

Sour Service Products

- Fittings: 30,000 psig (2068 bar)
- Tubing: 30,000 psig (2068 bar)
- Needle Valves: 30,000 psig (2068 bar)
- Bleed Valves: 20,000 psig (1379 bar)
- Gauge Valves: 20,000 psig (1379 bar)
- Check Valves: 30,000 psig (2068 bar)



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

Contents

Fittings	20M Series Medium Pressure Fittings	F-05
Tubing	60 Series High Pressure Fittings	F-06
Quick Couplings	PMH Series Pipe Fittings	F-07
Line Filters	AMH Series Adapter Fittings	F-08
Valves	T20M Series Tubing	F-10
	T60 Series Tubing	F-12
Sour Service Products	Needle Valves Working pressure up to 30,000 psig (2068 bar)	F-14
Subsea Valves	Bleed Valves Working pressure up to 20,000 psig (1379 bar)	F-27
Tools and Installation Instructions	Gauge Valves Working pressure up to 20,000 psig (1379 bar)	F-30
Technical Information	Check Valves Working pressure up to 30,000 psig (2068 bar)	F-34
Part Number Crossover Charts		

FITOK designs and manufactures medium & high pressure valves, fittings and tubing for use with sour oil and gas (H₂S). These components, are referred to as FITOK type S components.

Sour Oil and Gas (H₂S) Service or Standard Service

FITOK standard grade products are offered for standard oil field service and type S components for challenging H₂S service. FITOK type S components provide optimum resistance to H₂S through the use of the specific materials and procedures.

Working Pressure

Type S components are rated for working pressure up to 30,000 psig (2068 bar) at 100°F (38°C).

NACE MR0175 Compliant Materials

Standard material for type S component is annealed 316 SS and all pressure-containing materials used comply with NACE MR0175.

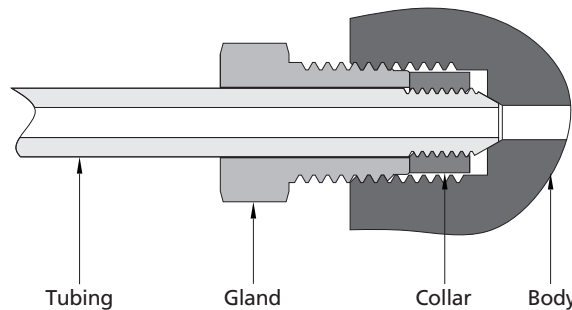
Fittings
Tubing
Quick Couplings
Line Filters
Valves
Sour Service Products
Subsea Valves
Tools and Installation Instructions
Technical Information
Part Number Crossover Charts

20M Series Medium Pressure Fittings

Features

- ⦿ Working pressure: 10,000 psig (690 bar)
- ⦿ Coned-and-threaded connection
- ⦿ Tube sizes available in 1/4", 3/8", 9/16", 3/4" and 1"
- ⦿ Annealed 316 Stainless Steel as standard material, other materials available upon request
- ⦿ Easy to disconnect and retighten
- ⦿ Metal-to-metal seal to provide perfect leak-tight service for working conditions from critical vacuum to medium pressure
- ⦿ Every fitting marked with size, material and heat number

Construction



Ordering Information

The structure of FITOK's type S fittings are the same as standard medium pressure fittings. To get the complete ordering number of type S medium pressure fittings, add "-S" as a suffix to the ordering number of standard medium pressure fittings. If glands and collars are not needed, add "-SWO" as a suffix.

Examples:

1. 9/16" Union, the ordering number is SS-MU-MF9-S.
2. 3/8" Tee without glands and collars, the ordering number is SS-MT-MF6-SWO.

The sizes of type S fittings are the same as standard medium pressure fittings, please refer to **20M Series Medium Pressure Fittings** on A-13.

Installation Instructions

Please see H-07.

Connection Information

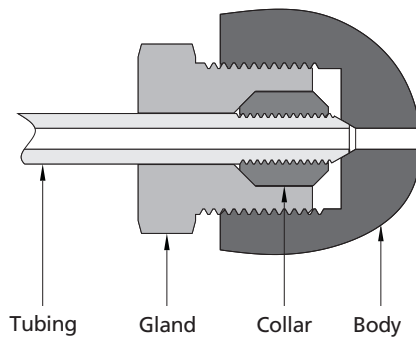
Please see I-03.

60 Series High Pressure Fittings

Features

- ⦿ Working pressure: 30,000 psig (2068 bar)
- ⦿ Working temperature range: -423°F to 1200°F (-252°C to 649°C)
- ⦿ Coned-and-threaded connection
- ⦿ Tube sizes available in 1/4", 3/8" and 9/16"
- ⦿ Annealed 316 Stainless Steel as standard material, other materials available upon request
- ⦿ Easy to disconnect and retighten
- ⦿ Metal-to-metal seal to provide perfect leak-tight service from critical vacuum to high pressure
- ⦿ Every fitting marked with size, material and heat number

Construction



Ordering Information

The structure of FITOK's type S fittings are the same as standard high pressure fittings. To get the complete ordering number of type S high pressure fittings, add "-S" as a suffix to the ordering number of standard high pressure fittings. If glands and collars are not needed, add "-SWO" as a suffix.

Examples:

1. 9/16" Union, the ordering number is SS-HU-HF9-S.
2. 3/8" Tee without glands and collars, the ordering number is SS-HT-HF6-SWO.

The sizes of type S fittings are the same as standard high pressure fittings, please refer to **60 Series High Pressure Fittings** on A-22.

Installation Instructions

Please see H-07.

Connection Information

Please see I-04.

Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service
Products

Subsea Valves

Tools and
Installation
InstructionsTechnical
InformationPart Number
Crossover Charts

PMH Series Pipe Fittings

Features

- ⦿ Annealed 316 Stainless Steel as standard material, other materials available upon request
- ⦿ Radius junction design with elbows provides smooth flow path
- ⦿ Every fitting marked with size, material and heat number

Working Pressure

- ⦿ Working pressures of pipe fittings are dependent on the end connection with the lowest working pressure
- ⦿ Working pressures of the end connections are shown in the table below

End Connection	Working Pressure psig (bar)	End Connection	Working Pressure psig (bar)
NS2/FNS2	10,000 (690)	RT2/FRT2	10,000 (690)
NS4/FNS4	10,000 (690)	RT4/FRT4	10,000 (690)
NS6/FNS6	10,000 (690)	RT6/FRT6	10,000 (690)
NS8/FNS8	10,000 (690)	RT8/FRT8	10,000 (690)
NS12/FNS12	10,000 (690)	RT12/FRT12	10,000 (690)
NS16/FNS16	10,000 (690)	RT16/FRT16	10,000 (690)

Cautions

- ⦿ Do not loosen or tighten fittings when the system is pressurized
- ⦿ Always use proper thread sealants on tapered pipe threads

Ordering Information

The structure of FITOK type S pipe fittings are the same as standard pipe fittings. To get the complete ordering number of type S pipe fittings, add "-S" as a suffix to the ordering number of standard pipe fittings. Examples: 3/8" NPT Hex Nipple, the ordering number is : SS-HPN-NS6-S.

The sizes of type S pipe fittings are the same as standard pipe fittings, please refer to *PMH Series Pipe Fittings* on A-29.

AMH Series Adapter Fittings

Features

- ⦿ Annealed 316 Stainless Steel as standard material, other materials available upon request
- ⦿ Every fitting marked with size, material and heat number

Working Pressure

- ⦿ Working pressures of AMH Series Adapter Fittings are dependent on the end connection with the lowest working pressure
- ⦿ Working pressures of the end connections are shown in the table below

End Connection	Working Pressure psig (bar)	End Connection	Working Pressure psig (bar)	End Connection	Working Pressure psig (bar)
MM4/MCP4/MF4	10,000 (690)	MCT4	10,000 (690)	HM4/HCP4/HF4	30,000 (2068)
MM6/MCP6/MF6	10,000 (690)	MCT6	10,000 (690)	HM6/HCP6/HF6	30,000 (2068)
MM9/MCP9/MF9	10,000 (690)	MCT9	10,000 (690)	HM9/HCP9/HF9	30,000 (2068)
MM12/MCP12/MF12	10,000 (690)	MCT12	10,000 (690)	—	—
MM16/MCP16/MF16	10,000 (690)	MCT16	10,000 (690)	—	—

End Connection	Working Pressure psig (bar)	End Connection	Working Pressure psig (bar)	End Connection	Working Pressure psig (bar)	End Connection	Working Pressure psig (bar)
HCT4	30,000 (2068)	NS2/FNS2	10,000 (690)	JM4/JF4	10,000 (690)	TM9	30,000 (2068)
HCT6	30,000 (2068)	NS4/FNS4	10,000 (690)	JM6/JF6	10,000 (690)	TM12	20,000 (1379)
HCT9	30,000 (2068)	NS6/FNS6	10,000 (690)	JM8/JF8	10,000 (690)	TM14	30,000 (2068)
—	—	NS8/FNS8	10,000 (690)	JM10/JF10	10,000 (690)	TM16	20,000 (1379)
—	—	NS12/FNS12	10,000 (690)	JM12/JF12	10,000 (690)	TM21	10,000 (690)
—	—	NS16/FNS16	10,000 (690)	JM16/JF16	10,000 (690)	—	—

Cautions

- ⦿ Do not loosen or tighten fittings when the system is pressurized
- ⦿ Always use proper thread sealants on tapered pipe threads

Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

Subsea Valves

Tools and Installation Instructions

Technical Information

Part Number Crossover Charts

Ordering Information

Except that DFT, DCP and DFF connections are not available, type S AMH series adapter fittings have the same connection types with standard AMH series adapter fittings. Add "-S" as a suffix to the ordering number of standard AMH series adapter fittings to get the complete ordering number of type S AMH series adapter fittings. For fittings with "MF" or "HF" connection, if glands and collars are not needed, add "-SWO" as a suffix.

Examples:

1. For adapter fittings with MM9 and NS8 connections, the ordering number is SS-MMA-MM9-NS8-S.
2. For adapter fittings with HF6 and MF4 connections, if glands and collars are not needed, the ordering number is SS-FFC-HF6-MF4-SWO.

The sizes of type S AMH series adapter fittings are the same as standard AMH series adapter fittings, please refer to **AMH Series Adapter Fittings** on A-60.

