

Hex Bar Stock Ball Valves

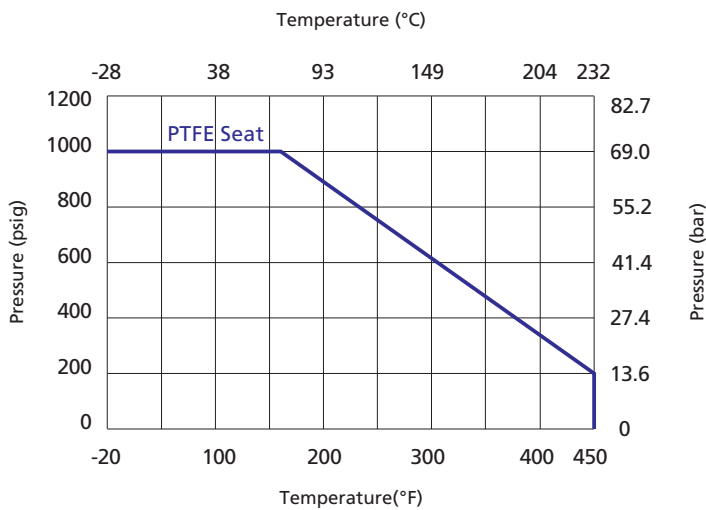
BR Series

Features

- Working pressure up to 1000 psig (69.0 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)
- Compact and economical ball valve designed for industrial applications
- Blowout-proof stem minimizes the risk of valve failure due to stem displacement or loosening
- Free-floating ball design allows the ball to be pushed against the seat by fluid pressure, ensuring a tight and reliable seal
- Bidirectional flow
- Low-torque handle enables easy and smooth operation
- A variety of end connections available
- Handle color options available
- Each valve is tested for internal and external leakage using nitrogen or compressed air at rated working pressure before shipment



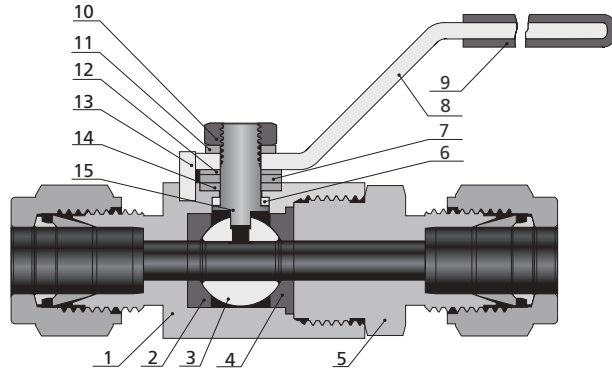
Pressure vs. Temperature



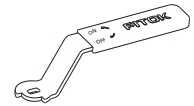
Standard Materials of Construction

Bar Stock Body

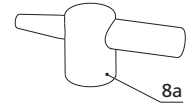
Ball Valves
Plug Valves



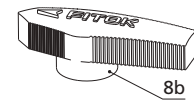
Handle Options



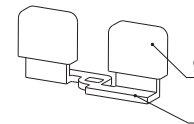
Lever Handle



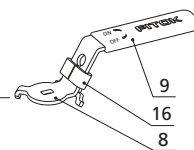
Aluminium Handle (-U)



Nylon Handle (-NY)



Butterfly Handle (-T)

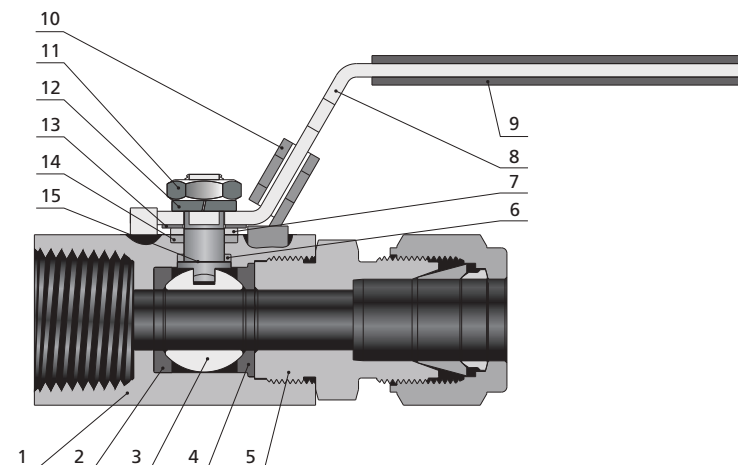


Handle with Locking Device 1 (-LB)

Item	Component	Material/Specification		
1	Body	316 SS/A479	Alloy 400/B164	Brass C36000/B16
2	Front Seat	PTFE/D1710		
3	Ball	316 SS/A479	Alloy 400/B164	316 SS/A479
4	Back Seat	PTFE/D1710		
5	End Connection	316 SS/A479	Alloy 400/B164	Brass C36000/B16
6	Lower Packing	PTFE/D1710		
7	Washer	316 SS/A479		
8	Handle	304 SS/A240		
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	S17700/A693		
13	Stop Pin ^①	Stainless steel		
14	Upper Packing	PTFE/D1710		
15	Stem	316 SS/A479	Alloy 400/B164	316 SS/A479
16	Lock Block	304 SS/A240		

Note: Wetted components are listed in italics.

