

CHECK VALVES

DUAL PLATE CHECK VALVES (DC SERIES)

NOZZLE CHECK VALVES (NC SERIES)

DUAL PLATE CHECK VALVE (DC SERIES)



150# / 1350A (54")

CONTRACTOR	POSCO E&C
PROJECT	POHANG 15 OXYGEN FACTORY PJT
END CUSTOMER	POSCO E&C IN KOREA

Range	Application
Size	1 1/2"(40A) ~ 84"(2100A)
Fluid	Water, Air, Steam, Gas, Sea Water
Rating	JIS 10K, 20K, 30K ANSI 150#, 300#, 600#, 900#, 1500#, 2500# PN10, 16, 20, 40 AWWA C 207
End Connection	Wafer, Lugged, Flanged
Temp. Range	-196 °C ~ 600 °C
Materials	Body Cast Iron, Ductile Iron, Cast Steel, Stainless Steel, (Ni) Al Bronze, (Super) Duplex S.S etc.
	Disc Stainless Steel, (Ni) Al Bronze, (Super) Duplex S.S etc.
	Seat Rubber (EPDM, BUNA-N etc.) Metal (Stainless Steel, Stellite etc.)
	Spring Stainless Steel, Inconel etc.



Cryogenic Dual Check Valve

DKC UNIQUE DUAL PLATE CHECK DESIGN



No.	Part Name
1	BODY
2	DISC
3	GUIDE
4	HINGE PIN
5	STOP PIN
6	SPRING
7	WASHER
8	SPACER
9	SET SCREW
10	EYE BOLT

DUAL PLATE CHECK VALVE (DC SERIES)



CRYOGENIC DUAL PLATE CHECK VALVE

CONTRACTOR	POGC IN IRAN
PROJECT	SOUTH PARS PJT
END CUSTOMER	NIOC IN IRAN



600# 800A (32")

CONTRACTOR	PIDEC
PROJECT	3 rd AMMONIA & UREA PLANTS(OIL REFINERY PLANT)
END CUSTOMER	PIDMCO IN IRAN



150# 500A (20")

CONTRACTOR	PETRO MIDDLE EAST
PROJECT	
END CUSTOMER	GASCO IN UAE



150# 1350A (54")

CONTRACTOR	POSCO E&C
PROJECT	POHANG 13 OXYGEN FACTORY PJT
END CUSTOMER	POSCO IN KOREA

DUAL PLATE CHECK VALVE TYPES (STANDARD DESIGN) (DC SERIES)

WAFER
RETAINERLESS



- Retainerless design supplied as standard
- **ANSI B16.5**
 - Flange dims to ANSI B16.5 (MSS SP44>24")
 - Face to face dims to API 594
 - **API 605**
 - Flange dims to API 605
 - Face to face dims to API 594

FLANGED
RETAINERLESS



- Flange dims to ANSI B16.5 (MSS SP44>24")
- Face to face dims to API 594
- **API 6A**
- Flange dims to API 6A
- Face to face dims to API 6A
- **API 6D**
- Flange dims to ANSI B16.5
- Face to face dims to API 6D

SOLID LUG
RETAINERLESS



- Flange dims to ANSI B16.5 (MSS SP44>24")
- Face to face dims to API 594
- * Threaded lug type also available
- **JIS 2210 & KS B1511**
- **EXTENDED BODY**
- Flange dims to ANSI B16.5

DKC CO., LTD.

BUTTERFLY VALVES

CHECK VALVE

NON RETURN VALVE

SPECIAL VALVE

□ Nominal Size Range

- ASME 150 lb. 2" to 60"
- ASME 300 lb. 2" to 40"
- ASME 600 lb. 2" to 36"
- ASME 900 lb. 2" to 36"
- ASME 1500 lb. 2" to 24"

Larger diameter valves for the respective pressure classes can be designed and manufactured on request.

□ Retainerless Design

DKC dual plate check valves are supplied retainerless as standard. Our patented design does not have any threaded plugs in the pressure boundary and totally eliminates the potential leakpath to atmosphere. This design meets fugitive emission control.

□ Seat

The seat is designed equal pressure at the plate with the state of stationary hour. The shape of rubber seat could not be changed even in many operation because of having its most hardness satisfaction. The metal to metal seated valve is tested to API 598.

□ Disc (Plate)

The two semicircle plate responsiveness of opening and closing is quick and it is strong against corrosion also has a strong durability.

