



## Features / Design

- 1.- **TFV Q 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 for 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<sup>(2)</sup>:**

**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.

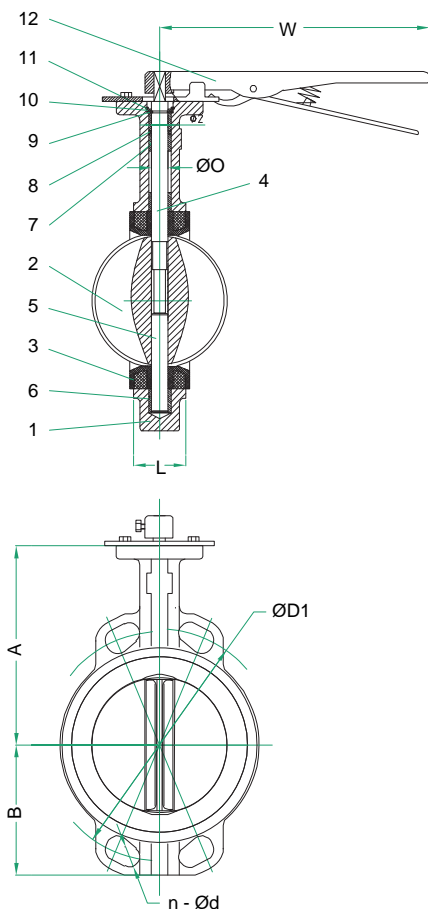
**Locating holes.** Flange locating holes shall be provided on wafer and lug bodies to allow quick and precise alignment during valve installation.

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

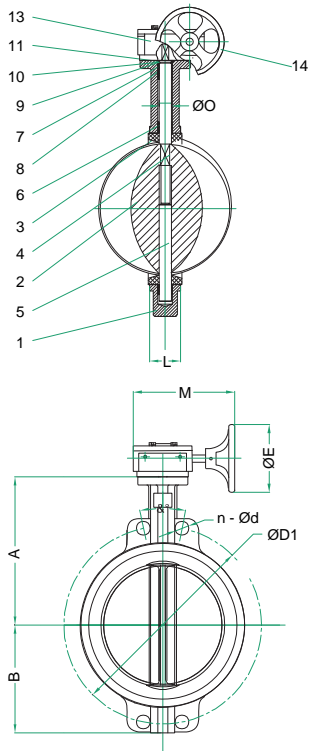
Valve mounting top flanges are based on **ISO 5211** standards for direct mounting of manual operators and power actuators.

- 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 +100°C.  
EPDM : -35 to +130°C.

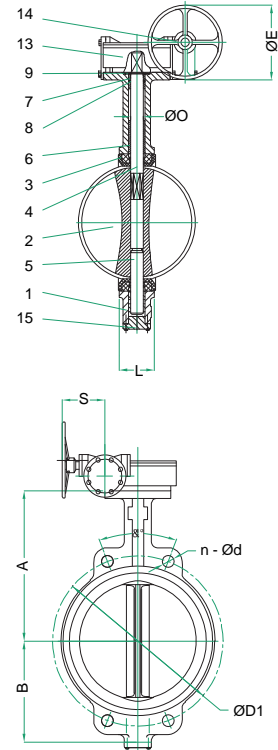
### WAFER Design for 1-1/2" to 12" valves



