276-420	12Cr18Ni9 00Cr17Ni12Mo	A276-304 A276-316
Bonnet Gasket	F.G/12Cr18Ni9	F.G/304	F.G/12Cr18Ni9	F.G/304	F.G/12Cr18Ni9	F.G/304
Bonnet Stud	35CrMo	A193-B7	12Cr18Ni9	A193-B8	12Cr18NI9	A193-B8
Bonnet Stud Nut	45	A194-2H	12Cr18Ni9	A194-8	12Cr18NI9	A194-8

Tilting disc check valve





Double flanged type tilting disc check

Size		Class 150						Class 300					
		Dimensions (mm)					Weight (Kg)	Dimensions (mm)					Weight (Kg)
NPS	DN	RF	L RTJ	BW	d	H		RF	L RTJ	BW	d	H	
2	50	203	216	203	51	132	15	267	283	267	51	144	20
2½	65	216	229	216	64	147	20	292	308	292	64	169	35
3	80	241	254	241	76	176	27	318	333	318	76	210	40
4	100	292	305	292	102	198	45	356	371	356	102	260	61
5	125	330	343	330	127	255	58	400	416	400	127	295	80
6	150	356	368	356	152	320	69	444	460	444	152	326	130
8	200	495	508	495	203	380	131	533	549	533	203	380	190
10	250	622	635	622	254	440	219	622	638	622	254	440	296
12	300	698	711	698	305	480	321	711	727	711	305	520	450
14	350	787	800	787	337	530	380	838	854	838	337	540	640
16	400	864	876	864	387	580	560	864	879	864	387	588	850
18	450	978	991	978	438	618	630	978	994	978	438	670	1030
20	500	978	991	978	489	657	770	1016	1035	1016	483	720	1330
24	600	1295	1308	1295	591	760	960	1346	1368	1346	584	850	1950
26	650	1295	–	1295	633	840	1250	1346	1372	1346	633	920	2300
28	700	1448	–	1448	684	920	1580	1499	1524	1499	684	1150	2600
30	750	1524	–	1524	735	980	1950	1594	1619	1594	735	1260	3200

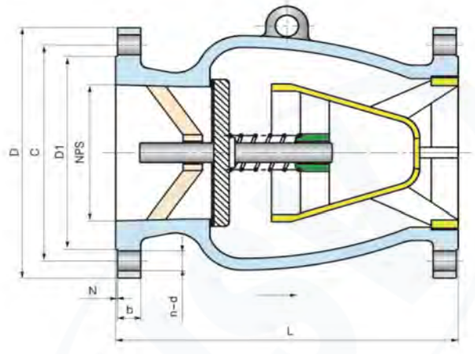
Size		Class 600 Dimensions (mm)						Class 900 Dimensions (mm)					
NPS	DN	L			d	H	Weight (Kg)	L			d	H	Weight (Kg)
		RF	RTJ	BW				RF	RTJ	BW			
2	50	292	295	292	51	170	28	368	371	368	47	200	48
2 1/2	65	330	333	330	64	178	40	419	422	419	57	220	75
3	80	356	359	356	76	246	68	381	384	381	73	280	95
4	100	432	435	432	102	290	117	457	460	457	98	320	135
5	125	508	511	508	127	320	155	559	562	559	121	360	200
6	150	559	562	559	152	360	192	610	613	610	146	400	264
8	200	660	664	660	200	430	340	737	740	737	190	480	424
10	250	787	791	787	248	502	515	838	841	838	234	560	730
12	300	838	841	838	298	554	750	965	968	965	282	632	1070
14	350	889	892	889	327	595	890	1029	1038	1029	311	680	1180
16	400	991	994	991	375	680	1303	1130	1140	1130	354	780	1790
18	450	1092	1095	1092	419	778	1800	1219	1232	1219	400	880	2500
20	500	1194	1200	1194	464	970	2150	1321	1334	1321	444	1050	3080
24	600	1397	1407	1397	559	1100	3200	1549	1568	1549	533	1200	4600

