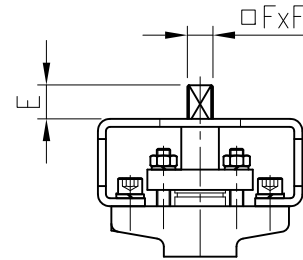




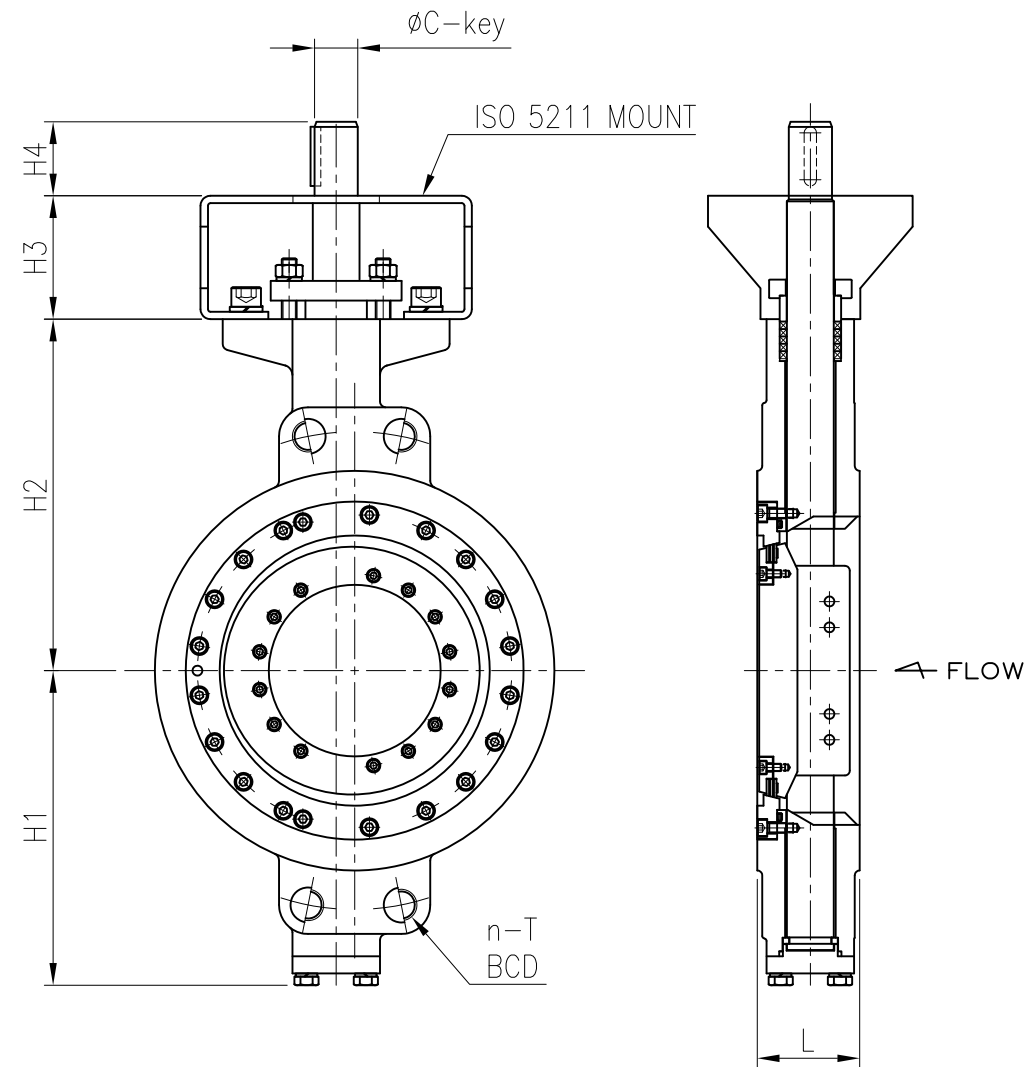
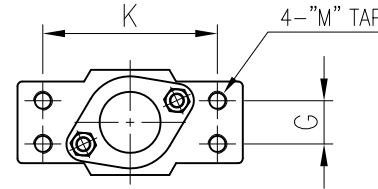
PROJECT

No.	Part	MATERIAL
01	BODY	A216 WCB, A351 CF8/CF8M/CF3M, etc.
02	DISC	A216 WCB, A351 CF8/CF8M/CF3M, etc.
03	STEM	Stainless Steel(304, 316, 316L etc.), A564 630(17-4PH), etc.
04	BODY SEAT	Stainless Steel(304, 316, 316L etc.), Stainless Steel+Hard Facing
05	DISC SEAT	316SS+(Graphite or PTFE) Laminate, PCTFE, etc.
06	SEAT RETAINER	Stainless Steel(304, 316, 316L etc.), Carbon steel, etc.
07	PACKING	Graphite, PTFE(V-Type), RTFE(V-Type), etc.
08	BUSH(BEARING)	SS316+Teflon, SS316+HCR, Copper Alloy, etc.
09	GLAND BRIDGE	Stainless Steel(304, 316, 316L etc.)
10	GLAND RING	Stainless Steel(304, 316, 316L etc.)

