



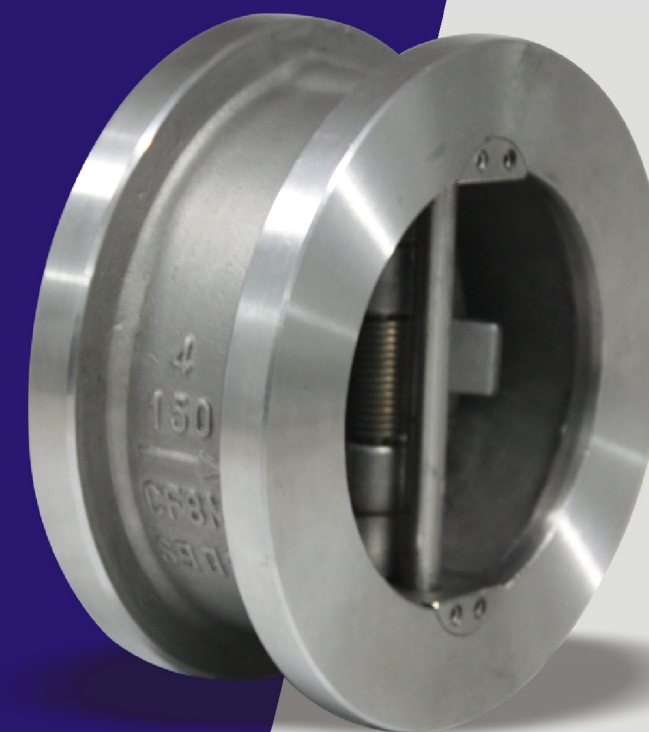
Agent Inforamtion:

WZLD[®] *QUALITY VALVE SOLUTIONS
MADE FOR THE WORLD*



WAFER TYPE CHECK VALVE

www.leadervalue.com.cn



WZLD[®]

LEADER VALVE GROUP
WENZHOU LEADER VALVE CO., LTD.

ADD.: Madao Industrial Zone, Wuniu Town, Youngjia County,
Zhejiang Province, China P.C.:325103

TEL: 0086(0)577-62896581

FAX: 0086(0)577-62896586

Email: sales@leadervalue.com.cn

<http://www.leadervalue.com.cn>

LEADER VALVE GROUP

Catalog No.:LEADER-WCK-01

QUALITY VALVE SOLUTIONS MADE FOR THE WORLD



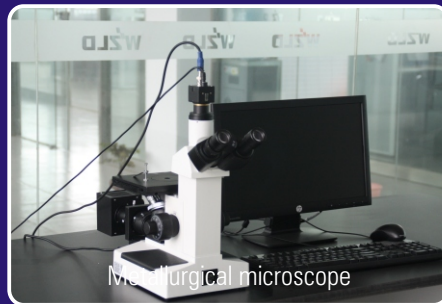
Pressure-test bench



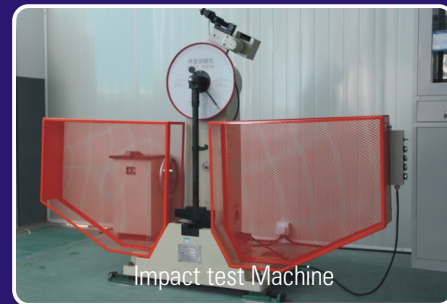
PMI equipment



Cryogenic Box



Surgical microscope



Impact test Machine

ABOUT US

We are one of the leading manufacturers in china to supply quality valve solutions for oil, gas, refinery, chemistry, marine, power plant, pipeline transmit industries etc.; We provide full range of industrial valves products, include Gate valve, Globe valve, Check valve, Ball valve, Plug valve, Butterfly valve, strainer etc. of different types ,sizes and material, Available standard include API, BS, JIS, EN, DIN, GOST etc. Our valves can be Carbon steel, Low-Temperature carbon steel, Austenitic stainless steel, Cr-Mo alloy steel, Duplex stainless steel, Super-duplex stainless steel, Bronze, Nickel alloy, Hastelloy, Titanium, Zirconium etc. The maximum pressure rating can be 2500lbs(PN420), The maximum size can be 80" (DN2000), service temperature can be -196 °C-600 °C

We own advanced metal material lab, which include PMI (PDA -5500S): It can analyse following element: Fe, C, Si, Mn, P, S, Cu, Ni, Cr, Mo, Ti, Al, V, Nb, N; so it can ensure us impose reliable control in metal material like casting and forging.

All our branch factories have strict Quality control system as per ISO 9001, API 600, API 6D, API Q1, CE/PED etc. so our products are designed and manufactured strictly as per client's requirements and latest manufacturing specification of international standards organization. We welcome most severe and critical valve application.

Leader Valve Group mission is to create a professional and comprehensive quality valve solutions for better serving the customers in the world;

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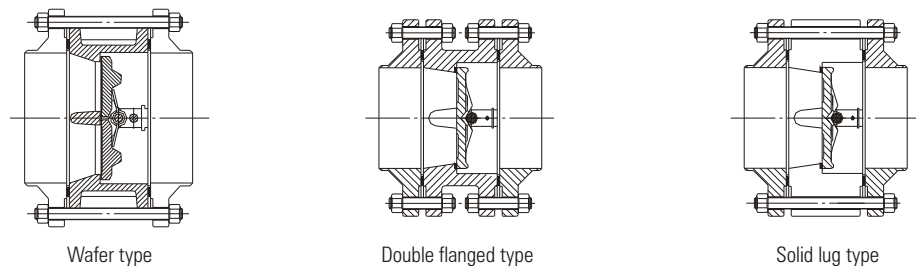


USAGE

Dual plate check valve is a vital item, installed in support of automatic shutdown valves and safety devices. Its purpose is to prevent and protect against the consequences of unintended reverse flow. WZLD check valve provides high integrity first-time defence in the event of unintended reverse flow and operates in advance of, or in conjunction with the safety devices, It's immediately responsive and fact acting in its closure, thereby maximising protection to prevent or minimize the adverse effect of any backflow. Correct use of WZLD check valve will give enhanced protection for the safety of personnel, the environment, mechanical equipment, process plant, and against loss of product or production. It's not an isolating valve and should not be used as such. WZLD dual plate check valves are widely applied in the industry of petroleum, petro-chemical, chemical, LNG etc.

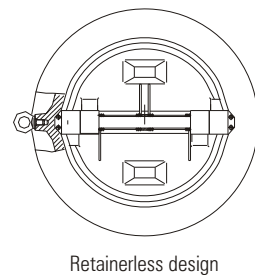
DESIGN STRUCTURAL FEATURES

1. Different body design based on different installation



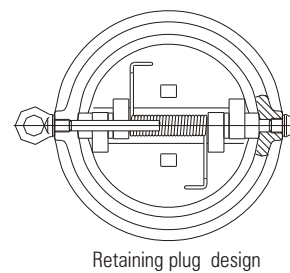
2. Retainerless design

WZLD was one of the first dual plate check valve manufacturers to offer a retainerless design. It has now been superseded by a technically superior solution which is available in all types of WZLD check valve-wafer, flanged, hub-ended and butt-weld end. The engineer no longer needs to worry about whether spiral wound gaskets or ring joints are compatible as the WZLD design accommodates both USA and European sealing elements. Not only does the retainerless design provide a higher integrity pressure vessel-no screwed plugs, WZLD's design enables the valve to be disassembled very quickly without the use of force or special tools other than an Allen wrench. The WZLD retainerless check valve design concept is such that it is impossible for the valve to become disassembled in the line and does not utilise any springs or circlips. With improved machining technology WZLD are able to offer this superior design as standard at a price equal or less than competitor' valves with retaining plugs. There is no intrusion into the gasket sealing element surface by the retaining mechanism on WZLD check valves.



