FITOK Concised Product Catalog

FITOK

Valves and Fittings

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Contents

General Instrumentation Valves and Fittings

Medium & High Pressure Valves and Fittings

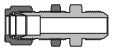
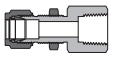
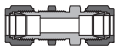
Semiconductor & Specialty Gas Applications

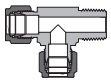
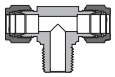
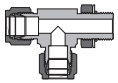
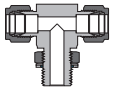
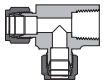
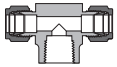
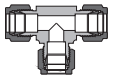
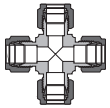
FITOK

Fittings

6 Series Tube Fittings

- Sizes range from 1/16" to 2" and 2 mm to 50 mm.
- Diverse materials and configurations are available.
- Precision machined components ensure perfect deformation of the ferrules and tubing.
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads.
- Female nut threads are silver-plated to minimize the friction with body threads.
- Radius junction design within elbows provides smooth flow path.
- Every fitting is stamped with size, material, and heat code.
- Fittings are easy to disconnect and retighten.

Configuration	Fitting Type	Example
	Male Connector	SS-CM-ML12-NS8
	Bulkhead Male Connector	S4-BCM-FL8-AN8
	Thermocouple Connector	S1-TCM-FL8-NS8
	Female Connector	B-CF-FL8-RG6
	Bulkhead Female Connector	CS-BCF-ML12-NS8
	Union	M-U-FL12
	Bulkhead Union	HC-BU-ML10
	Male Elbow	T-LM-FL8-NS8

Configuration	Fitting Type	Example
	Positionable Male Elbow	TI-LP-ML14-ST14
	Female Elbow	PA-LF-FL8-NS8
	Union Elbow	INC-LU-FL8
	Male Run Tee	A20-TMT-FL8-NS8
	Male Branch Tee	D5-TTM-ML16-NS8
	Positionable Male Run Tee	AL-TPT-FL8-ST14
	Positionable Male Branch Tee	A65-TTP-FL8-PP8
	Female Run Tee	SS-TFT-FL8-NS8
	Female Branch Tee	SS-TTF-ML12-NS8
	Union Tee	SS-TTT-FL6
	Union Cross	SS-C-FL8
	Cap	SS-TC-FL8
	Plug	SS-TP-ML12
	Nut+Ferrules	SS-NFR-FL8

Configuration	Fitting Type	Example
	Reducer	SS-R-FL8-MT12
	Insert for Soft Plastic Tubing	SS-IN-8-6
	Port Connector	SS-P-FL4
	Male Adapter	SS-AM-FT8-RT8
	Female Adapter	SS-AF-MT12-NS8
	Flange Adapter	SS-FA-FL6-F8-300
	Weld Connector	SS-CW-FL8-TS8
	Weld Elbow	SS-LW-FL8-PB8
	Lapped Flange Connector	SS-LFC-FL6A
	Calibration Fitting	SS-FC-FL4-1428
	Dielectric Fitting	SS-DF-FL6
	Nut-Ferrule Set	SS-NFS-FL6
	Ferrule Set	SS-FRS-FL6
	45° Male Elbow	SS-VM-FL5-NS2
	45° Adjustable Male Elbow	SS-VP-FL16-ST21
	Vent Protector	SS-VPF-NS12
	Fusible Fittings	SS-GFTA-4-160

Part Number Description

SS – CM – ML12 – NS8 – □ – □ – □

Material

SS	316 SS
S4	304 SS
S1	321 SS
904L	904L SS
TI	Titanium
D5	Duplex 2205
D7	Duplex 2507
A20	Alloy 20
M	Alloy 400
INC	Alloy 600
A65	Alloy 625
HC	Alloy C-276
CS	Carbon Steel
AL	Aluminum
B	Brass
PA	Nylon
T	PTFE

Fitting Type

CM	Male Connector
BCM	Bulkhead Male Connector
TCM	Thermocouple Connector
CF	Female Connector
BCF	Bulkhead Female Connector
U	Union
BU	Bulkhead Union
LM	Male Elbow
VM	45° Male Elbow
VP	45° Adjustable Male Elbow
LP	Positionable Male Elbow
LF	Female Elbow
LU	Union Elbow
TMT	Male Run Tee
TTM	Male Branch Tee
TPT	Positionable Male Run Tee
TTP	Positionable Male Branch Tee
TFT	Female Run Tee
TTF	Female Branch Tee
TTT	Union Tee
C	Union Cross
TC	Cap
TP	Plug
R	Reducer
P	Port Connector
AM	Male Adapter
AF	Female Adapter
CW	Weld Connector
LW	Weld Elbow
DF	Dielectric Fitting

P1 Type

ML	Metric Ferrule
FL	Fractional Ferrule
MT	Metric Tube
FT	Fractional Tube

P1 Size

1	1/16"
2	1/8" or 2 mm
3	3/16" or 3 mm
4	1/4" or 4 mm
5	5/16"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm
14	7/8" or 14 mm
15	15 mm
16	1" or 16 mm
18	1 1/8" or 18 mm
20	1 1/4" or 20 mm
22	22 mm
24	1 1/2" or 24 mm
25	25 mm
28	28 mm
30	30 mm
32	2" or 32 mm
38	38 mm
50	50 mm

P2 Type

Except the same as the P1, the other type follows:

NS	NPT Thread
ONS	O-ring with NPT Thread
RT	ISO Tapered Thread
RS	ISO Parallel Thread
RP	ISO Parallel Thread
RG	ISO Parallel Thread (Gauge)
RJ	ISO Parallel Thread (Japanese Gauge)
PP	Positionable, ISO Parallel Thread
ST	SAE/MS Straight Thread
OST	O-ring with SAE/MS Straight Thread
AN	37° Flare
MS	Male Metric Thread
TS	Fractional Tube Socket Weld
PB	Pipe Butt Weld

P2 Size

Except the same as the P1, the other size follows:

5	M5 x 0.8 or 5/16-24
6	M6 x 1 or 3/8-24
7	7/16-20
8	M8 x 1 or 1/2-20
9	9/16-18
10	M10 x 1
12	M12 x 1.5 or 3/4-16
14	M14 x 1.5 or 7/8-14
16	M16 x 1.5
17	1 1/16-12
18	M18 x 1.5
19	1 3/16-12
20	M20 x 1.5
21	1 5/16-12
22	M22 x 1.5
24	M24 x 1.5
26	1 5/8-12
27	M27 x 2
30	1 7/8-12

P3 and P4

Specify in the same way as the P2

Cleaning and Packaging

	FC-01
F2	FC-02

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

P1, P2, P3 and P4 shall be described in the following orders:

- Ferrule - Tube - NPT Thread - ISO Tapered Thread - ISO Parallel Thread - SAE/MS Straight Thread - 37° Flare - Pipe Butt Weld - Fractional Tube Socket Weld - Others
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

Cleaning and Packaging:

FC-01: Standard cleaning and packaging for general industrial procedures

FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C

37° Flared Tube Fittings

- Fittings are designed and manufactured in compliance with SAE J514.
- Sizes range from 1/8" to 2" and 3 mm to 50 mm.
- 316 stainless steel, aluminum, brass, and carbon steel materials are available.
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads.
- Radius junction design within elbows provides smooth flow path.
- Every fitting is stamped with size, material and heat code.
- Female nut threads are silver-plated to minimize the friction with body threads.
- Fittings are easy to disconnect and retighten.

Configuration	Fitting Type	Example
	Sleeve	SS-SL-AN8
	Nut	AL-N-AN8
	Male Connector	B-CM-AN8-NS8
	Female Connector	CS-CF-AN8-RT6
	Union	SS-U-AN8
	Reducing Adapter	SS-RA-AN8-AN4
	Bulkhead Union	SS-BU-AN6
	Tube Plug	SS-TP-AN6
	Tube Cap	SS-TC-AN6

Configuration	Fitting Type	Example
	Male Elbow	SS-LM-AN8-NS4
	Positionable Male Elbow	SS-LP-AN10-ST14
	45° Male Elbow	SS-VM-AN8-NS6
	Female Elbow	SS-LF-AN8-NS6
	Union Elbow	SS-LU-AN4
	Male Branch Tee	SS-TTM-AN8-NS4
	Male Run Tee	SS-TMT-AN8-RT4
	Female Branch Tee	SS-TTF-AN8-RT4
	Female Run Tee	SS-TFT-AN8-NS4
	Union Tee	SS-TTT-AN8
	Union Cross	SS-C-AN12

Part Number Description

SS – CM – AN8 – NS8 – □ – □

Material

SS	316 SS
AL	Aluminum
B	Brass
CS	Carbon Steel

Fitting Type

SL	Sleeve
N	Nut
CM	Male Connector
CF	Female Connector
U	Union
HU	Large Hex Union
RA	Reducing Adapter
BU	Bulkhead Union
TP	Plug
TC	Cap
LM	Male Elbow
VM	45° Male Elbow
LP	Positionable Male Elbow
LF	Female Elbow
LU	Union Elbow
TMT	Male Run Tee
TTM	Male Branch Tee
TFT	Female Run Tee
TTF	Female Branch Tee
TTP	Positionable Male Branch Tee
TTT	Union Tee
C	Union Cross

P1 Type

AN	37° Flare
AS	37° Flare Swivel

P1 Size

1	1/16"
2	1/8" or 2 mm
3	3/16" or 3 mm
4	1/4" or 4 mm
5	5/16"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm
14	7/8" or 14 mm
15	15 mm
16	1" or 16 mm
18	1 1/8" or 18 mm
20	1 1/4" or 20 mm
22	22 mm
24	1 1/2" or 24 mm
25	25 mm
28	28 mm
32	2" or 32 mm
38	38 mm
50	50 mm

P2 Type

Except the same as the P1, the other type follows:

NS	NPT Thread
RT	ISO Tapered Thread
ST	SAE/MS Straight Thread

P2 Size

Except the same as the P1, the other size follows:

5	5/16-24
6	3/8-24
7	7/16-20
8	1/2-20
9	9/16-18
12	3/4-16
14	7/8-14
17	1 1/16-12
19	1 3/16-12
21	1 5/16-12
26	1 5/8-12
30	1 7/8-12
40	2 1/2-12

P3 and P4

Specify in the same way as the P2

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

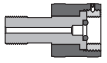
P1,P2,P3 and P4 shall be described in the following orders:

- 37° Flare - 37° Flare Swivel - NPT Thread - ISO Tapered Thread - SAE/MS Straight Thread - Others
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

6 Series Pipe Fittings

- Sizes range from 1/16 to 2.
- Materials include stainless steel, alloy 400, alloy 600, brass, and carbon steel.
- End connections with NPT, ISO/BSP, SAE, and metric threads are available.
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads.
- Radius junction design within elbows provides smooth flow path.
- Every fitting is stamped with size, materia, and heat code.

Configuration	Fitting Type	Example
	Pipe Plug	SS-PP-MRS14
	Hollow Hex Plug	S4-PI-NS4
	Close Nipple	S1-PCN-RT6
	Special Pipe Nipple	M-PSN-NS6-50.8
	Hex Nipple	INC-PHN-NS8-RP8
	Hex Long Nipple	B-PLN-NS6-76.2
	Reducing Bushing	CS-PRB-NS8-RT4
	Pipe Cap	SS-PC-NS4
	Hex Coupling	SS-PCG-NS12-NS8
	Union Ball Joint	SS-UBJ-NS4

Configuration	Fitting Type	Example
	Adapter	SS-PA-NS8-ST12
	Male Elbow	SS-PME-NS6
	Street Elbow	SS-PSE-RT6-RT4
	45° Street Elbow	SS-PSV-NS6-NS4
	Female Elbow	SS-PE-NS6
	45° Female Elbow	SS-PVE-NS6
	Male Tee	SS-PMT-NS4
	Female Branch Tee	SS-PTB-NS6
	Female Run Tee	SS-PTR-RT6
	Male Street Tee	SS-PST-NS6
	Male Branch Tee	SS-PBT-NS6
	Female Tee	SS-PT-RT8
	Female Cross	SS-PCR-NS6
	Pipe to Pipe Union	SS-PUP-MS20-NS4
	Hand Tight Adapter Fitting	SS-HF-MS20-FMS20
	Fusible Fittings	SS-GFPP-4-160

Part Number Description

SS – PSE – NS6 – NS4 – □ – □ – S – □

Material

SS	316 SS
S4	304 SS
S1	321 SS
M	Alloy 400
INC	Alloy 600
HC	Alloy C-276
B	Brass
CS	Carbon Steel
904L	904L SS

Fitting Type

PP	Pipe Plug
PI	Hollow Hex Plug
PCN	Close Nipple
PSN	Special Pipe Nipple
PHN	Hex Nipple
PLN	Hex Long Nipple
PRB	Reducing Bushing
PC	Pipe Cap
PCG	Hex Coupling
UBJ	Union Ball Joints
PA	Adapter
PME	Male Elbow
PSE	Street Elbow
PSV	45° Street Elbow
PE	Female Elbow
PVE	45° Female Elbow
PMT	Male Tee
PTB	Female Branch Tee
PTR	Female Run Tee
PST	Male Street Tee
PBT	Male Branch Tee
PT	Female Tee
PCR	Female Cross
PUP	Pipe to Pipe Union
HF	Hand Tight Adapter Fitting

P1 Type

NS	NPT Thread
RT	ISO Tapered Thread
RG	ISO Parallel Thread (Gauge)
BP	ISO Parallel Thread
RS	ISO Parallel Thread
MRS	Male Metric Thread
MS	Male Metric Thread
ST	Male SAE/MS Straight Thread
US	Female SAE/MS Straight Thread

P1 Size

2	1/8"
4	1/4"
5	5/16-24
6	3/8" or 3/8-24
7	7/16-20
8	1/2" or M8 x 1
9	9/16-18
10	M10 x 1
12	3/4" or M12 x 1.5 or 3/4-16
14	M14 x 1.5 or 7/8-14
16	1" or M16 x 1.5
17	1 1/16-12
18	M18 x 1.5
19	1 3/16-12
20	1 1/4" or M20 x 1.5
21	1 5/16-12
22	M22 x 1.5
24	1 1/2" or M24 X 1.5
26	1 5/8-12
27	M27 x 2
30	1 7/8-12 or M30 x 2
32	2"

P2, P3 and P4

Specify in the same way as the P1

Special Application

	NO
S	NACE MR0175

Classification for Nuclear Facility Application

N2	Class 2
N3	Class 3

Cleaning and Packaging

	FC-01
F2	FC-02

P4 P2 P1 P3

P1, P2, P3 and P4 shall be described in the following orders:

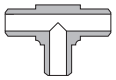
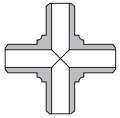
- NPT Thread - ISO Tapered Thread - ISO Parallel Thread - SAE/MS Straight Thread - Metric Thread - Others
- Male after female but the "PRB" and the "HF" types are not included
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

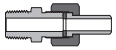
Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C

6 Series Weld Fittings

- Sizes range from 1/8" to 2" and 6 mm to 38 mm.
- 316 stainless steel material is standard; other materials are available on request.
- Radius junction design within elbows provides smooth flow path.
- Maximum working temperature is 1000°F (538°C).
- Every fitting is stamped with size, material, and heat code.

Configuration	Fitting Type	Example
	Tube Butt Weld Male Connector	SS-WM-TB12-NS8
	Tube Butt Weld Female Connector	SS-WF-MTB14-NS8
	Tube Butt Weld Reducing Union	SS-WU-MTB20-MTB14
	Tube Butt Weld Union Elbow	SS-WLU-TB8
	Tube Butt Weld Union Tee	SS-WT-MTB14
	Tube Butt Weld Union Cross	SS-WC-MTB12
	Tube Socket Weld Male Connector	SS-WM-TS8-NS8
	Tube Socket Weld Female Connector	SS-WF-MTS14-NS4
	Tube Socket Weld Male Elbow	SS-WLM-TS6-NS6
	Tube Socket Weld Female Elbow	SS-WLF-TS8-NS8

Configuration	Fitting Type	Example
	Tube Socket Weld Union	SS-WU-TS8
	Tube Socket Weld Reducing Union	SS-WU-TS12-TS8
	Tube Socket Weld Union Elbow	SS-WLU-MTS14
	Tube Socket Weld Union 45° Elbow	SS-WV-TS8
	Tube Socket Weld Union Tee	SS-WT-MTS14
	Tube Socket Weld Union Cross	SS-WC-TS8
	Pipe Butt Weld Male Connector	SS-WM-PB6-NS6
	Pipe Butt Weld Female Connector	SS-WF-PB8-NS8
	Pipe Socket Weld Male Connector	SS-WM-PS6-NS6
	Pipe Socket Weld Female Connector	SS-WF-PS8-NS8
	Pipe Socket Weld Union	SS-WU-PS8
	Tube to Tube Weld Adapter	SS-WA-TB8-TS6
	Pipe to Tube Weld Adapter	SS-WA-PB8-TS8
	Pipe to Weld End Union	SS-PUW-MS20-MTB14
	Male Pipe to Weld End Union	SS-MUW-NS8-MTB14

Part Number Description

SS – WLM – TS6 – NS6 – □ – □ – S – □

Material	
SS	316 SS
6L	316L SS
904L	904L SS

Fitting Type	
WM	Male Connector
WF	Female Connector
WU	Reducing Union
WLU	Union Elbow
WT	Union Tee
WC	Union Cross
WLM	Male Elbow
WLF	Female Elbow
WV	45° Union Elbow
WA	Adapter
PUW	Pipe To Weld
MUW	Male Pipe To Weld

P1 Type	
TB	Fractional Tube Butt Weld
TS	Fractional Tube Socket Weld
MTB	Metric Tube Butt Weld
MTS	Metric Tube Socket Weld
PB	Pipe Butt Weld
PS	Pipe Socket Weld
NS	NPT Thread
RT	ISO Tapered Thread
BP	ISO Parallel Thread
MS	Metric Thread

P1 Size	
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm or M12 x 1.5
14	7/8" or 14 mm or M14 x 1.5
16	1" or 16 mm or M16 x 1.5
18	18 mm or M18 x 1.5
20	1 1/4" or 20 mm or M20 x 1.5
22	22 mm or M22 x 1.5
24	1 1/2" or M24 x 1.5
25	25 mm
27	M27 x 2
28	28 mm
30	30 mm or M30 x 2
32	2" or 32 mm
38	38 mm

P2, P3 and P4
Specify in the same way as the P1

Special Application	
	NO
S	NACE MR0175
	Classification for Nuclear Facility Application
N2	Class 2
N3	Class 3

Cleaning and Packaging	
	FC-01
F2	FC-02

P1, P2, P3 and P4 shall be described in the following orders:

- Pipe thread connection type after weld connection type ("PUW" and "MUW" excluded)
- Pipe Butt Weld - Tube Butt Weld - Pipe Socket Weld - Tube Socket Weld - Others
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

Cleaning and Packaging:

FC-01: Standard cleaning and packaging for general industrial procedures

FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Calibration Hoses and Fittings

- Assembly and disassembly without requirement for a wrench or thread sealant
- Flexible hoses with small inside diameter and low internal volume
- Variety of adapters to connect with wide range of calibration devices
- Mix-interchangeable with other main brands
- Every assembly is factory tested with pure water at 1.5 times the maximum working pressure.

Quick-test Hoses

QH Series

- Working pressure up to: 6900 psig (475 bar)
- Working temperature: -10°F to 140°F (-23°C to 60°C)
- Hose outside diameter: 0.2" (5 mm)
- Hose inside diameter: 0.08" (2 mm)
- End connection materials: 316 SS, 304 SS

Hose Ends

FST End	SM516x2 End	SM520 End	FT4 End
1/2-20 UNF	M16x2.0	M20x1.5	1/4" Tube Adapter

NS2 End	NS4 End	FT2 End
1/8-27 NPT	1/4-18 NPT	1/8" Tube Adapter

Types listed are standard. Other types are available upon request.

Part Number Description

SS – QH – SMS20 – FST – F36

End Connection Material	
SS	316 SS
S4	304 SS

Series	
QH	

End 1 Connection Type and Size	
FST	1/2" Female UNF Swivel
NS2	1/8 Male NPT
NS4	1/4 Male NPT
FT2	1/8" Tube Adapter
FT4	1/4" Tube Adapter
SM516x2	M16 x 2.0 Female Swivel
SM520	M20 x 1.5 Female Swivel

End 2 Connection Type and Size	
	Same as End 1
	Specify in the same way as the end 1 connection type and size

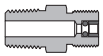
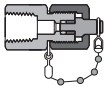
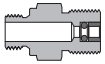
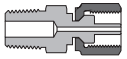
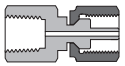
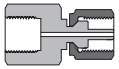
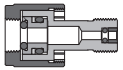
Overall Length	
FXX	XX in.
MXX	XX mm

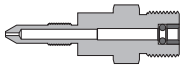
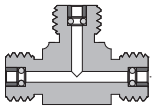
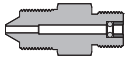
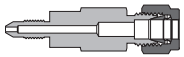
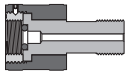
Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Quick-test Adapters and Fittings

QT Series

- Working pressure up to:
  Without valve: 5000 psig (345 bar)
  With valve: 3000 psig (207 bar)
- Working temperature:
  Fluorocarbon FKM seal: -10°F to 400°F (-23°C to 204°C)
  Buna N seal: -10°F to 250°F (-23°C to 121°C)
- Materials: 316 SS, 304 SS
- Optional check valves and protective caps available

Configuration	Fitting Type	Example
	Male NPT Adapters	SS-QT-NS4-ST
	Female NPT Adapters	SS-QT-FNS4-ST
	Male BSPT Adapters, with valve	SS-QT-RT4-ST-V
	Female BSPT Adapters, with cap	SS-QT-FRT4-ST-PC
	Male BSPP Adapters	SS-QT-RS2-ST
	Female BSPP Adapters	SS-QT-RG4-ST
	Male NPT Quick-test Gauge Adapters	SS-QT-NS4-FST
	Female NPT Quick-test Gauge Adapters	SS-QT-FNS4-FST
	Female BSPP Quick-test Gauge Adapters	SS-QT-RG4-FST
	Quick-test Hose Unions	SS-QT-ST-ST
	Quick-test Tube Adapters	SS-QT-QL4-ST
	Hand Tight Female NPT Quick-test Gauge Adapters	SS-QT-QNS8-ST

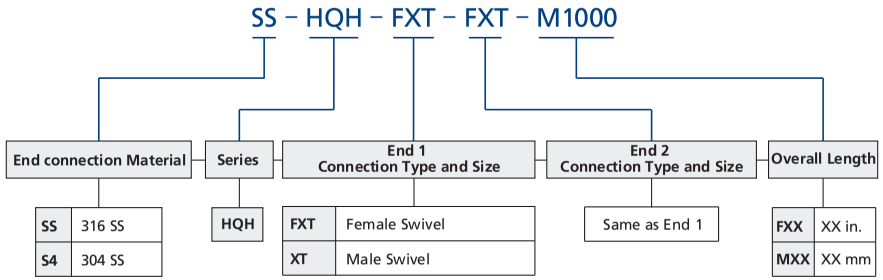
Configuration	Fitting Type	Example
	DP Transmitter Calibration Adapters	SS-QT-CH-ST
	Quick-test Tees	SS-QT-ST-ST-ST
	Male High Pressure Adapters	SS-QT-60HP-ST
	DP Transmitter Calibration Adapters	SS-QT-CH-FL4
	Hand Tight Adapters	SS-QT-MS20-MS14

High Pressure Quick-test Hose Assemblies

HQH Series

- Working pressure up to: 10000 psig (690 bar)
- Working temperature: -40°F to 140°F (-40°C to 60°C)
- Outer diameter of hose: 0.24" (6 mm)
- Inner diameter of hose: 0.08" (2 mm)
- Hose end materials: 316 SS, 304 SS
- Fluid media: water, petroleum based oils, air, inert gas

Part Number Description

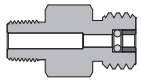
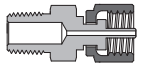
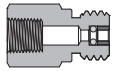
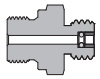
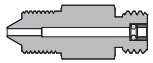
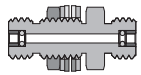
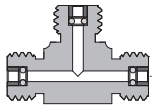


Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

High Pressure Quick-test Fittings

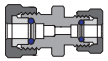
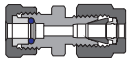
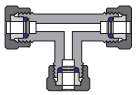
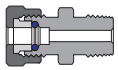
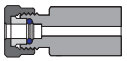
HQT Series

- Working pressure up to: 690 bar (10000 psig)
- Working temperature:
  FKM Seal: -10°F to 400°F (-23°C to 204°C)
  NBR Seal: -10°F to 250°F (-23°C to 121°C)
- Materials: 316 SS, 304 SS
- Convenient connection: No wrench or thread sealant required for assembly or disassembly.
- This kind of fittings is not applicable to use with FITOK QH series Quick-test Hose, please use with FITOK HQH series Quick-test Hose.

Configuration	Fitting Type	Example
	Male NPT Adapter	SS-HQT-NS4-XT
	Male NPT Quick-test Gauge Adapters	SS-HQT-NS4-FXT
	Female NPT Adapters	SS-HQT-FNS4-XT
	Male BSPP Adapters	SS-HQT-RS4-XT
	High Pressure Male Adapters	SS-HQT-60HP-XT
	Quick-test Unions	SS-HQT-XT-XT
	Quick-test Bulkhead Unions	SS-HQT-XT-TXT
	Quick-test Tees	SS-HQT-XT-XT-XT

VL Series Vacuum Tube Fittings

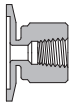
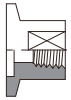
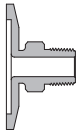
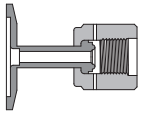
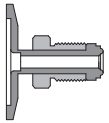
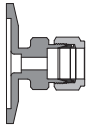
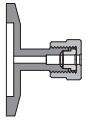
- Stainless steel construction, fluorocarbon FKM O-ring
- Available in tube sizes from 1/16" to 1 1/2"
- Working temperature: -25°F to 400°F (-31°C to 204°C)
- Knurled nut for easy, finger-tight assembly
- Reliable, repeatable sealing performance

Configuration	Fitting Type	Example
	Union	SS-U-VL8
	Reducing Union	SS-U-VL6-VL4
	Tube Fitting Union	SS-U-VL4-FL4
	Union Elbow	SS-LU-VL8
	Union Tee	SS-TTT-VL8
	Male Connector	SS-CM-VL8-NS6
	Adapter	SS-CW-VL4-A4
	Nut	SS-N-VL10
	O-ring	VI7-014

VA Series Vacuum Adapter Fittings

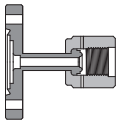
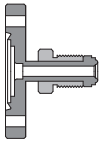
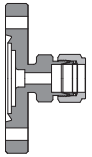
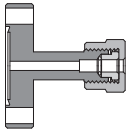
- Vacuum Range:
  Copper Seal: ≧10^{-12} Torr
  Elastomeric Seal: ≧10^{-8} Torr
- Working temperature:
  Copper Seal: -325°F to 842°F (-200°C to 450°C)
  Elastomeric Seal: -4°F to 302°F (-20°C to 150°C)
- Standard materials are in stainless steel 304, 304L, 316, 316L and Aluminum.

