

## For Commercial and Industrial Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Series LFB6000, LFB6001 2-Piece, Standard Port, Lead Free\* Ball Valves

Sizes: 1/4" – 4"

Series LFB6000, LFB6001 2-Piece, Standard Port, Lead Free\* Ball Valves feature a blowout proof pressure retaining 316 stainless steel stem. The LFB6000, LFB6001's standard port orifice ensures minimal pressure drop, while Durafill® and Uniseal® seats and 316 stainless steel ball provide lasting service for a wide range of liquids and gases. The Series LFB6000 and LFB6001 feature Lead Free\* construction to comply with Lead Free\* installation requirements.

### Features

- Lead Free copper silicon alloy body and adapter
- 316 stainless steel ball & stem
- Durafill® (carbon/glass filled PTFE) seats for sizes 1/4" – 1/2" and 1 1/4" – 4" and Uniseal® (enhanced PTFE) seats for sizes 3/4" & 1" for lasting service for a wide range of liquids and gases
- Blowout proof, pressure retaining 316 stainless steel stem
- 1/4" – 3" pressure rated at 600psi (41 bar) WOG non-shock; 150psi (10 bar) WSP. 4" pressure rated at 400psi (28 bar) WOG non-shock; 125psi (8.6 bar) WSP (over 150psi steam requires SS trim)
- High cycle life reinforced PTFE stem packing seal and thrust washer
- Vinyl insulator on heavy duty, zinc-plated, carbon steel handles
- Quarter-turn open or close operation
- Low operating torque
- Adjustable stem packing gland
- Each valve factory tested

### Models

LFB6000	1/4" – 4" threaded NPT end connections
LFB6001	3/8" – 3" solder end connections**

### Options

LH Locking lever handle

### Pressure – Temperature

Temperature Range: 0°F – 450°F (-18°C – 232°C) @ 50psi (3.4 bar)

Pressure Range:

1/4" – 3"	600psi (41 bar) WOG non-shock; 150psi (10 bar) WSP
4"	400psi (28 bar) WOG non-shock; 125psi (8.6 bar) WSP



### Specifications

A 2-piece standard port Lead Free\* copper silicon alloy ball valve to be installed as indicated on the plans. The valve must have a blowout proof pressure retaining 316 stainless steel stem, Durafill® seats (1/4" – 1/2" & 1 1/4" – 4") or Uniseal® seats (3/4" & 1"), reinforced PTFE stem packing seal, and 316 stainless steel ball. Valves with top loaded stems or valves without adjustable packing are not acceptable. Pressure rating no less than 600psi (41 bar) WOG non-shock; 150psi (10 bar) WSP for 1/4" – 3" and 400psi (28 bar) WOG non-shock; 125psi (8.6 bar) WSP for 4". The valve shall be constructed using Lead Free\* copper silicon alloy. Lead Free\* ball valves shall comply with state codes and standards, where applicable, requiring reduced lead content. Valve must conform to MSS-SP-110 and shall be a Watts Series LFB6000 (threaded) or LFB6001 (solder).

Durafill® is a registered trademark of Cargill, Limited.  
Uniseal® is a registered trademark of Uniseal, Incorporated.

### 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

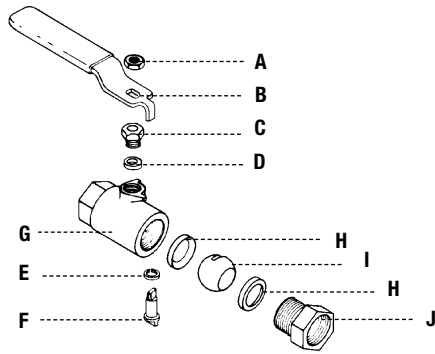
**\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.**

\*\*This valve is designed to be soft soldered into lines without disassembly, using a low temperature solder 420°F (216°C). Other solders such as 95/5 tin antimony 460°F (238°C) or 96/4 tin silver 420°F (216°C) can be used, however extreme caution must be used to prevent seat damage. Higher temperature solders will damage the seat material. ANSI B.16.18 states that the maximum operating pressure of 50-50 solder connections is 200 psi (14 bar) at 100°F (38°C) and decreases with higher temperatures.

Apply heat with the flame directed **AWAY** from the center of the valve body. Excessive heat can harm the seats. After soldering, the packing nut may have to be tightened.

