SERIES 9Q

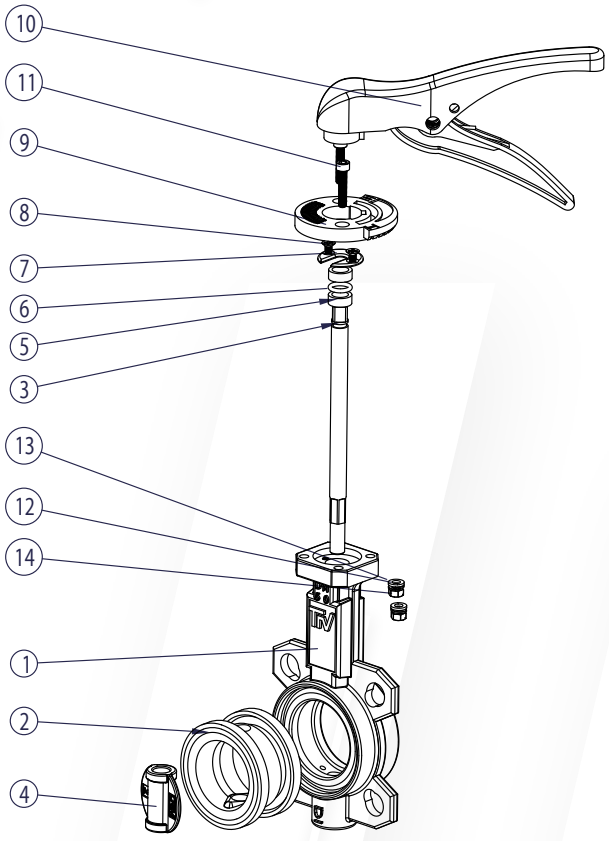
RESILIENT SEATED BUTTERFLY VALVE



www.tfv.mx



Explode View



Features / Design

1.- TFV 9Q Series is a concentric butterfly valve. The valve body shall be one-piece wafer or lug design with extended neck and a concentric disc and seat configuration to allow tor 2"~ 48" of piping insulation; it has a flange hole drilling per international flange standards and it is provided with a non-corrosive bushing and self-adjusting stem seal.

2.- Design & Manufacture Standard: API 609.

3.- General Features[2]:

Simple and compact construction, quick 90° on-off operation. Small size, light weight, easy installation and maintenance. It can be mounted wherever needed.

Bubbles-tight sealing with no leakage under the pressure testing. The wafer and lug valve shall be rated for bubble-tight shut-off for bidirectional service to 16 bar on sizes 2"-12" and to 10 bar on sizes 14"-48". The valve shall be tested for tight shut-off to 110% of the rated pressure.

Long service life. Standing the test of tens of thousands opening / closing operations.

Minimized operating torque, energy saving. The valve disc edge and hub on metal discs shall be spherically machined and hand polished for minimum torque and maximum sealing capability.

Locating holes. Flange locating holes shall be provided on wafer and lug bodies to allow quick and precise alignment during valve installation.

The seat shall totally encapsulate the body isolating it trom the line media and no flange gaskets shall be required - the seat is specifically designed to seal with slip-on or weldneck flanges.

Valve mounting top flanges are based on ISO 5211 standars for direct mounting of manual operators and power actuators.

4.- Ends: Wafer and lug options (ASME B16.5).

5.- Drilling per ANSI 150# - Class 200 CWP.

6.- Face to face acc. to API 609.

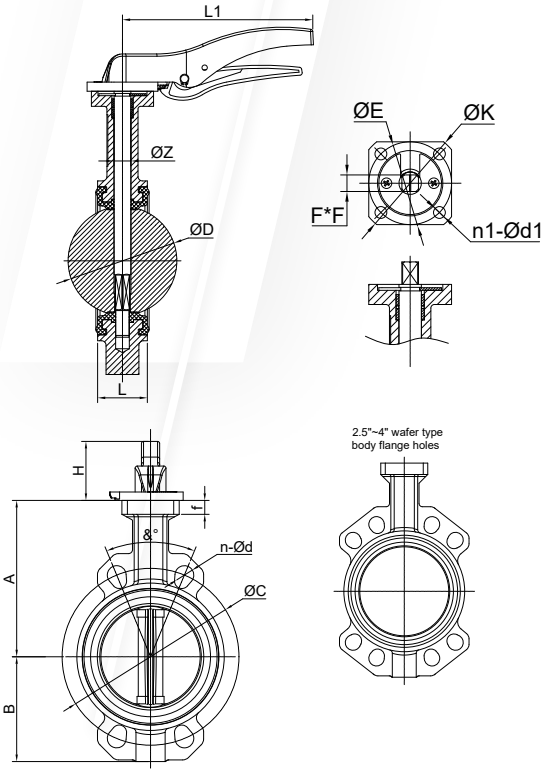
7.- Pressure & temp. rating acc. to ASME B16.34.