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

T20M Series Tubing

Features

- Working pressure: 10,000 psig (690 bar)
- Working temperature range: -423°F to 1200°F (-252°C to 649°C)
- Annealed 316/316L Stainless Steel as standard material, other materials available upon request
- Every tubing marked with material, size and heat number

Ordering Information

Tube O.D. in.	Tube I.D. in.	Material Grade	Basic Ordering Number	Max./Min. O.D. in. (mm)
1/4	0.109	Annealed 316/316L SS	SS-T20M-4-	0.248/0.243 (6.30/6.17)
3/8	0.203	Annealed 316/316L SS	SS-T20M-6-	0.370/0.365 (9.40/9.27)
9/16	0.312	Annealed 316/316L SS	SS-T20M-9-	0.557/0.552 (14.15/14.02)
3/4	0.438	Annealed 316/316L SS	SS-T20M-12-	0.745/0.740 (18.92/18.80)
1	0.562	Annealed 316/316L SS	SS-T20M-16-	0.995/0.990 (25.27/25.14)

To get the complete ordering number of type S tubing, add the length designator "-S" as a suffix to the basic ordering number.

Examples:

- For 20 feet of 3/8" O.D. tubing, the complete ordering number is SS-T20M-6-**20-S**.
- For 6 meters of 3/4" O.D. tubing, the complete ordering number is SS-T20M-12-**6M-S**.

The tubing is available in random lengths but no more than 20 feet (6 meters).



Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

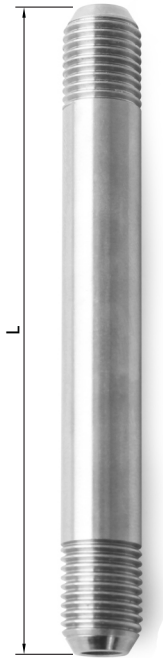
Subsea Valves

Tools and Installation Instructions

Technical Information

Part Number Crossover Charts

Coned and Threaded Nipples



Tube O.D. in.	Tube I.D. in.	Ordering Number	L in. (mm)
1/4	0.109	SS-T20M-4CT-2.75-S	2.75 (69.9)
1/4	0.109	SS-T20M-4CT-3-S	3 (76.2)
1/4	0.109	SS-T20M-4CT-4-S	4 (101.6)
1/4	0.109	SS-T20M-4CT-6-S	6 (152.4)
1/4	0.109	SS-T20M-4CT-8-S	8 (203.2)
1/4	0.109	SS-T20M-4CT-10-S	10 (254.0)
1/4	0.109	SS-T20M-4CT-12-S	12 (304.8)
3/8	0.203	SS-T20M-6CT-3-S	3 (76.2)
3/8	0.203	SS-T20M-6CT-4-S	4 (101.6)
3/8	0.203	SS-T20M-6CT-6-S	6 (152.4)
3/8	0.203	SS-T20M-6CT-8-S	8 (203.2)
3/8	0.203	SS-T20M-6CT-10-S	10 (254.0)
3/8	0.203	SS-T20M-6CT-12-S	12 (304.8)
9/16	0.312	SS-T20M-9CT-4-S	4 (101.6)
9/16	0.312	SS-T20M-9CT-6-S	6 (152.4)
9/16	0.312	SS-T20M-9CT-8-S	8 (203.2)
9/16	0.312	SS-T20M-9CT-10-S	10 (254.0)
9/16	0.312	SS-T20M-9CT-12-S	12 (304.8)
3/4	0.438	SS-T20M-12CT-4-S	4 (101.6)
3/4	0.438	SS-T20M-12CT-6-S	6 (152.4)
3/4	0.438	SS-T20M-12CT-8-S	8 (203.2)
3/4	0.438	SS-T20M-12CT-10-S	10 (254.0)
3/4	0.438	SS-T20M-12CT-12-S	12 (304.8)
1	0.562	SS-T20M-16CT-6-S	6 (152.4)
1	0.562	SS-T20M-16CT-8-S	8 (203.2)
1	0.562	SS-T20M-16CT-10-S	10 (254.0)
1	0.562	SS-T20M-16CT-12-S	12 (304.8)

NOTE: Do not recommend bending of tubing.

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

T60 Series Tubing

Features

- Working pressure: 30,000 psig (2068 bar)
- Working temperature range: -423°F to 1200°F (-252°C to 649°C)
- Annealed 316/316L Stainless Steel as standard material, other materials available upon request
- Every tubing marked with material, size and heat number

Ordering Information

Tube O.D. in.	Tube I.D. in.	Material Grade	Basic Ordering Number	Max./Min. O.D. in. (mm)
1/4	0.083	Annealed 316/316L SS	SS-T60-4-	0.248/0.243 (6.30/6.17)
3/8	0.125	Annealed 316/316L SS	SS-T60-6-	0.370/0.365 (9.40/9.27)
9/16	0.188	Annealed 316/316L SS	SS-T60-9-	0.557/0.552 (14.15/14.02)

To get the complete ordering number of type S tubing, add the length designator "-S" as a suffix to the basic ordering number.

Examples:

- For 20 feet of 1/4" O.D. tubing, the complete ordering number is SS-T60-4-20-S.
- For 6 meters of 9/16" O.D. tubing, the complete ordering number is SS-T60-9-6M-S.

The tubing is available in random lengths but no more than 20 feet (6 meters).



Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

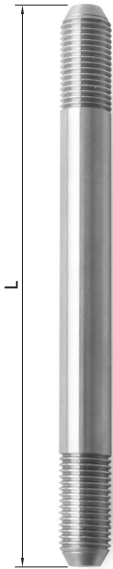
Subsea Valves

Tools and Installation Instructions

Technical Information

Part Number Crossover Charts

Coned and Threaded Nipples



Tube O.D. in.	Tube I.D. in.	Ordering Number	L in. (mm)
1/4	0.083	SS-T60-4CT-2.75-S	2.75 (69.9)
1/4	0.083	SS-T60-4CT-3-S	3 (76.2)
1/4	0.083	SS-T60-4CT-4-S	4 (101.6)
1/4	0.083	SS-T60-4CT-6-S	6 (152.4)
1/4	0.083	SS-T60-4CT-8-S	8 (203.2)
1/4	0.083	SS-T60-4CT-10-S	10 (254.0)
1/4	0.083	SS-T60-4CT-12-S	12 (304.8)
3/8	0.125	SS-T60-6CT-3-S	3 (76.2)
3/8	0.125	SS-T60-6CT-4-S	4 (101.6)
3/8	0.125	SS-T60-6CT-6-S	6 (152.4)
3/8	0.125	SS-T60-6CT-8-S	8 (203.2)
3/8	0.125	SS-T60-6CT-10-S	10 (254.0)
3/8	0.125	SS-T60-6CT-12-S	12 (304.8)
9/16	0.188	SS-T60-9CT-4-S	4 (101.6)
9/16	0.188	SS-T60-9CT-6-S	6 (152.4)
9/16	0.188	SS-T60-9CT-8-S	8 (203.2)
9/16	0.188	SS-T60-9CT-10-S	10 (254.0)
9/16	0.188	SS-T60-9CT-12-S	12 (304.8)

NOTE: Do not recommend bending of tubing.

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

Needle Valves

Working pressure up to 30,000 psig (2068 bar)

Features

- ⦿ Annealed 316 Stainless Steel for valve body and nickel-based alloy for lower stem
- ⦿ Metal-to-metal seating achieves ideal shutoff, longer stem/seat service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles
- ⦿ Non-rotating stem and bar stock body design
- ⦿ Easy to assemble and replace packing
- ⦿ Reliable packing gland locking device
- ⦿ Options for Vee or Regulating stem tips
- ⦿ Five flow patterns available

Technical Data

15N Series					
Connection Size	Connection	Orifice in. (mm)	Cv	Working Pressure psig (bar)	Working Temperature Range
1/8" Female NPT	FNS2	0.078 (1.98)	0.11	10,000 (690)	-100°F~400°F (-73°C~204°C)
1/8" Female ISO Tapered Thread	FRT2				
1/4" Female NPT	FNS4	0.203 (5.16)	0.63	10,000 (690)	
1/4" Female ISO Tapered Thread	FRT4				
3/8" Female NPT	FNS6	0.219 (5.56)	0.75	10,000 (690)	
3/8" Female ISO Tapered Thread	FRT6				
1/2" Female NPT	FNS8	0.312 (7.92)	1.30	10,000 (690)	
1/2" Female ISO Tapered Thread	FRT8				

20N Series					
Tube O.D. in.	Connection	Orifice in. (mm)	Cv	Working Pressure psig (bar)	Working Temperature Range
1/4	MF4	0.125 (3.18)	0.31	10,000 (690)	-100°F~600°F (-73°C~316°C)
3/8	MF6	0.204 (5.18)	0.68	10,000 (690)	
9/16	MF9	0.312 (7.92)	1.30	10,000 (690)	
3/4	MF12	0.438 (11.13)	2.50	10,000 (690)	
1	MF16	0.562 (14.27)	4.40	10,000 (690)	

Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

Subsea Valves

Tools and Installation Instructions

Technical Information

Part Number Crossover Charts

Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

Subsea Valves

Tools and Installation Instructions

Technical Information

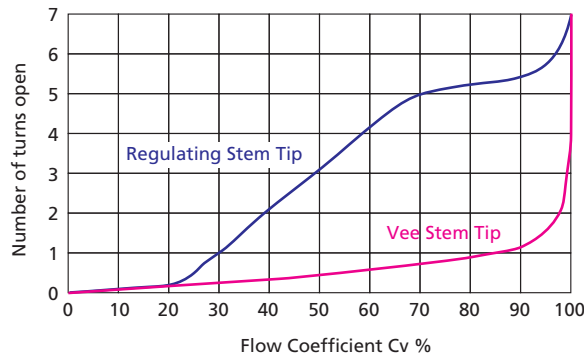
Part Number Crossover Charts

30N Series					
Tube O.D. in.	Connection	Orifice in. (mm)	Cv	Working Pressure psig (bar)	Working Temperature Range
1/4	HF4	0.094 (2.39)	0.12	20,000 (1379)	-100°F~600°F (-73°C~316°C)
3/8	HF6	0.125 (3.18)	0.23	20,000 (1379)	
9/16	HF9	0.125 (3.18)	0.33	20,000 (1379)	

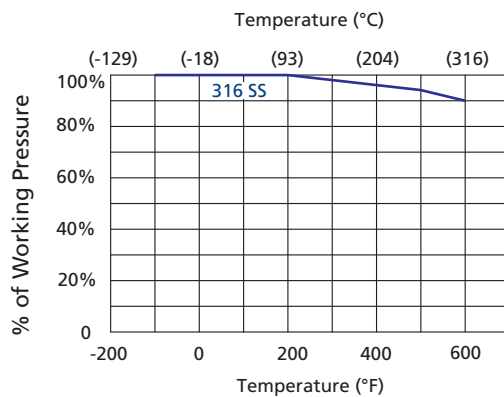
60N Series					
Tube O.D. in.	Connection	Orifice in. (mm)	Cv	Working Pressure psig (bar)	Working Temperature Range
1/4	HF4	0.063 (1.59)	0.08	30,000 (2068)	-100°F~600°F (-73°C~316°C)
3/8	HF6	0.063 (1.59)	0.09	30,000 (2068)	
9/16	HF9	0.078 (1.98)	0.14	30,000 (2068)	

