



*"THE RIGHT CHOICE"*

# ***Butterfly Valves***



***Resilient Seated Butterfly Valves  
Figures 4100/4800  
Industrial Application***

# Resilient Seated Butterfly Valves

## Shaft Weather Seal

(Below bushing on some models)

## One-Piece Thru Shaft

Ensures dependability and positive disc positioning.

## O-Ring

Provides further prevention of stem leakage.

## Set-Screw

Stabilizes seat to prevent movement. Positive dead-end service up to 75 PSIG max through 12".

## Smooth Finished Disc Flats

These "mate" with seat flats to give a highly efficient seal; prevents leakage into shaft areas.

## Support Shaft Seal

Bonding of elastomer to phenolic backing ring protects against distortion, a common cause of shaft leakage.

**2"-12" Direct Mount for Actuation**  
Pneumatic and Electric Available

## Bushings

Furnishes shaft support for positive shaft alignment and actuator support. (4 Bushings)

## Precision Taper Pin

Ensures a positive, vibration proof shaft to disc connection.

## Precision Profile Disc

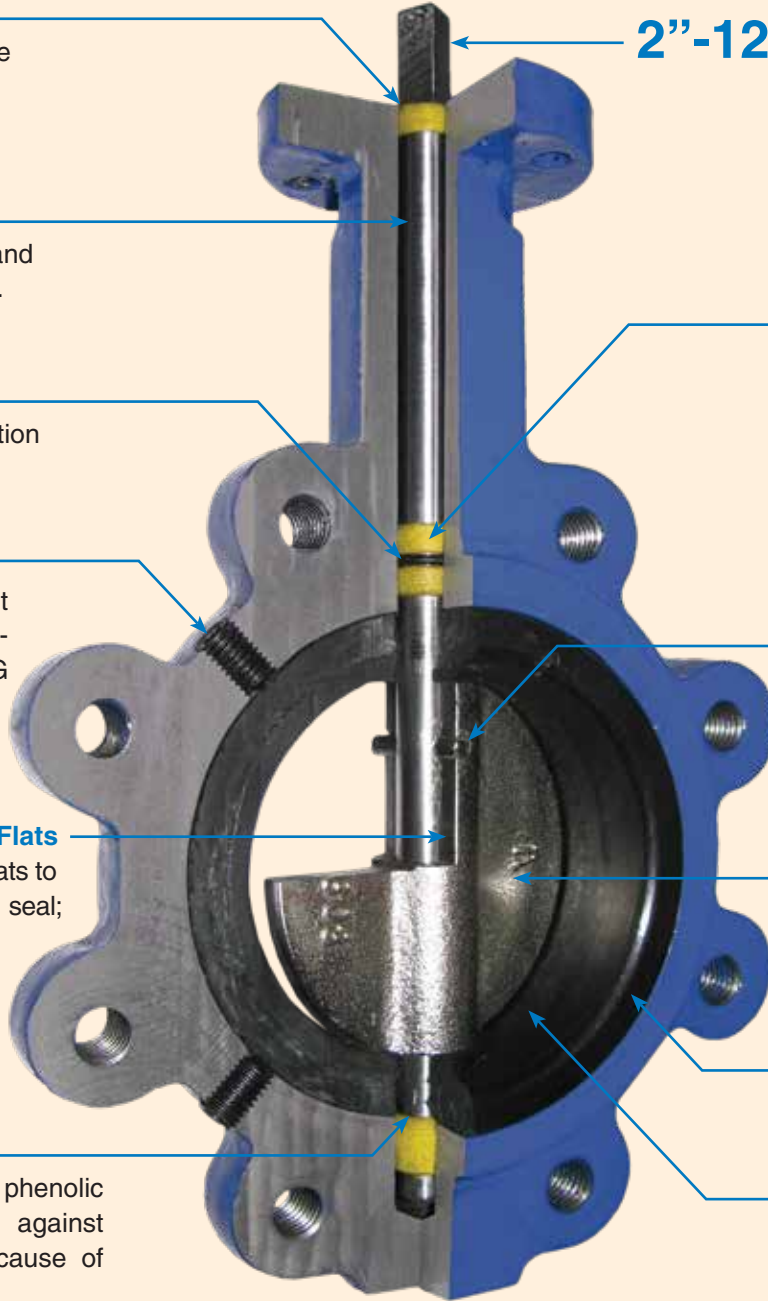
Provides **bubble-tight shut-off** and assures minimum torque and longer seat life.