Size		Class 1500 Dimensions (mm)						Class 2500 Dimensions (mm)					
NPS	DN	L			d	H	Weight (Kg)	L			d	H	Weight (Kg)
		RF	RTJ	BW				RF	RTJ	BW			
2	50	368	371	368	47	210	48	451	454	451	35	230	68
2 1/2	65	419	422	419	57	240	75	508	514	508	47	260	100
3	80	470	473	470	70	303	120	578	584	578	57	330	165
4	100	546	549	546	92	340	180	673	683	673	73	370	260
5	125	673	676	673	111	380	294	794	807	794	92	410	440
6	150	705	711	705	136	430	385	914	927	914	111	460	580
8	200	832	841	832	174	500	634	1022	1038	1022	146	530	970
10	250	991	1000	991	222	590	1140	1270	1292	1270	184	620	1700
12	300	1130	1146	1130	263	660	1650	1422	1445	1422	219	690	2600
14	350	1257	1276	1257	289	710	2000	–	–	–	–	–	–
16	400	1384	1407	1384	330	820	2700	–	–	–	–	–	–

Use

Except of the general function of check valve. the axial flow check valve has the advantagesof small noise and lower impact with the usingof a spring With the axial flowing structure, the valve has characteristic of small flud resistance, great low capacity, and small uter dimensionwhich makes this valve a wondertul choice using on the outlet of pump in pipeline system transporting oiland gas It is used on the pipelinetransporting oil, gas, water and etc. For non-return demanding condition.





Structure Features

1. One-piece body, small weight, good strength, and easy maintenance.
2. The thrust force of spring enables the valve stayed in closed position even without the force of medium.
3. Wonderful sealing carrier makes the valve able to be installed at any direction, and the disc can tough the seat sealing perfectly
4. Axial flow struoture and accurate flowing passage enables litle pressure loss, stable medium flowing, and non cavitation eroslon The discreturns to the sealing positon with the force of spring and sub-pressure caused by medium flowing So there is No Direct impact of themedium onto the back side of the disc. Axial flow check valve is a low-noise type.
5. The specialstruoture and surface treatment of the disc carrier and pin eliminates the phenomenon of valve sticking It can close and openevenly to avoid the common defects of disc can not stay in the center of sealing positon because of the gravity of disc So the valve haswonderful and lasting sealing effect.
6. In closed poston, and accurate design makes the thrust force of spring Is alitlebgger than the force of disc's gravity plus the friction forcebetween disc and sealing ring And the disc can return to its sealing position under low pressure despite of any installation position so as toprotect the operation of pump.

Technical Specifications

Design Basis		GB	API/ASME
Design Standard		GB/T 21387	API 6D ASME B16.34
Face-to-Face		GB/T 12221	API 6D ASME B16.10
Connection End	Flanged	GB/T 9113	ASME B16.5
Materials		NACE MR0175	
Test and Check		GB/T 26480	API 598

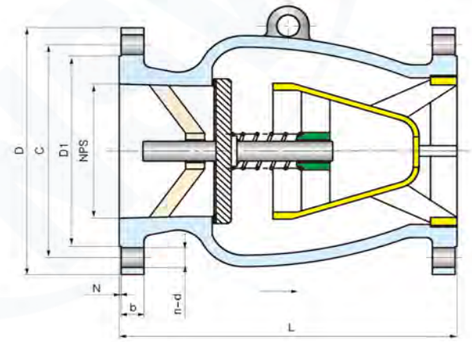
The valve connection end st andard designed and manufactured according to user requirements.

Main Parts and Materials

Conventional Type

Part Name	Carbon Steel		Low Temp Steel		Stainless Steel	
	GB	ASTM	GB	ASTM	GB	ASTM
Body	WCB	A216-WCB	LCB LCC	A352-LCB A352-LCC	CF8 CF8M	A351-CF8 A351-CF8M
Disc	WCB	A216-WCB	LCB LCC	A352-LCB A352-LCC	CF8 CF8M	A351-CF8 A351-CF8M
Guiding part	WCB	A216-WCB	LCB LCC	A352-LCB A352-LCC	CF8 CF8M	A351-CF8 A351-CF8M
Sleeve	12Cr18Ni9	SS304	12Cr18Ni9 00Cr17Ni12Mo2	SS304	12Cr18Ni9 00Cr17Ni12Mo2	SS304 SS316
Spring	SS304、SS316、Inconel X-750					