8.- Inspection and Test Standard: API 598.

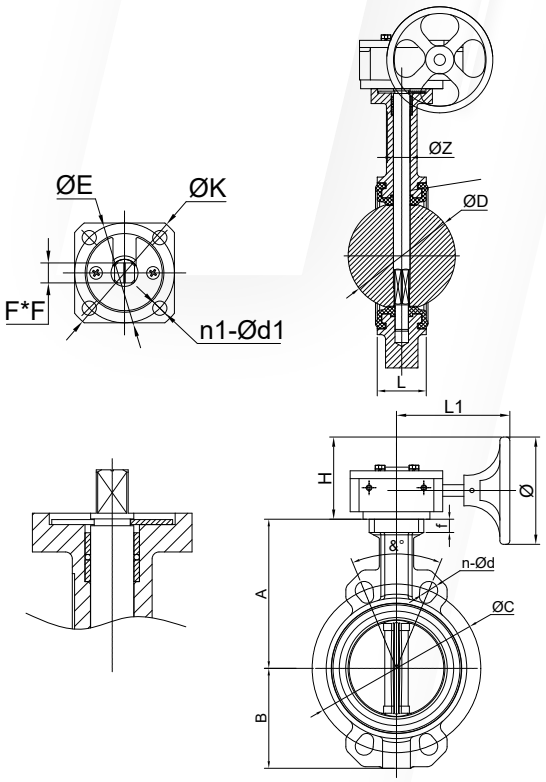
9.- Designed with a wide selection of materials, applicable for various medium - variety of liquid and gases.

10.- Seat Materials Max. Working Temperatures:
NBR : -25 to +90°C.
EPDM : -35 to +120°C.

