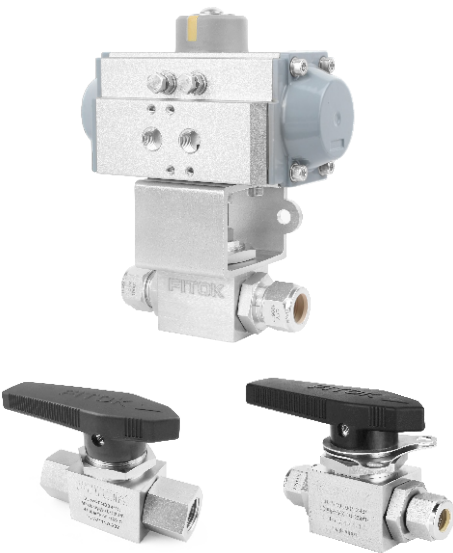


Alternative Fuel Service (AFS) Ball Valves

BU Series

Features

- Working pressures up to 6,000 psig (414 bar)
- Working temperature: -40 to 250°F (-40 to 121°C)
- Cv up to 13.8
- No packing adjustment required
- Field repairable with seal kit
- Floating ball design paired with disc-spring-loaded seats to compensate for seat wear and pressure/temperature changes, improving leak-tight integrity
- Each valve is factory leak-tested with nitrogen or compressed air at rated pressure
- Available with ECE R110 type approval



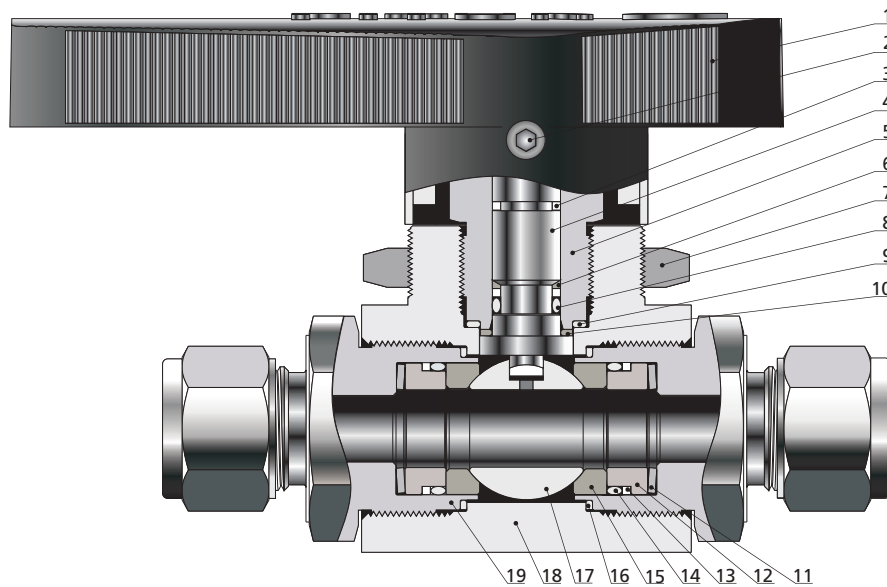
Ball Valves
Plug Valves

Pressure VS Temperature Ratings

End Connection	FITOK Tube Fitting			Female Pipe	
	3/8, 1/2 in., 12 mm	3/4 in., 16 mm	1 in.	3/8, 1/2 in.	3/4 in.
Temperature °F (°C)	Working Pressure, psig (bar)				
-40 (-40) ~ 250 (121)	6000 (414)	5800 (400)	4700 (324)	6000 (414)	6000 (414)

Note: Ratings are based on valves of standard materials.