NOTES: 1. Cv values shown are for 2-way straight valve pattern. For 2-way angle pattern, increase Cv value by 50% (Based on water).
 2. Packing Options
 PTFE is the standard packing material for 15N, 20N and 30N series, RPTFE glass also available.
 Packing material for 60N Series is RPTFE only.
 PTFE: -100°F~450°F (-73°C~232°C)
 RPTFE glass: -100°F~600°F (-73°C~316°C)

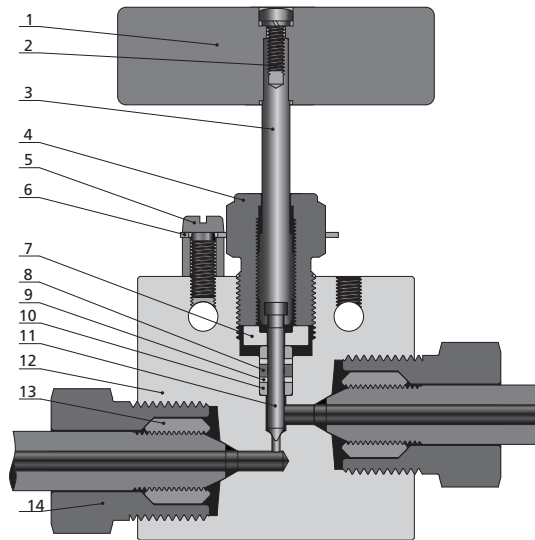
Flow Data at 100°F (38°C)



Pressure vs. Temperature Curve



Standard Materials of Construction



Item	Component	Material Grade
1	Handle	Stainless steel
2	Handle Screw	Stainless steel
3	Upper Stem	316 SS
4	Packing Gland	316 SS
5	Locking Screw	Stainless steel
6	Locking Plate	304 SS
7	Packing Ring	316 SS (For 15N, 20N and 30N Series), S17400 (For 60N Series)
8	<i>Packing</i>	<i>PTFE/RPTFE</i>
9	<i>Retaining Ring</i>	<i>PEEK (For 60N Series Only)</i>
10	<i>Packing Washer</i>	<i>316 SS (For 15N, 20N and 30N Series), Nickel-based Alloy (For 60N Series)</i>
11	<i>Lower Stem</i>	<i>Nickel-based Alloy</i>
12	<i>Body</i>	<i>Annealed 316 SS</i>
13	Collar	Annealed 316 SS (For tube connections)
14	Gland	Annealed 316 SS (For tube connections)
	Lubricant	Molybdenum disulfide

Wetted components listed in italics.

Fittings

Tubing

Quick Couplings

Line Filters

Valves

Sour Service Products

Subsea Valves

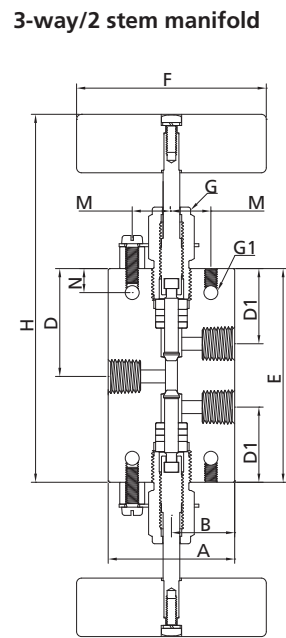
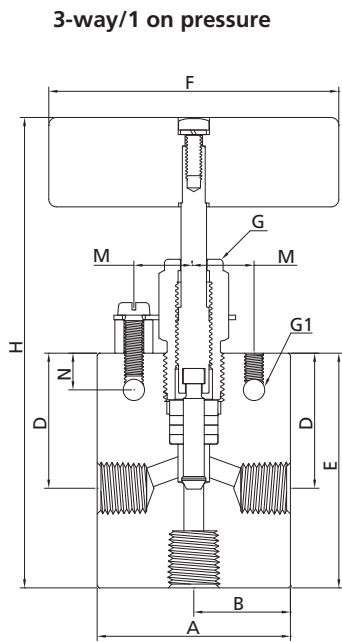
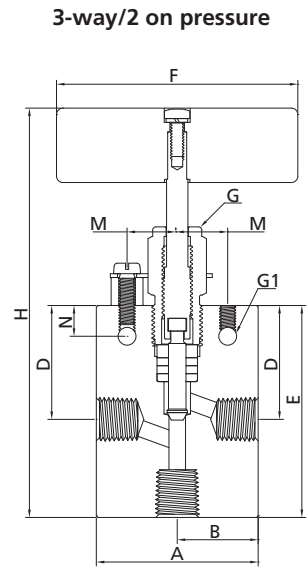
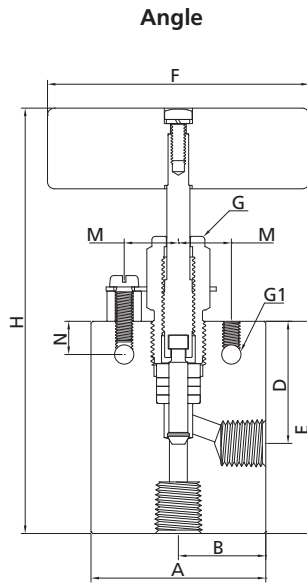
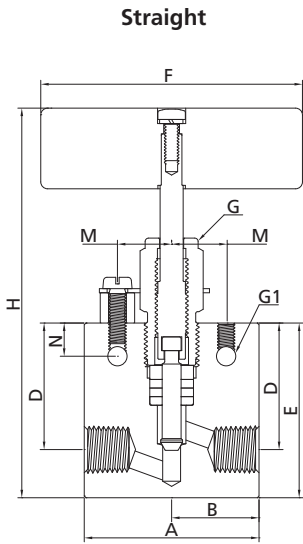
Tools and Installation Instructions

Technical Information

Part Number Crossover Charts

Ordering Information and Dimensions (Pipe Connection)

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



Ordering Information and Dimensions (Pipe Connection)

15N Series (Straight)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
15NSS-FNS2-1-S	FNS2	0.078 (1.98)	1.50 (38.1)	0.75 (19.1)	/	0.81 (20.6)	/	1.25 (31.8)	1.75 (44.5)	0.62 (15.8)	0.17 (4.3)	3.00 (76.4)	0.56 (14.2)	0.31 (7.9)	0.63 (15.9)
15NSS-FRT2-1-S	FRT2														
15NSS-FNS4-1-S	FNS4	0.203 (5.2)	2.00 (50.8)	1.00 (25.4)	/	1.41 (35.8)	/	2.00 (50.8)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.89 (124.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
15NSS-FRT4-1-S	FRT4														
15NSS-FNS6-1-S	FNS6	0.219 (5.56)	2.50 (63.5)	1.25 (31.8)	/	1.41 (35.8)	/	2.00 (50.8)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.85 (123.1)	0.62 (15.8)	0.38 (9.7)	1.00 (25.4)
15NSS-FRT6-1-S	FRT6														
15NSS-FNS8-1-S	FNS8	0.312 (7.92)	3.00 (76.2)	1.50 (38.1)	/	2.06 (52.3)	/	2.88 (73.2)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.18 (157.2)	0.69 (17.5)	0.50 (12.7)	1.38 (35.1)
15NSS-FRT8-1-S	FRT8														

15N Series (Angle)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
15NSS-FNS2-2-S	FNS2	0.078 (1.98)	1.50 (38.1)	0.75 (19.1)	/	0.81 (20.6)	/	1.38 (34.9)	1.75 (44.5)	0.62 (15.8)	0.17 (4.3)	3.13 (79.5)	0.56 (14.2)	0.31 (7.9)	0.63 (15.9)
15NSS-FRT2-2-S	FRT2														
15NSS-FNS4-2-S	FNS4	0.203 (5.2)	2.00 (50.8)	1.00 (25.4)	/	1.41 (35.8)	/	2.44 (62.0)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.33 (135.4)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
15NSS-FRT4-2-S	FRT4														
15NSS-FNS6-2-S	FNS6	0.219 (5.56)	2.50 (63.5)	1.25 (31.8)	/	1.41 (35.8)	/	2.44 (62.0)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.34 (135.7)	0.62 (15.8)	0.38 (9.7)	1.00 (25.4)
15NSS-FRT6-2-S	FRT6														
15NSS-FNS8-2-S	FNS8	0.312 (7.92)	3.00 (76.2)	1.50 (38.1)	/	2.06 (52.3)	/	3.38 (85.9)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.69 (169.9)	0.69 (17.5)	0.50 (12.7)	1.38 (35.1)
15NSS-FRT8-2-S	FRT8														

15N Series (3-way/2 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
15NSS-FNS2-4-S	FNS2	0.078 (1.98)	1.50 (38.1)	0.75 (19.1)	/	0.81 (20.6)	/	1.57 (40.0)	1.75 (44.5)	0.62 (15.8)	0.17 (4.3)	3.33 (84.6)	0.56 (14.2)	0.31 (7.9)	0.63 (15.9)
15NSS-FRT2-4-S	FRT2														
15NSS-FNS4-4-S	FNS4	0.203 (5.2)	2.00 (50.8)	1.00 (25.4)	/	1.41 (35.8)	/	2.62 (66.6)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.51 (140.0)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
15NSS-FRT4-4-S	FRT4														
15NSS-FNS6-4-S	FNS6	0.219 (5.56)	2.50 (63.5)	1.25 (31.8)	/	1.41 (35.8)	/	2.62 (66.6)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.47 (138.9)	0.62 (15.8)	0.38 (9.7)	1.00 (25.4)
15NSS-FRT6-4-S	FRT6														
15NSS-FNS8-4-S	FNS8	0.312 (7.92)	3.00 (76.2)	1.50 (38.1)	/	2.06 (52.3)	/	3.62 (92.0)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.94 (176.2)	0.69 (17.5)	0.50 (12.7)	1.38 (35.1)
15NSS-FRT8-4-S	FRT8														

Fitings
Tubing
Quick Couplings
Line Filters
Valves
Sour Service Products
Subsea Valves
Tools and Installation Instructions
Technical Information
Part Number Crossover Charts

Ordering Information and Dimensions (Pipe Connection)