3. RETAINING PLUGS

On occasion, for technical reasons, e.g. compact flange and lined valves, WZLD cannot supply its Retainerless design. In such instances, WZLD will provide valves with retaining plugs. Retaining plugs have been successfully utilised on check valves for some 40 years.



4. INDEPENDENT PLATE CLOSING ACTION

The independent spring action optimises the equal closing rates of each plate especially when friction coefficients are uneven due to one plate resting upon another. The springs have been designed to ensure stresses are kept to a level so that the spring should have a theoretical infinite life. Spring designs utilised in WZLD valves have undergone accelerated laboratory testing and are proven to be capable of operating without failure over 2,000,000 cycles.

5. SEAT LEAKAGE - METAL TO METAL SEATS

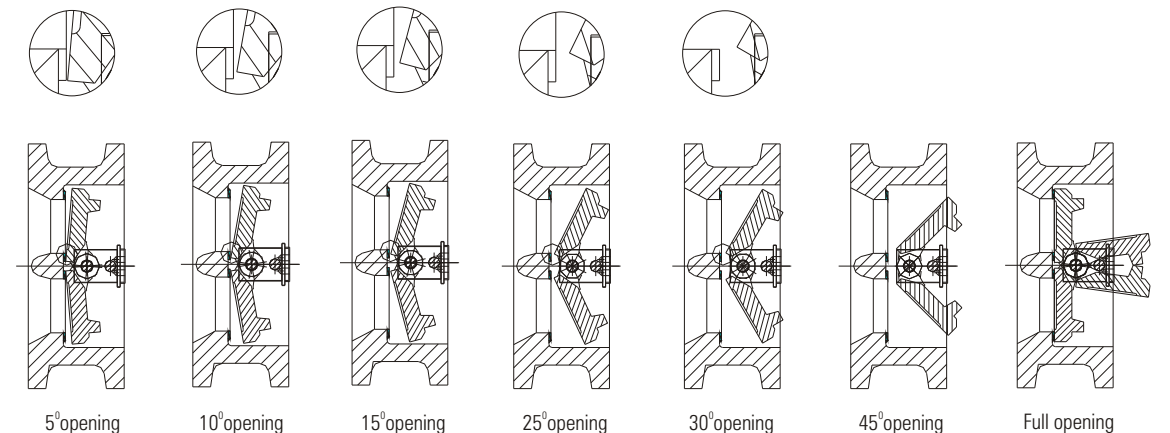
The dual plate check valve is tested to API 598 which has a metal to metal seat permitted seal leakage of 3 cc/inch of bore/min. This small but significant amount arises because it is more difficult to obtain a perfect seal on a D shaped seat compared to a circular seat. The WZLD plates have been specifically designed to overcome this problem and to be better at sealing than earlier designs, such that near zero leakage can be economically achieved on metal to metal seats. This is particularly useful on high temperature gas applications and cryogenic applications where it is not possible to use resilient seats. In contrast to other dual plate check valves the seat sealing characteristics of the WZLD valve are enhanced as line pressure increases unlike competitor's valves which can significantly deteriorate in higher pressure classes. This characteristic enables WZLD to provide dual plate check valves with substantially lower leakage rates than specified in API 598.

6. PLATE SHOCK BUMPERS

For many years Goodwin produced dual plate check valves with plate shock bumpers located at the extreme edge of the curve of the plate. Goodwin's plate(Pat) now incorporates the plate bumper at the centre of mass of the plate approximately one-third the way in from the curved edge. With the plate bumper at the centre of mass, when the bumper of each plate collides, there is an equal and opposite force acting on the plates which prevents significant bending moments acting on the hinge pin of the plate. Plate bumpers are supplied as standard on all sizes, pressures and types of Goodwin Dual Plate Check Valves. It is an accepted fact that there will be occasions when the plates do not arrive fully open at the same instance. Clearance on the bumper allow and ensure the plates to hit each other rather than the stop pin. This helps prevent large forces being exerted on the stop pin which could cause damage. The stop pin has only one purpose, to stop a plate going over top dead centre when reverse flow occurs. If this did occur both plates would be on the same side of the valve leaving one port open, thereby stopping the valve performing its sole function of preventing reverse flow.

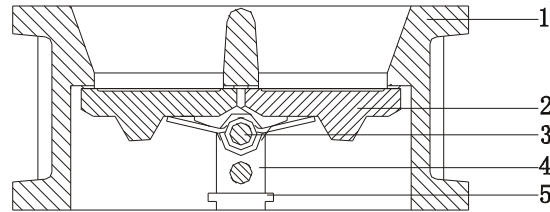
6. seat surface protection design

Professional seat surface protection design can ensure the distance from the plate's heel to the seating surface became gradually bigger when the valve opening from close position to full opening position. so the heel of the plate will not scuffing the seat's surface during the opening process, such design will greatly extend the valve's life.

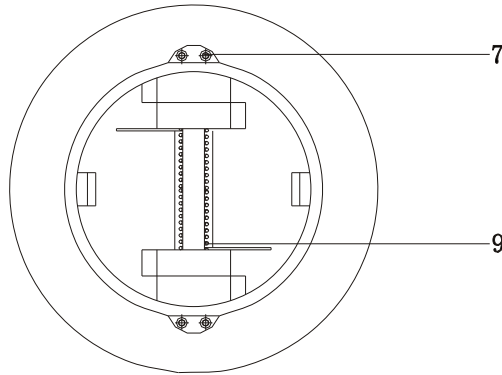


VALVE CONSTRUCTION

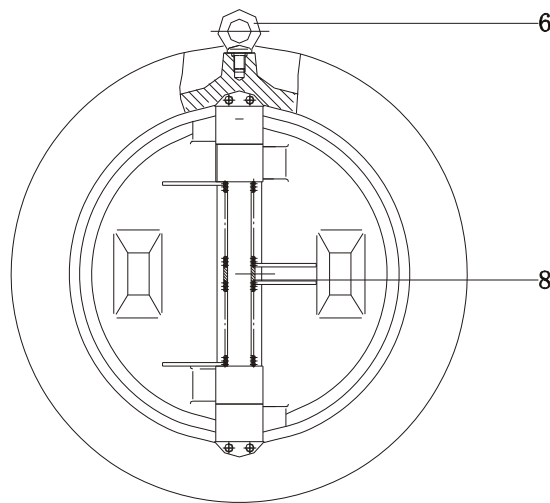
1. Wafer type



1	Body
2	Disc
3	Pin
4	Pin retainer
5	Plate
6	Eyebolt
7	Screw
8	Axle bushing
9	Spring



Size < 6"

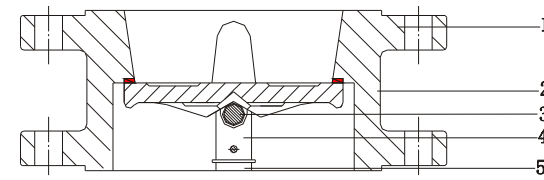


Size ≥ 6"

