

Hex Bar Stock Ball Valves

BR Series

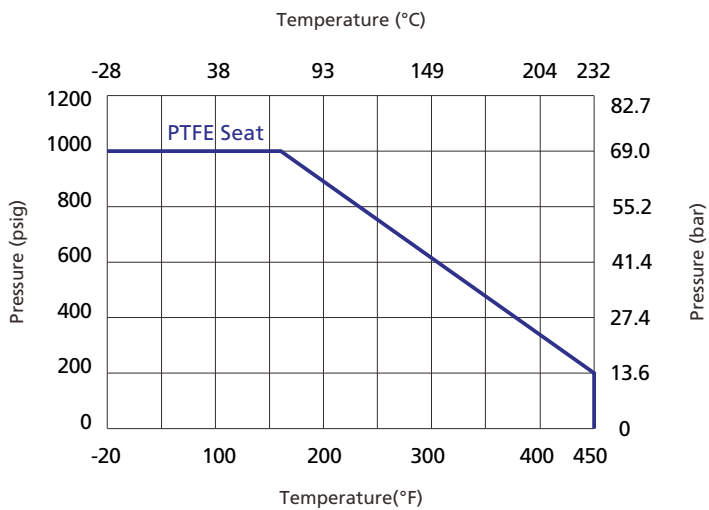
Features

- Working pressures up to 1,000 psig (69 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)
- Cv up to 17.35
- Compact design for minimal space requirements
- Floating ball design compensates for seat wear, improving leak-tight integrity
- Blowout-proof stem minimizes failures caused by stem movement or looseness
- Multiple handle types available
- Each valve is factory leak-tested with nitrogen or compressed air at rated pressure



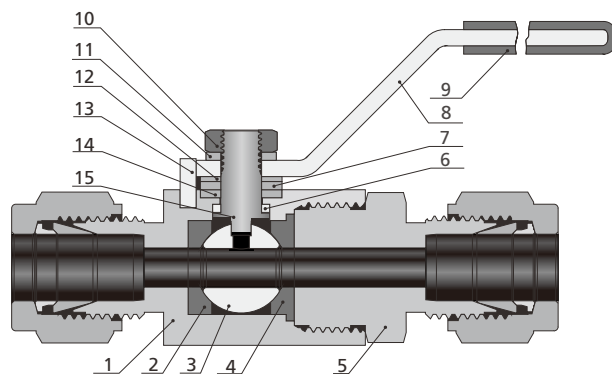
Ball Valves
Plug Valves

Pressure vs. Temperature



Standard Materials of Construction

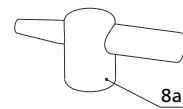
Bar Stock Body



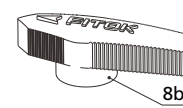
Handle Options



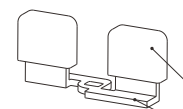
Lever Handle



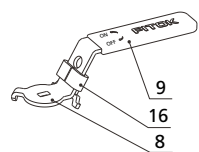
Aluminium Handle (-U)



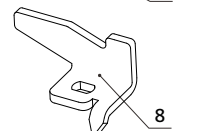
Nylon Handle (-NY)



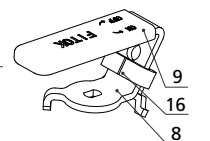
Butterfly Handle (-T)



Handle with Locking Device (-LB)



K-Shaped Handle (-KS)



Scorpion Handle with Locking Device (-FZLB)