□ Spring

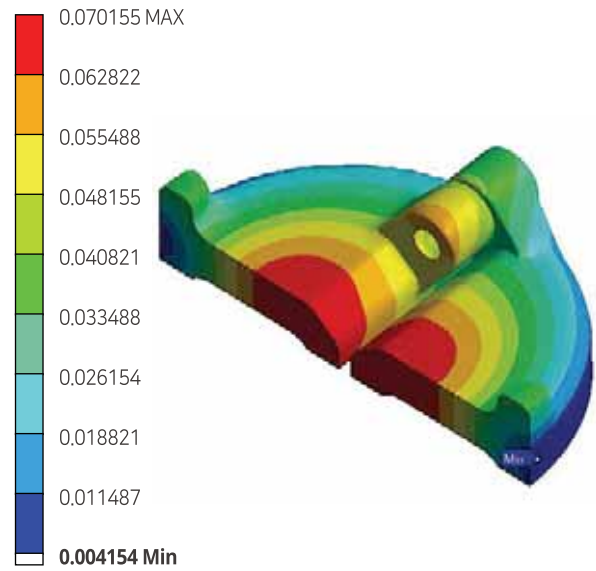
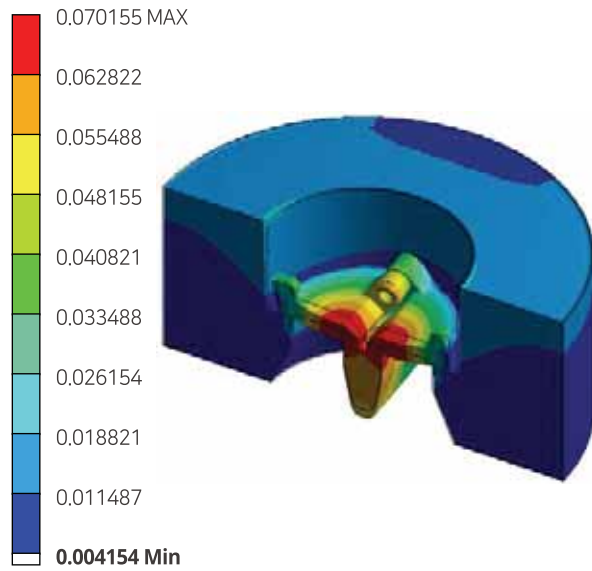
The springs have been designed to endure stresses and also ensure operating without failure for much cycles.

□ Rubber Lined

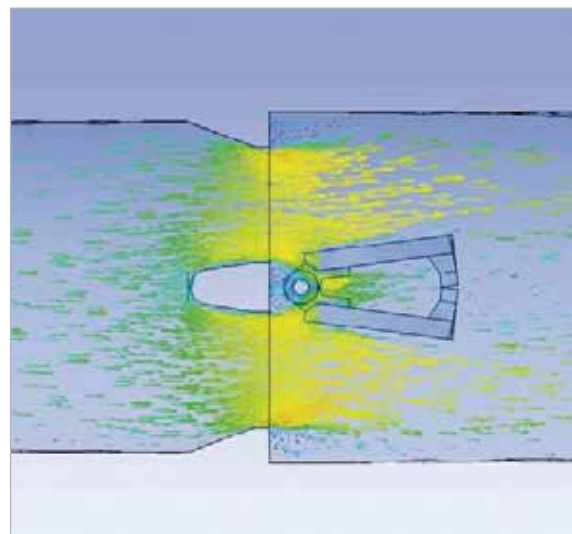
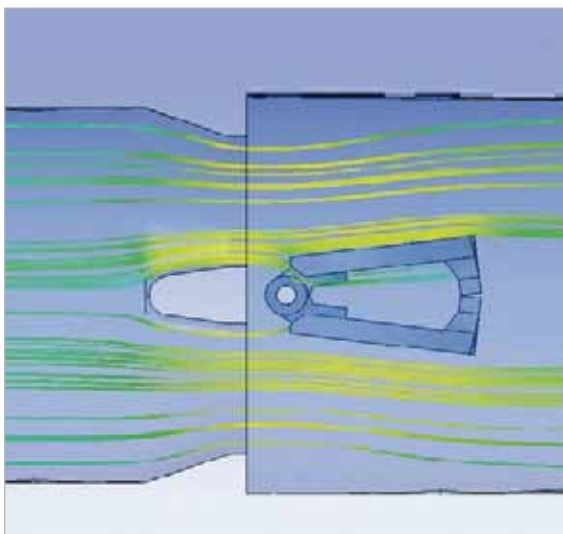
Fully Rubber Lined Valves to avoid corrosion inside are available.

