

# Check Valves

10C, 10CO Series: 10,000 psig (690 bar)

15C, 15CO Series: 15,000 psig (1034 bar)

20C, 20CO Series: 20,000 psig (1379 bar)

60C, 60CO Series: 60,000 psig (4137 bar)



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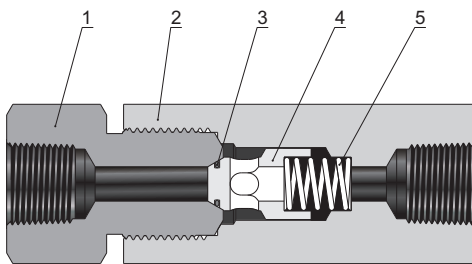
# 10C Series: 10,000 psig (690 bar)

## Pipe O-ring Check Valves

### Features

- Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)
- Fluorocarbon FKM O-ring for operation from 0°F to 400°F (-17.8°C to 204°C); other materials of O-rings available
- Provide unidirectional flow and tight shut-off for liquids and gases with high reliability. When differential drops below cracking pressure, valve shuts off (Not for use as relief valve)
- Resilient O-ring seat design for noise-free closing and zero leakage

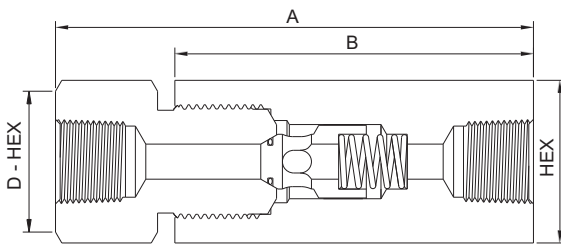
### Standard Materials of Construction



Item	Component	Material Grade
1	<i>Cover Gland</i>	316 SS
2	<i>Valve Body</i>	316 SS
3	<i>O-ring</i>	Fluorocarbon FKM
4	<i>Poppet</i>	316 SS
5	<i>Spring</i>	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

Wetted components listed in italics.

### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)				Working Pressure psig (bar)
				A	B	D - HEX	HEX	
10CSS-FNS12	FNS12	0.52 (13.21)	4.70	6.11 (155.3)	4.75 (120.7)	1.5 (38.1)	1.75 (44.5)	10,000 (690)
10CSS-FNS16	FNS16	0.69 (17.53)	7.40	7.33 (186.2)	5.75 (146.1)	1.75 (44.5)	1.88 (47.8)	10,000 (690)

NOTES: 1. For other pipe connections, please refer to 15C Series Pipe O-ring Check Valves for details.  
 2. Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

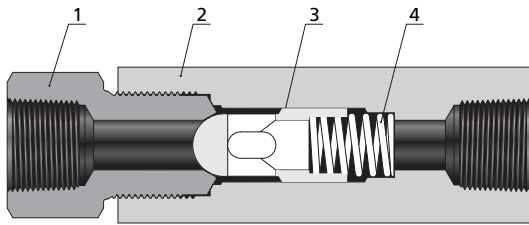
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# 10CO Series: 10,000 psig (690 bar) Pipe Ball Check Valves

## Features

- Working temperature range: -110°F to 400°F (-79°C to 204°C)
- Prevent reverse flow where leak-tight shut-off is not mandatory (Not for use as relief valve)
- An integral design of the ball and poppet to assure positive, in-line seating without "chatter".  
Poppet designed essentially for axial flow with minimum pressure drop
- Optional materials of cover gland and ball poppet for longer life

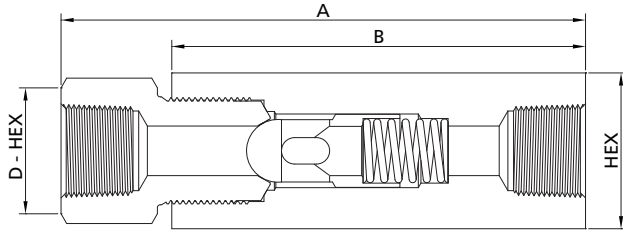
## Standard Materials of Construction



Item	Component	Material Grade
1	<i>Cover Gland</i>	316 SS
2	<i>Valve Body</i>	316 SS
3	<i>Ball Poppet</i>	316 SS
4	<i>Spring</i>	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

## Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)				Working Pressure psig (bar)
				A	B	D - HEX	HEX	
10COSS-FNS12	FNS12	0.52 (13.21)	4.70	6.11 (155.3)	4.75 (120.7)	1.5 (38.1)	1.75 (44.5)	10,000 (690)
10COSS-FNS16	FNS16	0.69 (17.53)	7.40	7.33 (186.2)	5.75 (146.1)	1.75 (44.5)	1.88 (47.8)	10,000 (690)

- NOTES: 1. For other pipe connections, please refer to 15CO Series Pipe Ball Check Valves for details.  
2. Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

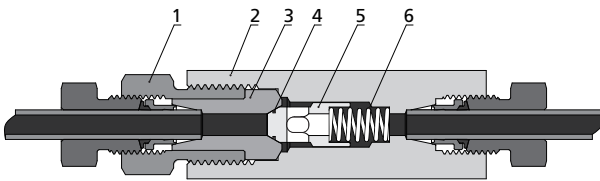
# 15C Series: 15,000 psig (1034 bar)

## O-ring Check Valves

### Features

- Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)
- Fluorocarbon FKM O-ring for operation from 0°F to 400°F (-17.8°C to 204°C); other materials of O-rings available
- Tubing sizes available in 1/4", 3/8" and 1/2"
- Provide unidirectional flow and tight shut-off for liquids and gases with high reliability. When differential drops below cracking pressure, valve shuts off (Not for use as relief valve)
- Resilient O-ring seat design for noise-free closing and zero leakage

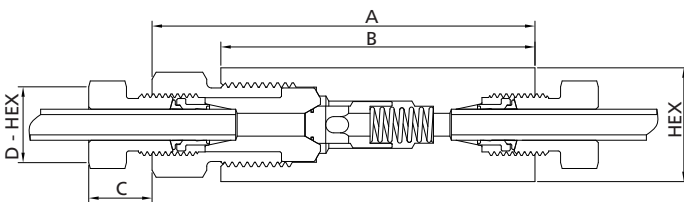
### Standard Materials of Construction



Item	Component	Material Grade
1	Cover Gland	316 SS
2	Valve Body	316 SS
3	Cover	316SS
4	O-ring	Fluorocarbon FKM
5	Poppet	316 SS
6	Spring	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

Wetted components listed in italics.

### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)
				A	B	C	D - HEX	HEX	
15CSS-DFF4	DFF4	0.188 (4.78)	0.63	3.35 (85)	2.72 (69.2)	0.52 (13.3)	0.63 (16.0)	0.81 (20.6)	15,000 (1034)
15CSS-DFF6	DFF6	0.250 (6.35)	1.70	3.72 (94.6)	3.13 (79.6)	0.53 (13.5)	0.75 (19.1)	1.00 (25.4)	15,000 (1034)
15CSS-DFF8	DFF8	0.36 (9.12)	2.30	4.41 (112.0)	3.68 (93.5)	0.60 (15.3)	0.93 (23.6)	1.38 (35.1)	15,000 (1034)

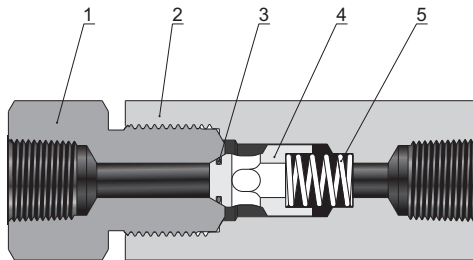
NOTE: Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

# Pipe O-ring Check Valves

## Features

- ⦿ Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)
- ⦿ Fluorocarbon FKM O-ring for operation from 0°F to 400°F (-17.8°C to 204°C); other materials of O-rings available
- ⦿ Provide unidirectional flow and tight shut-off for liquids and gases with high reliability. When differential drops below cracking pressure, valve shuts off (Not for use as relief valve)
- ⦿ Resilient O-ring seat design for noise-free closing and zero leakage

