

## 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"

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

- CSA approved threaded valves only 1/4" – 3"
- UL/FM approved threaded valves 1/4" – 2"
- UL Listed solder valves 1/2" – 2"
- 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
- Recommended for open/close applications

### Models

**FBV-3C** 1/4" – 4" with threaded connections

**FBVS-3C** 1/2" – 3" with solder connections

### Pressure – Temperature

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

### Pressure Ratings

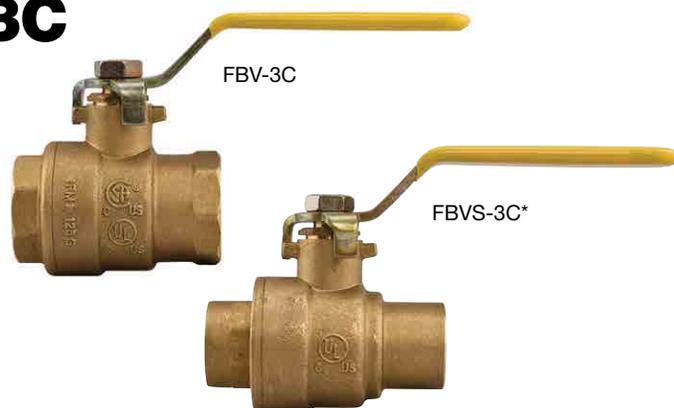
**FBV-3C:** 1/4" – 2"  
600psi (41 bar) WOG, non-shock  
150psi (10.3 bar) WSP

2 1/2" – 4"  
400psi (27.5 bar) WOG, non-shock  
125psi (8.6 bar) WSP

**FBVS-3C:** 1/2" – 2"  
600psi (41 bar) WOG, non-shock  
150psi (10.3 bar) WSP

2 1/2" – 3"  
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.



### Approvals

1/4" – 2" FBV-3C UL/FM approved  
1/2" – 2" FBVS-3C UL Listed



### Gas Approvals (Threaded Valves Only)

1/4" – 3/8"

ASME B16.33, CSA  
ASME B16.44  
1/2 psig, 5psig, (14, 34 kPa) @ -40°F to 125°F  
(-40°C to 52°C)



1/2" – 2"

ASME B16.33, CSA  
ASME B16.44  
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"

ASME B16.38, CSA  
ASME B16.44  
1/2 psig, 5psig, and 125psig (14, 34 and 862 kPa)  
@ -40°F to 125°F (-40°C to 52°C)



### NOTICE

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.

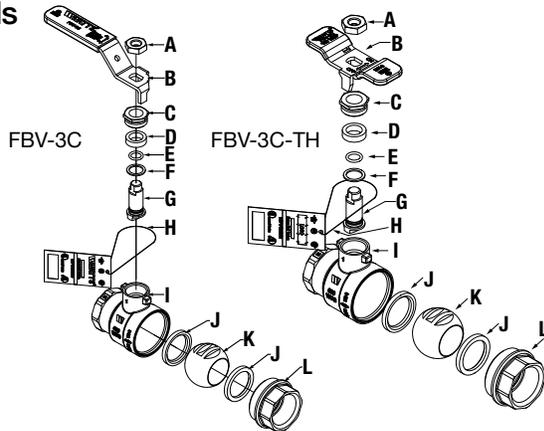
### NOTICE

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.

## 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 1/4" – 3" (shall be CSA approved to 1/2, 5, and 125psig (14, 34 and 862 kPa), 1/4" – 2" UL/FM approved. Solder valves to be UL listed. Valve sizes 1/4" – 2" shall be rated to 600psi (41 bar) WOG non-shock and 150psi (10.3 bar) WSP. Valve sizes 2 1/2" – 4" threaded, shall be rated to 400psi (27.5 bar) WOG non-shock and 125psi (8.6 bar) WSP. Valve sizes 2 1/2" – 3" solder shall be rated to 400psi (27.5 bar) WOG non-shock and 125psi (8.6 bar) WSP. Valve shall be a Watts Series FBV-3C (threaded) or FBVS-3C (solder).