Standard Materials of Construction

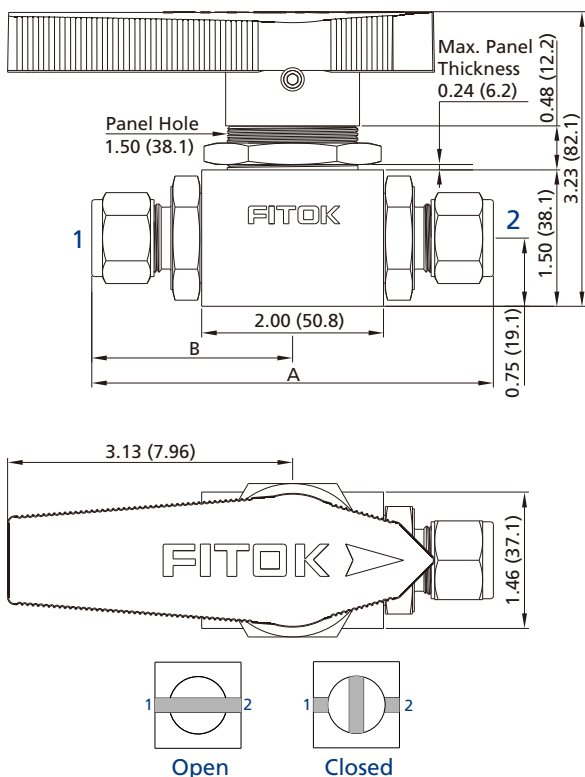


Item	Component	Material/ASTM Specification
1	Handle	Nylon with stainless steel insert
2	Set screw	Zinc-plated carbon steel
3	<i>Guide ring</i>	<i>PTFE/D1710</i>
4	<i>Stem</i>	<i>316 SS/A479</i>
5	<i>Packing bolt</i>	<i>316 SS/A479</i>
6	<i>Stem backup ring</i>	<i>PEEK</i>
7	Lock nut	316 SS/A479
8	<i>Stem O-ring</i>	<i>Low-temperature fluorocarbon</i>
9	<i>Packing bolt washer</i>	<i>Silver-plated 316 SS/A269</i>
10	<i>Thrust washer</i>	<i>PEEK</i>
11	<i>Coned-disc spring</i>	<i>316 SS/A240</i>
12	<i>Seat gland</i>	<i>316 SS/A479</i>
13	<i>Seat backup ring</i>	<i>PTFE/D1710</i>
14	<i>Seat O-ring</i>	<i>Low-temperature fluorocarbon</i>
15	<i>Seat</i>	<i>PEEK</i>
16	<i>End connection gasket</i>	<i>Silver-plated 316 SS/A269</i>
17	<i>Ball</i>	<i>316 SS/A479</i>
18	<i>Body</i>	<i>316 SS/A479</i>
19	<i>End connection</i>	<i>316 SS/A479</i>
<i>Lubricant</i>		<i>PTFE-based</i>

Note: Wetted components listed in italics.

Dimensions

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



Ordering Number	Connection ^① Type and Size	Cv	Orifice in. (mm)	Dimensions in. (mm)	
				A	B
BUSS-ML10-P12	10 mm FITOK	4.2	0.31 (7.9)	4.21 (107)	2.11 (53.5)
BUSS-ML12-P12	12 mm FITOK	5.2	0.41 (10.3)	4.42 (112.2)	2.21 (56.1)
BUSS-ML16-P12	16 mm FITOK	12.4	0.47 (12.0)	4.42 (112.3)	2.21 (56.2)
BUSS-FL6-P12	3/8" FITOK	4.0	0.28 (7.1)	4.20 (106.6)	2.10 (53.3)
BUSS-FL8-P12	1/2" FITOK	7.2	0.41 (10.3)	4.40 (111.8)	2.20 (55.9)
BUSS-FL12-P12	3/4" FITOK	7.1	0.47 (12.0)	4.50 (114.3)	2.46 (62.5)
BUSS-FL16-P12	1" FITOK	6.5	0.47 (12.0)	4.93 (125.1)	2.25 (57.1)
BUSS-FNS6-P12	3/8" Female NPT	11.0	0.47 (12.0)	4.01 (102)	2.00 (50.8)
BUSS-FNS8-P12	1/2" Female NPT	13.8		4.01 (102)	2.00 (50.8)
BUSS-FNS12-P12	3/4" Female NPT	7.8		4.13 (105)	2.06 (52.3)
BUSS-FRT8-P12	1/2" Female BSPT	13.8		4.01 (102)	2.00 (50.8)

Note: Dimensions shown with FITOK tube fitting nuts finger-tight. Valves can be ordered with two different end connections. Contact FITOK Group or our authorized distributors. Not recommended for panel mounting; not available with pneumatic actuator.

