

# Hex Bar Stock Ball Valves

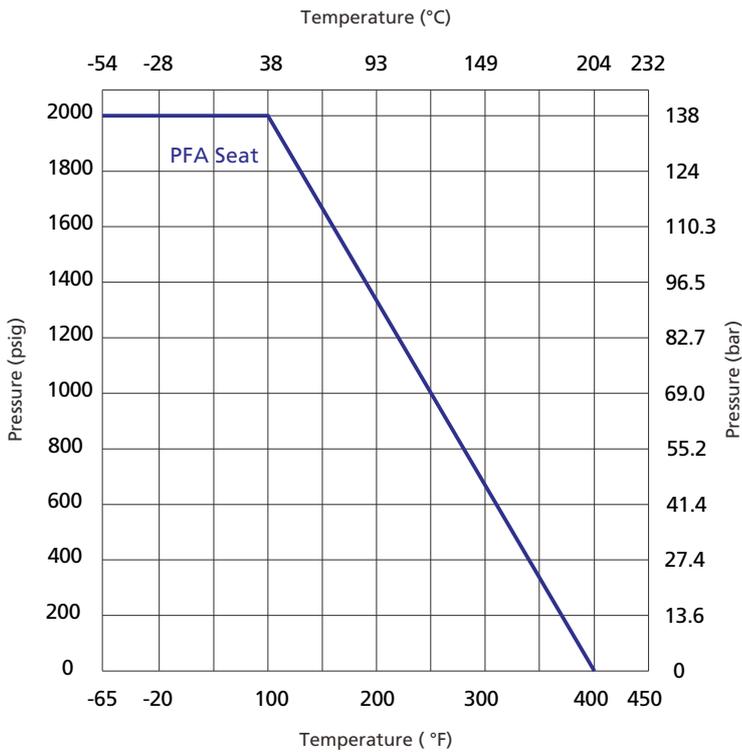
## BRC Series

### Features

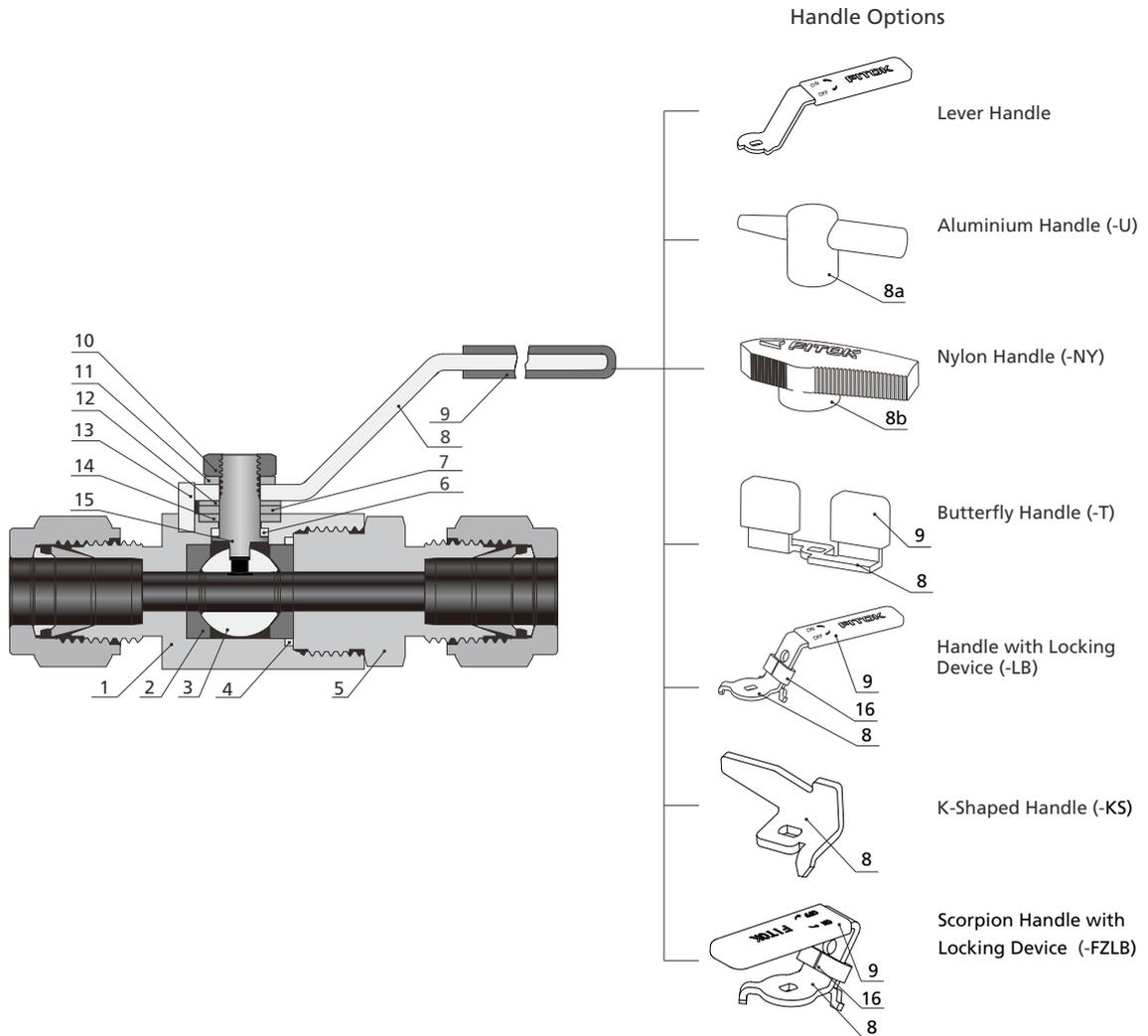
- ⦿ Working pressures up to 2,000 psig (138 bar)
- ⦿ Working temperature: -65°F to 400°F (-54°C to 204°C)
- ⦿ Cv up to 17.35
- ⦿ Compact design for minimal space requirements
- ⦿ Floating ball design compensates for seat wear, improving leak-tight integrity
- ⦿ Blowout-proof stem minimizes failures caused by stem movement or looseness
- ⦿ Multiple handle types available
- ⦿ O-ring stem packing ball valves available, requiring no packing adjustment
- ⦿ Each valve is factory leak-tested with nitrogen or compressed air at rated pressure