KF Adapter Fittings

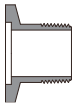
Configuration	Fitting Type	Example
 A Type (Default)	KF to Female NPT	S4-VA-KF10-FNS2
 B Type	KF to Female NPT	S4-VA-KF16-FNS2-N
	KF to Male NPT	S4-VA-KF10-NS2
	KF to Female FR Metal Gasket Face Seal Fitting	S4-VA-KF10-FFR4
	KF to Rotatable Male FR Metal Gasket Face Seal Fitting	S4-VA-KF10-RFR4
	KF to Tube Fitting	S4-VA-KF10-FL4
	KF to Vacuum Tube Fitting	S4-VA-KF25-VL4

Configuration	Fitting Type	Example
	KF to CF Flange Straight Reducing	S4-VA-KF10-CF133-SR
	KF to CF Flange Conical Reducing	S4-VA-KF16-CF212-NCR

CF Adapter Fittings

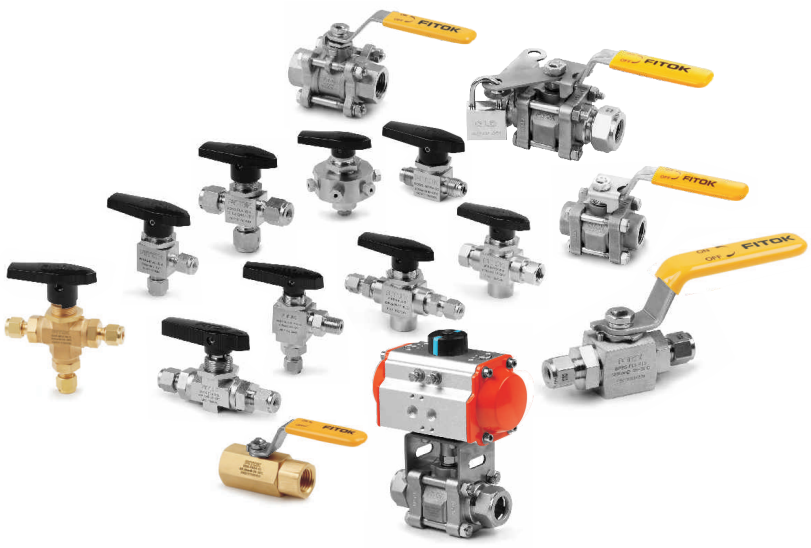
Configuration	Fitting Type	Example
	CF to Female FR Metal Gasket Face Seal Fitting	S4-VA-CF133-FFR4
	CF to Rotatable Male FR Metal Gasket Face Seal Fitting	S4-VA-CF133-RFR4
	CF to Tube Fitting	S4-VA-CF133-FL4
	CF to Vacuum Tube Fitting	S4-VA-CF212-VL4

Other Adapter Fittings

Configuration	Fitting Type	Example
	Male ISO Tapered Thread	S4-VA-KF10-RT4

Valves

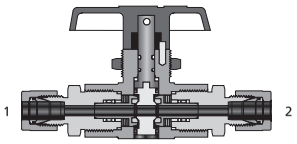
Ball Valves



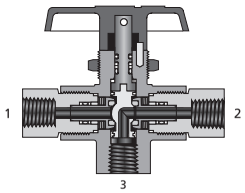
- Strong flowing capability and low operating torque
- 2-way Ball valves available for flow in two direction
- Symmetrical damping of operate, low operating torque and easy to operate
- Pneumatic or electric actuator available
- Options for handle color
- Every valve is factory tested with nitrogen at rated pressure; If rated pressure is greater than 6000 psig, tested at 6000 psig accordingly.

BF and BFH Series

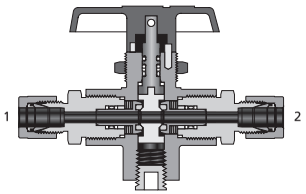
- Forged body with end connectors
- Body materials: 316 SS, 316L SS, 904L SS, and alloy 400
- Seat materials: PTFE, PCTFE and PEEK
- Packing materials: fluorocarbon FKM and PTFE
- End connections:
  1/8 to 1/2 female NPT
  1/4" to 1/2" and 6 mm to 12 mm tube fitting
- Orifice size: 0.19" (4.8 mm)
- Working pressure up to:
  BF Series: 6000 psig (414 bar)
  BFH Series: 10 000 psig (690 bar)
- Working temperature: 0°F to 450°F (-18°C to 232°C)



BF Series



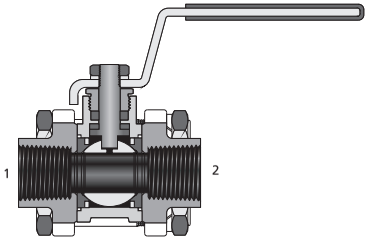
BF Series



BFH Series

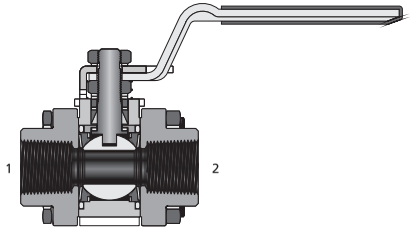
BG Series

- 3-piece precision cast body construction
- Body materials: CF8M (316), CF3M (316L), CF8 (304), CF3 (304L) and 904L SS
- Seat material: PTFE
- Packing material: PTFE
- End connections:
  1/8 to 1 thread
  1/8" to 1" pipe butt or socket weld
  1/4" to 2" and 6 mm to 25 mm tube butt or socket weld
  1/4" to 1" and 6 mm to 25 mm tube fitting
- Orifice sizes: 0.19" (4.8 mm) to 3" (76 mm)
- Working pressure up to: 1000 psig (69.0 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)



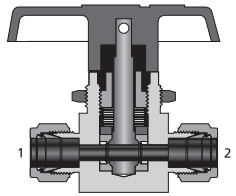
BH Series

- 3-piece precision cast body construction
- Body materials: CF8M (316), CF3M (316L), CF8 (304), CF3 (304L) and 904L SS
- Seat materials: PTFE, RPTFE and PEEK
- Packing materials: PTFE, RPTFE, Graphite and O-ring
- End connections:
  1/8 to 2 thread
  1/8" to 2" pipe butt or socket weld
  1/2" to 2" and 12 mm to 50 mm tube butt or socket weld
  1/2" to 2" and 12 mm to 38 mm tube fitting
- Orifice sizes: 0.19" (4.8 mm) to 1.5" (38.1 mm)
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)



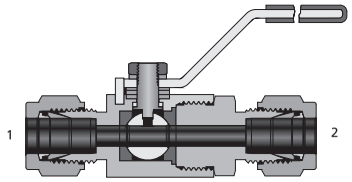
BO Series

- 1-piece forged body, top entry
- Body materials: 316 SS, 316L SS, 304 SS, 321 SS, 304L SS, 904L SS, alloy 400, and brass
- Seat materials: PTFE and UHMWPE
- Flow patterns: 2-way, 3-way, 4-way, 5-way, 6-way and 7-way
- End Connections:
  1/8 to 1/2 female thread
  1/16" to 3/4" and 3 mm to 18 mm tube fitting
- Orifice sizes: 0.05" (1.3 mm) to 0.41" (10.3 mm)
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -65°F to 300°F (-54°C to 148°C)



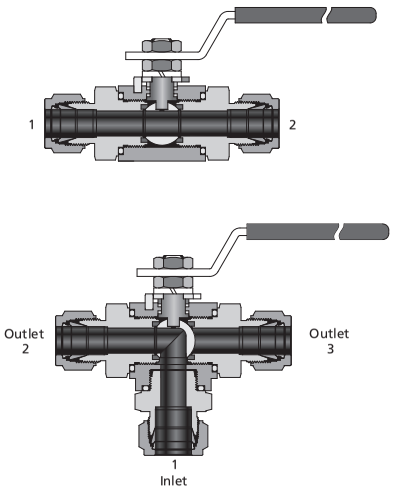
BR Series

- Cold drawn hex bar and casting body with single connector
- Body materials: 316 SS, 304 SS, 316L SS, 904L SS and brass
- Seat material: PTFE
- Packing material: PTFE
- End connections:
  1/8 to 1 thread
  1/4" to 1" and 6 mm to 25 mm tube fitting
- Orifice sizes: 0.19" (4.8 mm) to 0.63" (16 mm)
- Working pressure up to: 1000 psig (69.0 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)



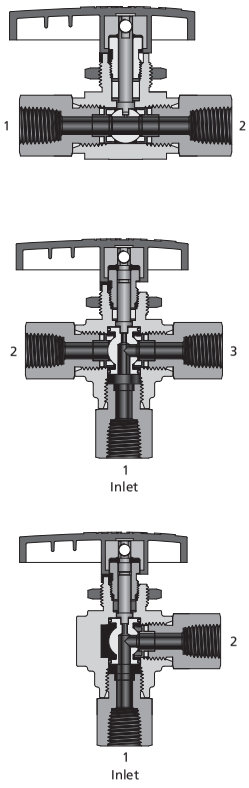
BP Series

- Cold drawn bar or forged body with end connectors
- Body materials: 316 SS, 304 SS, 321 SS, and 904L SS
- Seat materials: PVDF, PCTFE and PEEK
- Packing material: PTFE
- Flow patterns: 2-way and 3-way
- End connections:
  1/4 to 1 thread
  1/4" to 1" and 6 mm to 25 mm tube fitting
- Orifice sizes: 0.39" (10 mm), 0.5" (12.7 mm) and 0.71" (18 mm)
- Working pressure up to: 10 000 psig (690 bar)
- Working temperature: -40°F to 450°F (-40°C to 232°C)



BV Series

- Precision cast body with end connectors
- Body materials: CF8M (316), CF3M (316L), CF8 (304), 904L SS, CF3 (304L) and brass
- Seat materials: PTFE, PCTFE and PEEK
- Packing material: PTFE
- Flow patterns: 2-way straight, 2-way angle, and 3-way
- End connections:
  1/8 to 3/4 thread
  1/8" to 3/4" and 3 mm to 22 mm tube fitting
- Orifice sizes: 0.09" (2.4 mm) to 0.41" (10.3 mm)
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -65°F to 450°F (-54°C to 232°C)



Part Number Description

BVSS – FL8 – FNS8 – P10 – R – RXHQ3 – SF2

Series	Body Material	Port 1 Type	Port 1 Size	Port 2/3 Type	Port 2/3 Size	Seat Material	Orifice Size	Packing Material	Handle/ Actuator	For Actuator	Flow Pattern	Special Application	Cleaning and Packaging
BF	SS CF8M/ 316 SS	FNS Female NPT	2 1/8"	Same as Port 1		PTFE	02 0.09" (2.4 mm)	Fluorocarbon FKM (BF, BFH)	Black, Nylon (BF, BFH, BO, BV)	CS 90° Normally Closed Spring Return Pneumatic Actuator	Straight	NO	
BFH	6L CF3M/ 316L SS	NS Male NPT	3 3 mm		Specify every Port designator if any of its Ports is different from the others	H UHMWPE	03 0.13" (3.2 mm)	PTFE(BG, BH, BO, BP, BR, BV)	Stainless steel withyellow vinyl covered (BG, BH, BP, BR)	OS 90° Normally Open Spring Return Pneumatic Actuator	A Angle (Bottom Port Inlet)	S NACE MR0175	FC-01
BG	S4 CF8/ 304 SS	FRT Female BSPT	4 1/4"			K PCTFE	04 0.17" (4.2 mm)	B Buna N	C Red Handle or Vinyl Covered	DA 90° Double Acting Pneumatic Actuator	3 3-way		F2 FC-02
BH	4L CF3/ 304L SS	RT Male BSPT	5 5/16"			P PEEK	05 0.19" (4.7 mm)	E Ethylene propylene	F Green Handle or Vinyl Covered	LX 180°left end normally open spring return pneumatic actuator	4 4-way		
BO	S1 321 SS	FMS Female Metric Thread (for RG)	6 3/8" or 6 mm or M6 x 1			R Reinforced RPTFE	07 0.28" (7.1 mm)	G Graphite	J Blue Handle or Vinyl Covered	RX 180° right end normally open spring return pneumatic actuator	5 5-way For BO Series		
BP	B Brass	MS Male Metric Thread (for RG)	8 1/2" or 8 mm				0.35" (8.9 mm) For BR	H UHMWPE	Y Yellow Nylon	DX 180° Double Acting Pneumatic Actuator	6 6-way Series		
BR	M Alloy 400	FRP Female BSPP (for BP)	10 10 mm or M10 x 1				10 0.40" (10.3 mm) For BV BH Series	K Fluorocarbon FKM	U Black Aluminium	EA 90° Electric Actuator	7 7-way		
BV	22 F22	BP Male BSPP (for RG)	12 3/4" or 12 mm					N Neoprene		EX 180° Electric Actuator			
	91 F91	FL Fractional Tube Fitting	14 14 mm or M14 x 1.5				0.42" (10.6 mm)	P PEEK					
	D5 Duplex 2205	ML Metric Tube Fitting	16 1" or 16 mm				11 0.50" (12.7 mm)	R RPTFE					
	D7 Duplex 2507	MTS Metric Tube Socket	18 18 mm				13 0.88" (22.2 mm)	T PTFE					
	INC Inconel 600	TS Fractional Tube Socket	20 20 mm or M20 x 1.5				22						
	CS Carbon Steel	MTB Metric Tube Butt Weld	22 22 mm or M22 x 1.5										
	904L 904L SS	TB Fractional Tube Butt Weld	24 2 1/2" or M24 x 1.5										
		PS Pipe Socket Weld	25 25 mm										
		PB Pipe Butt Weld	27 M27 x 2										
		UFB Nut + Gasket + Bulge Fractional Tube Nipple	28 28 mm										
		UMB Nut + Gasket + Metric Tube Bulge Nipple	32 2" or 32 mm										
		UPB Nut + Gasket + Bulge Pipe Nipple	36 2 1/4" or M36 x 2										
			40 2 1/2" or M40 x 2										
			48 3" or M48 x 2										
			64 4"										

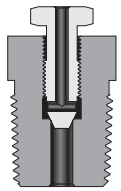
Handle/ Actuator	For Actuator
	NO
	H Mechanical Limit Switch
	N Inductive Limit Switch
	Q Electromag-netic Valve
	HQ Mechanical Limit Switch and Electro-magnetic Valve
	NQ Inductive Limit Switch and Electro-magnetic Valve

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

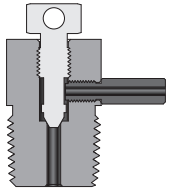
Bleed Valves

RB Series

- Compact design for convenient installation
- Chrome-plated stem and tip extend cycle life
- Working pressure up to 10 000 psig (690 bar)
- Working temperature: -65°F to 850°F (-54°C to 454°C)
- Stainless steel, carbon steel, and alloy R-405 body materials
- End connections:
  1/8 to 1/2 male NPT
  1/4 to 1/2 male BSPT
  M6 x 1, M8 x 1 and M10 x 1 male Metric Thread



Type 1



Type 2

Part Number Description

RBSS – NS4 – L – SH – SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet	Handle	Special Application	Cleaning and Packaging
RB	SS 316 SS 6L 316L SS S4 304 SS 4L 304L SS S1 321 SS B Brass M Alloy R-405 CS Carbon Steel	NS Male NPT RT Male BSPT	2 1/8" 4 1/4" 6 3/8" 8 1/2"	Type 1 L Type 2	NO SH Stainless Steel Handle (Only For Type 2)	NO S NACE MR 0175	FC-01 F2 FC-02

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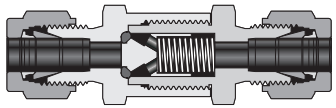
Check Valves

CV, CH and CO Series

Fixed cracking pressure
Can be installed in any direction

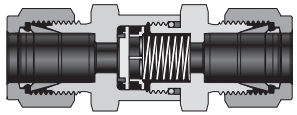
CV Series

- The resilient O-ring seat design provides cushioned and noise-free closing, and resists seat flow-out.
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- Body materials: stainless steel, brass, and alloy
- End connections:
  1/8" to 1" and 6 mm to 12 mm tube fitting
  1/8 to 1 female NPT
  1/8 to 1 male NPT
  1/4 to 1 male FR fitting



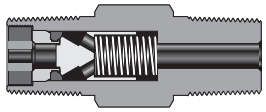
CH Series

- The seat ring is continuously cleaned by media, avoiding secondary pollution.
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- Body materials: stainless steel and alloy
- End connections:
  1/8" to 1" and 6 mm to 25 mm tube fitting
  1/8 to 1 female NPT, 1/8 to 1 male NPT
  1/4 to 1 female BSPT, 1/4 to 1 male BSPT
  1/4 to 3/4 male FO fitting, 1/4 to 1 male FR fitting



CO Series

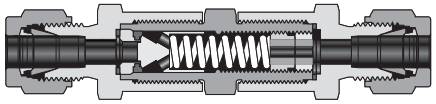
- Compact, one piece body
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- Body materials: stainless steel, brass, and alloy
- End connections:
  1/4 to 1/2 NPT
  1/4 to 1/2 BSPT



CA and COA Series

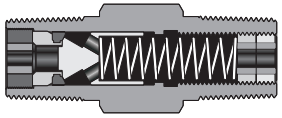
Adjustable cracking pressure
Variety of springs available
Installation in any direction

CA Series



- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 3 to 600 psig (0.2 to 41.4 bar)
- Body materials: stainless steel, brass, and alloy
- End connections:
  1/4" to 3/8" and 8 mm tube fitting
  1/4 male FR fitting

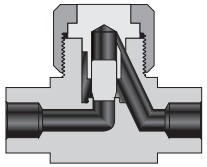
COA Series



- Compact, one piece body
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 3 to 600 psig (0.2 to 41.4 bar)
- Body materials: stainless steel, brass, and alloy
- End connections:
  1/4 female NPT
  1/4 to 1/2 male NPT
  1/4 to 1/2 male BSPT

CL Series

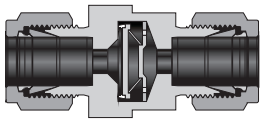
Union bonnet design
All stainless steel construction
Horizontal installation



- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -65°F to 900°F (-53°C to 482°C)
- Body materials: stainless steel
- End connections:
  1/4" to 3/4" and 6 mm tube fitting
  1/8 to 1/2 female NPT
  1/4" to 1/2" tube socket weld
  1/4" to 1/2" pipe butt weld

CW Series

All-welded design for enhanced safety
Installation in any directions



- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Cracking pressure: less than 2 psig (0.14 bar)
- Body materials: stainless steel
- End connections:
  1/4" and 6 mm tube fitting
  1/4" to 1/2" male and female FR fitting
  1/4" to 1/2" and 6 mm tube butt weld

Part Number Description

CVSS – FL8 – ML10 – B – 2SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Special Application	Cleaning and Packaging

Series	
CV	
CH	
CO	
CA	
COA	
CL	
CW	

Body Material	
SS	316 SS
6L	316L SS
M	Alloy 400
B	Brass

Inlet Type	
FNS	Female NPT
NS	Male NPT
FRT	Female BSPT
RT	Male BSPT
FMS	Female Metric Thread (for RP-M)
MS	Male Metric Thread (for RG-M)
FRP	Female BSPP (for RP)
BP	Male BSPP (for RG)
TS	Fractional Tube Socket Weld
MTS	Metric Tube Socket Weld
TB	Fractional Tube Butt Weld
MTB	Metric Tube Butt Weld
PS	Pipe Socket Weld
PB	Pipe Butt Weld
FL	Fractional Tube Fitting
ML	Metric Tube Fitting
UFB	Nut+Gasket+ Fractional Bulge Nipple
UMB	Nut + Gasket + Metric Bulge Nipple
FO	Male FO Fitting
FFR	Female FR Fitting
FR	Male FR Fitting
RFR	Rotatable Male FR Fitting

Inlet Size	
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	10 mm
12	3/4" or 12 mm
14	14 mm or M14 x 1.5
16	1" or 16 mm
18	18 mm
20	1 1/4" or 20 mm or M20 x 1.5
22	22 mm or M22 x 1.5
25	25 mm

Outlet Type	
	Same as Inlet

Specified in the same way as the inlet type and size

Outlet Size	

Seal Material	
	Fluorocarbon FKM
B	Buna N
N	Neoprene
E	Ethylene propylene
Z	Kalrez

Cracking Pressure		
	3 psig	For CV CH CO Series
1	1/3 psig	
2	1 psig	
3	10 psig	
4	25 psig	
	3 to 50 psig	For CA COA Series
5	50 to 150 psig	
6	150 to 350 psig	
7	350 to 600 psig	

Special Application	
	NO
S	NACE MR0175

Cleaning and Packaging	
	FC-01
F2	FC-02

1. Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.
2. The material in "Part Number Description" is general material, end connection type & size is general standard. If other end connection is needed, please contact FITOK group or authorized agent.

Part Number Description of Spring Kits

SSCV – SP8 – 2

Spring Material	Series	Part Name	Body Size	Cracking Pressure

Spring Material	
SS	316 SS
S4	304 SS
S2	302 SS
A75	X-750

Series
CV
CH
CO
CA
COA

Part Name	
SP	Spring

Body Size
4
8
12
16

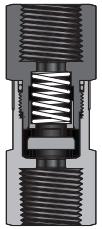
Cracking Pressure		
	3 psig	For CV CH CO Series
1	1/3 psig	
2	1 psig	
3	10 psig	
4	25 psig	
	3~50 psig	For CA COA Series
5	50~150 psig	
6	150~350 psig	
7	350~600 psig	

2. Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.
2. The material in "Part Number Description" is general material. If other material is needed, please contact FITOK group or authorized agent.

Excess Flow Valves

EV Series

- Compact design for convenient installation
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -10℉ to 400℉ (-23℃ to 204℃)
- Stainless steel construction
- Leak-tight performance testing for every valve with nitrogen at the maximum working pressure
- End connections:
  1/4" to 1/2" male 6 mm to 12 mm tube fitting
  1/4 to 1/2 male FR Fitting
  1/4 to 1/2 NPT



Part Number Description

EVSS – FL6 – ML8 – 6Z – SF2

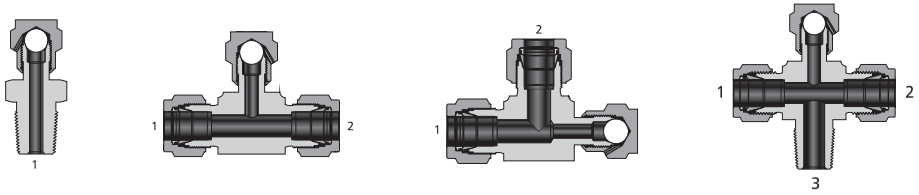
Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Series	Seal Material	Special Application	Cleaning and Packaging
EV	SS 316 SS S4 304 SS S1 321 SS 6L 316L SS 4L 304L SS 904L 904L SS	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RP-M) MS Male Metric Thread (for RG-M) FRP Female BSPP (for RP) BP Male BSPP (for RG) FL Fractional Tube Fitting ML Metric Tube Fitting	2 1/8" 4 1/4" 6 3/8" or 6 mm 8 1/2" or 8 mm 10 10 mm 12 3/4" or 12 mm	Same as Inlet Specified in the same way as the inlet typeand size		4 6 8	Fluorocarbon FKM B Buna N N Neoprene E Ethylene propylene Z Kalrez	NO S NACE MR0175	FC-01 F2 FC-02

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Purge Valves

RP Series

- Compact design for convenient installation
- Bonnet crimped to valve body to prevent accidental disassembly
- Straight, tee and cross body constructions
- Working pressure up to: 4000 psig (276 bar)
- Working temperature: -65°F to 600°F (-54°C to 315°C)
- Stainless steel, brass, and carbon steel body materials
- End connections:
  1/8" to 1" and 3 mm to 16 mm tube fitting
  1/8 to 1 female NPT
  1/8 to 1 male NPT



Part Number Description

RPSS – C – FL8 – ML10 – FL8 – SF2

Series	Body Material	Type	End Connection 1 Type	End Connection 1 Size	End Connection 2 Type	End Connection 2 Size	End Connection 3 Type	End Connection 3 Size	Special Application	Cleaning and Packaging
RP	SS 316 SS 6L 316L SS S4 304 SS 4L 304L SS S1 321 SS B Brass CS Carbon Steel 904L 904L SS	L Straight TL In-line Tee TA Angle Tee C Cross	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RP-M) MS Male Metric Thread (for RG-M) FRP Female BSPP (for RP) BP Male BSPP (for RG) FL Fractional Tube Fitting ML Metric Tube Fitting FT Fractional Tube FR Male FR Fitting	2 1/8" 4 1/4" 6 3/8" or 6 mm 8 1/2" or 8 mm 10 10 mm 12 3/4" or 12 mm 14 14 mm or M14 x 1.5 16 1" or 16 mm	Same as connection 1 Specified in the same way as the end connection 1 type and size		Same as connection 1 Specified in the same way as the end connection 1 type and size		NO S NACE MR0175	FC-01 F2 FC-02

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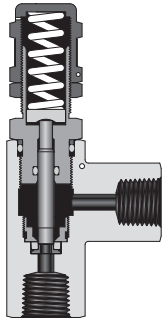
Relief Valves

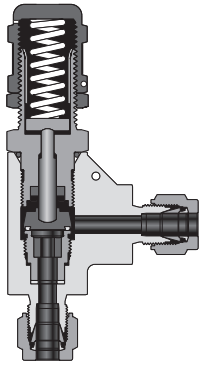
RV Series

- Set Pressure: 7 color-coded springs available for a wide range of set pressure, 50 to 6000 psig @ 70°F (3.4 to 414 bar @ 20°C)
- Maximum outlet pressure: 1500 psig (103 bar)
- Orifice size: RV Series: 0.14" (3.6 mm)
- Balance stem design to eliminate the effect of system back pressure
- Working temperature: -10°F to 300°F (-23°C to 148°C)
- Liquid or gas service
- Adjustable bonnet cap and adjustable set pressure
- Lock wired secure cap to maintain the set pressure
- Variety of seal materials
- Label identifies the set pressure range.
- Manual override handle available to open the valve without changing the set pressure which is lower than 1500 psig
- End connections:
  1/4" and 6 mm to 8 mm tube fitting
  1/4 NPT



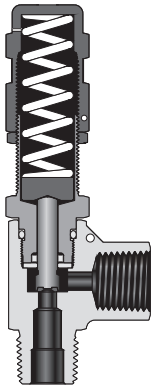
RL Series

- Set Pressure: 10 to 225 psig @ 70°F (0.68 to 15.5 bar @ 20°C)
- Maximum outlet pressure: 225 psig (15.5 bar)
- Orifice size: 0.19" (4.8 mm) and 0.25" (6.4 mm)
- Pre-set pressure = Desired pressure - 0.8 × Back pressure
- Working temperature: -10°F to 300°F (-23°C to 148°C)
- Liquid or gas service
- Adjustable bonnet cap and adjustable set pressure
- Lock wired secure cap to maintain the set pressure
- Variety of seal materials
- Label identifies the set pressure range
- Manual override handle available to open the valve without changing the set pressure which is lower than 1500 psig
- End connections:
  1/4" to 1/2" and 6 mm to 12 mm tube fitting
  1/4 to 1/2 NPT



RM Series

- Set Pressure: 3 color-coded springs available for a wide range of set pressure, 50 to 1500 psig @ 70°F (3.4 to 103 bar @ 20°C)
- Maximum outlet pressure: 1500 psig (103 bar)
- Orifice size: 0.25" (6.4 mm)
- Balance stem design to eliminate the effect of system back pressure
- Working temperature: -10°F to 300°F (-23°C to 148°C)
- Liquid or gas service
- Adjustable bonnet cap and adjustable set pressure
- Lock wired secure cap to maintain the set pressure
- Variety of seal materials
- Label identifies the set pressure range
- Manual override handle available to open the valve without changing the set pressure which is lower than 1500 psig
- End connections:
  3/8" to 1/2" and 8 mm to 12 mm tube fitting
  1/4 to 1/2 NPT



Part Number Description

Spring for Valves

7PRV – SP6 – Y – L

Material	Valve Series	Part Name	Valve Orifice Size	Spring Kit Color	Lock wire with seal
7P S17700	RV RM RL	SP Spring	6 0.14" (3.6 mm) RV Series Valves Only 7 0.19" (4.8 mm) RL Series Valves Only 8 0.25" (6.4 mm) RL and RM Series Valves	F Green 50 ~ 300 psig (For RV and RM Series Valves) O Orange 300 ~ 700 psig (For RV and RM Series Valves) Y Yellow 10 ~ 225 psig (For RL Series Valves Only) Yellow 700 ~ 1500 psig (For RV and RM Series Valves) P Purple 1500 ~ 2500 psig (For RV Series Valves Only) W White 2500 ~ 3500 psig (For RV Series Valves Only) J Blue 3500 ~ 4500 psig (For RV Series Valves Only) C Red 4500 ~ 6000 psig (For RV Series Valves Only)	NO L YES

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

- Every spring kit includes a corresponding color label.

