

API 6D / ISO 9001

CHECK VALVES

DUAL-PLATE CHECK VALVE



ORDERING INFORMATION (BODY / PLATE MATERIAL)

■ FIGURE NUMBER

Basic Code				Material			
Size	Model	Pressure	Flange Facing / Body · Plate	Seat	Spring	Spring Torque	
150	SDV	K	F	CS3	N	S	
150A	Dual Check [SDV]	KS 10K	Flat Face 63AARH	Body:FC200 Plate:SCS13	Seat NBR (BUNA-N)	Spring STS 316WPA	Torque Standard

■ NOMINAL PRESSURE

※ Apply to C1 manufacture in accordance with standard other than those described below

Standard	Code	0	1	2	3	4	5	6	7	8	9
KS	K	5	10	16	20	30	40	63	63	-	-
ANSI	A	-	125	250	150	300	400	600	900	1500	2500

■ FLANGE FACING

Code	Cast Iron/Ductile Iron	Carbon/Stainless Steel
F	63AARH	125~250AARH
R	250AARH	125~500AARH
J	-	Ring Joint

■ BODY/PLATE MATERIAL

Symbol	KS/JIS std	ASTM std
C	FC250/FC200	A126 Class B
D	FCD450	A536 65-45-12
D1	FCD-S	A395
W	SCPH2	A216 WCB
S1	SCS1	A217 CA15
S3	SCS13	A351 CF8
S4	SCS14	A351 CF8M
S5	SCS19	A351 CF3
S6	SCS16	A351 CF3M
A	ALBC3	B148 C95800
B	BC6	B584 C83600
M3		A494 M35-1

■ SEAT MATERIAL

	Symbol	Designation	Applied Temp
Resilient	N	NBR (BUNA-A)	0°C ~ 80°C
	C	CR (NEOPRENE)	-10°C ~ 80°C
	V	VITON	-30°C ~ 150°C
	E	EPDM	-10°C ~ 100°C
	P	PTFE (TEFLON)	0°C ~ 260°C
Metal	M	METAL	-268°C ~ 538
	S4	SUS 316	
	S3	SUS 304	
	M3	MONEL	
	6	STELLITE #6	

overlay

Remarks ※ 1 Neoprene/Viton registered by Dupon

■ SPRING MATERIAL

Symbol	Designation	Limits (Max)
S	STS 316 WPA	121°C
X	INCONEL X-750	538°C
M1	MONEL-K500	230°C

■ SPRING TORQUE

Torque		Liquid		Pneumatic		
		Up to 0.88MPa	Over 0.88MPa	Up to 0.1MPa	Over 0.1MPa	Up to 0.01MPa
(No code)	Standard Torque	○	-	-	○	-
L	Low Torque	-	-	○	-	-
M	Mini Torque	-	-	-	-	○
H	High Torque	-	○	-	-	-

MAJOR SUPPLIES OF SVC

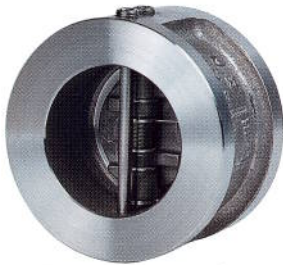
FEATURES

- Compact wafer design and lightweight
- Reduced line shock and noise
- Variety of body design and material
- Retainer-less type eliminates holes through body
- Rubber-lined type for corrosive application
- By-pass type can replace Smolensky check valve

SPECIFICATION

DESCRIPTION	Material
DESIGN	API 594, API 6D
PRESSURE CLASS	ASME 125LB ~ 1500LB (40A ~ 1800A)
BODY, PLATE MATERIAL	A126, A536, A216 WCB, A351 CF8, CF8M, CF3, CF3M, Duplex, Monel, CA15
SPRING MATERIAL	STS316WPA, Inconel X-750
VALVE TEST	to API 598, KS B2304
FLANGES	to ASME16.5 & B16.47, KS B1511
TYPE	WAFER, LUG, DOUBLE FLANGED
APPLICATION	Chemicals, Power Generation, Pulp and Paper, Mining, Water and Waste Water, Oil and Gas