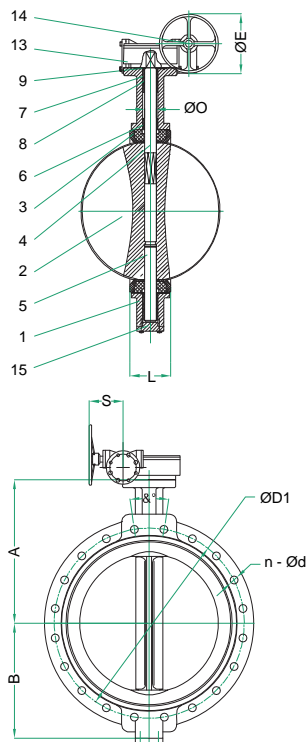
**WAFER Design for 14" valves**



**WAFER Design for 16" to 20" valves**



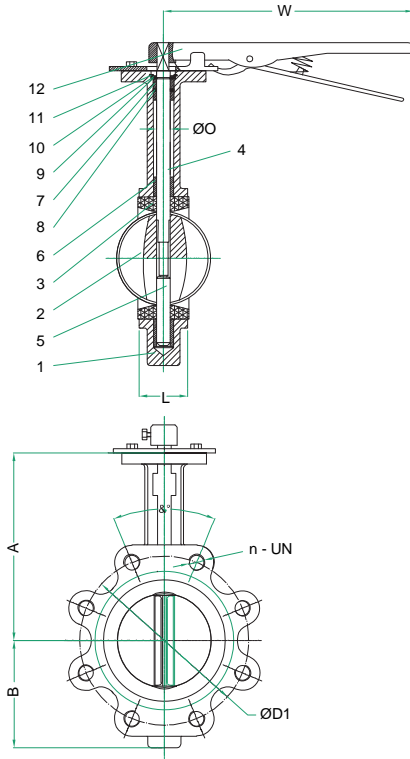
**WAFER Design for 24" valves**



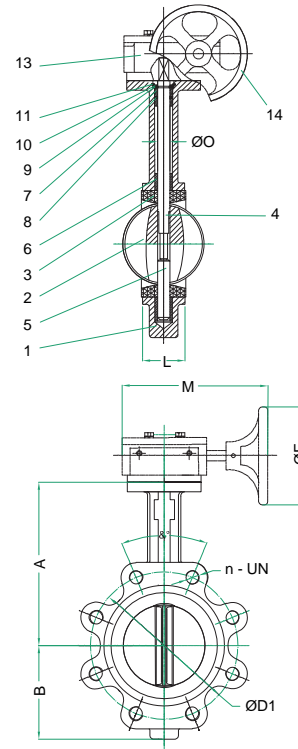
## Material List

POS	DESCRIPTION	MATERIAL
1	BODY	ASTM A536 65-45-12
2	DISC	A351 CF8M
3	LINEAR SEAT	EPDM
4	UP SHAFT	SS410
5	DOWN SHAFT	SS410
6	DOWN BUSHING	FRP
7	UP BUSHING	FRP
8	O-RING	NBR
9	HALF RING	STAINLESS STEEL
10	GSKET	STAINLESS STEEL
11	SNAP SPRING	SK7
12	LEVER	STAINLESS STEEL
13	GEARBOX	COMPOSITE PARTS
14	HANDWHEEL	STAINLESS STEEL
15	END COVER	ASTM A536 65-45-12

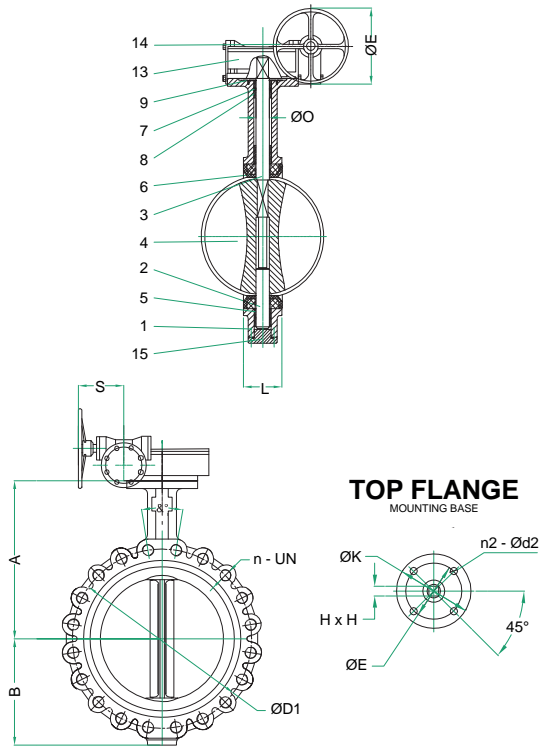
**LUG Design for 2" to 12" valves**



**LUG Design for 14" valves**



**LUG Design for 16" to 24" valves**



## Material List

POS	DESCRIPTION	MATERIAL
1	BODY	ASTM A536 65-45-12
2	DISC	A351 CF8M
3	LINEAR SEAT	EPDM
4	UP SHAFT	SS410
5	DOWN SHAFT	SS410
6	DOWN BUSHING	FRP
7	UP BUSHING	FRP
8	O-RING	NBR
9	HALF RING	STAINLESS STEEL
10	GSKET	STAINLESS STEEL
11	SNAP SPRING	SK7
12	LEVER	STAINLESS STEEL
13	GEARBOX	COMPOSITE PARTS
14	HANDWHEEL	STAINLESS STEEL
15	END COVER	ASTM A536 65-45-12