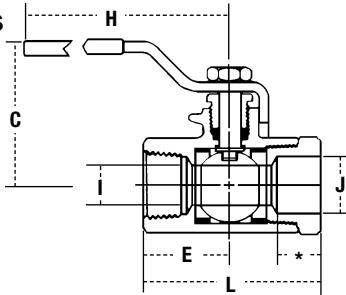
Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

## Materials



- A Handle Nut** Zinc Plated Carbon Steel
- B Handle** Zinc Plated Carbon Steel with Vinyl Insulator
- C Packing Nut** Brass ASTM B16, C36000
- D Stem Packing** Glass Reinforced PTFE
- E Thrust Washer** Glass Reinforced PTFE
- F Stem** 316 Stainless Steel
- G Body** Lead Free\* copper silicon alloy
- H Seats** Durafill® (1/4" - 1/2" & 1 1/4" - 4") Uniseal® (3/4" & 1")
- I Ball** 316 Stainless Steel
- J Adapter** Lead Free\* brass
- K Body Seals** PTFE (1/4" - 4" only) - Not shown

## Dimensions — Weights



### LFB6000

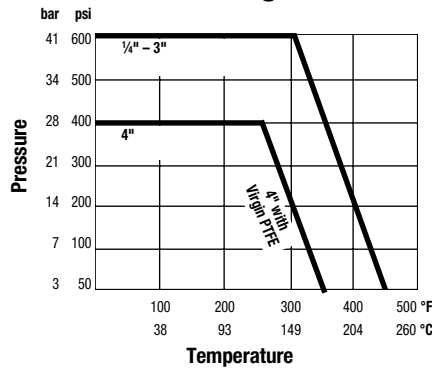
SIZE	DIMENSIONS								WEIGHT							
	C Center to Handle		E Center to End		H Radius of Handle		I Ball Orifice		J Dia. Solder Connection		L End to End		** Depth Solder Connection		lbs.	kg
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/4	1 3/4	45	1 1/16	27	3 3/4	78	3/8	10	-	-	2 1/16	52	-	-	0.6	0.3
3/8	1 3/4	45	1 1/16	27	3 3/4	78	3/8	10	-	-	2 1/16	52	-	-	0.6	0.3
1/2	1 3/4	45	1 1/16	27	3 3/4	95	1/2	13	-	-	2 1/4	58	-	-	0.6	0.3
3/4	2	51	1 1/16	36	3 3/4	95	1 1/16	17	-	-	2 3/16	72	-	-	1.0	0.5
1	2 1/4	57	1 1/16	43	4 1/2	114	7/8	22	-	-	3 7/16	87	-	-	1.6	0.7
1 1/4	2 1/2	64	1 15/16	49	3 13/16	97	1	25	-	-	3 7/8	99	-	-	2.2	1.0
1 1/2	3	76	2 1/8	54	5 1/2	140	1 1/4	32	-	-	4 1/4	108	-	-	3.2	1.5
2	3 5/16	84	2 1/16	62	5 1/2	140	1 1/2	38	-	-	4 13/16	122	-	-	4.9	2.2
2 1/2	4	102	3 3/16	81	8 1/8	206	2	51	-	-	6 1/2	165	-	-	13.2	5.9
3	4 1/4	108	3 7/16	87	8 1/8	206	2 1/2	64	-	-	6 15/16	173	-	-	17.5	7.9
4	4 13/16	122	3 7/8	98	11	279	3	76	-	-	7 1/16	195	-	-	29.3	13.3

### LFB6001

3/8	1 1/2	38	1 1/16	27	3 3/4	95	3/8	10	1/2	13	2 5/16	58	3/8	9	0.5	0.2
1/2	1 3/4	44	1 1/16	27	3 3/4	95	1/2	13	5/8	16	2 3/8	60	1/2	13	0.6	0.3
3/4	2	51	1 7/16	36	3 3/4	95	1 1/16	17	7/8	22	3 3/16	84	3/4	19	1.1	0.5
1	2 1/4	57	1 3/4	44	4 1/2	114	7/8	22	1 1/8	28	3 3/4	95	7/8	22	1.4	0.6
1 1/4	2 1/2	64	2 1/4	57	3 13/16	97	1	25	1 3/8	35	4 1/2	114	1	25	2.0	0.9
1 1/2	3	76	2 1/2	64	5 1/2	140	1 1/4	32	1 5/8	41	5	127	1 1/16	27	3.3	1.5
2	3 5/16	84	3 3/8	80	5 1/2	140	1 1/2	38	2 1/8	54	6 1/4	159	1 5/16	34	5.2	2.4
2 1/2	4	102	3 11/16	93	8 1/8	206	2	51	2 5/8	67	7 5/8	194	1 7/16	36	13.2	6.0
3	4 1/4	108	4 1/16	103	8 1/8	206	2 1/2	64	3 1/8	80	8 3/16	208	1 11/16	43	15.6	7.1

\*\* See Solder Instructions on front

## Valve Seat Rating



SIZE	Cv RATING	OPERATING TORQUE	
		in./lbs.	Nm
1/4	6	60	6.8
3/8	6	60	6.8
1/2	15	60	6.8
3/4	25	90	10.2
1	40	150	16.9
1 1/4	50	175	19.8
1 1/2	75	200	22.6
2	110	250	28.2
2 1/2	260	500	56.5
3	400	600	67.8
4	450	800	90.4

## Pressure Drop vs. Flow