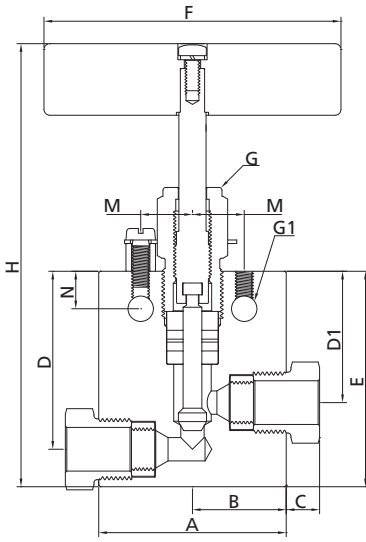
15N Series (3-way/1 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
15NSS-FNS2-5-S	FNS2	0.078 (1.98)	1.50 (38.1)	0.75 (19.1)	/	0.81 (20.6)	/	1.38 (35.0)	1.75 (44.5)	0.62 (15.8)	0.17 (4.3)	3.13 (79.5)	0.56 (14.2)	0.31 (7.9)	0.63 (15.9)
15NSS-FRT2-5-S	FRT2														
15NSS-FNS4-5-S	FNS4	0.203 (5.2)	2.00 (50.8)	1.00 (25.4)	/	1.41 (35.8)	/	2.44 (62.0)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.33 (135.4)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
15NSS-FRT4-5-S	FRT4														
15NSS-FNS6-5-S	FNS6	0.219 (5.56)	2.50 (63.5)	1.25 (31.8)	/	1.41 (35.8)	/	2.44 (62.0)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.34 (135.7)	0.62 (15.8)	0.38 (9.7)	1.00 (25.4)
15NSS-FRT6-5-S	FRT6														
15NSS-FNS8-5-S	FNS8	0.312 (7.92)	3.00 (76.2)	1.50 (38.1)	/	2.06 (52.3)	/	3.38 (85.9)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.69 (169.9)	0.69 (17.5)	0.50 (12.7)	1.38 (35.1)
15NSS-FRT8-5-S	FRT8														

15N Series (3-way/2 stem manifold)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
15NSS-FNS2-6-S	FNS2	0.078 (1.98)	1.50 (38.1)	0.75 (19.1)	/	1.00 (25.6)	0.68 (17.2)	2.02 (51.2)	1.75 (44.5)	0.62 (15.8)	0.17 (4.3)	3.77 (95.8)	0.56 (14.2)	0.31 (7.9)	0.63 (15.9)
15NSS-FRT2-6-S	FRT2														
15NSS-FNS4-6-S	FNS4	0.203 (5.2)	2.00 (50.8)	1.00 (25.4)	/	1.69 (42.9)	1.19 (30.2)	3.38 (85.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	6.27 (159.2)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
15NSS-FRT4-6-S	FRT4														
15NSS-FNS6-6-S	FNS6	0.219 (5.56)	2.50 (63.5)	1.25 (31.8)	/	1.69 (42.9)	1.19 (30.2)	3.38 (85.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	6.22 (158.1)	0.62 (15.8)	0.38 (9.7)	1.00 (25.4)
15NSS-FRT6-6-S	FRT6														
15NSS-FNS8-6-S	FNS8	0.312 (7.92)	3.00 (76.2)	1.50 (38.1)	/	2.56 (65.1)	1.75 (44.5)	5.12 (130.1)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	8.43 (214.2)	0.69 (17.5)	0.50 (12.7)	1.38 (35.1)
15NSS-FRT8-6-S	FRT8														

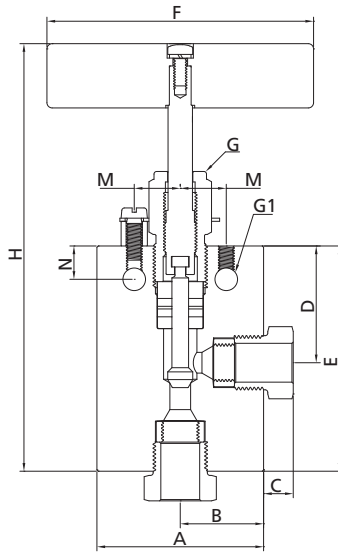
- NOTES: 1. G is the drill dimension of packing gland mounting hole.
 2. G1 is the dimension of bracket mounting hole.
 3. panel mounting drill size: 0.25" all valves.
 4. H is the dimension of stem in closed position.
 5. All dimensions for reference only and subject to change. For dimensions not shown above, please contact FITOK group or our authorized distributors.

Ordering Information and Dimensions (Tubing Connection)

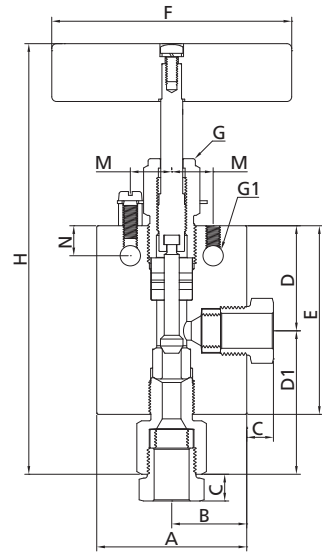
Straight



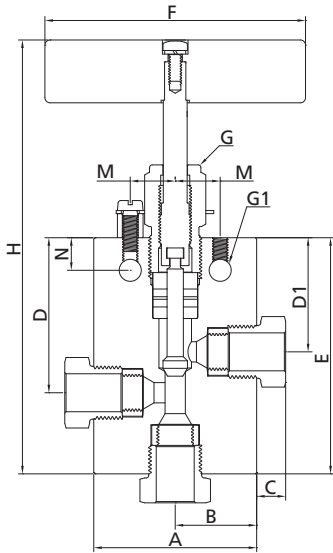
Angle



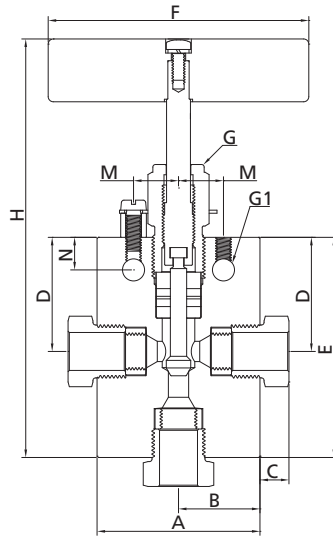
Angle (replaceable seat)



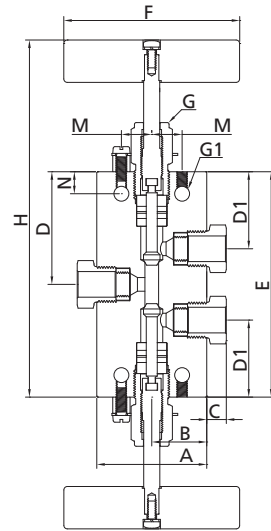
3-way/2 on pressure



3-way/1 on pressure



3-way/2 stem manifold



Part Number Crossover Charts	Technical Information	Tools and Installation Instructions	Subsea Valves	Sour Service Products	Valves	Line Filters	Quick Couplings	Tubing	Fittings
------------------------------	-----------------------	-------------------------------------	---------------	-----------------------	--------	--------------	-----------------	--------	----------

Ordering Information and Dimensions (Tubing Connection)

20N Series (Straight)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
20NSS-MF4-1-S	MF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.62 (41.2)	1.19 (30.2)	2.00 (50.8)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.85 (123.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF6-1-S	MF6	0.204 (5.18)	2.00 (50.8)	1.00 (25.4)	0.44 (11.2)	1.62 (41.2)	1.19 (30.2)	2.00 (50.8)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.89 (124.2)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF9-1-S	MF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.55 (14.0)	2.37 (60.3)	1.75 (44.5)	2.88 (73.2)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.18 (157.2)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NSS-MF12-1-S	MF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.60 (15.2)	3.00 (76.2)	2.25 (57.2)	3.75 (95.3)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.37 (187.2)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NSS-MF16-1-S	MF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.74 (18.7)	3.75 (95.3)	2.81 (71.4)	4.63 (117.6)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.45 (240.1)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

20N Series (Angle)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
20NSS-MF4-2-S	MF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.19 (30.2)		2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.28 (134.2)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF6-2-S	MF6	0.204 (5.18)	2.00 (50.8)	1.00 (25.4)	0.44 (11.2)	1.19 (30.2)		2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.33 (135.4)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF9-2-S	MF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.55 (14.0)	1.75 (44.5)		3.38 (85.9)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.69 (170.0)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NSS-MF12-2-S	MF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.60 (15.2)	2.25 (57.2)		4.25 (108.0)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.87 (199.9)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NSS-MF16-2-S	MF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.74 (18.7)	2.81 (71.4)		5.12 (130.1)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.94 (252.6)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

20N Series (Angle/replaceable seat)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
20NSS-MF4-3-S	MF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.19 (30.2)	2.13 (54.0)	2.25 (57.2)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	6.10 (154.9)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF6-3-S	MF6	0.204 (5.18)	2.00 (50.8)	1.00 (25.4)	0.44 (11.2)	1.19 (30.2)	2.13 (54.0)	2.25 (57.2)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	6.16 (156.5)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF9-3-S	MF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.55 (14.0)	1.75 (44.5)	2.50 (63.5)	3.13 (79.4)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	7.58 (192.1)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NSS-MF12-3-S	MF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.60 (15.2)	2.25 (57.2)	3.44 (87.4)	4.25 (108.0)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	9.30 (236.3)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NSS-MF16-3-S	MF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.74 (18.7)	2.81 (71.4)	4.22 (107.4)	5.25 (133.4)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	11.86 (301.3)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Ordering Information and Dimensions (Tubing Connection)

20N Series (3-way/2 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
20NSS-MF4-4-S	MF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.63 (41.3)	1.19 (30.2)	2.63 (66.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.47 (139.0)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF6-4-S	MF6	0.204 (5.18)	2.00 (50.8)	1.00 (25.4)	0.44 (11.2)	1.63 (41.3)	1.19 (30.2)	2.63 (66.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.52 (140.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF9-4-S	MF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.55 (14.0)	2.37 (60.3)	1.75 (44.5)	3.63 (92.1)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.94 (176.3)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NSS-MF12-4-S	MF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.60 (15.2)	3.00 (76.2)	2.25 (57.2)	4.63 (117.5)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	8.24 (209.4)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NSS-MF16-4-S	MF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.74 (18.7)	3.75 (95.3)	2.81 (71.4)	5.88 (149.4)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	10.70 (271.9)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

20N Series (3-way/1 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
20NSS-MF4-5-S	MF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.19 (30.2)	2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.28 (134.2)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)	
20NSS-MF6-5-S	MF6	0.204 (5.18)	2.00 (50.8)	1.00 (25.4)	0.44 (11.2)	1.19 (30.2)	2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.33 (135.4)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)	
20NSS-MF9-5-S	MF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.55 (14.0)	1.75 (44.5)	3.38 (85.9)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.69 (170.0)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)	
20NSS-MF12-5-S	MF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.60 (15.2)	2.25 (57.2)	4.25 (108.0)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.87 (199.9)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)	
20NSS-MF16-5-S	MF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.74 (18.7)	2.81 (71.4)	5.12 (130.1)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.94 (252.6)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)	