## Materials

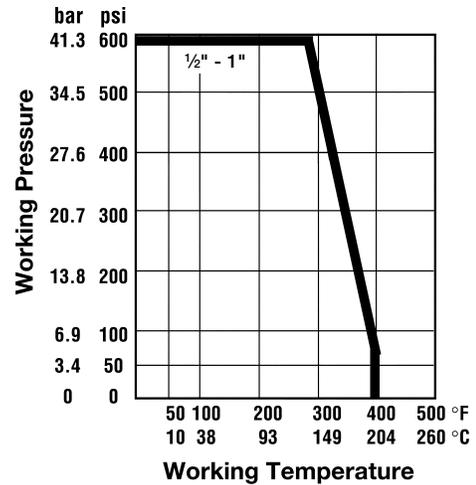


<b>A Handle Nut</b>	Zinc plated carbon steel
<b>B Handle Assembly</b>	Zinc plated carbon steel with vinyl insulator
<b>C Packing Nut</b>	Brass
<b>D Stem Packing</b>	Virgin PTFE
<b>E O-ring</b>	Fluorocarbon elastomer (FKM)
<b>F Thrust Washer</b>	Virgin PTFE
<b>G Stem</b>	Machined Brass
<b>H Tag</b>	Cardboard,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

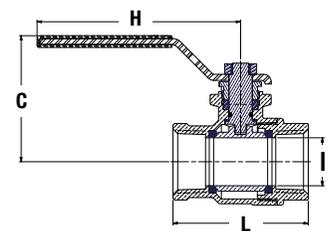
## Dimensions – Weights

SIZE		DIMENSIONS										WEIGHT			
in.	mm	C	H	H <sub>1</sub>	I	L	L <sub>1</sub>	lbs.	kg						
1/4	6.35	1 13/16	46	3 7/16	87	-	-	1/2	12.9	1 3/4	45	-	-	0.4	0.2
3/8	9.52	1 13/16	46	3 7/16	87	-	-	1/2	12.9	1 3/4	45	-	-	0.4	0.2
1/2	12.7	1 13/16	46	3 7/16	87	3 7/16	87	1/2	12.9	1 15/16	50	2 1/16	52	0.4	0.2
3/4	19.05	2 1/4	57	4	101	4	101	3/4	19.2	2 5/16	59	2 11/16	68	0.8	0.3
1	25.4	2 5/8	67	4 1/4	108	4 1/4	108	1	25.5	2 13/16	72	3 1/4	83	1.2	0.5
1 1/4	31.75	2 13/16	71	4 1/4	108	4 1/4	108	1 1/4	31.9	3 3/16	81	3 11/16	94	1.8	0.8
1 1/2	38.1	3 3/16	80	5 1/4	134	5 5/16	135	1 1/4	38.0	3 1/2	88	4 1/4	108	2.6	1.2
2	50.8	3 1/2	89	6	153	6	153	2	50.9	4 1/8	105	5 9/16	135	3.7	1.7
2 1/2	63.5	4 1/16	104	7 3/8	187	7 7/8	188	2 1/2	63.6	5 5/16	134	6 1/4	158	7.1	3.2
3	76.2	4 1/2	114	7 3/4	197	7 3/4	197	3	76.3	6 1/16	154	7 3/8	185	11.3	4.7
4	101.6	5 3/8	136	9 5/8	245	-	-	4	101.6	7 1/16	189	-	-	17.7	8.0

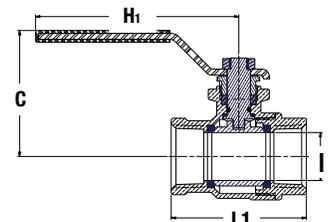
## Temperature – Pressure



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



FBV-3C



FBVS-3C