** SHAFT option



** BARE MOUNT DIMENSION



960 - Dimension / ASME B16.5 Class300 / Wafer type

[unit : mm]

Size	L	n	BCD	T	H1	H2	H3	H4	K	G	M	C	KEY BASE	E	FxF	TOP MOUNT	Weight (kg)
3"	48	4	ø168.3	ø22.2	117	130	65	40	88	22	10	ø16	5x5	13	11x11	ISO 5211-F05,F07	8.6
4"	54	4	ø200.0	ø22.2	143	160	70	42	94	24	10	ø20	6x6	22	17x17	ISO 5211-F07,F10	12.6
5"	57	4	ø235.0	3/4" UNC	146	165	70	42	94	24	10	ø20	6x6	22	17x17	ISO 5211-F07,F10	18.4
6"	59	4	ø269.9	3/4" UNC	203	210	70	42	94	24	10	ø22	8x7	26	19x19	ISO 5211-F10,F12	21.9
8"	73	4	ø330.2	7/8" UNC	233	245	80	60	114	36	12	ø30	10x8	32	22x22	ISO 5211-F10,F12	37.3
10"	83	4	ø387.4	1" UNC	255	285	90	60	150	40	16	ø35	10x8	35	27x27	ISO 5211-F12,F14	53.5
12"	92	4	ø450.8	1 1/8" 8UN	290	330	100	75	168	46	16	ø40	12x8	35	27x27	ISO 5211-F14,F16	74.4
14"	117	4	ø514.4	1 1/8" 8UN	335	370	110	75	150	40	16	ø45	14x9	48	36x36	ISO 5211-F14,F16	91.4
16"	133	4	ø571.5	1 1/4" 8UN	365	415	120	75	186	46	20	ø50	16x10	48	36x36	ISO 5211-F14,F16	147.7
18"	149	4	ø628.8	1 1/4" 8UN	420	470	130	90	225	76	20	ø60	18x11	50	46x46	ISO 5211-F16,F20	171.3
20"	159	4	ø685.8	1 1/4" 8UN	460	500	140	110	225	76	20	ø65	20x12	50	46x46	ISO 5211-F20,F25	234.4
24"	181	4	ø812.8	1 1/2" 8UN	525	590	160	110	280	82	24	ø80	25x14			ISO 5211-F25,F30	362.8

NOTES

- DESIGN STD. : API 609
- Mating FLANGE : ASME B16.5 CLASS300

Rev. No.	DATE	DESCRIPTION	DRN.	APP.
0	22.02.08	FOR REFERENCE	DJ,LEE	JH,YU

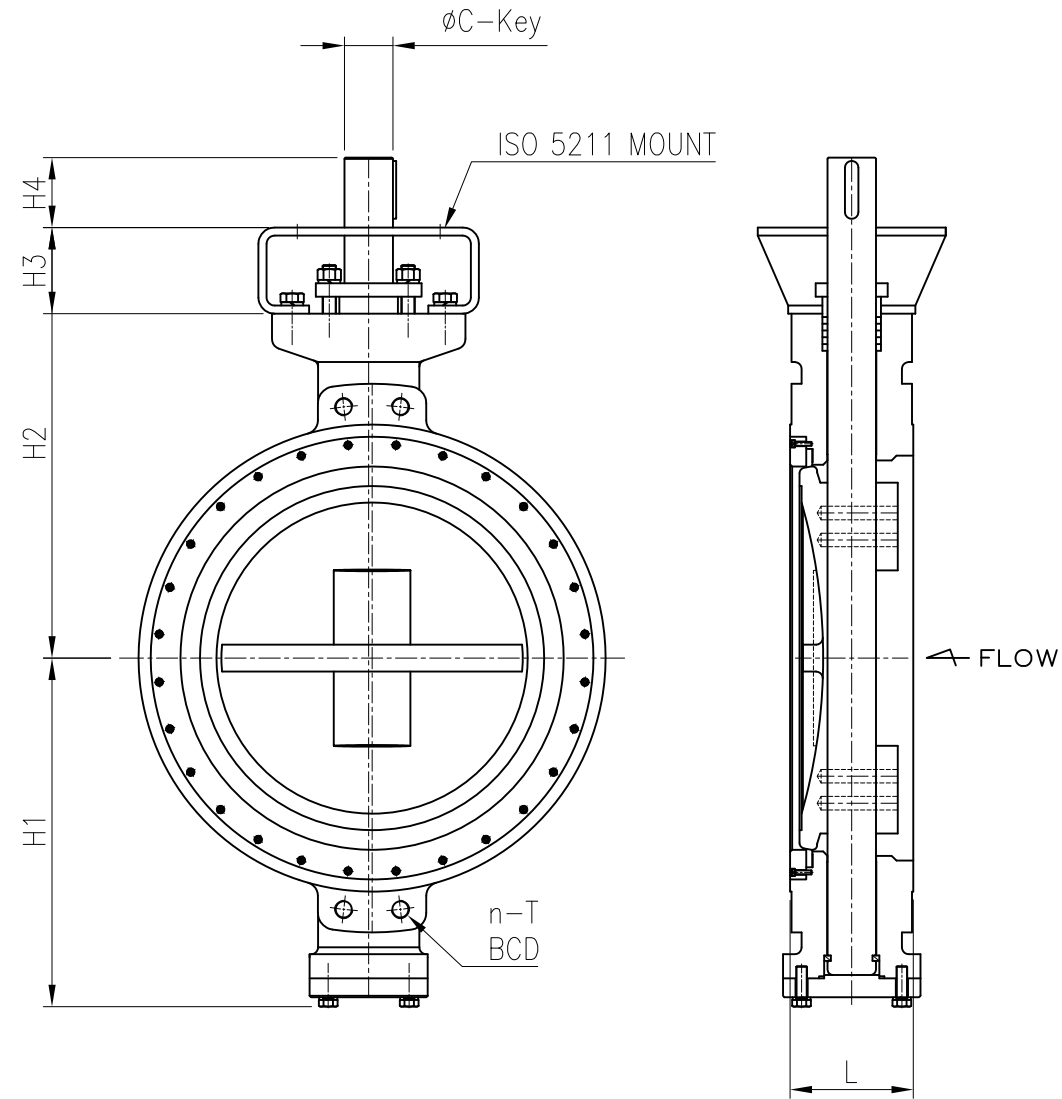
DESCRIPTION
**TRIPLE BUTTERFLY VALVE
 3" TO 24" 960 WAFER
 CLASS 300 BARE STEM**

DWG. No.	960- 3- 24- 30WB- 010		SCALE	N/A
TEST PRESSURE	HYDROSTATIC		SHELL	SEAT
	AIR		kgf/cm ²	kgf/cm ²
			kgf/cm ²	kgf/cm ²

