

# Subsea Needle Valves

## Features

- ⦿ Working pressure up to 20,000 psig (1379 bar)
- ⦿ Maximum external pressure: 6,000 psig (414 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
- ⦿ Standard stem seal material: PTFE
- ⦿ NACE MR0175 optional
- ⦿ Using a two-part spindle assembly with a non-rising upper stem, it is of great advantage when being used with ROVs
- ⦿ Non-rotating lower stem to ensure positive non-galling operation during shut-off
- ⦿ Packing located under stem threads
- ⦿ 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 packing gland locking device
- ⦿ Wide selection of tube and pipe end fittings available
- ⦿ 2-way straight and angle flow patterns available
- ⦿ Orifice size: 0.203"
- ⦿ Rated Cv: 0.75
- ⦿ Maximum water depth: 13,800 ft. (4200 m)



Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

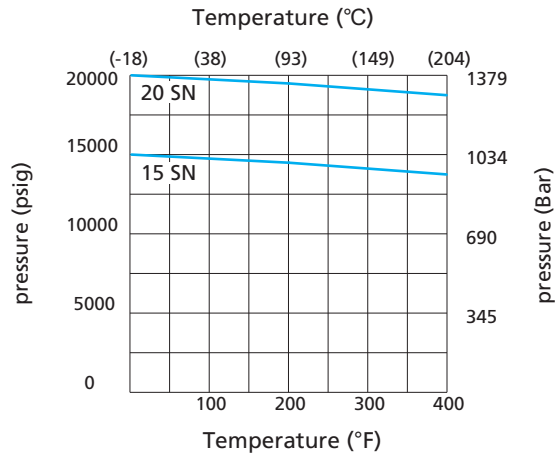
Subsea Valves

Tools and Installation Instructions

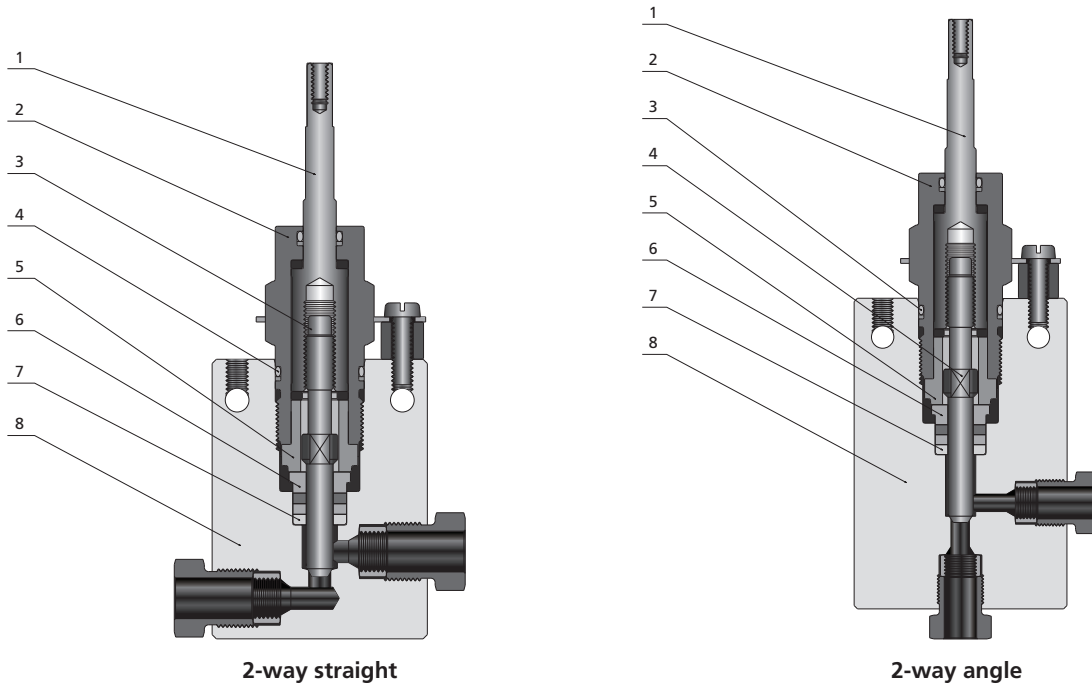
Technical Information

Part Number Crossover Charts

## Pressure vs. Temperature Curve



## Standard Materials of Construction

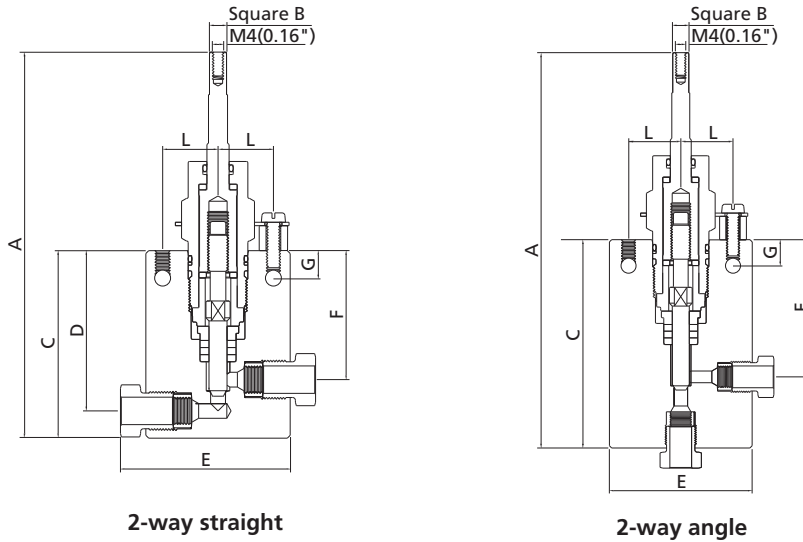


Item	Component	Material Grade
1	Upper Stem	316SS
2	Packing Gland	316SS
3	O-Ring	NBR
4	<i>Lower Stem</i>	<i>S17400</i>