CNG/NGV Application

ECE R110 Manual Service Valve Type Approval

Classification: Class 0

Temperature: -40 to 248°F (-40 to 120°C)

Pressure: 3770 psig (260 bar)

To order, add **-R110** to the valve ordering number.

Example: BUSS-ML12-P12-**R110**

Seal kit for field replacement is available, see "Seal Kits".

Seal Kits

Seal Kit Name	Seal Kit Ordering Number	Seal Kit Content
Seat seal kit	SS-BU-P-SE	Seat, seat backup ring, seat O-ring, coned-disc spring, end connection gasket, instructions.
Stem and seat seal kit	SS-BU-P	Guide ring, stem backup ring, stem O-ring, packing bolt washer, thrust washer, seat, seat backup ring, seat O-ring, coned-disc spring, end connection gasket, instructions

Locking Device

Locking Device 1

- ⦿ Locks BU series valves, featuring a locking hole diameter of 0.21 in (5.2 mm).
- ⦿ To order a ball valve with Locking Device 1, add - **L** to the valve ordering number.
Example: BUSS-ML12-P12- **L**

Locking Device 2

- ⦿ Locks BU series valves, featuring a locking hole diameter of 0.34 in (8.7 mm).
- ⦿ To order a ball valve with Locking Device 2, add - **LP** to the valve ordering number.
Example: BUSS-ML12-P12-**LP**
- ⦿ No impact on panel mounting.
- ⦿ Locking device kits are also available for individual purchase to add locking functionality to your existing standard manual ball valves, with ordering information as follows:

Locking Device 2 Kits

Name	Kit Ordering Number	Content
Locking Device Kits	BU54-12-LP-RK	Upper lock plate, lower lock plate, handle, hexagon socket set screws



Locking Device 1



Locking Device 2

Ball Valve without Handle

- ⦿ Ball Valve without handle can be directly connected to the FITOK actuator assembly.
- ⦿ To order, please add -**AM** to the valve ordering number.
Example: BUSS-FL8-P12-**AM**

Ordering Number Description

BUSS – ML12 – FL12 – P12 – OHQL – SF2

Series	Body Material	Connection 1 Type	Connection 1 Size	Connection 1 Type	Connection 2 Size	Seat Material	Orifice Size	Handle/Actuator	Actuator	Locking Device	Special Application	Cleaning and Packaging
BU	SS	FNS	6 3/8"	Same as connection 1	P PEEK	12	0.472" (12.0 mm) Max.	Black Nylon Handle	None	No	None	FC-01
		FRT	8 1/2"					Red Nylon Handle	H Mechanical Limit Switch	L Locking Device 1	R110 ECE R110	FC-02
		RT	10 10 mm	Specified in the same way as connection 1				Green Nylon Handle	N Inductive Limit Switch	LP Locking Device 2	S NACE MR0175	
		FL	12 3/4" or 12 mm					Blue Nylon Handle	Q Solenoid Valve			
		ML	16 1" or 16 mm					Black Aluminum Handle	HQ Mechanical Limit Switch and Solenoid Valve			
									NQ Inductive Limit Switch and Solenoid Valve			
								AM Without Handle				
								C 90° Normally Closed Pneumatic Actuator				
								O 90° Normally Open Pneumatic Actuator				
								D 90° Double Acting Pneumatic Actuator				

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

Standard thread pitch is omitted in ordering number.

For special thread pitch, specify in the ordering number.

2. For oxygen-enriched environment or hazardous media service, contact FITOK Group or our authorized distributors.

3. 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.

4. For more details about ball valves with pneumatic actuators, refer to Actuated Ball Valves.

5. Certifications do not include attachments to the valve, such as actuators or a different handle mechanism.