

For Commercial and Industrial Applications

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 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

FBV-3C-TH: 1/2" – 1" (15 – 25mm) tee handle with threaded connections

FBVS-3C-TH: 1/2" – 1" (15 – 25mm) tee handle 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)

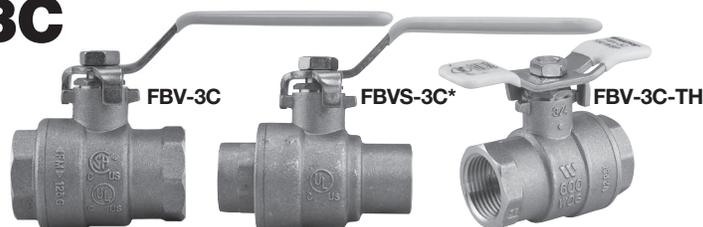
600psi (41 bar) WOG, non-shock
 150psi (10.3 bar) WSP

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

1/2" – 1" (15 – 25mm) FBV-3C-TH

Certified to NSF/ANSI standard 61/8*



1/2" – 3" (15 – 80mm) FBVS-3C

1/2" – 1" (15 – 25mm) FBVS-3C-TH

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" – 1" (15 – 25mm) FBVL-3C-TH



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

1/2" – 1" (15 – 25mm) FBVS-3C-TH



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)

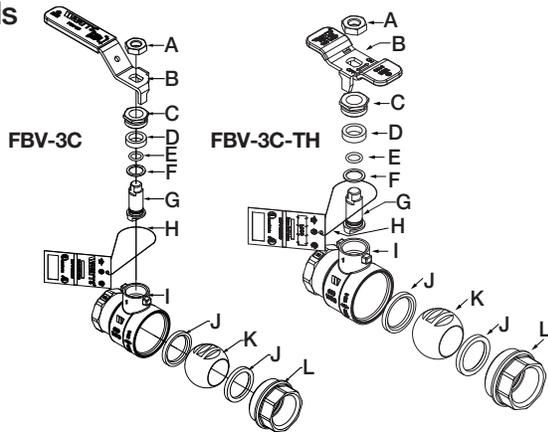
@ -40°F to 125°F (-40°C to 52°C)

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).

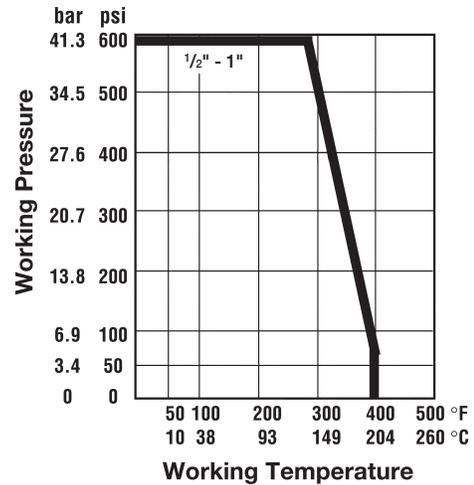
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Materials



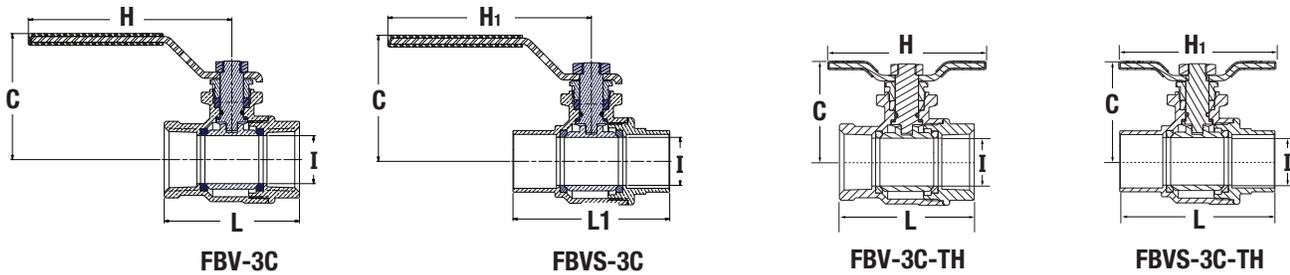
A. Handle Nut	Zinc plated carbon steel
B. Handle Assembly	Zinc plated carbon steel with vinyl insulator
C. Packing Nut	Brass
D. Stem Packing	Virgin PTFE
E. O-ring	Fluorocarbon elastomer (FKM)
F. Thrust Washer	Virgin PTFE
G. Stem	Machined Brass
H. Tag	Cardboard, Mylar coated both sides
I. Body	Forged 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			
<i>in.</i>	<i>mm</i>	<i>C</i>		<i>H</i>		<i>H₁</i>		<i>I</i>		<i>L</i>		<i>L₁</i>		<i>lbs.</i>	<i>kg.</i>
1/4	8	1 ¹³ / ₁₆	46	3 ⁷ / ₁₆	87	-	-	1/2	12.9	1 ³ / ₄	45	-	-	0.4	0.2
3/8	10	1 ¹³ / ₁₆	46	3 ⁷ / ₁₆	87	-	-	1/2	12.9	1 ³ / ₄	45	-	-	0.4	0.2
1/2	15	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	20	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	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	32	2 ¹³ / ₁₆	71	4 ¹ / ₄	108	4 ¹ / ₄	108	1 1/4	31.9	3 ³ / ₁₆	81	3 ¹ / ₁₆	94	1.8	0.8
1 1/2	40	3 ³ / ₁₆	80	5 ¹ / ₄	134	5 ⁹ / ₁₆	135	1 1/4	38.0	3 ¹ / ₂	88	4 ¹ / ₄	108	2.6	1.2
2	50	3 ¹ / ₂	89	6	153	6	153	2	50.9	4 ¹ / ₈	105	5 ⁵ / ₁₆	135	3.7	1.7
2 1/2	65	4 ¹ / ₁₆	104	7 ³ / ₈	187	7 ³ / ₈	188	2 1/2	63.6	5 ⁵ / ₁₆	134	6 ¹ / ₄	158	7.1	3.2
3	80	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	100	5 ³ / ₈	136	9 ⁵ / ₈	245	-	-	4	101.6	7 ⁷ / ₁₆	189	-	-	17.7	8.0

FBV-3C-TH and FBVS-3C-TH

SIZE (DN)		DIMENSIONS										WEIGHT			
<i>in.</i>	<i>mm</i>	<i>C</i>		<i>H</i>		<i>H₁</i>		<i>I</i>		<i>L</i>		<i>L₁</i>		<i>lbs.</i>	<i>kg.</i>
1/2	15	1 ⁹ / ₁₆	39.6	3 ¹ / ₈	79.3	3 ¹ / ₈	79.3	1/2	12.9	1 ¹⁵ / ₁₆	50	2 ¹ / ₁₆	52	0.4	0.2
3/4	20	2	50.9	3 ³ / ₈	85.7	3 ³ / ₈	85.7	3/4	19.2	2 ⁵ / ₁₆	59	2 ¹¹ / ₁₆	68	0.8	0.3
1	25	2 ¹ / ₈	53.9	3 ³ / ₈	85.7	3 ³ / ₈	85.7	1	25.5	2 ¹³ / ₁₆	72	3 ¹ / ₄	83	1.2	0.5



A Watts Water Technologies Company



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