

SUBSEA VALVES

Fitok Subsea Valves are manufactured with some notable differences to standard models to help ensure effective fluid transfer for the Oil and Gas Industry.

Valves within the range include ball type in various different configurations. As well as Subsea check and needle valve to pressures up to 20,000 psi (1400 bar).

Matching pipe fittings and tube are also available to complement this range. They are suitable for water depths of up to 4,200m and high temperatures.

NACE MR0175 compliance and H2S Sour Gas suitability is available.



SUBSEA BALL VALVES

10,000 PSI TO 20,000 PSI RATED

FEATURES

- Rapid quarter turn action provides quick open/close for easy ROV or diver operation
- One-piece, trunnion mounted style, ideal for severe service duty application
- 2-way and 3-way valve configurations available
- PEEK seats to offer excellent resistance against chemicals, heat and abrasion
- Full-port flow path to minimize pressure drop
- 316 cold-worked stainless steel construction
- NBR O-rings for temperature from 0°F to 250°F (-18°C to 121°C)
- Wide selection of tube and pipe end fittings available
- NACE MRO175 compliant
- Different wetted material optional

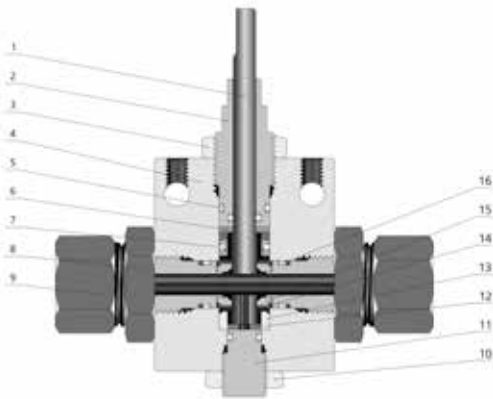


TECHNICAL DATA

- Maximum working pressure: 20,000 psig (1,379 bar)
- Working temperature: 0°F to 250°F (-18°C to 121°C)
- Maximum water depth: 13,800 ft (4,200 meters)
- Maximum external pressure: 6,000 psig (414 bar)

STANDARD MATERIALS OF CONSTRUCTION

2-way Straight Valves



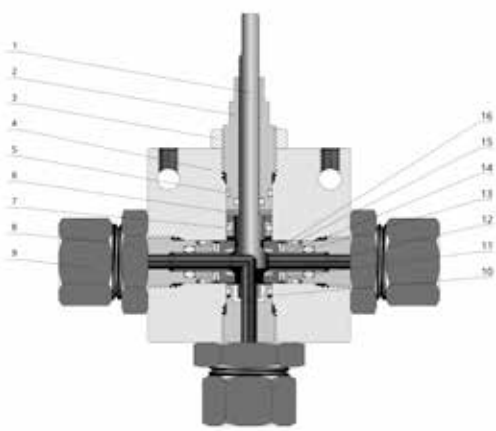
Item	Component	Material Grade
1	Ball Stem	316 SS / A479
2	Packing Gland	316 SS / A479
3	Locking Piece	316 SS / A276
4	Valve Body	316 SS / A479
5	O-Ring	NBR
6	Thrust Washer	C63000 / B150
7	O-Ring	NBR
8	Lock Nut	316 SS / A276
9	Seat Gland	316 SS / A479
10	Locking Piece	316 SS / A276
11	Bottom Gland	316 SS / A479
12	Bottom Thrust Washer	C63000 / B150
13	Bearing	PEEK
14	Seat	PEEK
15	O-Ring	NBR
16	Seat Retainer	316 SS / A479
-	Lubricant	Molybdenum Disulfide / Fluorinated-based



