

Hex Bar Stock High Purity Ball Valves

BRP Series

Introduction

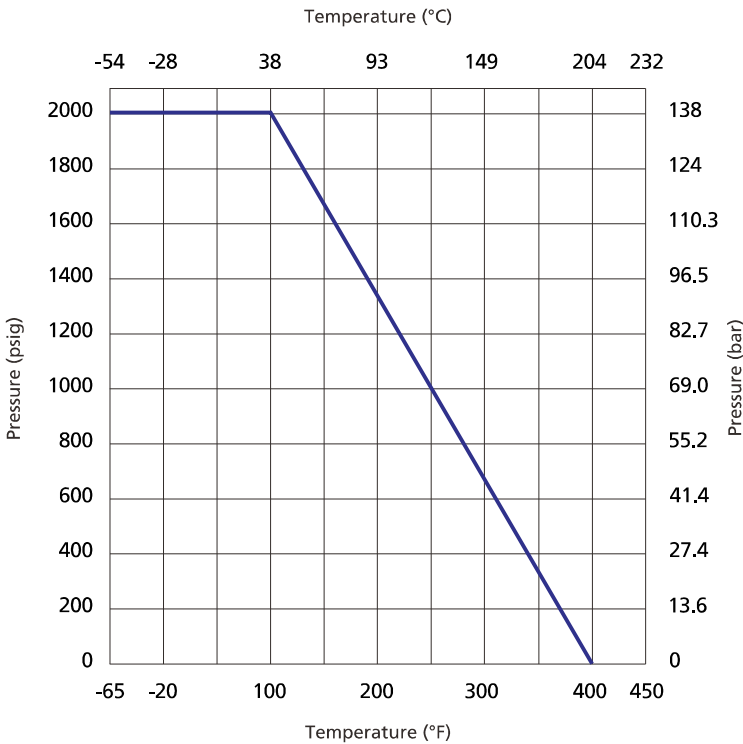
BRP series hex bar high purity ball valves are designed to meet the requirements of degreasing, low working pressure and bi-directional flow for the clean dry air (CDA) and bulk gas distribution line, which are widely used in specialty gas, semiconductor and chemical industries.



Features

- Working pressure up to: 2000 psig (138 bar)
- Working temperature: -65 °F to 400 °F (-54 °C to 204 °C)
- Orifice sizes: 0.19" (4.8 mm) to 0.63" (16 mm)
- Factory tested for leaks with nitrogen or compressed air at rated working pressure, with optional helium leak testing to helium leak rate $\leq 1 \times 10^{-8}$ std-cm³/s