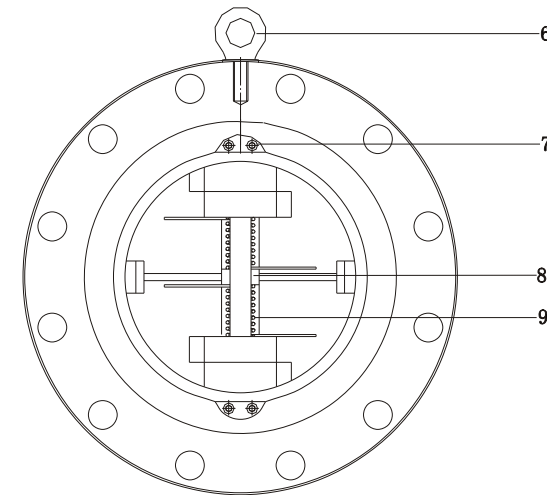


VALVE CONSTRUCTION

2. Double flange type (Size ≥ 6")

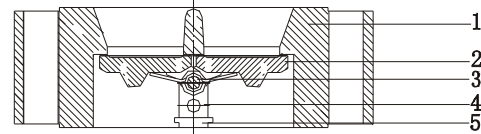


1	Body
2	Disc
3	Pin
4	Pin retainer
5	Plate
6	Eyebolt
7	Screw
8	Axle bushing
9	Spring

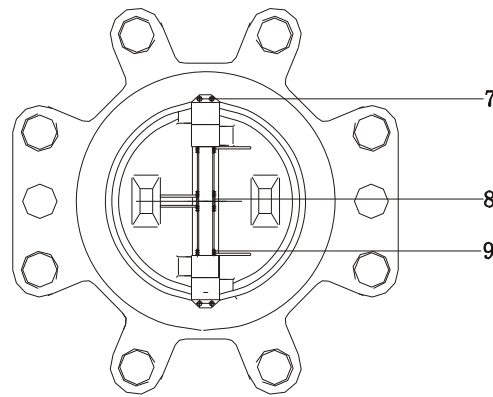


VALVE CONSTRUCTION

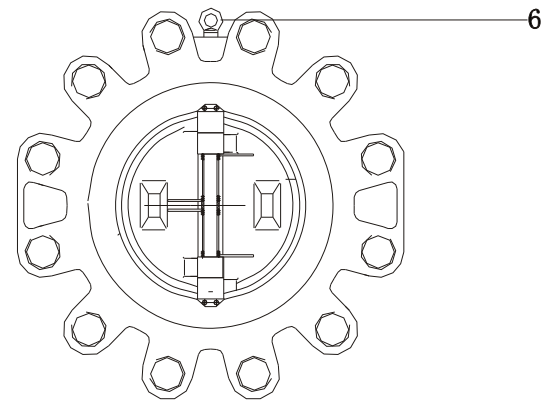
3. Solid lug type



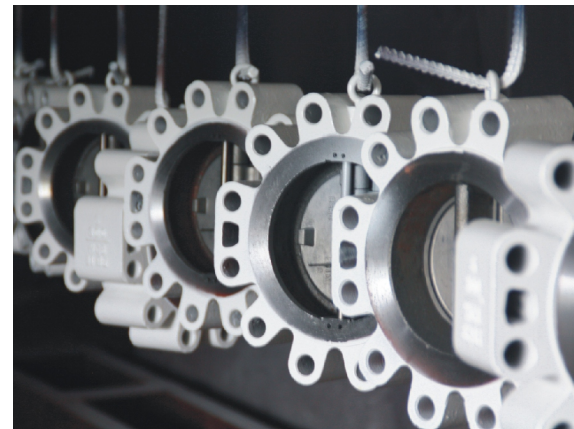
1	Body
2	Disc
3	Pin
4	Pin retainer
5	Plate
6	Eyebolt
7	Screw
8	Axle bushing
9	Spring



Size < 6"



Size ≥ 6"



AVAILABLE VALVE PART MATERIAL

Body And(or) Disc Material		
FIG	Material	Specification
1	Carbon steel	ASTM A105/A216 WCB
2	Low carbon steel	ASTM A352 LCB
3	Low carbon steel	ASTM A352 LCC/A350 LF2
4		ASTM A217 WC6
5	Low alloy steel	ASTM A487 GR 4N
6	Low alloy steel	ASTM A487 GR 4C
7	410 Stainless steel	ASTM A217 CA15
8	5% chromium steel	ASTM A217 C5
9	9% chromium steel	ASTM A217 C12
10	Low 13% Cr 4%Ni	ASTM A352 CA6NM
11	316 Stainless steel	ASTM A182 F316/A351 CF8M
12	316L Stainless steel	ASTM A182 F316L/A351 CF3M
13	High stainless steel	ASTM A351 CF8C
14	22%Cr Duplex steel	UNS S31803/J92205/ASTM A890 4A
15	Ferralium255-3SC	UNS S32550
16	25%Cr Senior duplex steel	UNS S32760
17	Alloy 825	UNS No8825
18	Alloy 625	ASTM A494 CW6MC
19	Avesta 254 SMO	UNS S31254/ASTM A351 CK3M CuN
20	Stellite alloy	Stellite 6
21	Titanium	ASTM B367 C2/B381 F2
22	Hastelloy	UNS N10276/ASTM A494 CW7RMN
23	Monel alloy	ASTM A494-M35-2
24	Nickel- Aluminum bronze	BS 1400 AB2/ASTM B148 C95800
25	Cr-Mo alloy steel	ASTM A217 GR WC9
26	3.5% Nickel steel	ASTM A352 LC3
27	304 Stainless steel	ASTM A351 CF8
28	304L Stainless steel	ASTM A351 CF3
29	Alloy 20	ASTM A351 CN7M
30	317 Stainless steel	ASTM A351 CG8M
31	C-Mo Steel	ASTM A352 LC1
32	Ni-resist	ASTM A439 D2
33	Nodular cast iron	ASTM A395

Lined valves

Valves can be supplied with various linings, such as Chloroprene, Nylon, EPDM, Class flake and Coal Tar Epoxy(Lined valves have retaining plugs)

Clad valves

Valves can be supplied with various internal cladding such as Inconel 625 & 825;

Body seat/disc overlay material			
FIG	Material	Operating Temperature Range	
		°F	°C
A	Same as body and plate	As body/plate	As body/plate
B	410 Stainless steel	-20 to 1000	-29 to 538
C	316 Stainless steel	-450 to 1500	-267 to 815
D	316L Stainless steel	-425 to 850	-254 to 455
F	17-4 PH Stainless steel	-94 to 800	-40 to 427
G	Inconel 625		
H	Monel 400	-.321 to 900	-196 to 482
I	Stellite 6	-450 to 1500	-267 to 815
J	Viton GLT	-22 to 400	-30 to 204
K	Viton A	-40 to 400	-40 to 204
L	Viton B / AED	-4 to 392	-20 to 200
M	Buna-N	-22 to 250	-30 to 121
N	Teflon	-200 to 450	-129 to 232
P	EPDM	-14 to 230	-10 to 110
Q	Elast-O-Lion 985	-40 to 320	-40 to 160
R	To be specified		