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

Cast Body (When the valve has a handle with locking device 2)

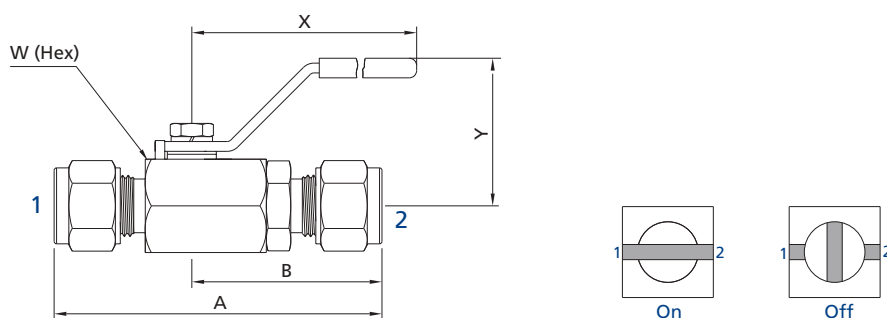
Item	Component	Material/Specification
1	<i>Body</i>	<i>CF8M/A351</i>
2	<i>Front Seat</i>	<i>PTFE/D1710</i>
3	<i>Ball</i>	<i>316 SS/A479</i>
4	<i>Back Seat</i>	<i>PTFE/D1710</i>
5	<i>End Connection</i>	<i>316 SS/A479</i>
6	<i>Lower Packing</i>	<i>PTFE/D1710</i>
7	Washer	316 SS/A479
8	Handle	304 SS/A240
9	Sleeve	Vinyl ester
10	Lock Block	304 SS/A240
11	Stem Nut	Stainless steel
12	Gasket	Stainless steel
13	Coned-disc Spring	S17700/A693
14	<i>Upper Packing</i>	<i>PTFE/D1710</i>
15	<i>Stem</i>	<i>316 SS/A479</i>

Notes: 1. Wetted components are listed in italics.

2. The standard models listed in this catalog feature a two-piece construction. However, due to the impact of connection types and orifice sizes, some models may have a three-piece construction. Please refer to the sales drawing for details.

Dimensions

Bar Stock Body



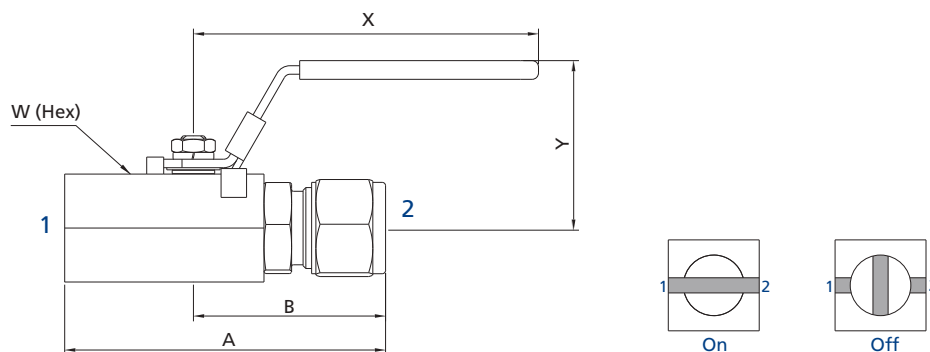
Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimensions, in. (mm)						
	Connection 1/2			A	B	W	X	Y		
BR□□-ML6-05	6 mm FITOK	0.19 (4.8)	1.25	2.57 (65.2)	1.50 (38.1)	3/4 (19.05)	2.36 (60)	1.18 (30)		
BR□□-ML8-05	8 mm FITOK			2.63 (66.8)	1.53 (38.8)					
BR□□-FL4-05	1/4" FITOK			2.57 (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	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								2.39 (60.7)	1.20 (30.5)
BR□□-FRP12-13	3/4 Female BSPP									
BR□□-FNS12-13	3/4 Female NPT	0.63 (16.0)	17.35	3.96 (100.6)	2.24 (56.8)	1 1/2 (38.1)		2.15 (54.8)		
BR□□-ML22-16	22 mm FITOK			4.31 (109.5)	2.42 (61.5)					
BR□□-ML25-16	25 mm FITOK									
BR□□-FL16-16	1" FITOK									
BR□□-FRP16-16	1 Female BSPP									
BR□□-FNS16-16	1 Female NPT									
				3.25 (82.6)	1.63 (41.3)					
				3.00 (76.5)	1.50 (38.1)					

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.