Pressure vs. Temperature



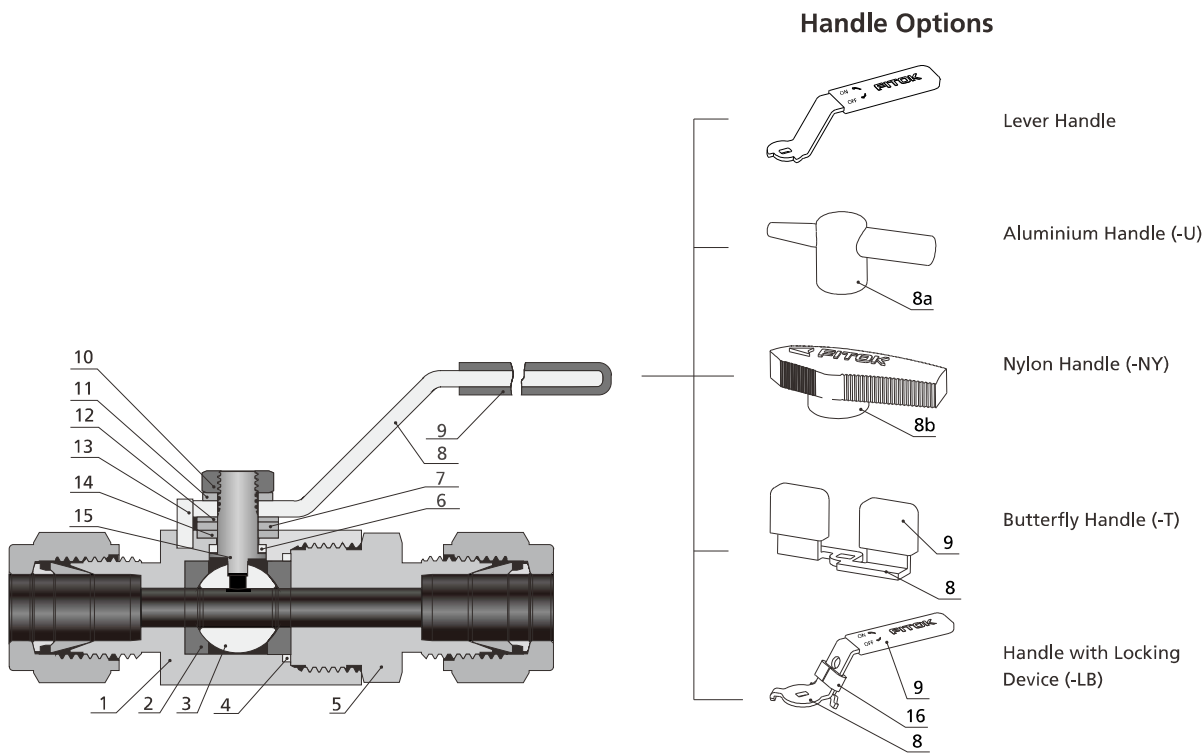
Note: The temperature and pressure rating is based on valves of standard materials.

Fittings
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Technical Information

Process Specification

Item	Process Specification	Special Cleaning and Packaging Process (FC-02)	Ultra High Purity Process (FC-03)
Material		316 SS, 316L SS	316L SS
Flow Path Surface Roughness		Ra 25 µin. (0.6 µm)	Ra 10 µin. (0.25 µm)
Process		Machined	Electropolished
Lubrication		Components in contact with the medium are treated with special lubricants that are oxygen- compatible	

Major Materials of Construction



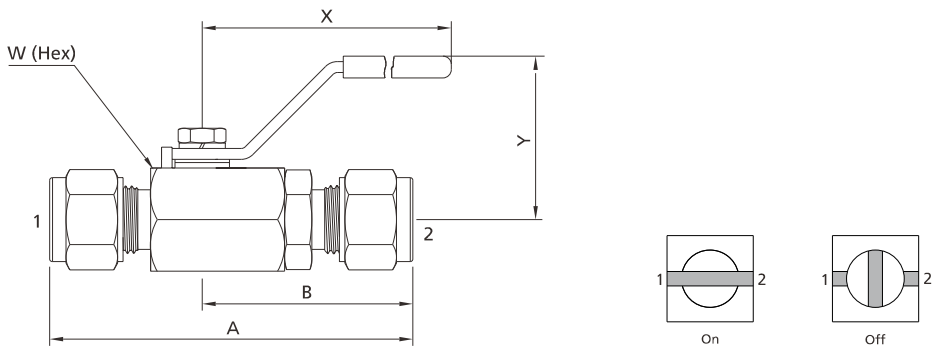
Item	Component	Material/Specification	
		316 SS	316L SS
1	Body	316 SS/A479	316L SS/A479
2	Seat	PFA/D3307	
3	Ball	316 SS/A479	316L SS/A479
4	Gasket	316L SS/A269	
5	End Connection	316 SS/A479	316L SS/A479
6	Lower Packing	Modified PTFE	
7	Washer	316 SS/A479	
8	Handle	304 SS/A240	
8a		Aluminium	
8b		Nylon 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	Modified PTFE	
15	Stem	316 SS/A479	316L SS/A479
16	Lock Block	304 SS/A240	

Note: Components in contact with the media are listed in italics.
For other materials, please contact FITOK Group or our authorized distributors.