SUBSEA BALL VALVES

10,000 PSI TO 20,000 PSI RATED

3-way Straight Valves

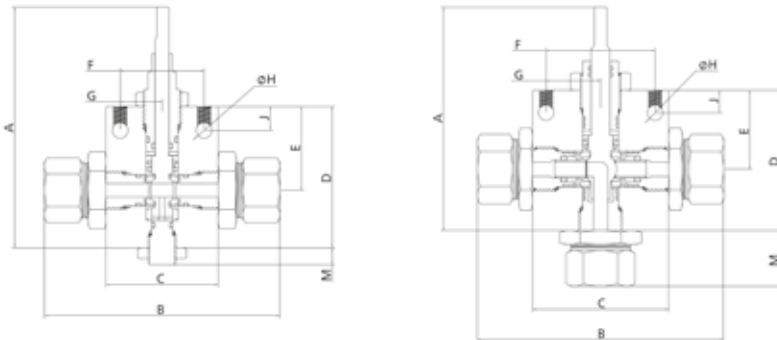


Item	Component	Material Grade
1	Ball Stem	316 SS / A479
2	Packing Gland	316 SS / A479
3	Locking Piece	316 SS / A276
4	Valve Body	316 SS / A479
5	O-Ring	NBR
6	Thrust Washer	C63000 / B150
7	O-Ring	NBR
8	Lock Nut	316 SS / A276
9	Seat Gland	316 SS / A479
10	Bearing	C63000 / B150
11	Seat Retainer	316 SS / A479
12	Seat	Carbon Filled PEEK
13	O-Ring	NBR
14	Belleville Washers	316SS / A276
15	O-Ring	NBR
16	Belleville Washers	17-7PH / A693
-	Lubricant	Molybdenum Disulfide / Fluorinated-based

SUBSEA BALL VALVES

10,000 PSI TO 20,000 PSI RATED

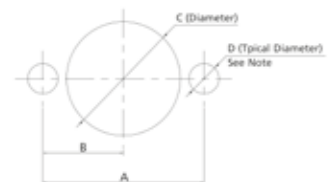
3-way Straight Valves



Body Style	Orifice No.	A	B	C	D	E	F	G	H	J	M	Block Thickness
		in. (mm)										
2-way	4	4.31 (10.93)	4.18 (106.3)	2 (50.8)	2.53 (64.2)	1.5 (38.1)	1.5 (38.1)	0.75 (19.05)	0.28 (7.1)	0.43 (10.9)	0.31 (7.7)	1 (25.4)
	6	5.78 (146.8)	5.53 (140.3)	3 (76.2)	3.28 (83.3)	1.78 (45.2)	2.5 (63.5)	1.25 (31.75)	0.28 (7.1)	0.41 (10.3)	0.76 (19.2)	1.38 (34.9)
	8	6.44 (163.5)	7.73 (196.4)	4.13 (104.8)	4 (101.6)	2.08 (52.8)	3 (76.2)	1.5 (38.1)	0.28 (7.1)	0.5 (12.7)	0.88 (22.4)	1.75 (44.5)
3-way	4	4.43 (110.2)	4.72 (119.9)	2.5 (63.5)	2.56 (65)	1.5 (38.1)	2.5 (63.5)	1.25 (31.75)	0.28 (7.1)	0.41 (10.3)	1.8 (45.8)	1 (25.4)
	6	5.09 (129.3)	5.74 (145.8)	3 (76.2)	3.03 (77)	1.63 (41.4)	2 (50.8)	1 (25.4)	0.28 (7.1)	0.41 (10.3)	1.28 (32.5)	1.38 (34.9)
	8	5.94 (150.8)	7.77 (197.4)	4.13 (104.9)	3.62 (91.9)	2 (50.8)	3 (76.2)	1.5 (38.1)	0.28 (7.1)	0.5 (12.7)	1.79 (45.5)	1.75 (44.5)

BALL VALVE PANEL MOUNTING DIMENSIONS

Body Style	Orifice No.	A	B	C	D
		in. (mm)			
2-way	4	1.5 (38.1)	0.75 (19.1)	1.06 (26.9)	0.28 (7.1)
	6	2.5 (63.5)	1.25 (31.75)	1.88 (47.6)	0.28 (7.1)
	8	3 (76.2)	1.5 (38.1)	1.88 (47.6)	0.28 (7.1)
3-way	4	2.5 (63.5)	1.25 (31.75)	1.88 (47.6)	0.28 (7.1)
	6	2 (50.8)	1 (25.4)	1.5 (38.1)	0.28 (7.1)
	8	3 (76.2)	1.5 (38.1)	1.88 (47.6)	0.28 (7.1)



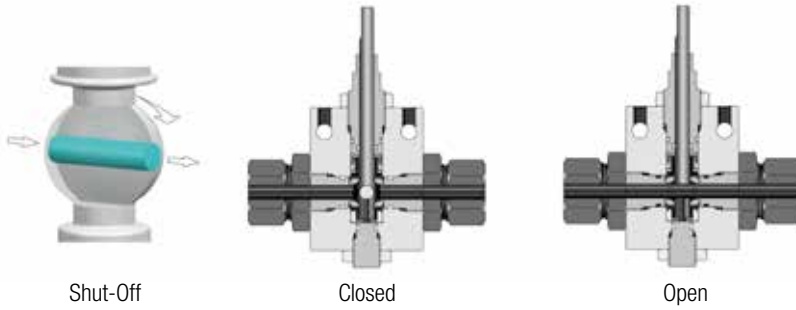
All dimensions are for reference only and are subject to change.

