

## For Commercial and Industrial Applications

Job Name \_\_\_\_\_  
 Job Location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Approval \_\_\_\_\_

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

# Series B6000, B6001

## 2-Piece, Standard Port, Bronze Ball Valves

Sizes: 1/4" – 4" (8 – 100mm)

Series B6000, B6001 2-Piece, Standard Port, Bronze 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.

### Features

- 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 bars) WOG non-shock; 150psi (10 bars) WSP. 4" (100mm) pressure rated at 400psi (28 bars) WOG non-shock; 125psi (8.6 bars) 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

B6000 1/4" – 4" (8 – 100mm) threaded NPT end connections  
 B6001 3/8" – 3" (10 – 80mm) solder end connections\*

### Specifications

A 2-piece standard port bronze 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 bars) WOG non-shock; 150psi (10 bars) WSP for 1/4" – 3" and 400psi (28 bars) WOG non-shock; 125psi (8.6 bars) WSP for 4". Valve must conform to MSS-SP-110 and shall be a Watts Regulator Company Series B6000 (threaded) or B6001 (solder).

Durafill® is a registered trademark of Cargill, Limited.

Uniseal® is a registered trademark of Uniseal, Incorporated.

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.



### BAA/ARRA Compliant\*\*

\*\*This product complies with the Buy American Act and The American Recovery and Reinvestment Act. For more information, visit [watts.com](http://watts.com).

### Options

#### Suffix

- 01/VT- Virgin Teflon® seat material
- SS- 316 stainless steel ball and stem
- LH- Locking lever handle
- OV- High profile safety oval handle
- OVLH- Oval locking handle
- RH- Round Handle
- SH- Stainless steel handle and nut
- BS- Balancing stop
- XH- Extended handle
- TH- Tee handles 1/4"-2" (8-50mm)
- GS- Ground Washer
- CC- 3/4" (20mm) hose thread outlet. Hose thread outlet has cap & chain. Inlet sizes: 1/2" and 3/4" (15-20mm) NPT. Also 1/2" and 3/4" (15-20mm) solder inlet connection
- SE- Safety Exhaust (Max pressure rating: 175psi)
- SC- Rough chrome 1/4"-2" (8-50mm)
- Z15- Less lever and nut
- 04- Mineral filled PTFE seats and seals (available only with 316SS ball and stem)
- U.L.- UL approved as follows:
  - Flammable Liquids (YRBX)
  - LP Gas (YSdT)
  - Compressed Gas (YQNZ)
  - Natural/Manufactured Gas (YRPV)
  - Fire Protection (HNFx)
  - For #1/#2 Fuel Oils (MHKZ)

### Pressure – Temperature

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

Pressure Range:

1/4" – 3" (8 – 80mm),

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

4" (100mm),

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

Use stainless steel trim (option SS) for steam pressures over 150psi (10 bars).

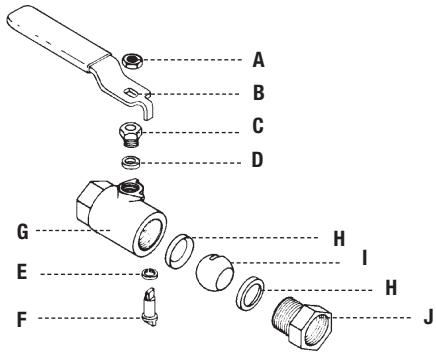
\*This valve is designed to be soft soldered into lines without disassembly, using a low temperature solder 420°F (216°C). Other solders such as 95/5 tin antimony 460°F (238°C) or 96/4 tin silver 420°F (216°C) can be used, however extreme caution must be used to prevent seat damage. Higher temperature 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 bars) 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.

