

3-Piece Ball Valves

BG Series

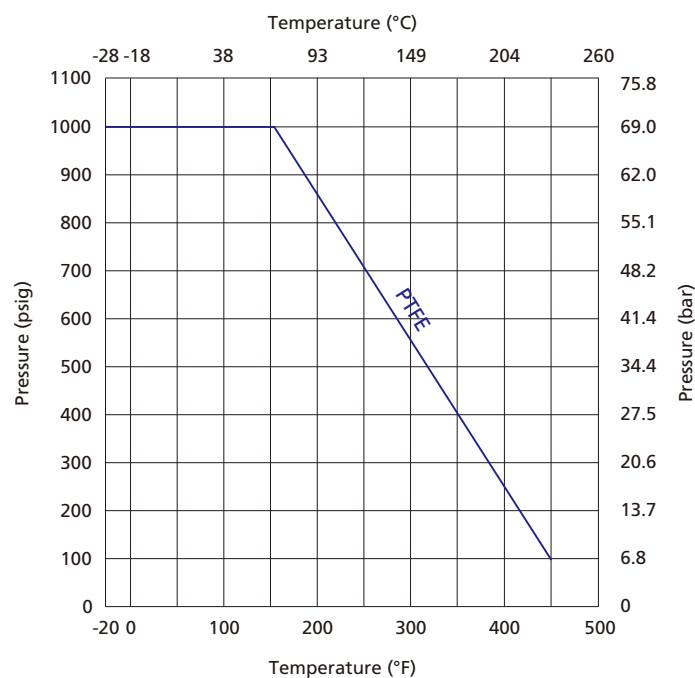
Features

- Working pressures up to 1,000 psig (69 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)
- Maximum-flow design with Cv up to 93
- Blowout-proof stem minimizes failures caused by stem movement or looseness
- Floating ball design compensates for seat wear, improving leak-tight integrity
- Each valve is factory leak-tested with nitrogen or compressed air at rated pressure



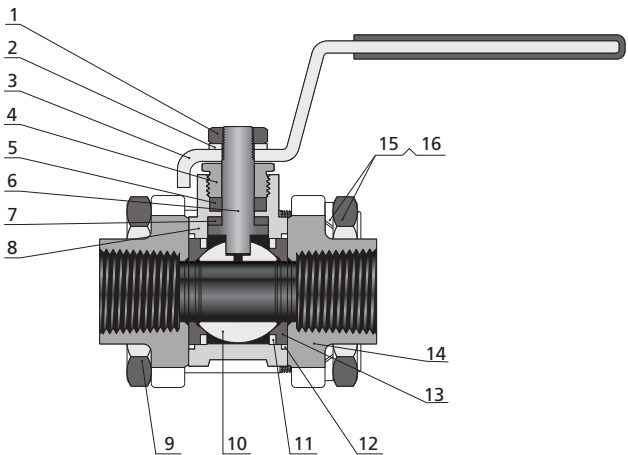
Ball Valves
Plug Valves

Pressure vs. Temperature



Note: The temperature and pressure rating are based on valves of standard materials.

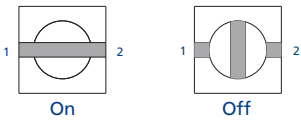
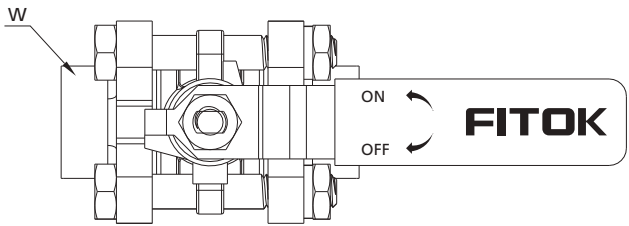
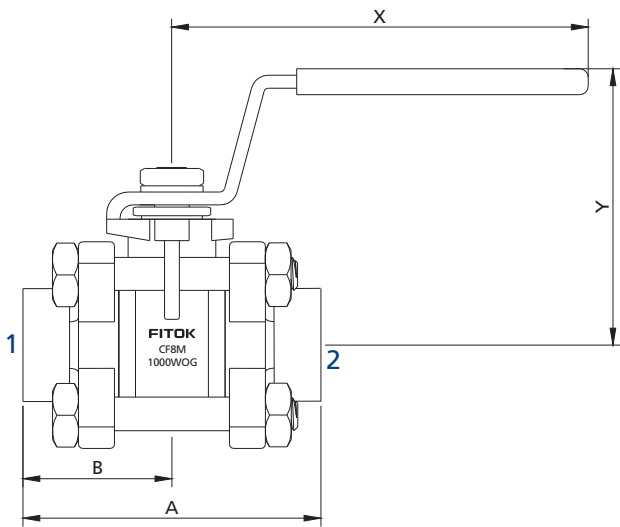
Standard Materials of Construction



Item	Component	Valve Body Material	
		CF8M/A351	CF8/A351
1	Stem Nut	SS	
2	Gasket	SS	
3	Handle	304 SS/A240 (with vinyl sleeve)	
4	Gland	316 SS/A479 or 304 SS/A479	
5	Upper Packing	PTFE/D1710	
6	Stem	316 SS/A479 or 304 SS/A479	
7	Lower Bearing	PTFE/D1710	
8	Body	CF8M/A351	CF8/A351
9	Body Bolt	SS	
10	Ball	316 SS/A479 or 304 SS/A479	
11	Support Ring	316 SS/A240 or 304 SS/A240	
12	Flange Seal	PTFE/D1710	
13	Seat	PTFE/D1710	
14	End Connection	CF8M/A351	CF8/A351
15	Gasket	SS	
16	Nut	SS	
Lubricants		Silicone-based and PTFE-based	

Note: Wetted components are listed in italics.
For other materials, please contact FITOK Group or our authorized distributors.