SUBSEA BALL VALVES

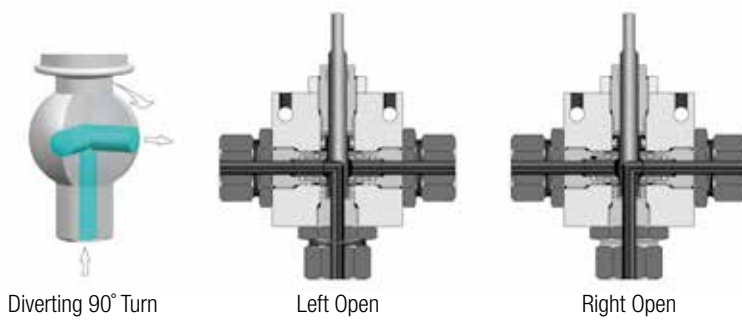
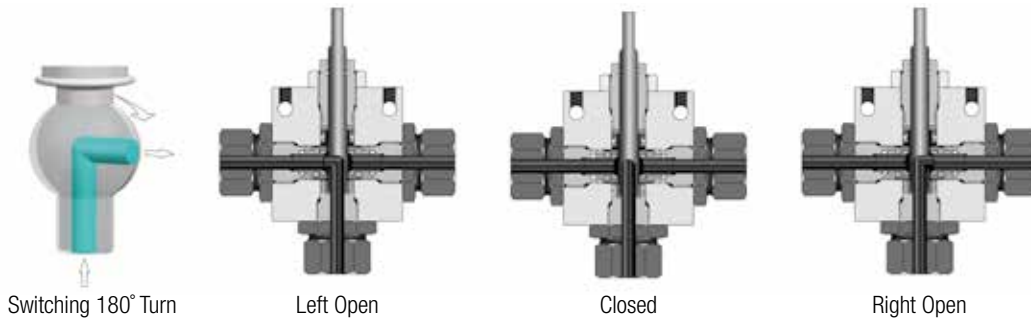
10,000 PSI TO 20,000 PSI RATED