### Pressure vs. Temperature



## Standard Materials of Construction



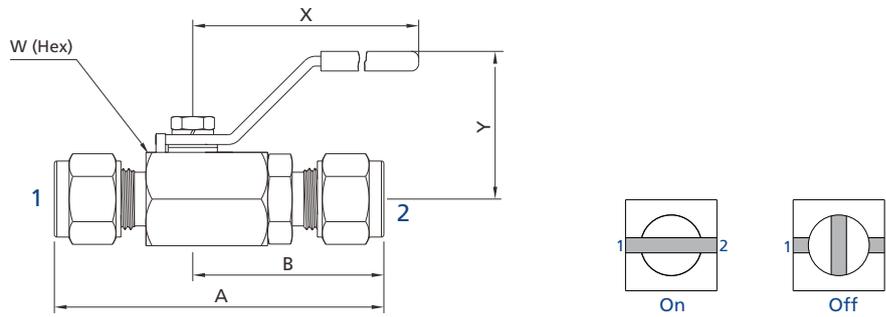
Ball Valves  
Plug Valves

Item	Component	Material/Specification	
1	<i>Body</i>	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>
2	<i>Seat</i>	<i>PFA</i>	
3	<i>Ball</i>	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>
4	<i>Sealing Gasket</i>	<i>316L SS/A269</i>	<i>Alloy 400/B164</i>
5	<i>End Connection</i>	<i>316 SS/A479</i>	<i>Alloy 400/B164</i>
6	<i>Lower Packing</i>	<i>RPTFE</i>	
7	<i>Washer</i>	<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	S17700/A693	
13	Stop Pin <sup>①</sup>	Stainless steel	
14	<i>Upper Packing</i>	<i>RPTFE</i>	
15	<i>Stem</i>	<i>316 SS/A479</i>	<i>Alloy 400/B164</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