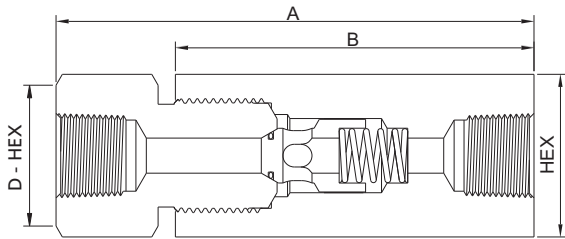
## Standard Materials of Construction



Item	Component	Material Grade
1	<i>Cover Gland</i>	316 SS
2	<i>Valve Body</i>	316 SS
3	<i>O-ring</i>	Fluorocarbon FKM
4	<i>Poppet</i>	316 SS
5	<i>Spring</i>	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

## Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)				Working Pressure psig (bar)
				A	B	D - HEX	HEX	
15CSS-FNS4	FNS4	0.12 (3.05)	0.28	3.30 (83.8)	2.38 (60.3)	0.94 (23.8)	0.94 (23.8)	15,000 (1034)
15CSS-FNS6	FNS6	0.22 (5.59)	0.84	3.95 (100.3)	2.88 (73.2)	1.13 (28.6)	1.13 (28.6)	15,000 (1034)
15CSS-FNS8	FNS8	0.36 (9.12)	2.30	5.07 (128.9)	3.88 (98.6)	1.38 (34.9)	1.38 (34.9)	15,000 (1034)

NOTE: Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

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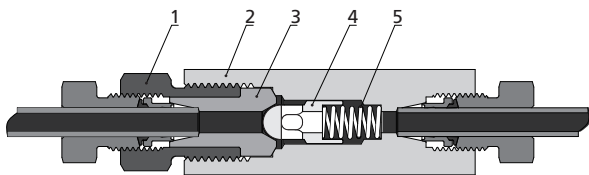
# 15CO Series: 15,000 psig (1034 bar)

## Ball Check Valves

### Features

- ⦿ Working temperature range: -110°F to 800°F (-79°C to 427°C)
- ⦿ Tubing sizes available in 1/4", 3/8" and 1/2"
- ⦿ Prevent reverse flow where leak-tight shut-off is not mandatory (Not for use as relief valve)
- ⦿ An integral design of the ball and poppet to assure positive, in-line seating without "chatter".  
 Poppet designed essentially for axial flow with minimum pressure drop
- ⦿ Optional materials of cover and ball poppet for longer life

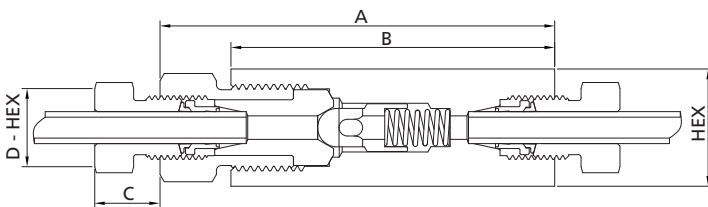
### Standard Materials of Construction



Item	Component	Material Grade
1	Cover Gland	316 SS
2	Valve Body	316 SS
3	Cover	316 SS
4	Ball Poppet	316 SS
5	Spring	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

Wetted components listed in italics.

### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)
				A	B	C	D - HEX	HEX	
15COSS-DFF4	DFF4	0.188 (4.78)	0.63	3.35 (85)	2.72 (69.2)	0.52 (13.3)	0.63 (16.0)	0.81 (20.6)	15,000 (1034)
15COSS-DFF6	DFF6	0.250 (6.35)	1.70	3.72 (94.6)	3.13 (79.6)	0.53 (13.5)	0.75 (19.1)	1.00 (25.4)	15,000 (1034)
15COSS-DFF8	DFF8	0.36 (9.12)	2.30	4.41 (112.0)	3.68 (93.5)	0.60 (15.3)	0.93 (23.6)	1.38 (35.1)	15,000 (1034)

NOTE: Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

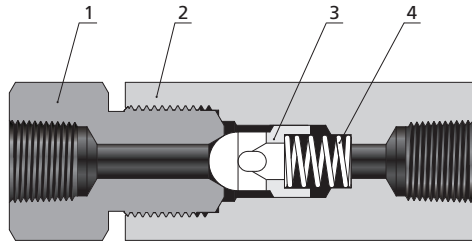
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# Pipe Ball Check Valves

## Features

- ⦿ Working temperature range: -110°F to 400°F (-79°C to 204°C)
- ⦿ Prevent reverse flow where leak-tight shut-off is not mandatory (Not for use as relief valve)
- ⦿ An integral design of the ball and poppet to assure positive, in-line seating without "chatter".  
 Poppet is designed essentially for axial flow with minimum pressure drop
- ⦿ Optional materials of cover gland and ball poppet for longer life

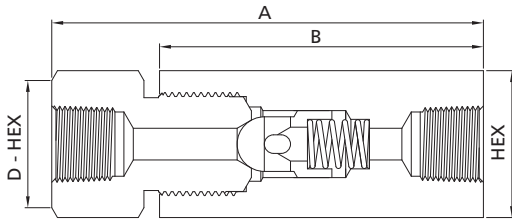
## Standard Materials of Construction



Item	Component	Material Grade
1	<i>Cover Gland</i>	316 SS
2	<i>Valve Body</i>	316 SS
3	<i>Ball Poppet</i>	316 SS
4	<i>Spring</i>	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

## Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)				Working Pressure psig (bar)
				A	B	D - HEX	HEX	
15COSS-FNS4	FNS4	0.12 (3.05)	0.28	3.30 (83.8)	2.38 (60.3)	0.94 (23.8)	0.94 (23.8)	15,000 (1034)
15COSS-FNS6	FNS6	0.22 (5.59)	0.84	3.95 (100.3)	2.88 (73.2)	1.13 (28.6)	1.13 (28.6)	15,000 (1034)
15COSS-FNS8	FNS8	0.36 (9.12)	2.30	5.07 (128.9)	3.88 (98.6)	1.38 (34.9)	1.38 (34.9)	15,000 (1034)

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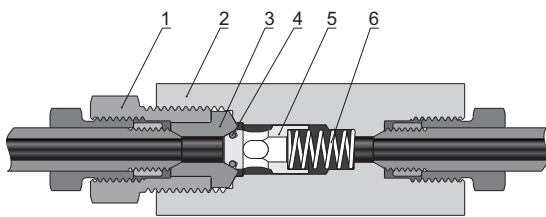
# 20C Series: 20,000 psig (1379 bar)

## O-ring Check Valves

### Features

- ⦿ Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)
- ⦿ Fluorocarbon FKM O-ring for operation from 0°F to 400°F (-17.8°C to 204°C); other materials of O-rings available
- ⦿ Tubing sizes available from 1/4" to 1"
- ⦿ Provide unidirectional flow and tight shut-off for liquids and gases with high reliability. When differential drops below cracking pressure, valve shuts off (Not for use as relief valve)
- ⦿ Resilient O-ring seat design for noise-free closing and zero leakage