FLOW CONFIGURATION

2-Way Straight Valves



3-Way Valves



SUBSEA BALL VALVES

10,000 PSI TO 20,000 PSI RATED

PART NUMBER DESCRIPTION

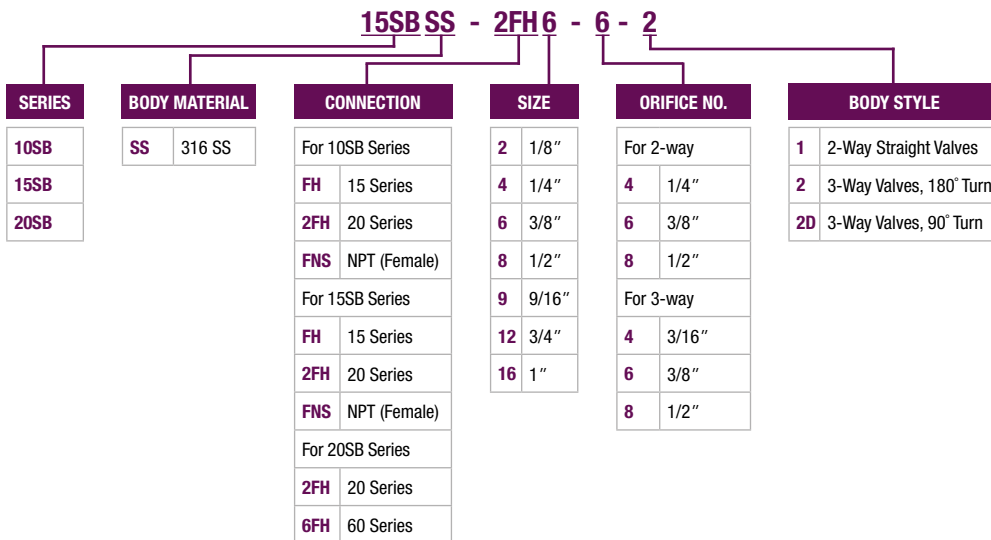
#	Body Style	Connection Type	Orifice No.	Orifice Size in. (mm)	Rated Cv	Pressure / Temperature Rating psig (bar) at Room Temperature			
10SBSS-FH8-4-1	2-way	FH8	4	0.25 (6.35)	1.51	10,000 (690)			
10SBSS-FH8-6-1		FH8	6	0.375 (9.52)	3.51				
10SBSS-FNS12-8-1		FH12	8	0.5 (12.7)	10.2				
10SBSS-FNS16-8-1		FH16		0.5 (12.7)	10.2				
10SBSS-FH8-6-2	3-way	FH8	6	0.328 (8.33)	2.1				
10SBSS-FH8-6-2D									
10SBSS-2FH6-6-2		2FH6		0.203 (5.16)	0.81				
10SBSS-2FH6-6-2D									
10SBSS-2FH9-6-2		2FH9	0.312 (7.92)	1.9					
10SBSS-2FH9-6-2D									
10SBSS-2FH12-6-2		2FH12	0.328 (8.33)	2.1					
10SBSS-2FH12-6-2D									
10SBSS-FNS4-6-2		FNS4	6	0.328 (8.33)	2.1				
10SBSS-FNS4-6-2D									
10SBSS-FNS6-6-2				FNS6	0.328 (8.33)		2.1		
10SBSS-FNS6-6-2D									
10SBSS-FNS8-6-2		FNS8	6	0.328 (8.33)	2.1				
10SBSS-FNS8-6-2D									
10SBSS-2FH12-8-2		2FH12	8	0.5 (12.7)	4.4				
10SBSS-2FH12-8-2D									
10SBSS-2FH16-8-2							2FH16	0.5 (12.7)	4.4
10SBSS-2FH16-8-2D									
10SBSS-2FH12-8-2				FH12	0.5 (12.7)		4.4		
10SBSS-2FH12-8-2D									
10SBSS-2FH16-8-2	FNS16			0.5 (12.7)	4.4				
10SBSS-2FH16-8-2D									
15SBSS-FH2-4-1	2-way	FH2	4	0.094 (2.39)	0.26		15,000 (1,034)		
15SBSS-FH4-4-1		FH4		0.128 (3.25)	0.26				
15SBSS-FH6-4-1		FH6		0.25 (6.35)	1.51				
15SBSS-FNS2-4-1		FNS2		0.25 (6.35)	1.51				
15SBSS-FNS4-4-1		FNS4	0.25 (6.35)	1.51					
15SBSS-FNS6-4-1		FNS6	0.25 (6.35)	1.51					
15SBSS-FNS8-4-1		FNS8	0.25 (6.35)	1.51					
15SBSS-FNS4-6-1		FNS4	6	0.375 (9.52)	3.51				
15SBSS-FNS6-6-1				FNS6	0.375 (9.52)	3.51			
15SBSS-FNS8-6-1				FNS8	0.375 (9.52)	3.51			
15SBSS-FNS4-4-2	3-way	4	0.188 (4.77)	0.50					
15SBSS-FNS4-4-2D									
15SBSS-FNS6-4-2					FNS6	0.188 (4.77)	0.50		
15SBSS-FNS6-4-2D									
20SBSS-2FH4-4-1	2-way	2FH4	4	0.109 (2.77)	0.36	20,000 (1,379)			
20SBSS-2FH6-4-1		2FH6		0.203 (5.16)	1.23				
20SBSS-2FH9-4-1		2FH9		0.25 (6.35)	1.51				
20SBSS-6FH4-4-1		6FH4		0.094 (2.39)	0.26				
20SBSS-6FH6-4-1		6FH6	0.125 (3.17)	0.47					
20SBSS-6FH9-4-1		6FH9	0.188 (4.77)	1.05					
20SBSS-2FH6-6-1		2FH6	6	0.203 (5.16)	1.23				
20SBSS-2FH9-6-1				2FH9	0.312 (7.92)		2.93		
20SBSS-2FH12-6-1				2FH12	0.375 (9.52)		3.51		



SUBSEA BALL VALVES

10,000 PSI TO 20,000 PSI RATED

#	Body Style	Connection Type	Orifice No.	Orifice Size in. (mm)	Rated Cv	Pressure / Temperature Rating psig (bar) at Room Temperature	
20SBSS-2FH4-4-2	3-way	2FH4	4	0.109 (2.39)	0.17	20,000 (1,379)	
20SBSS-2FH4-4-2D				0.188 (4.77)	0.5		
20SBSS-2FH6-4-2		2FH6		0.188 (4.77)	0.5		
20SBSS-2FH6-4-2D				0.188 (4.77)	0.5		
20SBSS-2FH9-4-2		2FH9		0.188 (4.77)	0.5		
20SBSS-2FH9-4-2D				0.188 (4.77)	0.5		
20SBSS-6FH4-4-2		6FH4		0.094 (2.39)	0.13		
20SBSS-6FH4-4-2D				0.094 (2.39)	0.13		
20SBSS-6FH6-4-2				6FH6	0.125 (3.17)		0.22
20SBSS-6FH6-4-2D					0.125 (3.17)		0.22



NB: Most configurations are available but not all.