Dimensions



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimensions, in. (mm)				
	Connection 1	Connection 2			A	B	W	X	Y
BG□□-FNS2-05	1/8 Female NPT	1/8 Female NPT	0.19 (4.8)	1.2	2.05 (52.1)	1.03 (26.0)	0.63 (16.0)	2.69 (68.3)	1.46 (37.0)
BG□□-FRP2-05	1/8 Female BSPP	1/8 Female BSPP							
BG□□-PB4-05	1/4×SCH80 Pipe Butt Weld	1/4×SCH80 Pipe Butt Weld							
BG□□-FL4-05	1/4" FITOK	1/4" FITOK							
BG□□-ML6-05	6 mm FITOK	6 mm FITOK							
BG□□-ML8-05	8 mm FITOK	8 mm FITOK							
BG□□-FNS4-07	1/4 Female NPT	1/4 Female NPT	0.28 (7.1)	3.8	2.05 (52.1)	1.03 (26.0)			
BG□□-FRP4-07	1/4 Female BSPP	1/4 Female BSPP							
BG□□-FL6-07	3/8" FITOK	3/8" FITOK							
BG□□-ML10-07	10 mm FITOK	10 mm FITOK							
BG□□-FL8-11	1/2" FITOK	1/2" FITOK	0.42 (10.6)	7.5	4.04 (103.0)	2.02 (51.3)			
BG□□-ML12-11	12 mm FITOK	12 mm FITOK							
BG□□-ML14-11	14 mm FITOK	14 mm FITOK							
BG□□-FNS6-13	3/8 Female NPT	3/8 Female NPT	0.50 (12.7)	11.3	2.57 (65.2)	1.28 (32.6)	0.93 (23.5)	3.94 (100.0)	2.19 (55.7)
BG□□-FRP6-13	3/8 Female BSPP	3/8 Female BSPP							
BG□□-PS6-13	3/8 PS	3/8 PS							
BG□□-PB8-13	1/2×SCH80 Pipe Butt Weld	1/2×SCH80 Pipe Butt Weld			2.96 (75.3)	1.48 (37.7)			
BG□□-FL10-13	5/8" FITOK	5/8" FITOK							
BG□□-ML16-13	16 mm FITOK	16 mm FITOK			4.04 (103.0)	2.02 (51.3)			
BG□□-FNS8-15	1/2 Female NPT	1/2 Female NPT	0.55 (14.0)	13.0			2.74 (69.5)	1.37 (34.8)	1.06 (27.0)
BG□□-FRP8-15	1/2 Female BSPP	1/2 Female BSPP							
BG□□-PS8-15	1/2 PS	1/2 PS							
BG□□-MTB22-15	22×3 mm Tube Butt Weld	22×3 mm Tube Butt Weld							
BG□□-TS12-15	3/4" TS	3/4" TS							
BG□□-MTS18-15	18 mm Tube Socket Weld	18 mm Tube Socket Weld							
BG□□-FL12-15	3/4" FITOK	3/4" FITOK			4.04 (103.0)	2.02 (51.3)			
BG□□-ML18-15	18 mm FITOK	18 mm FITOK							
BG□□-FNS12-20	3/4 Female NPT	3/4 Female NPT	0.79 (20.0)	50.0	3.15 (80.0)	1.57 (40.0)	1.34 (34.0)	5.18 (131.5)	2.66 (67.5)
BG□□-FRP12-20	3/4 Female BSPP	3/4 Female BSPP							

Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimensions, in. (mm)				
	Connection 1	Connection 2			A	B	W	X	Y
BG□□-PB12-20	3/4×SCH80 Pipe Butt Weld	3/4×SCH80 Pipe Butt Weld	0.79 (20.0)	34	3.15 (80.0)	1.57 (40.0)	1.34 (34.0)	5.18 (131.5)	2.66 (67.5)
BG□□-PS12-20	3/4 PS	3/4 PS							
BG□□-TS16-20	1" TS	1" TS							
BG□□-MTB25-20	25×3.5 mm Tube Butt Weld	25×3.5 mm Tube Butt Weld							
BG□□-MTS25-20	25 mm Tube Socket Weld	25 mm Tube Socket Weld			5.12 (130.0)	2.56 (65.0)			
BG□□-FL16-20	1" FITOK	1" FITOK							
BG□□-ML22-20	22 mm FITOK	22 mm FITOK							
BG□□-ML25-20	25 mm FITOK	25 mm FITOK							
BG□□-FNS16-25	1 Female NPT	1 Female NPT	0.98 (25.0)	65	3.54 (90.0)	1.77 (45.0)	1.57 (40.0)	5.95 (151.2)	3.08 (78.2)
BG□□-FRP16-25	1 Female BSPP	1 Female BSPP							
BG□□-PS16-25	1 PS	1 PS							
BG□□-PB16-25	1×SCH80 Pipe Butt Weld	1×SCH80 Pipe Butt Weld							