MODEL NO : SDV - 1



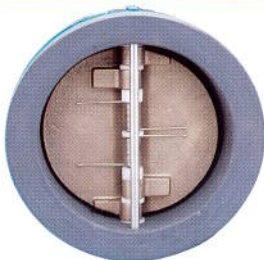
(WAFER TYPE)

MODEL NO : SDV - 2



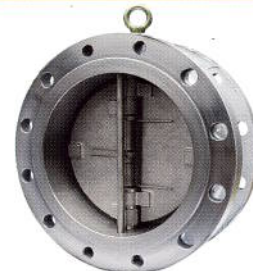
(WAFER & RETAINERLESS TYPE)

MODEL NO : SDV-3



(WAFER & RUBBER LINING TYPE)

MODEL NO : SDV-4



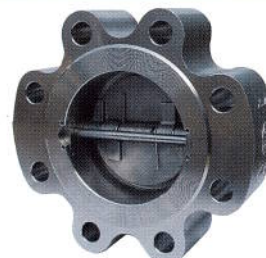
(FLANGE TYPE)

MODEL NO : SDV-5



(WAFER - LUG TYPE & PLUG)

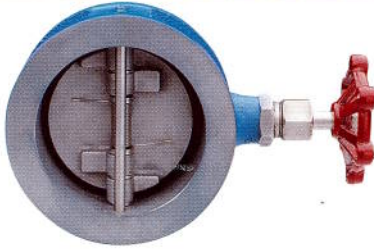
MODEL NO : SDV-6



(WAFER - LUG & RETAINERLESS TYPE)

MAJOR SUPPLIES OF SVC

MODEL NO : BDV -1



(WAFER & BY-PASS TYPE (FC200))

MODEL NO : BDV -2



(WAFER & BY-PASS TYPE (FC200 / EPOXY COATED))

MODEL NO : BDV -3



(WAFER & BY-PASS TYPE (SCS13))

MODEL NO : SMC-1



(SMOLENSKY CHECK VALVE)

1. DIAMETER : 40A(1½") ~ 600A(24")
2. PRESSURE : 10K, 20K, 150LB, 300LB
3. MATERIAL : CAST STEEL, STAINLESS STEEL

MODEL NO : PIV-1



GEAR TYPE



TAMPER SWITCH TYPE

(POST INDICATOR GATE VALVE)

1. DIAMETER : 100A(4") ~ 600A(24")
2. PRESSURE : 10K, 20K, 125LB, 150LB, 300LB
3. MATERIAL : DUCTILE IRON, CAST STEEL, STAINLESS STEEL

MODEL NO : DFV-1



(FOOT VALVE / DUAL TYPE)

1. DIAMETER : 40A(1½") ~ 800A(32")
2. PRESSURE : 10K, 20K, 150LB, 300LB
3. MATERIAL : DUCTILE IRON, CAST STEEL, STAINLESS STEEL