Cast Body



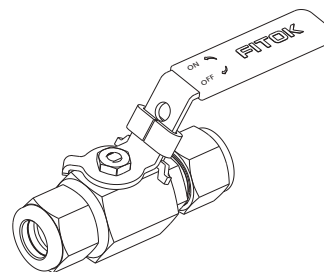
Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimensions, in. (mm)				
	Connection 1	Connection 2			A	B	W	X	Y
BRSS-FNS6-07-L	3/8" Female NPT	3/8" Female NPT	0.28 (7.1)	2.5	2.03 (51.6)	1.19 (30.1)	7/8 (22.23)	2.40 (61.2)	1.25 (31.8)
BRSS-FNS6-FL6-07-L	3/8" Female NPT	3/8" FITOK			2.53 (64.2)	1.68 (42.7)			
BRSS-FNS8-10-L	1/2" Female NPT	1/2" Female NPT	0.35 (8.9)	5.3	2.08 (52.8)	1.08 (27.5)	1 (25.4)	3.20 (81.2)	1.56 (39.6)
BRSS-FNS8-FL8-10-L	1/2" Female NPT	1/2" FITOK			2.78 (70.5)	1.78 (45.2)			
BRSS-FNS12-13-L	3/4" Female NPT	3/4" Female NPT	0.47 (12.0)	8.6	2.39 (60.6)	1.21 (30.6)	1 1/4 (31.75)	3.80 (96.4)	1.93 (48.9)
BRSS-FNS12-FL12-13-L	3/4" Female NPT	3/4" FITOK			3.19 (80.9)	2.00 (50.9)			
BRSS-FNS16-16-L	1" Female NPT	1" Female NPT	0.63 (16.0)	17.35	3.78 (96)	2.28 (57.8)	1 1/2 (38.1)		2.05 (52.1)
BRSS-FNS16-FL16-16-L	1" Female NPT	1" FITOK			3.92 (99.6)	2.42 (61.4)			

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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

Locking Device 1 (-LB)

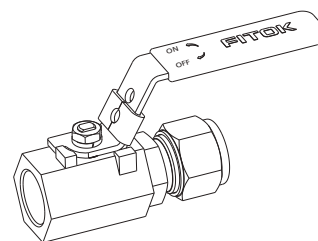
Body Material	Orifice	Locking Hole Diameter in. (mm)	Example
A variety of optional materials (bar stock)	05	0.19 (4.8)	BRSS-ML12-10-LB
	07		
	10	0.24 (6.2)	
	13		
	16		



Locking Device 1

Locking Device 2 (-L)

Body Material	Orifice	Locking Hole Diameter in. (mm)	Example
CF8M (cast)	07	0.19 (4.8)	BRSS-FNS8-10-L
	10		
	13	0.22 (5.7)	
	16		



Locking Device 2

Note: The locking device is only applicable to lever 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 - JL - 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	Specified in the same way as connection 1 type and size	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"			07	0.28" (7.1 mm)					
	S4	304 SS	FRT	Female BSPT	5	5/16"	Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.		10	0.35" (8.9 mm)	I	Lever Handle with Red Handle Sleeve	LB	NACE MR0175	F2
	M	Alloy 400	RT	Male BSPT	6	3/8" or 6 mm			13	0.47" (12.0 mm)	L	Lever Handle with Blue Handle Sleeve	L	SilcoNert® 2000 (Sulfinert®) Coating	FC-02
	B	Brass	FRP	Female BSPP (for RP)	8	1/2" or 8 mm			16	0.63" (16.0 mm)	J	Lever Handle with Blue Handle Sleeve	Note: Locking device only applies to lever handle.		
			BP	Male BSPP (for RG)	10	10 mm					U	Black Aluminium Handle			
			FL	Fractional Tube Fitting	12	3/4" or 12 mm					NY	Black Nylon Handle			
			ML	Metric Tube Fitting	14	14 mm or M14 x 1.5					T	Butterfly Handle with Yellow Handle Sleeve			
			UFB	Rotatable Fractional Tube Butt Weld	16	1" or 16 mm					TI	Butterfly Handle with Red Handle Sleeve			
			UMB	Rotatable Metric Tube Butt Weld	18	18 mm					TJ	Butterfly Handle with Blue Handle Sleeve			
			UPB	Rotatable Pipe Butt Weld	20	1 1/4" or 20 mm or M20 x 1.5									
					22	22 mm or M22 x 1.5									
					25	25 mm									

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

1. 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

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
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.
- SilcoNert® 2000 (Sulfinert®) Coating: Wetted metal components SilcoNert® 2000 (Sulfinert®) coated.