## Dimensions (inches)

### WAFER TYPE - CLASS 150#

WAFER CONNECTION																					
SIZE	A (in)	B (in)	C (in)	ØO (in)	ISO5211 (in)	ØK (in)	ØE (in)	n2 (in)	Ød2 (in)	ØD1 (in)	N (in)	Ød (in)	% (in)	H (in)	W (in)	M (in)	ØE (in)	S (in)	Torque (Lbf*in)	Weight (Kg)	CV (USgpm)
1 1/2"	4.724	2.559	1.299	0.496	F05	2.559	1.969	4	0.276	3.874	4	0.630	90	0.354	10.236	/	/	/	79.646	6.834	110
2"	5.512	3.150	1.693	0.496	F07	3.543	2.756	4	0.394	4.752	4	0.787	90	0.433	10.236	/	/	/	88.496	8.157	135
2 1/2"	5.906	3.504	1.811	0.496	F07	3.543	2.756	4	0.394	5.500	4	0.787	90	0.433	10.236	/	/	/	150.442	9.039	220
3"	6.220	3.740	1.811	0.496	F07	3.543	2.756	4	0.394	6.000	4	0.787	90	0.433	10.236	/	/	/	230.088	9.921	302
4"	6.929	4.488	2.047	0.621	F07	3.543	2.756	4	0.394	7.500	8	0.787	45	0.433	10.236	/	/	/	380.531	13.889	600
5"	7.480	5.000	2.205	0.745	F07	3.543	2.756	4	0.394	8.500	8	0.906	45	0.551	10.236	/	/	/	575.221	17.857	1022
6"	8.346	5.471	2.205	0.745	F07	3.543	2.756	4	0.394	9.500	8	0.906	45	0.551	10.236	/	/	/	911.504	20.062	1579
8"	9.291	6.850	2.362	0.870	F10	4.921	4.016	4	0.472	11.752	8	0.906	45	0.669	14.173	/	/	/	1823.009	34.613	3136
10"	10.433	7.992	2.677	1.120	F10	4.921	4.016	4	0.472	14.252	12	1.024	30	0.866	14.173	/	/	/	2646.018	53.572	5340
12"	12.008	9.528	3.071	1.244	F10	4.921	4.016	4	0.472	17.000	12	1.024	30	0.866	14.173	/	/	/	3690.265	71.650	8250
14"	14.488	10.512	3.071	1.244	F10	4.921	4.016	4	0.472	18.752	12	1.142	30	0.866	/	11.220	/	/	8141.593	100.972	11917
16"	15.748	12.165	4.016	*	F14	6.890	5.512	4	0.709	21.252	16	1.142	22.5	1.063	/	/	11.496	6.496	12743.363	196.873	16388
18"	16.614	13.386	4.488	*	F14	6.890	5.512	4	0.709	22.752	16	1.260	22.5	1.063	/	/	11.811	6.496	15752.212	225.974	21705
20"	17.323	14.252	5.000	*	F14	6.990	5.512	4	0.709	25.000	20	1.260	18	1.417	/	/	11.811	6.496	19557.522	280.649	27908
24"	22.244	17.795	6.063	*	F16	8.268	6.496	4	0.866	29.500	10	1.378	18	1.417	/	/	11.811	6.496	35221.239	515.882	43116