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

Dimensions

Dimensions in in. (mm) are for reference only and subject to change.



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Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimensions, in. (mm)				
	Connection 1/2			A	B	W	X	Y
BRP□□-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 (60.0)	1.18 (30)
BRP□□-ML8-05	8 mm FITOK			2.63 (66.8)	1.53 (38.8)			
BRP□□-FL4-05	1/4" FITOK			2.57 (65.2)	1.50 (38.1)			
BRP□□-FL5-05	5/16" FITOK			2.63 (66.8)	1.53 (38.8)			
BRP□□-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)
BRP□□-FL6-07	3/8" FITOK							
BRP□□-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)
BRP□□-ML14-10	14 mm FITOK			3.24 (82.2)	1.87 (47.5)			
BRP□□-FL8-10	1/2" FITOK			3.15 (80.0)	1.83 (46.5)			
BRP□□-FL10-10	5/8" FITOK			3.24 (82.2)	1.87 (47.5)			
BRP□□-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)
BRP□□-ML18-13	18 mm FITOK							
BRP□□-FL12-13	3/4" FITOK							
BRP□□-ML22-16	22 mm FITOK	0.63 (16.0)	17.35	3.96 (100.6)	2.24 (56.8)	1 1/2 (38.1)		2.15 (54.8)
BRP□□-ML25-16	25 mm FITOK			4.31 (109.5)	2.42 (61.5)			
BRP□□-FL16-16	1" FITOK							

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.

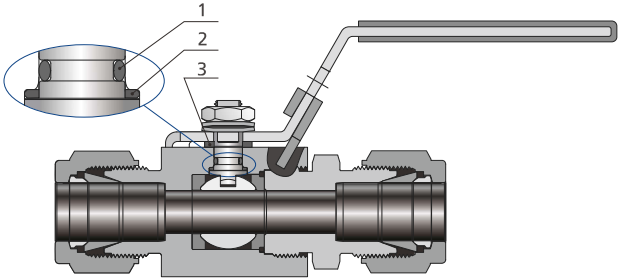
O-Ring Stem Packing Ball Valves

- ⦿ Suitable for applications where adjusting the packing during valve operation is inconvenient.
- ⦿ Standard factory testing includes a sealing test using nitrogen or compressed air at rated working pressure. Optional helium leak testing is available, with a helium leakage rate $\leq 1\times 10^{-6}$ std-cm³/s

Materials of Construction

Item	Component	Material/Specification
1	<i>O-ring</i>	<i>Fluorocarbon FKM, EPDM, Buna N, FFKM</i>
2	<i>Lower Packing</i>	<i>PEEK</i>
3	Seal	PTFE

Note: Wetted components are listed in italics. Other components are consistent with standard materials of construction.



Temperature Range

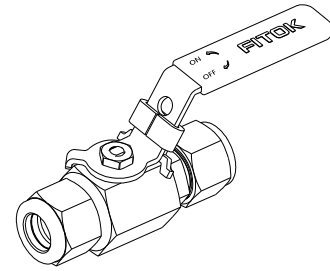
Stem Packing Material	Designator	Temperature Range °F (°C)
<i>Fluorocarbon FKM</i>	VI	5 ~ 400 (-15 ~ 204)
<i>EPDM</i>	E	-40 ~ 250 (-40 ~ 121)
<i>Buna N</i>	B	0 ~ 250 (-17 ~ 121)
<i>FFKM</i>	Z	14 ~ 400 (-10 ~ 204)

Ordering Information

- ⦿ To order an O-ring stem packing ball valve, add the suffix VI to the standard part number.
Exmample: BRPSS-ML12-10VI