Part Number Description
Valves

RVSS – FL6 – ML8 – 6Z – WM – LSF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Seal Material	Spring Kit Color	Handle	Lock wire with seal	Special Application	Cleaning and Packaging
RV	SS 316 SS	FNS Female NPT	2 1/8"	Same as inlet	Same as inlet	6 0.14" (3.6 mm) RV Only	Fluorocarbon FKM	Yellow 10 ~ 225 psig (RL Only)	None	No	No	FC-01
RM	S4 304 SS	NS Male NPT	4 1/4"	Specified in the same way as the inlet type and size		7 0.19" (4.8 mm) RL Only	B Buna N	F Green 50 ~ 300 psig (RV and RM)	M Manual Override Handle	L Yes	S NACE MR0175	F2 FC-02
RL	S1 321 SS	FRT Female BSPT	6 3/8" or 6 mm			8 0.25" (6.4 mm) RL and RM	N Neoprene	O Orange 300 ~ 700 psig (RV and RM)				
	6L 316L SS	RT Male BSPT	8 1/2" or 8 mm				E Ethylene propylene	Y Yellow 700 ~ 1500 psig (RV and RM)				
	4L 304L SS	FMS Female Metric Thread (for RG)	10 10 mm				Z Kalrez RV Only	P Purple 1500 ~ 2500 psig (RV Only)				
	904L 904L SS	MS Male Metric Thread (for RG)	12 3/4" or 12 mm					W White 2500 ~ 3500 psig (RV Only)				
		FRP Female BSPP (for RP)						J Blue 3500 ~ 4500 psig (RV Only)				
		BP Male BSPP (for RG)						C Red 4500 ~ 6000 psig (RV Only)				
		FL Fractional Tube Fitting						N No spring				
		ML Metric Tube Fitting										

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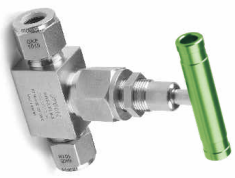
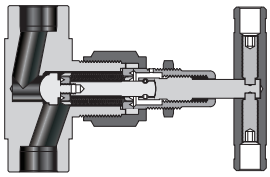
Bellows-sealed Valves



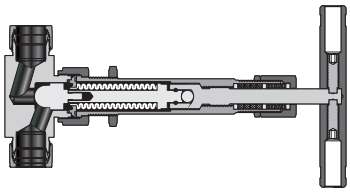
- Secondary containment system above the bellows.
- Hydraulic-formed multilayer bellows enhance cycle life.
- Nonrotating stem tip eliminates galling within the seat area.
- Strictly controlled bellows stroke to improve safety and cycle life.
- Replaceable bellows and stem assembly.
- Regulating, conical and spherical stem tips available.
- Panel, bottom and side mounting available.

SW Series



- Working pressure up to: 1000 psig (69.0 bar)
- Working temperature: -20°F to 900°F (-28°C to 482°C)
- Stainless steel, brass and alloy 400 body materials
- End connections:
  1/4" to 1" and 6 mm to 25 mm tube fitting
  1/4" to 1/2" and 6 mm to 12 mm tube socket weld
  1/4" to 1/2" and 6 mm to 12 mm tube butt weld
  1/4 to 1/2 FR fitting

SU Series



- Working pressure up to: 2500 psig (172 bar)
- Working temperature: -20°F to 1200°F (-28°C to 649°C)
- Stainless steel body materials
- End connections:
  1/4" to 1/2" and 6 mm to 25 mm tube fitting
  1/4" to 1" and 6 mm to 25 mm tube socket weld
  3/8" to 1" and 6 mm to 25 mm tube butt weld
  1/4 to 1/2 FR fitting

Part Number Description

SWSS – FL8 – ML10 – 5 – WR – BSF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Tip Material	Tip Type	Handle	Special Application	Cleaning and Packaging
SW	SS 316 SS	TS Fractional Tube Socket Weld	2 1/8"	Same as Inlet	Same as Inlet	2 0.16" (4.1 mm)	Standard Material	Spherical	Green Aluminum Bar	NO	FC-01
SU	6L 316L SS	MTS Metric Tube Socket Weld	4 1/4"	Specified in the same way as Inlet type and size	Specified in the same way as Inlet type and size	3 0.26" (6.6 mm)	K PCTFE	R Regulating	B Black Aluminum Bar	S NACE MR0175	F2 FC-02
	S4 304 SS	TB Fractional Tube Butt Weld	6 3/8" or 6 mm			4 0.28" (7.1 mm)	W Stellite	N Conical	C Red Aluminum Bar	Classification for Nuclear Facility Application	
	4L 304L SS	MTB Metric Tube Butt Weld	8 1/2" or 8 mm			5 0.31" (7.6 mm)			J Blue Aluminum Bar	N2 Class 2	
	S1 321 SS	PS Pipe Socket Weld	10 10 mm			6 0.39" (10 mm)			M 321 Stainless Steel Bar	N3 Class 3	
	M Alloy 400	PB Pipe Butt Weld	12 3/4" or 12 mm			7 0.67" (17 mm)			O Black Knob		
	B Brass	FL Fractional Tube Fitting	14 14 mm 或 M14						T Toggle handle		
	904L 904L SS	ML Metric Tube Fitting	16 1" or 16 mm								
		UFB Nut + Gasket + Fractional Bulge Nipple	18 18 mm								
		UMB Nut + Gasket + Metric Bulge Nipple	20 20 mm								
		FFR Female FR Fitting									
		FR Male FR Fitting									

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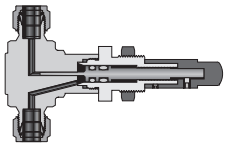
Metering Valves

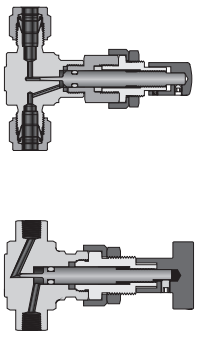
MS Series

- Working pressure up to: 2000 psig (138 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Orifice size: 0.032" (0.81 mm)
- Flow coefficient (Cv): 0.004
- Stem taper: 1°
- Turns to open: 9 to 12
- Shutoff service: not available
- Panel mountable
- Flow patterns: straight, angle, cross and double
- Handle types: round, vernier, slotted and adjustable-torque
- Variety of materials available for valve body
- End connections:
  1/16" to 1/4" and 3 mm to 6 mm tube fitting
  1/4 male FR Fitting
  1/8 to 1/4 NPT



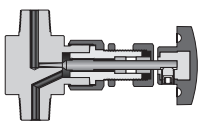
MV and ML Series

- Working pressure up to: 1000 psig (69.0 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Flow coefficients (Cv): MV series: 0.03
  ML series: 0.15
- Orifice sizes: MV series: 0.056" (1.42 mm)
  ML series: 0.128" (3.25 mm)
- Stem taper: MV series: 3°
  ML series: 6.5°
- Turns to open: MV series: 8 to 10
- ML series: 10 to 11
- Shutoff service: MV series: not available
- ML series: available
- Panel mountable
- Flow patterns: straight, angle, cross (MV Series) and double (MV Series)
- Handle types: round, vernier, slotted and adjustable-torque
- Variety of materials available for valve body
- End connections:
  1/8" to 1/4" and 3 mm to 8 mm tube fitting
  1/4 male FR Fitting
  1/8 to 1/4 NPT



MH Series

- Working pressure up to: 5000 psig (345 bar)
- Working temperature: -65°F to 850°F (-54°C to 454°C)
- Orifice size: 0.062" (1.6 mm)
- Flow coefficient (Cv): 0.04
- Stem taper: 2°
- Shutoff service: available
- Variety of end connections
- Turns to open: 9 to 10
- Panel mountable
- Flow patterns: straight and angle
- Handle type: round phenolic, vernier
- Variety of materials available for valve body
- End connections:
  1/8" to 1/4" and 3 mm to 8 mm tube fitting
  1/4 male FR Fitting
  1/8 to 1/4 NPT



Part Number Description

MVSS – FL4 – ML6 – EVJ – ASF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	O-ring Material	Handle Type and Default color	Handle Color	Flow Pattern	Special Application	Cleaning and Packaging
MS	SS 316 SS	FNS Female NPT	1 1/16"		Same as inlet	Fluorocarbon FKM	Round (Black) For MH and ML	Default	Straight	NO	FC-01
MV	6L 316L SS	NS Male NPT	2 1/8"		Specified in the same way as the inlet type and size	B Buna N	Knurled (Metallic luster) For MS and MV	C Red	A Angle	S NACE MR0175	F2 FC-02
ML	S4 304 SS	FRT Female BSPT	3 3 mm			E Ethylene Propylene	L Slotted (Metallic luster)	F Green	D Double		
MH	4L 304L SS	RT Male BSPT	4 1/4"			N Neoprene	T Adjustable torque (Metallic luster)	J Blue	R Cross		
	S1 321 SS	FMS Female Metric Thread (for RP)	6 3/8" or 6 mm			Z Kalrez	V Vernier (MH Series: Metallic luster) (Other Series: Black)	O Orange			
	B Brass	MS Male Metric Thread (for RG)	8 1/2" or 8 mm			G Graphite (MH Only)		Y Yellow			
	904L 904L SS	FRP Female BSPP (for RP)	10 10 mm								
		BP Male BSPP (for RG)	12 3/4" or 12 mm								
		FL Fractional Tube Fitting									
		ML Metric Tube Fitting									
		FO FO Fitting									
		FR Male FR Fitting									

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Needle Valves

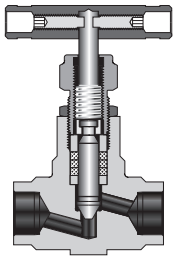
Needle Valves Features

- The nonrotating stem eliminates galling between the seat and tip, and reducing the friction of sealed packing. Effectively improve the service life of the valve and valve packing.
- Intermittent packing system designed to effectively reduce the cold flow of valve packing and the valve operating torque, while use System media for the useful of valve packing.
- Packing mounted on the bottom of the stem transmission thread designed to achieve the isolation of transmission thread lubricating material and system medium to prevent transmission thread lubricating substance contamination of the media on the system.
- Threaded operating torque transmitted using online extrusion and roll forming process, Effectively improve the strength and precision of the threads. To provide strong protection for operating torque for the screw to pass long-term, stable and reliable torque transmission.
- Different body materials and structure selection, a variety of colors and forms of the handle , and optional panel mounting structure to achieve different requirements, different application occasions.
- Valve reference standard: According to ASME B16.34, each valve is tested for strength and leak-tight performance with pure water or nitrogen at max working pressure before delivered out.

Forged Needle Valves

NF, NFH Series

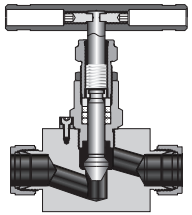
- One-piece forged body.
- Body materials: Carbon steel/A105, 316 SS, 316L SS, 304 SS, 304L SS, 321 SS, Duplex 2205, Alloy 400, Alloy C- 276, and brass, other material please contact with manufacture.
- Orifice (mm): 4, 6.4, 10, 15 and 18. (15 and 18 suitable for NF series only).
- Working pressure up to: NF Series—6000 psig (41.4 MPa);
  NFH Series—10000 psig (69.0 MPa).
- Working temperature: -65°F to 1200°F (-54°C to 649°C).
- Sealing face materials: Same as body material, optional stellite available.
- Stem tips type: blunt, ball, regulating, and soft tips (suitable for NF series only).
- End connections type and size:
  1/8" to 1", M10 to M36 thread;
  1/4" to 1", 6 mm to 28 mm tube fitting;
  3/8" to 1", 10 mm to 25 mm weld.



Bar Stock Needle Valves

NB, NBH Series

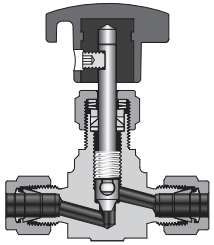
- Cold drawn bar.
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, Duplex 2205, Alloy 400, Alloy C- 276, and brass, other material please contact with manufacture.
- Orifice (mm): 4, 6.4, 10, 15 and 18. (15 and 18 suitable for NB series only).
- Working pressure up to: NB Series—6000 psig (41.4 MPa); NBH Series—10000 psig (69.0 MPa).
- Working temperature: -65°F to 1200°F (-54°C to 649°C).
- Sealing face materials: Same as body material, optional stellite available.
- Stem tips type: blunt, ball, regulating, and soft tips (suitable for NB series only).
- End connections type and size:
  1/8" to 1", M14 to M27 thread;
  1/4" to 1", 6 mm to 25 mm tube fitting;
  3/8" to 1", 10 mm to 28 mm weld.



General Purpose Needle Valves

NG, NGH Series

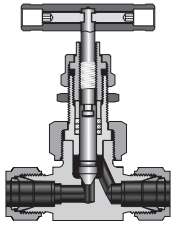
- One-piece forged body.
- Body materials: Carbon steel/A105, 316 SS, 316L SS, 304 SS, 304L SS, Duplex 2205, Alloy 400, Alloy C- 276, and brass, other material please contact with manufacture.
- Orifice (mm): 2, 4, 6.4, 10
- Working pressure up to: NG Series—3000 psig (20.7 Mpa); NGH Series—5000 psig (34.5 Mpa).
- Working temperature: -65°F to 500°F (-54°C to 260°C);
- Sealing face materials: Same as body material.
- Stem tips type: blunt, ball, regulating, and soft tips.
- End connections type and size:
  1/8" to 3/4", M14 to M27 thread;
  1/4" to 3/4", 6 mm to 25 mm tube fitting.



Union Bonnet Needle Valves

NU, NUH Series

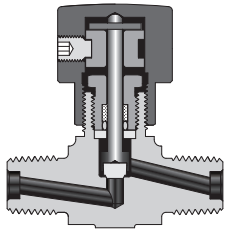
- One-piece forged body.
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, Duplex 2205, Alloy 400, Alloy C- 276, and brass, other material please contact with manufacture.
- Orifice (mm): 4, 6.4, 10
- Working pressure up to: NU Series—6000 psig (41.4 MPa); NUH Series—10000 psig (69.0 MPa).
- Working temperature: -65°F to 1200°F (-54°C to 649°C).
- Sealing face materials: Same as body material, optional stellite available.
- Stem tips type: blunt, ball, regulating, and soft tips (suitable for NU series only).
- End connections type and size:
  1/8" to 1", M14 to M27 thread;
  1/4" to 1", 6 mm to 25 mm tube fitting;
  3/8" to 1", 10 mm to 28 mm weld.



Nonrotating-stem Needle Valves

ND, NDH Series

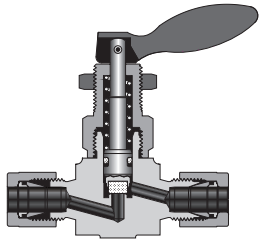
- One-piece forged body.
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, Alloy 400 and brass, other material please contact with manufacture.
- Orifice (mm): 2, 4, 5.6
- Working pressure up to: ND Series—3000 psig (20.7 MPa); NDH Series—5000 psig (34.5 MPa).
- Working temperature: -20°F to 450°F (-28°C to 232°C).
- Designed handle to prevent contaminants from entering into the valve.
- Non-rotating stem, soft stem tip.
- End connections type and size:
  1/8" to 1/2", M10 to M14 thread;
  1/4" to 1/2", 3 mm to 12 mm tube fitting.



Toggle Valves

NT Series

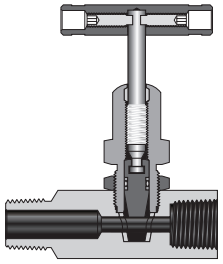
- One-piece forged body.
- Body materials: 316 SS, 316L SS, 304 SS,304L SS, and brass, other material please contact with manufacture.
- Orifice (mm): 2, 4, 6.4
- Working pressure up to: 300 psig (2.07 Mpa).
- Working temperature: -20°F to 250°F (-28°C to 121°C).
- Sealing face materials: Same as body material.
- End connections type and size:
  1/8" to 1/2", M10 to M20 thread;
  1/4" to 1/2", 3 mm to 12 mm tube fitting.



Rising Plug Valves

NR, NRG Series

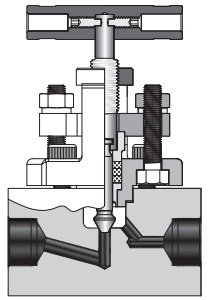
- Cold drawn square bar.
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, Duplex, Alloy 400, Alloy C-276, and brass, other material please contact with manufacture.
- Orifice (mm): 4, 6.4
- Working pressure up to: 6000 psig (41.4 Mpa).
- Working temperature: -20°F to 400°F (-28°C to 204°C).
- Sealing face materials: soft seat design, seat material: Acetal, PEEK, PFA.
- End connections type and size:
  1/8" to 1/2", M14 to M20 thread;
  1/4" to 1/2", 6 mm to 12 mm tube fitting.



Outside Screw and Yoke (OS&Y) Needle Valves

NY, NYH Series

- Cold drawn bar.
- Body materials: Carbon steel/A105, 316 SS, 316L SS, 304 SS, 304L SS, Duplex, Alloy 400, Alloy C-276, and brass, other material please contact with manufacture.
- Orifice (mm): 4
- Working pressure up to: NY Series—6000 psig (41.4 Mpa); NYH Series—10000 psig (69.0 MPa).
- Working temperature: -65°F to 1200°F (-54°C to 649°C).
- Sealing face materials: Same as body material, optional stellite available.
- Externally adjustable gland independent of spindle thread.
- End connections type and size:
  1/4" to 1/2", M10 to M20 thread;
  1/4" to 1/2", 6 mm to 12 mm tube fitting;
  3/8" to 1/2", 10 mm to 20 mm weld.



Part Number Description

NBSS – PB8 – ML12 – 18WR – GYM – A – SF2

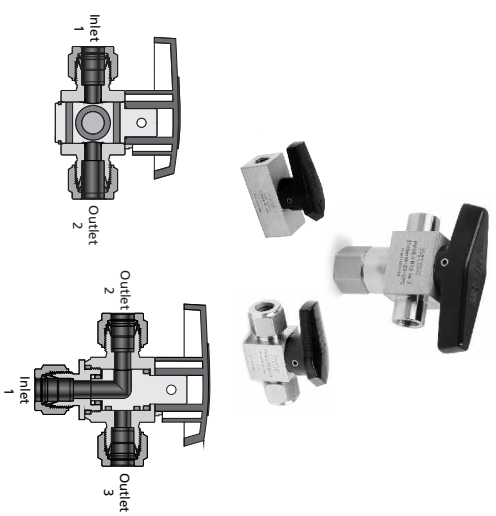
Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seat Material	Orifice Size	Tip Material	Tip Type	Packing Material	Panel Mounting	Handle	Flow Pattern	Special Application	Cleaning and Packaging
NF/NFH	SS 316 SS	FNS Female NPT	2 1/8"	Same as Inlet	5 0.08" (2.0 mm)	Same as Body NF/NFH NB/NBH NU/NUH NY/NYH Series	5 0.08" (2.0 mm)	R Blunt	Blunt NF/NFH NB/NBH NG/NGH NU/NUH Series	PTFE NF/NFH NB/NBH NG/NGH NU/NUH NY/NYH Series	No NF/NFH NB/NBH NG/NGH NU/NUH Series	Black Aluminum Bar NF/NFH NB/NBH NG/NGH NU/NUH NY/NYH Series	Straight	NO	FC-01
NB/NBH	6L 316L SS	NS Male NPT	4 1/4"	If different specify in the same way as Inlet type and Inlet size	7 0.16" (4.0 mm)	1 Stellite	7 0.16" (4.0 mm)	B Ball	Regulating	P PEEK	Yes	C Red Aluminum Bar	A Angle	S NACE MR0175	F2 FC-02
NG/NGH	S4 304 SS	FRT Female BSPT	6 3/8" or 6 mm		8 0.25" (6.4 mm)	Acetal NR Series	8 0.25" (6.4 mm)	T Soft Tip-PTFE	Ball	G Graphite		F Green Aluminum Bar		Classification for Nuclear Facility Application	
NU/NUH	4L 304L SS	RT Male BSPT	8 1/2" or 8 mm		9 0.39" (10 mm)	P PEEK	9 0.39" (10 mm)	K Soft Tip-PCTFE	Soft Tip-PTFE	FKM		J Blue Aluminum Bar		N2 Class 2	
ND	S1 321 SS	FMS Female Metric Thread (for RP)	10 10 mm		6 0.59" (15 mm)	A PFA	6 0.59" (15 mm)	P Soft Tip-PEEK	Soft Tip-PCTFE	B Buna N		M 321 Stainless Steel Bar		N3 Class 3	
NT	91 F91	MS Male Metric Thread (for RG)	12 3/4" or 12 mm		0 0.71" (18 mm)		0 0.71" (18 mm)	P Soft Tip-PEEK	Soft Tip-PEEK ND Series	E Ethylene Propylene		O Black Knob			
NR/NRG	92 F92	FRP Female BSPP (for RP)	14 14 mm or M14 x 1.5									Black Knob NG Series			
NY/NYH	D5 Duplex 2205	BP Male BSPP (for RG)	16 1" or 16 mm									Stainless Steel Handle NT Series			
	TI Titanium	TS Fractional Tube Socket Weld	18 18 mm												
	C20 Alloy 20	MTS Metric Tube Socket Weld	20 1 1/4" or 20 mm or M20 x 1.5												
	M Alloy 400	TB Fractional Tube Butt Weld	22 22 mm or M22 x 1.5												
	INC Alloy 600	MTB Metric Tube Butt Weld	24 M24 x 1.5												
	HC Alloy C -276	PS Pipe Socket Weld	25 25 mm												
	B Brass	PB Pipe Butt Weld	27 M27 x 2												
	CS Carbon Steel	FL Fractional Tube Fitting	28 28 mm												
		ML Metric Tube Fitting													
		UMB Nut + Gasket + Metric Bulge Nipple													

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Plug Valves

PV Series

- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Size from 1/8" to 3/4" and 6 to 12 mm
- Orifice sizes: 2.4 mm, 4.4 mm, 7.2 mm
- Body materials: 316 SS, 304 SS, and brass
- Seal materials: Fluorocarbon FKM, Buna N, Ethylene propylene, Neoprene, and Kalrez
- Easy to maintain and clean
- Low operating torque
- Replaceable plug assembly
- Handle as indicator of flow direction
- Handle of different colors available for option
- Positive handle shutoff
- Leak-tight performance testing for every valve with nitrogen at the maximum working pressure



Part Number Description

PVSS – FL8 – ML12 – FL8 – B04GV – 3SF2

Series	Body Material	Inlet 1 Type	Inlet 1 Size	Outlet 2/3 Type	Outlet 2/3 Size	O-ring Material	Orifice	Handle	Downstream Vent	Flow Pattern	Special Application	Cleaning and Packaging
PV	SS 316 SS	FNS Female NPT	2 1/8"	Same as Inlet 1	Same as Inlet 1	Fluorocarbon FKM	02 0.09" (2.4 mm)	Black Nylon	NO	2-Way	No	FC-01
	6L 316L SS	NS Male NPT	3 3 mm	Specified in the same way as the inlet 1 type and size	B Buna N	N Neoprene	04 0.17" (4.4 mm)	R Red Nylon	YES	3-Way	S NACE MR0175	F2 FC-02
	S4 304 SS	FRT Female BSPT	4 1/4"		E Ethylene Propylene	Z Kalrez	07 0.28" (7.2 mm)	G Green Nylon				
	B Brass	RT Male BSPT	6 3/8" or 6 mm					Y Yellow Nylon				
	904L 904L SS	FMS Female Metallic Thread (for RG)	8 1/2" or 8 mm					B Blue Nylon				
		MS Male Metallic Thread (for RG)	10 10 mm					A Black Aluminium				
		FRP Female BSPP (for RP)	12 3/4" or 12 mm									
		BP Male BSPP (for RG)										
		FL Fractional Tube Fitting										
		ML Metric Tube Fitting										

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Two-Piece Forged Metal-Seated Ball Valves

BM Series

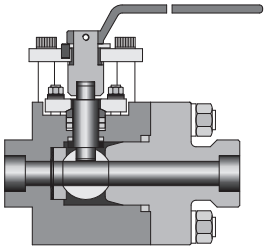
- Size: NPS 1/2 ~ NPS 2 (DN 15 ~ DN 50)
- Classes: 150 ~ 2500

Specifications

- Design: ASME B16.34
- Testing: ASME B16.34 and API 598
- Marking: MSS-SP-25
- Socket weld ends: ASME B16.11
- Butt weld ends: ASME B16.25

Features

- Two-piece forged body designs.
- Ball and seats mate-lapped for 100% contact ensures absolute shutoff.
- Free floating ball design provides seat wear compensation.
- The ball is forced to load into the seat by a high-strength Belleville spring.
- The ball and seat are in full constant contact, isolating the body cavity from flow to prevent build-up of solids.
- Mate-lapped ball and seat of same material and coating to match thermal expansion rates.
- Advanced HVOF custom trim coating technology with hardness in excess of 900Hv.
- An advanced packing chamber design and live-loading provide long lasting, maintenancefree, stem packing tightness.
- Flow arrow forged into mounting flange visible above insulation.
- Low operating torque.
- Blowout-proof stem.
- Positive handle stop.