5	Packing Ring	C63000
6	<i>Packing</i>	<i>PTFE</i>
7	<i>Packing washer</i>	<i>S17400</i>
8	<i>Body</i>	<i>316 SS</i>
Lubricant		Molybdenum disulfide

*Wetted components listed in italics.*

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## Ordering Information and Dimensions

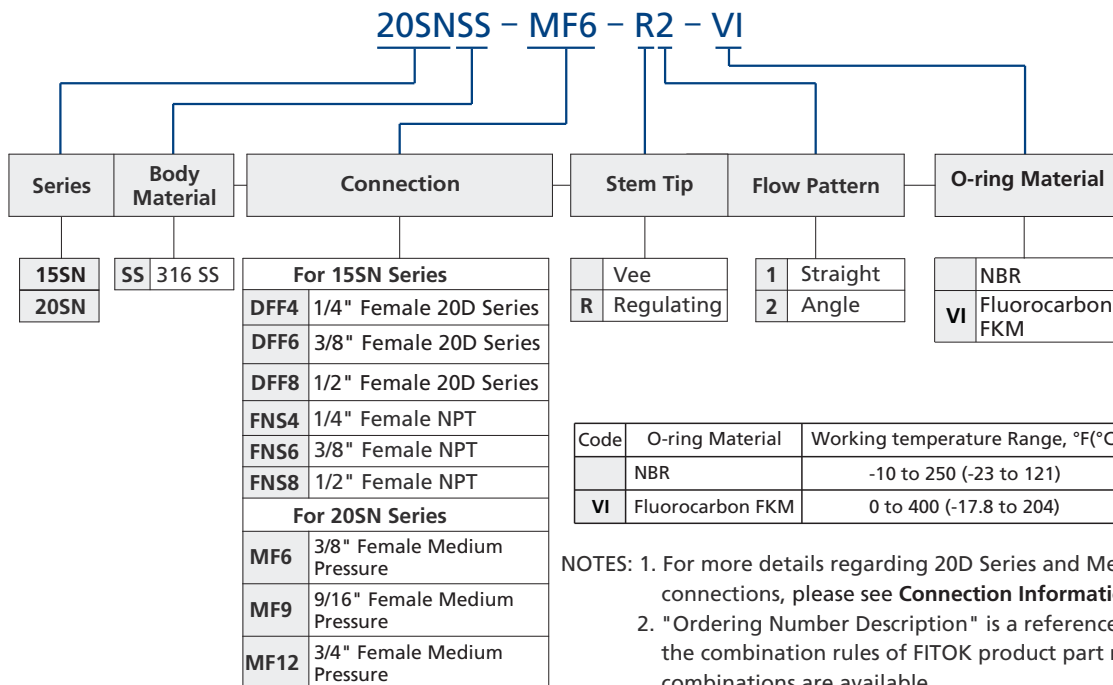


2-way straight

2-way angle

Ordering Number	Connection	Dimensions, in. (mm)								
		A	B	C	D	E	F	G	L	Block Thickness
20SNSS-MF6-1	MF6	5.35 (135.9)	0.24 (6.0)	2.60 (66.00)	2.22 (56.4)	2.00 (50.8)	1.79 (45.40)	0.38 (9.65)	0.77 (19.5)	1.00 (25.4)
20SNSS-MF9-1	MF9	5.75 (146.1)	0.24 (6.0)	3.00 (76.2)	2.40 (61.0)	2.50 (63.5)	2.00 (50.8)	0.38 (9.65)	0.77 (19.5)	1.50 (38.1)
20SNSS-MF12-1	MF12	5.90 (149.9)	0.24 (6.0)	3.15 (80.0)	2.43 (61.8)	3.00 (76.2)	2.00 (50.8)	0.38 (9.65)	0.77 (19.5)	1.50 (38.1)
20SNSS-MF6-2	MF6	5.78 (146.9)	0.24 (6.0)	3.03 (77.00)	—	2.00 (50.8)	1.78 (45.40)	0.38 (9.65)	0.77 (19.5)	1.00 (25.4)
20SNSS-MF9-2	MF9	6.25 (158.8)	0.24 (6.0)	3.50 (88.9)	—	2.50 (63.5)	2.00 (50.8)	0.38 (9.65)	0.77 (19.5)	1.50 (38.1)
20SNSS-MF12-2	MF12	6.50 (165.2)	0.24 (6.0)	3.75 (95.3)	—	3.00 (76.2)	2.00 (50.8)	0.38 (9.65)	0.77 (19.5)	1.50 (38.1)

## Ordering Number Description



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