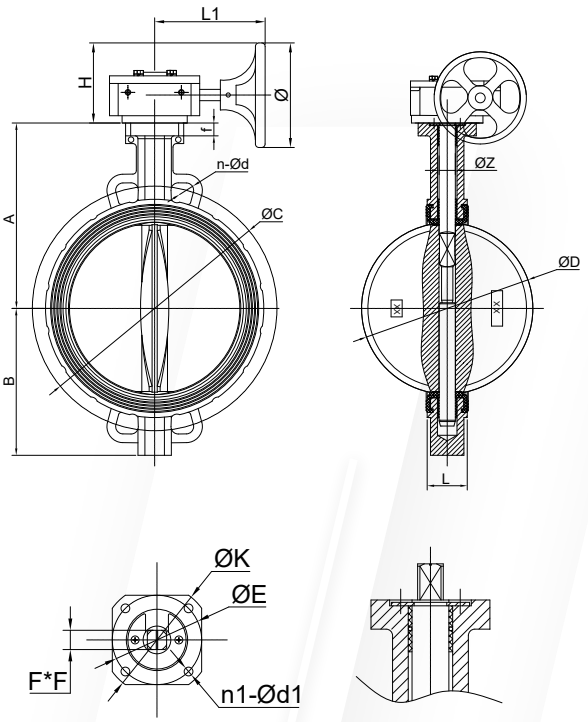
WAFER Design for 2" to 6" valves



WAFER Design for 8" to 12" valves



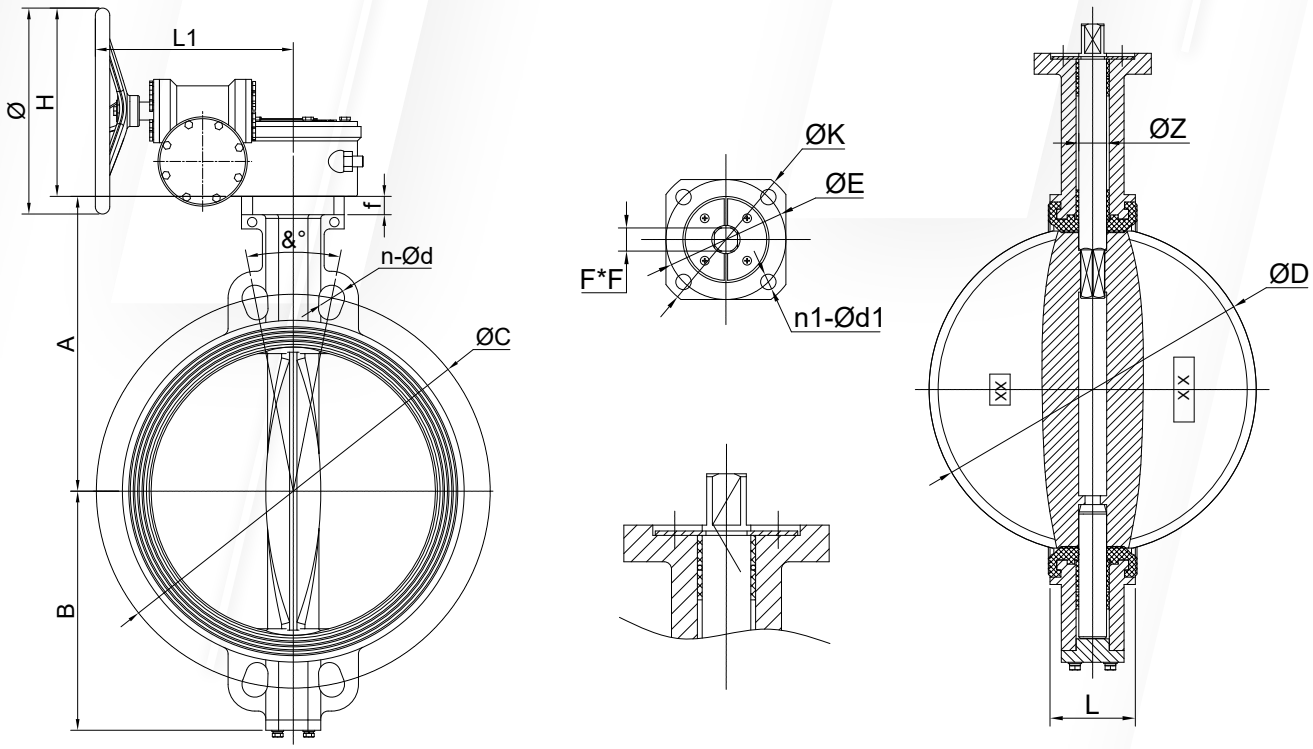
WAFER Design for 14" valves



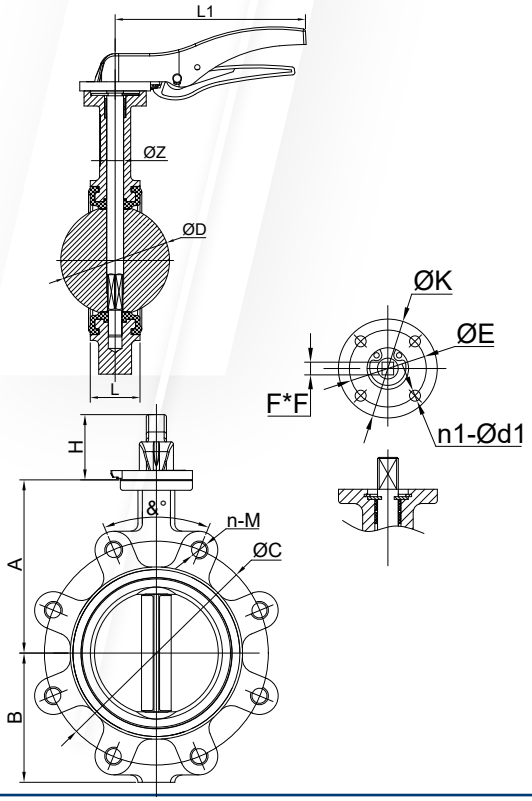
Standard Material List

POS	DESCRIPTION	MATERIAL
1	BODY	ASTM A395
2	SEAT	EPDM
3	STEM	SS410
4	DISC	ASTM A351 CF8M
5	STEM PACKING	PTFE
6	O-RING	NBR
7	RETAINING WASHER	SS304
8	BOLT	SS304
9	LEVER PLATE	ALUMINUM
10	LEVER	ALUMINUM
11	BOLT	SS304
12	SPRING WASHER	SS304
13	WASHER	SS304
14	NUT	SS304
15	GEAR BOX(7)	DI

