

**For Residential, Commercial, and Industrial Applications**

|                    |                             |
|--------------------|-----------------------------|
| Job Name _____     | Contractor _____            |
| Job Location _____ | Approval _____              |
| Engineer _____     | Contractor's P.O. No. _____ |
| Approval _____     | Representative _____        |

# Series FBV

## 2 Piece, Full Port Bronze Ball Valves

Sizes: 1/2" through 2" (15-50 mm)

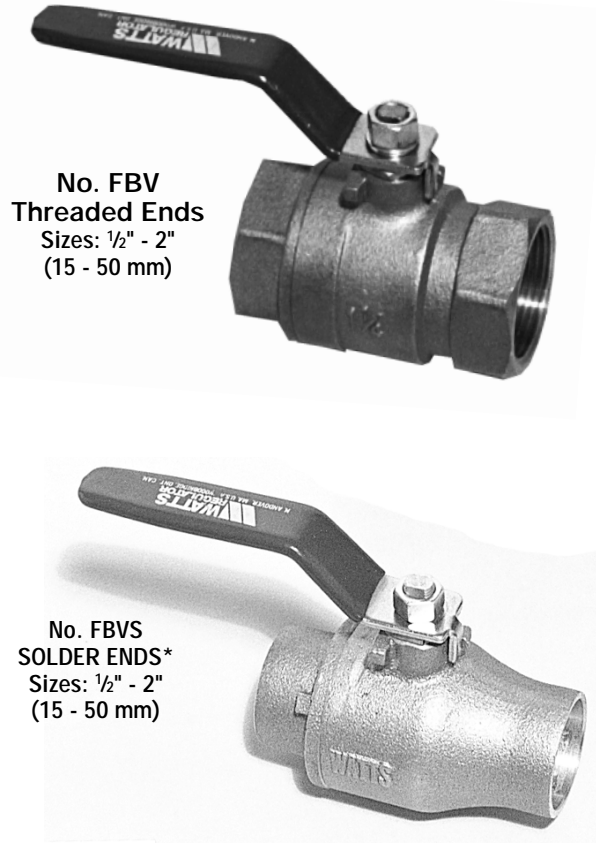
**FEATURES**

- Suitable for full range of liquids and gases.
- Minimal pressure drop due to full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600 psi (41 bars) WOG (non- shock) @ 100° F (38° C) 1/2"-2" (15-50mm), and 125 psi (8.6 bars) saturated steam.
- Suitable for temperatures from 0° F to +350° F (-18° to 177° C) at 50 psi (3.4 bars).
- Virgin PTFE stem packing seal, thrust washer and seat.
- Vinyl insulator on heavy duty zinc-plated, carbon steel handles.
- Fast quarter-turn open or close operation.
- Excellent for throttling and balancing applications of non-abrasive fluids where minimum flow is 20% to 100% of valve capacity.
- Low operating torque.
- Adjustable stem packing gland.
- Each valve individually tested, in the opened and closed position.

**SPECIFICATIONS**

Approved valves shall have bottom loaded, pressure retaining stems, virgin PTFE seats, and full port. Ball shall be chrome plated brass with brass stem. Valves shall be pressure rated at 600 psi WOG (non-shock), 125 psi saturated steam. Each valve shall be tested in the opened and closed position by the manufacturer. Valve must conform to MSS-SP-110. Watts Regulator Company Series FBV.

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.



**No. FBV  
Threaded Ends**  
Sizes: 1/2" - 2"  
(15 - 50 mm)

**No. FBVS  
SOLDER ENDS\***  
Sizes: 1/2" - 2"  
(15 - 50 mm)

\*This valve is designed to be soft soldered without disassembly, using a low temperature solder (420°F/216°C). Higher temperature solders may damage the seat material.  
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.

