

TECHNICAL SPECIFICATIONS

Series 710 UHMWPE-Lined
Full-Face Wafer/Lug Butterfly Valves: 2"– 12"
Fiberglass Reinforced Composite Body



1. SCOPE

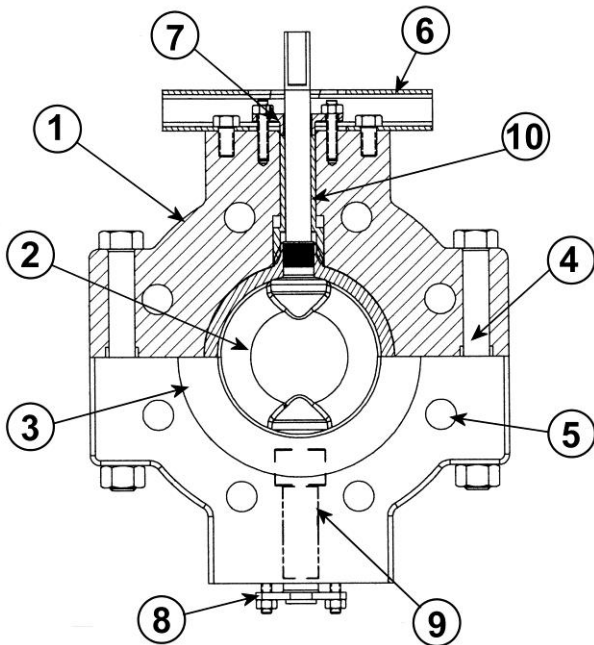
Full-Face Wafer/Lug Butterfly Valves with through-drilled or threaded flange bolt holes and Ultra-High Molecular Weight Polyethylene (UHMWPE) liner and encapsulated disc for corrosive and abrasive chemical services.

2. SERVICE RATING

Continuous temperature service from -50 to 200° F. Maximum service pressure to 150 psig per the P/T curve on Page 2.

3. MATERIALS OF CONSTRUCTION

- (1) **Body:** Glass fiber reinforced vinyl ester resin
- (2) **Disc:** UHMWPE-lined, CD4M Cu.
- (3) **Seat:** UHMWPE/Silicone Energizer
- (4) **Body Bolts:** PTFE-coated ASTM A193 Gr. B7
- (5) **Flange Connections:** Bolt holes may be through-drilled (wafer) or threaded (lug).
- (6) **Bracket:** C1008/C1010 CS Plate Weldment/Painted
- (7) **Upper Packing Gland:** ASTM494 GR CW6M
- (8) **Lower Packing Gland w/cover:** ASTM494 GR CW6M
- (9) **Lower Adjustable Sleeve:** Stainless Steel
- (10) **Upper Adjustable Sleeve:** Stainless Steel



4. DESIGN

- Body shall have flange clearance holes per ANSI B16.5 CL 150 for alignment or be threaded. Threaded Lug valves are fully rated for end-of-line service.
- Valves are designed for Bi-Directional shutoff at full rated pressure.
- Body shall have burst pressure at least 4x the rated pressure, per ASTM 1173.
- Face-to-face dimensions per MSS-SP67.
- Disc shall be a one piece blowout proof design.
- Stem seal shall be externally adjustable.
- Stem sealing to be provided by mating primary seat/disc spherical surfaces
- Valve design shall be such that it can be bolted into a standard PTFE-lined steel pipe and the valve disc not interfere with the lining of the pipe.
- Valve disc/seat to provide bubble tight shut off per API 598 and MSS-SP61.
- Gear or lever handle shall be available on all sizes.
- Valves shall be capable of on-off actuation or modulating control with pneumatic, electric or hydraulic actuators.

5. QUALITY ASSURANCE

- The Manufacturer's facility shall be certified to ISO 9001 or equivalent.
- Each valve shall be hydrostatically tested with water at 225 psig with the disc open and both ends blanked for 3 minutes with no evidence of leakage.
- Each valve shall be subjected to a hydrostatic seat test at 165 psi with no evidence of leakage.