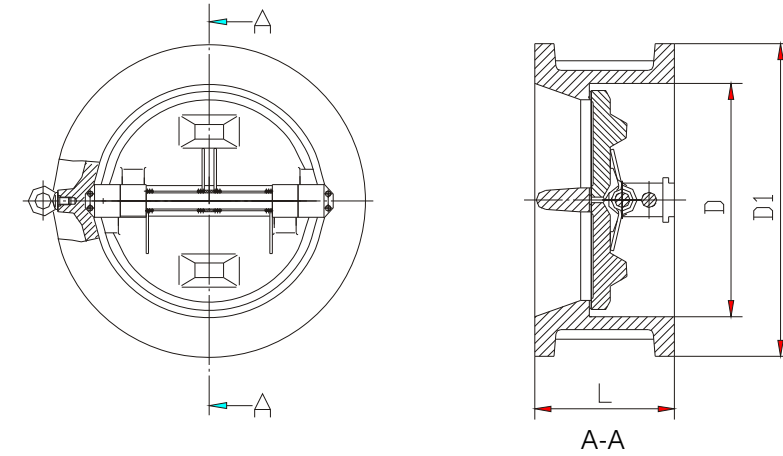
Spring material			
FIG	Material	Recommended Temp.	
		Max. °F	°C
1	316 Stainless steel	250	121
2	Inconel X750	1000	537
3	Inconel 625	1000	537
4	Monel K500	400	204
5	Inconel 718	1022	550
6	Titanium Ti6AL4V	662	350
7	To be specified		

Wetted parts			
FIG	PIN/OTHER	FIG	PIN/OTHER
A	316 SS	I	304L SS/316 SS
B	316L SS/316 SS	J	347 SS/625
C	410 SS/316 SS	K	321 SS/625
D	17-4PH/316 SS	L	F51 DSS/625
E	Inconel 625	M	F55 SDSS/625
F	Monel K500/625	N	Incoloy 825/625
G	Monel 400/625	O	Titanium
H	304 SS/316 SS		

Manufacturer standard material for wetted parts, Other combination available on request.

MAIN MATERIAL CONFIGURATION & MAIN PARAMETER

Size(inch)		NPS 2~80													
Rating/PN		150LB-2500LB(PN20-PN420)													
Valve part material	NO.	Part name	Material												
			C.S.			L.T.C.S.				S.S.			D.S.S.		
	1	Body	A216 WCB+304	A216 WCB+316	A216 WCB+13CR	A352 LCB+304	A216 WCB+316	A352 LCC+304	A216 WCB+316	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A	
	2	Disc	A351 CF8	A351 CF8M	A217 Ca15	A351 CF8	A351 CF8M	A351 CF8	A351 CF8M	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A	
	3	Pin	A182 F304	A182 F316	A182 F6	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F51	
	4	Pin retainer	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.	SS304	SS316	SS304L	SS316L	UNS S31803	
	5	Plate	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.	SS304	SS316	SS304L	SS316L	UNS S31803	
	6	Eyebolt	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	AISI 1035+Zn	
	7	Screw	AISI 1025	AISI 1025	AISI 1025	AISI 1025	AISI 1025	AISI 1025	AISI 1025	S.S.	S.S.	S.S.	S.S.	S.S.	
	8	Axle bushing	SS304	SS316	A276 T410	SS304	SS316	SS304	SS316	SS304	SS316	SS304	SS316	SS316	
9	Spring	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750	Inconel X750		
Application condition	Application service	Oil, gas, water etc.													
	App.temp.(°C)	≤425 °C (Metal-to-metal seated)						≤150 °C (Viton seated)							
Design & Manufacture		API594, API6D, ASME B16.34													
Face-to-face(Length)		API594													
Connection		ANSI B16.5(Size≤24"), ANSI B16.47A(MSS SP-44) /ANSI B16.47B(API605) (26"≤Size≤60"), AWWA C207 Class D, AWWA C207 Class E;													
Pressure test		API598, ISO 5208													
Remark		Seat surface and disc surface can be hard faced with Stellite according to client's requirements													

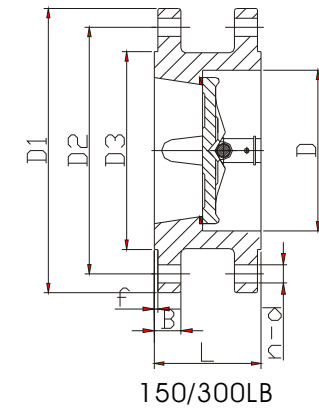
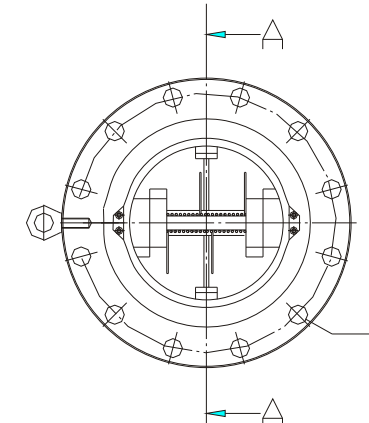
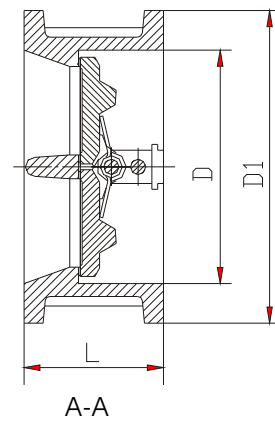
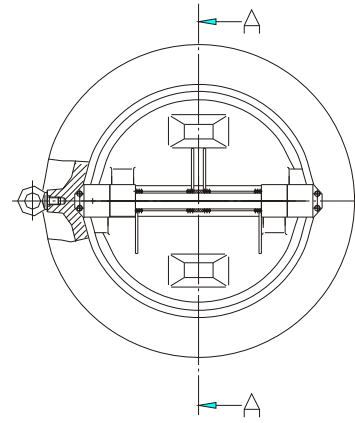


CLASS 150LB

SIZE		L	D	D1	WEIGHT kgs
DN(mm)	NPS(in)				
50	2"	60	57	105	3
65	2 1/2"	67	77	124	5
80	3"	73	90	137	6
100	4"	73	110	175	8
125	5"	86	141	197	12
150	6"	98	166	222	16
200	8"	127	206	279	21
250	10"	146	260	340	48
300	12"	181	300	410	78
350	14"	184	348	451	91
400	16"	191	388	514	125
450	18"	203	438	549	143
500	20"	219	486	606	197
600	24"	222	580	718	281
700	28"	321	711	832	-
750	30"	305	762	883	558
800	32"	356	813	940	-
900	36"	368	914	1048	915
1000	40"	419	1016	1162	-
1050	42"	432	1067	1219	1270
1200	48"	425	1219	1384	1178

CLASS 300LB

SIZE		L	D	D1	WEIGHT kgs
DN(mm)	NPS(in)				
50	2"	60	57	111	3
65	2 1/2"	67	77	130	5
80	3"	73	90	149	6
100	4"	73	110	181	8
125	5"	86	141	216	16
150	6"	98	166	251	20
200	8"	127	206	308	37
250	10"	146	260	362	57
300	12"	181	300	422	91
350	14"	222	348	486	147
400	16"	232	388	540	188
450	18"	264	438	597	252
500	20"	292	486	654	329
600	24"	318	580	775	499
750	30"	398	762	953	930
900	36"	489	914	1117	1621
1050	42"	568	1067	1289	2622
1200	48"	629	1219	1366	2981



CLASS 600LB

SIZE		L	D	D1	WEIGHT kgs
DN(mm)	NPS(in)				
50	2"	60	57	111	3
65	2 1/2"	67	77	130	5
80	3"	73	90	149	7
100	4"	73	110	194	12
125	5"	105	141	241	22.7
150	6"	136	166	267	36
200	8"	165	206	321	61
250	10"	213	260	400	108
300	12"	229	300	457	151
350	14"	273	348	492	206
400	16"	305	388	565	290
450	18"	362	438	613	404
500	20"	368	486	683	508
600	24"	438	580	791	925