20N Series (3-way/2 stem manifold)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
20NSS-MF4-6-S	MF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.69 (42.9)	1.19 (30.2)	3.38 (85.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	6.23 (158.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF6-6-S	MF6	0.204 (5.18)	2.00 (50.8)	1.00 (25.4)	0.44 (11.2)	1.69 (42.9)	1.19 (30.2)	3.38 (85.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	6.24 (158.6)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NSS-MF9-6-S	MF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.55 (14.0)	2.56 (65.1)	1.75 (44.5)	5.13 (130.2)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	8.44 (214.4)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NSS-MF12-6-S	MF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.60 (15.2)	3.00 (76.2)	2.25 (57.2)	6.50 (165.1)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	10.11 (257.0)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NSS-MF16-6-S	MF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.74 (18.7)	3.75 (95.3)	2.81 (71.4)	7.50 (190.5)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	12.32 (313.0)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Ordering Information and Dimensions (Tubing Connection)	Fittings
	Tubing
	Quick Couplings
	Line Filters
	Valves
	Sour Service Products
	Subsea Valves
	Tools and Installation Instructions
	Technical Information
	Part Number Crossover Charts

Ordering Information and Dimensions (Tubing Connection)

30N Series (Straight)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
30NSS-HF4-1-S	HF4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.50 (38.1)	1.12 (28.5)	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.69 (119.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF6-1-S	HF6	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.50 (38.1)	1.12 (28.5)	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.69 (119.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF9-1-S	HF9	0.125 (3.18)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.56 (39.6)	1.12 (28.5)	2.44 (62.0)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.13 (130.3)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

30N Series (Angle)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
30NSS-HF4-2-S	HF4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.12 (28.5)	/	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.69 (119.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF6-2-S	HF6	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.12 (28.5)	/	2.25 (57.2)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.95 (125.7)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF9-2-S	HF9	0.125 (3.18)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.12 (28.5)	/	2.44 (62.0)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.13 (130.3)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

30N Series (Angle/replaceable seat)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
30NSS-HF4-3-S	HF4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.12 (28.5)	2.06 (52.3)	2.38 (60.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.88 (149.2)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF6-3-S	HF6	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.12 (28.5)	2.31 (58.67)	2.38 (60.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	6.12 (155.4)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF9-3-S	HF9	0.125 (3.18)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.12 (28.6)	2.57 (65.3)	2.46 (62.4)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	6.39 (162.4)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

30N Series (3-way/2 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
30NSS-HF4-4-S	HF4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.50 (38.1)	1.12 (28.5)	2.12 (53.9)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.81 (122.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF6-4-S	HF6	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.50 (38.1)	1.12 (28.5)	2.50 (63.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.19 (131.9)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF9-4-S	HF9	0.125 (3.18)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.56 (39.6)	1.12 (28.5)	2.88 (73.2)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.57 (141.5)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

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

Ordering Information and Dimensions (Tubing Connection)

30N Series (3-way/1 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
30NSS-HF4-5-S	HF4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.12 (28.5)	/	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.69 (119.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF6-5-S	HF6	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.12 (28.5)	/	2.25 (57.2)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.95 (125.7)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF9-5-S	HF9	0.125 (3.18)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.12 (28.5)	/	2.44 (62.0)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.13 (130.3)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

30N Series (3-way/2 stem manifold)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
30NSS-HF4-6-S	HF4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.53 (38.9)	1.12 (28.5)	3.06 (77.7)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.75 (146.0)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF6-6-S	HF6	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.62 (41.2)	1.12 (28.5)	3.25 (82.6)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.94 (150.9)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
30NSS-HF9-6-S	HF9	0.125 (3.18)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.88 (47.8)	1.12 (28.5)	3.75 (95.3)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	6.44 (163.6)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

60N Series (Straight)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
60NSS-HF4-TG1-S	HF4	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.69 (42.9)	1.31 (33.3)	2.13 (54.0)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.77 (121.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF6-TG1-S	HF6	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.69 (42.9)	1.31 (33.3)	2.25 (57.2)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	4.89 (124.3)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF9-TG1-S	HF9	0.078 (1.98)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.75 (44.5)	1.31 (33.3)	2.50 (63.5)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.14 (130.6)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

60N Series (Angle)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												
			A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
60NSS-HF4-TG2-S	HF4	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.31 (33.3)	/	2.38 (60.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.02 (127.5)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF6-TG2-S	HF6	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.31 (33.3)	/	2.62 (66.6)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.26 (133.5)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF9-TG2-S	HF9	0.078 (1.98)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.31 (33.3)	/	2.81 (71.4)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.45 (138.5)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

Ordering Information and Dimensions (Tubing Connection)	Fittings
	Tubing
	Quick Couplings
	Line Filters
	Valves
	Sour Service Products
	Subsea Valves
	Tools and Installation Instructions
	Technical Information
	Part Number Crossover Charts

Ordering Information and Dimensions (Tubing Connection)

60N Series (Angle/replaceable seat)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												Thickness
			A	B	C	D	D1	E	F	G	G1	H	M	N	
60NSS-HF4-TG3-S	HF4	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.31 (33.3)	2.12 (53.9)	2.62 (66.6)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	6.07 (154.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF6-TG3-S	HF6	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.31 (33.3)	2.36 (59.9)	2.62 (66.6)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	6.30 (160.1)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF9-TG3-S	HF9	0.078 (1.98)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.31 (33.3)	2.68 (68.8)	2.62 (66.6)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	6.65 (168.9)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

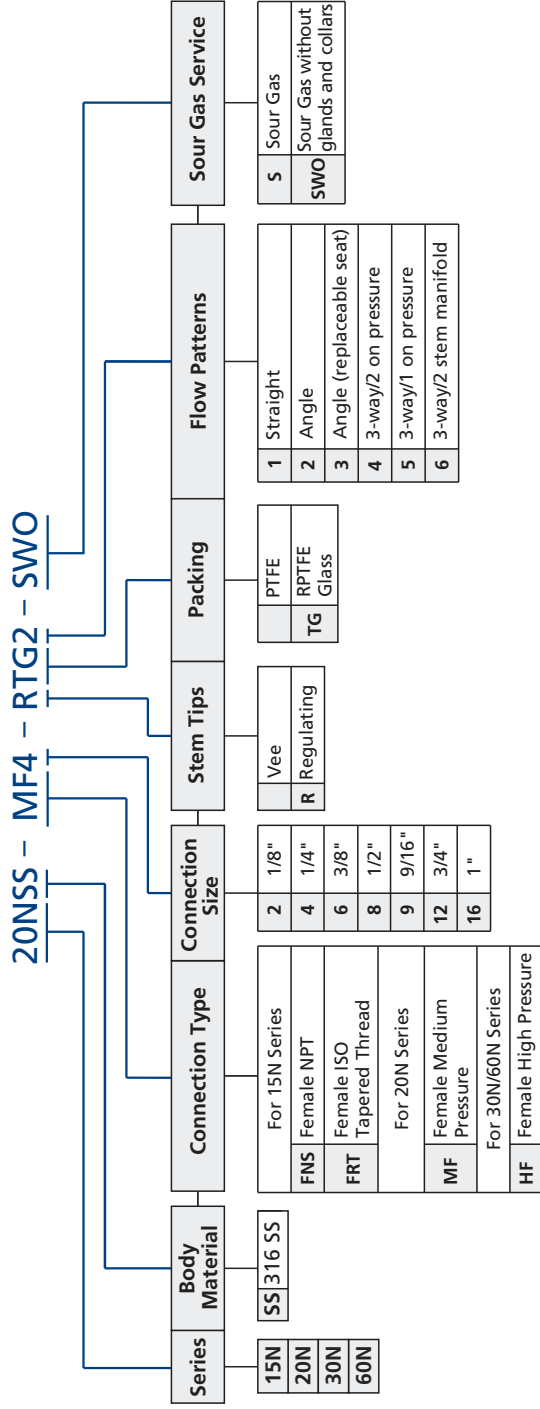
60N Series (3-way/2 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												Thickness
			A	B	C	D	D1	E	F	G	G1	H	M	N	
60NSS-HF4-TG4-S	HF4	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.69 (42.9)	1.31 (33.3)	2.38 (60.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.26 (133.6)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF6-TG4-S	HF6	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.69 (42.9)	1.31 (33.3)	2.75 (68.9)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.34 (135.8)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF9-TG4-S	HF9	0.078 (1.98)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.75 (44.5)	1.31 (33.3)	3.03 (77.0)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.67 (143.9)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

60N Series (3-way/1 on pressure)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												Thickness
			A	B	C	D	D1	E	F	G	G1	H	M	N	
60NSS-HF4-TG5-S	HF4	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.31 (33.3)	/	2.38 (60.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.02 (127.5)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF6-TG5-S	HF6	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.31 (33.3)	/	2.62 (66.6)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	5.26 (133.5)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF9-TG5-S	HF9	0.078 (1.98)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	1.31 (33.3)	/	2.81 (71.4)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	5.45 (138.5)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

60N Series (3-way/2 stem manifold)															
Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)												Thickness
			A	B	C	D	D1	E	F	G	G1	H	M	N	
60NSS-HF4-TG6-S	HF4	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.72 (43.69)	1.31 (33.3)	3.44 (87.4)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	6.08 (154.5)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF6-TG6-S	HF6	0.063 (1.59)	2.00 (50.8)	1.00 (25.4)	0.61 (15.6)	1.88 (47.8)	1.31 (33.3)	3.75 (95.3)	3.00 (76.2)	1.00 (25.4)	0.22 (5.6)	6.39 (162.3)	0.69 (17.5)	0.38 (9.7)	1.00 (25.4)
60NSS-HF9-TG6-S	HF9	0.078 (1.98)	2.62 (66.6)	1.31 (33.3)	0.95 (24.1)	2.06 (52.3)	1.31 (33.3)	4.12 (104.6)	3.00 (76.2)	1.00 (25.4)	0.28 (7.1)	6.76 (171.8)	0.69 (17.5)	0.38 (9.7)	1.50 (38.1)

- NOTES: 1. G is the drill dimension of packing gland mounting hole.
 2. G1 is the dimension of bracket mounting hole.
 3. Panel mounting drill size: 0.25" all valves.
 4. H is the dimension of stem in closed position.
 5. All dimensions for reference only and 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 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.