MODEL NO : SFV-1

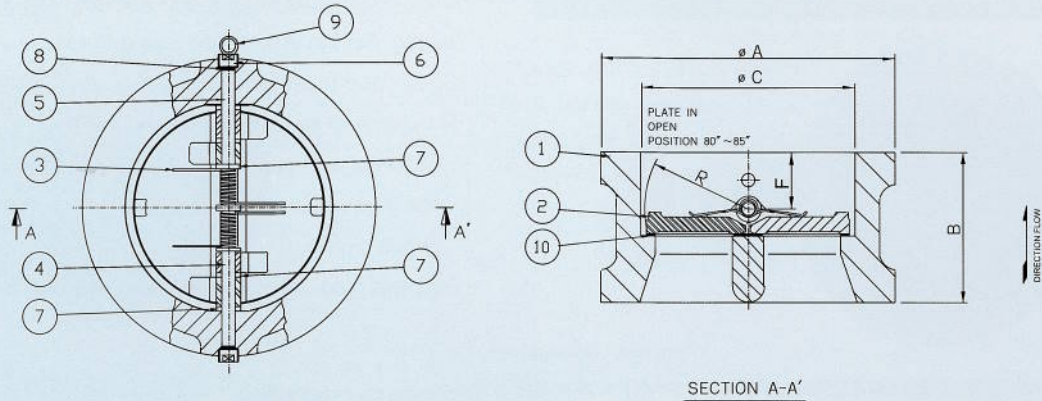


(FOOT VALVE / LEVER TYPE)

1. DIAMETER : 50A(2") ~ 600A(24")
2. PRESSURE : 10K, 20K, 150LB, 300LB
3. MATERIAL : DUCTILE IRON, CAST STEEL, STAINLESS STEEL

WAFFER TYPE INSTALLATION DIMENSIONS(1) KS • ANSI

WAFFER TYPE



* DESCRIPTION OF PARTS(Refer to Page 4)

Size	Series	Type Facing	Dimensions					Flange Bolt Circle	Number of Bolts	Bolt Diameter	Bolt Length		Weight (kg)
			ØA	B	ØC	F	R				FF · RF	RJ	
50 (2")	10K *	FF	101	54	60	27	32	120	4	M16	125	-	3
	16K *	FF	101	54	60	25	27	120	8	M16	125	-	4
	20K	RF · FF	101	60	60	33	27	120	8	M16	140	-	3
	125 *	FF	105	54	60	27	32	120.6	4	5/8	145	-	3
	250 *	FF	111	54	60	25	27	127.0	8	5/8	170	-	4
	150	RF · R-22	105	60	60	33	27	120.6	4	5/8	155	155	3
	300	RF · R-23	111	60	60	33	27	127.0	8	5/8	155	175	3
	400-600	RF · R-23	111	60	60	33	27	127.0	8	5/8	175	180	3
	900	RF · R-24	143	70	60	33	29	165.1	8	7/8	225	225	6
1500	RF · R-24	143	70	60	33	29	165.1	8	7/8	225	225	7	
65 (2½")	10K *	FF	121	54	73	27	37	140	4	M16	130	-	4
	16K *	FF	121	60	73	25	33	140	8	M16	135	-	5
	20K	RF · FF	121	67	73	32	33	140	8	M16	150	-	5
	125 *	FF	124	60	73	27	37	139.7	4	5/8	150	-	4
	250 *	FF	130	60	73	25	33	149.3	8	3/4	180	-	5
	150	RF · R-25	124	67	73	32	33	139.7	4	5/8	165	165	4
	300	RF · R-26	130	67	73	32	33	149.3	8	3/4	175	195	4
	400-600	RF · R-26	130	67	73	32	33	149.3	8	3/4	195	195	4
	900	RF · R-27	165	83	73	35	35	190.5	8	1	250	250	7
1500	RF · R-27	165	83	73	35	35	190.5	8	1	250	250	8	
80 (3")	10K *	FF	131	57	89	30	45	150	8	M16	135	-	5
	16K *	FF	137	67	89	27	41	160	8	M20	155	-	7
	20K	RF · FF	137	73	89	36	41	160	8	M20	170	-	7
	125 *	FF	137	67	89	30	45	152.4	4	5/8	160	-	5
	250 *	FF	149	67	89	27	41	168.4	8	3/4	195	-	7
	150	RF · R-29	137	73	89	36	41	152.4	4	5/8	175	180	6
	300	RF · R-31	149	73	89	36	41	168.4	8	3/4	190	205	7
	400-600	RF · R-31	149	73	89	36	41	168.4	8	3/4	210	210	7
	900	RF · R-31	168	83	89	34	42	190.5	8	7/8	240	235	13
1500	RF · R-35	175	83	89	34	42	203.2	8	1½	270	270	14	
100 (4")	10K *	FF	156	64	114	32	53	175	8	M16	145	-	6
	16K *	FF	162	67	114	30	54	185	8	M20	160	-	8
	20K	RF · FF	162	73	114	38	55	185	8	M20	175	-	8
	125 *	FF	175	67	114	32	53	190.5	8	5/8	170	-	6
	250 *	FF	181	67	114	30	54	200.1	8	3/4	205	-	8
	150	RF · R-36	175	73	114	38	54	190.5	8	5/8	175	180	8
	300	RF · R-37	181	73	114	38	55	200.1	8	3/4	195	210	8
	400	RF · R-37	178	79	114	42	55	200.1	8	7/8	220	220	11
	600	RF · R-37	194	79	114	42	55	215.9	8	7/8	245	245	12
900	RF · R-37	206	102	114	40	55	234.9	8	1½	285	280	18	
1500	RF · R-39	210	102	114	40	55	241.3	8	1¾	310	305	21	
125 (5")	10K *	FF	187	70	141	33	67	210	8	M20	165	-	9
	16K *	FF	197	83	141	38	65	225	8	M22	185	-	10
	20K	RF · FF	197	86	141	41	65	225	8	M22	195	-	14
	125 *	FF	197	83	141	33	67	215.9	8	3/4	185	-	9
	250 *	FF	216	83	141	38	65	234.9	8	3/4	220	-	14
	150	RF · R-41	197	86	141	41	65	215.9	8	3/4	195	195	10
	300	RF · R-41	216	86	141	41	65	234.9	8	3/4	215	230	14
	400	RF · R-41	213	105	141	40	65	234.9	8	7/8	260	260	19
	600	RF · R-41	241	105	141	40	65	266.7	8	1	280	280	23

