

# Subsea Check Valves

## Features

- ⦿ Working pressure up to 20,000 psig (1379 bar)
- ⦿ Maximum external pressure: 6,000 psig (414 bar)
- ⦿ Cracking pressure: 14 to 26 psig (0.966 to 1.794 bar)
- ⦿ NBR O-ring for operation from -10 to 250°F (-23 to 121°C); other O-ring materials available
- ⦿ High tensile 316 stainless steel for valve body
- ⦿ Available to NACE MR0175
- ⦿ Provides 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)
- ⦿ Soft seat seal ring style or metal-to-metal seat poppet style available
- ⦿ Maximum water depth: 13,800 ft. (4200 m)



Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

Subsea Valves

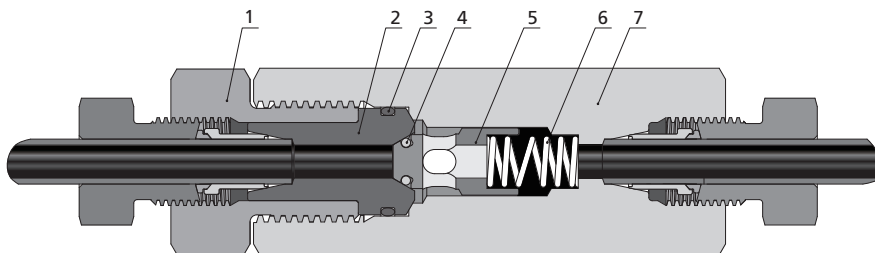
Tools and Installation Instructions

Technical Information

Part Number Crossover Charts

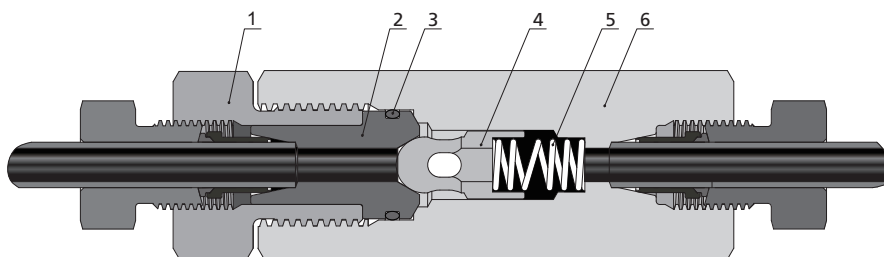
## Standard Materials of Construction

### SC Series



| Item | Component   | Material Grade |
|------|-------------|----------------|
| 1    | Cover Gland | 316SS          |
| 2    | Cover       | 316SS          |
| 3    | Seal Ring   | NBR            |
| 4    | Seal Ring   | NBR            |
| 5    | Ball Poppet | 316SS          |
| 6    | Spring      | 304SS          |
| 7    | Valve Body  | 316SS          |

### SCO Series

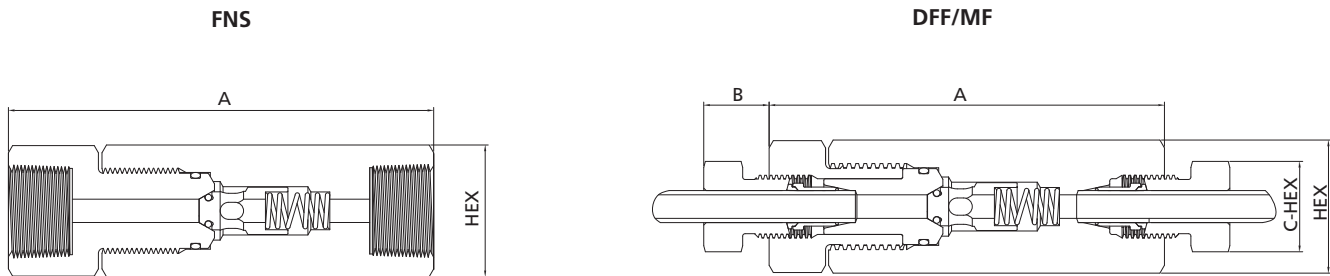


| Item | Component   | Material Grade |
|------|-------------|----------------|
| 1    | Cover Gland | 316SS          |
| 2    | Cover       | 316SS          |
| 3    | Seal Ring   | NBR            |
| 4    | Ball Poppet | 316SS          |
| 5    | Spring      | 304SS          |
| 6    | Valve Body  | 316SS          |

