

## 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\* Brass Ball Valves

Sizes: 1/4" – 4" (8 – 100mm)

Series LFB6000, LFB6001 2-Piece, Standard Port, Lead Free\* brass Ball Valves feature a blowout proof pressure retaining stem. The B6000, B6001's standard port orifice ensures minimal pressure drop, while Durafill® and Uniseal® seats and chrome plated brass ball provide lasting service for a wide range of liquids and gases. The Series LFB6000 and LFB6001 features Lead Free\* construction to comply with Lead Free\* installation requirements.

#### Features

- Lead Free brass body and adapter
- Durafill® (carbon/glass filled PTFE) seats for sizes 1/4" – 1/2" (8 – 15mm) and 1 1/4" – 4" (32 – 100mm) and Uniseal® (enhanced PTFE) seats for sizes 3/4" & 1" (20 & 25mm) for lasting service for a wide range of liquids and gases
- Chrome plated brass ball is wiped clean during each operation of the valve
- Minimal pressure drop due to large ports
- Blowout proof, pressure retaining stem
- 1/4" – 3" (8 – 80mm) pressure rated at 600psi (41 bar) WOG non-shock; 150psi (10 bar) WSP. 4" (100mm) 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" (8 – 100mm) threaded NPT end connections

LFB6001 3/8" – 3" (10 – 80mm) 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" (8 – 80mm),

600psi (41 bar) WOG non-shock; 150psi (10 bar) WSP

4" (100mm),

400psi (28 bar) WOG non-shock; 125psi (8.6 bar) WSP

#### Specifications

A 2-piece standard port Lead Free\* brass ball valve to be installed as indicated on the plans. The valve must have a blowout proof pressure retaining stem, Durafill® seats (1/4" – 1/2" & 1 1/4" – 4") or Uniseal® seats (3/4" & 1"), reinforced PTFE stem packing seal, and chrome plated brass 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\* brass. 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.

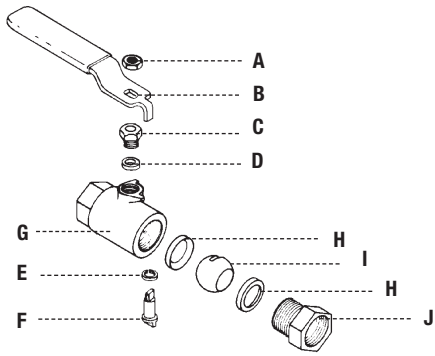
Uniseal® is a registered trademark of Uniseal, Incorporated.

\*The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (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.

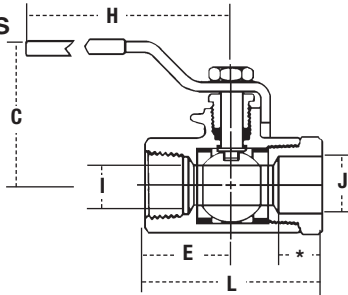
Apply heat with the flame directed **AWAY** from the center of the valve body. Excessive heat can harm the seats. After soldering, the packing nut may have to be tightened.

## Materials

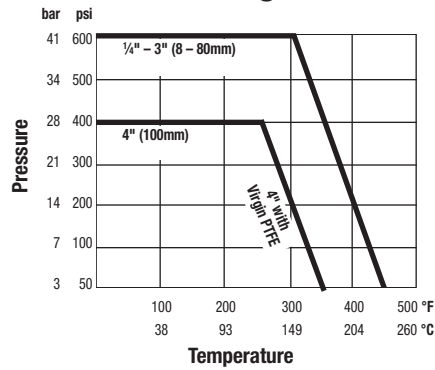


<b>A</b>	<b>Handle Nut</b>	Zinc Plated Carbon Steel
<b>B</b>	<b>Handle</b>	Zinc Plated Carbon Steel with Vinyl Insulator
<b>C</b>	<b>Packing Nut</b>	Lead Free* brass
<b>D</b>	<b>Stem Packing</b>	Glass Reinforced PTFE
<b>E</b>	<b>Thrust Washer</b>	Glass Reinforced PTFE
<b>F</b>	<b>Stem</b>	Lead Free* brass
<b>G</b>	<b>Body</b>	Lead Free* brass
<b>H</b>	<b>Seats</b>	Durafill® (1/4" - 1/2" & 1 1/4" - 4") Uniseal® (3/4" & 1")
<b>I</b>	<b>Ball</b>	Chrome Plated Lead Free* brass
<b>J</b>	<b>Adapter</b>	Lead Free* brass
<b>K</b>	<b>Body Seals</b>	PTFE (1 1/4" - 4" only) - Not shown