SUBSEA CHECK VALVES

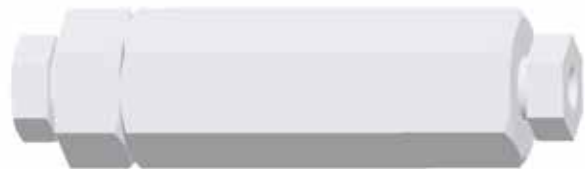
10,000 PSI TO 20,000 PSI RATED

FEATURES

- Provides unidirectional flow and tight shut-off for liquids and gas 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
- PTFE seat to offer excellent resistance against harsh chemicals
- 316 cold-worked stainless steel construction
- NACE MRO175 compliant

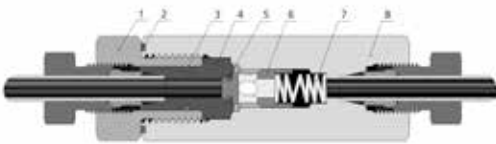
TECHNICAL DATA

- Maximum working pressure: 20,000 psig (1,379 bar)
- Working temperature: -20°F to 250°F (-29°C to 121°C)
- Maximum water depth: 13,800 ft (4,200 meters)
- Maximum external pressure: 6,000 psig (414 bar)
- Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)



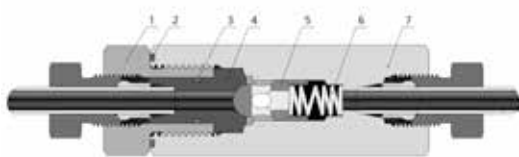
STANDARD MATERIALS OF CONSTRUCTION

SC Series



Item	Component	Material Grade
1	Cover Gland	316 / A479
2	Seal Ring	HNBR
3	Seal Ring	HNBR
4	Cover	316 / A479
5	Seal Ring	Wide Selection of O-Rings Available
6	Ball Poppet	316 / A479
7	Spring	300 SS
8	Valve Body	316 / A479

SCO Series



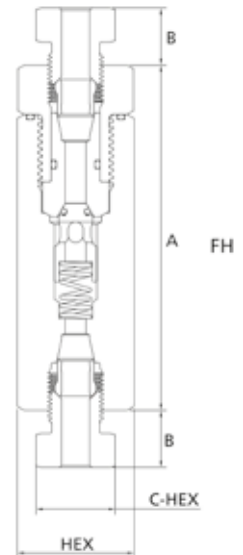
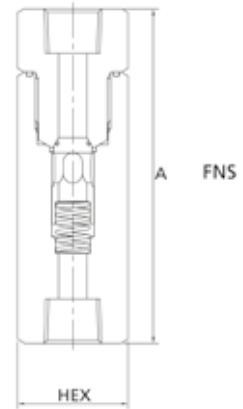
Item	Component	Material Grade
1	Cover Gland	316 / A479
2	Seal Ring	HNBR
3	Seal Ring	HNBR
4	Cover	316 / A479
5	Ball Poppet	316 / A479
6	Spring	300 SS
7	Valve Body	316 / A479