## Seat Face

Negates need for flange gaskets.

## Phenolic Backed Seat

Non-collapsible, stretch resistant, blow-out proof. Field replaceable.



## CONSTRUCTION SPECIFICATIONS:

**Body:** Ductile iron (ASTM A536)

**Disc:** Ni-coated ductile iron, 316 stainless steel, bronze

**Stem:** 416 stainless steel

**Resilient Seat:** EPDM, Buna-N, Teflon, Viton

**Stem Bushings:** PTFE

**Disc Screws:** 316 stainless steel

**O-Ring:** EPDM, Buna-N

**Set Screws:** Carbon steel

Phenolic Backed Seat provides the following advantages:

1. The movement of the elastomer against the body assures a completely dry back.
2. Wide flange-face sealing area provides a tight flange-to-valve seal without the use of gaskets.
3. The Controlled-Torque Seat allows tight shut-off with minimum movement of the seat material to reach the closed position in the center of the seat for ease of actuation.
4. The wide sealing area around the shaft provides a positive seal isolating the shaft from the media.

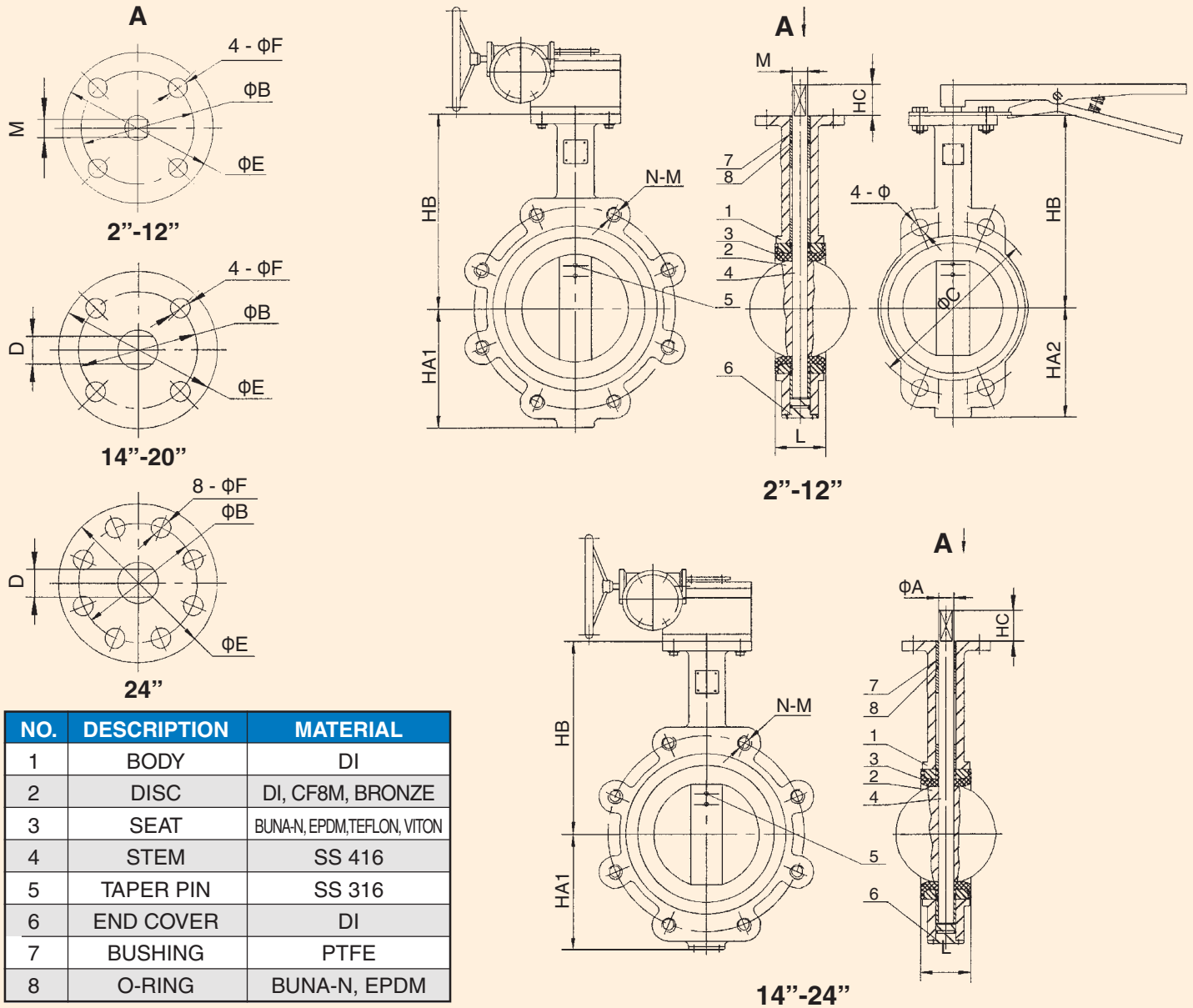
Pressure 2"-12": 200 PSI / 14" and above: 150 PSI, see back page for ordering instructions.