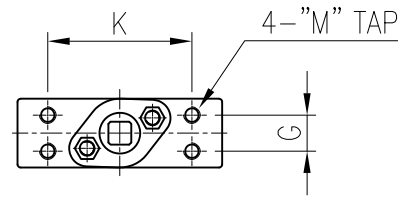


PROJECT

No.	Part	MATERIAL
01	BODY	A216 WCB, A351 CF8/CF8M/CF3M, etc.
02	DISC	A216 WCB, A351 CF8/CF8M/CF3M, etc.
03	STEM	Stainless Steel(304, 316, 316L etc.), A564 630(17-4PH), etc.
04	BODY SEAT	Stainless Steel(304, 316, 316L etc.), Stainless Steel+Hard Facing
05	DISC SEAT	316SS+(Graphite or PTFE) Laminate, PCTFE, etc.
06	SEAT RETAINER	Stainless Steel(304, 316, 316L etc.), Carbon steel, etc.
07	PACKING	Graphite, PTFE(V-Type), RTFE(V-Type), etc.
08	BUSH(BEARING)	SS316+Teflon, SS316+HCR, Copper Alloy, etc.
09	GLAND BRIDGE	Stainless Steel(304, 316, 316L etc.)
10	GLAND RING	Stainless Steel(304, 316, 316L etc.)



** BARE MOUNT DIMENSION



960 - Dimension / ASME B16.47 SERIES A Class300 / Wafer type [unit : mm]

Size	L	total (n)	nt	BCD	T	H1	H2	H3	H4	K	G	M	C	KEY BASE	TOP MOUNT (OPTION)	WEIGHT (kg)
26"	210	28	4	ø876.3	1 5/8" (8UN)	580	590	160	110	270	60	20	ø80	22x14	ISO 5211-F20,F25	534
28"	229	28	4	ø939.8	1 5/8" (8UN)	640	660	160	110	270	60	20	ø80	22x14	ISO 5211-F20,F25	601
30"	230	28	4	ø997.0	1 3/4" (8UN)	690	690	160	110	270	80	24	ø85	25x14	ISO 5211-F20,F25	758
32"	241	28	4	ø1054.1	1 7/8" (8UN)	720	720	160	125	280	70	24	ø90	25x14	ISO 5211-F25,F30	857
34"	241	28	4	ø1104.9	1 7/8" (8UN)	760	750	180	130	300	80	27	ø100	28x16	ISO 5211-F25,F30	1014
36"	271	32	4	ø1168.4	2" (8UN)	780	780	180	130	300	100	27	ø120	32x18	ISO 5211-F25,F30	1130
40"	300	32	4	ø1155.7	1 5/8" (8UN)	800	810	180	150	320	110	30	ø135	36x20	ISO 5211-F25,F30	1507
42"	300	32	4	ø1206.5	1 5/8" (8UN)	840	870	180	150	320	110	30	ø135	36x20	ISO 5211-F30,F35	1918
48"	320	32	4	ø1371.6	1 7/8" (8UN)	950	970	180	180	350	120	30	ø160	40x22	ISO 5211-F30,F35	2530

NOTES

- DESIGN STD. : API 609
- Mating FLANGE : ASME B16.5 CLASS300

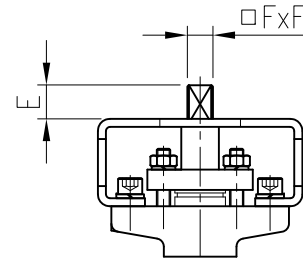
Rev. No.	DATE	DESCRIPTION	DRN.	APP.	DESCRIPTION	DWG. No.	960- 26- 46- 30WB- 010	SCALE	N/A
0	23.06.15	FOR REFERENCE	DJ,LEE	JH,YU	TRIPLE BUTTERFLY VALVE 26" TO 48" 960 WAFER CLASS 300 BARE STEM	TEST PRESSURE	HYDROSTATIC	SHELL	SEAT
								kgf/cm ²	kgf/cm ²
								AIR	kgf/cm ²