SUBSEA CHECK VALVES

10,000 PSI TO 20,000 PSI RATED

TECHNICAL DATA & DIMENSIONS

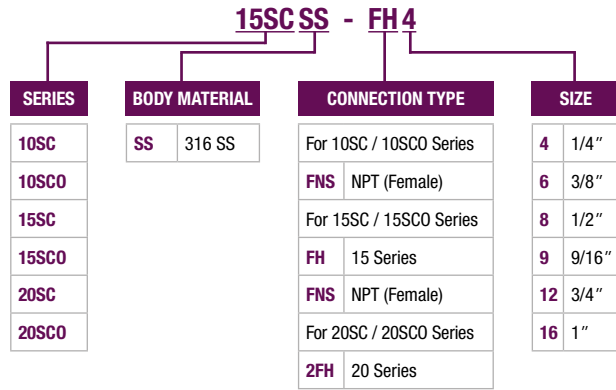
#	Connection Type	Orifice Size in. (mm)	Rated Cv	A	B	C-HEX	HEX	Pressure / Temperature Rating psig (bar) at Room Temperature
				in. (mm)				
10SCSS-FNS12	FNS12	0.52 (13.21)	4.70	6.29 (159.77)	-	-	1.75 (44.45)	10,000 (690)
10SCSS-FNS16	FNS16	0.69 (17.53)	7.40	7.33 (186.18)	-	-	1.88 (47.75)	
10SCOSS-FNS12	FNS12	0.52 (13.21)	4.70	6.29 (159.77)	-	-	1.75 (44.45)	
10SCOSS-FNS16	FNS16	0.69 (17.53)	7.40	7.33 (186.18)	-	-	1.88 (47.75)	
15SCSS-FH4	FH4	0.188 (4.78)	0.63	3.18 (80.77)	0.44 (11.18)	0.63 (16.00)	0.81 (20.57)	15,000 (1,034)
15SCSS-FH6	FH6	0.250 (6.35)	1.70	3.56 (90.42)	0.53 (13.46)	0.75 (19.05)	1.00 (25.40)	
15SCSS-FH8	FH8	0.375 (9.53)	3.40	4.18 (106.17)	0.53 (13.46)	0.93 (23.62)	1.38 (35.05)	
15SCOSS-FH4	FH4	0.188 (4.78)	0.63	3.18 (80.77)	0.44 (11.18)	0.63 (16.00)	0.81 (20.57)	
15SCOSS-FH6	FH6	0.250 (6.35)	1.70	3.56 (90.42)	0.53 (13.46)	0.75 (19.05)	1.00 (25.40)	
15SCOSS-FH8	FH8	0.375 (9.53)	3.40	4.18 (106.17)	0.53 (13.46)	0.93 (23.62)	1.38 (35.05)	
15SCSS-FNS4	FNS4	0.12 (3.05)	0.28	3.37 (85.60)	-	-	0.94 (23.81)	
15SCSS-FNS6	FNS6	0.22 (5.59)	0.84	3.95 (100.33)	-	-	1.13 (28.58)	
15SCSS-FNS8	FNS8	0.36 (9.12)	2.30	5.36 (136.14)	-	-	1.38 (35.05)	
15SCOSS-FNS4	FNS4	0.12 (3.05)	0.28	3.37 (85.60)	-	-	0.94 (23.81)	
15SCOSS-FNS6	FNS6	0.22 (5.59)	0.84	3.95 (100.33)	-	-	1.13 (28.58)	
15SCOSS-FNS8	FNS8	0.36 (9.12)	2.30	5.36 (136.14)	-	-	1.38 (35.05)	
20SCSS-2FH4	2FH4	0.125 (3.18)	0.28	2.94 (74.68)	0.38 (9.65)	0.50 (12.70)	0.81 (20.57)	20,000 (1,379)
20SCSS-2FH6	2FH6	0.218 (5.54)	0.84	3.12 (79.25)	0.47 (11.94)	0.62 (15.75)	1.00 (25.40)	
20SCSS-2FH9	2FH9	0.359 (9.12)	2.30	4.18 (106.17)	0.53 (13.46)	0.94 (23.81)	1.38 (35.05)	
20SCSS-2FH12	2FH12	0.516 (13.11)	4.70	5.50 (139.70)	0.62 (15.75)	1.19 (30.23)	1.75 (44.45)	
20SCSS-2FH16	2FH16	0.688 (17.48)	7.40	6.63 (168.40)	0.72 (18.29)	1.38 (35.05)	2.12 (53.85)	
20SCOSS-2FH4	2FH4	0.125 (3.18)	0.28	2.94 (74.68)	0.38 (9.65)	0.50 (12.70)	0.81 (20.57)	
20SCOSS-2FH6	2FH6	0.218 (5.54)	0.84	3.12 (79.25)	0.47 (11.94)	0.62 (15.75)	1.00 (25.40)	
20SCOSS-2FH9	2FH9	0.359 (9.12)	2.30	4.18 (106.17)	0.53 (13.46)	0.94 (23.81)	1.38 (35.05)	
20SCOSS-2FH12	2FH12	0.516 (13.11)	4.70	5.50 (139.70)	0.62 (15.75)	1.19 (30.23)	1.75 (44.45)	
20SCOSS-2FH16	2FH16	0.688 (17.48)	7.40	6.63 (168.40)	0.72 (18.29)	1.38 (35.05)	2.12 (53.85)	



SUBSEA CHECK VALVES

10,000 PSI TO 20,000 PSI RATED

PART NUMBER DESCRIPTION



NB: Most configurations are available but not all.