* KS DESIGN FACE TO FACE → MAKER STANDARD

WAFER TYPE INSTALLATION DIMENSIONS(2) KS • ANSI

Size	Series	Type Facing	Dimensions					Flange Bolt Circle	Number of Bolts	Bolt Diameter	Bolt Length		Weight (kg)
			Ø A	B	Ø C	F	R				FF - RF	RJ	
150 (6")	10K *	FF	217	76	168	35	79	240	8	M20	170	-	10
	16K *	FF	235	95	168	43	79	260	12	M22	200	-	19
	20K	RF	235	98	168	44	79	260	12	M22	215	-	19
	125 *	FF	222	95	168	35	79	241.3	8	3/4	190	-	10
	250 *	FF	257	95	168	43	79	269.9	12	3/4	240	-	19
	150	RF · R-43	222	98	168	44	79	241.3	8	3/4	210	210	16
	300	RF · R-43	251	98	168	44	79	269.9	12	3/4	235	250	19
	400	RF · R-45	248	136	168	46	82	269.9	12	7/8	300	300	31
	600	RF · R-45	267	136	168	46	82	292.1	12	1	315	320	33
	900	RF · R-45	289	159	168	56	82	317.5	12	1 1/8	370	360	53
1500	RF · R-46	283	159	168	56	82	317.5	12	1 3/8	430	425	59	
200 (8")	10K *	FF	267	95	219	42	105	290	12	M20	195	-	19
	16K *	FF	279	127	219	43	102	305	12	M22	340	-	36
	20K	RF · FF	279	127	219	48	102	305	12	M22	250	-	36
	125 *	FF	279	127	219	42	105	298.4	8	3/4	215	-	19
	250 *	FF	308	127	219	48	102	330.2	12	7/8	280	-	36
	150	RF · R-48	279	127	219	48	102	298.4	8	3/4	245	250	32
	300	RF · R-49	308	127	219	48	102	330.2	12	7/8	280	290	36
	400	RF · R-49	305	165	219	54	105	330.2	12	1	350	345	36
	600	RF · R-49	321	165	219	54	105	349.2	12	1 1/8	375	370	68
	900	RF · R-49	359	206	219	73	107	393.7	12	1 3/8	435	440	89
1500 *	RF · R-50	352	206	219	73	107	393.7	12	1 3/8	505	510	97	
250 (10")	10K *	FF	330	108	274	42	128	310	12	M22	215	-	31
	16K *	FF	353	140	274	48	126	380	12	M24	260	-	51
	20K *	RF · FF	353	146	274	52	126	380	12	M24	280	-	51
	125 *	FF	340	140	274	42	128	361.9	12	7/8	240	-	31
	250 *	FF	362	140	274	48	126	387.5	16	1	315	-	51
	150	RF · R-52	340	146	274	56	126	361.9	12	7/8	280	280	47
	300	RF · R-53	362	146	274	52	126	387.5	16	1	315	325	51
	400	RF · R-53	359	213	274	70	133	387.5	16	1 1/8	410	415	96
	600	RF · R-53	400	213	274	70	133	431.8	16	1 1/4	435	440	104
	900	RF · R-53	435	241	274	87	133	469.9	16	1 1/4	490	485	132
1500 *	RF · R-54	435	248	274	87	133	482.6	12	1 3/8	605	600	140	
300 (12")	10K *	FF	375	143	324	58	155	400	16	M22	255	-	56
	16K *	FF	403	181	324	70	152	400	16	M24	305	-	90
	20K *	RF · FF	403	181	324	70	152	430	16	M24	320	-	88
	125 *	FF	410	181	324	58	155	431.8	12	7/8	280	-	56
	250 *	FF	422	181	324	70	152	450.8	16	1 1/8	370	-	90