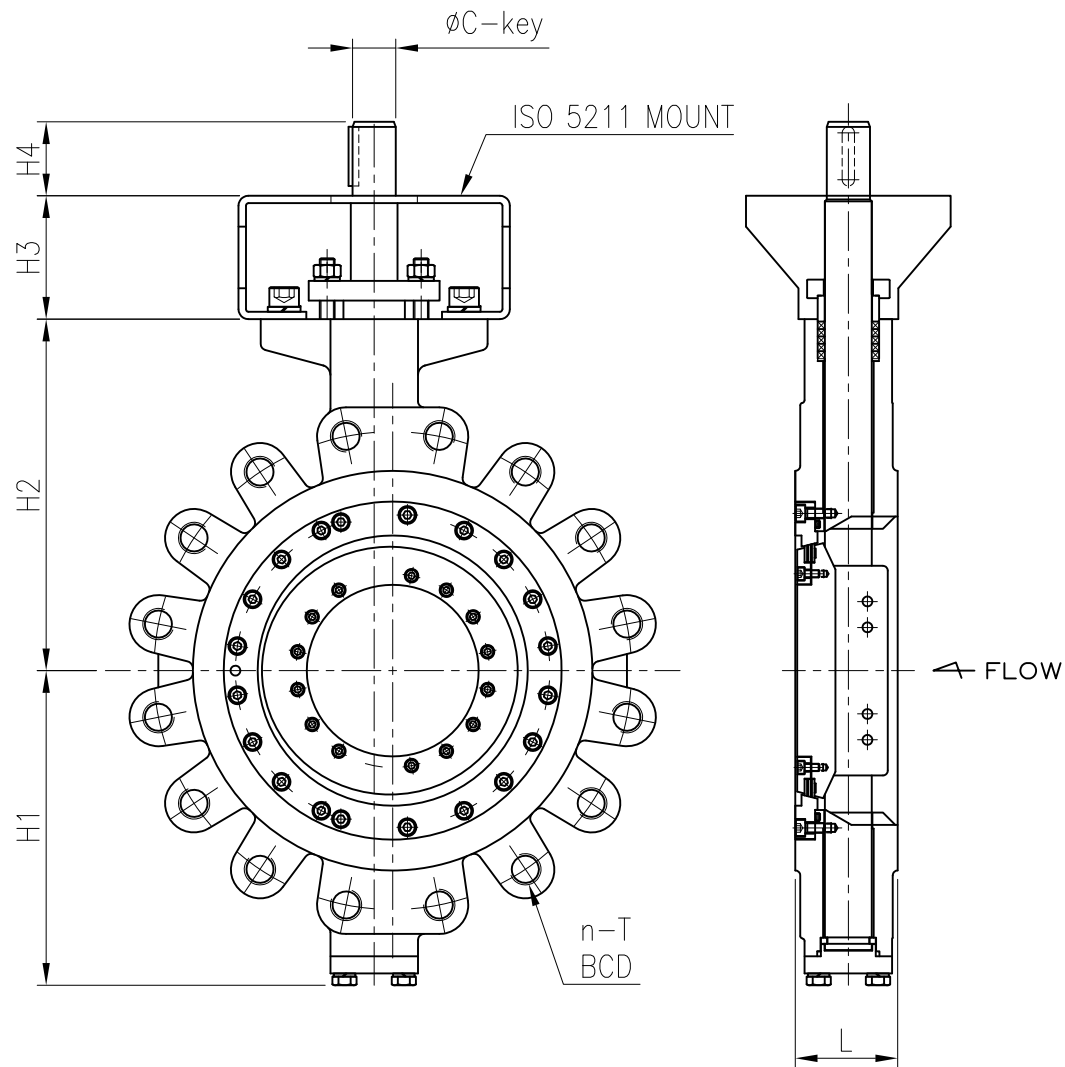
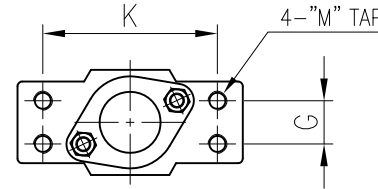
PROJECT

No.	Part	MATERIAL
01	BODY	A216 WCB, A351 CF8/CF8M/CF3M, etc.
02	DISC	A216 WCB, A351 CF8/CF8M/CF3M, etc.
03	STEM	Stainless Steel(304, 316, 316L etc.), A564 630(17-4PH), etc.
04	BODY SEAT	Stainless Steel(304, 316, 316L etc.), Stainless Steel+Hard Facing
05	DISC SEAT	316SS+(Graphite or PTFE) Laminate, PCTFE, etc.
06	SEAT RETAINER	Stainless Steel(304, 316, 316L etc.), Carbon steel, etc.
07	PACKING	Graphite, PTFE(V-Type), RTFE(V-Type), etc.
08	BUSH(BEARING)	SS316+Teflon, SS316+HCR, Copper Alloy, etc.
09	GLAND BRIDGE	Stainless Steel(304, 316, 316L etc.)
10	GLAND RING	Stainless Steel(304, 316, 316L etc.)

** SHAFT option



** BARE MOUNT DIMENSION



961 - Dimension / ASME B16.5 Class300 / Lug type

[unit : mm]

Size	L	n	BCD	T	H1	H2	H3	H4	K	G	M	C	KEY BASE	E	FxF	TOP MOUNT	Weight (kg)
3"	48	8	ø168.3	3/4" UNC	117	130	65	40	88	22	10	ø16	5x5	13	11x11	ISO 5211-F05,F07	10.1
4"	54	8	ø200.0	3/4" UNC	143	160	70	42	94	24	10	ø20	6x6	22	17x17	ISO 5211-F07,F10	17.3
5"	57	8	ø235.0	3/4" UNC	146	165	70	42	94	24	10	ø20	6x6	22	17x17	ISO 5211-F07,F10	28.1
6"	59	12	ø269.9	3/4" UNC	203	210	70	42	94	24	10	ø22	8x7	26	19x19	ISO 5211-F10,F12	30.7
8"	73	12	ø330.2	7/8" UNC	233	245	80	60	114	36	12	ø30	10x8	32	22x22	ISO 5211-F10,F12	47.2
10"	83	16	ø387.4	1" UNC	255	285	90	60	150	40	16	ø35	10x8	35	27x27	ISO 5211-F12,F14	78.1
12"	92	16	ø450.8	1 1/8" 8UN	290	330	100	75	168	46	16	ø40	12x8	35	27x27	ISO 5211-F14,F16	110.0
14"	117	20	ø514.4	1 1/8" 8UN	335	370	110	75	150	40	16	ø45	14x9	48	36x36	ISO 5211-F14,F16	215.4
16"	133	20	ø571.5	1 1/4" 8UN	365	415	120	75	186	46	20	ø50	16x10	48	36x36	ISO 5211-F14,F16	253.4
18"	149	24	ø628.8	1 1/4" 8UN	420	470	130	90	225	76	20	ø60	18x11	50	46x46	ISO 5211-F16,F20	305.7
20"	159	24	ø685.8	1 1/4" 8UN	460	500	140	110	225	76	20	ø65	20x12	50	46x46	ISO 5211-F20,F25	430.4
24"	181	24	ø812.8	1 1/2" 8UN	525	590	160	110	280	82	24	ø80	25x14			ISO 5211-F25,F30	693.9