SUBSEA NEEDLE VALVES

10,000 PSI TO 20,000 PSI RATED

FEATURES

- Non-rotating, non-rising stem to ensure positive non-galling operation when shut-off
- Standard stem seal material: Glass filled PTFE
- Packing is under the threads of valve stem
- Metal-to-metal seating to ensure ideal shut-off, longer stem/seat service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles
- Reliable locking device of packing gland
- Wide selection of tube and pipe end fittings available
- 2-way straight and 2-way angle available for flow pattern
- 316 cold-worked stainless steel construction
- NACE MR0175 compliant

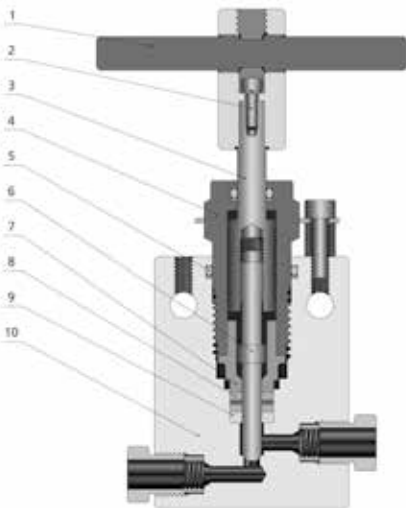
TECHNICAL DATA

- Orifice: 0.203"
- Rated CV: 0.75
- Maximum working pressure: 20,000 psig (1,379 bar)
- Working temperature: 0°F to 250°F (-18°C to 121°C)
- Maximum water depth: 13,800 ft (4,200 meters)
- Maximum external pressure: 6,000 psig (414 bar)

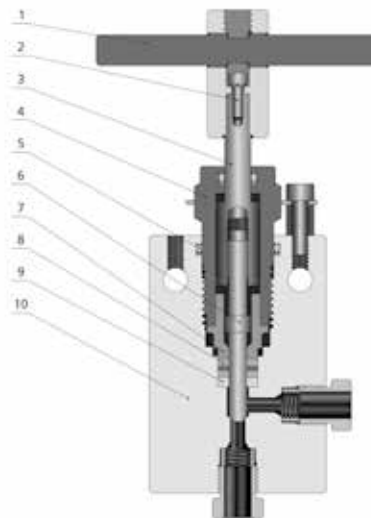


STANDARD MATERIALS OF CONSTRUCTION

2-way Straight



2-way Angle



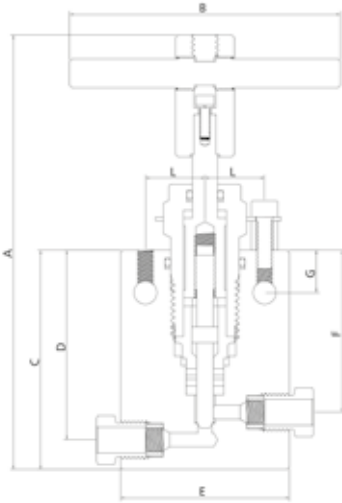
Item	Component	Material Grade
1	Handle	SS
2	Handle Screw	SS
3	Upper Stem	316 SS / A479
4	Packing Gland	316 SS / A479
5	O-Ring	NBR
6	Lower Stem	Alloy 725
7	Packing Ring	C63000 / B150
8	Packing	PTFE / RPTFE
9	Packing Washer	Alloy 725
10	Body	316 SS / A479
-	Lubricant	Molybdenum Disulfide