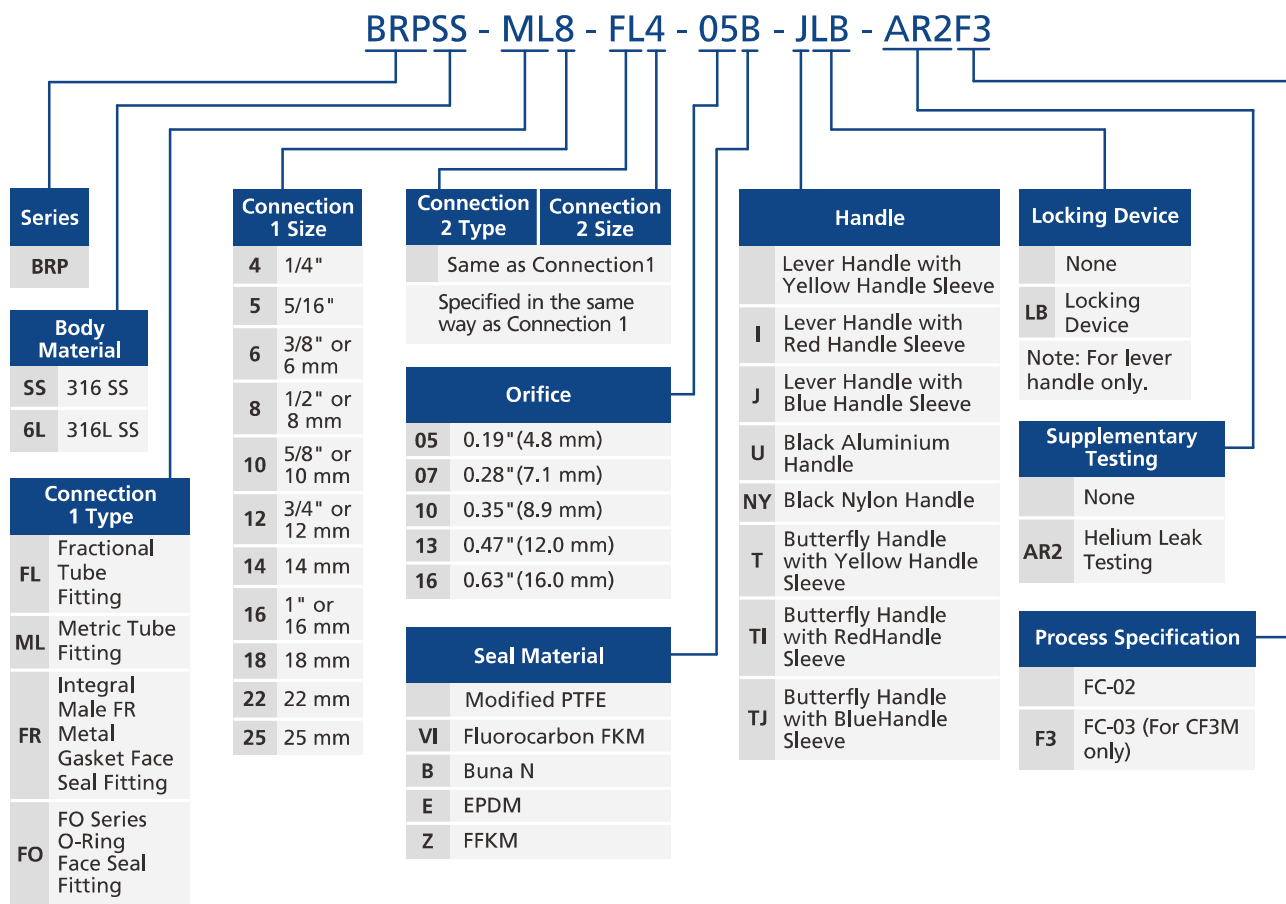
Locking Device

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



Locking Device

Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number.

Not all combinations are available, Should you have any questions, please contact FITOK Group or our authorized distributors.