

For Potable Water Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Full Lug Style Butterfly Valves with NSF Certification

Model BF03-121-45 and BF03-121-4G

Sizes: 2" – 12"

Models BF03-121-45 and BF03-121-4G full lug style butterfly valves are certified by NSF to NSF/ANSI 61 Section 8. The valves feature a FDA epoxy coated ductile iron body, aluminum bronze disc, 416SS shaft, and a NSF approved EPDM seat. The valves are designed and manufactured for use with ANSI 125 or 150 class flanges. They comply with API 609 and MSS-SP-67 and are bi-directional and provide dead-end service capability. ISO standard 5211 mounting pad and bolt hole pattern allow for actuation if required.

Features

- NSF approved EPDM seat is phenolic backed, non-collapsible, and mechanically secured to provide dead-end service to 200psi (13.8 bar)
- FDA approved epoxy coated ductile iron body designed to accept 2" of insulation
- One-piece 416SS shaft with diameters in accordance with AWWA C504-94 Class 75B for sizes 3" – 12"
- Disc edge is machined and polished to assure leak tight shutoff and low operating torque

Models

BF03-121-45-M2	2" – 8" lever handles
BF03-121-4G-M2	6" – 12" manual gear operator



Series BF03-121-45
Full Lug



Certified to
NSF/ANSI Std 61/8.

Specifications

Butterfly valves to be NSF approved for potable water applications with FDA approved epoxy coated ASTM A-536 ductile iron body, NSF approved EPDM seat and be fully rated for dead end and bidirectional service to 200psi. Disc material to be ASTM A-395 aluminum bronze with one piece 416 stainless steel shaft. Valve to have ISO standard 5211 mounting pad and bolt hole pattern. Valve to be Watts Series BF03-121-45 with lever handle or BF03-121-4G with gear operator.

Pressure – Temperature

Temperature Range: 5°F – 248°F (-15°C – 120°C)

Maximum Working Pressure: 200psi (13.8 bar) WOG

NOTICE

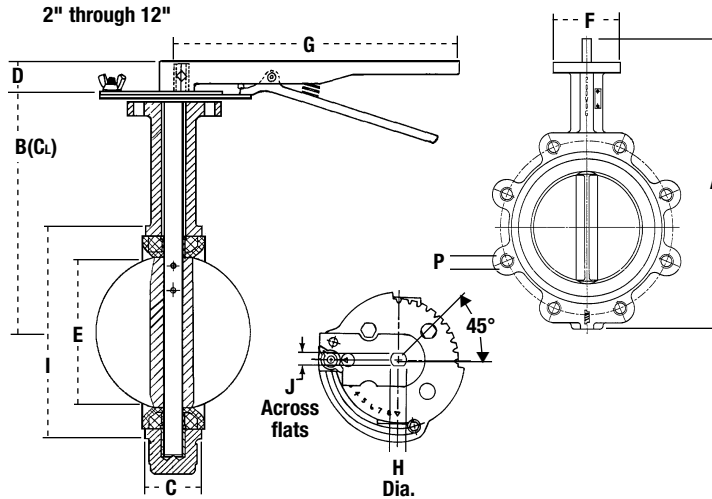
The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Dimensions – Weights



SIZE	DIMENSIONS																			
	A		B		C		D		E		F		G		H		I		J	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2"	10 ³ / ₄	273	6 ⁵ / ₈	161	1 ⁵ / ₈	42	1 ¹ / ₄	32	2 ¹ / ₂	54	3 ¹ / ₁₆	77	10 ¹ / ₂	267	1 ¹ / ₂	13	3 ³ / ₄	95	3 ⁵ / ₈	9
2 ¹ / ₂ "	11 ⁵ / ₈	295	6 ⁷ / ₈	175	1 ¹ / ₄	45	1 ¹ / ₄	32	2 ⁹ / ₁₆	65	3 ¹ / ₁₆	77	10 ¹ / ₂	267	1 ¹ / ₂	13	4 ¹ / ₄	108	3 ⁵ / ₈	9
3"	12 ¹ / ₈	308	7 ¹ / ₈	181	1 ¹ / ₄	45	1 ¹ / ₄	32	3 ¹ / ₈	79	3 ¹ / ₁₆	77	10 ¹ / ₂	267	1 ¹ / ₂	13	4 ³ / ₄	120	3 ⁵ / ₈	9
4"	13 ⁵ / ₈	346	7 ³ / ₈	200	2	52	1 ¹ / ₄	32	4 ¹ / ₈	105	3 ⁵ / ₈	92	10 ¹ / ₂	267	5 ⁵ / ₈	16	6 ¹ / ₁₆	154	3 ⁵ / ₈	10
5"	14 ⁵ / ₈	372	8 ⁵ / ₈	213	2 ¹ / ₈	54	1 ¹ / ₄	32	4 ⁷ / ₈	124	3 ⁵ / ₈	92	10 ¹ / ₂	267	3 ³ / ₄	19	7 ¹ / ₈	181	1 ¹ / ₂	13
6"	15 ⁵ / ₈	397	8 ⁷ / ₈	226	2 ⁹ / ₁₆	55	1 ¹ / ₄	32	6 ¹ / ₈	156	3 ⁵ / ₈	92	10 ¹ / ₂	267	3 ³ / ₄	19	8 ³ / ₁₆	208	1 ¹ / ₂	13
8"	18 ⁷ / ₈	479	10 ¹ / ₄	260	2 ⁵ / ₈	60	1 ³ / ₄	45	8	200	4 ¹ / ₂	115	14	356	7 ⁵ / ₈	22	10 ¹ / ₄	260	5 ⁵ / ₈	16
10"	21 ¹ / ₄	540	11 ¹ / ₂	292	2 ⁵ / ₈	66	1 ³ / ₄	45	9 ⁷ / ₈	251	4 ¹ / ₂	115	14	N/A	1 ¹ / ₈	29	12 ⁵ / ₈	320	3 ³ / ₄	19
12"	24 ⁵ / ₈	626	13 ¹ / ₄	337	3	76	1 ³ / ₄	45	11 ⁷ / ₈	301	5 ¹ / ₂	140	14	N/A	1 ¹ / ₄	32	14 ³ / ₄	375	1 ¹ / ₄	32