Part Number Description

BMSS – PS8G

Series	Body Material		Type of Connection		Size of Connection		Class	
BM	CS	A105	PS	Pipe Socket Weld	8	NPS 1/2 (DN 15)	A	150 CL
	22	F22	PB	Pipe Butt Weld	12	NPS 3/4 (DN 20)	B	300 CL
	91	F91			16	NPS 1 (DN 25)	C	600 CL
	SS	F316			20	NPS 1 1/4 (DN 32)	E	900 CL
					24	NPS 1 1/2 (DN 40)	F	1500 CL
					32	NPS 2 (DN 50)	G	2500 CL

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Globe Valves

SY Series

- Size: NPS 3/8 ~ NPS 1 (DN 10 ~ DN 25)
- Classes: 2500 and 4500

Specifications

- Design: ASME B16.34
- Testing: ASME B16.34 and API 598
- Marking: MSS-SP-25
- Socket weld ends: ASME B16.11
- Butt weld ends: ASME B16.25

Features

- One-piece, forged, bonnetless globe valves eliminate the potential for body-to-bonnet joint leakage, and not require cut or disassemble the bonnet for servicing.
- 65° inclined body reduces pressure drop compared with T-type.
- Splined bushing guides the stem allows quick and easy maintenance by removing all working parts at one time.
- The non-rotating stem hardened and polished to reduce operating torque.
- Linearly instead of helical movement of the non-rotating stem reduces the total friction area between the packing and stem.
- Packing chamber burnished and combination graphite rings individually pre-stressed for tight seal.
- Two-piece gland ensures gland and packing self-aligning.
- Stellite disc, seat and backseat provide excellent long service life even in severe services.
- Fully guided disc assures seat and disc precise alignment in spite of side thrust caused by high velocity flow, and prevents stem from scoring and galling, and provides longer disc seal and body life.
- Double orifice design Protects seating faces because part of the erosive flow energy dissipates through disc.
- Two flat slots design at the internal bottom of the disc prevent the disc from rotating, so avoid high-speed rotating disc and seat contact, damage to disc and seat.
- Backseat bevel on the stem, not on the disc, meet specifications API-602.
- Large clearance between stem and disc allows disc to move freely.
- Dust cover and sleeve protect stem threads from dirt, dust and sand.
- Fully enclosed stem driving lubrication system with two needle roller bearings ensures low operating torque.
- Upper stem position indicates if valve is open or closed.
- Optional live-loading packing, disc springs keep packing tight for long periods of time without maintenance.
- Stop, regulating, and stop check discs are available.
- Handwheel is rugged and knobbed to make sure the grip even when wearing gloves.
- Optional handwheel colors are available.

Part Number Description

SYSS – PS8G – 2TLLR

Series	Body Material	Type Of Connection	Size Of Connection	ANSI Class	Disc Type	Packing Material	Live-Loading	Handwheel Color
SY	CS A105	PS Pipe Socket Weld	6 NPS 3/8 (DN 10)	G 2500 CL	2 Needle	T PTFE	LL Yes	B Black
	22 F22	PB Pipe Butt Weld	8 NPS 1/2 (DN 15)	H 4500 CL	3 Stop Check	G Graphite	No	G Green
	D5 F51		12 NPS 3/4 (DN 20)		Stop			R Red
	91 F91		16 NPS 1 (DN 25)					Y Yellow
	SS F316							Blue
	6H F316H							

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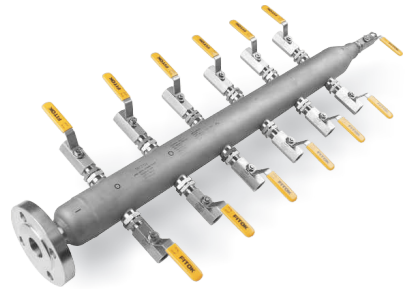
Manifolds

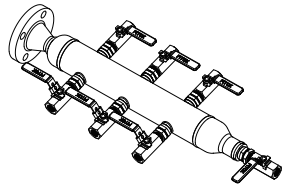
Air Headers and Distribution Manifolds



- Distribution lines and drain ports with ball valves, plug valves, and needle valves.
- Red, green, yellow, and blue handles are available.
- Main lines: NPS2
- Connections:
  Inlet ports: 1" ASME, EN and GB flange
  1 pipe thread
  Outlet ports: 1/4 or 1/2 pipe thread
  1/2" or 12 mm tube fitting
  Drain ports: 1/4 or 1/2 pipe thread
- Quantity of branches: 4 to 16
- Materials: 316 SS, 304 SS
- Each manifold is hydraulic tested with pure water at 1.5 times the design pressure, and leak - tight tested with nitrogen at the design pressure.

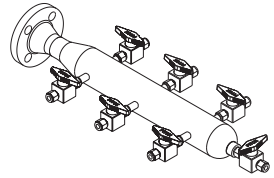
Air Headers

AP Series



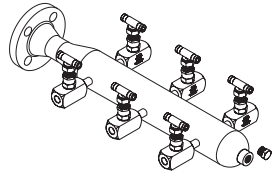
- Distribution ports are BR series ball valves.
- The main line is pipe (Sch 10).
- Working pressure up to: 1000 psig (69.0 bar)
- Working temperature: -15°F to 450°F (-26°C to 232°C)

MP Series



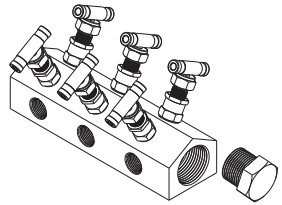
- Distribution ports are PV series plug valves.
- The main line is pipe (Sch 160).
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -15°F to 450°F (-26°C to 232°C)

MN Series



- Distribution ports are NB or NF series needle valves.
- The main line is pipe (Sch 160).
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -15°F to 450°F (-26°C to 232°C)

CM Series



- Distribution ports are needle valves.
- The main line is made of pentagon bar.
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -15°F to 1200°F (-26°C to 649°C)

Part Number Description

AP Series

APSS – FNS16Y – 8NS12T – TNS8 – C – SF2

Series	Body Material	Inlet Type	Inlet Size	Inlet Valve	Outlet Quantity	Outlet Type	Outlet Size	Outlet Valve/Plug	Drain Valve/Plug	Drain Type	Drain Size	Handle	Special Application	Cleaning and Packaging
AP	SS 316 SS S4 304 SS 4L 304L SS 6L 316L SS	FNS Female NPT FRT Female BSPT FRP Female BSPP (For RP) PS Pipe Socket Weld PB Pipe Butt Weld AM Class 150 RF Serrated Flange (ANSI B 16.5) DM PN 25 RF Smooth Flange (EN 1092) DE PN 16 RF Serrated Flange (EN 1092) GM PN 16 RF Smooth Flange (GB/T 9115) GE PN 20 RF Serrated Flange (GB/T 9115) AET Class 300 RF Serrated Flange (ANSI B 16.5) DMT PN 40 RF Serrated Flange (EN 1092) GMT PN 40 RF Serrated Flange (GB/T 9115)	12 3/4 16 1 20 1 1/4 24 1 1/2 32 2	No Y Yes	4 6 8 10 12	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RP) MS Male Metric Thread (for RG) FRP Female BSPP (For RP) BP Male BSPP (For RG) FL Fractional Tube Fitting ML Metric Tube Fitting UFB Nut+Gasket +Fractional BulgeNipple UMB Nut+Gasket+ Metric Bulge Nipple	8 1/2" or 8 mm 10 M10 × 1 or 10 mm 12 3/4" or 12 mm 14 M14 × 1.5 or 14 mm	Valve VP Valve with Plug T Thread TP Thread with Plug	Valve with Plug V Valve P Plug T Thread N No drain	None FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RP) MS Male Metric Thread (for RG) FRP Female BSPP (For BP) BP Male BSPP (For RG) FL Fractional Tube Fitting ML Metric Tube Fitting	None 8 1/2" or 8 mm 10 M10×1 or 10 mm 12 3/4" or 12 mm 14 M14×1.5 or 14 mm	Stainless steel with Yellow Vinyl Cover C Stainless Steel with Red Vinyl Cover W Stainless Steel with Blue Vinyl Cover U Black Aluminium NY Black Nyon L Handle Lock	NO S NACE MR0175	FC-01 F2 FC-02

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Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirements as stated in ASTM G93 Lever C.

MP, MN Series

MNSS – FNS16Y – 10NS8T – BFNS8 – C – SF2

Series	Body Material	Inlet Type	Inlet Size	Inlet Valve	Outlet Quantity	Outlet Type	Outlet Size	Outlet Vavle/Plug	Drain Type	Drain Type	Drain Size	Handle	Special Application	Cleaning and Packaging
MP MN	SS 316 SS S4 304 SS 4L 304L SS 6L 316L SS	FNS Female NPT FRT Female BSPT FRP Female BSPP (For RP) PS Pipe Socket Weld PB Pipe Butt Weld AM Class 2500 RF Serrated Flange (ANSI B 16.5) DM PN 420 RF Serrated Flange (EN 1092) GM PN 420 RF Serrated Flange (GB/T 9115)	12 3/4 16 1 20 1 1/4 24 1 1/2 32 2	No Y Yes	4 6 8 10 12	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RP) MS Male Metric Thread (for RG) FRP Female BSPP (For RP) BP Male BSPP (For RG) FL Fractional Tube Fitting ML Metric Tube Fitting UFB Nut+Gasket+ Fractional Bulge Nipple UMB Nut+Gasket+ Metric Bulge Nipple	8 1/2" or 8 mm 10 M10 × 1 or 10 mm 12 3/4" or 12 mm 14 M14 × 1.5 or 14 mm	Valve VP Valve with Plug T Thread TP Thread with Plug Valve with Plug L PV Series Plug Valve B NB Series Needle Valve E NF Series Needle Valve P Plug T Thread N No drain	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RP) MS Male Metric Thread (for RG) FRP Female BSPP (For RP) BP Male BSPP (For RG) FL Fractional Tube Fitting ML Metric Tube Fitting UFB Nut+Gasket+ Fractional Bulge Nipple UMB Nut+Gasket+ Metric Bulge Nipple	None 8 1/2" or 8 mm 10 M10 × 1 or 10 mm 12 3/4" or 12 mm 14 M14 × 1.5 or 14 mm	Black Aluminum Bar C Red Aluminum Bar F Green Aluminum Bar J Blue Aluminum Bar M 321 Stainless Steel Bar	NO S NACE MR0175	FC-01 F2 FC-02

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Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleaning requirement as stated in ASTM G93 Level C.

CM Series

CMSS – FNS16 – 8FNS12P – 12T – C – SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Quantity	Outlet Type	Outlet Size	Outlet Valve/Plug	Drain Type/Size	Drain Plug	Handle	Special Application	Cleaning and Packaging
CM	SS 316 SS S4 304 SS 4L 304L SS 6L 316L SS	FNS Female NPT FRT Female BSPT FRP Female BSPP (For RP) PS Pipe Socket Weld PB Pipe Butt Weld	8 1/2 12 3/4 *16 1	4 6 8 10 12	FNS Female NPT FRT Female BSPT FMS Female Metric Thread (for RP) FRP Female BSPP (For RP) PS Pipe Socket Weld	4 1/4" 6 3/8" or M6 × 1 8 1/2" 10 M10 × 1 12 3/4" or M12 × 1.5 14 M14 × 1.5	NO P Valve with Plug Valve with Plug L PV Series Plug Valve B NB Series Needle Valve E NF Series Needle Valve Plug Thread No drain	1/2"Female NPT 12 3/4" Female NPT *16 1" Female NPT Plug T Thread	Black Aluminum Bar C Red Aluminum Bar F Green Aluminum Bar J Blue Aluminum Bar M 321 Stainless Steel Bar	NO S NACE MR0175	FC-01 F2 FC-02

Note: * only applies to maximum working pressure up to 3000 PSI.
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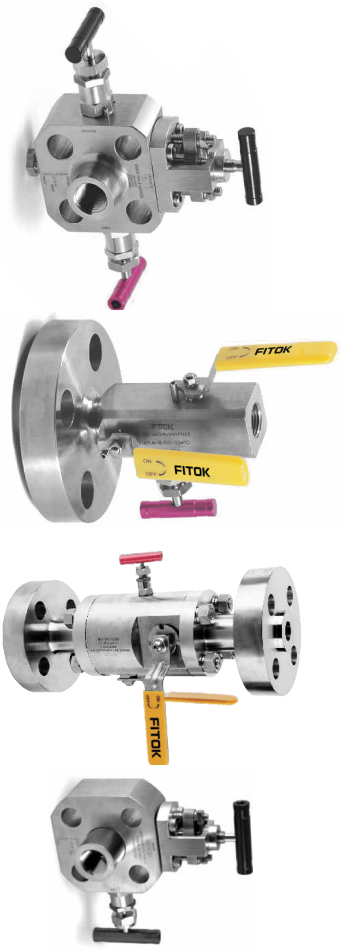
Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleaning requirement as stated in ASTM G93 Level C.

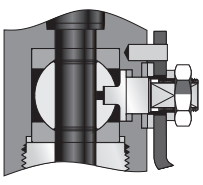
Block and Bleed Valves



Element Features

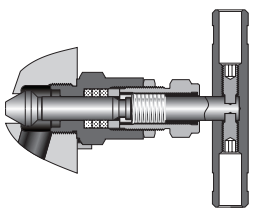
Ball Valves

- Working pressure up to: 6000 psig (414 bar)
- Working temperature:
  PTFE: -65°F to 450°F (-54°C to 232°C)
  PEEK: -65°F to 450°F (-54°C to 232°C)
- Bottom-loaded stem prevents stem blowout and enhances system safety.
- High-strength stem bearings provide smooth actuation and eliminate galling between the valve stem and body.
- FITOK ball valves are designed to be operated in a fully open or fully closed position.

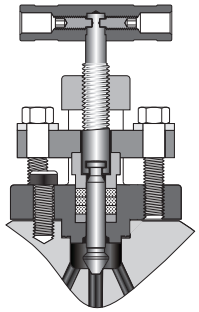


Needle Valves

- Working pressure up to: 6000 psig (414 bar)
- Working temperature:
  PTFE: -65°F to 450°F (-54°C to 232°C)
  Graphite: -65°F to 1200°F (-54°C to 649°C)
- Two stems design. The upper stem has hardened threads, the lower stem has hardened smooth surface.
- Upper stem thread lubricant is isolated from system media.
- The lower stem performs vertical linear movement instead of screwing movement, significantly reducing the friction area.
- The nonrotating lower stem eliminates galling between the seat and tip.
- Stem back seating seals in the fully open position
- Double lock-pins enable steady and durable fastening of the handle.



OS & Y Needle Valves

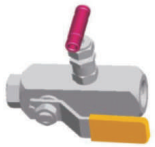
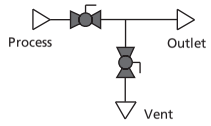
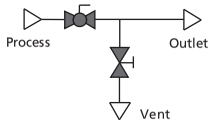
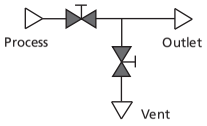


- Working pressure up to: 6000 psig (414 bar)
- Working temperature:
  PTFE: -65°F to 450°F (-54°C to 232°C)
  Graphite: -65°F to 1200°F (-54°C to 649°C)
- Two-stem design: thread hardened upper stem and smooth surface hardened lower stem.
- Upper stem thread lubricant is isolated from system fluid.
- The nonrotating lower stem, linearly instead of helical movement, avoids galling damage to the seat and tip, as well as reduces the total friction area between the packing and the lower stem.
- Bolted bonnet enhance strength and reliability.
- Adjustable gland flange allows easy access to the packing gland and packing adjustment for an effective stem seal.
- Investment case yoke is formed by precision casting which enhances strength and perfect stem alignment.
- Two handle pins make the handle fixed firmly and lastingly.

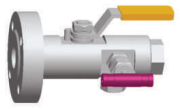
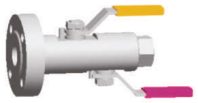
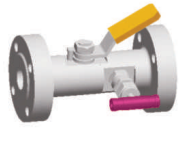
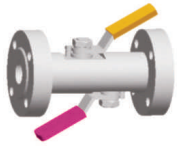
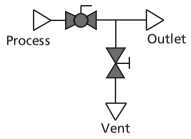
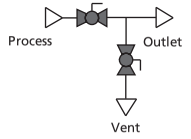
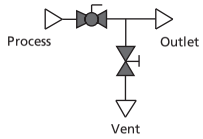
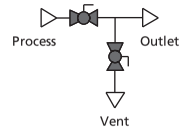
Handle colors indicate functions:
Needle and OS & Y valves: **Black** = Isolate/Block **Red** =Vent/Bleed
Ball valves: **Yellow**=Isolate/Block **Red** =Vent/Bleed

Single Block and Bleed Valves - BB Series

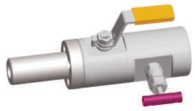
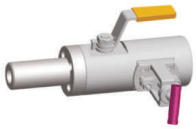
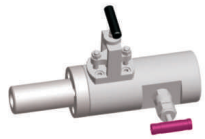
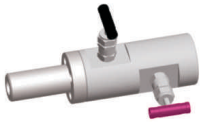
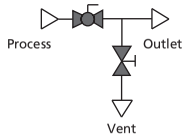
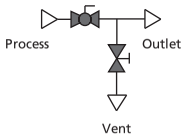
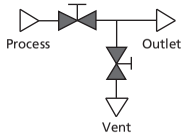
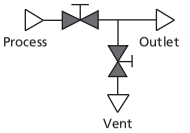
Instrument Single Block and Bleed Valves

BB□□-BB-FNS8-C	BB□□-BN-FNS8-V	BB□□-NN-NS8-FNS8-H
		
		

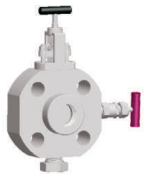
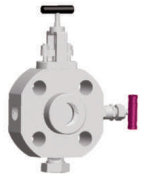
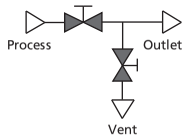
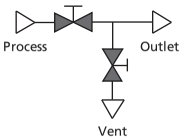
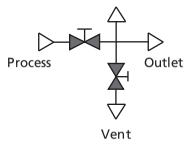
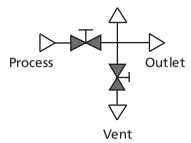
Flange Single Block and Bleed Valves

BB□□-BN-FM8300-FNS8-V8	BB□□-BB-FM8300-FNS8-V8	BB□□-BN-FM8300-V8	BB□□-BB-FM8300-V8
			
			

Root Single Block and Bleed Valves

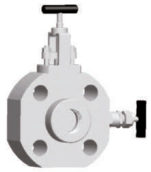
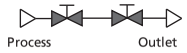
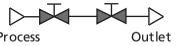
BB□□-BN-RV8-FNS8-V8	BB□□-BO-RV8-FNS8-V8	BB□□-ON-RV8-FNS8-V8	BB□□-NN-RV8-FNS8-V8
			
			

Monoflange Single Block and Bleed Valves

BB□□-ON-MM16600-FNS8-V4	BB□□-NN-MM16600-FNS8-V4	BB□□-ON-MM16600-FNS8-2V4	BB□□-NN-MM16600-FNS8-2V4
			
			

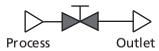
Double Block Valves - DB Series

Monoflange Double Block Valves

DB□□-ON-MM8300-FNS8	DB□□-NN-MM8300-FNS8
	
	

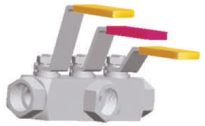
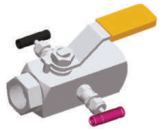
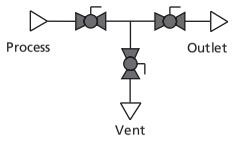
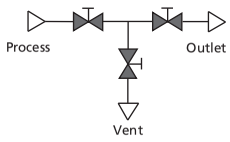
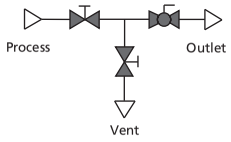
Single Block Valves - SB Series

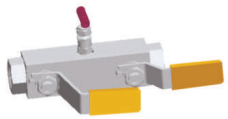
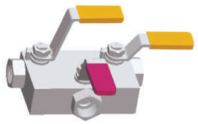
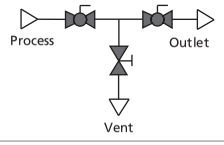
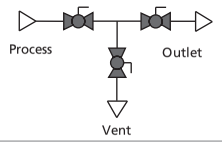
Monoflange Single Block Valves

SB□□-O-MM8300-FNS8	SB□□-N-MM8300-FNS8
	
	

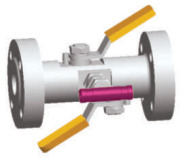
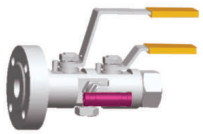
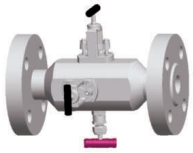
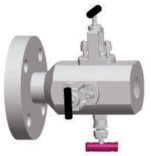
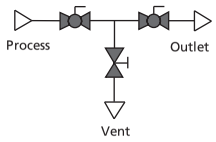
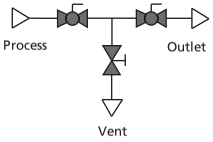
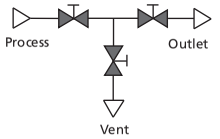
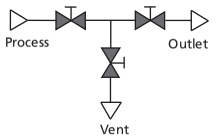
Double Block and Bleed Valves - DBB Series

Instrument Double Block and Bleed Valves

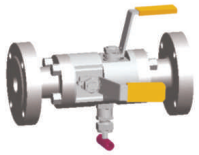
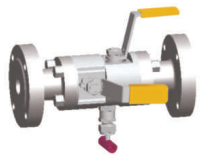
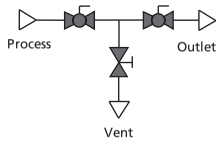
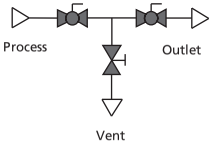
DBB□□-BBB-FNS8-V4-L	DBB□□-NNN-NS8-FNS8-V4-V	DBB□□-NBN-FNS8-V4-H
		
		

DBB□□-BBN-FNS8-V4-V	DBB□□-BBB-FNS8-V4-C
	
	

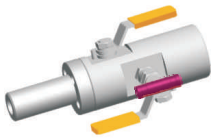
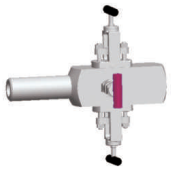
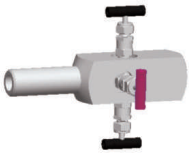
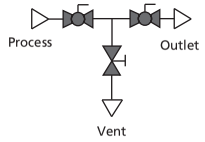
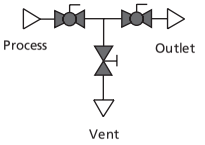
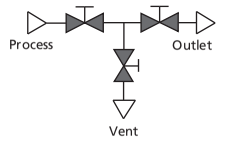
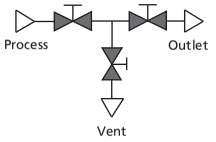
Flange Double Block and Bleed Valves

DBB□□-BBN-FM8600-V4	DBB□□-BBN-FM8600-FNS8-V4	DBB□□-OON-FM8600-V4	DBB□□-OON-FM8600-FNS8-V4
			
			

Large-Bore Bolted Double Block and Bleed Valves

DBB□□-BBN-FM16600-V4-F	DBB□□-BBN-FM16600-V4-R
	
	

Root Double Block and Bleed Valves

DBB□□-BBN-RV8-FNS8-V8	DBB□□-BBO-RV8-FNS8-V8	DBB□□-OON-RV8-FNS8-V8	DBB□□-NNN-RV8-FNS8-V8
			
			

Monoflange Double Block and Bleed Valves

DBB□□-ONN-MM8600-FNS8-V4	DBB□□-NNN-MM8600-FNS8-V4	DBB□□-ONN-MM8600-FNS8-V4-X	DBB□□-NNN-MM8600-FNS8-V4-X
DBB□□-ONN-MM8600-BWE8-V4	DBB□□-NNN-MM8600-BWE8-V4	DBB□□-ONN-MM8600-BWE8-V4-X	DBB□□-NNN-MM8600-BWE8-V4-X

Injection Double Block and Bleed Valves

DBB□□-BBN-FMS8-FE8150-IN

Sampling Double Block and Bleed Valves

DBB□□-BBN-FMS8-FE8150-SA

Part Number Description

DBBSS – 1BBO1 – FM16300 – FNS8 – 2V8 – RPSF2 – IE

Series	Body Material
BB	Single Block and Bleed
DB	Double Block
SB	Single Block
DBB	Double Block and Bleed

Body Material	
SS	316 SS
6L	316L SS
CS	Carbon Steel
D5	Duplex 2205
904L	904L SS

Options of Needle Valve Orifice	
	No Needle Vavles Configuration
1	0.16" (4 mm)
2	0.25" (6.4 mm)
	0.39" (10 mm)

Configuration	Primary	Secondary	Bleed
NNN	Needle	Needle	Needle
NBN	Needle	Ball	Needle
BBN	Ball	Ball	Needle
BBB	Ball	Ball	Ball
OON	OS&Y	OS&Y	Needle
BBO	Ball	Ball	OS&Y
ONN	OS&Y	Needle	Needle
BB	Ball	——	Ball
NN	Needle	——	Needle
	Needle	Needle	——
BN	Ball	——	Needle
BO	Ball	——	OS&Y
ON	OS&Y	——	Needle
	OS&Y	Needle	——
O	OS&Y	——	——
N	Needle	——	——

Options of Ball Valve Orifice	
	No Ball Vavles Configuration
	3/8" (10 mm)
1	1/2" (14 mm)
2	3/4" (20 mm)
3	1" (25.4 mm)
4	1 1/2" (38.1 mm)
5	2" (50.8 mm)

Inlet Type	
FNS	Female NPT
NS	Male NPT
FRT	Female BSPT
RT	Male BSPT
ML	Metric Tube Fitting
FL	Fractional Tube Fitting
FMS	Female Metric Thread (for RP)
MS	Male Metric Thread (for RG)
UMB	Nut+Gasket+Metric Bulge Nipple
FM	RF Smooth Flange
FJ	RTJ Flange
MM	RF Smooth Monoflange
MJ	RTJ Monoflange
RV	Root Valve Plain End

Inlet Size	
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	10 mm
12	3/4" or 12 mm
14	14 mm
16	1" or 16 mm
20	1 1/4" or M20 x 1.5
24	1 1/2"
32	2"
48	3"