NOTES

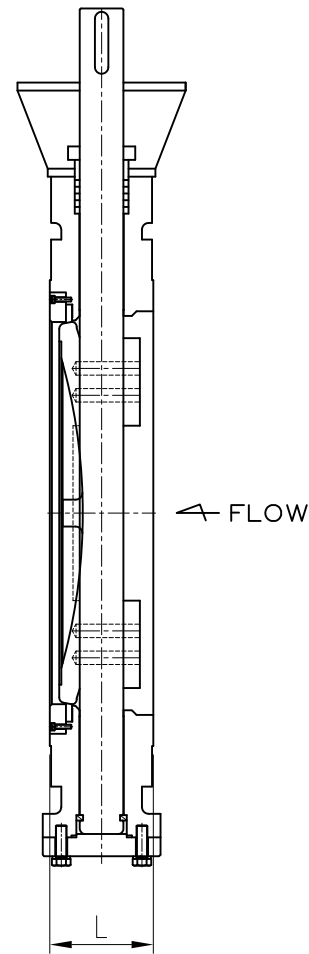
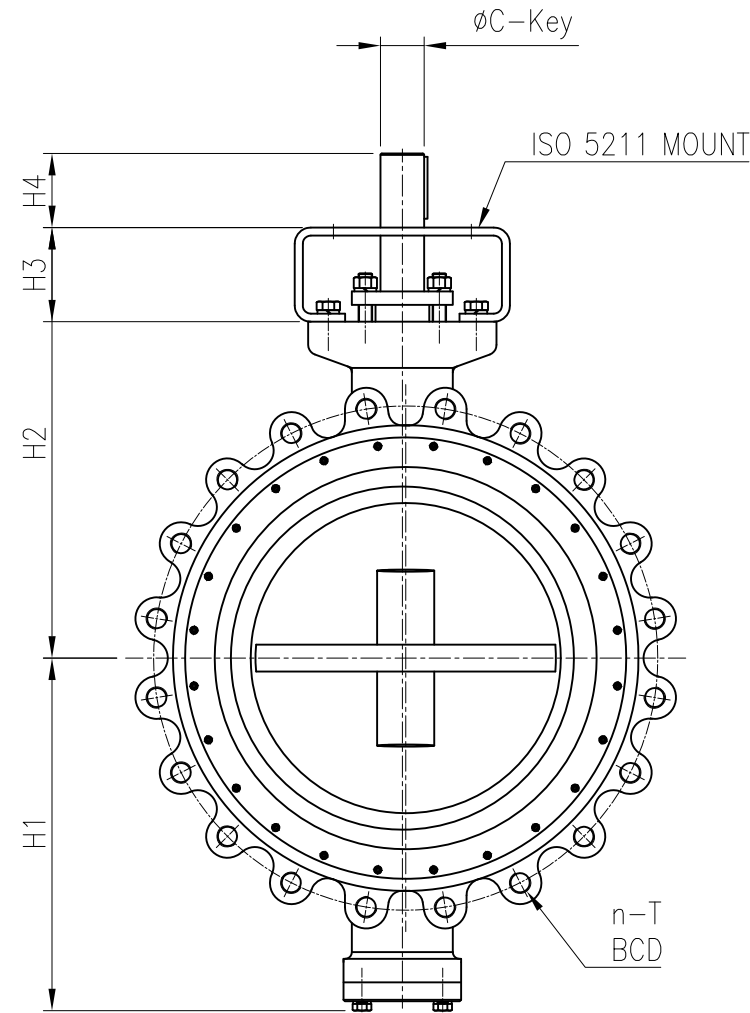
- DESIGN STD. : API 609
- Mating FLANGE : ASME B16.5 CLASS300

					DESCRIPTION	DWG. No.	961- 3- 24- 30LB- 010		SCALE	N/A
					TRIPLE BUTTERFLY VALVE	TEST PRESSURE	HYDROSTATIC	SHELL		SEAT
					3" TO 24" 961 LUG			kgf/cm ²		kgf/cm ²
					CLASS 300 BARE STEM			AIR		kgf/cm ²
Rev. No.	DATE	DESCRIPTION	DRN.	APP.						
0	23.06.15	FOR REFERENCE	DJ,LEE	JH,YU						

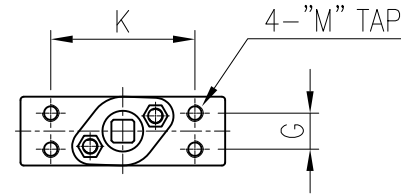


PROJECT

No.	Part	MATERIAL
01	BODY	A216 WCB, A351 CF8/CF8M/CF3M, etc.
02	DISC	A216 WCB, A351 CF8/CF8M/CF3M, etc.
03	STEM	Stainless Steel(304, 316, 316L etc.), A564 630(17-4PH), etc.
04	BODY SEAT	Stainless Steel(304, 316, 316L etc.), Stainless Steel+Hard Facing
05	DISC SEAT	316SS+(Graphite or PTFE) Laminate, PCTFE, etc.
06	SEAT RETAINER	Stainless Steel(304, 316, 316L etc.), Carbon steel, etc.
07	PACKING	Graphite, PTFE(V-Type), RTFE(V-Type), etc.
08	BUSH(BEARING)	SS316+Teflon, SS316+HCR, Copper Alloy, etc.
09	GLAND BRIDGE	Stainless Steel(304, 316, 316L etc.)
10	GLAND RING	Stainless Steel(304, 316, 316L etc.)