*Wetted components listed in italics.*

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## Ordering Information and Dimensions



| Ordering Number | Connection | Orifice Size<br>in. (mm) | Cv   | Dimensions, in. (mm) |                 |                 |                 | Working Pressure<br>psig (bar) |
|-----------------|------------|--------------------------|------|----------------------|-----------------|-----------------|-----------------|--------------------------------|
|                 |            |                          |      | A                    | B               | C-HEX           | HEX             |                                |
| 10SCSS-FNS12    | FNS12      | 0.52 (13.21)             | 4.70 | 6.11<br>(155.19)     | —               | —               | 1.75<br>(44.45) | 10,000 (690)                   |
| 10SCSS-FNS16    | FNS16      | 0.69 (17.53)             | 7.40 | 7.32<br>(185.93)     | —               | —               | 1.88<br>(47.75) |                                |
| 10SCOSS-FNS12   | FNS12      | 0.52 (13.21)             | 4.70 | 6.11<br>(155.19)     | —               | —               | 1.75<br>(44.45) |                                |
| 10SCOSS-FNS16   | FNS16      | 0.69 (17.53)             | 7.40 | 7.32<br>(185.93)     | —               | —               | 1.88<br>(47.75) |                                |
| 15SCSS-DFF4     | DFF4       | 0.188 (4.78)             | 0.63 | 3.43<br>(87.12)      | 0.52<br>(13.21) | 0.63<br>(16.00) | 0.81<br>(20.57) | 15,000 (1034)                  |
| 15SCSS-DFF6     | DFF6       | 0.250 (6.35)             | 1.70 | 3.82<br>(97.03)      | 0.53<br>(13.46) | 0.75<br>(19.05) | 1.00<br>(25.40) |                                |
| 15SCSS-DFF8     | DFF8       | 0.375 (9.53)             | 3.40 | 4.55<br>(115.57)     | 0.60<br>(15.24) | 0.93<br>(23.62) | 1.38<br>(35.05) |                                |
| 15SCOSS-DFF4    | DFF4       | 0.188 (4.78)             | 0.63 | 3.43<br>(87.12)      | 0.53<br>(13.46) | 0.63<br>(16.00) | 0.81<br>(20.57) |                                |
| 15SCOSS-DFF6    | DFF6       | 0.250 (6.35)             | 1.70 | 3.82<br>(97.03)      | 0.53<br>(13.46) | 0.75<br>(19.05) | 1.00<br>(25.40) |                                |
| 15SCOSS-DFF8    | DFF8       | 0.375 (9.53)             | 3.40 | 4.55<br>(115.57)     | 0.60<br>(15.24) | 0.93<br>(23.62) | 1.38<br>(35.05) |                                |
| 15SCSS-FNS4     | FNS4       | 0.12 (3.05)              | 0.28 | 3.43<br>(87.12)      | —               | —               | 0.94<br>(23.81) |                                |
| 15SCSS-FNS6     | FNS6       | 0.22 (5.59)              | 0.84 | 3.82<br>(97.03)      | —               | —               | 1.13<br>(28.58) |                                |
| 15SCSS-FNS8     | FNS8       | 0.36 (9.12)              | 2.30 | 4.55<br>(115.57)     | —               | —               | 1.38<br>(35.05) |                                |
| 15SCOSS-FNS4    | FNS4       | 0.12 (3.05)              | 0.28 | 3.43<br>(87.12)      | —               | —               | 0.94<br>(23.81) | 20,000 (1379)                  |
| 15SCOSS-FNS6    | FNS6       | 0.22 (5.59)              | 0.84 | 3.82<br>(97.03)      | —               | —               | 1.13<br>(28.58) |                                |
| 15SCOSS-FNS8    | FNS8       | 0.36 (9.12)              | 2.30 | 4.55<br>(115.57)     | —               | —               | 1.38<br>(35.05) |                                |
| 20SCSS-MF4      | MF4        | 0.125 (3.18)             | 0.28 | 2.94<br>(74.68)      | 0.38<br>(9.65)  | 0.50<br>(12.70) | 0.81<br>(20.57) |                                |
| 20SCSS-MF6      | MF6        | 0.218 (5.54)             | 0.84 | 3.34<br>(84.84)      | 0.44<br>(11.18) | 0.62<br>(15.75) | 1.00<br>(25.40) |                                |
| 20SCSS-MF9      | MF9        | 0.359 (9.12)             | 2.30 | 4.35<br>(110.49)     | 0.55<br>(13.97) | 0.94<br>(23.81) | 1.38<br>(35.05) |                                |
| 20SCSS-MF12     | MF12       | 0.516 (13.11)            | 4.70 | 5.50<br>(139.70)     | 0.62<br>(15.75) | 1.19<br>(30.23) | 1.75<br>(44.45) |                                |
| 20SCSS-MF16     | MF16       | 0.688 (17.48)            | 7.40 | 7.07<br>(179.59)     | 0.74<br>(18.80) | 1.38<br>(35.05) | 2.12<br>(53.85) |                                |