SUBSEA NEEDLE VALVES

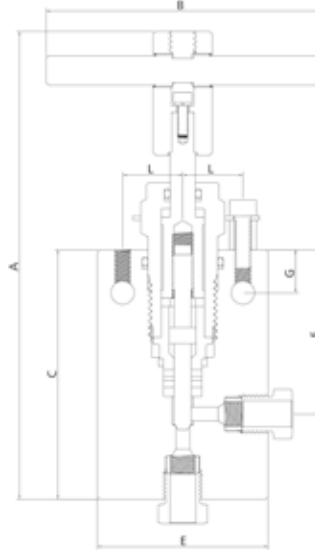
10,000 PSI TO 20,000 PSI RATED

DIMENSIONS

2-way Straight



2-way Angle



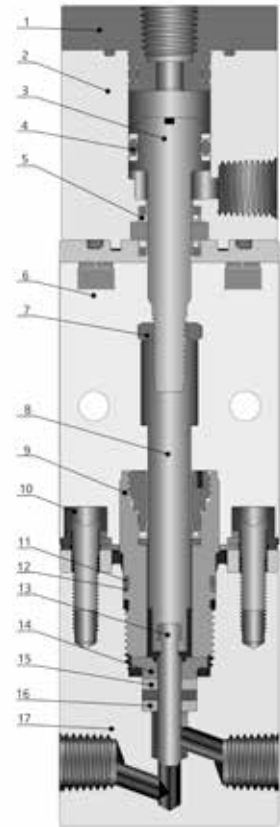
#	Connection Type	A	B	C	D	E	F	G	L	Block Thickness
		in. (mm)								
20SNSS-2FH6-1	2FH6	6.15 (156.2)	4.00 (101.6)	3.25 (82.55)	2.75 (69.9)	2.50 (63.5)	2.44 (61.98)	0.75 (19.05)	0.94 (23.88)	1.50 (38.1)
20SNSS-2FH9-1	2FH9	6.15 (156.2)	4.00 (101.6)	3.25 (82.55)	2.75 (69.9)	2.50 (63.5)	2.44 (61.98)	0.75 (19.05)	0.94 (23.88)	1.50 (38.1)
20SNSS-2FH12-1	2FH12	7.22 (183.4)	10.25 (260.4)	4.12 (104.7)	3.44 (87.38)	3.00 (76.2)	2.94 (74.68)	0.75 (19.05)	0.94 (23.88)	1.50 (38.1)
20SNSS-2FH6-2	2FH6	6.65 (168.9)	4.00 (101.6)	3.75 (95.25)	-	2.50 (63.5)	2.44 (61.98)	0.75 (19.05)	0.94 (23.88)	1.50 (38.1)
20SNSS-2FH9-2	2FH9	6.65 (168.9)	4.00 (101.6)	3.75 (95.25)	-	2.50 (63.5)	2.44 (61.98)	0.75 (19.05)	0.94 (23.88)	1.50 (38.1)
20SNSS-2FH12-2	2FH12	7.72 (196.1)	10.25 (260.4)	4.62 (117.3)	-	3.00 (76.2)	2.94 (74.68)	0.75 (19.05)	0.94 (23.88)	1.50 (38.1)

SUBSEA NEEDLE VALVES

10,000 PSI TO 20,000 PSI RATED

SUBSEA HYDRAULIC NEEDLE VALVE

Item	Component	Material Grade
1	Gland	316 SS / A479
2	Actuator Body	316 SS / A479
3	Piston Rod	316 SS / A479
4	O-Ring	Fluorocarbon FKM
5	Piston Seal	UHMWPE
6	Support Block	316 SS / A479
7	Nut	Stainless Steel
8	Upper Stem	316 SS / A479
9	Packing Gland	316 SS / A479
10	Locking Screw	SS
11	O-Ring	HNBR
12	O-Ring Retainer	PTFE
13	Lower Stem	S17400 / A564
14	Packing Ring	C63000 / B150
15	Packing	PTFE
16	Packing Washer	S17400 / A564
17	Body	316 SS / A479



PART NUMBER DESCRIPTION

20SN SS - 2FH6 - R 2 - H

SERIES	BODY MATERIAL	CONNECTION TYPE	STEM TIPS	FLOW PATTERNS	CONTROL PATTERNS										
15SN	SS 316 SS	For 15SN Series	Vee	1 Straight	None										
20SN		<table border="1"> <tr><td>FH4</td><td>1/4"</td></tr> <tr><td>FH6</td><td>3/8"</td></tr> <tr><td>FNS4</td><td>1/4 NPT (Female)</td></tr> <tr><td>FNS6</td><td>3/8 NPT (Female)</td></tr> <tr><td>FNS8</td><td>1/2 NPT (Female)</td></tr> </table>	FH4	1/4"	FH6	3/8"	FNS4	1/4 NPT (Female)	FNS6	3/8 NPT (Female)	FNS8	1/2 NPT (Female)	R Regulating	2 Angle	H Hydraulic
FH4	1/4"														
FH6	3/8"														
FNS4	1/4 NPT (Female)														
FNS6	3/8 NPT (Female)														
FNS8	1/2 NPT (Female)														
		For 20SN Series													
		2FH6 3/8"													
		2FH9 9/16"													
		2FH12 3/4"													

NB: Most configurations are available but not all.