Part Number Crossover Charts	Technical Information	Tools and Installation Instructions	Subsea Valves	Sour Service Products	Valves	Line Filters	Quick Couplings	Tubing	Fittings
------------------------------	-----------------------	-------------------------------------	---------------	-----------------------	--------	--------------	-----------------	--------	----------

Bleed Valves

Working pressure up to 20,000 psig (1379 bar)

Features

- ⦿ One piece hex construction compact design allows easy installation
- ⦿ Working temperature range: 0°F to 400°F (-17.8°C to 204°C)
- ⦿ 1/8" Female NPT outlet connection
- ⦿ Easy to assemble and replace O-ring
- ⦿ Positive locking screw design prevents accidental removal of the stem
- ⦿ Tee handle for easy operation

Technical Data

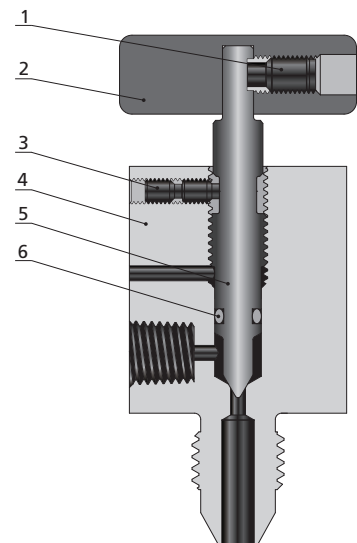
Series	Inlet Connection	Orifice in. (mm)	Working Pressure psig (bar)
20BV	MM6	0.094 (2.4)	10,000 (690)
	MM9	0.094 (2.4)	10,000 (690)
	MCT6	0.094 (2.4)	10,000 (690)
	MCT9	0.094 (2.4)	10,000 (690)
30BV	HM6	0.094 (2.4)	20,000 (1379)
	HM9	0.094 (2.4)	20,000 (1379)
	HCT6	0.094 (2.4)	20,000 (1379)
	HCT9	0.094 (2.4)	20,000 (1379)

- NOTES: 1. Working pressure shown is in closed position.
 2. Working pressure is 10,000 psig (690 bar) in open position.
 3. A variety of end connections available on request. For connections not shown above, please contact FITOK Group or our authorized distributors.

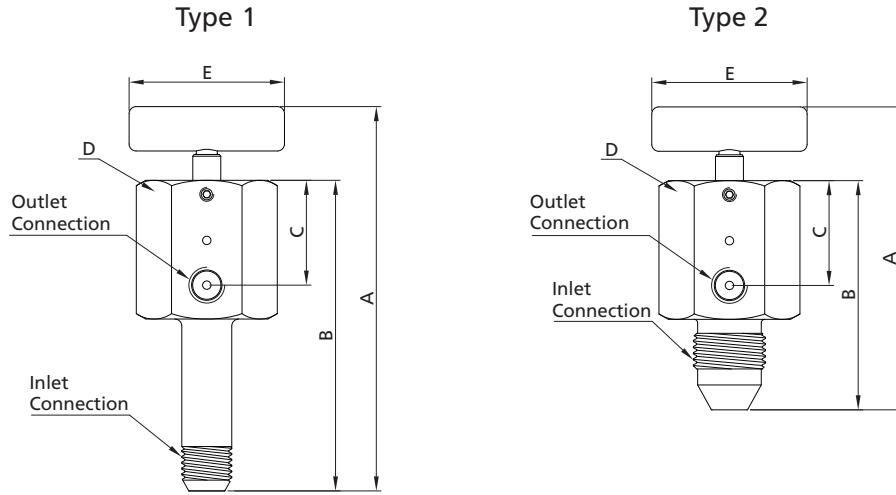
Standard Materials of Construction

Item	Component	Material Grade
1	Handle Screw	Stainless steel
2	Handle	Stainless steel
3	Locking screw	Stainless steel
4	<i>Body</i>	<i>Annealed 316 SS</i>
5	<i>Stem</i>	<i>Nickel-based Alloy</i>
6	<i>O-Ring</i>	<i>FKM</i>
Lubricant		Molybdenum disulfide/Fluorinated-based

Wetted components listed in italics.



Ordering Information and Dimensions



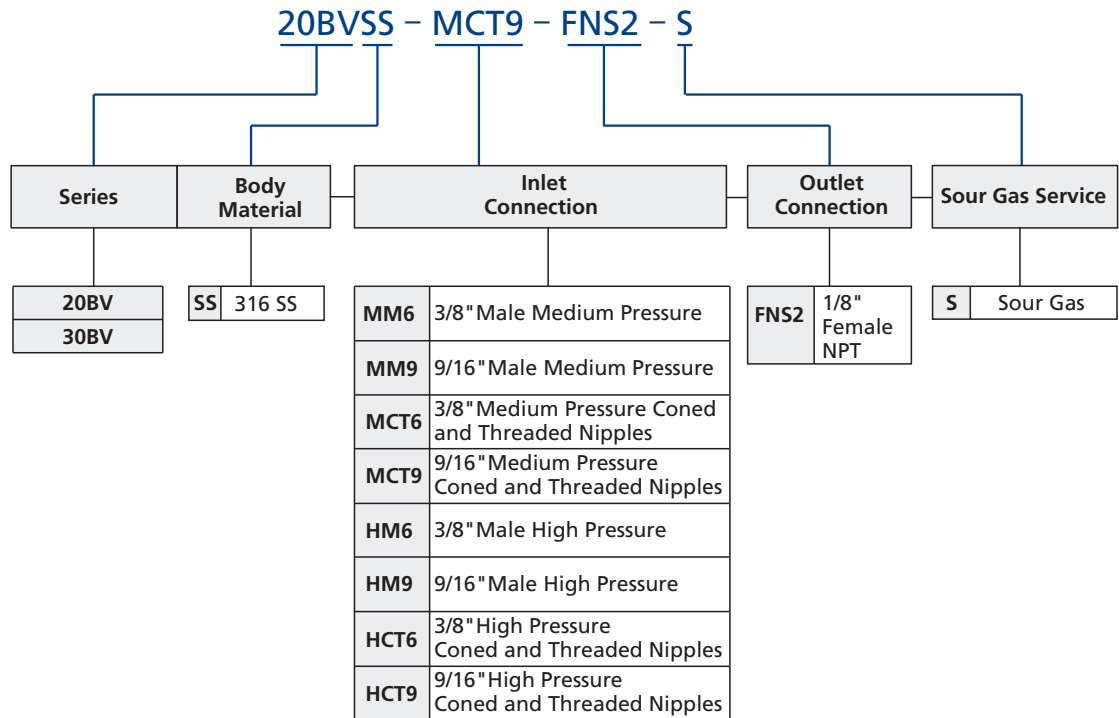
Type 1								
Ordering Number	Inlet Connection	Outlet Connection	Orifice in. (mm)	Dimensions, in. (mm)				
				A	B	C	D	E
20BVSS-MCT6-FNS2-S	MCT6	FNS2	0.094 (2.4)	3.61 (91.7)	2.78 (70.5)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)
20BVSS-MCT9-FNS2-S	MCT9	FNS2	0.094 (2.4)	3.82 (97.0)	2.98 (75.8)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)
30BVSS-HCT6-FNS2-S	HCT6	FNS2	0.094 (2.4)	4.09 (103.9)	3.26 (82.7)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)
30BVSS-HCT9-FNS2-S	HCT9	FNS2	0.094 (2.4)	4.68 (118.9)	3.85 (97.7)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)

Type 2								
Ordering Number	Inlet Connection	Outlet Connection	Orifice in. (mm)	Dimensions, in. (mm)				
				A	B	C	D	E
20BVSS-MM6-FNS2-S	MM6	FNS2	0.094 (2.4)	3.23 (82.0)	2.39 (60.8)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)
20BVSS-MM9-FNS2-S	MM9	FNS2	0.094 (2.4)	3.42 (86.8)	2.58 (65.6)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)
30BVSS-HM6-FNS2-S	HM6	FNS2	0.094 (2.4)	3.27 (83.1)	2.44 (61.9)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)
30BVSS-HM9-FNS2-S	HM9	FNS2	0.094 (2.4)	3.44 (87.4)	2.61 (66.2)	1.18 (30.0)	1.37 (34.9)	1.75 (44.5)

- NOTES: 1. D is the dimension of hex.
 2. A is the dimension of stem in closed position.
 3. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

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

Ordering Number Description



- NOTES: 1. For more details regarding 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
Part Number Crossover Charts

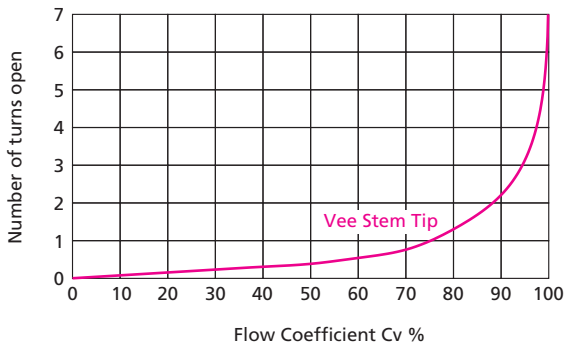
Gauge Valves

Working pressure up to 20,000 psig (1379 bar)

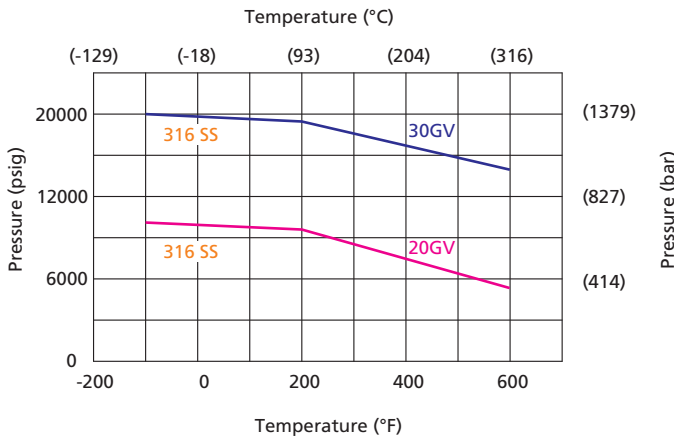
Features

- One inlet, three outlet ports.
- Metal-to-metal seating achieves ideal shutoff, longer stem/seat service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles
- Reliable packing gland locking device

Flow Data at 100°F (38°C)



Pressure vs. Temperature Curve



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

Technical Data

Series	Connection	Orifice in. (mm)	Cv	Working Pressure psig (bar)
20GV	MF6	0.125 (3.18)	0.23	10,000 (690)
	MF9	0.125 (3.18)	0.23	10,000 (690)
30GV	HF6	0.125 (3.18)	0.33	20,000 (1379)
	HF9	0.125 (3.18)	0.33	20,000 (1379)

NOTES: 1. Packing Options

PTFE is the standard packing material, RPTFE glass also available

PTFE: -100°F~450°F (-73°C~232°C).