CLASS 900LB

SIZE		L	D	D1	WEIGHT kgs
DN(mm)	NPS(in)				
50	2"	70	57	143	6
65	2 1/2"	83	77	165	7
80	3"	83	90	168	11
100	4"	102	110	206	18
150	6"	159	166	289	52
200	8"	206	206	359	104
250	10"	241	260	435	176
300	12"	292	300	498	245
350	14"	356	348	541	420
400	16"	384	388	575	523
450	18"	451	438	638	598
500	20"	451	486	699	647
600	24"	495	580	838	1238

CLASS 150LB

SIZE		L	D	D1	D2	D3	b	f	N-φd
DN(mm)	NPS(in)								
200	8"	127	206	381	330	270	29	2	12-φ25
250	10"	146	260	445	388	324	31	2	16-φ29
300	12"	181	300	521	451	381	32	2	16-φ32
350	14"	184	348	584	515	413	35	2	20-φ32
400	16"	191	388	648	572	470	37	2	20-φ35
450	18"	203	438	711	629	533	40	2	24-φ35
500	20"	219	486	775	686	584	43	2	24-φ35
600	24"	222	580	914	813	692	48	2	24-φ41
700	28"	321	711	927	864	800	72	2	28-φ35
750	30"	305	762	984	914	857	75	2	28-φ35
800	32"	356	813	1060	978	914	81	2	28-φ41
900	36"	368	914	1168	1086	1022	91	2	32-φ41
1000	40"	419	1016	1289	1200	1124	91	2	36-φ41
1050	42"	432	1067	1346	1257	1194	97	2	36-φ41
1200	48"	524	1219	1511	1422	1359	108	2	44-φ41

CLASS 300LB

SIZE		L	D	D1	D2	D3	b	f	N-φd
DN(mm)	NPS(in)								
200	8"	127	206	381	330	270	42	2	12-φ25
250	10"	146	260	445	388	324	48	2	16-φ29
300	12"	181	300	521	451	381	51	2	16-φ32
350	14"	222	348	584	515	413	54	2	20-φ32
400	16"	232	388	648	572	470	58	2	20-φ35
450	18"	264	438	711	629	533	61	2	24-φ35
500	20"	292	486	775	686	584	64	2	24-φ35
600	24"	318	580	914	813	692	70	2	24-φ41
750	30"	398	762	1092	997	857	92	2	28-φ48
900	36"	489	914	1270	1168	1022	105	2	32-φ54
1050	42"	568	1067	1289	1207	1137	120	2	32-φ45
1200	48"	629	1219	1467	1372	1302	134	2	32-φ51

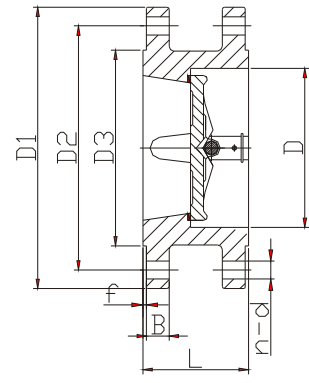
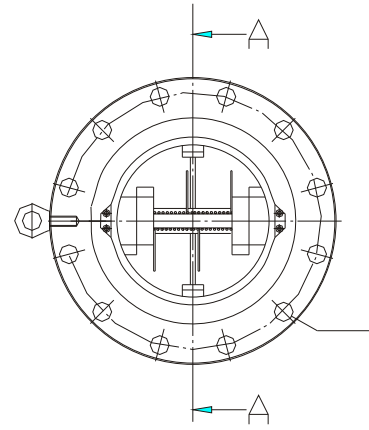
CLASS 1500LB

SIZE		L	D	D1	WEIGHT kgs
DN(mm)	NPS(in)				
50	2"	70	57	143	6
65	2 1/2"	83	77	165	7
80	3"	83	90	175	11
100	4"	102	110	210	20
150	6"	159	166	283	50
200	8"	206	206	352	99
250	10"	248	260	435	180
300	12"	305	300	421	329

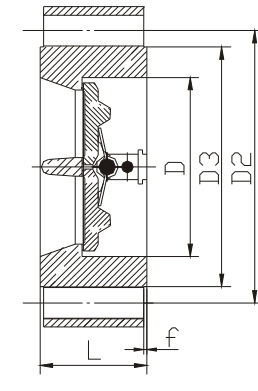
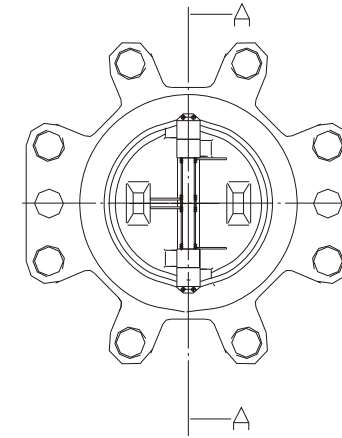
CLASS 2500LB

SIZE		L	D	D1	WEIGHT kgs
DN(mm)	NPS(in)				
50	2"	70	57	146	7
65	2 1/2"	83	77	168	10
80	3"	86	90	197	14
100	4"	105	110	235	25
150	6"	159	166	318	86
200	8"	206	206	387	129
250	10"	254	260	476	228
300	12"	305	300	549	437

Dual-plate wafer check valve are available in accordance with DIN, BS, JIS, AS and ISO Dimensions, for other sizes and pressure classes contact factory.



600LB&above



A-A

CLASS 600LB

SIZE		L	D	D1	D2	D3	b	f	N-φd
DN(mm)	NPS(in)								
200	8"	165	206	419	349	270	56	7	12-φ32
250	10"	213	260	508	432	324	64	7	16-φ35
300	12"	229	300	559	489	381	67	7	20-φ35
350	14"	273	348	603	527	413	70	7	20-φ39
400	16"	305	388	686	603	470	77	7	20-φ41
450	18"	362	438	743	654	533	83	7	20-φ44
500	20"	368	486	813	724	584	89	7	24-φ44
600	24"	445	580	940	838	692	102	7	24-φ51
750	30"	505	-	1130	1022	857	115	7	28-φ54
900	36"	635	-	1314	1194	1022	124	7	28-φ67
1050	42"	702	-	1403	1283	1168	169	7	28-φ67
1200	48"	787	-	1594	1461	1334	189	7	32-φ73

CLASS 900LB

SIZE		L	D	D1	D2	D3	b	f	N-φd
DN(mm)	NPS(in)								
200	8"	206	206	470	394	308	64	7	12-φ39
250	10"	241	260	546	470	362	70	7	16-φ39
300	12"	292	300	610	533	419	80	7	20-φ39
350	14"	356	348	641	559	467	86	7	20-φ41
400	16"	384	388	705	616	524	89	7	20-φ44
450	18"	451	438	787	686	594	102	7	20-φ51
500	20"	451	486	857	749	648	108	7	20-φ54
600	24"	495	580	1042	902	772	140	7	20-φ67
750	30"	635	-	1232	1086	857	150	7	20-φ79
900	36"	711	-	1461	1289	1022	172	7	20-φ90
1050	42"	800	-	1562	1391	1213	207	7	24-φ92

CLASS 150LB

SIZE		L	D	D2	D3	f	N-φd	WEIGHT kgs
DN(mm)	NPS(in)							
40	1 1/2"	51	50	98.5	73	2	4-φ15	-
50	2"	60	57	120.5	92	2	4-φ19	3.5
65	2 1/2"	67	77	139.5	105	2	4-φ19	-
80	3"	73	90	152.5	127	2	4-φ19	6
100	4"	73	110	190.5	157	2	8-φ19	11
125	5"	86	141	216	186	2	8-φ22	16
150	6"	98	166	241.5	216	2	8-φ22	20