Sizes 2"-12": Install between Std. ANSI Class 125/150 Flanges. Conforms to MSS-SP67, MSS-SP25, API-609

Liner Temperature Ratings °F: Buna-N (Standard): +10 to 180 / EPDM (Standard): -30 to 275 / Teflon: -40 to 275, Viton: 0 to 350  
Vacuum service to 29 inches of mercury

Note: Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

# Valve Dimensions



INCH	HA1	HA2	HB	HC	L	ΦC	4 - Φ	N - M	Bolt	Stud	ΦA	D	M**	ΦE	ΦB***	ΦF	TORQUE*	WT	
																		WAFER	LUG
2"	2.99	2.99	6.36	1.26	1.77	4.75	0.75	4-5/8"-11	4.25	5.00	--	--	9	3.54	7	0.41	117	6	7
2.5"	3.15	3.50	6.89	1.26	1.89	5.50	0.75	4-5/8"-11	4.50	5.25	--	--	9	3.54	7	0.41	189	7	8
3"	3.74	3.74	7.12	1.26	1.93	6.00	0.75	4-5/8"-11	4.75	5.50	--	--	9	3.54	7	0.41	244	10	14
4"	4.49	4.49	7.87	1.26	2.16	7.50	0.75	8-5/8"-11	5.00	5.75	--	--	11	3.54	7	0.41	390	13	26
5"	4.92	4.92	8.38	1.26	2.28	8.50	0.88	8-3/4"-10	5.25	6.25	--	--	14	3.54	7	0.41	598	18	28
6"	5.51	5.51	8.86	1.26	2.32	9.50	0.88	8-3/4"-10	5.25	6.25	--	--	14	3.54	7	0.41	875	20	31
8"	6.81	6.97	10.23	1.41	2.52	11.75	0.88	8-3/4"-10	6.00	7.00	--	--	17	4.92	10	0.49	1430	32	49
10"	7.99	7.99	11.49	1.41	2.75	14.25	1.00	12-7/8"-9	6.25	7.25	--	--	22	4.92	10	0.49	2275	42	72
12"	9.33	9.52	13.26	1.41	3.15	17.00	1.00	12-7/8"-9	6.75	7.75	--	--	22	4.92	10	0.49	3250	70	105
14"	10.98	10.51	14.48	1.77	3.15	18.75	1.125	12-1"-8	7.25	8.50	1.25	0.94	--	4.92	10	0.49	3500	95	155
16"	11.97	11.73	15.74	2.00	3.54	21.25	1.125	16-1"-8	8.25	9.50	1.31	1.06	--	6.89	14	0.71	5500	117	195
18"	14.25	12.52	16.61	2.00	4.29	22.75	1.25	16-1 1/8"-7	9.25	10.25	1.50	1.06	--	6.89	14	0.71	8200	165	230
20"	14.49	13.74	18.85	2.52	5.31	25.00	1.25	20-1 1/8"-7	10.0	11.25	1.62	1.26	--	6.89	14	0.71	10000	275	396
24"	17.48	16.14	22.12	2.80	6.14	29.50	1.375	20-1 1/4"-7	11.5	13.00	1.99	1.41	--	11.81	--	0.71	18200	440	610