Non-Slam check valve

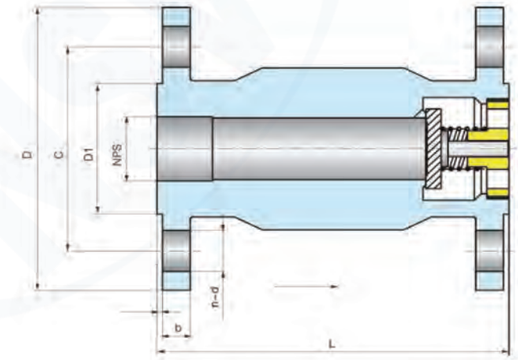


NPS	DN	CLASS 150 L		PN10/16/25 L		CLASS 300 L		PN40 L	
		RF/BW	RTJ	LTS	STS	RF/BW	RTJ	LTS	STS
2	50	203	–	203	130	267	–	267	130
2 1/2	65	216	–	216	160	292	–	292	160
3	80	241	–	241	180	318	–	318	180
4	100	292	–	292	200	356	–	356	200
5	125	330	–	330	230	400	–	400	230
6	150	356	–	356	270	444	–	444	270
8	200	495	–	495	330	533	–	533	330
10	250	622	–	622	370	622	–	622	370
12	300	698	–	698	450	711	–	711	450
14	350	787	–	787	520	838	–	838	520
16	400	864	–	864	580	864	–	864	580
18	450	978	–	978	650	978	–	978	650
20	500	978	–	978	720	1016	–	1016	720
24	600	1295	–	1295	980	1346	–	1346	980
28	700	1448	–	1448	1180	1449	–	–	–
30	750	1524	–	–		1594	–	–	–
36	900	1956	–	–		2083	–	–	–

Size		CLASS 600		PN100		CLASS 900		PN160	
NPS	DN	L		L		L		L	
		RF/BW	RTJ	LTS	STS	RF/BW	RTJ	LTS	STS
2	50	292	295	292	170	368	371	368	200
2 1/2	65	330	333	330	190	419	422	419	230
3	80	356	359	356	220	381	384	381	260
4	100	432	435	432	260	457	460	457	300
5	125	508	511	508	300	559	562	559	350
6	150	559	562	559	340	610	613	610	390
8	200	660	664	660	420	737	740	737	480
10	250	787	791	787	480	838	841	838	550
12	300	838	841	838	590	965	968	965	670
14	350	889	892	889	650	1092	1038	–	–
16	400	991	994	991	720	1130	1140	–	–
18	450	1092	1095	1092	770	1219	1232	–	–
20	500	1194	1200	1194	850	1321	1334	–	–
24	600	1397	1407	–	–	1549	1568	–	–
28	700	1600	–	–	–	–	–	–	–
30	750	1651	–	–	–	–	–	–	–
36	900	2083	–	–	–	–	–	–	–

Size		CLASS 1500		CLASS 2500	
NPS	DN	L		L	
		RF/BW	RTJ	RF/BW	RTJ
2	50	368	371	451	454
2 1/2	65	419	422	508	514
3	80	470	473	578	584
4	100	546	549	673	683
5	125	673	676	794	807
6	150	705	711	914	927
8	200	832	841	1022	1038
10	250	991	1000	1270	1292
12	300	1130	1146	1422	1445
14	350	1257	1276	–	–
16	400	1384	1407	–	–
18	450	1537	1559	–	–
20	500	1664	1686	–	–
24	600	1943	1972	–	–

Non-Slam check valve



Size		CLASS 150		PN10/16/25	CLASS 300		PN40
NPS	DN	L		L	L		L
		RF/BW	RTJ		RF/BW	RTJ	
1/2	15	108	108	80	152	152	80
3/4	20	117	117	80	178	178	80
1	25	127	127	85	216	216	85
1 1/4	32	140	140	110	229	229	110
1 1/2	40	165	165	120	241	241	120

Size		CLASS 150		PN100	CLASS 300		PN160
NPS	DN	L		L	L		L
		RF/BW	RTJ		RF/BW	RTJ	
1/2	15	165	165	90	216	216	110
3/4	20	190	190	90	229	229	110
1	25	216	216	100	254	254	120
1 1/4	32	229	229	120	279	279	140
1 1/2	40	241	241	130	305	305	160

Size		CLASS 1500		CLASS 2500	
NPS	DN	L		L	
		RF/BW	RTJ	RF/BW	RTJ
1/2	15	216	216	264	264
3/4	20	229	229	273	273
1	25	254	254	308	308
1 1/4	32	279	279	349	349
1 1/2	40	305	305	384	384