

## For Commercial and Industrial Applications

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

Contractor \_\_\_\_\_

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

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Series FBV-3C, FBVS-3C

## 2-Piece, Full Port, Brass Ball Valves

### Sizes: 1/4" – 4" (8 – 100mm)

Series FBV-3C 2-piece, full port, brass ball valves are used in commercial and industrial applications for a full range of liquids and gases. They feature a bottom-loaded blowout proof stem, virgin PTFE seats, thrust washer, and adjustable stem packing gland, stem packing nut, chrome plated brass ball, brass adapter, and steel handle.

### Features

- Certified to NSF/ANSI standard 61/8
- CSA approved threaded valves only 1/4" – 3" (15 – 80mm)
- UL/FM approved threaded valves 1/2" – 2" (15 – 50mm)
- UL Listed solder valves 1/2" – 2" (15 – 50mm)
- Fluorocarbon elastomer stem O-ring prevents stem leaks
- Adjustable stem packing gland
- PTFE stem packing seal, thrust washer, and seats
- Bottom loaded blowout proof stem
- Machined chrome plated brass ball
- Valves comply to MSS-SP-110 standard

### Models

**FBV-3C:** 1/4" – 4" (8 – 100mm) with threaded connections

**FBVS-3C:** 1/2" – 3" (15 – 80mm) with solder connections

### Pressure – Temperature

**Temperature Range:** -40°F to 400°F (-40°C to 204°C)

### Pressure Ratings

**FBV-3C:** 1/4" – 2" (8 – 50mm)

600psi (41 bar) WOG, non-shock  
150psi (10.3 bar) WSP

2 1/2" – 4" (65 – 100mm)

400psi (27.5 bar) WOG, non-shock  
125psi (8.6 bar) WSP

**FBVS-3C:** 1/2" – 2" (15 – 50mm)

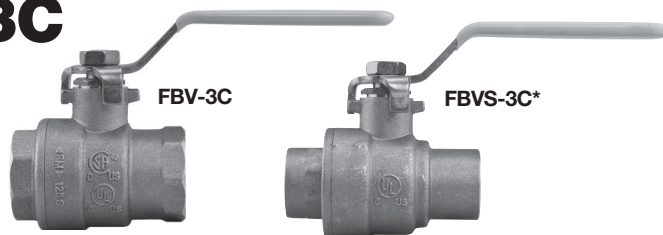
600psi (41 bar) WOG, non-shock  
150psi (10.3 bar) WSP

2 1/2" – 3" (65 – 80mm)

400psi (27.5 bar) WOG, non-shock  
125psi (8.6 bar) WSP

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

**NOTE:** 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.



### Approvals

1/4" – 3" (8 - 80mm) FBV-3C

Certified to NSF/ANSI standard 61/8\*



1/2" – 3" (15 – 80mm) FBVS-3C

Certified to NSF/ANSI standard 61/8\*



\*Domestic cold water at 73°F (23°C)

1/2" – 2" (15 – 50mm) FBV-3C UL/FM approved



1/2" – 2" (15 – 50mm) FBVS-3C UL Listed



### Gas Approvals (Threaded Valves Only)

1/4" – 3/8" (8 – 10mm)

ASME B16.33, CSA 

1/2 psig, 5psig, (14, 34 kPa)


@ -40°F to 125°F (-40°C to 52°C)

1/2" – 2" (15 – 50mm) ASME B16.33, CSA 

1/2 psig, 5psig, and 125psig (14, 34 and 862 kPa)

@ -40°F to 125°F (-40°C to 52°C)

2 1/2" – 3" (65 – 80mm)

ASME B16.38, CSA 

1/2 psig, 5psig, and 125psig (14, 34 and 862 kPa)

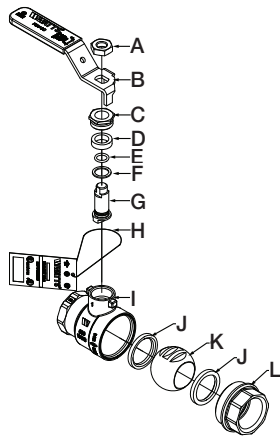
@ -40°F to 125°F (-40°C to 52°C)

### Specifications

Approved valves shall be 2-piece full port design constructed of a forged brass body and end adapter. Seats and stem packing shall be virgin PTFE. Stem shall be bottom loaded, blowout proof design with fluorocarbon elastomer O-ring to prevent stem leaks. Valve shall have chrome plated brass ball and adjustable packing gland. Threaded valves 1/2" – 3" (shall be CSA approved to 1/2, 5, and 125psig (14, 34 and 862 kPa), UL/FM approved and certified to NSF/ANSI standard 61/8. Solder valves to be UL listed and certified to NSF/ANSI standard 61/8. Valve sizes 1/4" – 2" (8 – 80mm) shall be rated to 600psi (41 bar) WOG non-shock and 150psi (10.3 bar) WSP. Valve sizes 2 1/2" – 4" (65 – 100mm) threaded, shall be rated to 400psi (27.5 bar) WOG non-shock and 125psi (8.6 bar) WSP. Valve sizes 2 1/2" – 3" (65 – 88mm) solder shall be rated to 400psi (27.5 bar) WOG non-shock and 125psi (8.6 bar) WSP. Valve shall be a Watts Regulator Company Series FBV-3C (threaded) or FBVS-3C (solder).