CLASS 300LB

SIZE		L	D	D2	D3	f	N-φd	WEIGHT kgs
DN(mm)	NPS(in)							
40	1 1/2"	51	50	114.5	73	2	4-φ22	-
50	2"	60	57	127	92	2	8-φ19	5
65	2 1/2"	67	77	149	105	2	8-φ22	-
80	3"	73	90	168.5	127	2	8-φ22	10
100	4"	73	110	200	157	2	8-φ22	14.5
125	5"	86	141	235	186	2	8-φ22	-
150	6"	98	166	270	216	2	12-φ22	35
200	8"	127	206	330	270	2	12-φ25	56
250	10"	146	260	388	324	2	16-φ29	123

WEIGHT

Class	Size Weight (Kgs)	Size															
		8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	36"	40"	42"	48"	
150LB	42	86	99	124	160	185	250	389	-	687	-	1145	-	1888	2667		
300LB	-	-	152	195	280	385	488	686	-	1406	-	2109	-	3932	4513		
600LB	-	-	277	309	430	553	728	1111	-	1735	-	2747	-	4529	5715		
900LB	-	-	349	561	548	835	1787	1893	-	2948	-	-	-	-	-		
1500LB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2500LB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

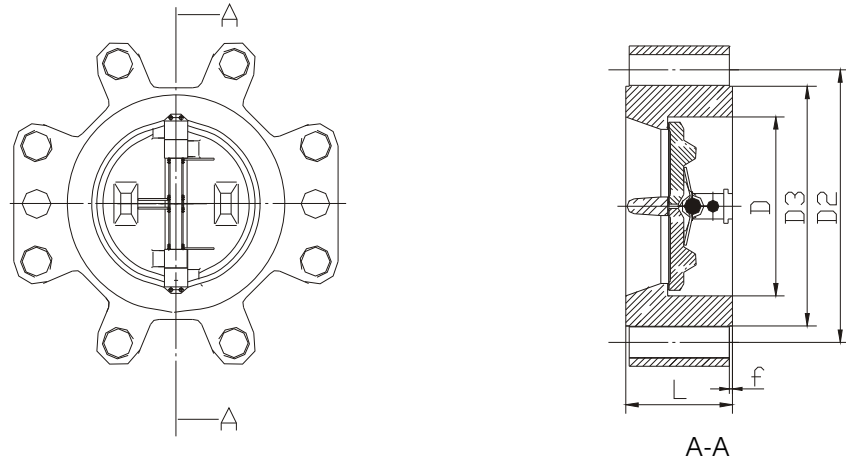
CLASS 600LB

SIZE		L	D	D2	D3	f	N-φd	WEIGHT kgs
DN(mm)	NPS(in)							
50	2"	60	57	127	92	7	8-φ19	8
65	2 1/2"	67	77	149	105	7	8-φ22	10
80	3"	73	90	168	127	7	8-φ22	14
100	4"	73	113	216	157	7	8-φ25	23
150	6"	136	166	292	216	7	12-φ29	83
200	8"	165	206	349	270	7	12-φ32	134
250	10"	213	260	432	324	7	16-φ35	245

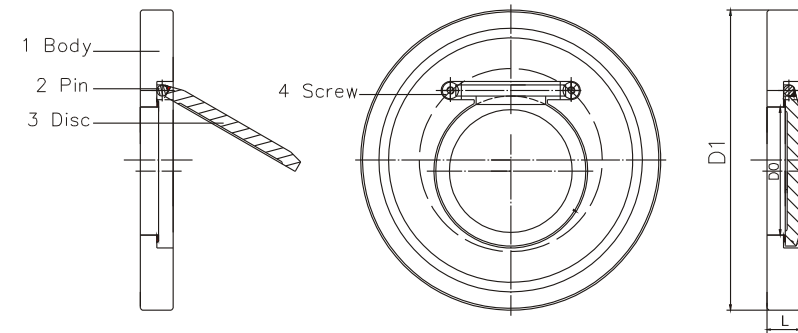
CLASS 900LB

SIZE		L	D	D2	D3	f	N-φd	WEIGHT kgs
DN(mm)	NPS(in)							
50	2"	70	57	165.5	92	7	8-φ26	17
65	2 1/2"	83	77	190.5	105	7	8-φ29	-
80	3"	83	90	190.5	127	7	8-φ26	26
100	4"	102	113	234.5	157	7	8-φ32	45
150	6"	159	166	317.5	216	7	12-φ32	114
200	8"	206	206	394	270	7	8-φ25	200
250	10"	241	260	470	324	7	12-φ29	357

Note:
 1.Sizes not available in double flange design are offered as Solid lug type body design, see next pages.
 2.Please consult factory for other sizes and pressure classes available;
 3.Consult factory for weight information not shown, all above weight information is for reference only;
 4.For size above 24", the flange dimension as per ASME B16.47A;



WAFER TYPE SWING CHECK VALVE(SHORT PATTERN)



Main Parameter Specification:

Design and manufacturer: API6D, ASME B16.34
Face-to-face Dimension: API6D
Test and Inspection: API598
Installed between ASME B16.5 Flange

CLASS 1500LB

SIZE		L	D	D2	D3	f	N-φd	WEIGHT kgs
DN(mm)	NPS(in)							
50	2"	70	57	165.1	92	7	8-φ26	17
65	2 1/2"	83	77	190.5	105	7	8-φ29	-
80	3"	83	90	203.2	127	7	8-φ32	32
100	4"	102	113	241.3	157	7	8-φ35	51
150	6"	159	166	317.5	216	7	12-φ39	119
200	8"	206	206	394	270	7	12-φ44	221
250	10"	248	260	483	324	7	12-φ51	416
300	12"	305	300	572	381	7	16-φ54	646
350	14"	356	-	635	413	7	16-φ61	928
400	16"	384	-	705	470	7	16-φ67	1179
450	18"	468	-	775	533	7	16-φ74	1761
500	20"	533	-	832	584	7	16-φ80	2580
600	24"	559	-	991	692	7	16-φ92	3246

CLASS 2500LB

SIZE		L	D	D2	D3	f	N-φd	WEIGHT kgs
DN(mm)	NPS(in)							
50	2"	70	57	171.5	92	7	8-φ29	22
65	2 1/2"	83	77	196.8	105	7	8-φ32	-
80	3"	83	90	228.6	127	7	8-φ35	42
100	4"	102	113	273	157	7	8-φ41	69
150	6"	159	166	368.3	216	7	8-φ54	175
200	8"	206	206	438	270	7	12-φ54	309
250	10"	248	260	540	324	7	12-φ67	559
300	12"	305	300	619.3	381	7	12-φ74	853