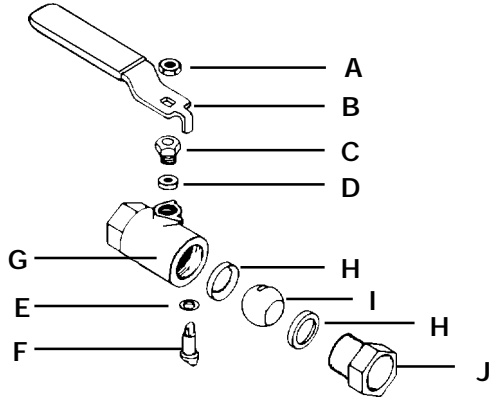


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**Water Products Division • Safety & Control Valves**

USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.wattsreg.com  
Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscda.com



# MATERIALS



- A. Handle Nut - Zinc-plated Carbon Steel
- B. Handle - Zinc-plated Carbon Steel with Vinyl Insulator
- C. Packing Nut - Brass
- D. Stem Packing - PTFE
- E. Thrust Washer - PTFE
- F. Stem - Brass
- G. Body - Bronze
- H. Seats - PTFE
- I. Ball - Chrome Plated Brass
- J. Adapter - Bronze

# VALVE TORQUE RATING

| Size  |    | Max. Breakaway/Torque |       | Cv  |
|-------|----|-----------------------|-------|-----|
| In.   | mm | In.-lbs               | N-m   |     |
| 1/2   | 15 | 60                    | 6.8   | 15  |
| 3/4   | 20 | 150                   | 16.95 | 30  |
| 1     | 25 | 200                   | 22.60 | 60  |
| 1 1/4 | 32 | 250                   | 28.25 | 110 |
| 1 1/2 | 40 | 320                   | 36.16 | 130 |
| 2     | 50 | 500                   | 56.50 | 360 |