### LUG TYPE - CLASS 150#

LUG CONNECTION																					
SIZE	A (in)	B (in)	C (in)	ØO (in)	ISO5211 (in)	ØK (in)	ØE (in)	n2 (in)	Ød2 (in)	ØD1 (in)	N (in)	UN (in)	% (in)	H (in)	W (in)	M (in)	ØE (in)	S (in)	Torque (Lbf*in)	Weight (Kg)	CV (USgpm)
1 1/2"	4.724	2.559	1.299	0.496	F05	2.559	1.969	4	0.276	3.874	4	1/2" - 13 UNC - 2B	90	0.354	10.236	/	/	/	79.646	5.600	110
2"	5.512	3.150	1.693	0.496	F07	3.543	2.756	4	0.394	4.752	4	5/8" - 11 UNC - 2B	90	0.433	10.236	/	/	/	88.496	9.039	135
2 1/2"	5.906	3.307	1.811	0.496	F07	3.543	2.756	4	0.394	5.500	4	5/8" - 11 UNC - 2B	90	0.433	10.236	/	/	/	150.442	9.480	220
3"	6.220	3.740	1.811	0.496	F07	3.543	2.756	4	0.394	6.000	4	5/8" - 11 UNC - 2B	90	0.433	10.236	/	/	/	230.088	11.376	302
4"	6.929	4.488	2.047	0.621	F07	3.543	2.756	4	0.394	7.500	8	5/8" - 11 UNC - 2B	45	0.433	10.236	/	/	/	380.531	18.078	600
5"	7.480	5.000	2.205	0.745	F07	3.543	2.756	4	0.394	8.500	8	3/4" - 10 UNC - 2B	45	0.551	10.236	/	/	/	575.221	23.369	1022
6"	8.307	5.472	2.205	0.745	F07	3.543	2.756	4	0.394	9.500	8	3/4" - 10 UNC - 2B	45	0.551	10.236	/	/	/	911.504	26.808	1579
8"	9.252	6.890	2.362	0.870	F10	4.921	4.016	4	0.472	11.752	8	3/4" - 10 UNC - 2B	45	0.669	14.173	/	/	/	1823.009	40.124	3136
10"	10.433	7.992	2.677	1.120	F10	4.921	4.016	4	0.472	14.252	12	7/8" - 9 UNC - 2B	30	0.866	14.173	/	/	/	2646.018	61.289	5340
12"	12.008	9.528	3.071	1.244	F10	4.921	4.016	4	0.472	17.000	12	7/8" - 9 UNC - 2B	30	0.866	14.173	/	/	/	3690.265	91.933	8250
14"	14.488	10.512	3.071	1.244	F10	4.921	4.016	4	0.472	18.752	12	1" - 8 UNC - 2B	30	0.866	/	11.220	/	/	6920.354	167.111	11917
16"	15.748	11.811	4.016	*	F14	6.890	5.512	4	0.709	21.252	16	1" - 8 UNC - 2B	22.5	1.063	/	/	11.496	6.496	10831.858	261.909	16388
18"	16.614	12.598	4.488	*	F14	6.890	5.512	4	0.709	22.752	16	1 1/8" - 8 UNC - 2B	22.5	1.063	/	/	11.811	6.496	13389.381	338.410	21705
20"	17.913	14.370	5.000	*	F14	6.990	5.512	4	0.709	25.000	20	1 1/8" - 8 UNC - 2B	18	1.417	/	/	11.811	6.496	16628.319	373.243	27908
24"	22.244	17.520	6.063	*	F16	8.268	6.496	4	0.866	29.500	10	1 1/4" - 8 UNC - 2B	18	1.417	/	/	11.811	6.496	29938.053	437.618	43116





## How to Order

DESIGN (SERIES)	SPECIAL FEATURES	MATERIAL			ENDS	CLASS	SIZE <sup>(4)</sup>		OPERATION
		BODY <sup>(1)</sup>	TRIM <sup>(2)</sup>	SEAT <sup>(3)</sup>					
Q Resilient Seated Butterfly Valve	None None NS NSF / ANSI 61	2 WCB	1 Bronze Aluminium	E EPDM	L Lug	0 ANSI 150# <sup>(5)</sup>	02	2"	L Manual Lever Operator
		6 DI	3 316SS	B NBR	W Wafer		02.5	2 1/2"	B Bare Shaft
		4 304SS	V Viton		03		3"	G Gear Operator	
		6 DI	N Neoprene		04		4"	P Pneumatic Actuator	
		7 DI + Nylon	H Hypalon		05		5"	E Electric Actuator	
			P PTFE		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.

**Q66EW006L**

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, polychloroprene, silicon rubber, etc.).
  - (4) Please contact for more available sizes.
  - (5) (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").
- \* Nylon 11 coating can be certified to NSF / ANSI 61 for water service.