ANALYSIS OF DUAL PLATE CHECK VALVES (DC SERIES)

Analysis of Stress and Deformation for Body & Disc



Valve Internal Flow Analysis through the CFD

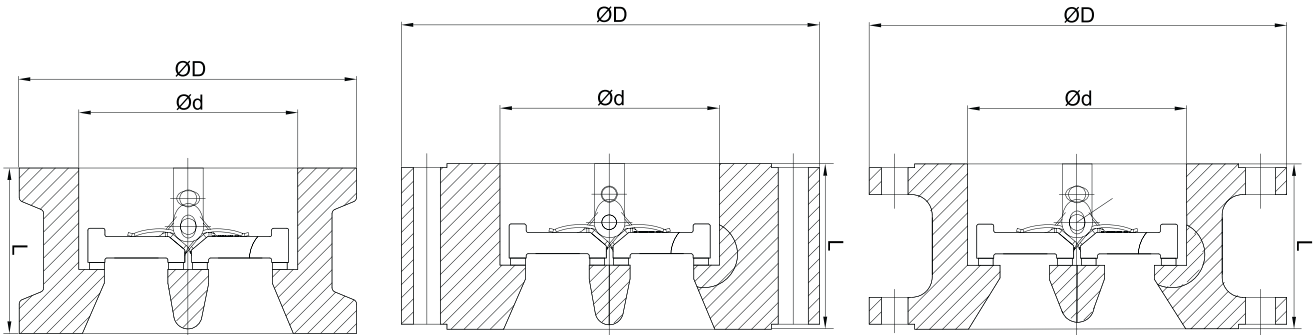


DIMENSION TABLE FOR DUAL PLATE CHECK VALVE (DC SERIES)

□ Wafer

□ Lug

□ Flange



MAX. SIZE : 2100A (84")

ANSI B 16.5 CLASS 150

Unit : mm

SIZE	CLASS	BODY		OD (Ød)			FLANGE			WEIGHT (kg)		
		L	Ød	WAFER	FLANGE	LUG	PCD (ØC)	HOLE NO.	HOLE DIA.	WAFER	LUG	FLANGE
2	150	60	60	102	-	150	120.7	4	19	2.5	7	-
3	150	73	87	133	-	190	152.4	4	19	5	13	-
4	150	73	113	171	-	230	190.5	8	19	8	19	-
6	150	98	166	219	-	280	241.3	8	22.5	15	32	-
8	150	127	207	276	345	345	298.5	8	22.5	30	65	49
10	150	146	260	337	405	405	362	12	25.5	48	93	82
12	150	181	300	406	485	485	431.8	12	25.5	85	170	125
14	150	184	339	448	535	535	476.3	12	28.5	105	210	154
16	150	191	387	511	595	595	539.8	16	28.5	135	270	186
18	150	203	438	546	635	635	577.9	16	32	170	333	224
20	150	219	487	603	700	700	635	20	32	215	450	270
24	150	222	580	714	815	815	749.3	20	35	300	796	410

ANSI B 16.5 CLASS 300

Unit : mm

SIZE	CLASS	BODY		OD (Ød)			FLANGE			WEIGHT (kg)		
		L	Ød	WAFER	FLANGE	LUG	PCD (ØC)	HOLE NO.	HOLE DIA.	WAFER	LUG	FLANGE
2	300	60	60	108	-	165	127	8	19	3	8	-
3	300	73	87	146	-	210	168.3	8	22.5	7	15	-
4	300	73	113	178	-	255	200	8	22.5	9	23	-
6	300	98	166	248	-	320	269.9	12	22.5	21	45	-
8	300	127	207	305	-	380	330.2	12	25.5	40	82	-
10	300	146	260	359	-	445	387.4	16	28.5	60	140	-
12	300	181	300	419	520	520	450.8	16	32	100	242	153
14	300	222	339	483	585	585	514.4	20	32	180	313	207
16	300	232	387	537	650	650	571.5	20	35	205	489	301
18	300	264	438	594	710	710	628.6	24	35	300	558	392
20	300	292	487	651	775	775	685.8	24	35	360	766	489
24	300	318	580	772	915	915	812.8	24	41.5	522	1190	756