	150	RF · R-56	410	181	324	70	152	431.8	12	7/8	310	315	84
	300	RF · R-57	422	181	324	70	152	450.8	16	1 1/8	360	375	88
	400	RF · R-57	419	229	324	67	152	450.8	16	1 1/4	445	440	133
	600	RF · R-57	457	229	324	67	152	488.9	20	1 1/4	465	460	144
	900	RF · R-57	498	292	324	100	159	533.4	20	1 3/8	560	555	169
1500 *	RF · R-58	521	305	324	102	159	571.5	16	2	700	700	178	
350 (14")	10K *	FF	420	184	356	94	170	445	16	M22	300	-	71
	16K *	FF	447	222	356	94	170	480	16	M30	365	-	170
	20K *	RF · FF	447	222	356	94	170	480	16	M30	370	-	176
	125 *	FF	451	184	356	94	170	476.2	12	1	315	-	71
	250 *	FF	486	222	356	94	170	514.3	20	1 1/8	425	-	176
	150	RF · R-59	451	184	356	90	170	476.2	12	1	315	350	97
	300	RF · R-61	486	222	356	94	170	514.3	20	1 1/8	425	415	176
	400	RF · R-61	483	273	356	103	164	514.3	20	1 1/4	495	485	198
	600	RF · R-61	492	273	356	103	164	527	20	1 3/8	520	510	198
	900	RF · R-62	521	356	356	130	181	558.8	20	1 1/2	645	650	198
1500 *	RF · R-63	578	356	356	130	181	635	16	2 1/4	785	800	198	
400 (16")	10K *	FF	483	191	406	86	195	510	16	M24	315	-	99
	16K *	FF	507	232	406	97	195	540	16	M30	385	-	227
	20K *	RF · FF	507	232	406	95	195	540	16	M30	405	-	227
	125 *	FF	514	191	406	89	195	539.7	16	1	350	-	99
	250 *	FF	540	232	406	97	195	517.5	20	1 1/4	435	-	227
	150	RF · R-64	514	191	406	86	195	539.7	16	1	350	340	159
	300	RF · R-65	540	232	406	95	195	571.5	20	1 1/4	435	425	227
	400	RF · R-65	537	305	406	92	198	571.5	20	1 3/8	550	540	268
	600	RF · R-65	565	305	406	92	198	603.2	20	1 1/2	585	575	288
	900	RF · R-66	575	384	406	137	203	615.9	20	1 3/8	690	695	550
1500 *	RF · R-67	641	384	406	137	203	704.8	16	2 1/2	855	870	750	
450 (18")	10K *	FF	538	203	457	86	219	565	20	M24	325	-	118
	16K *	FF	572	264	457	102	219	605	20	M30	420	-	301
	20K *	RF · FF	572	264	457	127	219	605	20	M30	440	-	301
	125 *	FF	549	203	457	86	219	577.8	16	1 1/8	370	-	118
	250 *	FF	597	264	457	102	219	628.6	24	1 1/4	495	-	301
	150 *	RF · R-68	549	203	457	86	219	577.8	16	1 1/8	370	390	185
	300	RF · R-69	597	264	457	127	219	628.6	24	1 1/4	495	485	301
	400	RF · R-69	594	362	457	121	228	628.6	24	1 3/8	635	625	401
	600	RF · R-69	613	362	457	121	228	654	20	1 3/8	635	625	401
	900	RF · R-70	638	451	457	167	232	685.8	20	1 3/8	800	800	770
1500 *	RF · R-71	705	468	457	167	216	774.7	16	2 3/4	985	1005	980	