Pressure Ratings	
Class Series	
150	Class 150
300	Class 300
600	Class 600
900	Class 900
1500	Class 1500
2500	Class 2500
PN Series	
6	PN 6
10	PN 10
16	PN 16
25	PN 25
40	PN 40
63	PN 63
100	PN 100
160	PN 160

Outlet Type	Outlet Size	Pressure Ratings
Same as inlet		

Vent Number	
	One Vent
2	Two Vents

Vent Type and Size	
V4	1/4 Female NPT with plug
V8	1/2 Female NPT with plug

Body Style/ Function	
	Flange and Root pattern
C	Compact pattern
L	Valves in-line mounted
V	Valves vertically mounted
H	Valves horizontally mounted
F	Full-bore three piece bolted mounted
R	Reduced-bore three piece bolted mounted
X	Block/Block/Bleed
SA	Sampling application
IN	Injection application

Packing/ Sealing Material	
	PTFE
	Fire safe
P	PEEK
G	Graphite

Special Application	
	No
S	NACE MR 0175

Cleaning and Packaging	
	FC-01
F2	FC-02

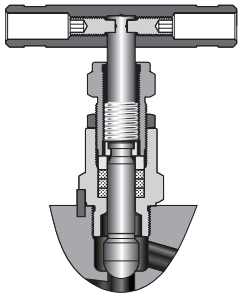
Special Function	
	No
I	Fire safe (it does not apply to the manifold whose vavles are all needle vavles
E	Anti-static
IE	Fire safe and Anti-static

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

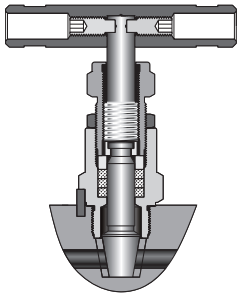
Gauge Valves

- Working pressure up to:
  Stainless steel: GV, GR up to 6000 psig (414 bar)
  GVH up to 10000 psig (690 bar)
- GV series and GVH series working temperature:
  PTFE packing: -65°F to 450°F (-54°C to 232°C)
  Graphite packing: -65°F to 1200°F (-54°C to 649°C)
- GR series working temperature:
  Acetal seat: -20°F to 250°F (-28°C to 121°C)
  PEEK seat: -20°F to 400°F (-28°C to 204°C)
  PFA seat: -20°F to 400°F (-28°C to 204°C)
- Non-rotating lower stem, ball tip and plug tip designs
- Variety of materials for seat and packing
- Safety back seating seals in fully open position
- Rolled spindle operating threads
- Lubricant for stem thread isolated from the media
- Externally adjustable gland
- Bonnet locking pin fitted as standard
- Low torque operating T bar handle
- Option for different colored handles
- Steady and durable fastening of the handle by double lock-pins
- Leak-tight performance testing for every valve with nitrogen at the maximum working pressure

Ball Tip Design Valves (GV, GVH)

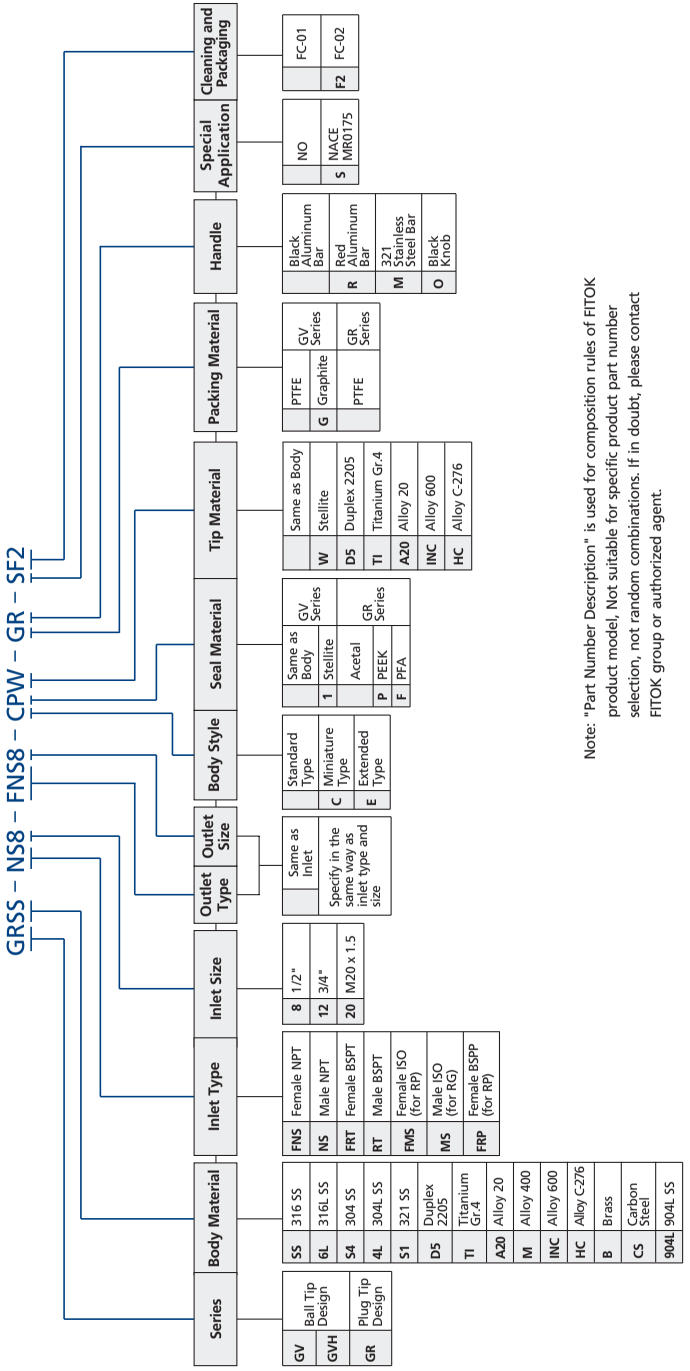


Plug Tip Design Valves (GR)



GV□□-NS8-FNS8 GVH□□-NS8-FNS8 GR □□-NS8-FNS8	GV□□-NS8-FNS8-E GVH□□-NS8-FNS8-E GR □□-NS8-FNS8-E	GV□□-NS8-FNS8-C GVH□□ -NS8-FNS8-C GR □□-NS8-FNS8-C
		

Part Number Description



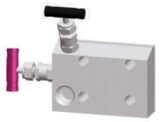
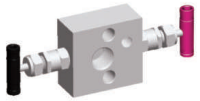
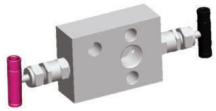
Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Instrumentation Manifolds

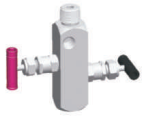
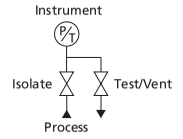
- Working pressure up to:
  Stainless steel: 2D, 2R, 3D, 3R, 5D, 5R up to 6000 psig (414 bar)
  2DH, 2RH, 3DH, 3RH, 5DH, 5RH up to 10000 psig (690 bar)
  Alloy C-276: 2D, 2R, 3D, 3R, 5D, 5R up to 6000 psig (414 bar)
- Working temperature:
  PTFE packing: -65°F to 450°F (-54°C to 232°C)
  Graphite packing: -65°F to 1200°F (-54°C to 649°C)
- Orifice: 0.157" (4.0 mm), CV: 0.35
- Two-stem design: thread hardened upper stem and smooth surface hardened lower stem
- Upper stem thread lubricant isolated from system media
- Linear instead of helical movement of the nonrotating lower stem avoids galling damage to the seat and tip, as well as reduces the total friction area between the packing and the lower stem
- Safety back seating seals in fully open position
- Steady and durable fastening of the handle by double lock-pins
- Leak-tight performance testing for every valve with nitrogen at the maximum working pressure

Handle colors indicate functions:
Black=Isolate/Block **Red**=Test/Vent **Green**=Equalize

2-Valve Manifolds

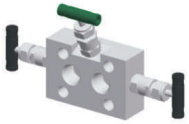
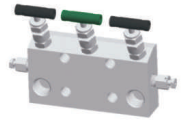
2D□□-FNS8-A	2D□□-FNS8-L	2D□□-FNS8-H
		

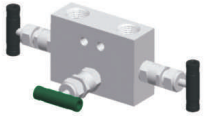
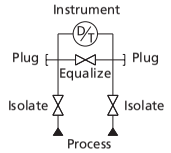
2R□□-FNS4-A	2R□□-FNS4-C	2R□□-FNS8-L
		

2R□□-FNS8-NS8-H	2R□□-FNS8-V	Flow Diagram
		

- The standard configuration of direct mount manifolds contain PTFE flange seal ring and 7/16-20 UNF × 1.75" high tensile bolts.

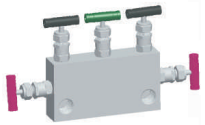
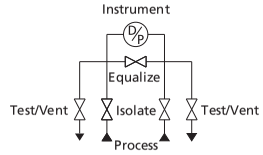
3-Valve Manifolds

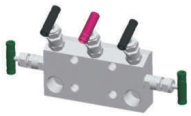
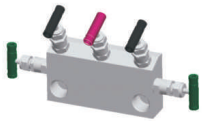
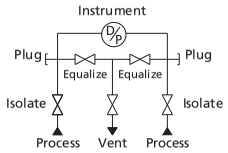
3D□□-FNS8-A	3D□□-FNS8-L-T
	

3R□□-FNS8-V	Flow Diagram
	

- The standard configuration of direct mount manifolds contain PTFE flange seal ring and 7/16-20 UNF × 1.75" high tensile bolts.

5-Valve Manifolds

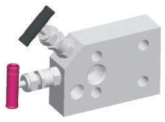
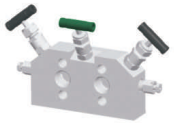
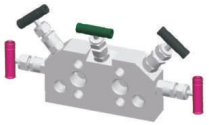
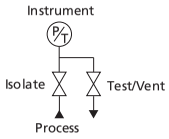
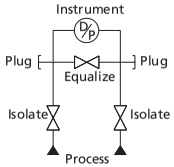
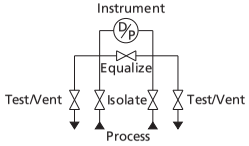
5D□□-FNS8-A	5R□□-FNS8-L	Flow Diagram
		

5D□□-FNS8-B	5R□□-FNS8-B	Flow Diagram
		

- The standard configuration of direct mount manifolds contain PTFE flange seal ring and 7/16-20 UNF × 1.75" high tensile bolts.

Instrumentation Integral Manifolds

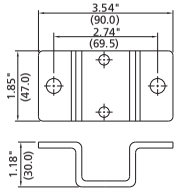
◎ C Integral Manifold is specifically designed for the pressure transmitters of Rosemount® coplanar™, including Model 3051C, 3051P, 2024 and 3095.

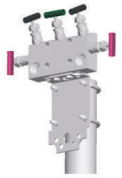
2D□□-FNS8-C	3D□□-FNS8-C	5D□□-FNS8-C
		
		

◎ The standard configuration of direct mount manifolds contain PTFE flange seal ring and 7/16-20 UNF × 1.75" high tensile bolts.

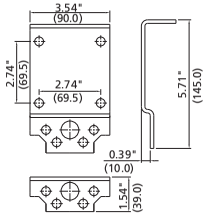
Manifold Mounting Brackets

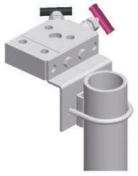
SS-M2P-2BK



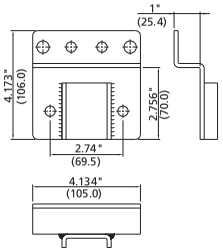


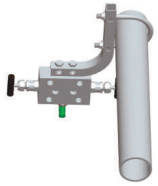
SS-M2P-4BK



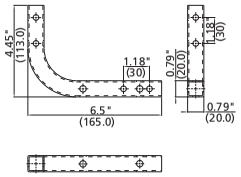


SS-M2P-6BK



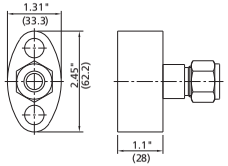


SS-M2P-8BK

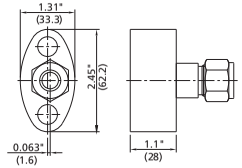


Kidney and Eccentric Flanges

Kidney Flange



Eccentric Flange



The auxiliary installation for FITOK manifolds and transmitters of different brands

Model of FITOK Manifolds / Model of Transmitters	3(5)DXX-XX-X	3(5)RXX-FXXX-X	2DXX-XXX-X	2RXX-FXXX-X
Rosemount Transmitters				
3051 CD X X 2 (3、4、5、7、8) X X X X	A4			
3051 CD X X 0 X X X X H2 (H3、H4、H7、HJ)	A1			
3051 CD X X 0 X X X X HK	A2			
3051 CD X X 0 X X X X HL	A3			
3051 CD X X X X X X X DF	A5	A		
3051 CG (CA) X X 2 (3 4 5 7 8) X X X X			A4	
3051 CG (CA) X X 0 X X X X H2 (H3 H4 H7 HJ)			A1	
3051 CG (CA) X X 0 X X X X HK			A2	
3051 CG (CA) X X 0 X X X X HL			A3	
3051 CG (CA) X X X X X X X DF			A5	A
1151 D (H) P 3 (4、5) X XX XX	A1			
1151 A (G) P 3 (4 5) X XX XX			A1	
1151 D (H) P X X XX XX DF	A5	A		
EJA Transmitters				
EJA1X0A-XXX0 (5) X-XXXX	A1			
EJA1X0A-XXX1 (2、3、4) X-XXXX	A5	A		
EJA3 (4、5) X0A-XXX0 (5) X-XXXX			A1	
EJA3 (4 5) X0A-XXX1 (2 3 4) X-XXXX			A5	A
Honeywelly Transmitters				
STDXXX-XXA-XXX	A1			
STDXXX-XXH-XXX	A5	A		
STXXXX-XXG-XXX			A5	A
STGXXX-XXA-XXX			A1	
SMXXXX-XXA-XXX	A1			
SMXXXX-XXH-XXX	A5	A		
SIEMENS Transmitters				
7MF433X-XXX0 (4) X-XXXX			A2	A
7MF433X-XXX2 (6) X-XXXX			A1	A
7MF44 (5) 3X-XXX0 (4) X-XXXX	A2			
7MF44 (5) 3X-XXX2 (3、6、7) X-XXXX	A1			
7MF44 (5) 3X-XXX1 (5) X-XXXX	A3			

Remark:
A: Connecting with fittings
A1: Connecting with flange and sealing rings, using 7/16 - 20 x 1.75" bolts
A2: Connecting with flange and sealing rings, using M10 x 40 mm bolts
A3: Connecting with flange and sealing rings, using M12 x 40 mm bolts
A4: Connecting with flange and sealing rings, using 7/16 - 20 x 3" bolts
A5: Remove the kidney flanges and then connect with flange and sealing rings

Part Number Description

3DSS – FNS8 – LG – TY1M – SF2

Manifold Series	Mount Type	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Body Style	Packing Sealing Material	Test Ports & Plugs	Mounting Bracket	For direct mount only: Flange Fasteners	For direct mount only: Bolt Material	For direct mount only: Flange Outlet Centerline	Special Application	Cleaning and Packaging
2 2-valve	D Direct Mount	SS 316 SS	FNS Female NPT	4 1/4"	D type: Flanged	A Angle Pattern	PTFE	No	NO	7/16 - 20 UNF x 1.75"	Zinc Plated Carbon Steel	2.13" (54 mm)	NO	FC-01
3 3-valve	DH Direct Mount	6L 316L SS	FRT Female BSPT	6 3/8" or 6 mm	R type: Same as Inlet	B Double equalize Function	G Graphite	T 1/4 Female NPT with Relief Valve	Y Yes	1 7/16 - 20 UNF x 3"	M 316 SS	56 2.19" (55.6 mm)	S NACE MR0175	F2 FC-02
5 5-valve	R Remote Mount	S4 304 SS	ML Metric Tube Fitting	8 1/2" or 8 mm	Specified in the same way as the inlet type and size	C Compact Pattern		P 1/4 Female NPT with Plug		2 M10 x 40 mm		57 2.25" (57.2 mm)		
	RH Remote Mount	4L 304L SS	FL Fractional Tube Fitting	10 10 mm		L Valves In-Line Mounted				3 M12 x 40 mm				
		S1 321 SS	FMS Female Metric Thread (for RP)	12 3/4" or 12 mm		H Valves Horizontally Mounted								
		D5 Duplex 2205	UMB Nut+Gasket +Metric Bulge Nipple	14 14 mm		V Valves Vertically Mounted								
		TI Titanium Gr.4	F Flanged	16 16 mm										
		A20 Alloy 20		20 M20 x 1.5										
		M Alloy 400												
		INC Alloy 600												
		HC Alloy C-276												
		B Brass												
		CS Carbon Steel												
		904L 904L SS												

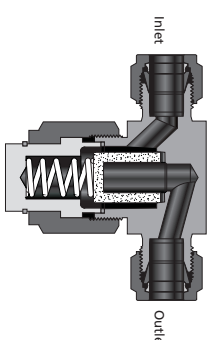
Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.

Filters

Tee-type Filters

FT Series

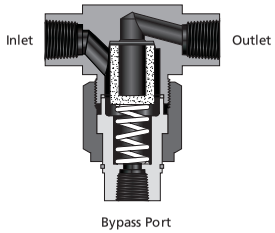
- Filter element replaceable without removing body from system
- Union bonnet design
- Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 μm
- Nominal pore sizes for strainer element: 100, 150, 250 and 450 μm
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -20°F to 900°F (-28°C to 482°C)
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, 904L SS and Brass
- Variety of end connections available



Bypass Filters

FB Series

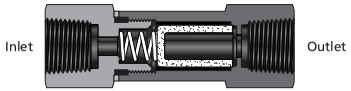
- Bypass port at filter bottom for the ease of sampling or purging
- Union bonnet design
- Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 µm
- Nominal pore sizes for strainer element: 100, 150, 250 and 450 µm
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -20 °F to 900°F (-28°C to 482°C)
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, 904L SS and Brass
- Variety of end connections available



In-line Filters

FI Series

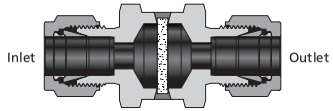
- Compact and space-saving design
- Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 µm
- Nominal pore sizes for strainer element: 100, 150, 250 and 450 µm
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -20 °F to 900°F (-28°C to 482°C)
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS, 321 SS, 904L SS and Brass
- Variety of end connections available



All-welded In-line Filters

FW Series

- Large filtration area and high flow coefficient
- All-welded construction for elimination of leakage
- Easy cleaning of filters by backflushing
- Full-penetration weld between body and element
- Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 µm
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -20 °F to 900°F (-28°C to 482°C)
- Body materials: 316 SS, 316L SS, 304 SS, 304L SS and 904L SS
- Variety of end connections available



Filters Part Number Description

FBSS – FL8 – ML10 – S – P150 – FL4SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Element Type	Gasket Material	Element Nominal Pore Size	Bypass Port (for FB Series Only)	Special Application	Cleaning and Packaging
FT	SS 316 SS	FNS Female NPT	2 1/8"		Same as Inlet	Sintered	Silver-plated 316 SS for FT, FB, FI	05 0.5 µm	1/8 Female NPT	NO	FC-01
FB	6L 316L SS	NS Male NPT	4 1/4"		Specified in the same way as the inlet type and size	S Strainer	P PTFE-plated 316 SS for FT, FB, FI	2 2 µm	FL2 1/8" Fractional Tube Fitting	S NACE MR0175	F2 FC-02
FI	S4 304 SS	FRT Female BSPT	6 3/8" or 6 mm				A Aluminum for FT, FB, FI	7 7 µm	FL4 1/4" Fractional Tube Fitting		
FW	4L 304L SS	RT Male BSPT	8 1/2" or 8 mm				W No-plated 316 SS for FT, FB, FI	15 15 µm	TS4 1/4" Tube Socket Weld		
	S1 321 SS	FMS Female Metric Thread (for RP)	10 10 mm					40 40 µm	FL6 3/8" Fractional Tube Fitting		
	B Brass	MS Male Metric Thread (for RG)	12 3/4" or 12 mm					60 60 µm	FL8 1/2" Fractional Tube Fitting		
	904L 904L SS	FRP Female BSPP (for RP)	14 14 mm or M14 x 1.5					80 80 µm			
		BP Male BSPP (for RG)	16 1" or 16 mm					100 100 µm			
		FL Fractional Tube Fitting	18 18 mm					150 150 µm			
		ML Metric Tube Fitting	20 1 1/4" or 20 mm or M20 x 1.5					250 250 µm			
		TS Fractional Tube Socket Weld	22 22 mm or M22 x 1.5					450 450 µm			
		TB Fractional Tube Butt Weld	25 25 mm								
		FR Male FR Fitting									

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Hoses and Connectors

Metal Flexible Hose Assemblies

MH, MM Series

- Core tube and fitting material: 316 stainless steel
- Overbraid material: 304 stainless steel
- Working pressure up to: 3100 psig (213 bar)
- Hose sizes: 1/4" to 2"
- Working temperature: -325°F to 800°F (-200°C to 426°C)
- End connections:
  1/4 to 2 thread
  1/4" to 2" and 6 mm to 22 mm tube fitting
- Welded fitting-to-hose construction to ensure reliable seal
- Standard and custom-length available

PTFE-lined, Stainless Steel Braided Hose Assemblies

PS Series

- Lightweight construction for easy handling and installation
- Core tube material: smooth virgin PTFE
- Overbraid material: 304 stainless steel
- Working pressure up to: 3000 psig (207 bar)
- Hose sizes: 1/4" to 1"
- Working temperature: -65°F to 400°F (-53°C to 204°C)
- End connections:
  1/8 to 1 thread
  1/8" to 1" and 6 mm to 22 mm tube fitting
- Standard and custom-length available

Thermoplastic Hose Assemblies

TH Series

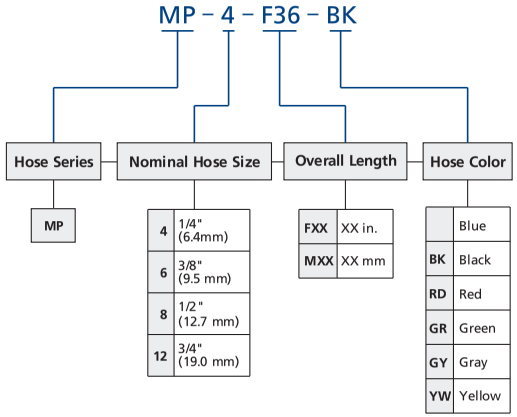
- Cover: polyurethane for resistance to oil, weather and abrasion
- Reinforcement: double-braid high-strength synthetic fiber
- Core tube: nylon
- Working pressure up to: 5000 psig (345 bar)
- Hose sizes: 3/16" to 1"
- Working temperature: -40°F to 200°F (-40°C to 93°C)
- End connections:
  1/4 to 1 thread
  1/4" to 1" and 6 mm to 22 mm tube fitting
- End connection materials: stainless steel, brass, and carbon steel
- Standard and custom-length available

Multipurpose Push-on Hose Assemblies

MP Series

- Cover: weather-, abrasion-, and oil-resistant synthetic rubber
- Reinforcement: single-braid high-strength synthetic fiber woven for maximum strength and end connection retention
- Core tube: highly oil-resistant rubber
- Hose colors: blue, black, green, gray, red and yellow
- Working pressure up to: 300 psig (20.7 bar)
- Hose sizes: 1/4" to 3/4"
- Working temperature: -40°F to 190°F (-40°C to 88°C)
- End connections:
  1/4 to 3/4 thread
  1/4" to 3/4" and 6 mm to 18 mm tube fitting
- End connection materials: stainless steel and brass
- End connections reusable
- Standard and custom-length assemblies

Hose Part Number Description



Example: **MP-8-F60-BK**
MP: Hose series
8: Hose size is 1/2"
F60: Overall length is 60"
BK: Hose color is black

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Part Number Description

SS – MH4 – ML10 – NS4 – F36 – BK – PF2

End Connection Material	
SS	316 SS
S1	321 SS
S4	304 SS
A20	Alloy 20
INC	Alloy 600
HC	Alloy C-276
TI	Titanium

Hose Series	
MH	
MM	
PS	
MP	
TH	

Hose ID	
4	1/4" (6.4 mm)
6	3/8" (9.5 mm)
8	1/2" (12.7 mm)
12	3/4" (19.1 mm)
16	1" (25.4 mm)

End Connection 1 Type	
FNS	Female NPT
NS	Male NPT
FRT	Female BSPT
RT	Male BSPT
FMS	Female Metric Thread (for RG gasket)
MS	Male Metric Thread (for RG gasket)
FL	Fractional Tube Fitting
ML	Metric Tube Fitting
FT	Fractional Tube Adapter
MT	Metric Tube Adapter
AN	Male JIC 37° Flare
SAN	Female JIC 37° Flare Swivel
SMS	Female Metric Thread Swivel (for MRG)
SNS	Male NPT Swivel
SRT	Male BSPT Swivel
SRG	Female BSPP Swivel (for RG)

End Connection 1 Size	
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm
14	M14 x 1.5
16	1" or 16 mm
18	M18 x 1.5
20	M20 x 1.5

End Connection 2 Type and Size	
	Same as End 1
	Specify in the same way as End Connection 1 Type and Size

Overall Length	
FXX	XX in.
MXX	XX mm

Hose Color Only MP Series	
	Blue
BK	Black
RD	Red
GR	Green
GY	Gray
YW	Yellow

Option Only PS Series	
P	Clear PVC Cover
SP	302 Stainless Steel Spring Guard

Cleaning and Packaging Only PS Series	
	FC-01
F2	FC-02

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1. *Options and accessories do not change hose technical data. Hose operating parameters must be considered when selecting a cover.*
2. *Clear PVC cover resists abrasion.*
3. *302 stainless steel spring guard covers entire hose to protect against kinking and abrasion.*
4. *To order a hose assembly with special cleaning and packaging (FC-02), following ASTM G93 level C, add -F2 as a suffix to the ordering number.*
   *Example: **SS-PS4-FT4-F24-F2.***

End 1 and end 2 follow the orders and regulations below:
1. *Metric Double Ferrules - Fractional Double Ferrules - Metric Tube Adapters - Fractional Tube Adapters - NPT Threads - BSPT Threads - BSPP Threads - SAE/MS Parallel Threads - 37° Flare - Others*
2. *Put the sizes from the biggest down to the smallest if they are of the same type.*
3. *Put the female bofore male if they are of the same type and size.*

Hose Connectors, Adapters, and Sleeves

HC Series

- For connecting with soft plastic or rubber tubing
- Working pressure and temperature range is higher than the corresponding connecting hose.
- Stainless steel or brass material
- Shank design for secure holding of tubing inside diameter
- Hose connectors reusable

Part Number Description

SS – HC – F4 – NS4

End Connection Material	
SS	316 SS
S4	304 SS
A20	Alloy 20
INC	Alloy 600
HC	Alloy C-276
TI	Titanium
AL	Aluminum
904L	904L SS