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimensions, in. (mm)				
				A	B	W	X	Y
BRC□□-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)
BRC□□-ML8-05	8 mm FITOK			2.63 (66.8)	1.53 (38.8)			
BRC□□-FL4-05	1/4" FITOK			2.57 (65.2)	1.50 (38.1)			
BRC□□-FL5-05	5/16" FITOK			2.63 (66.8)	1.53 (38.8)			
BRC□□-FNS2-05	1/8 Female NPT			1.85 (47.0)	1.08 (27.4)			
BRC□□-FRP2-05	1/8 Female BSPP			2.00 (50.0)	1.14 (29.0)			
BRC□□-FRP4-05	1/4 Female BSPP			2.00 (50.0)	1.14 (29.0)			
BRC□□-FNS4-05	1/4 Female NPT			1.85 (47.0)	1.08 (27.4)			
BRC□□-ML10-07	10 mm FITOK	0.28 (7.1)	2.50	2.87 (72.9)	1.68 (42.7)	7/8 (22.23)	2.36 (60)	1.26 (32)
BRC□□-FL6-07	3/8" FITOK			2.03 (51.6)	1.18 (30.0)			
BRC□□-FRP6-07	3/8 Female BSPP			2.03 (51.6)	1.18 (30.0)			
BRC□□-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)
BRC□□-ML12-10	12 mm FITOK			3.24 (82.2)	1.87 (47.5)			
BRC□□-ML14-10	14 mm FITOK			3.15 (80.0)	1.83 (46.5)			
BRC□□-FL8-10	1/2" FITOK			3.24 (82.2)	1.87 (47.5)			
BRC□□-FL10-10	5/8" FITOK			2.08 (53.0)	1.12 (28.5)	15/16 (24.0)		
BRC□□-FRP8-10	1/2 Female BSPP			2.08 (53.0)	1.12 (28.5)			
BRC□□-FNS8-10	1/2 Female NPT	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)
BRC□□-ML16-13	16 mm FITOK			3.13 (79.5)	1.95 (49.5)			
BRC□□-ML18-13	18 mm FITOK			3.13 (79.5)	1.95 (49.5)			
BRC□□-FL12-13	3/4" FITOK			3.96 (100.6)	2.24 (56.8)	1 1/2 (38.1)		
BRC□□-FRP12-13	3/4 Female BSPP			4.31 (109.5)	2.42 (61.5)			
BRC□□-FNS12-13	3/4 Female NPT	3.68 (93.4)	2.14 (54.3)					
BRC□□-ML22-16	22 mm FITOK	3.43 (87.1)	2.01 (51.1)					
BRC□□-ML25-16	25 mm FITOK	0.63 (16.0)	17.35	4.31 (109.5)	2.42 (61.5)	1 1/2 (38.1)	3.94 (100)	2.15 (54.8)
BRC□□-FL16-16	1" FITOK			3.68 (93.4)	2.14 (54.3)			
BRC□□-FRP16-16	1 Female BSPP			3.43 (87.1)	2.01 (51.1)			
BRC□□-FNS16-16	1 Female NPT			3.43 (87.1)	2.01 (51.1)			

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.

## O-Ring Stem Packing Ball Valves

☉ Suitable for applications where adjusting the packing during valve operation is inconvenient.

### 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>
2	Seal	PTFE

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>	<i>VI</i>	<i>5 ~ 400 (-15 ~ 204)</i>
<i>EPDM</i>	<i>E</i>	<i>-40 ~ 250 (-40 ~ 121)</i>
<i>Buna N</i>	<i>B</i>	<i>0 ~ 250 (-17 ~ 121)</i>
<i>FFKM</i>	<i>Z</i>	<i>14 ~ 400 (-10 ~ 204)</i>

### Ordering Information

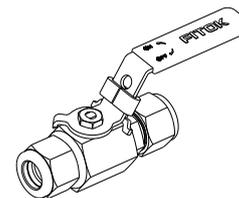
☉ To order an O-ring upper seal ball valve, add the suffix VI to the standard part number.