L : Face to Face Dimension

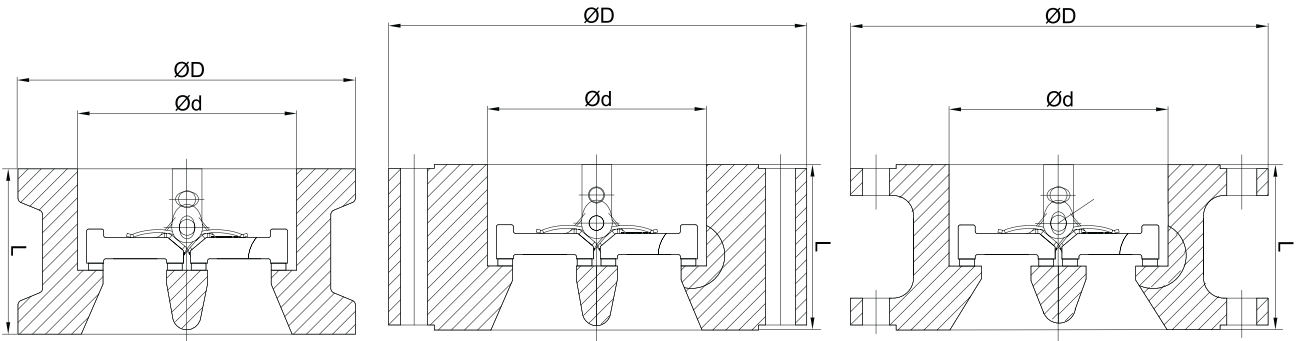
* Please contact sales office for other sizes.

DIMENSION TABLE FOR DUAL PLATE CHECK VALVE (DC SERIES)

Wafer

Lug

Flange



MAX. SIZE : 2100A (84")

ANSI B 16.5 CLASS 600

Unit : mm

SIZE	CLASS	BODY		OD (Ød)			FLANGE			WEIGHT (kg)		
		L	Ød	WAFER	FLANGE	LUG	PCD (ØC)	HOLE NO.	HOLE DIA.	WAFER	LUG	FLANGE
2	600	60	60	108	-	165	127	8	19	3	8	-
3	600	73	87	146	-	210	168.3	8	22.5	7	15	-
4	600	79	113	191	-	275	215.9	8	25.5	13	30	-
6	600	136	166	264	-	355	292.1	12	28.5	36	81	-
8	600	165	207	317	-	420	349.2	12	32	72	134	-
10	600	213	260	397	510	510	431.8	16	35	118	234	183
12	600	229	300	454	560	560	489	20	35	164	304	239
14	600	273	339	489	605	605	527	20	38	186	440	378
16	600	305	387	562	685	685	603.2	20	41.5	331	660	451
18	600	362	438	610	745	745	654	20	44.5	394	995	560
20	600	368	487	679	815	815	723.9	24	44.5	544	1078	762
24	600	438	580	787	940	940	838.2	24	51	819	1520	1150

ANSI B 16.5 CLASS 900

Unit : mm

SIZE	CLASS	BODY		OD (Ød)			FLANGE			WEIGHT (kg)		
		L	Ød	WAFER	FLANGE	LUG	PCD (ØC)	HOLE NO.	HOLE DIA.	WAFER	LUG	FLANGE
2	900	70	60	140	-	215	165.1	8	25.5	8	16	-
3	900	83	87	165	-	240	190.5	8	25.5	12	25	-
4	900	102	113	203	-	290	235	8	32	19	45	-
6	900	159	166	286	-	380	317.5	12	32	54	115	-
8	900	206	207	356	-	470	393.7	12	38	122	217	-
10	900	241	260	432	545	545	469.9	16	38	196	330	203
12	900	292	300	495	610	610	533.4	20	38	293	509	347
14	900	356	339	518	640	640	558.8	20	41.5	396	775	470
16	900	384	387	571	705	705	616	20	45	532	850	610
18	900	451	438	635	785	785	685.8	20	51	611	1450	843
20	900	451	487	695	855	855	749.3	20	54	637	1960	1582
24	900	495	580	835	1040	1040	901.7	20	67	1230	2351	1750

ANSI B 16.5 CLASS 1500

Unit : mm

SIZE	CLASS	BODY		OD (Ød)			FLANGE			WEIGHT (kg)		
		L	Ød	WAFER	FLANGE	LUG	PCD (ØC)	HOLE NO.	HOLE DIA.	WAFER	LUG	FLANGE
2	1500	70	60	140	-	215	165.1	8	25.5	8	16	-
3	1500	83	87	171	-	265	203.2	8	32	13	29	-
4	1500	102	113	206	-	310	241.3	8	35	21	51	-
6	1500	159	166	279	-	395	317.5	12	38	52	119	-
8	1500	206	207	349	-	485	393.7	12	44.5	116	230	-
10	1500	248	260	432	585	585	482.6	12	51	203	378	-
12	1500	305	300	518	675	675	571.5	16	54	373	650	-
14	1500	356	339	575	750	750	635	16	60.5	484	905	-
16	1500	384	387	638	825	825	704.8	16	66.5	587	1120	-
18	1500	468	438	702	915	915	774.7	16	73	791	1775	-
20	1500	533	487	752	985	985	831.8	16	79.5	1275	2200	-
24	1500	559	580	899	1170	1170	990.6	16	92	2713	3325	-

L : Face to Face Dimension

* Please contact sales office for other sizes.