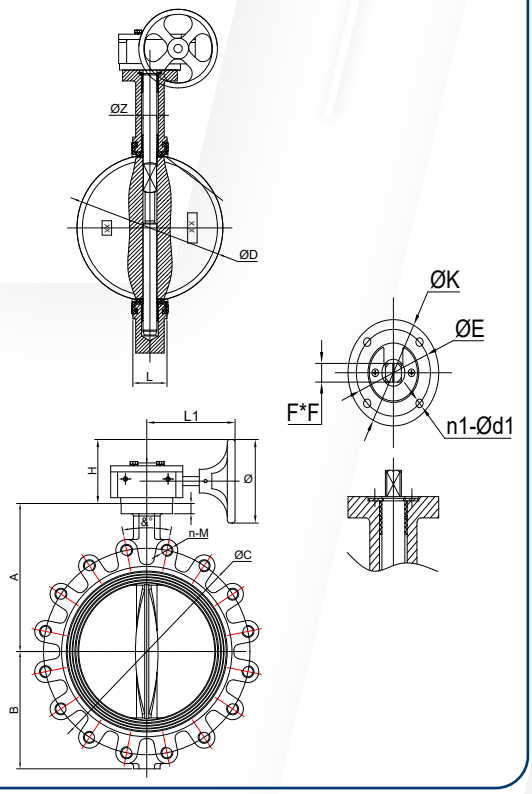
WAFER Design for 16" to 24" valves



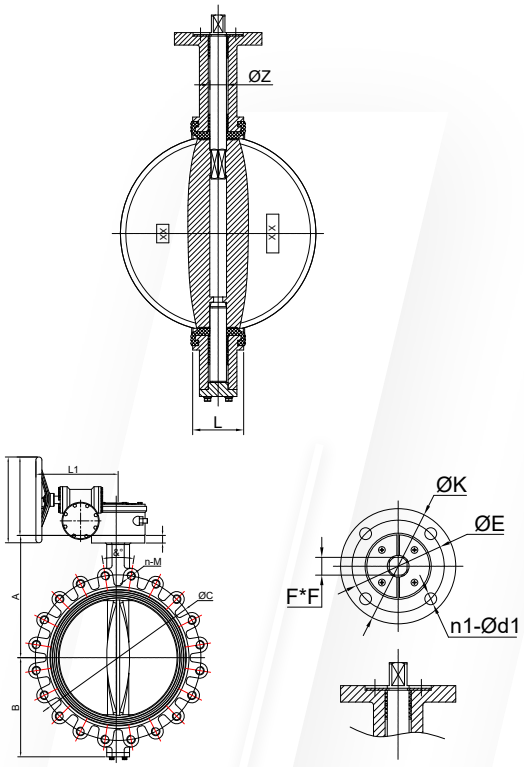
LUG Design for 2" to 6" valves



LUG Design for 14" valves



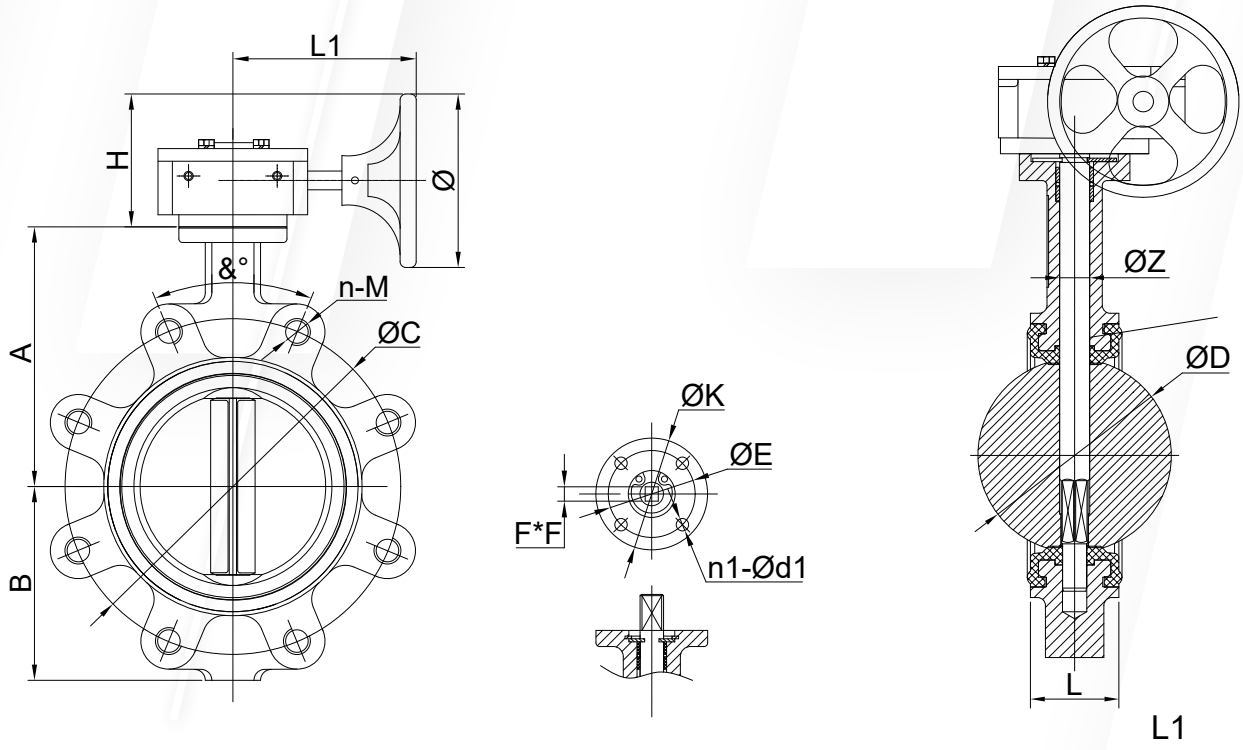
LUG Design for 16" to 24" valves



Standard Material List

POS	DESCRIPTION	MATERIAL
1	BODY	ASTM A395
2	SEAT	EPDM
3	STEM	SS410
4	DISC	ASTM A351 CF8M
5	STEM PACKING	PTFE
6	O-RING	NBR
7	RETAINING WASHER	SS304
8	BOLT	SS304
9	LEVER PLATE	ALUMINUM
10	LEVER	ALUMINUM
11	BOLT	SS304
12	SPRING WASHER	SS304
13	WASHER	SS304
14	NUT	SS304
15	GEAR BOX(7)	DI

LUG Design for 8" to 12" valves



Dimensions (inches)

WAFER TYPE - CLASS 150#

SIZE	A (in)	B (in)	L±3.3 (in)	ØZ (in)	ØD (in)	f (in)	L1 (in)	H (in)	ISO 5211	ØK (in)	ØE (in)	n1-Ød1	F*F	ØC (in)	n-Ød1	&°	Torque (Nm)	CV (USgpm)	Ø (in)	Weight (lb)
2"	5,59	2,84	1,69	0,50	2,06	0,51	7,44	2,99	F05	2,56	1,97	4-Ø7	11*11	4,7	4-Ø19.1	90	30	119		3,18
2.5"	5,98	3,58	1,81	0,50	2,52	0,55	7,44	2,99	F05	2,56	1,97	4-Ø7	11*11	5,5	4-Ø19.1	90	40	241		3,18
3"	6,26	3,94	1,81	0,50	3,09	0,55	7,44	2,99	F05	2,56	1,97	4-Ø7	11*11	6,0	4-Ø19.1	90	61	442		4,08