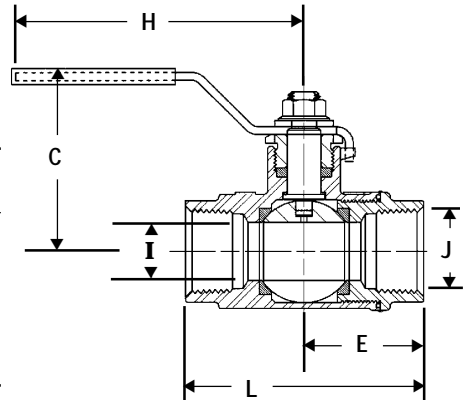
# DIMENSIONS - WEIGHT

## FBV - Dimensions

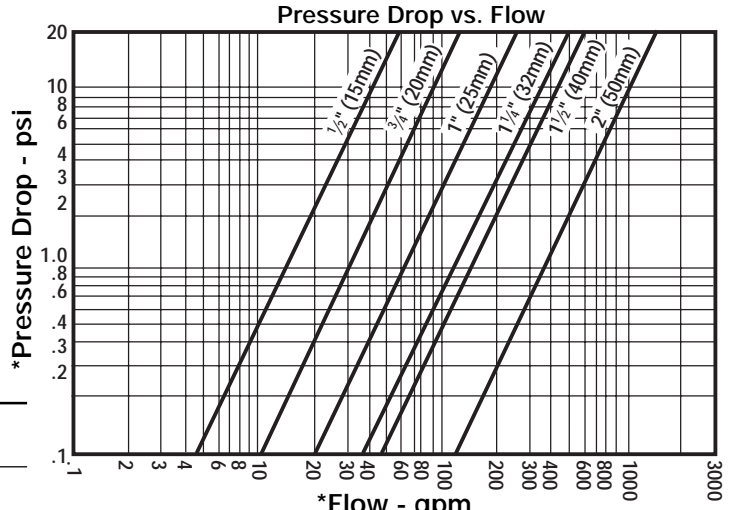
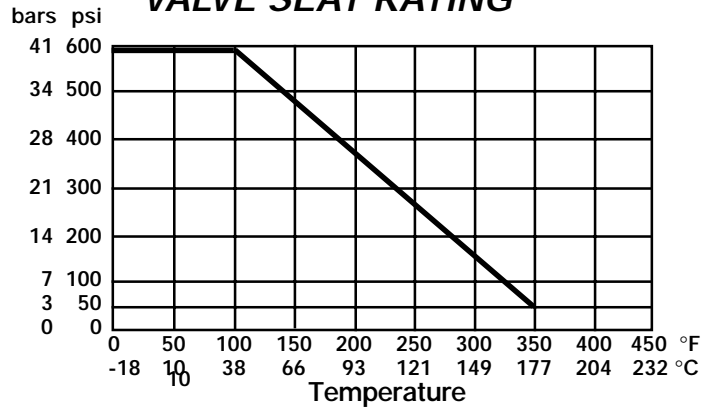
| Order No. | Size (Dn) |    | C      |    | E       |    | H     |     | I     |    | L      |     | Weight |     |
|-----------|-----------|----|--------|----|---------|----|-------|-----|-------|----|--------|-----|--------|-----|
|           | In.       | mm | In.    | mm | In.     | mm | In.   | mm  | In.   | mm | In.    | mm  | lbs.   | kg. |
| 546745    | 1/2       | 15 | 1 3/4  | 44 | 1 3/32  | 28 | 3 3/8 | 86  | 1/2   | 13 | 2 3/16 | 56  | .6     | .3  |
| 546750    | 3/4       | 20 | 2 1/16 | 52 | 1 9/32  | 33 | 3 5/8 | 92  | 3/4   | 19 | 2 9/16 | 65  | .8     | .4  |
| 546755    | 1         | 25 | 2 1/2  | 64 | 1 7/32  | 31 | 4 3/8 | 111 | 1     | 25 | 3 1/16 | 78  | 1.5    | .7  |
| 546760    | 1 1/4     | 32 | 2 5/8  | 67 | 1 9/16  | 40 | 4 3/8 | 111 | 1 1/4 | 32 | 3 1/2  | 89  | 2.5    | 1.1 |
| 546765    | 1 1/2     | 40 | 3 1/8  | 79 | 1 15/16 | 49 | 6 1/8 | 156 | 1 1/2 | 38 | 3 7/8  | 98  | 3.5    | 1.6 |
| 546770    | 2         | 50 | 3 1/2  | 89 | 2 7/32  | 56 | 6 1/8 | 156 | 2     | 51 | 4 7/16 | 113 | 5.5    | 2.5 |

## FBVS - Dimensions

| Order No. | Size (Dn) |    | C       |     | E      |    | H     |     | I (Orifice) |    | J (Dia.) |    | L       |     | Weight |     |
|-----------|-----------|----|---------|-----|--------|----|-------|-----|-------------|----|----------|----|---------|-----|--------|-----|
|           | In.       | mm | In.     | mm  | In.    | mm | In.   | mm  | In.         | mm | In.      | mm | In.     | mm  | lbs.   | kg. |
| 546775    | 1/2       | 15 | 1 5/8   | 41  | 1 1/16 | 27 | 3 3/4 | 95  | 1/2         | 13 | 5/8      | 16 | 2 3/32  | 53  | .6     | .3  |
| 546780    | 3/4       | 20 | 1 3/4   | 44  | 1 3/8  | 35 | 3 3/4 | 95  | 3/4         | 19 | 7/8      | 22 | 2 27/32 | 72  | .8     | .4  |
| 546785    | 1         | 25 | 2 1/16  | 52  | 1 3/4  | 44 | 3 3/4 | 95  | 1           | 25 | 1 1/8    | 29 | 3 1/16  | 87  | 1.5    | .7  |
| 546790    | 1 1/4     | 32 | 2 13/16 | 71  | 2      | 51 | 5 1/2 | 140 | 1 1/4       | 32 | 1 3/8    | 35 | 3 7/8   | 98  | 2.5    | 1.1 |
| 546795    | 1 1/2     | 40 | 3       | 76  | 2 5/16 | 59 | 5 1/2 | 140 | 1 1/2       | 38 | 1 5/8    | 41 | 4 1/16  | 103 | 3.5    | 1.6 |
| 546000    | 2         | 50 | 4       | 102 | 2 3/4  | 70 | 8     | 203 | 2           | 51 | 2 1/8    | 54 | 5 1/2   | 140 | 5.5    | 2.5 |



# VALVE SEAT RATING



\*Note: 1 gpm equals 3.785 liters per minute.  
1 psi equals .07 bar



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