## Dimensions — Weights

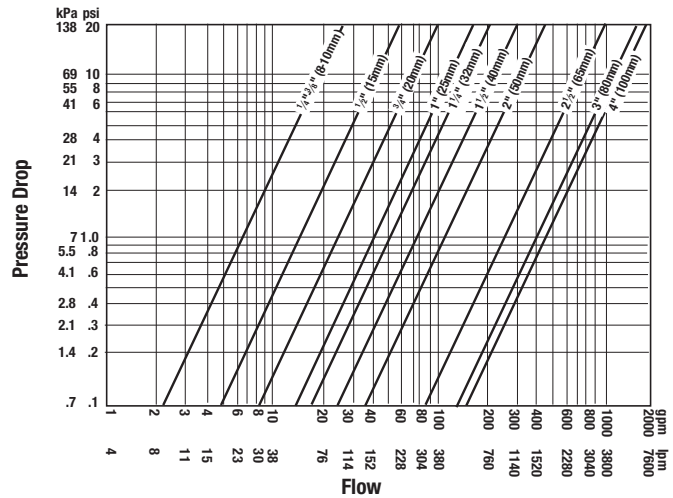


## Valve Seat Rating



SIZE (DN)	Cv RATING	OPERATING TORQUE
1/4 in. mm	8	60 6.8
3/8 10	6	60 6.8
1/2 15	15	60 6.8
3/4 20	25	90 10.2
1 25	40	150 16.9
1 1/4 32	50	175 19.8
1 1/2 40	75	200 22.6
2 50	110	250 28.2
2 1/2 65	260	500 56.5
3 80	400	600 67.8
4 100	450	800 90.4

## Pressure Drop vs. Flow



### LFB6000

SIZE DN		DIMENSIONS												WEIGHTS			
		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			
<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>lbs.</i>	<i>kg.</i>
¼	8	1¾	45	1⅛	27	3⅛	78	⅜	10	-	-	2⅛	52	-	-	0.6	0.3
⅜	10	1¾	45	1⅛	27	3⅛	78	⅜	10	-	-	2⅛	52	-	-	0.6	0.3
½	15	1¾	45	1⅛	27	3¾	95	½	13	-	-	2¼	58	-	-	0.6	0.3
¾	20	2	51	1⅛	36	3¾	95	11⁄16	17	-	-	2⅜	72	-	-	1.0	0.5
1	25	2¼	57	111⁄16	43	4½	114	7⁄8	22	-	-	3⅛	87	-	-	1.6	0.7
1¼	32	2½	64	115⁄16	49	313⁄16	97	1	25	-	-	3⅝	99	-	-	2.2	1.0
1½	40	3	76	2⅝	54	5½	140	1¼	32	-	-	4¼	108	-	-	3.2	1.5
2	50	35⁄16	84	27⁄16	62	5½	140	1½	38	-	-	413⁄16	122	-	-	4.9	2.2
2½	65	4	102	33⁄16	81	8⅝	206	2	51	-	-	6½	165	-	-	13.2	5.9
3	80	4¼	108	37⁄16	87	8⅝	206	2½	64	-	-	613⁄16	173	-	-	17.5	7.9
4	100	413⁄16	122	3⅞	98	11	279	3	76	-	-	711⁄16	195	-	-	29.3	13.3

### LFB6001

3/8	10	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	15	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	20	2	51	1 1/16	36	3 3/4	95	1 1/16	17	7/8	22	3 3/16	84	3/4	19	1.1	0.5
1	25	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	32	2 1/2	64	2 1/4	57	3 13/16	97	1	25	1 1/8	35	4 1/2	114	1	25	2.0	0.9
1 1/2	40	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	50	3 5/16	84	3 1/8	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	65	4	102	3 13/16	93	8 1/8	206	2	51	2 5/8	67	7 5/8	194	1 7/16	36	13.2	6.0
3	80	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.



A Watts Water Technologies Company



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