\*Torque values in inch-pounds. All torque values shown on chart are for non-lubricating media & on-off service. For dry services, multiply by 1.6. Torques may vary; consult factory. Above torque based on 150 PSI at ambient temperature.

\*\*Dimension "M" in mm.

\*\*\* B = FO Pattern

# ORDERING INFORMATION

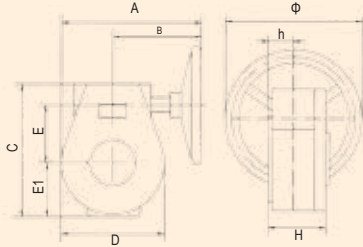
① BODY MATERIAL	
4100 =	WAFER, ASTM A536 DUCTILE IRON
4800 =	LUG, ASTM A536 DUCTILE IRON

② DISC MATERIAL	
D =	DUCTILE IRON/NICKEL PLATED
S =	316 STAINLESS STEEL
B =	BRONZE

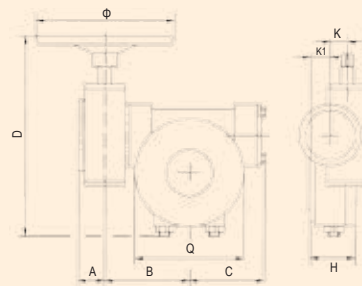
③ SEAT MATERIAL			
B =	BUNA-N	V =	VITON
E =	EPDM		
T =	TFE		

④ OPERATOR*	
L =	10 POSITION LEVER
G =	GEAR

## WORM GEAR I



## WORM GEAR II



## WORM GEAR I

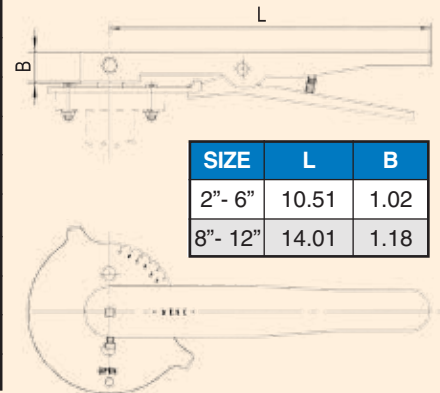
SIZE	A	B	C	D	E	H	φ	h	E1	Torque (IN-LB)	Ratio
2"-6"	8.38	6.69	4.92	4.13	1.77	2.48	5.90	1.49	2.08	1530	24:1
8"-11"	12.20	9.25	6.85	5.98	2.48	3.07	11.81	1.65	2.99	6750	30:1
12"-14"	12.24	8.89	7.76	6.69	3.18	3.14	11.81	1.59	3.18	10800	50:1