4"	7,05	4,49	2,05	0,62	4,09	0,59	9,84	3,31	F07	3,54	2,76	4-Ø10	11*11	7,5	8-Ø19.1	45	95	765		4,54
5"	7,52	5,04	2,21	0,75	4,84	0,67	9,84	3,31	F07	3,54	2,76	4-Ø10	14*14	8,5	8-Ø22.3	45	139	1269		4,99
6"	8,47	5,55	2,21	0,75	6,11	0,71	9,84	3,31	F07	3,54	2,76	4-Ø10	14*14	9,5	8-Ø22.3	45	200	2037		5,44
8"	9,37	6,89	2,36	0,87	7,97	0,71	8,19	5,51	F10	4,92	4,02	4-Ø12	17*17	11,7	8-Ø22.3	45	398	3512	10,83	9,53
10"	10,59	8,15	2,68	1,12	9,85	0,75	8,19	5,51	F10	4,92	4,02	4-Ø12	22*22	14,3	12-Ø25.4	30	587	5891	10,83	14,51
12"	12,09	9,69	3,07	1,24	11,89	0,75	8,43	5,51	F10	4,92	4,02	4-Ø12	22*22	17,0	12-Ø25.4	30	729	8327	10,83	20,87
14"	14,25	11,10	3,07	1,24	13,14	0,75	8,43	5,51	F10	4,92	4,02	4-Ø12	22*22	18,7	12-Ø28.6	30	969	11321	10,83	27,22
16"	15,83	12,84	4,02	1,31	15,34	0,95	9,84	9,84	F14	6,89	5,51	4-Ø18	27*27	21,3	16-Ø28.6	23	1307	14269	10,83	43,54
18"	16,65	13,62	4,49	1,49	17,35	0,95	9,84	9,84	F14	6,89	5,51	4-Ø18	27*27	22,7	16-Ø31.8	23	1787	19089	10,83	-
20"	18,90	14,96	5,00	1,62	19,36	0,95	9,84	9,84	F14	6,89	5,51	4-Ø18	36*36	25,0	20-Ø31.8	18	2288	21872	10,83	-
24"	22,17	18,11	6,06	1,99	23,33	1,10	11,02	15,75	F16	8,27	6,50	4-Ø22	36*36	29,5	20-Ø35	18	3711	32087	15,16	-