SIZE	TOP PLATE DRILLING		TAPPED LUG DATA		KEY WAY		WEIGHT†					
	N	O	Bolt Circle	No. Holes	Bolt P	Q	BF-03					
in.	in.	mm	in.	mm	in.	mm	lbs.	kgs				
2"	2 ¹ / ₄	57	1 ¹ / ₄	6	4 ³ / ₄	121	4	5 ⁵ / ₈ "-11UNC x 1 ¹ / ₄ "	–	–	8	3.6
2 ¹ / ₂ "	2 ¹ / ₄	57	1 ¹ / ₄	6	5 ¹ / ₂	140	4	5 ⁵ / ₈ "-11UNC x 1 ³ / ₈ "	–	–	10	4.5
3"	2 ¹ / ₄	57	1 ¹ / ₄	6	6	150	4	5 ⁵ / ₈ "-11UNC x 1 ³ / ₈ "	–	–	10	4.5
4"	2 ³ / ₄	70	3 ⁵ / ₈	10	7 ¹ / ₂	191	8	5 ⁵ / ₈ "-11UNC x 1 ¹ / ₂ "	–	–	17	7.7
5"	2 ³ / ₄	70	3 ⁵ / ₈	10	8 ¹ / ₂	216	8	3 ⁴ / ₄ "-10UNC x 1 ³ / ₄ "	–	–	25	11.3
6"	2 ³ / ₄	70	3 ⁵ / ₈	10	9 ¹ / ₂	241	8	3 ⁴ / ₄ "-10UNC x 2"	–	–	27	12.2
8"	3 ¹ / ₂	89	5 ⁵ / ₈	16	11 ³ / ₄	298	8	3 ⁴ / ₄ "-10UNC x 2 ¹ / ₈ "	–	–	40	18.1
10"	3 ¹ / ₂	89	5 ⁵ / ₈	16	14 ¹ / ₄	362	12	7 ⁵ / ₈ "-9UNC x 2 ¹ / ₄ "	–	–	63	28.6
12"	4 ¹ / ₄	108	5 ⁵ / ₈	16	17	432	12	7 ⁵ / ₈ "-9UNC x 2 ¹ / ₄ "	1 ¹ / ₄ x 1	6 x 25	107	48.5

†Weights are for valves with aluminum bronze discs and 10-position lever handles.

Refer to Watts' folder F-CDBF for butterfly valve weights with gear actuators, or consult factory.

SEATING TORQUE	
BUNA-N, EPDM, VITON	
SIZE	NORMAL CONDITIONS
in.	WET/DRY
2"	134/214
2 ¹ / ₂ "	190/289
3"	250/387
4"	390/644
5"	600/959
6"	907/1,542
8"	1,697/2,919
10"	2,500/4,857
12"	3,300/7,071

CV RATING	
(FULL OPEN)	
SIZE	CV RATING
in.	
2"	135
2 ¹ / ₂ "	220
3"	302
4"	600
5"	1,022
6"	1,579
8"	3,136
10"	5,340
12"	8,250

How to Order Series BF

12 - BF- 03 - 121 - 4G

Size: _____
2" thru 12"

Series: _____
03; Full Lug

Body: _____
1; Ductile Iron

Disc: _____
2; Aluminum Bronze

Shaft: _____
1; 416SS

Seat: _____
4; NSF Approved EPDM

Operator: _____
G; Gear Operator - 6" through 12"
5; Standard handle (10-position) - 2" through 8"

Materials

Body:	FDA Epoxy Coated ASTM A-536 Ductile Iron.
Bushing:	Duralon (3); Teflon® - Dacron liner bonded to fiberglass - epoxy resin outer shell.
Stem O-rings:	Buna-N
Disc:	ASTM A-395 Ductile Iron/Electroless Nickel-plated
Shaft:	416 Stainless Steel
Seat:	NSF Approved EPDM +5°F to 248°F (-15°C to +120°C)

Note: Do not use EPDM when hydrocarbons are present.

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