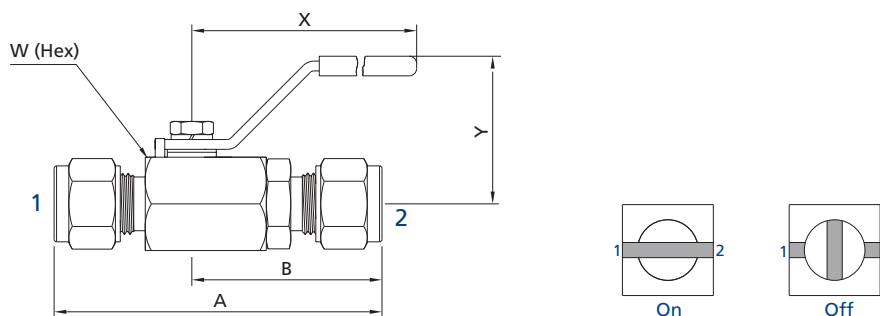
Item	Component	Material/Specification		
1	Body	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>	<i>Brass C36000/B16</i>
2	Front Seat	<i>PTFE/D1710</i>		
3	Ball	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>	<i>316 SS/A479</i>
4	Back Seat	<i>PTFE/D1710</i>		
5	End Connection	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>	<i>Brass C36000/B16</i>
6	Lower Packing	<i>PTFE/D1710</i>		
7	Washer	<i>316 SS/A479</i>		
8	Handle	<i>304 SS/A240</i>		
8a		Aluminium		
8b		Nylon with 304 SS insert		
9	Sleeve	Vinyl ester		
10	Stem Nut	Stainless steel		
11	Gasket	Stainless steel		
12	Coned-disc Spring	<i>S17700/A693</i>		
13	Stop Pin ^①	Stainless steel		
14	Upper Packing	<i>PTFE/D1710</i>		
15	Stem	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>	<i>316 SS/A479</i>
16	Lock Block	<i>304 SS/A240</i>		

Note: Wetted components are listed in italics.

① A handle with a locking device does not include a stop pin.

Dimensions

Bar Stock Body



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimensions, in. (mm)				
	Connection 1/2			A	B	W	X	Y
BR□□-ML6-05	6 mm FITOK	0.19 (4.8)	1.25	2.57 (65.2)	1.50 (38.1)	3/4 (19.05)	2.36 (60)	1.18 (30)
BR□□-ML8-05	8 mm FITOK			2.63 (66.8)	1.53 (38.8)			
BR□□-FL4-05	1/4" FITOK			2.57 (65.2)	1.50 (38.1)			
BR□□-FL5-05	5/16" FITOK			2.63 (66.8)	1.53 (38.8)			
BR□□-FNS2-05	1/8 Female NPT			1.85 (47.0)	1.08 (27.4)			
BR□□-FRP2-05	1/8 Female BSPP			2.00 (50.0)	1.14 (29.0)			
BR□□-FRP4-05	1/4 Female BSPP			2.00 (50.0)	1.14 (29.0)			
BR□□-FNS4-05	1/4 Female NPT			1.85 (47.0)	1.08 (27.4)			
BR□□-ML10-07	10 mm FITOK	0.28 (7.1)	2.50	2.87 (72.9)	1.68 (42.7)	7/8 (22.23)		1.26 (32)
BR□□-FL6-07	3/8" FITOK			2.03 (51.6)	1.18 (30.0)			
BR□□-FRP6-07	3/8 Female BSPP							
BR□□-FNS6-07	3/8 Female NPT							
BR□□-ML12-10	12 mm FITOK	0.35 (8.9)	5.30	3.15 (80.0)	1.83 (46.5)	1 1/16 (27.0)	3.15 (80)	1.54 (39)
BR□□-ML14-10	14 mm FITOK			3.24 (82.2)	1.87 (47.5)			
BR□□-FL8-10	1/2" FITOK			3.15 (80.0)	1.83 (46.5)			
BR□□-FL10-10	5/8" FITOK			3.24 (82.2)	1.87 (47.5)			
BR□□-FRP8-10	1/2 Female BSPP			2.08 (53.0)	1.12 (28.5)	15/16 (24.0)		
BR□□-FNS8-10	1/2 Female NPT			2.08 (53.0)	1.12 (28.5)			
BR□□-ML16-13	16 mm FITOK	0.47 (12.0)	8.60	3.50 (88.9)	2.00 (50.8)	1 1/4 (31.75)	3.94 (100)	2.03 (51.7)
BR□□-ML18-13	18 mm FITOK			2.48 (63.0)	1.30 (33.0)			
BR□□-FL12-13	3/4" FITOK							
BR□□-FRP12-13	3/4 Female BSPP							
BR□□-FNS12-13	3/4 Female NPT	0.63 (16.0)	17.35	2.39 (60.7)	1.20 (30.5)	1 1/2 (38.1)		2.15 (54.8)
BR□□-ML22-16	22 mm FITOK			3.96 (100.6)	2.24 (56.8)			
BR□□-ML25-16	25 mm FITOK			4.31 (109.5)	2.42 (61.5)			
BR□□-FL16-16	1" FITOK			3.25 (82.6)	1.63 (41.3)			
BR□□-FRP16-16	1 Female BSPP			3.00 (76.5)	1.50 (38.1)			
BR□□-FNS16-16	1 Female NPT							

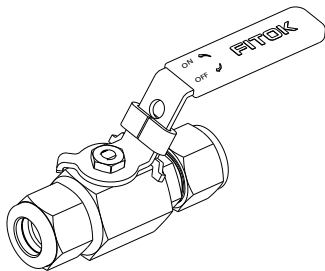
1. FITOK means FITOK double ferrule tube fittings.