LUG TYPE - CLASS 150#

SIZE	A (in)	B (in)	L±1.5 (in)	ØZ (in)	ØD (in)	f (in)	L1 (in)	H (in)	ISO 5211	ØK (in)	ØE (in)	n1-Ød1	F*F	ØC (in)	N-M	&°	Torque (Nm)	CV (USgpm)	Ø (in)	Weight (lb)
2"	5,5906	2.83"	1,69	0,5	2,06	0,51	7,44	2,99	F05	2,56	1,97	4-Ø7	11*11	4,75	4-(5/8-11UNC-2B)	90,00	30,00	119,00		7
2.5"	5,9843	3.19"	1,81	0,5	2,52	0,51	7,44	2,99	F05	2,56	1,97	4-Ø7	11*11	5,5	4-(5/8-11UNC-2B)	90,00	40,00	241,00		8
3"	6,2598	3.39"	1,81	0,5	3,09	0,51	7,44	2,99	F05	2,56	1,97	4-Ø7	11*11	6	4-(5/8-11UNC-2B)	90,00	61,00	442,00		9
4"	7,0079	4.49"	2,05	0,62	4,09	0,59	9,84	3,31	F07	3,54	2,76	4-Ø10	11*11	7,5	8-(¾-10UNC-2B)	45,00	95,00	765,00		11
5"	7,5197	5.04"	2,2	0,74	4,84	0,67	9,84	3,31	F07	3,54	2,76	4-Ø10	14*14	8,5	8-(¾-10UNC-2B)	45,00	139,00	1269,00		13
6"	8,4646	5.55"	2,2	0,74	6,11	0,67	9,84	3,31	F07	3,54	2,76	4-Ø10	14*14	9,5	8-(¾-10UNC-2B)	45,00	200,00	2037,00		23,00
8"	9,3701	6.89"	2,36	0,87	7,97	0,67	8,19	5,51	F10	4,92	4,02	4-Ø12	17*17	11,75	8-(¾-10UNC-2B)	45,00	398,00	3512,00		31,00
10"	10,5906	8.15"	2,68	1,12	9,85	0,71	8,19	5,51	F10	4,92	4,02	4-Ø12	22*22	14,25	12-(5/8-9UNC-2B)	30,00	587,00	5891,00		43,00
12"	12,0866	9.69"	3,07	1,24	11,89	0,71	8,43	5,51	F10	4,92	4,02	4-Ø12	22*22	17	12-(5/8-9UNC-2B)	30,00	729,00	8327,00		45,00
14"	12,874	11.34"	3,07	1,25	13,14	0,79	8,43	5,51	F10	4,92	4,02	4-Ø12	22*22	18,75	12-(1/2-10UNC-2B)	30,00	11321		10,83	80,00
16"	14,6063	12.52"	4,02	1,31	15,35	0,94	9,84	9,84	F14	6,89	5,51	4-Ø18	27*27	21,25	16-(1/8UNC-2B)	22,50	14269		10,83	100,00
18"	17,3819	13.86"	4,49	1,49	17,35	0,94	9,84	9,84	F14	6,89	5,51	4-Ø18	27*27	22,75	18-(1/8UNC-2B)	22,50	19089		10,83	136,00
20"	17,7165	15.04"	5	1,62	19,37	1,02	9,84	9,84	F14	6,89	5,51	4-Ø18	36*36	25	20-(1/8UNC-2B)	18,00	21872		10,83	185,00
24"	20,2756	17.52"	6,06	1,99	23,32	1,1	11,02	15,75	F16	8,27	6,5	4-Ø22	36*36	29,5	20-(1/8UNC-2B)	18,00	32087		15,16	247,00

Dimensions (Milimeters)