Example: BRCSS-ML12-10VI

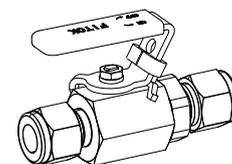
## Locking Device

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

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



BRCSS-ML12-10-LB

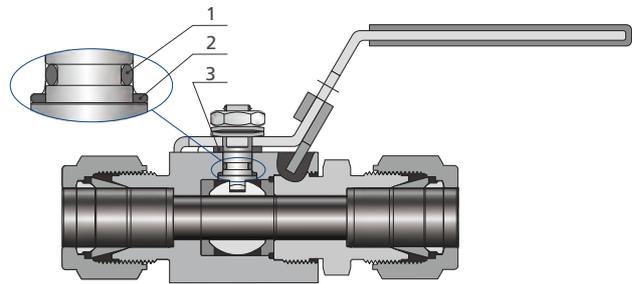


BRCSS-ML12-10-FZLB

## Seal Kits

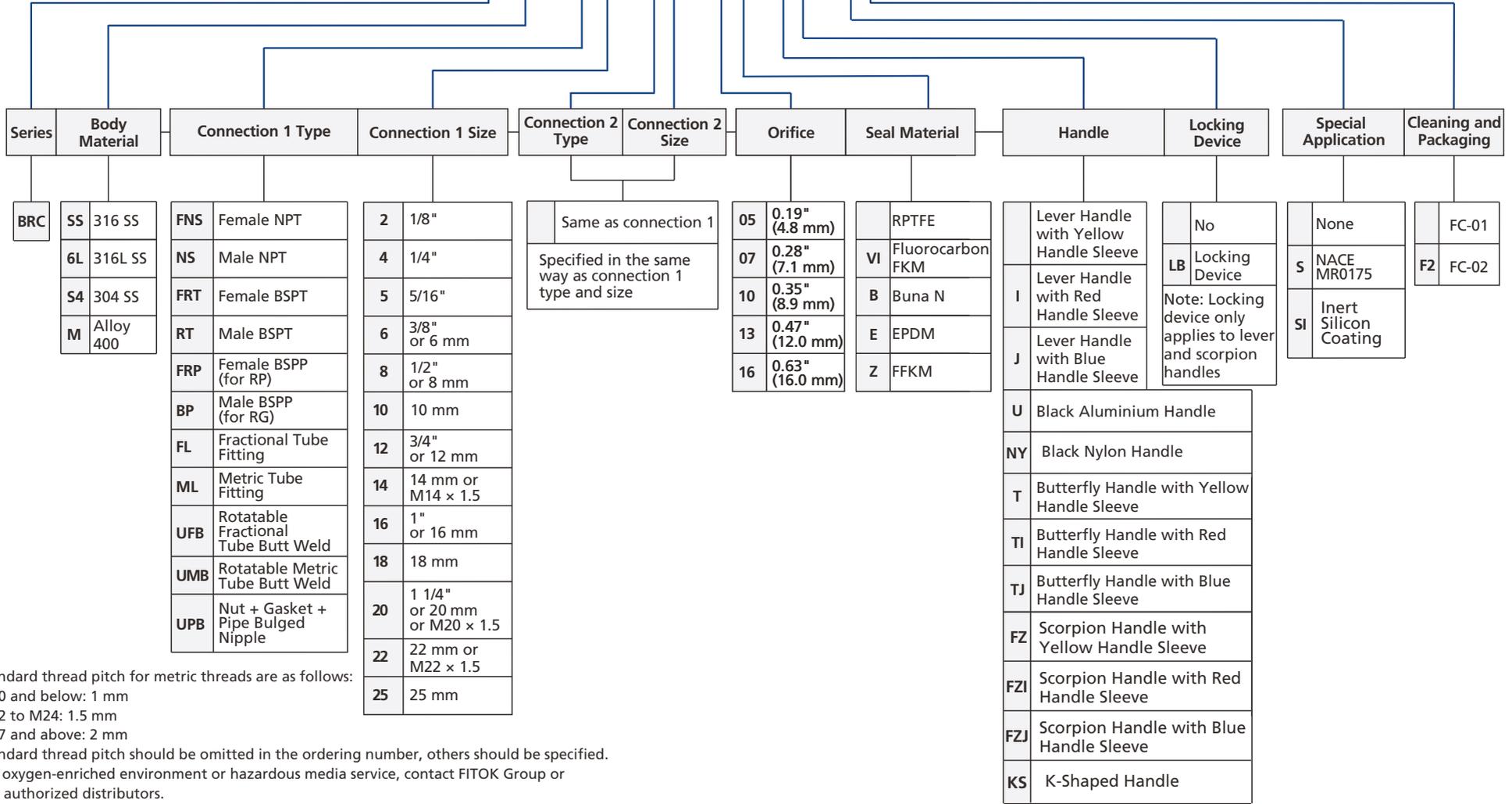
Valve Orifice	Basic Seal Kit Ordering Number	Content
05	BRCSS-05-RK	Seat, sealing gasket, ball, lower packing, upper packing, instructions
07	BRCSS-07-RK	
10	BRCSS-10-RK	
13	BRCSS-13-RK	
16	BRCSS-16-RK	

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: BRCSS4-05-RK



# Ordering Number Description

**BRCSS - ML8 - FL4 - 05B - JLB - SF2**



- 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.