2. Sizes and types listed are standard. Other sizes and types are available upon request, please contact FITOK Group or our authorized distributors.

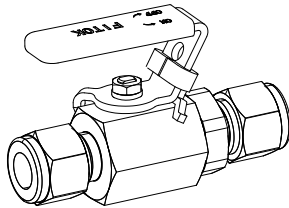
3. Dimensions are shown with FITOK tube fitting nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

Locking Device

Body Material	Orifice	Locking Hole Diameter in. (mm)	Example
A variety of optional materials (bar stock)	05	0.19 (4.8)	BRSS-ML12-10-LB BRSS-ML12-10-FZLB
	07		
	10	0.24 (6.2)	
	13		
	16		



BRSS-ML12-10-LB



BRSS-ML12-10-FZLB

Note: Locking device applies only to lever and scorpion handles. For other handle types requiring a locking device, please contact FITOK Group or our authorized distributors.

Seal Kits

Valve Orifice	Basic Seal Kit Ordering Number	Content
05	BRSS-05-RK	Front seat, back seat, ball, lower packing, upper packing, instructions
07	BRSS-07-RK	
10	BRSS-10-RK	
13	BRSS-13-RK	
16	BRSS-16-RK	

1. Seal kit components are the same materials and grades listed in materials of construction.
2. The listed basic seal kit ordering numbers specify 316 stainless steel material. To order kits with other materials, such as 304 stainless steel material, replace "SS" with "S4" in the ordering number.
Example: BR54-05-RK

Ordering Number Description

BRSS - ML8 - FL4 - 05 - JLB - SF2

Series	Body Material	Connection 1 Type	Connection 1 Size	Connection 2 Type	Connection 2 Size	Orifice	Handle	Locking Device	Special Application	Cleaning and Packaging
BR	SS 316 SS or CF8M	FNS Female NPT	2 1/8"	Same as connection 1		05 0.19" (4.8 mm)	Lever Handle with Yellow Handle Sleeve	No	None	FC-01
	6L 316L SS	NS Male NPT	4 1/4"	Specified in the same way as connection 1 type and size		07 0.28" (7.1 mm)	Lever Handle with Red Handle Sleeve	LB Locking Device	S NACE MR0175	F2 FC-02
	S4 304 SS	FRT Female BSPT	5 5/16"			10 0.35" (8.9 mm)	I Lever Handle with Blue Handle Sleeve	Note: Locking device only applies to lever and scorpion handles.	SI Inert Silicon Coating	
	M Alloy 400	RT Male BSPT	6 3/8" or 6 mm			13 0.47" (12.0 mm)	J Lever Handle with Blue Handle Sleeve			
	B Brass	FRP Female BSPP (for RP)	8 1/2" or 8 mm			16 0.63" (16.0 mm)	U Black Aluminium Handle			
		BP Male BSPP (for RG)	10 10 mm				NY Black Nylon Handle			
		FL Fractional Tube Fitting	12 3/4" or 12 mm				T Butterfly Handle with Yellow Handle Sleeve			
		ML Metric Tube Fitting	14 14 mm or M14 x 1.5				TI Butterfly Handle with Red Handle Sleeve			
		UFB Rotatable Fractional Tube Butt Weld	16 1" or 16 mm				TJ Butterfly Handle with Blue Handle Sleeve			
		UMB Rotatable Metric Tube Butt Weld	18 18 mm				FZ Scorpion Handle with Yellow Handle Sleeve			
		UPB Nut + Gasket + Pipe Bulged Nipple	20 1 1/4" or 20 mm or M20 x 1.5				FZI Scorpion Handle with Red Handle Sleeve			
			22 22 mm or M22 x 1.5				FZJ Scorpion Handle with Blue Handle Sleeve			
			25 25 mm				KS K-Shaped Handle			

- Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
M12 to M24: 1.5 mm
M27 and above: 2 mm
Standard thread pitch should be omitted in the ordering number, others should be specified.
- 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.

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