

# Series DBF (2" – 12"), BF (2" – 24")

## Butterfly Valves

- For positive shutoff service on commercial, irrigation, HVAC and industrial applications

### Specifications

**\*DBF** – Sizes 2" – 12" (50 – 300mm), pressure 200psi (13.8 bar) WOG

**BF** – Sizes 2" – 24" (50 – 600mm), pressure 200psi (13.8 bar) WOG for 2" – 12" (50 – 300mm) and 150psi (10.3 bar) for 14" – 24" (350 – 600mm)

#### Sample Ordering Number: 10-DBF-03-121-1G

**10** = 10-inch (250mm) size; **DBF-03** = full lug style butterfly valve;

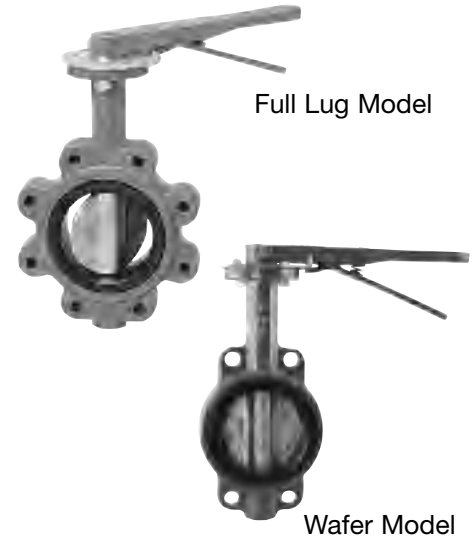
**1** = ductile iron; **2** = aluminum bronze disc; **1** = 416SS shaft;

**1** = EPDM seat; and **G** = gear operator

**Designation Definitions:** Add the appropriate designations required.

**DBF for sizes:** 2" – 12" (50 – 300mm)

**BF for sizes:** 2" – 24" (50 – 600mm)



### Style

**03** - Full lug

**04** - Wafer

### Body

**1** - Ductile Iron (ASTM-A-536)

### Disc

**1** - Ductile Iron (ASTM-A126)

**2** - Aluminum Bronze (ASTM-A296)

**3** - 316 Stainless Steel (ASTM-A351)

### Shaft

**1** - 416 Stainless Steel \*(316SS shaft on 316SS disc models)

### Seat

**1** - EPDM§ Temperature 5°F – 248°F (-15°C – 120°C)

**2** - Buna-N Temperature -14°F – 176°F (-10°C – 80°C)

**3** - Viton -4°F – 302°F (-20°C – 150°C)

§**Note:** Do not use EPDM when hydrocarbons are present.

### Operator

**0** – Bare shaft (no handle)

**G\*\*** - Gear operator

**5** – Lever handle (10-position), Sizes: 2" – 12" (50 – 300mm) only

**P\*\*** – Positioning/locking kit with handle, Sizes: 2" – 12" (50 – 300mm) only

### Features

- Full lug and with lifting lug design
- Wafer style with lifting lug design
- Ductile iron body, 416 stainless steel shaft
- 5211 ISO mounting pad for 10-position lever gear operator, or actuator
- Extended neck for 2" (50mm) of insulation
- Pinned disc
- Dead-end service rated lug style

For additional information, request literature ES-DBF or ES-BF.

### Standards

For use with ANSI Class 125 or 150 flanges. Complies with API 609 and MSS-SP-67

### Notes:

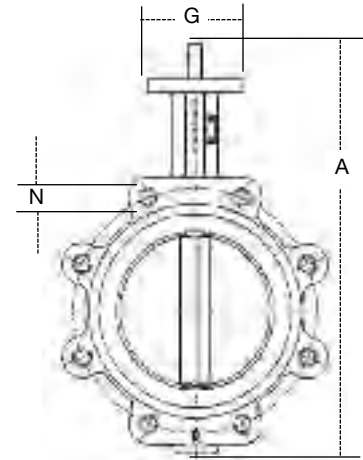
\*DBF series butterfly valves use domestic and foreign components that have been assembled and tested in the U.S.A.

\*\*Kits for suffix (G) gear operator & (P) positioning/locking service with handle are available.

Gear Operators – High mechanical efficiency reduces the required input effort. Two self-locking adjusting screws give a  $\pm 5^\circ$  adjustment at end of  $90^\circ$  travel.