** BARE MOUNT DIMENSION



961 - Dimension / ASME B16.47 SERIES A Class300 / Lug type [unit : mm]

Size	L	n	BCD	T	H1	H2	H3	H4	K	G	M	C	KEY BASE	TOP MOUNT (OPTION)	WEIGHT (kg)
26"	165	28	ø876.3	1 5/8" (8UN)	520	510	160	110	270	60	20	ø80	22x14	ISO 5211-F20,F25	854
28"	165	28	ø939.8	1 5/8" (8UN)	570	545	160	110	270	60	20	ø80	22x14	ISO 5211-F20,F25	942
30"	190	28	ø997.0	1 3/4" (8UN)	600	555	160	110	270	80	24	ø85	25x14	ISO 5211-F20,F25	1116
32"	190	28	ø1054.1	1 7/8" (8UN)	630	600	160	125	280	70	24	ø90	25x14	ISO 5211-F25,F30	1161
34"	203	32	ø1104.9	1 7/8" (8UN)	650	640	180	130	300	80	27	ø100	28x16	ISO 5211-F25,F30	1368
36"	203	32	ø1168.4	2" (8UN)	690	670	180	130	300	100	27	ø120	32x18	ISO 5211-F25,F30	1539
40"	216	36	ø1155.7	1 5/8" (8UN)	720	675	180	150	320	110	30	ø135	36x20	ISO 5211-F25,F30	2030
42"	251	36	ø1206.5	1 5/8" (8UN)	750	700	180	150	320	110	30	ø135	36x20	ISO 5211-F30,F35	2604
48"	254	44	ø1371.6	1 7/8" (8UN)	845	860	180	180	350	120	30	ø160	40x22	ISO 5211-F30,F35	3594

NOTES

- DESIGN STD. : API 609
- Mating FLANGE : ASME B16.5 CLASS300

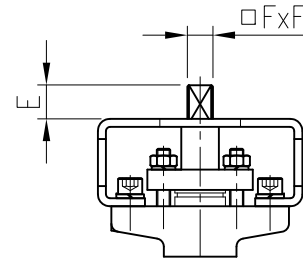
Rev. No.	DATE	DESCRIPTION	DRN.	APP.	DESCRIPTION	DWG. No.	961- 26- 48- 30LB- 011	SCALE	N/A
0	23.06.15	FOR REFERENCE	DJ,LEE	JH,YU	TRIPLE BUTTERFLY VALVE 26" TO 48" 961 LUG CLASS 300 BARE STEM	TEST PRESSURE	HYDROSTATIC	SHELL	SEAT
					kgf/cm ²			kgf/cm ²	
					AIR			kgf/cm ²	kgf/cm ²



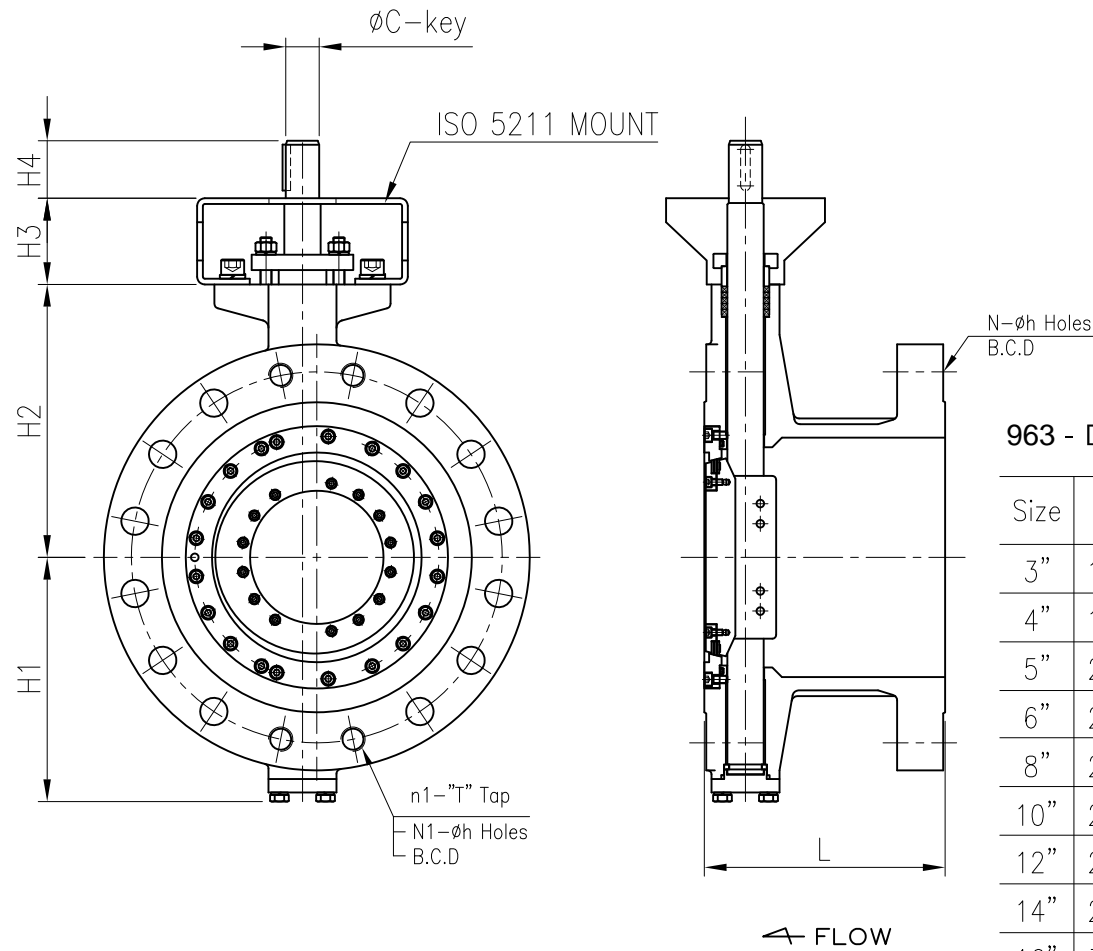
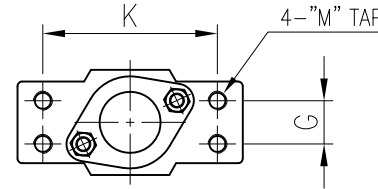
PROJECT

No.	Part	MATERIAL
01	BODY	A216 WCB, A351 CF8/CF8M/CF3M, etc.
02	DISC	A216 WCB, A351 CF8/CF8M/CF3M, etc.
03	STEM	Stainless Steel(304, 316, 316L etc.), A564 630(17-4PH), etc.
04	BODY SEAT	Stainless Steel(304, 316, 316L etc.), Stainless Steel+Hard Facing
05	DISC SEAT	316SS+(Graphite or PTFE) Laminate, PCTFE, etc.
06	SEAT RETAINER	Stainless Steel(304, 316, 316L etc.), Carbon steel, etc.
07	PACKING	Graphite, PTFE(V-Type), RTFE(V-Type), etc.
08	BUSH(BEARING)	SS316+Teflon, SS316+HCR, Copper Alloy, etc.
09	GLAND BRIDGE	Stainless Steel(304, 316, 316L etc.)
10	GLAND RING	Stainless Steel(304, 316, 316L etc.)