Series	
HC	

End 1 Connection Type	
F	Fractional
M	Metric

End 1 Connection Size	
4	1/4" or 4 mm
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm
16	1" or 16 mm

End 2 Connection Type	
ML	Metric Tube Fitting
FL	Fractional Tube Fitting
MT	Metric Tube Adapter
FT	Fractional Tube Adapter
FNS	Female NPT
NS	Male NPT
FRT	Female BSPT
RT	Male BSPT
FMS	Female Metric Thread (for RG gasket)
MS	Male Metric Thread (for RG gasket)

End 2 Connection Size	
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	5/8" or 10 mm
12	3/4" or 12 mm
16	1" or 16 mm
18	M18 x 1.5
20	M20 x 1.5

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Quick-connects

QC Series

- Working pressure up to: 3000 psig (207 bar)
- Working temperature:
  -10°F to 400°F (-23°C to 204°C) with Fluorocarbon FKM seal
  -10°F to 250°F (-23°C to 121°C) with Buna N seal
- Materials: stainless steel or brass
- End connections: 1/8 to 1/2 NPT, 1/8" to 1/2" and 6 mm to 12 mm tube fitting and 1/4" to 1/2" hose connectors
- Reliable, leak-tight O-ring seals for vacuum or pressure systems
- Mix-interchangeable with other main brands
- Single-end shutoff, double-end shutoff and full-flow quick-connects available
- Simple push-to-connect coupling for quick and easy operation
- Sturdy locking mechanism with large contact area to ensure reliable stem retainment

QF Series

- Working pressure up to: 6000 psig (414 bar)
- Working temperature:
  -10°F to 400°F (-23°C to 204°C) with Fluorocarbon FKM seal
  -10°F to 250°F (-23°C to 121°C) with Buna N seal
- Materials: stainless steel, carbon steel and brass
- End connections: 1/4 to 1 NPT, 1/4" to 1" and 6 mm to 12 mm tube fitting
- Full flow
- Quick, easy operation
- Smooth, open bores without valving on either end to minimize pressure drop and allow easy cleaning

QV Series

- Working pressure up to: 2000 psig (137 bar)
- Working temperature:
  -10°F to 400°F (-23°C to 204°C) with Fluorocarbon FKM seal
  -10°F to 250°F (-23°C to 121°C) with Buna N seal
- Materials: stainless steel, carbon steel and brass
- End connections:
  1/8 to 1 NPT and BSPT
- Double-end shutoff available
- Durable ball-locking mechanism assures reliable connection
- Simple push-to-connect coupling for quick and easy operation

QM Series

- Working pressure up to: 4000 psig (276 bar)
- Working temperature:
  -10°F to 400°F (-23°C to 204°C) with Fluorocarbon FKM seal
  -10°F to 250°F (-23°C to 121°C) with Buna N seal
- Materials: stainless steel or brass
- Single-end shutoff, double-end shutoff and full-flow available
- Quick, easy operation

Part Number Description

SS – QC4 – FL4 – S – K1 – CE

Material		Series		End Connection Type		End Connection Size		Stem or Body		Key Number and Color		Special Application	
SS	316 SS	QC4	1/4" (6.4 mm)	FNS	Female NPT	4	1/4"	S	Stem without valve remains open when uncoupled		Without key		NO
B	Brass	QC6	3/8" (9.5 mm)	NS	Male NPT	6	3/8" or 6 mm	D	Stem with valve shuts off when uncoupled	K1	Black	CE	NACE MR 0175
		QC8	1/2" (12.7 mm)	FRT	Female BSPT	8	1/2" or 8 mm	B	Body with valve shuts off when uncoupled	K2	Orange		
				RT	Male BSPT	10	5/8" or 10 mm	F	Full-flow body	K3	Green		
				FMS	Female Metric Thread (for RG gasket)	12	3/4" or 12 mm			K4	Yellow		
				MS	Male Metric Thread (for RG gasket)	14	M14 x 1.5			K5	Blue		
				FL	Fractional Tube Fitting	16	1" or 16 mm			K6	White		
				ML	Metric Tube Fitting	18	M18 x 1.5			K7	Purple		
				FT	Fractional Tube Adapter	20	M20 x 1.5			K8	Brown		
				MT	Metric Tube Adapter								
				AN	Male JIC 37° Flare								

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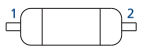
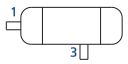
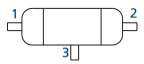
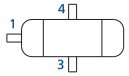
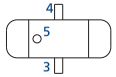
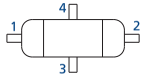
Condensate Pots and Vessels

Condensate Pots

CP Series

- Working pressure up to: Class 2500
- Socket weld connection as per ANSI B16.11
- Butt welding ends as per ANSI B16.9
- NPT as per ANSI B1.20.1 taper pipe thread
- All chambers are factory tested fully prior to shipment
- Standard material of construction: 316 SS, 304 SS, carbon steel
- Pipe schedule: 40, 80, 160, XXS seamless steel
- Variety of end connections available

Configurations

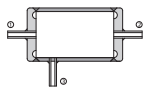
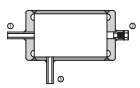
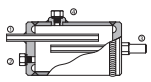
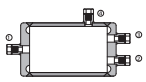
2A	2B	3A	3B	3C	4A
					

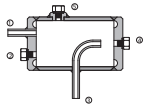
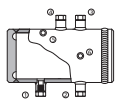
Vessels

SV Series

- Pressure ratings range class 300 to 2500
- Outside diameters: NPS 3 and NPS 4
- Full-penetration gas tungsten arc-weld construction ensures great strength and leak-tight performance
- All vessels are cleaned in compliance with FITOK standard clean procedure. The connections are protected with caps or plugs
- Each vessels is hydraulic tested with pure water at 1.5 times the design pressure, and leak-tight tested with nitrogen at its design pressure

Configurations

CV1	CV2	SV1	SV2	IV1	IV2
					

IV3	IV4
	

Part Number Description

SS – SV – 36 – 4A – FNS8 – MTS14 – MTB12 – SF2

Body Material	Series	Body O.D.	ANSI Class	Configuration	Connection 1 Type	Connection 1 Size	Connection 2 to 6 Type	Connection 2 to 6 Size	Special Application	Cleaning and Packaging
SS 316 SS	CP	3 NPS 3	3 Class 300	CP Series	FNS Female NPT	2 1/8"	Same as connection 1	Same as connection 1		FC-01
6L 316L SS	SV	4 NPS 4	6 Class 600	2A	FRT Female BSPT	4 1/4"	Specified in the same way as theconnection 1 type and size	Specified in the same way as theconnection 1 type and size	NO	F2 FC-02
S4 304 SS			9 Class 900	2B	TS Fractional Tube Socket Weld	8 1/2" or 8 mm			S NACE MR0175	
4L 304L SS			15 Class 1500	3A	MTS Metric Tube Socket Weld	10 10 mm				
S1 321 SS			25 Class 2500	3B	TB Fractional Tube Butt Weld	12 3/4" or 12 mm				
CS Carbon Steel				3C	MTB Metric Tube Butt Weld	14 14 mm				
				4A	PS Pipe Socket Weld	16 1" or 16 mm				
				SV Series	PB Pipe Butt Weld					
				CV1	FL Fractional Tube Fitting					
				CV2	ML Metric Tube Fitting					
				SV1	FT Fractional Tube Fitting					
				SV2	MT Metric Tube Fitting					
				IV1	RB Purge Valve (normative)					
				IV2						
				IV3						
				IV4						

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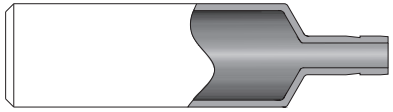
Sample Cylinders and Accessories

SC Series

- Working pressure up to: 5000 psig (345 bar).
- Volume varies from 40 to 3785 cm^3.
- 304L and 316L and alloy 400 stainless steel materials resist intergranular corrosion.
- Seamless tubing body provides consistent wall thickness, size and capacity.
- Cylinder inlet ends are 1/8, 1/4 and 1/2 female NPT connections.
- Heavy wall end connections provide strength and are flaring-resistent.
- Full-penetration gas tungsten arc-weld construction provides leak-tight sample containment.

MC Series

- Working pressure up to: 1000 psig (69.0 bar)
- Capacity: 10, 25 and 50 cm^3
- Single-ended and double-ended designs
- End connection: connected to 3/8" FITOK tube fittings or welded to 1/4" or 3/8" tubing
- Corrosion-resistant stainless steel construction
- Full-penetration butt weld construction



Part Number Description

6L – MC – DTS4 – 10 – F2

Material	Series	Type	End Connection	Internal Volume	Cleaning and Packaging
6L 316L SS 4L 304L SS	MC	S Single-ended D Double-ended	TS4 1/4" (6.4 mm) Fractional Tube Socket Weld TB6 3/8" (9.5 mm) Fractional Tube Butt Weld FT6 3/8" (9.5 mm) Tube	10 10 cm^3 25 25 cm^3 50 50 cm^3	FC-01 F2 FC-02

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Part Number Description

6L – SC18 – DN4 – T – PC – H2 – OT4087 – 300 – F2

Material	Series	Working Pressure	End Type	End Connection	Internal Cylinder Surface	Cap & Plug	Carrying Handle	Outage Tube Code	Internal Volume	Cleaning and Packaging
6L 316L SS 4L 304L SS M Alloy 400	SC	5 500 Psig 18 1800 Psig 50 5000 Psig	S Single-ended D Double-ended	N2 1/8 Female NPT N4 1/4 Female NPT N8 1/2 Female NPT	No Special Treatment T PTFE Coating E Electropolishing	NO TP Tube Fitting Plug PP Pipe Plug PC Pipe Cap EC End Cap	NO H2 Cylinder OD 1.9" to 3.5" H4 Cylinder OD 1.9" and 4"	No OT4087 Outage Tube OD 1/4" Length 0.87"	150 150 cm^3 300 300 cm^3 500 500 cm^3 For Double-ended Only: 40 40 cm^3, 50 50 cm^3, 75 75 cm^3, 400 400 cm^3, 1000 1000 cm^3, 2250 2250 cm^3, 3785 3785 cm^3	FC-01 F2 FC-02

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Tubing Tools

Hand Tube Benders

HTB Series

- Can bend stainless steel or copper tubing, the outside diameter ranges from 1/4" to 1/2" and 6 mm to 12 mm
- Roll dies reduce bending force and tube ovality, as compared to conventional slide block design
- 1° to 180° bending range

Ordering Number	Tube O.D.	Bend Radius
HTB-4S	1/4"	0.56"
HTB-4	1/4"	0.75"
HTB-5	5/16"	0.94"
HTB-6	3/8"	
HTB-8	1/2"	1.5"
HTB-6M	6 mm	15 mm
HTB-8M	8 mm	24 mm
HTB-10M	10 mm	
HTB-12M	12 mm	38 mm
HTB-14M-L	14 mm	56 mm
HTB-16M-L	16 mm	

The hand tube bender can not be used for SAF 2507 tubing over 1/4" or for medium-pressure tubing.

Tube Cutters

Ordering Number: FTC-03,FTC-04,FTC-05

- For cutting stainless steel, copper, and aluminum tubing
- For cutting 1/8" to 2 5/8" and 3 mm to 65 mm outside diameter tubing

Tube Deburring Tools

Ordering Number: TDT-01,TDT-03,TDT-05

- For deburring tubing made from stainless steel, carbon steel, aluminium, and copper materials
- For deburring 1/4" to 1 1/4"and 6 mm to 35 mm outside diameter tubing

Hydraulic Presetting Tools

Ordering Numbers: HPT-03 (for 1/2" to 1"and 12 mm to 25 mm tubing)
HPT-05 (for 1 1/4" to 2" and 28 mm to 50 mm tubing)

- For installation of 1/2" to 2" and 12 mm to 50 mm tube fittings
- Used to install carbon steel, stainless steel, and alloy steel tube fittings
- Manually operated hydraulic pump, without requirement for power or compressed air
- Flexible hose connection between the pump and jig to assure easy and comfortable operation
- Sturdy plastic package for easy carrying
- Total weight of 37.5 lbs
- Overall dimensions (without handle) of 12.6 in. x 9.8 in. x 5.9 in.

Manual Presetter Tools

MPT Series

For tube fitting installations in close quarters, the presetter tool can make installation easier when paired with the table vice.

- For 1/4" to 1" and 6 mm to 25 mm tube fittings

Gap Inspection Gauges

GIG Series

During initial installation of tube fittings, installer or inspector can use gap inspection gauge to check whether a fitting has been sufficiently tightened and eliminate the latent danger of leakage for the system.

- For all metal fittings, sizes from 1/16" to 1" and 2 mm to 25 mm

Simple Individual Sizes Multiple Sizes

Universal Adapters Cases

- Carefully selected adapters, hoses, and gaskets in one case for convenience
- Customer specified adapters available

Ordering Numbers:
ZR45K-65P: 65 standard pieces inside
ZR45K-65PC: 65 customer specified pieces inside
ZR25K-30P: 30 standard pieces inside
ZR25K-30PC: 30 customer specified pieces inside

Other Elements

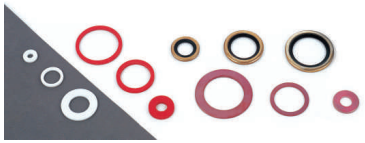
Stainless Steel Seamless Tubing

Material Standards

Grade	UNS Designation	ASTM	ASME
316/316L	S31600/S31603	A312	SA312
304/304L	S31400/S31403		
321	S32100		

Example:
Fractional: 6L-ST8-049-12-MP-A269
Metric: 6L-ST12M-1.0-2M-MP-A269

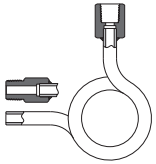
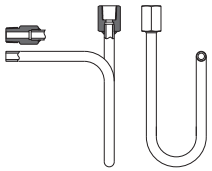
Gaskets and O-rings

Configuration	Gasket Type	Example
	RS Gasket	CSB-RS-8
	RP Gasket	CU-RP-6
	RG Gasket	CU-RG-4

Configuration	O-ring Type	Example
	70 durometer NBR	BN7-116
	90 durometer FKM	VI9-912

Syphons

- Working pressures up to: 6000 psig (414 bar)
- Working temperatures up to: 850°F (454°C)
- 316 SS, 304 SS materials are available

Configuration	Type	Example
	WS Series	SS-WS-FNS8-MTB14
	LWS Series	S4-LWS-FNS8-MTB14
	UWS Series	S1-UWS-FNS8-MTB14

Thermowells and Bosses

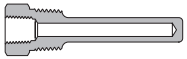
Thermowells

- FITOK thermowells provide reliable heat-transmission performance under high temperature, high pressure, and corrosive conditions
- Rugged mechanical construction ensures resistance to distortion under sharp temperature fluctuation conditions
- Straight, stepped, and tapered shank designs are available
- Standard instrument connection is 1/2" NPT; other connections are available on request
- Materials: 316 SS, 304 SS, 321 SS, F91, F92, 316H SS, carbon steel, brass, titanium, alloy C-276 and alloy 400

TW Series

Example: SS-TW-FNS8-NS12-ST12-4-4

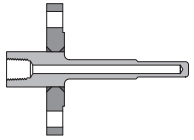
- Process connections: 1/2" to 1" NPT; other connections available on request
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -65°F to 1200°F (-54°C to 649°C)



TF Series

Example: SS-TF-FNS8-RF16150-SP12-4-4.5

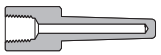
- Process connection: flange complying with ANSI B16.5
  Flange sizes: 1" to 2"
  Flange ratings: class 150 to 2500
  Flange types: raised face and flat face
- Welded flange-to-body construction



TS Series

Example: SS-TS-FNS8-TP-4-2.5

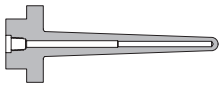
- Process connection: socket weld
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -65°F to 1200°F (-54°C to 649°C)



TJ Series

Example: SS-TJ-FNS8-TP-4-11.8

- Process connection: flange
- Flange complying with ANSI B16.5
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -65°F to 1200°F (-54°C to 649°C)



Part Number Description

SS – TW – FNS8 – RF12150 – ST10 – 6 – 4.5 – SF2

Material	Series	Instrument Connection Type	Instrument Connection Size	Process Connection Type	Process Connection Size	ANSI Class	Shank Style	Shank Diameter (ST&SP) and TS Series Tapered Root Diameter	Bore Diameter	Insertion Length	Special Application	Cleaning and Packaging
SS 316 SS	TW Thread Thermowells	FNS Female NPT	8 1/2	NS Male NPT	8 1/2	150 Class 150	ST Straight	8 0.5"	4 0.26"	2.5 2.5"	NO	FC-01
S1 321 SS	TF Flange Thermowells	FRT Female BSPT		RT Male BSP Tapered	12 3/4	300 Class 300	SP Stepped	10 0.625"	5 0.335"	3 3"	S NACE MR0175	F2 FC-02
S4 304 SS	TS Socket Weld Thermowells			RF Raised Face Flange	16 1	600 Class 600	TP Tapered	12 0.75"	6 0.385"	3.5 3.5"		
91 F91	TJ Wafer Flanged Thermowells			FF Flat Face Flange	20 1 1/4	900 Class 900		14 0.875"	7 0.437"	4 4"		
92 F92				RJ Ring Type Joint Flange	24 1 1/2	1500 Class 1500		16 1.06"	8 0.515"	4.5 4.5"		
6H 316H SS				LJ Wafer Type Joint Flange	32 2	2500 Class 2500		20 1.25"	10 0.656"	5 5"		
B Brass								24 1.5"		5.5 5.5"		
CS Carbon Steel										6 6"		
TI Titanium										6.5 6.5"		
HC Alloy C-276										7 7"		
M Alloy 400/ R-405										7.5 7.5"		
904L 904L SS										8 8"		
										8.5 8.5"		
										9 9"		
										9.5 9.5"		
										10 10"		
										10.5 10.5"		
										11 11"		
										11.5 11.5"		
										12 12"		
										12.5 12.5"		

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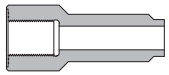
Bosses

BS Series

- Variety of process connection types and sizes available on request
- Working pressure up to: 1500 psig (104 bar)
- Instrument connections: M12 x 1.5 to M33 x 2.0, and 1/2 to 1 thread
- Materials: 316 SS, 304 SS, 321 SS, carbon steel, brass, titanium, alloy C-276, and alloy 400/R-405



Example: SS-BS-FMS27-17-40-120

Part Number Description

SS – BS – FNS12 – 7 – 27 – 60 – SF2

Material	Series	Instrument Connection Type	Instrument Connection Size	Bore Diameter	Wrench Allowance	Overall Length	Special Application	Cleaning and Packaging
SS 316 SS	BS	FNS Female NPT	8 1/2"	7 7 mm	20 20 mm	60 60 mm	NO	FC-01
S1 321 SS		FMS Female Metric thread	12 12 mm or 3/4"	9 9 mm	27 27 mm	80 80 mm	S NACE MR0175	F2 FC-02
S4 304 SS		FRP Female BSPT	16 16 mm or 1"	16 16 mm	35 35 mm	120 120 mm		
D5 2205			27 27 mm	17 17 mm	40 40 mm	140 140 mm		
			33 33 mm	20 20 mm	45 45 mm			
				24 24 mm				

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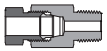
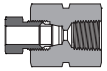
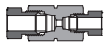
Medium & High Pressure Fittings

15 Series Tube Fittings

- Pressures up to 15000 psig (1034 bar)
- Fittings are easy to disconnect and retighten
- Every fitting is stamped with size, material and heat code
- Radius junction design with elbows provides smooth flow path
- Male nut threads are molybdenum disulfide-based lubricant to minimize the friction
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads

Configuration	Fitting Type	Example
	Male Connector	SS-CM-FH4-NS8
	Female Connector	SS-CF-FH6-NS4
	Union	SS-U-FH6
	Reducing Union	SS-U-FH8-FH6

Configuration	Fitting Type	Example
	Bulkhead Union	SS-BU-FH12
	Union Elbow	SS-LU-FH4
	Union Reducing Elbow	SS-LU-FH8-FH6
	Male Elbow	SS-LM-FH8-NS8
	Union Tee	SS-TTT-FH8
	Male Branch Tee	SS-TTM-FH12-NS12
	Union Cross	SS-C-FH4
	Cap	SS-TC-FH8
	Plug	SS-TP-FH6
	Nut	SS-N-FH2
	Ferrule	SS-FE-FH2
	Reducer	SS-R-FH6-FM8
	Port Connector	SS-P-FH8
	Adapter	SS-AM-FM8-NS4

Part Number Description

SS – U – FH8 – FH6 – □ – □

Material

SS	316 SS

Fitting Type

CM	Male Connector
CF	Female Connector
U	Union
U	Reducing Union
BU	Bulkhead Union
LU	Union Elbow
LU	Union Reducing Elbow
LM	Male Elbow
TTT	Union Tee
TTM	Male Branch Tee
C	Union Cross
TC	Cap
TP	Plug
N	Nut
FE	Ferrule
R	Reducer
P	Port Connector
AM	Adapter

P1 Connection Type

FH	Ferrule
FM	Fractional Tube

P1 Size

2	1/8"
4	1/4"
6	3/8"
8	1/2"
9	9/16"
12	3/4"

P2 Connection Type

Except the same as the P1, the other type follows:

NS	NPT Thread
SH	SAE/MS Straight Thread

P2 Size

Except the same as the P1, the other size follows:

7	7/16-20
9	9/16-18
16	1"

P3 and P4

Specify in the same way as the P2

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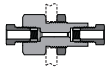
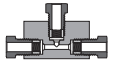
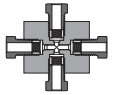
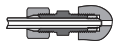
P1, P2, P3 and P4 shall be described in the following orders:

- ◎ Ferrule - Tube - Others
- ◎ Describe in descending order as per size if the end connection types are the same
- ◎ Describe the end of P1 if all end connections are the same

20 Series Tube Fittings

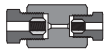
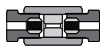
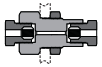
- Pressures up to 20000 psig (1379 bar)
- Coned-and-Threaded Connection
- Metal-to-metal seal provides perfect leak-tight service from critical vacuum to medium pressure
- Anti-vibration connection components available
- Fittings are easy to disconnect and retighten
- Every fitting is stamped with size, material and heat code
- Available to NACE MR-01-75

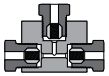
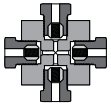
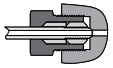
Configuration	Fitting Type	Example
	Gland	SS-G-2FH4
	Collar	SS-CO-2FH6
	Plug	SS-TP-2FH9
	Union Coupling	SS-U-2FH12
	Reducing Union Coupling	SS-U-2FH6-2FH4
	Union Coupling (Slip Type)	SS-SU-2FH16
	Bulkhead Coupling	SS-BU-2FH6
	Cap	SS-TC-2FH6
	Elbow	SS-LU-2FH9
	Tee	SS-TTT-2FH12
	Cross	SS-C-2FH4

Configuration	Fitting Type	Example
	Anti-Vibration Gland Assembly	SS-AVGA-2FH9
	Coned and Threaded Nipple	SS-CTN-2FH6-8

60 Series Tube Fittings

- Pressures up to 60000 psig (4137 bar)
- Coned-and-Threaded Connection
- Metal-to-metal seal provides perfect leak-tight service from critical vacuum to high pressure
- Anti-vibration connection components available
- Fittings are easy to disconnect and retighten
- Every fitting is stamped with size, material and heat code
- Available to NACE MR-01-75

Configuration	Fitting Type	Example
	Gland	SS-G-6FH4
	Collar	SS-CO-6FH6
	Plug	SS-TP-6FH9
	Union Coupling	SS-U-6FH4
	Reducing Union Coupling	SS-U-6FH6-6FH4
	Union Coupling (Slip Type)	SS-SU-6FH6
	Bulkhead Coupling	SS-BU-6FH6
	Cap	SS-TC-6FH6

Configuration	Fitting Type	Example
	Elbow	SS-LU-6FH9
	Tee	SS-TTT-6FH6
	Cross	SS-C-6FH4
	Anti-Vibration Gland Assembly	SS-AVGA-6FH9
	Coned and Threaded Nipple	SS-CTN-6FH6-10

20 Series and 60 Series Tube Fittings Part Number Description

SS – SU – 2FH16 – □ – □ – □

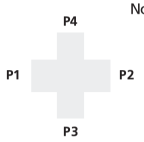
Material	
SS	316 SS

Fitting Type	
G	Gland
CO	Collar
TP	Plug
U	Union Coupling
U	Reducing Union Coupling
SU	Union Coupling (Slip Type)
BU	Bulkhead Coupling
TC	Cap
LU	Elbow
TTT	Tee
C	Cross
AVGA	Anti-Vibration Gland Assembly
CTN	Coned and Threaded Nippe

P1 Connection Type	
2FH	20 Series Fractional Tube
6FH	60 Series Fractional Tube

P1 Size	
4	1/4"
6	3/8"
9	9/16"
12	3/4"
16	1"

P2, P3 and P4
Specify in the same way as the P1



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P1, P2, P3 and P4 shall be described in the following orders:

- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

Pipe Fittings

- The hardened threads with smooth surface avoid galling and help to extend the fitting service life
- Radius junction design with elbows provides smooth flow path.
- Every fitting is stamped with size, material, and heat code
- 316 stainless steel standard material. Other materials are available upon request
- Available to NACE MR-01-75

Configuration	Fitting Type	Example
	Pipe Plug	SS-HPP-NS4
	Hex Nipple	SS-HPHN-NS4
	Hex Long Nipple	SS-HPLN-NS4-50.8
	Pipe Cap	SS-HPC-NS4
	Hex Coupling	SS-HPCG-NS4

Configuration	Fitting Type	Example
	Zero-Clearance Union	SS-HPZC-NS4
	Adapter	SS-HPA-NS4
	Male Elbow	SS-HPME-NS4
	Street Elbow	SS-HPSE-NS4
	Female Elbow	SS-HPE-NS4
	Male Tee	SS-HPMT-NS4
	Male Street Tee	SS-HPST-NS4
	Male Branch Tee	SS-HPBT-NS4
	Female Tee	SS-HPT-NS4
	Female Cross	SS-HPCR-NS4

Part Number Description

SS – HPHN – NS6 – RT4 – □ – □

Material	Fitting Type	P1 Connection Type	P1 Size	P2 Connection Type	P2 Size	P3 and P4
SS 316 SS	HPP Pipe Plugs HPHN Hex Nipples HPLN Hex Long Nipples HPC Pipe Caps HPCG Hex Couplings HPZC Zero-Clearance Unions HPA Adapters HPME Male Elbows HPSE Street Elbows HPE Female Elbows HPMT Male Tees HPST Male Street Tees HPBT Male Branch Tees HPT Female Tees HPCR Female Cross	NS NPT RT ISO Tapered SH Heavy-Duty SAE/MS (Accordance with SAE J1926-2) AN JIC (37° Flare) HM Type "M" Male	NS and RT Size 2 1/8" 4 1/4" 6 3/8" 8 1/2" 12 3/4" 16 1" SH Size 7 7/16-20 9 9/16-18 12 3/4-16 AN Size 4 7/16-20 6 9/16-18 8 3/4-16 10 7/8-14 12 1 1/16-12 16 1 5/16-12 HM Size 9 9/16-18 12 3/4-16 14 7/8-14 16 1-12 21 1 5/16-12	Specify in the same way as the P1	Specify in the same way as the P1 Size	Specify in the same way as the P1

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P1,P2,P3 and P4 shall be described in the following orders:

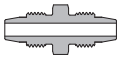
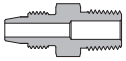
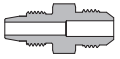
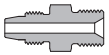
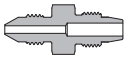
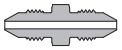
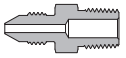
- Female thread end is the first
- NPT-ISO Tapered-Heavy Duty SAE/MS -JIC (37° Flare)-HM
- Describe the descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connection are the same

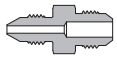
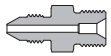
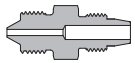
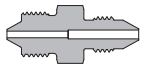
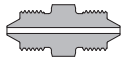
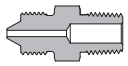
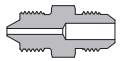
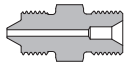
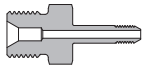
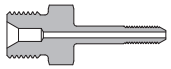
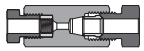
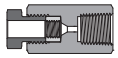
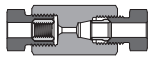
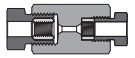
Adapters and Couplings

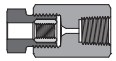
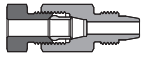
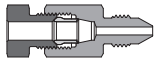
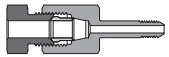
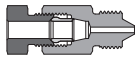
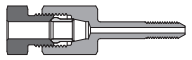
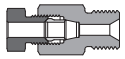
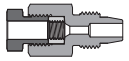
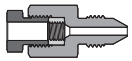
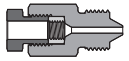
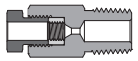
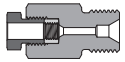
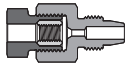
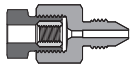
- The hardened threads with smooth surface finishing avoid galling and help to extend the fitting service life
- Every fitting is stamped with size, material, and heat code
- 316 stainless steel is standard material. Other materials are available upon request
- Available to NACE MR-01-75

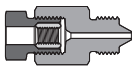
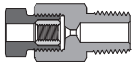
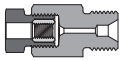
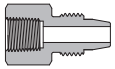
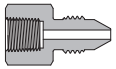
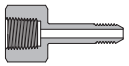
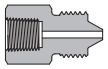
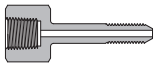
About "CP"

Ordering number with designator "□CP" is for "two-piece" male to male and female to male adapters. They are identical to the "one-piece" designs in length can be ordered by substituting "CP" for "MP" to the "one-piece" adapter part numbers listed.
Example: Ordering number of "one-piece": SS-MMA-6MP6-6MP4
The corresponding ordering number of "two-piece" is SS-MMA-6CP6-6CP4.