WAFER TYPE - CLASS 150#

SIZE	A (mm)	B (mm)	L± 3.3 (mm)	ØZ (mm)	ØD (mm)	f (mm)	L1 (mm)	H (mm)	ISO 5211	ØK (mm)	ØE (mm)	n1-Ød1	F*F	ØC (mm)	n-Ød1	&°	Torque (Nm)	CV (USgpm)	Ø (mm)	Weight (kg)
2"	142,00	72,00	43,00	12,60	52,30	13,00	189,00	76,00	F05	65,00	50,00	4-Ø7	11*11	120,60	4-Ø19.1	90,00	30,00	119,00		7
2.5"	152,00	91,00	46,00	12,60	64,00	14,00	189,00	76,00	F05	65,00	50,00	4-Ø7	11*11	139,70	4-Ø19.1	90,00	40,00	241,00		7
3"	159,00	100,00	46,00	12,60	78,40	14,00	189,00	76,00	F05	65,00	50,00	4-Ø7	11*11	152,40	4-Ø19.1	90,00	61,00	442,00		9
4"	179,00	114,00	52,00	15,77	104,00	15,00	250,00	84,00	F07	90,00	70,00	4-Ø10	11*11	190,50	8-Ø19.1	45,00	95,00	765,00		10
5"	191,00	128,00	56,00	18,92	123,00	17,00	250,00	84,00	F07	90,00	70,00	4-Ø10	14*14	215,90	8-Ø22.3	45,00	139,00	1269,00		11
6"	215,00	141,00	56,00	18,92	155,20	18,00	250,00	84,00	F07	90,00	70,00	4-Ø10	14*14	241,30	8-Ø22.3	45,00	200,00	2037,00		12,00
8"	238,00	175,00	60,00	22,10	202,40	18,00	208,00	140,00	F10	125,00	102,00	4-Ø12	17*17	298,40	8-Ø22.3	45,00	398,00	3512,00	275,00	21,00
10"	269,00	207,00	68,00	28,45	250,30	19,00	208,00	140,00	F10	125,00	102,00	4-Ø12	22*22	362,00	12-Ø25.4	30,00	587,00	5891,00	275,00	32,00
12"	307,00	246,00	78,00	31,60	302,00	19,00	214,00	140,00	F10	125,00	102,00	4-Ø12	22*22	431,80	12-Ø25.4	30,00	729,00	8327,00	275,00	46,00
14"	362,00	282,00	78,00	31,60	333,80	19,00	214,00	140,00	F10	125,00	102,00	4-Ø12	22*22	476,20	12-Ø28.6	30,00	969,00	11321,00	275,00	60,00
16"	402,00	326,00	102,00	33,15	389,60	24,00	250,00	250,00	F14	175,00	140,00	4-Ø18	27*27	539,80	16-Ø28.6	22,50	1307,00	14269,00	275,00	96,00
18"	423,00	346,00	114,00	37,95	440,60	24,00	250,00	250,00	F14	175,00	140,00	4-Ø18	27*27	577,80	16-Ø31.8	22,50	1787,00	19089,00	275,00	-
20"	480,00	380,00	127,00	41,12	491,70	24,00	250,00	250,00	F14	175,00	140,00	4-Ø18	36*36	635,00	20-Ø31.8	18,00	2288,00	21872,00	275,00	-
24"	563,00	460,00	154,00	50,62	592,50	28,00	280,00	400,00	F16	210,00	165,00	4-Ø22	36*36	749,30	20-Ø35	18,00	3711,00	32087,00	385,00	-