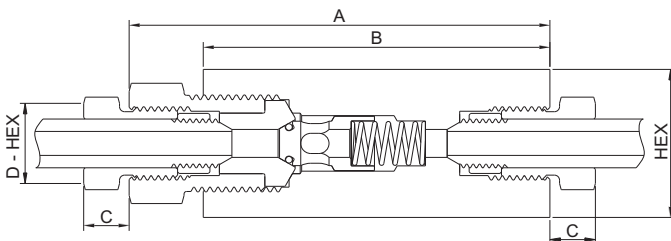
### Standard Materials of Construction



Item	Component	Material Grade
1	Cover Gland	316 SS
2	Valve Body	316 SS
3	Cover	316 SS
4	O-ring	<i>Fluorocarbon FKM</i>
5	Poppet	316 SS
6	Spring	<i>300 Series Stainless Steel</i>
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)
				A	B	C	D - HEX	HEX	
20CSS-MF4	MF4	0.125 (3.18)	0.28	2.94 (74.7)	2.50 (63.5)	0.38 (9.7)	0.50 (12.7)	0.81 (20.6)	20,000 (1379)
20CSS-MF6	MF6	0.218 (5.54)	0.84	3.12 (79.3)	2.62 (66.6)	0.44 (11.2)	0.62 (15.8)	1.00 (25.4)	20,000 (1379)
20CSS-MF9	MF9	0.359 (9.12)	2.30	4.18 (106.2)	3.50 (88.9)	0.55 (14.0)	0.94 (23.9)	1.38 (35.1)	20,000 (1379)
20CSS-MF12	MF12	0.516 (13.11)	4.70	5.50 (139.7)	4.75 (120.7)	0.60 (15.2)	1.19 (30.2)	1.75 (44.5)	20,000 (1379)
20CSS-MF16	MF16	0.688 (17.48)	7.40	6.91 (175.6)	5.75 (146.1)	0.74 (18.8)	1.38 (35.1)	2.12 (53.9)	20,000 (1379)

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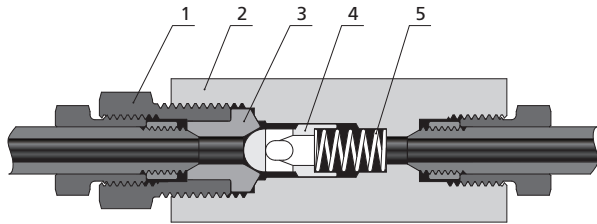
# 20CO Series: 20,000 psig (1379 bar)

## Ball Check Valves

### Features

- ⦿ Working temperature range: -110°F to 1200°F (-79°C to 649°C)
- ⦿ Tubing sizes available from 1/4" to 1"
- ⦿ Prevent reverse flow where leak-tight shut-off is not mandatory (Not for use as relief valve)
- ⦿ An integral design of the ball and poppet to assure positive, in-line seating without "chatter".  
 Poppet is designed essentially for axial flow with minimum pressure drop
- ⦿ Optional materials of cover and ball poppet for longer life

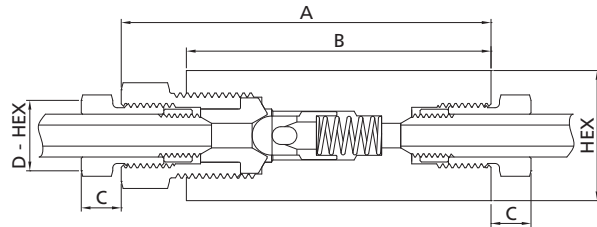
### Standard Materials of Construction



Item	Component	Material Grade
1	Cover Gland	316 SS
2	Valve Body	316 SS
3	Cover	316 SS
4	Ball Poppet	316 SS
5	Spring	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)
				A	B	C	D - HEX	HEX	
20COSS-MF4	MF4	0.125 (3.18)	0.28	2.94 (74.7)	2.50 (63.5)	0.38 (9.7)	0.50 (12.7)	0.81 (20.6)	20,000 (1379)
20COSS-MF6	MF6	0.218 (5.54)	0.84	3.12 (79.3)	2.62 (66.6)	0.44 (11.2)	0.62 (15.8)	1.00 (25.4)	20,000 (1379)
20COSS-MF9	MF9	0.359 (9.12)	2.30	4.18 (106.2)	3.50 (88.9)	0.55 (14.0)	0.94 (23.9)	1.38 (35.1)	20,000 (1379)
20COSS-MF12	MF12	0.516 (13.11)	4.70	5.50 (139.7)	4.75 (120.7)	0.60 (15.2)	1.19 (30.2)	1.75 (44.5)	20,000 (1379)
20COSS-MF16	MF16	0.688 (17.48)	7.40	6.91 (175.6)	5.75 (146.1)	0.74 (18.8)	1.38 (35.1)	2.12 (53.9)	20,000 (1379)