Configuration	Fitting Type	Example
	15 Series Male to 15 Series Male	SS-MMA-MP6-MP4
	15 Series Male to Male NPT Thread	SS-MMA-MP6-NS6
	15 Series Male to Male JIC	SS-MMA-MP4-AN6
	15 Series Male to Type "M" Male	SS-MMA-MP4-HM9
	20 Series Male to 15 Series Male	SS-MMA-2MP6-MP6
	20 Series Male to 20 Series Male	SS-MMA-2MP9-2MP6
	20 Series Male to Male NPT Thread	SS-MMA-2MP9-NS4

Configuration	Fitting Type	Example
	20 Series Male to Male JIC	SS-MMA-2MP9-AN6
	20 Series Male to Type "M" Male	SS-MMA-2MP6-HM9
	60 Series Male to 15 Series Male	SS-MMA-6MP6-MP4
	60 Series Male to 20 Series Male	SS-MMA-6MP6-2MP4
	60 Series Male to 60 Series Male	SS-MMA-6MP9-6MP4
	60 Series Male to Male NPT Thread	SS-MMA-6MP6-NS4
	60 Series Male to Male JIC	SS-MMA-6MP6-AN6
	60 Series Male to Type "M" Male	SS-MMA-6MP4-HM16
	Type "M" Male to 20 Series Coned and Threaded Nipples	SS-MMA-HM9-2CT6
	Type "M" Male to 60 Series Coned and Threaded Nipples	SS-MMA-HM9-6CT9
	20 Series Female to 15 Series Female	SS-FFC-2FH6-FH4
	20 Series Female to Female NPT Thread	SS-FFC-2FH6-NS4
	60 Series Female to 15 Series Female	SS-FFC-6FH4-FH8
	60 Series Female to 20 Series Female	SS-FFC-6FH6-2FH4

Configuration	Fitting Type	Example
	60 Series Female to Female NPT Thread	SS-FFC-6FH6-NS4
	15 Series Female to 15 Series Male	SS-FMA-FH4-MP6
	15 Series Female to 20 Series Male	SS-FMA-FH4-2MP4
	15 Series Female to 20 Series Coned and Threaded Nipples	SS-FMA-FH6-2CT4
	15 Series Female to 60 Series Male	SS-FMA-FH6-6MP4
	15 Series Female to 60 Series Coned and Threaded Nipples	SS-FMA-FH4-6CT9
	15 Series Female to Type "M" Male	SS-FMA-FH6-HM9
	20 Series Female to 15 Series Male	SS-FMA-2FH9-MP6
	20 Series Female to 20 Series Male	SS-FMA-2FH6-2MP9
	20 Series Female to 60 Series Male	SS-FMA-2FH9-6MP4
	20 Series Female to Male NPT Thread	SS-FMA-2FH9-NS4
	20 Series Female to Type "M" Male	SS-FMA-2FH9-HM9
	60 Series Female to 15 Series Male	SS-FMA-6FH6-MP4
	60 Series Female to 20 Series Male	SS-FMA-6FH9-2MP4

Configuration	Fitting Type	Example
	60 Series Female to 60 Series Male	SS-FMA-6FH6-6MP6
	60 Series Female to Male NPT Thread	SS-FMA-6FH6-NS4
	60 Series Female to Type "M" Male	SS-FMA-6FH6-HM9
	Female NPT Thread to 15 Series Male	SS-FMA-NS4-MP6
	Female NPT Thread to 20 Series Male	SS-FMA-NS6-2MP4
	Female NPT Thread to 20 Series Coned and Threaded Nipples	SS-FMA-NS4-2CT6
	Female NPT Thread to 60 Series Male	SS-FMA-NS6-6MP4
	Female NPT Thread to 60 Series Coned and Threaded Nipples	SS-FMA-NS6-6CT6

Part Number Description

SS – MMA – 2MP6 – NS4

Material		Fitting Type		P1 Connection Type		P1 Size		P2 Connection Type		P2 Size	
SS	316 SS	MMA	Male to Male	NS	NPT	NS Size		Except the same as the P1, the other type follows:		Except the same as the P1, the other size follows:	
		FFC	Female to Female	MP and CP	15 Series Male	2	1/8"	2CT	20 Series Coned and Threaded Nipples	2CT Size	
		FMA	Female to Male	2MP and 2CP	20 Series Male	4	1/4"	6CT	60 Series Coned and Threaded Nipples	4	1/4-28
				6MP and 6CP	60 Series Male	6	3/8"	AN	Male JIC	6	3/8-24
				FH	15 Series Female	8	1/2"			9	9/16-18
				2FH	20 Series Female	12	3/4"			12	3/4-16
				6FH	60 Series Female	16	1"			16	1-14
				HM	Type "M" Male	MP, CP and FH Sizes				6CT Size	
						2	3/8-24			4	1/4-28
						4	1/2-20			6	3/8-24
						6	5/8-18			9	9/16-18
						8	13/16-16			AN Size	
						2MP, 2CP and 2FH Sizes				4	7/16-20
						4	7/16-20			6	9/16-18
						6	9/16-18			8	3/4-16
						9	13/16-16			10	7/8-14
						12	3/4-14			12	1 1/16-12
						16	1 3/8-12			16	1 5/16-12
						6MP, 6CP and 6FH Sizes					
						4	9/16-18				
						6	3/4-16				
						9	1 1/8-12				
						HM Size					
						9	9/16-18				
						12	3/4-16				
						14	7/8-14				
						16	1-12				
						21	1 5/16-12				

Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

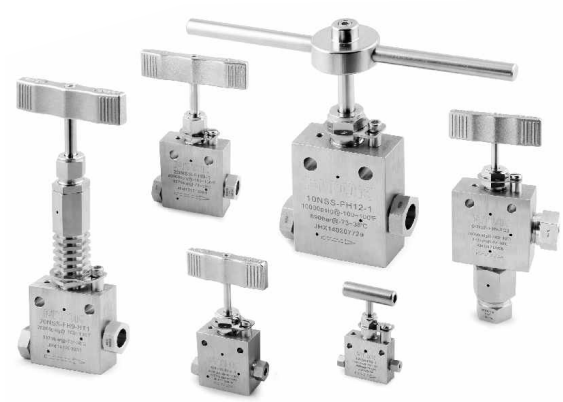
P1	P2

P1 and P2 shall be described in the following orders:

- For fitting type MMA: 6MP□-2MP□-MP□-NS□-AN□-HM□
  For fitting type FFC: 6FH□-2FH□-FH□-NS□
  For fitting type FMA: Female connection type is the first
- Describe the descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connection are the same

Medium & High Pressure Valves

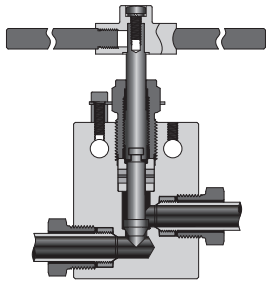
Needle Valves



- Non-rotating stem and bar stock body design
- Easy to assemble and replace packing
- 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
- The standard packing material for 60N Series is Nylon, the other Series is PTFE. RPTFE glass, Graphite and ext-end stuffing box with Graphite are also available
- Extended stuffing box with of Graphite can be operated to 1200°F (649°C)
- The location of packing is under the thread of upper stem.
- The material of packing gland and lower stem have been selected to achieve reduced handle torque and extended thread cycle life
- Options for Vee or Regulating stem tips
- Five flow patterns are available
- Available to NACE MR-01-75

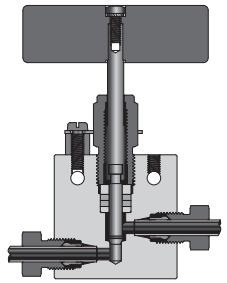
10N Series Needle Valves

- End connections: 9/16", 3/4", 1" tube fittings and 3/4 NPT, 3/4 BSPT, 1 NPT, 1 BSPT
- Body material: 316 SS
- Orifice sizes: 0.359", 0.516", 0.688", 0.438" and 0.562"
- Working pressure up to: 10000 psig (690 bar)
- Working temperature: -100°F to 1200°F (-73°C to 649°C)



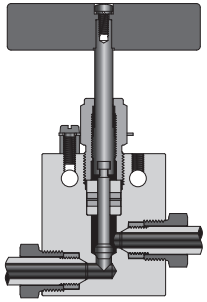
15N Series Needle Valves

- End connections: 1/8", 1/4", 3/8", 1/2" tube fittings and 1/8 NPT, 1/8 BSPT, 1/4 NPT, 1/4 BSPT, 3/8 NPT, 3/8 BSPT, 1/2 NPT, 1/2 BSPT
- Body material: 316 SS
- Orifice sizes: 0.094", 0.188", 0.250", 0.375", 0.078", 0.203", 0.219" and 0.312"
- Working pressure up to: 15000 psig (1034 bar)
- Working temperature: -100°F to 800°F (-73°C to 427°C)



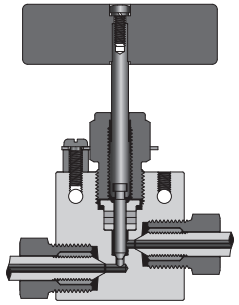
20N Series Needle Valves

- End connections: 1/4", 3/8", 9/16", 3/4" and 1" tube fittings
- Body material: 316 SS
- Orifice sizes: 0.125", 0.219", 0.312", 0.438" and 0.562"
- Working pressure up to: 20000 psig (1379 bar)
- Working temperature: -100°F to 1200°F (-73°C to 649°C)



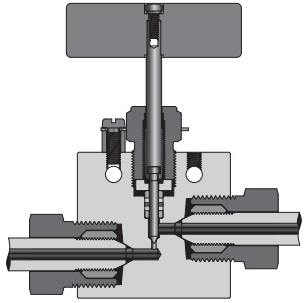
30N Series Needle Valves

- End connections: 1/4", 3/8" and 9/16" tube fittings
- Body material: 316 SS
- Orifice sizes: 0.094" and 0.125"
- Working pressure up to: 30000 psig (2068 bar)
- Working temperature: -100°F to 1200°F (-73°C to 649°C)



60N Series Needle Valves

- End connections: 1/4", 3/8", 9/16" tube fittings
- Body material: 316 SS
- Orifice sizes: 0.063" and 0.078"
- Working pressure up to: 60000 psig (4137 bar)
- Working temperature: -100°F to 1200°F (-73°C to 649°C)



Part Number Description

15NSS – FH4 – RG2

Series	Body Material	Connection	Size	Stem Tips	Packing	Flow Patterns
10N	SS 316 SS	For 10N Series	2 1/8"	Vee	PTFE	1 Straight
15N		2FH 20 Series	4 1/4"	R Regulating	Nylon (60N Only)	2 Angle
20N		FNS NPT(Female)	6 3/8"		TG RPTFE Glass	3 Angle(replaceable seat)
30N		For 15N Series	8 1/2"		G Graphite	4 3-way/2 on pressure
60N		FH 15 Series	9 9/16"		HT extended stuffing box with Graphite	5 3-way/1 on pressure
		FNS NPT(Female)	12 3/4"			6 3-way/2 stem manifold
		For 20N Series	16 1"			
		2FH 20 Series				
		For 30N/60N Series				
		6FH 60 Series				

Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

Ball Valves

- One-piece, trunnion mounted style, ideal for severe duty applications
- Two-way and three-way valve configurations
- PEEK seats offer excellent resistance to chemicals, heat, and wear/abrasion
- Full-port flow path minimizes pressure drop
- Optional O-rings available for high-temperature applications
- Pneumatic actuator options

10B Series Ball Valves

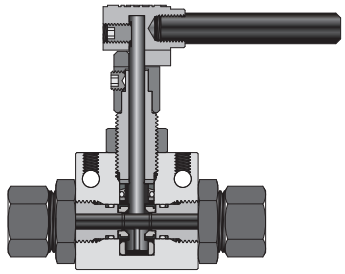
- End connections:
  3/4" and 1" tube fittings
  3/4 and 1 NPT threads
- Body material: 316 SS
- Orifice sizes:
  2-way: 0.5"
  3-way: 0.5"
- Working pressure up to: 10000 psig (690 bar)
- Fluorocarbon FKM O-ring working temperature:
  0°F to 400°F (-17.8°C to 204°C)

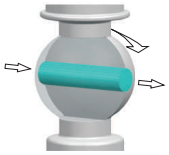
15B Series Ball Valves

- End connections:
  1/8", 1/4", 3/8", 1/2", 9/16" and 3/4" tube fittings
  1/8, 1/4, 3/8 and 1/2 NPT threads
- Body material: 316 SS
- Orifice sizes:
  2-way: 0.094" to 0.375"
  3-way: 0.094" to 0.328"
- Working pressure up to: 15000 psig (1034 bar)
- Fluorocarbon FKM O-ring working temperature:
  0°F to 400°F (-17.8°C to 204°C)

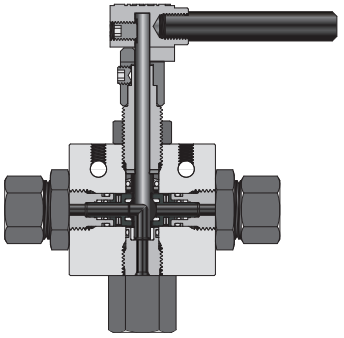
20B Series Ball Valves

- End connections: 1/4", 3/8", 9/16" and 3/4" tube fittings
- Body material: 316 SS
- Orifice sizes:
  2-way: 0.094" to 0.375"
  3-way: 0.094" to 0.19"
- Working pressure up to: 20000 psig (1379 bar)
- Fluorocarbon FKM O-ring working temperature:
  0°F to 400°F (-17.8°C to 204°C)

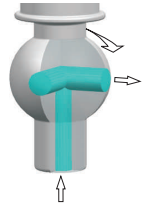




Shut-Off



Switching
180° Turn



Diverting
90° Turn

Part Number Description

15BSS – 2FH6 – 6 – 2 – N – AO

Series	Body Material	Connection	Size	Orifice No.	Body Style	O-ring Material	Pneumatic Actuators
10B	SS 316 SS	FH 15 Series	2 1/8"	For 2-way	1 2-Way Straight Valves	Fluorocarbon FKM	None
15B		2FH 20 Series	4 1/4"	1/4"	2 3-Way Valves, 180° Turn	N NBR	AO Air-to-open/ spring-to-close
20B		FNS NPT(Female)	6 3/8"	6 3/8"	2D 3-Way Valves, 90° Turn	F FFKM	AC Air-to-close/ spring-to-open
		6FH 60 Series	8 1/2"	8 1/2"		E EPDM	AOC Double acting
			9 9/16"	For 3-way			
			12 3/4"	3/16"			
			16 1"	6 3/8"			
				8 1/2"			

Note: 1. Operators 90° rotations standard. 180° options available upon request.
2."Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

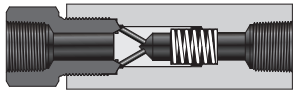
Code	O-ring Material	Temperature Range
	Fluorocarbon FKM	0 to 400°F (-17.8 to 204°C)
N	NBR	-40 to 250°F (-40 to 121°C)
F	FFKM	-20 to 500°F (-29 to 260°C)
E	EPDM	-50 to 300°F (-45 to 148°C)

Check Valves

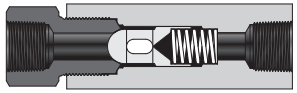
- Provides unidirectional flow and tight shut-off for liquid and gases with high reliability. When differential drops below cracking pressure, valve shuts off (Not for use as relief valve)
- Body material: 316 SS
- Resilient O-ring seat design for noise-free closing leakage-free
- Optional O-rings available for high-temperature applications
- Cracking pressure:
  10C, 15C, 20C and 60C Series Check Valves: 14 psig~26 psig (0.966 bar~1.794 bar)
- Available to NACE MR-01-75

10C, 10CO Series Check Valves

- End connections: 3/4 NPT and 1 NPT
- Orifice sizes: 0.52" and 0.69"
- Working pressure up to: 10000 psig (690 bar)
- Working temperature:
  10C Series (Pipe O-ring Check Valves): -50°F to 400°F (-45°C to 204°C)
  10CO Series (Ball Check Valves): -110°F to 400°F (-79°C to 204°C)



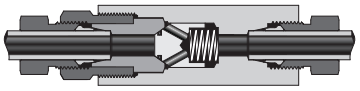
10C Series (Pipe O-ring Check Valves)



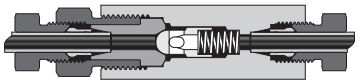
10CO Series (Pipe Ball Check Valves)

15C, 15CO Series Check Valves

- End connections:
  O-ring Check Valves and Ball Check Valves:
  1/4", 3/8" and 1/2" tube fittings
  Pipe O-ring Check Valves and Pipe Ball Check Valves:
  1/4 NPT, 3/8 NPT and 1/2 NPT
- Orifice sizes:
  O-ring Check Valves and Ball Check Valves:
  0.188", 0.25" and 0.375"
  Pipe O-ring Check Valves and Pipe Ball Check Valves:
  0.12", 0.22" and 0.36"
- Working pressure up to: 15000 psig (1034 bar)
- Working temperature:
  15C Series (O-ring Check Valves): -50°F to 550°F (-45°C to 288°C)
  15C Series (Pipe O-ring Check Valves): -50°F to 400°F (-45°C to 204°C)
  15CO Series (Ball Check Valves): -110°F to 800°F (-79°C to 427°C)
  15CO Series (Pipe Ball Check Valves): -110°F to 400°F (-79°C to 204°C)



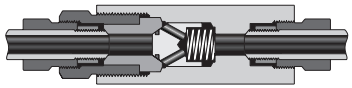
15C Series (O-ring Check Valves)



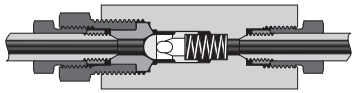
15CO Series (Ball Check Valves)

20C, 20CO Series Check Valves

- End connections: 1/4", 3/8", 9/16", 3/4" and 1" tube fittings
- Orifice sizes: 0.125", 0.218", 0.359", 0.516" and 0.688"
- Working pressure up to: 20000 psig (1379 bar)
- Working temperature:
  20C Series Check Valves (O-ring Check Valves):
  -50°F to 550°F (-45°C to 288°C)
  20CO Series Check Valves (Ball Check Valves):
  -110°F to 1200°F (-79°C to 649°C)



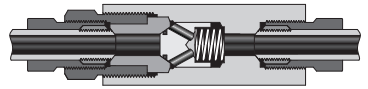
20C Series (O-ring Check Valves)



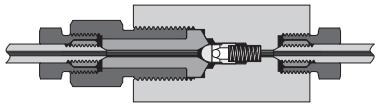
20CO Series (Ball Check Valves)

60C, 60CO Series Check Valves

- End connections: 1/4", 3/8" and 9/16" tube fittings
- Orifice sizes: 0.094", 0.125" and 0.187"
- Working pressure up to: 60000 psig (4137 bar)
- Working temperature:
  60C Series Check Valves (O-ring Check Valves):
  -50°F to 550°F (-45°C to 288°C)
  60CO Series Check Valves (Ball Check Valves):
  -110°F to 1200°F (-79°C to 649°C)



60C Series (O-ring Check Valves)



60CO Series (Ball Check Valves)

Part Number Description

15CSS – FH4

Series	Body Material	Connection	Size
10C	SS 316 SS	For 10C/10CO Series	4 1/4"
10CO		FNS NPT(Female)	6 3/8"
15C		For 15C/15CO Series	8 1/2"
15CO		FH 15 Series	9 9/16"
20C		FNS NPT(Female)	12 3/4"
20CO		For 20C/20CO Series	16 1"
60C		2FH 20 Series	
60CO		For 60C/60CO Series	
		6FH 60 Series	

Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

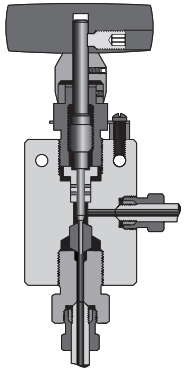
Code	O-ring Material	Temperature Range
	Fluorocarbon FKM	0 to 400°F (-17.8 to 204°C)
N	NBR	-40 to 250°F (-40 to 121°C)
F	FFKM	-20 to 550°F (-29 to 288°C)
E	EPDM	-50 to 300°F (-45 to 148°C)

Options: O-ring
Fluorocarbon FKM is standard. For other materials, add a material code to the valve ordering number.
Example: 20CSS-2FH6-K

Metering Valves

- The design of Barrel and Thimble micrometer permits repeatable settings
  Each division of barrel equal to 0.025"
  Thimble is divided into 25 divisions, each division of thimble equal to 0.001" stem travel
  One revolution equal to valve stem 0.025" travel
- Precise Metering valves are not intended for use as shut-off valves
- The minimum flow rate is factory set at "0"position. The valve will be damaged when the valve operated below "0" position. When shutoff is required, a correlated shutoff valve from 15B, 20B, 15N, 20N, 30N and 60N series valve should be installed series with the Precise Metering Valves
- The location of packing is under the thread of valve stem
- Reliable locking device of packing gland design
- Extend stuffing box valve with of Graphite can be operated to 1200°F (649°C)

- End connections:
  15M series: 1/8" and 1/4" tube fitting
  30M series: 1/4" tube fitting
  60M series: 1/4" and 3/8" tube fittings
- Body material: 316 SS
- Orifice sizes: 0.062"
- Flow coefficient (Cv): 0.04
- Working pressure up to:
  15M series: 15000 psig (1034 bar)
  30M series: 30000 psig (2068 bar)
  60M series: 60000 psig (4137 bar)
- Working temperature: -100°F to 1200°F (-73°C to 649°C)



Part Number Description

30MSS – 6FH4 – G

Series	Body Material	Tube OD	Packing Material
15M	SS 316 SS	FH2 1/8"	PTFE
30M		FH4 1/4"	Nylon(60M Only)
60M		6FH4 1/4"	TG RPTFE Glass
		6FH6 3/8"	G Graphite
			HT Extend stuffing box valve with Graphite

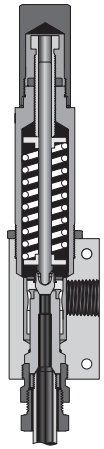
Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

Relief Valves

- Maximum back pressure: 500 psig (34.5 bar)
- Liquid or gas service
- Pressure settings of HSR Series and HMR Series valves are made at the factory and valves are tagged accordingly.
  State the required set pressure with the order please
- Pressure settings of HAR Series valves are adjusted on use's own
- Lock wired secure cap to maintain set pressure
- Easily exchangeable replaceable seat
- Free assembly positions

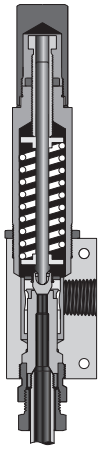
HSR Series Relief Valves

- Inlet connection:
  9/16" of 20 series tube fittings
- Outlet connection: 3/4 NPT thread
- Body material: 316 SS
- Orifice sizes: 0.156" to 0.312"
- Soft seat relief valves
- Set pressure: 1500 to 20000 psig (103.4 to 1378.9 bar)
- Working temperature:
  32°F to 400°F (0°C to 204°C)



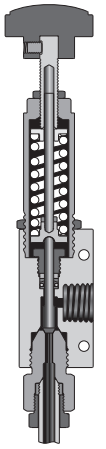
HMR Series Relief Valves

- Inlet connection:
  9/16" of 20 series tube fittings
  3/8" of 60 series tube fittings
- Outlet connection: 3/4 NPT thread
- Body material: 316 SS
- Orifice sizes: 0.078" to 0.312"
- Metal seat relief valves
- Set pressure: 3000 to 60000 psig (206.8 to 4136.8 bar)
- Working temperature:
  -110°F to 500°F (-79°C to 260°C)



HAR Series Relief Valves

- Inlet connection:
  9/16" of 20 series tube fittings
- Outlet connection: 3/4 NPT thread
- Body material: 316 SS
- Orifice sizes: 0.093" to 0.197"
- Field adjustable and soft seat relief valves
- Set pressure: 3000 to 20000 psig (206.8 to 1378.9 bar)
- Working temperature:
  32°F to 400°F (0°C to 204°C)