LUG TYPE - CLASS 150#

SIZE	A (mm)	B (mm)	L±1.5 (mm)	ØZ (mm)	ØD (mm)	f (mm)	L1 (mm)	H (mm)	ISO 5211	ØK (mm)	ØE (mm)	n1-Ød1	F*F	ØC (mm)	N-M	&°	Torque (Nm)	CV (USgpm)	Ø (mm)	Weight (Kg)
2"	142,00	72,00	43,00	12,60	52,30	13,00	189,00	76,00	F05	65,00	50,00	4-Ø7	11*11	120,60	4-(5/8-11UNC-2B)	90,00	30,00	119,00		7
2.5"	152,00	81,00	46,00	12,60	64,00	13,00	189,00	76,00	F05	65,00	50,00	4-Ø7	11*11	139,70	4-(5/8-11UNC-2B)	90,00	40,00	241,00		8
3"	159,00	86,00	46,00	12,60	78,40	13,00	189,00	76,00	F05	65,00	50,00	4-Ø7	11*11	152,40	4-(5/8-11UNC-2B)	90,00	61,00	442,00		9
4"	178,00	114,00	52,00	15,77	104,00	15,00	250,00	84,00	F07	90,00	70,00	4-Ø10	11*11	190,50	8-(¾-10UNC-2B)	45,00	95,00	765,00		11
5"	191,00	128,00	56,00	18,92	123,00	17,00	250,00	84,00	F07	90,00	70,00	4-Ø10	14*14	215,90	8-(¾-10UNC-2B)	45,00	139,00	1269,00		13
6"	215,00	141,00	56,00	18,92	155,20	17,00	250,00	84,00	F07	90,00	70,00	4-Ø10	14*14	241,30	8-(¾-10UNC-2B)	45,00	200,00	2037,00		23,00
8"	238,00	175,00	60,00	22,10	202,40	17,00	208,00	140,00	F10	125,00	102,00	4-Ø12	17*17	298,40	8-(¾-10UNC-2B)	45,00	398,00	3512,00		31,00
10"	269,00	207,00	68,00	28,45	250,30	18,00	208,00	140,00	F10	125,00	102,00	4-Ø12	22*22	362,00	12-(5/8-9UNC-2B)	30,00	587,00	5891,00		43,00
12"	307,00	246,00	78,00	31,60	302,00	18,00	214,00	140,00	F10	125,00	102,00	4-Ø12	22*22	431,80	12-(5/8-9UNC-2B)	30,00	729,00	8327,00		45,00
14"	327,00	288,00	78,00	31,80	333,80	20,00	214,00	140,00	F10	125,00	102,00	4-Ø12	22*22	476,20	12-(1/2-10UNC-2B)	30,00	11321		275,00	80,00
16"	371,00	318,00	102,00	33,15	389,80	24,00	250,00	250,00	F14	175,00	140,00	4-Ø18	27*27	539,80	16-(1/8UNC-2B)	22,50	14269		275,00	100,00
18"	441,50	352,00	114,00	37,95	440,80	24,00	250,00	250,00	F14	175,00	140,00	4-Ø18	27*27	577,90	18-(1/8UNC-2B)	22,50	19089		275,00	136,00
20"	450,00	382,00	127,00	41,12	492,00	26,00	250,00	250,00	F14	175,00	140,00	4-Ø18	36*36	635,00	20-(1/8UNC-2B)	18,00	21872		275,00	185,00
24"	515,00	445,00	154,00	50,62	592,40	28,00	280,00	400,00	F16	210,00	165,00	4-Ø22	36*36	749,30	20-(1/8UNC-2B)	18,00	32087		385,00	247,00

How to Order

DESIGN (SERIES)		SPECIAL FEATURES	
9Q	Resilient Seated Butterfly Valve		None
		W	WRAS

MATERIAL					
BODY[1]		TRIM[2]		SEAT[3]	
2	ASTM A216 WCB	1	Bronze Aluminium /SS410	E	EPDM
3	CF8M	3	SS316/ SS 410 o SS420	B	NBR
4	CF8	4	SS304/ SS 410	V	VITON
5	CF3	6	DI ASTM A395/ SS4410	N	NEOPRENE
6	A395	7	DI ASTM A395 + NYLON 11 / Monel K500l	A	EPDM FOOD GRADE
7	DI + A395 / Nylon	8	DI ASTM A395 + EPDM / SS410		
8	DI + A395 + Polyester	A	SS 316/ SS 431		

ENDS		CLASS		SIZE[4]		OPERATION	
L	LUG ASME B16.5	0	ANSI 150#[5]	02	2"	L	Solid Manual Lever
W	WAFER ASME B16.5			02.5	2 1/2"	G	Gear Operator with Solid Handwheel
D	Double Flange RF ASME B16.5			03	3"	B	Bare Shaft
				04	4"	GC	Gear Operator with Solid Handwheel and Chain operator [6]
				05	5"		
				06	6"		
				08	8"		
				10	10"		
				12	12"		
				14	14"		
				16	16"		
				18	18"		
				20	20"		
				22	22"		
				24	24"		

Example:

Resilient Seated Butterfly Valve, Body Ductil Iron, Disc CF8M, Seat EPDM, Wafer 150# Size 6" with Lever.

9Q66EW006L

NOTES:
(1) Please contact for more available materials.
(2) Please contact for more available materials.
(3) Please contact for more available materials (e.g. natural rubber, poychloroprene, silicon rubber, etc.).
(4) Please contact for more available sizes.
(5) CWP stands for Cold Working Pressure and is an indication of the pressure rating for valves at a temperature up to 100°F. Drilling per ANSI 150# (200 CWP from 2" to 24").
(6) Please share us the length of chain that you need.
(7) Gearbox is Applied from 8" until bigger size valves, if you need on small sizes, please contact us
* Nylon 11 coating can be certified to NSF / ANSI 61 for water service.
"Please request the drawings for the stainless steel shell"