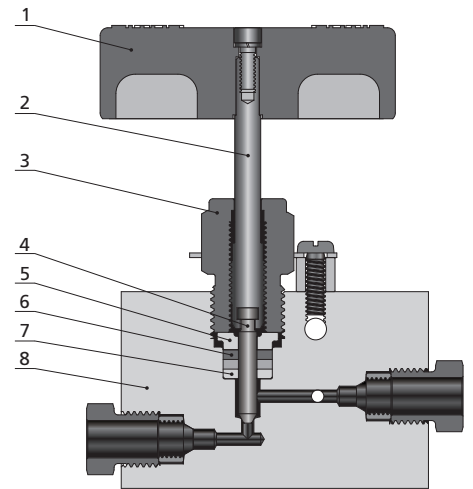
RPTFE glass: -100°F~600°F (-73°C~316°C).

2. A variety of end connections are available upon request. For connections not shown above, please contact FITOK Group or our authorized distributors.

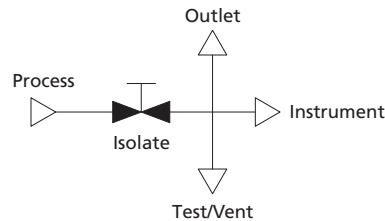
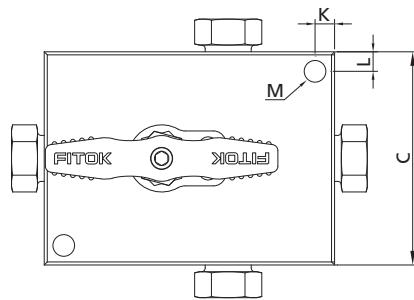
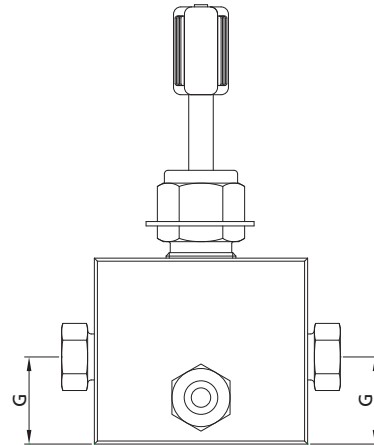
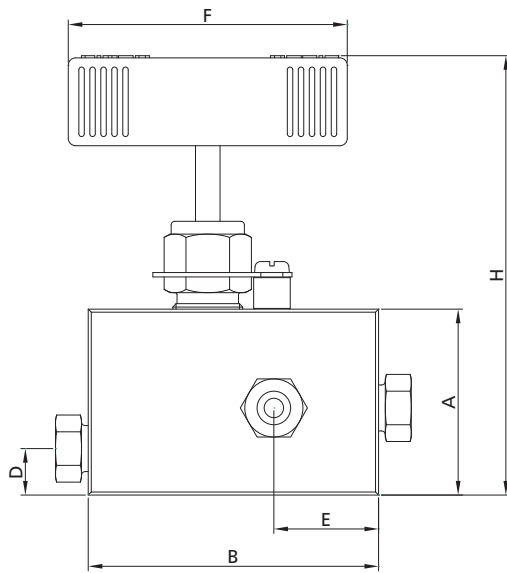
Standard Materials of Construction

Item	Component	Material Grade
1	Handle	Stainless steel
2	Upper stem	316 SS
3	Packing Gland	316 SS
4	<i>Lower Stem</i>	<i>Nickel-based Alloy</i>
5	Packing Ring	316 SS
6	<i>Packing</i>	<i>PTFE/RPTFE</i>
7	<i>Packing washer</i>	<i>316 SS</i>
8	<i>Body</i>	<i>Annealed 316 SS</i>
	Lubricant	Molybdenum disulfide

Wetted components listed in italics.



Ordering Information and Dimensions

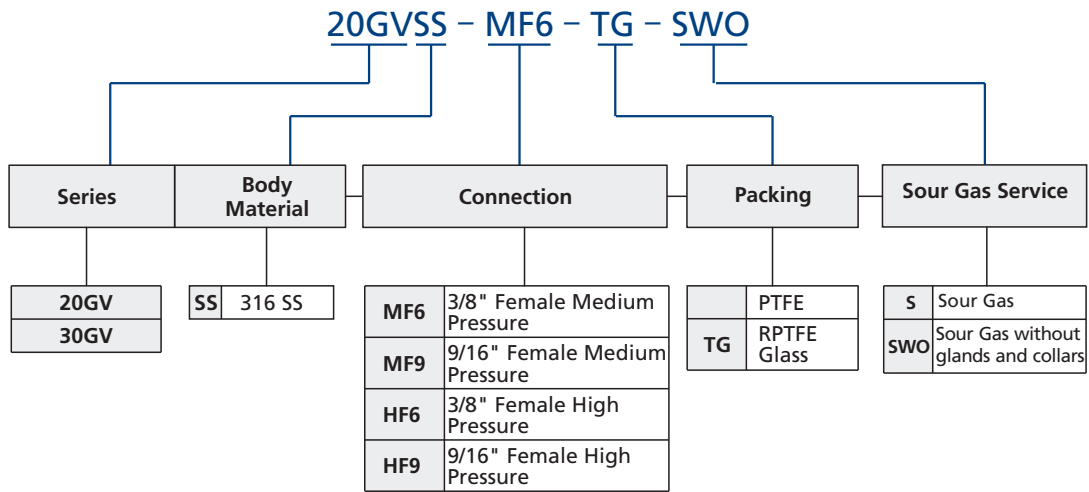


Ordering Number	Connection	Orifice in. (mm)	Dimensions, in. (mm)										
			A	B	C	D	E	F	G	H	K	L	M
20GVSS-MF6-S	MF6	0.125 (3.18)	2.00 (50.8)	3.12 (79.3)	2.00 (50.8)	0.50 (12.7)	1.13 (28.6)	3.00 (76.2)	0.94 (23.8)	4.68 (118.9)	0.38 (9.7)	0.25 (6.4)	0.28 (7.1)
20GVSS-MF9-S	MF9	0.125 (3.18)	2.00 (50.8)	3.88 (98.6)	2.75 (69.9)	0.66 (16.8)	1.38 (34.9)	3.00 (76.2)	0.94 (23.8)	4.68 (118.9)	0.38 (9.7)	0.38 (9.7)	0.28 (7.1)
30GVSS-HF6-S	HF6	0.125 (3.18)	2.00 (50.8)	3.12 (79.3)	2.00 (50.8)	0.50 (12.7)	1.13 (28.6)	3.00 (76.2)	0.94 (23.8)	4.68 (118.9)	0.38 (9.7)	0.38 (9.7)	0.28 (7.1)
30GVSS-HF9-S	HF9	0.125 (3.18)	2.00 (50.8)	3.88 (98.6)	2.75 (69.9)	0.66 (16.8)	1.38 (34.9)	3.00 (76.2)	0.94 (23.8)	4.68 (118.9)	0.38 (9.7)	0.38 (9.7)	0.28 (7.1)

- NOTES: 1. M is the panel mounting drill size.
 2. H is the dimension of stem in closed position.
 3. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

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

Ordering Number Description



- NOTES: 1. For more details regarding 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
Part Number Crossover Charts

Check Valves

Working pressure up to 30,000 psig (2068 bar)

Features

(Pipe) O-ring Check Valves

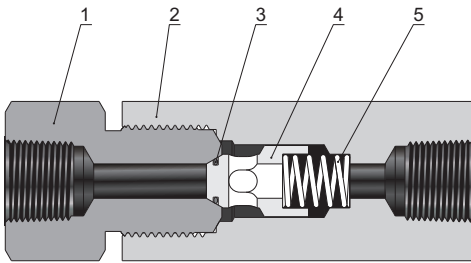
- ⦿ Provide unidirectional flow and tight shut-off for liquids and gases with high reliability (Not for use as relief valve)
- ⦿ Resilient O-ring seat design for noise-free closing and zero leakage
- ⦿ Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)

(Pipe) Ball Check Valves

- ⦿ 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

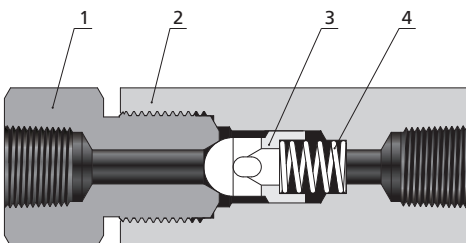
Standard Materials of Construction

15C Series Pipe O-ring Check Valves



Item	Component	Material Grade
1	Cover Gland	Annealed stainless steel
2	Valve Body	Annealed 316 SS
3	O-ring	FKM
4	Poppet	Annealed 316 SS
5	Spring	Nickel-based Alloy
	Lubricant	Molybdenum disulfide

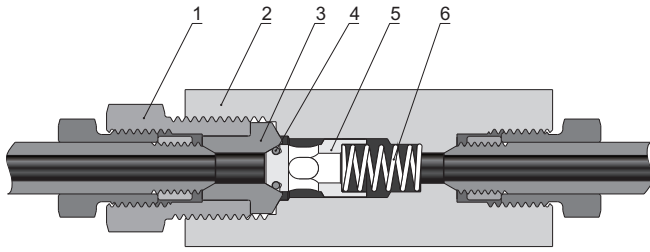
15CO Series Pipe Ball Check Valves



Item	Component	Material Grade
1	Cover Gland	Annealed stainless steel
2	Valve Body	Annealed 316 SS
3	Ball Poppet	Nickel-based Alloy
4	Spring	
	Lubricant	Molybdenum disulfide

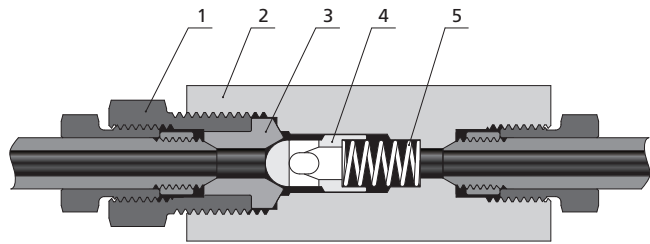
Fittings
Tubing
Quick Couplings
Line Filters
Valves
Sour Service Products
Subsea Valves
Tools and Installation Instructions
Technical Information
Part Number Crossover Charts

20C Series O-ring Check Valves



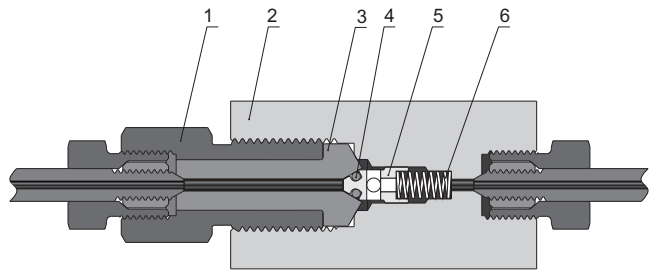
Item	Component	Material Grade
1	Cover Gland	Annealed stainless steel
2	Valve Body	<i>Annealed 316 SS</i>
3	Cover	<i>Annealed 316 SS</i>
4	O-ring	<i>FKM</i>
5	Poppet	<i>Annealed 316 SS</i>
6	Spring	<i>Nickel-based Alloy</i>
	Lubricant	Molybdenum disulfide