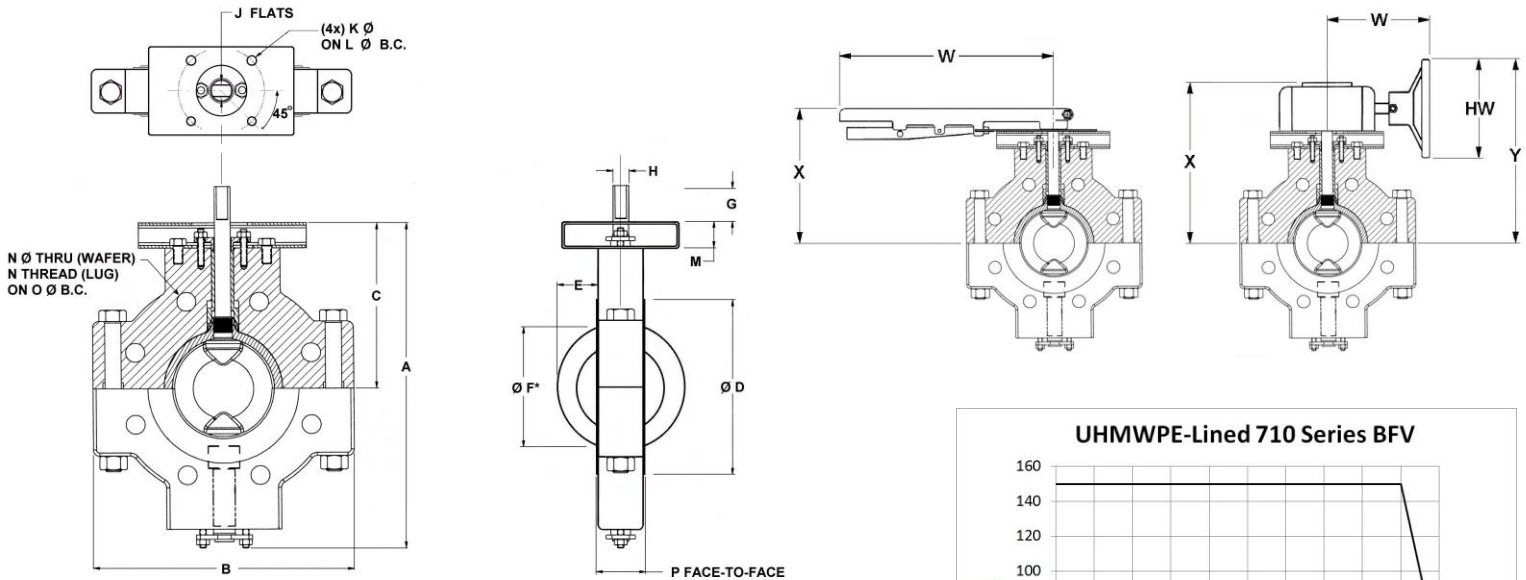
6. PACKING AND SHIPPING

Valves shall be shipped in the closed position. Each valve shall be marked with the manufacturer, size, series, construction materials, serial number, and valve component designation in accordance with MSS-SP25.

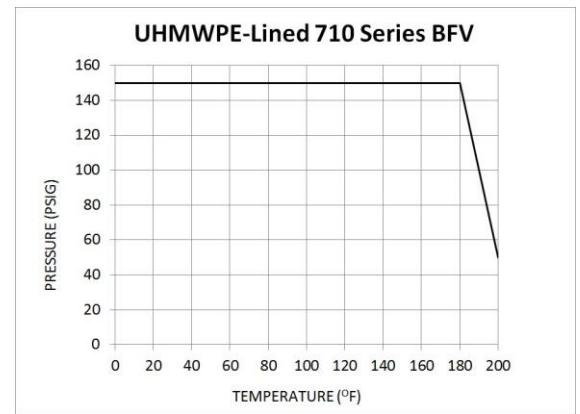
7. AVAILABILITY

Valves meeting this specification are available from:

Nil-Cor®, LLC
4855 Broadmoor Ave.
Kentwood, MI 49512
P: 616-554-3100
F: 616-554-5623
www.nilcor.com