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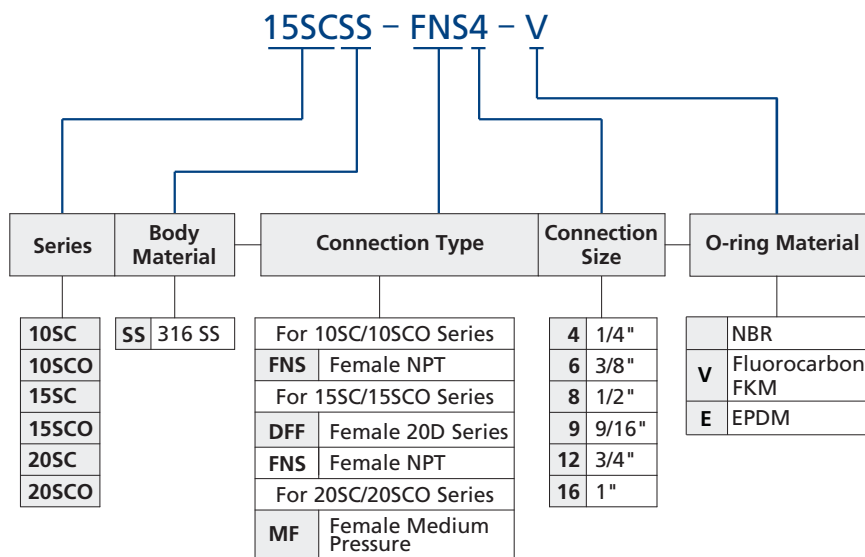
Subsea Valves

Tools and  
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InstructionsTechnical  
InformationPart Number  
Crossover Charts

## Ordering Information and Dimensions (continued)

| Ordering Number | Connection | Orifice Size in. (mm) | Cv   | Dimensions, in. (mm) |              |              |              | Working Pressure psig (bar) |
|-----------------|------------|-----------------------|------|----------------------|--------------|--------------|--------------|-----------------------------|
|                 |            |                       |      | A                    | B            | C-HEX        | HEX          |                             |
| 20SCOSS-MF4     | MF4        | 0.125 (3.18)          | 0.28 | 2.94 (74.68)         | 0.38 (9.65)  | 0.50 (12.70) | 0.81 (20.57) | 20,000 (1379)               |
| 20SCOSS-MF6     | MF6        | 0.218 (5.54)          | 0.84 | 3.12 (79.25)         | 0.47 (11.94) | 0.62 (15.75) | 1.00 (25.40) |                             |
| 20SCOSS-MF9     | MF9        | 0.359 (9.12)          | 2.30 | 4.18 (106.17)        | 0.53 (13.46) | 0.94 (23.81) | 1.38 (35.05) |                             |
| 20SCOSS-MF12    | MF12       | 0.516 (13.11)         | 4.70 | 5.50 (139.70)        | 0.62 (15.75) | 1.19 (30.23) | 1.75 (44.45) |                             |
| 20SCOSS-MF16    | MF16       | 0.688 (17.48)         | 7.40 | 6.63 (168.40)        | 0.72 (18.29) | 1.38 (35.05) | 2.12 (53.85) |                             |

## Ordering Number Description



| Code | O-ring Material  | Working temperature Range, °F(°C) |
|------|------------------|-----------------------------------|
|      | NBR              | -10 to 250 (-23 to 121)           |
| V    | Fluorocarbon FKM | 0 to 400 (-17.8 to 204)           |
| E    | EPDM             | -50 to 300 (-45 to 148)           |

- NOTES: 1. For more details regarding 20D Series and Medium 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.
3. Please contact FITOK Group or our authorized distributors for more information on wetted materials (Eg: 2507 SD), seal materials and operational designs to fulfill your application requirements.