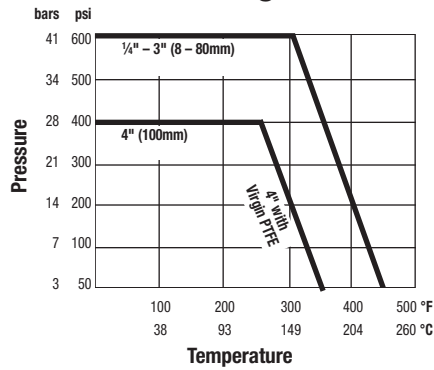
**WATTS®**

## Materials



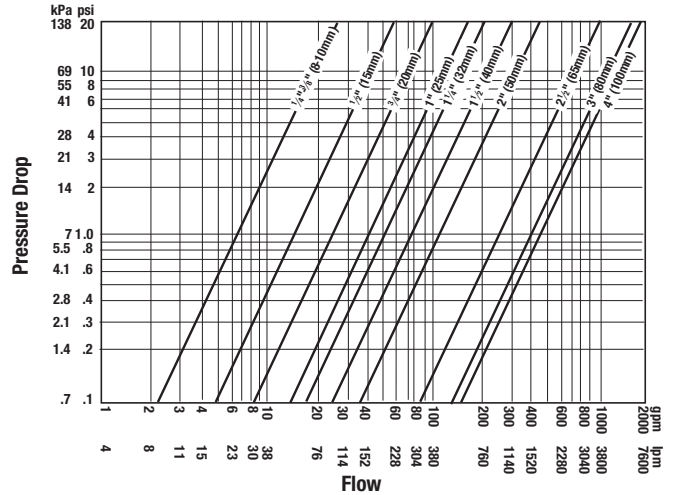
<b>A</b>	<b>Handle Nut</b>	Zinc Plated Carbon Steel
<b>B</b>	<b>Handle</b>	Zinc Plated Carbon Steel with Vinyl Insulator
<b>C</b>	<b>Packing Nut</b>	Brass ASTM B16, C36000
<b>D</b>	<b>Stem Packing</b>	Glass Reinforced PTFE
<b>E</b>	<b>Thrust Washer</b>	Glass Reinforced PTFE
<b>F</b>	<b>Stem</b>	Brass ASTM B16, C36000
<b>G</b>	<b>Body</b>	Cast Bronze ASTM B584, C84400
<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 Brass ASTM B16, C36000
<b>J</b>	<b>Adapter</b>	Brass ASTM B16, C36000
<b>K</b>	<b>Body Seals</b>	PTFE (1/4" - 4" only) - Not shown

## Valve Seat Rating

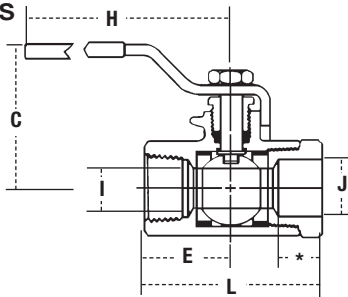


SIZE (DN)	Cv RATING	OPERATING TORQUE
1/4 in. mm	8	60 6.8
3/8 in. mm	10	60 6.8
1/2 in. mm	15	60 6.8
3/4 in. mm	20	90 10.2
1 in. mm	25	150 16.9
1 1/4 in. mm	32	175 19.8
1 1/2 in. mm	40	200 22.6
2 in. mm	50	250 28.2
2 1/2 in. mm	65	500 56.5
3 in. mm	80	600 67.8
4 in. mm	100	800 90.4

## Pressure Drop vs. Flow



## Dimensions — Weights



### B6000

SIZE DN		DIMENSIONS										WEIGHTS					
in.	mm	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.
1/4	8	1 3/4	45	1 1/16	27	3 1/16	78	3/8	10	-	-	2 1/16	52	-	-	0.6	0.3
3/8	10	1 3/4	45	1 1/16	27	3 1/16	78	3/8	10	-	-	2 1/16	52	-	-	0.6	0.3
1/2	15	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	20	2	51	1 7/16	36	3 3/4	95	1 1/16	17	-	-	2 3/16	72	-	-	1.0	0.5
1	25	2 1/4	57	1 11/16	43	4 1/2	114	7/8	22	-	-	3 1/16	87	-	-	1.6	0.7
1 1/4	32	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	40	3	76	2 1/8	54	5 1/2	140	1 1/4	32	-	-	4 1/4	108	-	-	3.2	1.5
2	50	3 5/16	84	2 7/16	62	5 1/2	140	1 1/2	38	-	-	4 13/16	122	-	-	4.9	2.2
2 1/2	65	4	102	3 3/16	81	8 1/8	206	2	51	-	-	6 1/2	165	-	-	13.2	5.9
3	80	4 1/4	108	3 7/16	87	8 1/8	206	2 1/2	64	-	-	6 13/16	173	-	-	17.5	7.9
4	100	4 13/16	122	3 7/8	98	11	279	3	76	-	-	7 11/16	195	-	-	29.3	13.3

### B6001

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 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	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 3/8	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 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	65	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	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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