** SHAFT option



** BARE MOUNT DIMENSION



963 - Dimension / ASME B16.5 Class300 / Flange type

[unit : mm]

Size	L	BCD	n1	T(Tap)	N	N1	h	H1	H2	H3	H4	K	G	M	C	KEY BASE	E	FxF	TOP MOUNT	Weight (kg)
3"	180	ø168.3	4	3/4" UNC	8	4	ø22.2	117	130	65	40	88	22	10	ø16	5x5	13	11x11	ISO 5211-F05,F07	27.4
4"	190	ø200.0	4	3/4" UNC	8	4	ø22.2	143	160	70	42	94	24	10	ø20	6x6	22	17x17	ISO 5211-F07,F10	35.3
5"	210	ø235.0	4	3/4" UNC	8	4	ø22.2	146	165	70	42	94	24	10	ø20	6x6	22	17x17	ISO 5211-F07,F10	43.8
6"	210	ø269.9	4	3/4" UNC	12	8	ø22.2	203	210	70	42	94	24	10	ø22	8x7	26	19x19	ISO 5211-F10,F12	53.3
8"	230	ø330.2	4	7/8" UNC	12	8	ø25.4	233	245	75	60	114	36	12	ø30	10x8	32	22x22	ISO 5211-F10,F12	90.6
10"	250	ø387.4	4	1" UNC	16	12	ø28.4	255	285	80	60	150	40	16	ø35	10x8	35	27x27	ISO 5211-F12,F14	140.3
12"	270	ø450.8	4	1 1/8" 8UN	16	12	ø31.8	290	330	90	75	168	46	16	ø40	12x8	35	27x27	ISO 5211-F14,F16	205.7
14"	290	ø514.4	4	1 1/8" 8UN	20	16	ø31.8	335	370	90	75	150	40	16	ø45	14x9	48	36x36	ISO 5211-F14,F16	291.9
16"	310	ø571.5	4	1 1/4" 8UN	20	16	ø35.1	365	415	110	75	186	46	20	ø50	16x10	48	36x36	ISO 5211-F14,F16	429.4
18"	330	ø628.8	4	1 1/4" 8UN	24	20	ø35.1	420	470	110	90	225	76	20	ø60	18x11	50	46x46	ISO 5211-F16,F20	478.2
20"	350	ø685.8	4	1 1/4" 8UN	24	20	ø35.1	460	500	120	110	225	76	20	ø65	20x12	50	46x46	ISO 5211-F20,F25	611.9
24"	390	ø812.8	4	1 1/2" 8UN	24	20	ø41.1	525	590	140	110	280	82	24	ø80	25x14			ISO 5211-F25,F30	805.0

NOTES

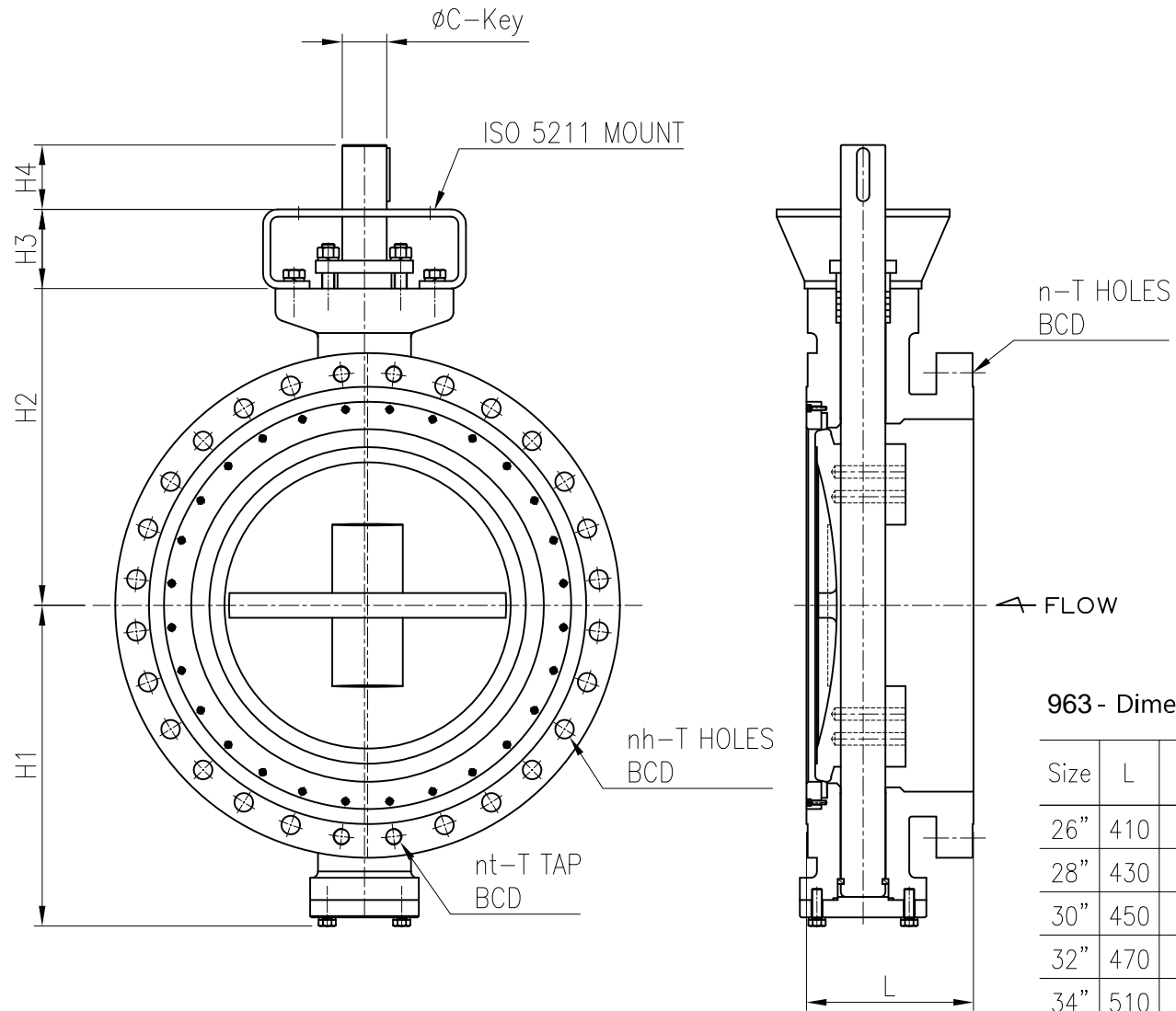
- DESIGN STD. : API 609
- Mating FLANGE : ASME B16.5 CLASS300