1. FITOK means FITOK double ferrule tube fittings, TS means fractional tube socket weld, MTS means metric tube socket weld, TB means fractional tube butt weld, MTB means metric tube butt weld, PS means pipe socket weld, and PB means pipe butt weld.
2. Butt welding ends are manually welded. For connections with orbital welding, please contact FITOK Group or our authorized distributors.
3. Sizes and types listed are standard. Other sizes and types are available upon request, please contact FITOK Group or our authorized distributors.
4. Dimensions are shown with tube fitting nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

Seal Kits

Valve Orifice	Basic Seal Kit Ordering Number	Content
05/07	T-BG-2-RK	Seat, flange seal, lower packing, upper packing, instructions
11/13	T-BG-4-RK	
15	T-BG-6-RK	
20	T-BG-12-RK	
25	T-BG-16-RK	Seat, flange seal, stem bearing, packing support, lower packing, upper packing, instructions

Locking Device

- ⦿ Lock BG series valves, locking hole diameters of:
valves with orifice 05 or 07 are 0.185 in (4.7 mm);
valves with orifice 11, 13, 15, or 20 are 0.22 in (5.7 mm);
valves with orifice 25 are 0.19 in (4.8 mm)
- ⦿ To order a ball valve with locking device, add -L to the valve ordering number.
Example: BGSS-FRT8-15-L

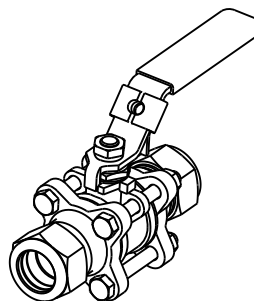


Diagram of Ball Valves with Locking Device and Orifice 05, 07, 11, 13, 15, or 20

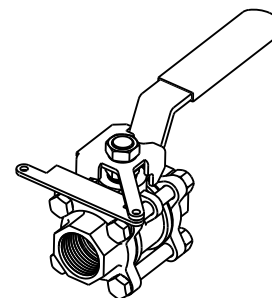


Diagram of Ball Valves with Locking Device and Orifice 25

Ordering Number Description

BGSS - FNS8 - ML18 - 15 - L - SF2

Series	Body Material	Connection 1 Type	Connection 1 Size	Connection 2 Type	Connection 2 Size	Orifice Size	Locking Device	Special Application	Cleaning and Packaging
BG	SS CF8M	FNS Female NPT	2 1/8"	Same as Connection 1	Specified in the same way as connection 1 type and size	05 0.19" (4.8 mm)	No	None	FC-01
S4 CF8	NS Male NPT	4 1/4" or 1/4xSCH80	4			07 0.28" (7.1 mm)	L Yes	S NACE MR0175	F2 FC-02
		FRT Female BSPT	5 5/16"			11 0.42" (10.6 mm)		SI Inert Silicon Coating	
		RT Male BSPT	6 3/8" or 6 mm			13 0.50" (12.7 mm)			
		FRP Female BSPP (for RP)	8 1/2" or 8 mm or 1/2xSCH80			15 0.55" (14.0 mm)			
		BP Male BSPP (for RG)	10 5/8" or 10 mm			20 0.79" (20 mm)			
		FMS Female Metric Thread (for RG-M)	12 3/4" or 12 mm or 3/4xSCH80			25 0.98" (25 mm)			
		MS Male Metric Thread (for RG-M)	14 14 mm or M14 x 1.5						
		MTS Metric Tube Socket	16 1" or 16 mm or 1"xSCH80						
		TS Fractional Tube Socket	18 18 mm						
		MTB Metric Tube Butt Weld	20 1 1/4" or 20 mm or M20 x 1.5						
		TB Fractional Tube Butt Weld	22 22 mm or 22x3 mm or M22x1.5						
		PS Pipe Socket Weld	24 1 1/2" or M24 x 1.5						
		PB Pipe Butt Weld	25 25 mm or 25x3.5 mm						
		FL Fractional Tube Fitting							
		ML Metric Tube Fitting							
		UFB Rotatable Fractional Tube Butt Weld							
		UMB Rotatable Metric Tube Butt Weld							
		UPB Rotatable Pipe Butt Weld							

Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

- Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
M12 to M24: 1.5 mm
Standard thread pitch should be omitted in the ordering number, others should be specified.
- If you need a port with orbital welding, please contact FITOK Group.
- For oxygen-enriched environment or hazardous media service, contact FITOK Group or our authorized distributors.
- Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleaning requirement of ASTM G93 Level C.
- Inert Silicon Coating: Wetted metal components Inert Silicon coated.