* KS DESIGN FACE TO FACE → MAKER STANDARD

ENGINEERING DATA

ELASTOMER GENERAL TABLE

Elastomer seats have been chosen to satisfy every service need. Application suggested derive from recommendation given by the elastomer manufacturers and are purely indicative. Since many factors influence corrosion and abrasion (type of fluid, concentration, temperature, turbulence impurities etc.), the final choice is to be taken by the customer, based on characteristics and specific application.

NAME	Composition	General application			Other limits
EPDM	Ethylene-Propylene Terpolymer	Water steam Sea water Brine Esters	-35°C +110°C	-30°F +230°F	Not recommended for hydrocarbons-oils-fats
EPDM HIGH/TEMP (HT)	Copolymer	Ketone Alkalis Caustic Soda	-35°C +150°C	0°F +300°F	Not recommended for hydrocarbons-oils-fats
BUNA N (NBR)	Copolymer of Bu- tadiene and hig Acryloitrile	Hydrocarbons Oils and Gas Air Gasoline	-18°C +100°C	0°F +212°F	Not recommended for Solvents-Ben-zene-Xylol
Neoprene	Chloro butadiene	Fats Oils Diluted mineral acids Alkalis	-18°C +90°C	0°F +194°F	Not recommended for Ketones, thin-ners Concentrated acids..
Hypalon	Chlorosulfonated Polyethylend	Mineral acids Organic acids Oxidising substances Fats	-18°C +100°C	0°F +212°F	Not recommended for-Nitric acid-Steam Ketones
Viton	Fluorocarbon Polymer	Acids Oils Hydrocarbons	-10°C +160°C	+14°F +320°F	Not recommended for Steam- Freon 22 Solvents-ketones- Esters-Alkalis
Natural rubber	Latex(vegetable)	Abrasive products	-35°C +65°C	-30°F +150°F	Not recommended for Steam oils-Hydrocarbons
Silicone	Organic silicone Polymer	Food & Beverage	-30°C +150°C	-22°F +300°F	Not recommended for Steam Solvents-Hydrocarbons
Teflon	Polytetrafluoro Ethylene	Solvents Corrosive Prod-ucts	-40°C +180°C	+40°F +356°F	Not recommended for Fluid containing powders. Alkaline metals(sodium. potassium) Gaseous Fluorine

NOTES:

The above table is merely indicative. The customer is expected to make the final decision on the suitability of seat materials for their specific applications. Therefore, in any case, we are not responsible for the elastomers selected by the customers.