MATERIAL OF MAIN PARTS

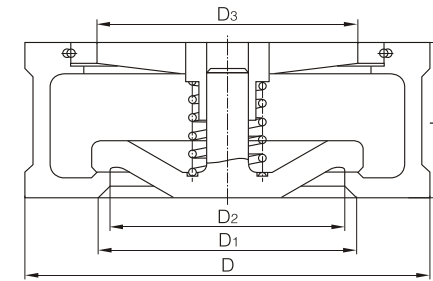
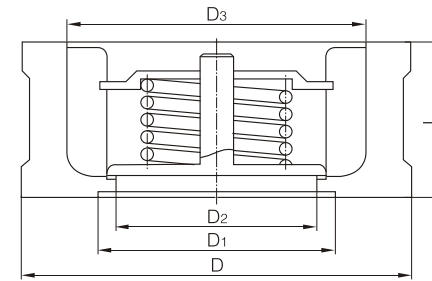
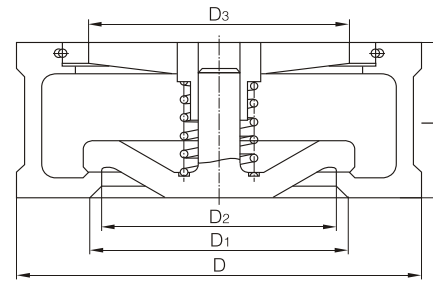
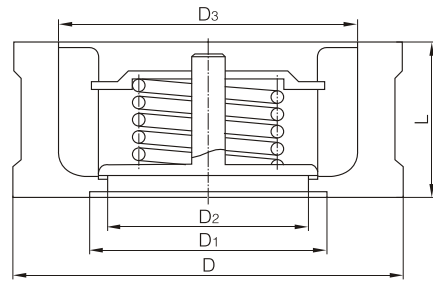
NO.	Parts	Material					
		A105+HF	A516 GR 70+HF	LF2+HF	A182 F304(L)+HF	A182 F316(L)+HF	A182 F51
1	Body	A105+HF	A516 GR 70+HF	LF2+HF	A182 F304(L)+HF	A182 F316(L)+HF	A182 F51
2	Pin	SS316	SS316	SS316	SS304(L)	SS316(L)	A182 F51
3	Disc	SS316+HF	SS316+HF	SS316	SS304(L)+HF	SS316(L)	A182 F51
4	Screw	S.S	S.S	S.S	S.S	S.S	S.S

MAIN DIMENSION AND WEIGHT

Rating	SIZE		L	D0	D1	Weight (kg)
	DN(mm)	NPS(in)				
150Lb	50	2"	19.1	38	105	
	65	2 1/2"	19.1	51	124	
	80	3"	19.1	51	137	
	100	4"	19.1	76	175	
	150	6"	19.1	102	222	
	200	8"	28.6	152	279	
	250	10"	28.6	203	340	
	300	12"	38.1	254	410	
	350	14"	44.5	305	451	
	400	16"	50.8	337	514	
	450	18"	60.3	387	549	
	500	20"	63.5	438	606	
300Lb	50	2"	19.1	38	111	
	65	2 1/2"	19.1	51	130	
	80	3"	19.1	51	149	
	100	4"	19.1	76	181	
	150	6"	22.2	102	251	
	200	8"	28.6	152	308	
	250	10"	38.1	203	362	
	300	12"	50.8	254	422	
	350	14"	50.8	305	486	
	400	16"	50.8	337	540	
	450	18"	76.2	387	597	
	500	20"	82.6	438	654	

Rating	SIZE		L	D0	D1	Weight (kg)
	DN(mm)	NPS(in)				
600Lb	50	2"	19.1	38	111	
	65	2 1/2"	19.1	51	130	
	80	3"	19.1	51	149	
	100	4"	22.2	76	194	
	150	6"	28.6	102	267	
	200	8"	38.1	152	321	
	250	10"	57.2	200	400	
	300	12"	60.3	248	457	
	350	14"	66.7	298	492	
	400	16"	73	327	565	
	450	18"	82.6	375	613	
	500	20"	92.1	419	683	
900Lb	50	2"	19.1		143	
	65	2 1/2"	19.1	47	165	
	80	3"	19.1	47	168	
	100	4"	22.2	73	206	
	150	6"	34.9	98	289	
	200	8"	44.5	146	359	
1500Lb	250	10"	57.2	190	435	
	50	2"	19.1		143	
	65	2 1/2"	19.1	47	165	
	80	3"	22.2	47	175	
	100	4"	31.8	70	210	
	150	6"	44.5	92	283	
200	8"	57.2	136	352		
250	10"	73	174	435		

Note:
1.Consult factory for additional sizes and pressure class.
2.Consult factory for weight information not shown, all above weight information is for reference only;



CLASS 150Lb~300Lb

Pressure	SIZE		Dimension (mm)					Weight (kg)	Cv
	mm	in	L	D	D1	D2	D3		
Class150Lb	15	1/2	25	46	25	15	25	0.28	-
	20	3/4	31.5	56	30	19	30	0.42	-
	25	1	35.5	65	36	24	36	0.56	-
	32	1 1/4	40	74	43	31	43	0.75	-
	40	1 1/2	45	84	52	39	52	1.3	-
	50	2	56	103	62	48	62	2.1	-
	65	2 1/2	63	122	75	62	75	2.8	-
	80	3	71	135	90	76	90	3.6	105
	100	4	80	173	112	95	112	4.8	189
	125	5	110	195	125	110	132	12	381
	150	6	125	220	150	127	158	17	428
	200	8	160	277	200	165	208	29	798
Class300Lb	15	1/2	25	52	25	15	25	0.3	-
	20	3/4	31.5	65	30	19	30	0.46	-
	25	1	35.5	72	36	24	36	0.6	-
	32	1 1/4	40	81	43	31	43	0.8	-
	40	1 1/2	45	94	52	39	52	1.5	-
	50	2	56	110	62	48	62	2.4	-
	65	2 1/2	63	128	75	62	75	3	-
	80	3	71	147	90	76	90	4	105
	100	4	80	179	112	95	112	5.5	189
	125	5	110	214	125	110	132	13	381
	150	6	125	249	150	127	158	22	428
	200	8	160	305	200	165	208	36	798

CLASS 600Lb~900Lb

Pressure	SIZE		Dimension (mm)					Weight (kg)	Cv
	mm	in	L	D	D1	D2	D3		
Class600Lb	15	1/2	25	52	25	15	25	0.4	-
	20	3/4	31.5	65	30	19	30	0.8	-
	25	1	35.5	72	36	24	36	1	-
	32	1 1/4	40	81	43	31	43	1.3	-
	40	1 1/2	45	94	52	39	52	1.8	-
	50	2	56	110	62	48	62	2.8	-
	65	2 1/2	63	128	75	62	75	4	-
	80	3	71	147	90	76	90	6	105
	100	4	80	191	112	95	112	11	189
	125	5	110	239	125	110	132	25	381
	150	6	125	264	150	127	158	32	428
	200	8	160	318	200	165	208	52	798
Class900Lb	15	1/2	25	62	25	15	25	0.6	-
	20	3/4	31.5	69	30	19	30	0.9	-
	25	1	35.5	77	36	24	36	1.2	-
	32	1 1/4	40	87	43	31	43	1.5	-
	40	1 1/2	45	97	52	39	52	2	-
	50	2	56	140	62	48	62	5.5	-
	65	2 1/2	63	162	75	62	75	7.5	-
	80	3	71	165	90	76	90	8	105
	100	4	80	204	112	95	112	14	189
	125	5	110	245	125	110	132	27	381
	150	6	125	286	150	127	158	41	428
	200	8	160	356	200	165	208	76	798

CHECK VALVE APPLICATIONS

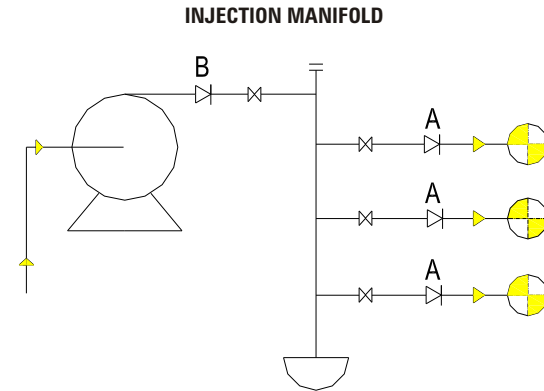
A check valve is a vital item, installed in support of automatic shutdown valves and safety devices. Its purpose is to prevent and protect against the consequences of unintended reverse flow.