20CO Series Ball Check Valves



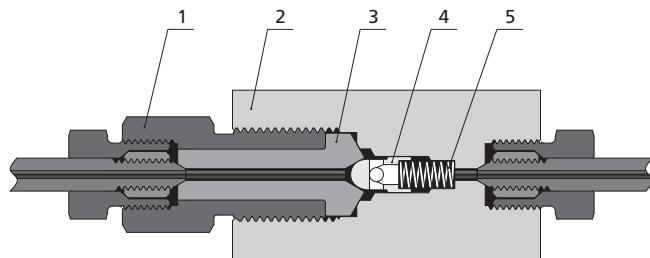
Item	Component	Material Grade
1	Cover Gland	Annealed stainless steel
2	Valve Body	<i>Annealed 316 SS</i>
3	Cover	<i>Nickel-based Alloy</i>
4	Ball Poppet	
5	Spring	
	Lubricant	Molybdenum disulfide

60C Series O-ring Check Valves



Item	Component	Material Grade
1	Cover Gland	Annealed stainless steel
2	Valve Body	<i>Annealed 316 SS</i>
3	Cover	<i>Annealed 316 SS</i>
4	O-ring	<i>FKM</i>
5	Poppet	<i>Annealed 316 SS</i>
6	Spring	<i>Nickel-based Alloy</i>
	Lubricant	Molybdenum disulfide

60CO Series Ball Check Valves



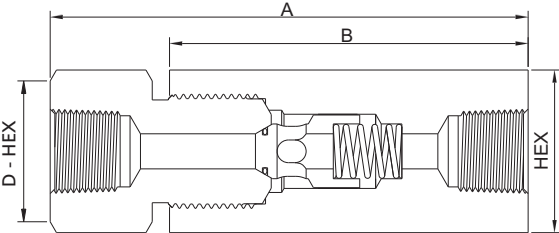
Item	Component	Material Grade
1	Cover Gland	Annealed stainless steel
2	Valve Body	<i>Annealed 316 SS</i>
3	Cover	<i>Nickel-based Alloy</i>
4	Ball Poppet	
5	Spring	
	Lubricant	Molybdenum disulfide

Wetted components listed in italics.

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

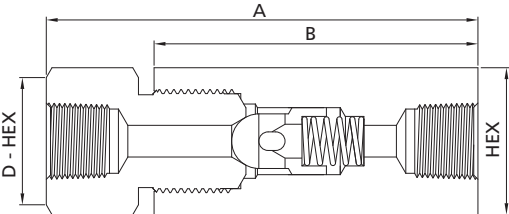
Ordering Information and Dimensions

15C Series Pipe O-ring Check Valves



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)				Working Pressure psig (bar)	Working Temperature °F (°C)
				A	B	D - HEX	HEX		
15CSS-FNS4-S	FNS4	0.12 (3.05)	0.28	3.30 (83.8)	2.38 (60.3)	0.94 (23.8)	0.94 (23.8)	10,000 (690)	0 to 400 (-17.8 to 204)
15CSS-FNS6-S	FNS6	0.22 (5.59)	0.84	3.95 (100.33)	2.88 (73.2)	1.13 (28.6)	1.13 (28.6)		
15CSS-FNS8-S	FNS8	0.36 (9.12)	2.30	5.07 (128.8)	3.88 (98.6)	1.38 (34.9)	1.38 (34.9)		

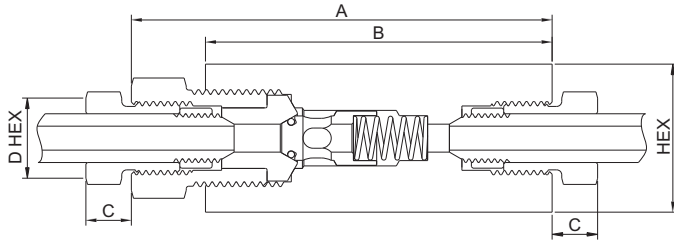
15CO Series Pipe Ball Check Valves



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)				Working Pressure psig (bar)	Working Temperature °F (°C)
				A	B	D - HEX	HEX		
15COSS-FNS4-S	FNS4	0.12 (3.05)	0.28	3.30 (83.8)	2.38 (60.3)	0.94 (23.8)	0.94 (23.8)	10,000 (690)	-110 to 400 (-79 to 204)
15COSS-FNS6-S	FNS6	0.22 (5.59)	0.84	3.95 (100.33)	2.88 (73.2)	1.13 (28.6)	1.13 (28.6)		
15COSS-FNS8-S	FNS8	0.36 (9.12)	2.30	5.07 (128.8)	3.88 (98.6)	1.38 (34.9)	1.38 (34.9)		

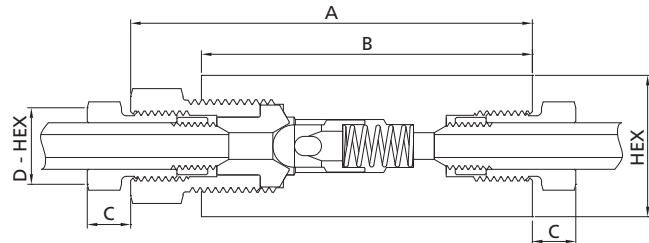
Fittings
Tubing
Quick Couplings
Line Filters
Valves
Sour Service Products
Subsea Valves
Tools and Installation Instructions
Technical Information
Part Number Crossover Charts

20C Series O-ring Check Valves



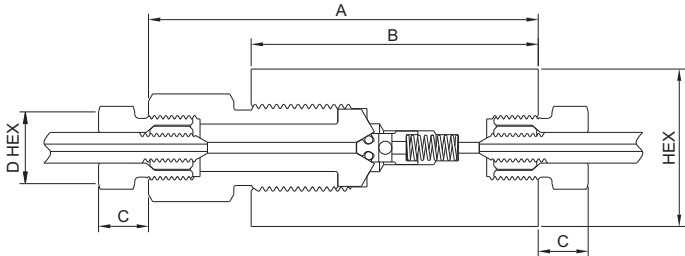
Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)	Working Temperature °F (°C)
				A	B	C	D - HEX	HEX		
20CSS-MF4-S	MF4	0.125 (3.18)	0.28	2.94 (74.7)	2.50 (63.5)	0.38 (9.65)	0.50 (12.7)	0.81 (20.6)	10,000 (690)	0 to 400 (-17.8 to 204)
20CSS-MF6-S	MF6	0.218 (5.54)	0.84	3.12 (79.3)	2.62 (66.6)	0.44 (11.2)	0.62 (15.8)	1.00 (25.4)		
20CSS-MF9-S	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)		
20CSS-MF12-S	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)		
20CSS-MF16-S	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)		

20CO Series Ball Check Valves



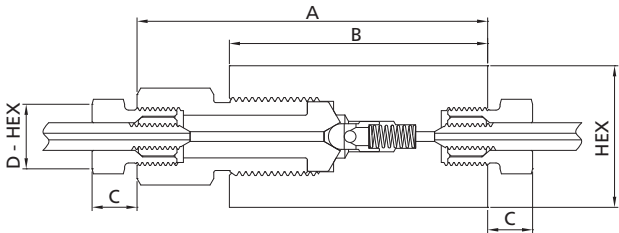
Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)	Working Temperature °F (°C)
				A	B	C	D - HEX	HEX		
20COSS-MF4-S	MF4	0.125 (3.18)	0.28	2.94 (74.7)	2.50 (63.5)	0.38 (9.65)	0.50 (12.7)	0.81 (20.6)	10,000 (690)	-110 to 1200 (-79 to 649)
20COSS-MF6-S	MF6	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)		
20COSS-MF9-S	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)		
20COSS-MF12-S	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)		
20COSS-MF16-S	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)		

60C Series O-ring Check Valves



Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)	Working Temperature °F (°C)
				A	B	C	D - HEX	HEX		
60CSS-HF4-S	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)	30,000 (2068)	0 to 400 (-17.8 to 204)
60CSS-HF6-S	HF6	0.125 (3.18)	0.28	3.86 (98.1)	2.80 (71.0)	0.61 (15.5)	0.81 (20.6)	1.18 (30.0)		
60CSS-HF9-S	HF9	0.187 (4.75)	0.63	4.62 (117.4)	3.38 (85.85)	0.95 (24.1)	1.12 (28.5)	1.50 (38.1)		

60CO Series Ball Check Valves

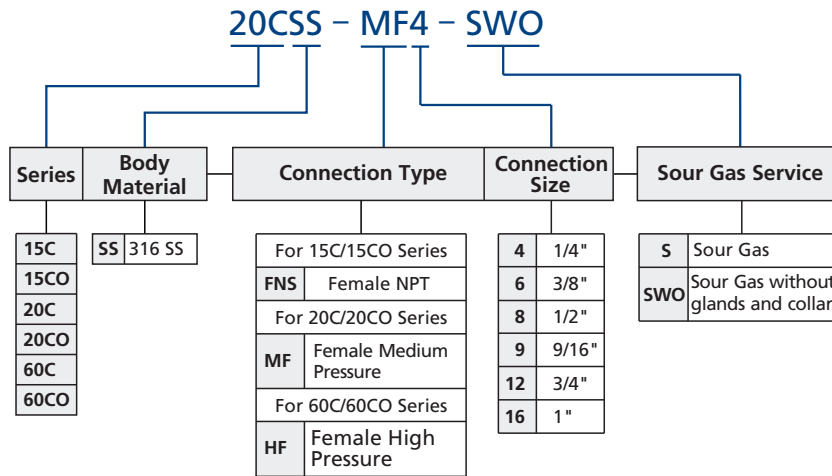


Ordering Number	Connection	Orifice in. (mm)	Cv	Dimensions, in. (mm)					Working Pressure psig (bar)	Working Temperature °F (°C)
				A	B	C	D - HEX	HEX		
60COSS-HF4-S	HF4	0.094 (2.39)	0.15	3.38 (85.9)	2.50 (63.5)	0.47 (11.9)	0.63 (16.0)	1.18 (30.0)	30,000 (2068)	-110 to 1200 (-79 to 649)
60COSS-HF6-S	HF6	0.125 (3.18)	0.28	3.86 (98.1)	2.80 (71.0)	0.61 (15.5)	0.81 (20.6)	1.18 (30.0)		
60COSS-HF9-S	HF9	0.187 (4.75)	0.63	4.62 (117.4)	3.38 (85.85)	0.95 (24.1)	1.12 (28.5)	1.50 (38.1)		

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

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

Ordering Number Description



- NOTES: 1. For more details regarding 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
Part Number Crossover Charts