## WORM GEAR II

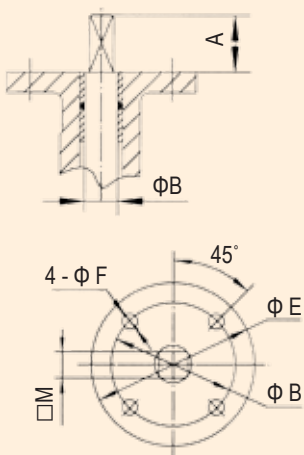
SIZE	A	B	C	D	H	φ	K	Q	K1	Torque (IN-LB)	Ratio
16"-18"	2.28	6.29	5.23	16.53	4.13	11.81	2.48	7.87	1.96	22500	384:1
20"	2.28	7.28	6.29	18.89	4.33	14.96	2.48	9.84	2.24	27000	352:1
24"	2.28	7.28	6.29	20.47	4.92	14.96	2.48	11.29	2.48	36000	416:1

## 2" - 12"

SIZE	A	B	M	φ E	φ B	φ F	Bolt
2"	1.26	0.5 <sup>0</sup> <sub>-0.043</sub>	9	3.54	7	0.41	M8
2.5"	1.26	0.5 <sup>0</sup> <sub>-0.043</sub>	9	3.54	7	0.41	M8
3"	1.26	0.5 <sup>0</sup> <sub>-0.043</sub>	9	3.54	7	0.41	M8
4"	1.26	0.62 <sup>0</sup> <sub>-0.052</sub>	11	3.54	7	0.41	M8
5"	1.26	0.75 <sup>0</sup> <sub>-0.052</sub>	14	3.54	7	0.41	M8
6"	1.26	0.75 <sup>0</sup> <sub>-0.052</sub>	14	3.54	7	0.41	M8
8"	1.41	0.87 <sup>0</sup> <sub>-0.052</sub>	17	4.92	10	0.49	M10
10"	1.41	1.12 <sup>0</sup> <sub>-0.052</sub>	22	4.92	10	0.49	M10
12"	1.41	1.25 <sup>0</sup> <sub>-0.062</sub>	22	4.92	10	0.49	M10

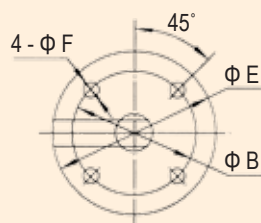


## 2" - 12"

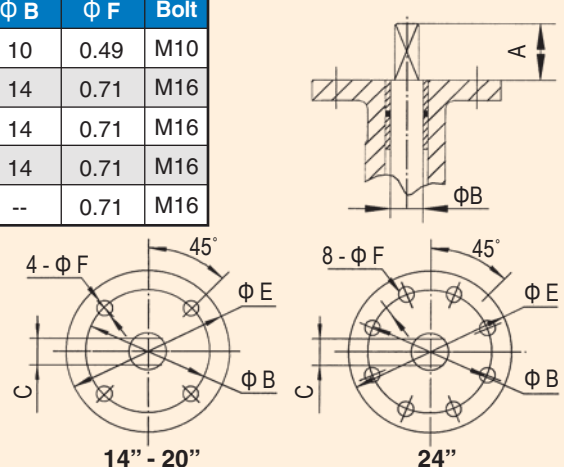


## 14" - 24"

SIZE	A	B	C	φ E	φ B	φ F	Bolt
14"	1.77	1.25 <sup>0</sup> <sub>-0.062</sub>	0.94 <sup>0</sup> <sub>-0.06</sub>	4.92	10	0.49	M10
16"	2.00	1.31 <sup>0</sup> <sub>-0.062</sub>	1.06 <sup>0</sup> <sub>-0.06</sub>	6.89	14	0.71	M16
18"	2.00	1.49 <sup>0</sup> <sub>-0.062</sub>	1.06 <sup>0</sup> <sub>-0.06</sub>	6.89	14	0.71	M16
20"	2.51	1.62 <sup>0</sup> <sub>-0.062</sub>	1.26 <sup>0</sup> <sub>-0.07</sub>	6.89	14	0.71	M16
24"	2.75	1.99 <sup>0</sup> <sub>-0.074</sub>	1.41 <sup>0</sup> <sub>-0.08</sub>	11.81	--	0.71	M16



## 14" - 24"



14" - 20"

24"