WZLD check valve provides high integrity first-line defence in the event of unwanted reverse flow and operates in advance of, or in conjunction with safety devices. It is immediately responsive and fast acting in its closure, thereby maximising protection to prevent or minimize the adverse effect of any backflow..

WELLHEAD INJECTION LINES

Fluid:Treated Sea Water, Gas, Condensate
Typical Sizes:(A)4", 6", 8" (B) 12" to 16"
Rating:900, 1500, 2500, API 5000, API 10000
Typical Materials:LCC, Duplex, SMO 254, 825, 625
Typical Style:Wafer, Flanged, Solid Lug, Hub Ended.

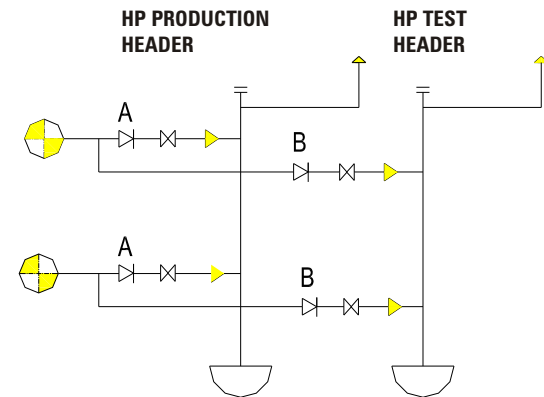
Purpose: Valve A: Prevention of backflow into injection line. Valve placed as near as practical to well head to help protect entire line and injection manifold against possible over pressure.
Valve B: Prevention of backflow into pump. Protection against reverse rotation and consequent mechanical damage.



PRODUCTION FLOWLINES

Fluid:Hydrocarbons (Gas, Oil & Condensates)
Typical Sizes:4", 6", 8", 10"
Typical Pressures:ANSI 1500, 2500
Typical Materials:LCC, CF3MN, Duplex, 825, 625, CF8M
Typical Style:Hub Ended, Flanged, Solid Lug

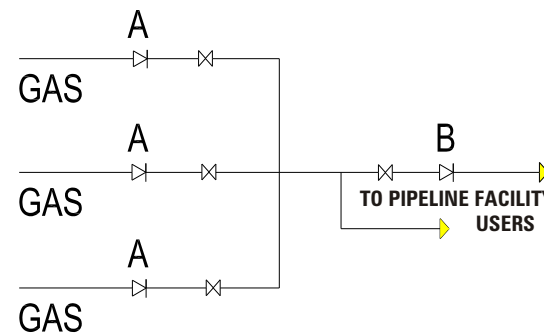
Purpose: Valve A: Prevention of backflow into flowline/reservoir.
Valve B: Prevention of backflow from test header to HP Production header.



SALES GAS EXPORT FACILITY

Fluid:Gas
Typical Sizes:(A) 10" to 16" (B) 16" to 36"
Typical Pressures:ANSI 600 and 900
Typical Materials:LCC, WCB, WCC
Typical Style:Wafer, Flanged

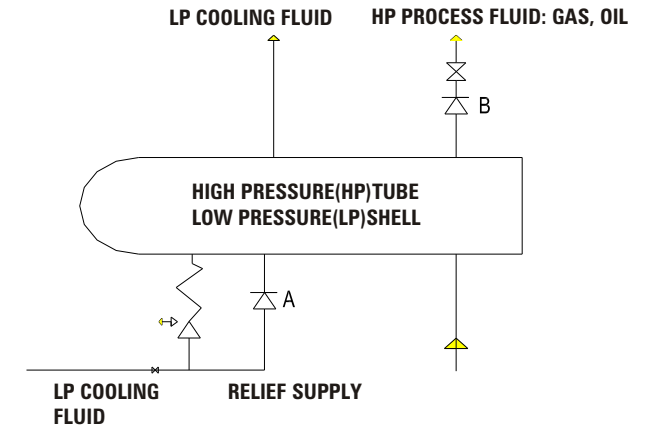
Purpose: Valve A: Prevention of backflow into one gas train from operating gas train(s) ensuring gas train separation.
Valve B: Prevention of backflow in the event of process failure or pressure loss. Initial protection against loss of large pipeline inventory.



HEAT EXCHANGER

Fluid:Water, Sea Water
Typical Sizes:6" to 24"
Typical Pressures:ANSI 150
Typical Materials:Al. Br, Duplex, SMO254, 625
Typical Style:Wafer

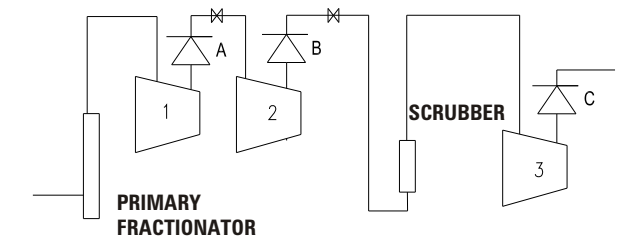
Purpose: Valve A: Prevention of backflow of HP process fluid in LP supply system in event of HP tube rupture. A key component in the protection of the LP system against over pressure and contamination.
Valve B: Prevention of backflow of HP process fluid in event of HP tube rupture. Protection against loss of inventory of HP process fluid.



REFINERY: PROCESS GAS CENTRIFUGAL COMPRESSOR TRAIN

Fluid:Process Gas
Typical Sizes:(A) up to 52" 150: (B) up 30" 150: (C) up to 18" 300 WCB
Typical Materials:WCB
Typical Style:Wafer, Flanged

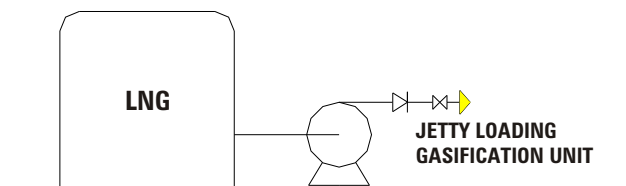
Purpose: Valve A: Installed on discharge - prevention of backflow through 1st compressor.
Valve B: Installed on discharge - prevention of backflow through 2nd compressor.
Valve C: Installed on discharge - prevention of backflow through 3rd compressor.
Protection against reverse rotation of compressor and consequent mechanical damage and line depressurisation.



LNG STORAGE

Fluid:LNG @ - 162°C
Typical Sizes:Up to 24"
Typical Pressures:ANSI 150, 300
Typical Materials:Stainless Steel, CF8M, CF3M
Typical Style:Wafer, Flanged, Solid Lug

Purpose:Prevention of backflow into pump and LNG storage tank. Protection against reverse rotation of pump and over pressure of LNG storage tank.



PRODUCT TANK FARM WITH SHARED LOADING FACILITIES

Fluid:Diesel Oil, Gasoline, Kerosene
Typical Sizes:Up to 42"
Typical Pressures:ANSI 150
Typical Materials:WCB
Typical Style:Wafer, Flanged

Purpose: Valve A: Prevention of backflow from tanks. Protection against loss of inventory in event of supply line rupture.
Valve A&B: Prevention of cross flow between tanks of different levels. A key component in the protection against over pressurisation, excessive vacuum and contamination.
Valve C: Prevention of backflow into pump. Protection against reverse rotation and consequent mechanical damage. Protection against loss of inventory in event of pump supply line rupture.