					DESCRIPTION	DWG. No.	963- 3- 24- 30FB- 010		SCALE	N/A
					TRIPLE BUTTERFLY VALVE	TEST PRESSURE	HYDROSTATIC	SHELL		SEAT
					3" TO 24" 963 FLANGED			kgf/cm ²		kgf/cm ²
					CLASS 300 BARE STEM			AIR		kgf/cm ²
Rev. No.	DATE	DESCRIPTION	DRN.	APP.						
0	23.06.15	FOR REFERENCE	DJ,LEE	JH,YU						

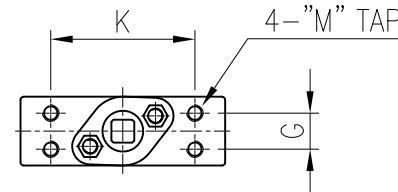


PROJECT

No.	Part	MATERIAL
01	BODY	A216 WCB, A351 CF8/CF8M/CF3M, etc.
02	DISC	A216 WCB, A351 CF8/CF8M/CF3M, etc.
03	STEM	Stainless Steel(304, 316, 316L etc.), A564 630(17-4PH), etc.
04	BODY SEAT	Stainless Steel(304, 316, 316L etc.), Stainless Steel+Hard Facing
05	DISC SEAT	316SS+(Graphite or PTFE) Laminate, PCTFE, etc.
06	SEAT RETAINER	Stainless Steel(304, 316, 316L etc.), Carbon steel, etc.
07	PACKING	Graphite, PTFE(V-Type), RTFE(V-Type), etc.
08	BUSH(BEARING)	SS316+Teflon, SS316+HCR, Copper Alloy, etc.
09	GLAND BRIDGE	Stainless Steel(304, 316, 316L etc.)
10	GLAND RING	Stainless Steel(304, 316, 316L etc.)



** BARE MOUNT DIMENSION



963 - Dimension / ASME B16.47 SERIES A Class300 / Flange type [unit : mm]

Size	L	n	nt	nh	BCD	T		H1	H2	H3	H4	K	G	M	C	KEY BASE	TOP MOUNT (OPTION)	WEIGHT (kg)
						TAP	HOLES											
26"	410	28	4	24	ø876.3	1 5/8" (8UN)	ø44.5	520	510	115	100	200	55	20	ø65	20x12	ISO 5211-F16,F20	1308
28"	430	28	4	24	ø939.8	1 5/8" (8UN)	ø44.5	570	545	140	100	220	60	20	ø70	20x12	ISO 5211-F16,F20	1411
30"	450	28	4	24	ø997.0	1 3/4" (8UN)	ø47.6	600	555	140	100	230	60	20	ø75	20x12	ISO 5211-F20,F25	1559
32"	470	28	4	24	ø1054.1	1 7/8" (8UN)	ø50.8	630	600	150	110	270	60	20	ø80	22x14	ISO 5211-F25,F30	1926
34"	510	28	4	24	ø1104.9	1 7/8" (8UN)	ø50.8	650	640	150	110	270	60	20	ø80	22x14	ISO 5211-F25,F30	1987
36"	510	32	4	28	ø1168.4	2" (8UN)	ø54.1	690	670	150	110	270	80	24	ø85	25x14	ISO 5211-F25,F30	2096
40"	550	32	4	28	ø1155.7	1 5/8" (8UN)	ø44.5	720	675	160	125	280	70	24	ø90	25x14	ISO 5211-F25,F30	2942
42"	570	32	4	28	ø1206.5	1 5/8" (8UN)	ø44.5	750	700	160	150	280	70	24	ø95	25x14	ISO 5211-F30,F35	3182
48"	630	32	4	28	ø1371.6	1 7/8" (8UN)	ø50.8	845	860	160	155	300	100	27	ø110	28x16	ISO 5211-F30,F35	4919

NOTES

- DESIGN STD. : API 609
- Mating FLANGE : ASME B16.5 CLASS300

					DESCRIPTION	DWG. No.	963- 26- 48- 30FB- 011	SCALE	N/A	
					TRIPLE BUTTERFLY VALVE	TEST PRESSURE	HYDROSTATIC	SHELL	SEAT	
					26" TO 48" 963 FLANGED			AIR	kgf/cm ²	kgf/cm ²
					CLASS 300 BARE STEM				kgf/cm ²	kgf/cm ²
Rev. No.	DATE	DESCRIPTION	DRN.	APP.						
0	23.06.15	FOR REFERENCE	DJ,LEE	JH,YU						