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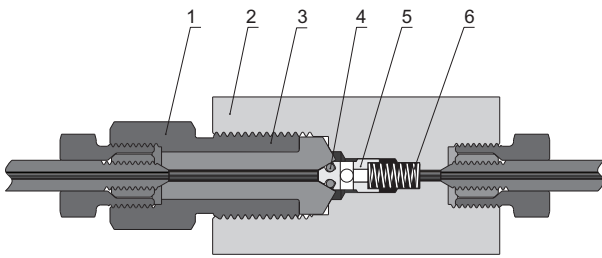
# 60C Series: 60,000 psig (4137 bar)

## O-ring Check Valves

### Features

- Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)
- Fluorocarbon FKM O-ring for operation from 0°F to 400°F (-17.8°C to 204°C); other materials of O-rings available
- Tubing sizes available from 1/4" to 9/16"
- Provide unidirectional flow and tight shut-off for liquids and gases with high reliability. When differential drops below cracking pressure, valve shuts off (Not for use as relief valve)
- Resilient O-ring seat design for noise-free closing and zero leakage

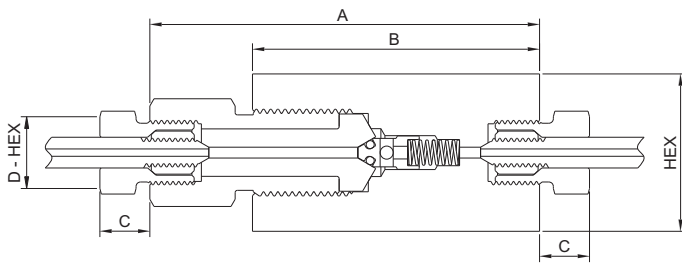
### Standard Materials of Construction



Item	Component	Material Grade
1	Cover Gland	316 SS
2	Valve Body	316 SS
3	Cover	316 SS
4	O-ring	Fluorocarbon FKM
5	Poppet	316 SS
6	Spring	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

Wetted components listed in italics.

### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)
				A	B	C	D - HEX	HEX	
60CSS-HF4	HF4	0.094 (2.39)	0.15	3.38 (85.9)	2.50 (63.5)	0.47 (11.9)	0.63 (16.0)	1.18 (30.0)	60,000 (4137)
60CSS-HF6	HF6	0.125 (3.18)	0.28	3.86 (98.1)	2.80 (71.1)	0.61 (15.5)	0.81 (20.6)	1.18 (30.0)	60,000 (4137)
60CSS-HF9	HF9	0.187 (4.75)	0.63	4.62 (117.4)	3.38 (85.9)	0.95 (24.1)	1.12 (28.5)	1.50 (38.1)	60,000 (4137)

NOTE: Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

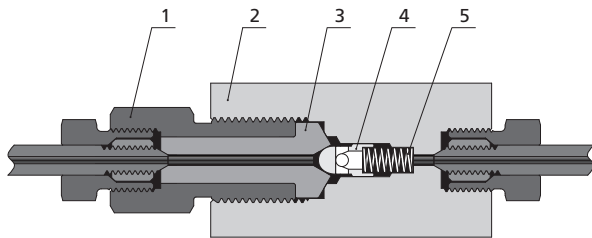
# 60CO Series: 60,000 psig (4137 bar)

## Ball Check Valves

### Features

- ⦿ Working temperature range: -110°F to 1200°F (-79°C to 649°C)
- ⦿ Tubing sizes available from 1/4" to 9/16"
- ⦿ Prevent reverse flow where leak-tight shut-off is not mandatory (Not for use as relief valve)
- ⦿ An integral design of the ball and poppet to assure positive, in-line seating without "chatter".  
 Poppet is designed essentially for axial flow with minimum pressure drop
- ⦿ Optional materials of cover and ball poppet for longer life