For additional information, request literature F-P/E-AC.

SIZE		DIMENSIONS (APPROX.)				TAPPED LUG DATA		†WEIGHT			
(DN)		A		G		N (Bolt)		(03) Full Lug		(04) Wafer	
in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2	50	10¾	273	3¼	77	5/8-11UNCx1¼	16x32	8	4	5	3
2½	65	11¾	295	3¼	77	5/8-11UNCx1¾	16x35	10	5	7	4
3	80	12½	308	3¼	77	5/8-11UNCx1¾	16x35	10	5	7	4
4	100	13¾	346	3¾	92	5/8-11UNCx1½	16x38	17	8	11	5
5	125	14¾	371	3¾	92	¾-11UNCx1¾	19x44	23	11	16	8
6	150	15¾	397	3¾	92	¾-11UNCx1¾	19x44	29	14	19	9
8	200	18¾	479	4½	115	¾-11UNCx2½	19x54	39	18	30	14
10	250	21¼	540	4½	115	7/8-11UNCx2¼	22x57	61	28	45	21
12	300	24¾	625	5½	140	7/8-11UNCx2¼	22x57	113	52	73	34
14	350	26¾	679	5½	140	1-8UNCx2¼	25x57	154	70	97	44
16	400	30	762	7¾	197	1-8UNCx3¾	25x86	200	91	138	63
18	450	31½	800	7¾	197	1½-7UNCx4	29x102	272	124	182	83
20	500	35¾	905	7¾	197	1½-7UNCx5	29x127	396	180	260	118
24	600	43	1092	10¾	276	1¼-7UNCx5¾	32x146	610	277	465	211



† Weights are for valves with stainless steel discs.

Weights for 2" – 12" have 10- position lever handles; 14" – 24" with bare stem

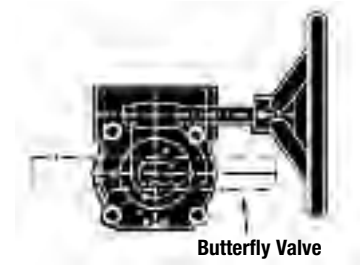
For additional dimensional data, request literature F-CDBF.



Positioning/Locking Kit



Standard Lever Handle/Latch Plate



Gear Operator

SIZE (DN)		GEAR OPERATOR	POSITIONING/LOCKING	CHAINWHEELS		
in.	mm	Kit No.	Kit No.	Kit No.	Chain	2" Sq. Nut
2	50	GA-1-M3	#1 POS-LOCK-M2	#2 BCWK	#2 BCWC	OPN-BFG
2½	65	GA-1-M3	#1 POS-LOCK-M2	#2 BCWK		OPN-BFG
3	80	GA-1-M3	#1 POS-LOCK-M2	#2 BCWK		OPN-BFG
4	100	GA-2-M3	#2 POS-LOCK-M2	#2 BCWK		OPN-BFG
5	125	GA-3-M3	#3 POS-LOCK-M2	#2 BCWK		OPN-BFG
6	150	GA-3-M3	#3 POS-LOCK-M2	#2 BCWK		OPN-BFG
8	200	GA-4-M3	#4 POS-LOCK-M2	#3 BCWK	#3 BCWC	OPN-BFG
10	250	GA-5-M3	#5 POS-LOCK-M2	#3 BCWK		OPN-BFG
12	300	GA-6-M3	#6 POS-LOCK-M2	#3 BCWK		OPN-BFG
14	350	GA-6-M3	N/A	#3 BCWK		OPN-BFG
16	400	GA-7-M3	N/A	#4 BCWK		-----
18	450	GA-8-M3	N/A	#4 BCWK		-----
20	500	GA-9-M3	N/A	#4 BCWK		-----
24	600	GA-10-M3	N/A	#5 BCWK	#5 BCWC	-----

Chain Wheel Kits attach to gear actuator handwheel.

2" (50mm) nuts are installed on gear operator shafts.

To operate Watts' butterfly valves with 2" (50mm) square nut, a gear operator must be used by removing gear handwheel and installing 2" (50mm) nut on gear shaft. Valve should be installed in line such that gear shaft is vertical for 2" (50mm) nut operation.