710 With UHMWPE LINER	2"	3"	4"	6"	8"	10"	12"
Flow Coefficient Cv	104	350	553	1,460	3,077	5,263	7,897
Break Torque, in-lbs / (NM)	630 / (71)	715 / (81)	1250 / (141)	2990 / (338)	3790 / (428)	6350 / (718)	8550 / (966)



ENGLISH UNITS (Dimensions in inches)

SIZE	SHAFT								BRACKET			WAFER	LUG	LEVER		GEAR				WT (LBS)			
	A	B	C	D	E	F	G	H	J	K	L	M	N	N	O	P	W	X	W		X	Y	HW
2	10.15	8.25	5.45	3.61	0.47	2.06	1.43	0.625	0.439	.41	4.016	.75	0.75	5/8 - 11	4.75	1.69	13.75	6.87	6.25	8.03	9.56	6.00	6
3	11.29	9.00	6.15	5.00	0.69	2.59	1.43	0.625	0.439	.41	4.016	1.00	0.75	5/8 - 11	6.00	1.81	13.75	7.65	6.25	8.73	10.26	6.00	9
4	12.99	10.25	6.62	6.00	1.00	3.47	1.43	0.625	0.439	.41	4.016	1.00	0.75	5/8 - 11	7.50	2.06	13.75	8.15	6.25	9.20	10.73	6.00	14
6	15.36	12.22	7.87	8.25	1.88	5.50	1.43	1.000	0.836	.41	4.016	1.50	0.88	3/4 - 10	9.50	2.22	13.75	9.40	6.75	10.45	12.98	8.00	25
8	19.58	15.39	9.92	10.25	2.69	7.38	1.43	1.000	0.836	.41	4.016	1.50	0.88	3/4 - 10	11.75	2.38	NA	NA	6.75	10.81	13.34	8.00	34
10	24.08	18.81	12.47	12.25	3.63	9.56	1.66	1.375	1.000	.53	4.921	2.00	1.00	7/8 - 9	14.25	2.69	NA	NA	7.25	15.45	19.85	12.00	52
12	26.23	21.00	13.51	14.38	4.44	11.56	1.95	1.375	1.000	.53**	4.921	2.00	1.00	7/8 - 9	17.00	3.09	NA	NA	7.25	16.49	20.89	12.00	65

METRIC UNITS (Dimensions in mm)

SIZE	SHAFT								ISO FLANGE			WAFER	LUG	LEVER		GEAR				WT (KG)			
	A	B	C	D	E	F	G	H	J	K	L	M	N	N	O	P	W	X	W		X	Y	HW
50	257.8	209.6	138.4	91.7	11.9	52.3	36.3	15.88	11.15	10.3	102	19.1	19.1	5/8 - 11	120.7	42.9	349	174	159	204	243	152	2.7
80	286.8	228.6	156.2	127.0	17.5	65.8	36.3	15.88	11.15	10.3	102	25.4	19.1	5/8 - 11	152.4	46.0	349	194	159	222	261	152	4.1
100	329.9	260.4	168.1	152.4	25.4	88.1	36.3	15.88	11.15	10.3	102	25.4	19.1	5/8 - 11	190.5	52.4	349	207	159	234	273	152	6.4
150	390.1	310.4	199.9	209.6	47.8	139.7	36.3	25.40	21.23	10.3	102	38.1	2.2	3/4 - 10	241.3	56.4	349	239	171	265	330	203	11.4
200	497.3	390.9	252.0	260.4	68.3	187.5	36.3	25.40	21.23	10.3	102	38.1	22.4	3/4 - 10	298.5	60.3	NA	NA	171	275	339	203	15.5
250	611.6	477.8	316.7	311.2	92.2	242.8	42.2	34.93	25.40	13.5	125	50.8	25.4	7/8 - 9	362.0	68.3	NA	NA	184	392	504	305	23.6
300	666.2	533.4	343.2	365.3	112.8	293.6	49.5	34.93	25.40	13.5**	125	50.8	25.4	7/8 - 9	431.8	78.6	NA	NA	184	419	531	305	29.5

NOTE:

*Lined piping which exceeds the liner thickness specification of ASTM F1545 may require spacers to avoid disc interference.