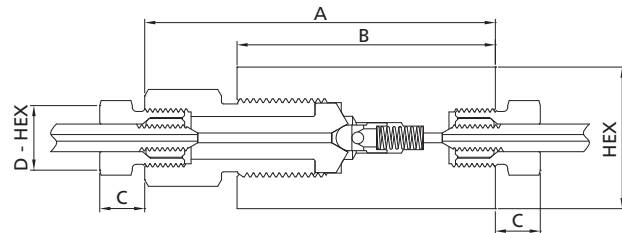
### Standard Materials of Construction



Item	Component	Material Grade
1	Cover Gland	316 SS
2	Valve Body	316 SS
3	Cover	316 SS
4	Ball Poppet	316 SS
5	Spring	300 Series Stainless Steel
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

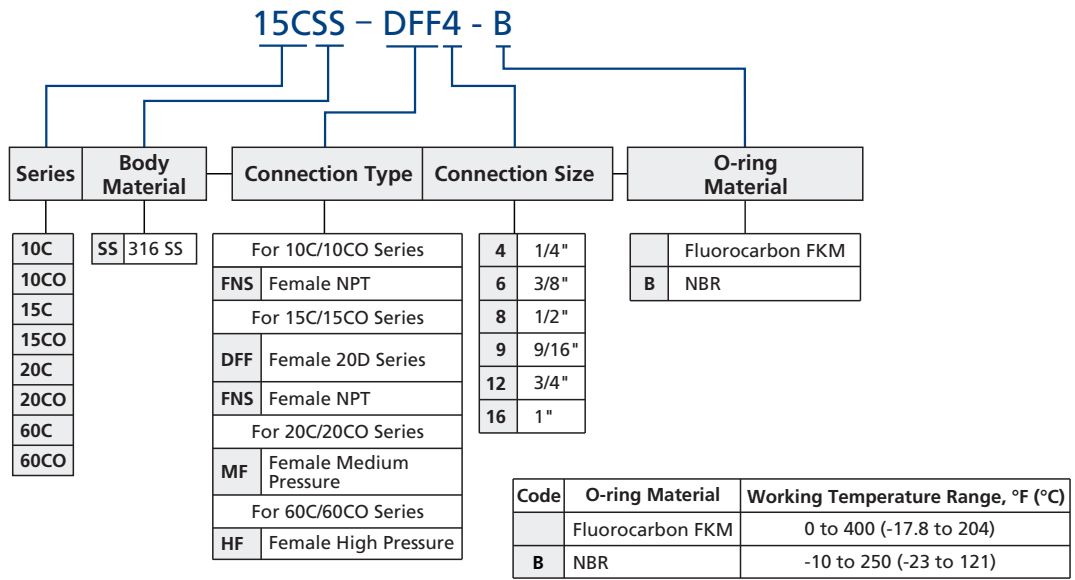
### Ordering Information and Dimensions



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)
				A	B	C	D - HEX	HEX	
60COSS-HF4	HF4	0.094 (2.39)	0.15	3.38 (85.9)	2.50 (63.5)	0.47 (11.9)	0.63 (16.0)	1.18 (30.0)	60,000 (4137)
60COSS-HF6	HF6	0.125 (3.18)	0.28	3.86 (98.1)	2.80 (71.1)	0.61 (15.5)	0.81 (20.6)	1.18 (30.0)	60,000 (4137)
60COSS-HF9	HF9	0.187 (4.75)	0.63	4.62 (117.4)	3.38 (85.9)	0.95 (24.1)	1.19 (30.16)	1.50 (38.1)	60,000 (4137)

NOTE: Dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

# Ordering Number Description



NOTES: 1. For more details regarding 20D Series and Medium/High Pressure connections, please see **Connection Information** on I-02.  
 2. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

Fittings
Tubing
Quick Couplings
Line Filters
Valves
Sour Service Products
Subsea Valves
Tools and Installation Instructions
Technical Information
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