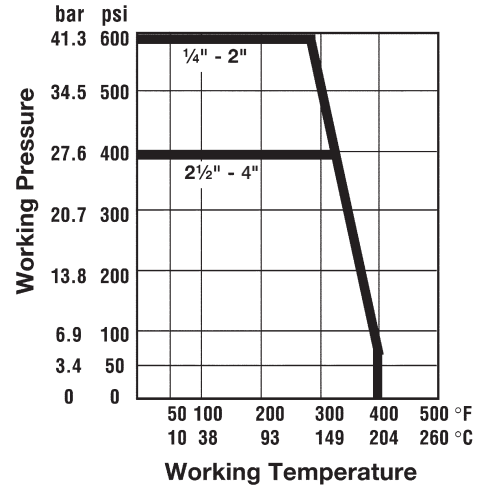
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## Materials



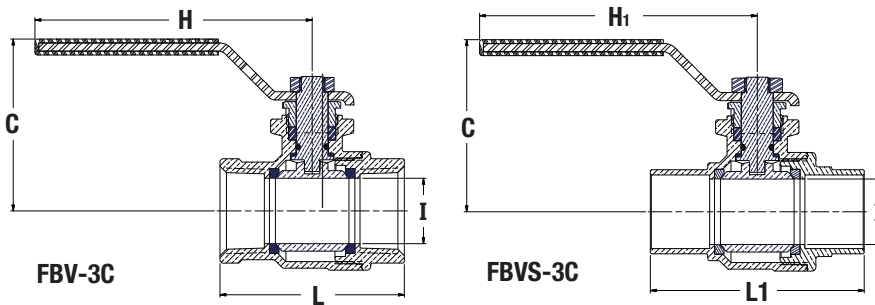
- A. Handle Nut Zinc plated carbon steel
- B. Handle Assembly Zinc plated carbon steel with vinyl insulator
- C. Packing Nut Brass
- D. Stem Packing Virgin PTFE
- E. O-ring Fluorocarbon elastomer (FKM)
- F. Thrust Washer Virgin PTFE
- G. Stem Machined Brass
- H. Tag Cardboard, Mylar coated both sides
- I. Body Forged Brass
- J. Seats Virgin PTFE
- K. Ball Chrome plated brass
- L. Adapter Forged Brass

## Temperature – Pressure



\*See applicable note on reverse side for solder end valves with regards to pressure/temperature rating.

## Dimensions – Weights



SIZE (DN)		DIMENSIONS										WEIGHT			
in.	mm	C		H		H <sub>1</sub>		I		L		L <sub>1</sub>		lbs.	kg.
1/4	8	1 <sup>13</sup> / <sub>16</sub>	46	3 <sup>7</sup> / <sub>16</sub>	87	-	-	1/2	12.9	1 <sup>3</sup> / <sub>4</sub>	45	-	-	0.4	0.2
3/8	10	1 <sup>13</sup> / <sub>16</sub>	46	3 <sup>7</sup> / <sub>16</sub>	87	-	-	1/2	12.9	1 <sup>3</sup> / <sub>4</sub>	45	-	-	0.4	0.2
1/2	15	1 <sup>13</sup> / <sub>16</sub>	46	3 <sup>7</sup> / <sub>16</sub>	87	3 <sup>7</sup> / <sub>16</sub>	87	1/2	12.9	1 <sup>15</sup> / <sub>16</sub>	50	2 <sup>1</sup> / <sub>16</sub>	52	0.4	0.2
3/4	20	2 <sup>1</sup> / <sub>4</sub>	57	4	101	4	101	3/4	19.2	2 <sup>5</sup> / <sub>16</sub>	59	2 <sup>11</sup> / <sub>16</sub>	68	0.8	0.3
1	25	2 <sup>5</sup> / <sub>8</sub>	67	4 <sup>1</sup> / <sub>4</sub>	108	4 <sup>1</sup> / <sub>4</sub>	108	1	25.5	2 <sup>13</sup> / <sub>16</sub>	72	3 <sup>1</sup> / <sub>4</sub>	83	1.2	0.5
1 1/4	32	2 <sup>13</sup> / <sub>16</sub>	71	4 <sup>1</sup> / <sub>4</sub>	108	4 <sup>1</sup> / <sub>4</sub>	108	1 1/4	31.9	3 <sup>3</sup> / <sub>16</sub>	81	3 <sup>11</sup> / <sub>16</sub>	94	1.8	0.8
1 1/2	40	3 <sup>3</sup> / <sub>16</sub>	80	5 <sup>1</sup> / <sub>4</sub>	134	5 <sup>5</sup> / <sub>16</sub>	135	1 1/4	38.0	3 <sup>1</sup> / <sub>2</sub>	88	4 <sup>1</sup> / <sub>4</sub>	108	2.6	1.2
2	50	3 <sup>1</sup> / <sub>2</sub>	89	6	153	6	153	2	50.9	4 <sup>1</sup> / <sub>8</sub>	105	5 <sup>5</sup> / <sub>16</sub>	135	3.7	1.7
2 1/2	65	4 <sup>1</sup> / <sub>16</sub>	104	7 <sup>3</sup> / <sub>8</sub>	187	7 <sup>3</sup> / <sub>8</sub>	188	2 1/2	63.6	5 <sup>5</sup> / <sub>16</sub>	134	6 <sup>1</sup> / <sub>4</sub>	158	7.1	3.2
3	80	4 <sup>1</sup> / <sub>2</sub>	114	7 <sup>3</sup> / <sub>4</sub>	197	7 <sup>3</sup> / <sub>4</sub>	197	3	76.3	6 <sup>1</sup> / <sub>16</sub>	154	7 <sup>3</sup> / <sub>8</sub>	185	11.3	4.7
4	100	5 <sup>3</sup> / <sub>8</sub>	136	9 <sup>5</sup> / <sub>8</sub>	245	-	-	4	101.6	7 <sup>7</sup> / <sub>16</sub>	189	-	-	17.7	8.0



Water Safety & Flow Control Products



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