Part Number Description

HMRSS – 2FH9 – FNS12 – 2

Series	Body Material	Inlet Tube OD	Outlet Connection Type	Grade
HSR	SS 316 SS	6FH6 3/8"(HMR Only)	FNS12 3/4" NPT (Female)	1 1500~5000 psig (103~345 bar) HSR
HMR		2FH9 9/16"		1 3000~5000 psig (207~345 bar) HMR
HAR				1 3000~10000 psig (207~690 bar) HAR
				2 5000~10000 psig (345~690 bar) HSR, HMR
				2 10000~20000 psig (690~1379 bar) HAR
				3 10000~15000 psig (690~1034 bar) HMR
				3 10000~20000 psig (690~1379 bar) HSR
				4 15000~20000 psig (1034~1379 bar) HMR
				5 20000~30000 psig (1379~2068 bar)
				6 25000~45000 psig (1724~3103 bar)
				7 30000~60000 psig (2068~4137 bar)

Note: 1. Pressure settings are made at the factory and valves are tagged accordingly. State the required set pressure with the order please.
2. "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

Line Filters

Dual-disc Line Filters

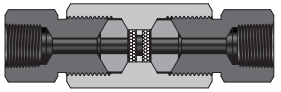
- Dual-disc Line Filters are utilized in chemical processing, aerospace, nuclear and other applications
- The large contaminations particles are filtrated by upstream element. The rest of contaminations particles are filtrate by downstream element
- Easy to replace filter element
- Standard size of downstream/upstream nominal pore is 5/10,10/35 and 35/65 μm.
  Other element combinations also available on special order
- Pressure differential not to exceed 1,000 psig (69 bar) in a flowing condition

Cup-type Line Filters

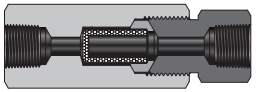
- The filter elements can be quickly and easily replaced
- Cup-type Line Filters are recommended in high pressure systems requiring both maximum filter surface area and high flow rates. Cup-type Line Filters are widely used in chemical processing and industrial fields. The cup design of this filter offers about six times the effective filter area as compared to disc-type units
- Nominal pore sizes for filter element: 5, 35 and 65 μm
- Pressure differential not to exceed 1,000 psig (69 bar) in a flowing condition

10FD, 10FC Series Line Filters

- End connections: 3/4 NPT and 1 NPT
- Body material: 316 SS
- Orifice sizes:
  10FD Series: 0.359" and 0.563"
  10FC Series: 0.516" and 0.688"
- Working pressure up to: 10000 psig (690 bar)
- Working temperature: -60°F to 400°F (-50°C to 204°C)



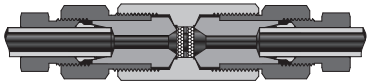
10FD Series (Dual-disc)



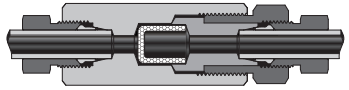
10FC Series (Cup-type)

15FD, 15FC Series Line Filters

- End connections: 1/8", 1/4", 3/8", 1/2" tube fittings and 1/8 NPT, 1/4 NPT, 3/8 NPT, 1/2 NPT
- Body material: 316 SS
- Orifice sizes:
  15FD Series: 0.094", 0.125", 0.188" and 0.312"
  15FC Series: 0.125", 0.188", 0.312" and 0.438"
- Working pressure up to: 15000 psig (1034 bar)
- Working temperature:
  Tube fittings: -60°F to 660°F (-50°C to 350°C)
  NPT thread ends: -60°F to 400°F (-50°C to 204°C)



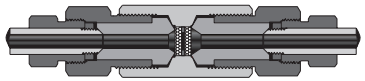
15FD Series (Dual-disc)



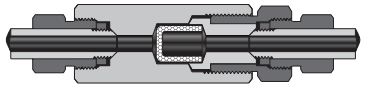
15FC Series (Cup-type)

20FD, 20FC Series Line Filters

- End connections:
  20FD Series: 9/16" tube fitting
  20FC Series: 1/4", 3/8", 9/16", 3/4" and 1" tube fittings
- Body material: 316 SS
- Orifice sizes:
  20FD Series: 0.312"
  20FC Series: 0.125", 0.218", 0.359", 0.516" and 0.688"
- Working pressure up to: 20000 psig (1379 bar)
- Working temperature: -60°F to 660°F (-50°C to 350°C)



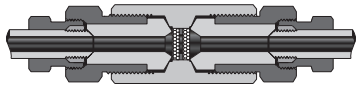
20FD Series (Dual-disc)



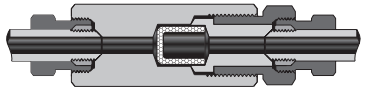
20FC Series (Cup-type)

60FD, 60FC Series Line Filters

- End connections: 1/4", 3/8" and 9/16" tube fittings
- Body material: 316 SS
- Orifice sizes:
  60FD Series: 0.094", 0.125" and 0.187"
  60FC Series: 0.094", 0.125" and 0.187"
- Working pressure up to: 60000 psig (4137 bar)
- Working temperature: -60°F to 660°F (-50°C to 350°C)



60FD Series (Dual-disc)



60FC Series (Cup-type)

Part Number Description

15FDSS – FH4 – 1035

Series	Body Material	Connection	Size	Norminal Pore Size
10FD	SS 316 SS	For 10FD/10FC Series	2 1/8"	For 10FD/15FD/20FD/60FD Series
10FC		FNS NPT(Female)	4 1/4"	0510 5/10 μm
15FD		For 15FD/15FC Series	6 3/8"	1035 10/35 μm
15FC		FH 15 Series	8 1/2"	3565 35/65 μm
20FD		FNS NPT(Female)	9 9/16"	For 10FC/15FC/20FC/60FC Series
20FC		For 20FD/20FC Series	12 3/4"	5 5 μm
60FD		FH 20 Series	16 1"	35 35 μm
60FC		For 60FD/60FC Series		65 65 μm
		FH 60 Series		

Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

Medium & High Pressure Tubings

15 Series Tubing

- Working pressures up to 15 000 psig (1034 bar)
- 316/316L and 304/304L stainless steel are standard materials. Other materials are available upon request
- Example:
  316 SS: SS-15T4-083-6M
  304 SS: S4-15T8-156-5

20 Series Tubing

- Working pressures up to 20000 psig (1379 bar)
- 316/316L and 304/304L stainless steel are standard materials. Other materials are available upon request
- Example:
  316 SS: SS-MT-2FH6-10
  304 SS: S4-MT-2FH9-3M

60 Series Tubing

- Working pressures up to 60000 psig (4137 bar)
- 316/316L and 304/304L stainless steel are standard materials. Other materials are available upon request
- Example:
  316 SS: SS-HT-6FH4-5
  304 SS: S4-HT-6FH9-3M

Tools

Coning Tools

◎ For preparing a "cone" on the 20 and 60 series tubing ends.

Tube O.D. x I.D. in.	Ordering Number
1/4 × 0.109	HCT-M4
3/8 × 0.203	HCT-M6
9/16 × 0.312	HCT-M9
1/4 × 0.083	HCT-H4
3/8 × 0.125	HCT-H6
9/16 × 0.188	HCT-H9

Threading Tools

◎ For preparing a left hand thread on the 20 and 60 series tubing ends.

Tube O.D. in.	Ordering Number	Thread Size (Left Hand)
1/4	HTT-4	1/4-28 UNF
3/8	HTT-6	3/8-24 UNF
9/16	HTT-9	9/16-18 UNF

Reseating Tools

◎ For repairing the damaged tube connector seats in 20 and 60 series tube fittings and valves.

Connection Size in.	Connection Type	Ordering Number
1/4	2FH4	HRT-M4
3/8	2FH6	HRT-M6
9/16	2FH9	HRT-M9
3/4	2FH12	HRT-M12
1	2FH16	HRT-M16
1/4	6FH4	HRT-H4
3/8	6FH6	HRT-H6
9/16	6FH9	HRT-H9

Manual Presetting Tool

Ordering Number	Tube O.D. in.
PST-2	1/8
PST-4	1/4
PST-6	3/8
PST-8	1/2

High Pressure Hydraulic Presetting Tools

Ordering Number	Tube O.D. in.
HPT-HF	1/2, 9/16, 3/4
HPT-H+U	Choose your needs from Die Heads. ex:HPT-H+HPT-H-FH8.

Die Heads

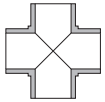
Ordering Number	Tube O.D. in.
HPT-H-FH8	1/2
HPT-H-FH9	9/16
HPT-H-FH12	3/4

Fittings

Butt Weld Fittings

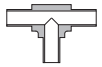
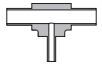
M Series

- Sizes range from 1/8" to 1/2" and 6 mm to 12 mm
- 316, 316L, 316L VAR and 316L VIM/VAR stainless steel materials are available
- Butt weld connection allows for a smooth transition
- Radius junction design with elbows provides smooth flow path.
- Maximum working temperature is 850°F (454°C)
- Standard wetted surface finish is average 10μin. (0.25 μm) Ra
- Every fitting is stamped with size, material, and heat code

Configuration	Fitting Type	Example
	Reducing Union	6LV-WU1-TB8-TB4
	90° Union Elbow	6LW-WL1-MTB10
	Reducing Union Elbow	6LW-WL1-MTB12-MTB6
	45° Union Elbow	6LW-WV1-TB4
	Tribow	6LW-WB1-TB4
	Union Tee	6LW-WT1-MTB12
	Reducing Tee	6LW-WT1-TB8-TB8-TB4
	Union Cross	6LW-WC1-TB6

L Series

- Sizes range from 1/4" to 1" and 6 mm to 18 mm
- 316L stainless steel materials are standard
- Butt weld connection allows for a smooth transition
- Radius junction design with elbows provides smooth flow path
- Maximum working temperature is 850°F (454°C)
- Standard wetted surface finish is average 10μin. (0.25 μm) Ra
- Every fitting is stamped with size, material, and heat code

Configuration	Fitting Type	Example
	Reducing Union	6L-WU2-TB8-TB4
	Union Elbow	6L-WL2-MTB10
	Union Tee	6L-WT2-MTB10
	Reducing Tee	6L-WT2-TB8-TB8-TB4
	Union Cross	6L-WC2-TB8

M and L Series Butt Weld Fitting Part Number Description

6L – WU2 – TB8 – TB4 – □ – □ – F2

Material	
SS	316 SS
6L	316L SS
6LV	316L VAR SS
6LW	316L VIM/VAR SS

Fitting Type	
WU	Reducing Union
WL	Union Elbow
WT	Union Tee
WV	45°Union Elbow
WC	Union Cross
WB	Tribow

Fitting Series	
1	M Series
2	L Series

P1 Type	
TB	Fractional Tube Butt Weld
MTB	Metric Tube Butt Weld

P1 Size	
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm
10	10 mm
12	3/4" or 12 mm
16	1" or 16 mm
18	18 mm

P2, P3 and P4: Specify in the same way as the P1

Technology grade	
	Standard Process Specification
F2	Special Cleaning and packaging
F3	Ultrahigh-purity Process Specification

Standard Process Specification
Special Cleaning and Packaging
Ultrahigh-purity Process Specification

P1, P2, P3 and P4 shall be described in the following orders:

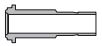
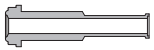
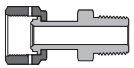
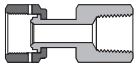
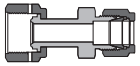
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

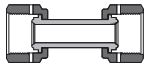
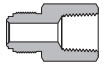
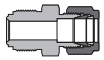
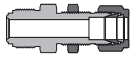
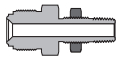
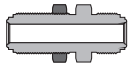
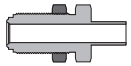
Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

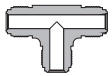
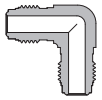
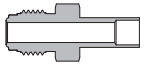
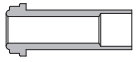
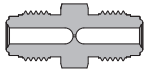
Metal Gasket Face Seal Fittings

FR Series

- Sizes range from 1/16" to 1" and 6 mm to 18 mm
- 316, 316L, and 316L VAR stainless steel materials are available
- Metal-to-metal seal provides perfect leak-tight service from vacuum to high pressure
- Standard wetted surface finish is average 10 µin. (0.25 µm) Ra
- Glands and bodies are stamped with size, material, and heat code
- All seal faces and male threads are protected with plastic caps
- FR female threads are silver plated

Configuration	Fitting Type	Example
	FR Gland to Short Tube Butt Weld	6LV-G-FR8-TB8-6S
	FR Gland to long Butt Weld	6LV-G-FR8-TB8-6
	FR Gland to Male Weld	6L-G-FR8-TB4
	FR Gland to Tube Socket Weld	SS-G-FR8-TS6
	FR Gland to Short Tube Socket Weld	SS-G-FR4-TS4-0.75
	FR Gland to Tube Port	SS-G-FR8-FT6
	Short Fractional Automatic Tube Butt Weld	SS-AG-FR4-TB4-12S
	Long Fractional Automatic Tube Butt Weld	SS-AG-FR4-TB4-12
	Blind Gland	SS-G-FR8-B
	FR Welded Gland to Male NPT	SS-WG-FR8-NS6
	FR Welded Gland to Female NPT	SS-WG-FR8-FNS6
	FR Welded Gland to Tube Fitting	SS-WG-FR8-FL8

Configuration	Fitting Type	Example
	FR Welded Gland Union	SS-WG-FR4
	Female Nut	SS-N-FR4
	Male Nut	SS-MN-FR8
	FR Body to Male NPT	SS-CM-FR8-NS4
	FR Body to Female NPT	SS-CF-FR8-NS4
	FR Body to Tube Fitting	SS-U-FR8-FL6
	FR Body to Bulkhead Tube Fitting Union	SS-UB-FR8-FL8
	FR Body to Bulkhead Male Connector	SS-CMB-FR8-NS4
	Union Body	SS-U-FR8
	Bulkhead Union Body	SS-BU-FR8
	FR Bulkhead Body to Tube Butt Weld	SS-BW-FR4-TB4
	Coupling	SS-BC-FR8
	Female Reducing Union	SS-RU-FR8-FR4
	Reducing Adapter	SS-RA-FR8-FR4

Configuration	Fitting Type	Example
	Reducing Bushing	SS-RB-FR8-FR4
	FR Body to Male NPT Elbow	SS-LM-FR8-NS6
	FR Body Union Elbow	SS-LU-FR8
	FR Body Union Tee	SS-TTT-FR8
	FR Body Union Cross	SS-C-FR6
	"H" Type Union Elbow	SSLUHFR4
	"H" Type Tube Butt Weld	SSCWHFR4TB6
	"H" Type Tube Butt Weld	SSGHFR4TB630.2
	Flow Restrictors	6LV-RFR4020
	Plug	SS-PG-FR4
	Cap	SS-CP-FR4
	Gasket	6L-GT-FR8

Part Number Description

SS – LM – FR8 – NS6 – □ – □ – F2

Material		Fitting Type		P1 Type		P1 Size		P2 Type		P2 Size		P3 and P4		Technology grade	
SS	316 SS	G	Gland	FR	Metal Gasket Face Seal	2	1/8"	FR	Metal Gasket Face Seal	Except the same as the P1, the other size follows:		Specify in the same way as the P2			Standard Cleaning and packaging
6L	316L SS	WG	Weld Gland			4	1/4"	FL	Fractional Double Ferrule	1	1/16"			F2	Special Cleaning and packaging
6LV	316L VAR SS	N	Female Nut			8	1/2" or 3/8"	FT	Fractional Tube	2	1/8"			F3	Ultrahigh-purity
		MN	Male Nut			12	3/4"	TS	Fractional Tube Socket Weld	4	1/4"				
		CM	Male Connector Body			16	1"	TB	Fractional Tube Butt Weld	6	3/8" or 6 mm				
		CF	Female Connector Body					MTB	Metric Tube Butt Weld	7	7/16-20				
		U	Union Body					NS	NPT Thread	8	8 mm				
		UB	Body to Bulkhead Tube Fitting Union					FNS	Female NPT Thread	9	9/16-18				
		CMB	Body to Bulkhead Male Connector					ST	SAE/MS Straight Thread	10	10 mm				
		BY	Blind Body							12	3/4" or 3/4-16 or 12 mm				
		BU	Bulkhead Union Body							17	1 1/16-12				
		BW	Bulkhead Body to Tube Butt Weld							18	18 mm				
		BC	Coupling							21	1 5/16-12				
		CW	Body to Tube Socket Weld												
		RU	Female Reducing Union												
		RA	Reducing Adapter												
		RB	Reducing Bushing												
		LM	Male Elbow												
		LU	Union Elbow												
		TTT	Union Tee												
		C	Union Cross												
		PG	Plug												
		CP	Cap												
		GT	Gasket												

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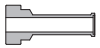
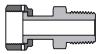
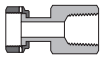
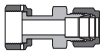
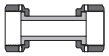
P1,P2,P3 and P4 shall be described in the following orders:

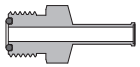
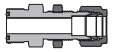
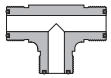
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

O-ring Face Seal Fittings

FO Series

- Sizes range from 1/8" to 1"
- 316 and 316L stainless steel materials are available
- O-ring seal provides perfect leak-tight service from vacuum to high pressure
- Glands and bodies are stamped with size, material, and heat code
- Fittings are easy to install and maintain
- FO female threads are silver plated

Configuration	Fitting Type	Example
	FO Gland to Tube Butt Weld	6LV-G-FO8-TB6
	FO Gland to Tube Socket Weld	6L-G-FO8-TS8
	FO Gland to Tube Port	SS-G-FO8-FT8
	FO Gland to Automatic Tube Weld	6L-G-FO4-TB4A
	FO Welded Gland to Male NPT	SS-WG-FO4-NS4
	FO Welded Gland to Female NPT	SS-WG-FO4-FNS4
	FO Welded Gland to Tube Fitting	SS-WG-FO8-FL6
	FO Welded Gland Union	SS-WG-FO4
	Female Nut	SS-N-FO8
	Blind Nut	SS-N-FO4-B
	FO Body to Male NPT	SS-CM-FO8-NS8
	FO Body to Female NPT	SS-CF-FO8-NS6

Configuration	Fitting Type	Example
	FO Body to Tube Fitting	SS-U-FO8-FL6
	FO Body to Automatic Tube Weld	6L-CW-FO4-TB4A
	FO Body to Bulkhead Tube Fitting Union	SS-UB-FO8-FL8
	Blind Body	SS-BY-FO8
	Union Body	SS-U-FO4
	Bulkhead Union Body	SS-BU-FO8
	FO Body to Tube Socket Weld	SS-CW-FO8-TS8
	FO Body to Male NPT Elbow	SS-LM-FO8-NS6
	FO Body to Tube Fitting Elbow	SS-LU-FO8-FL8
	FO Body Union Elbow	SS-LU-FO8
	FO Body Union Tee	SS-TTT-FO4

L-ring Face Seal Fittings

TFO Series

- Sizes range from 1/4" to 1"
- Materials:
  Body, gland: 316L stainless steel
  Nut: 316 stainless steel
- Reduced internal entrapment
- Lubricant-free L-ring seal
- Tube butt end connections
- Controlled L-ring extrusion, no overtightening

Configuration	Fitting Type	Example
	Gland	6L-G-TFO8-TB8
	Tube Butt Weld Body	6L-CW-TFO8-TB8
	Nut	SS-N-TFO8
	L-ring Seal	T-GT-TFO8

Valves

Diaphragm Valves

DQ Series

- 316L VIM-VAR stainless steel body is available
- Suitable for ultrahigh-purity applications
- Elgiloy material for strength and corrosion resistance for long cycle life
- Fully contained PCTFE seat design provides excellent resistance to swelling and contamination
- Wetted Surface Electropolished, Roughness Ra finished to an average of Ra5 µin.(0.13 µm)
- Helium leak tested, maximum leak rate of $1x10^{-9}$ std cm^3/s
- Low-pressure and high-pressure models
- Manual or pneumatic actuation
- Aluminum piston accelerated open/close speed
- Different handle types and colors are available
- Can be used in vacuum applications

Manual Actuators

Round

- Quick, quarter-turn actuation
- Handle with window provides visual indication of open and closed positions

OPEN CLOSED

Integral Lockout

- Quick, quarter-turn actuation
- Lockable in the CLOSED position for safety
- Handle shape and window indicator provides visual indication of OPEN and CLOSED position

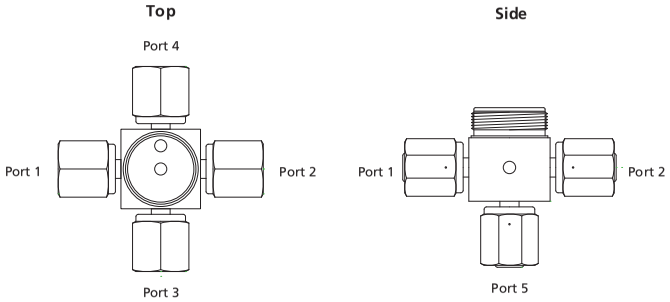
Pneumatic Actuator

- Normally open, "N.O." marked on the top of the cylinder
- Normally close, "N.C." marked on the top of the cylinder

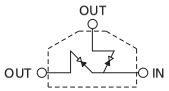
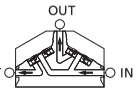
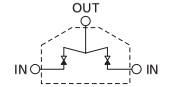
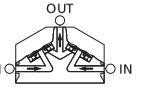
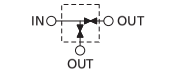
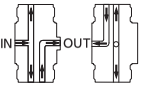
Multiport and Elbow Valves

Designator	Schematic	Flow Path		Designator	Schematic	Flow Path	
		Closed	Open			Closed	Open
2A				3D			
2B				3E			
2C				3F			
4M				3G			
4N				3K			

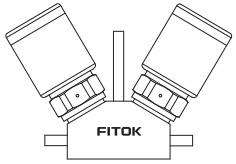
End Connections



Multivalve Manifolds

Designator	Schematic	Flow Path
V		
W		
D		

V and W Multivalve Manifolds



D Multivalve Manifold

Part Number Description

DQ6LW – TB4 – TB4 – MTB6 – H3KZY – F2

Series	Body Material	Port 1 Type	Port 1 Size	Port 2/3/4/5 Type	Port 2/3/4/5 Size	Pressure Type	Flow Path	Actuator/Handle	Colour	Technology grade
DQ	SS 316 SS 6L 316L SS 6LW 316L VIM-VAR	FL Fractional Tube Fitting ML Metric Tube Fitting TB Fractional Tube Butt Weld MTB Metric Tube Butt Weld FR Male FR Fitting FFR Female FR Fitting RFR Rotatable Male FR Fitting	2 1/8" 4 1/4" 6 6 mm	Same as port 1 Specify in the same way as port 1 type and port 1 size	H High-Pressure Valves L Low-Pressure Valves	Union 2A, 2B, 2C 2 ports 3D, 3E, 3F, 3G, 3K 3 ports 4M, 4N 4 ports V, W, D Multivalve Manifolds	Round Handle U Integral Lockout Handle C Pneumatic, Normally closed O Pneumatic, Normally open	Green K Black W White Y Yellow B Blue R Red	Standard Cleaning and packaging F2 Special Cleaning and packaging F3 Ultrahigh-purity	

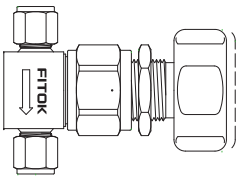
Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

DM Series

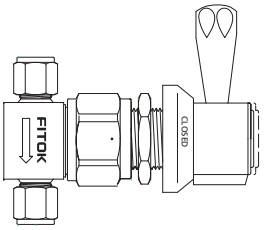
- All-metal containment, packless
- Repetitive shutoff with fully contained softseat stem tip
- Position indicator ring for lever handle
- Manual or penumatic actuation
- Aluminum piston accelerated open/close speed
- Helium leak tested, maximum leak rate of $4x10^{-9}$ std cm^3/s
- Different handle types and colors are available
- Can be used in vacuum applications

Straight Patterns

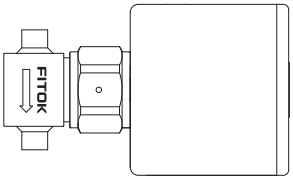
Round Handle



Lever Handle

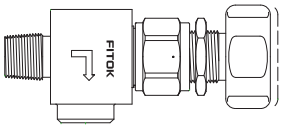


Pneumatic Actuator

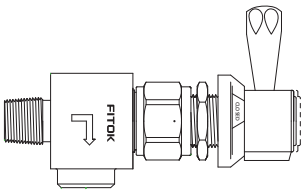


Angle Patterns

Round Handle



Lever Handle



Part Number Description

DM6L – FL4 – NS4 – T – ALR – SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Stem Tip Material	Flow Pattern	Actuator/Handle	Handle Colour	NACE MR0175	Technology grade
DM	6L 316L SS SS 316 SS	FL Fractional Tube Fitting ML Metric Tube Fitting TB Fractional Tube Butt Weld MTB Metric Tube Butt Weld TS Fractional Tube Socket Weld MTS Metric Tube Socket Weld FR Male FR Fitting FFR Female FR Fitting NS Male NPT FNS Female NPT	2 1/8" 4 1/4" 6 6 mm 8 1/2"	Same as Inlet Specify in the same way as inlet type and inlet size		PCTFE T PTFE V Polyimide	Straight A Angle	Round Handle L Level Handle C Pneumatic, Normally Closed O Pneumatic, Normally Open	Blue R Red G Green Y Yellow W White	NO S YES	Standard Cleaning and packaging F2 Special Cleaning and packaging F3 Ultrahigh-purity

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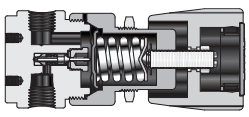
Pressure Reducing Regulator

Compact Pressure Reducing Regulator

PR Series

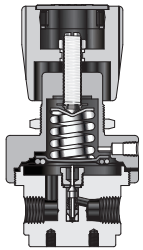
- Maximum inlet pressure: 500, 3000 psig
- Outlet pressure ranges: 0~25, 0~50, 0~100, 0~250, 0~500 psig
- Flow coefficient (Cv):
  500 psig Inlet pressure: 0.15
  3000 psig Inlet pressure: 0.06
- Working temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ≤$2x10^{-8}$ atm · cc/sec He
- Convoluted diaphragm provides accurate pressure adjustment
- Metal-to-metal diaphragm seal
- Spring loaded pressure reducing regulator
- A filter installed in inlet
- Panel mounting available



Extremely Sensitive Pressure Reducing Regulator

PS Series

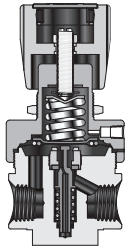
- Maximum inlet pressure: 500, 3000 psig
- Outlet pressure ranges: 0~25, 0~50, 0~100, 0~150, 0~200 psig
- Flow coefficient (Cv):
  500 psig Inlet pressure: 0.15
  3000 psig Inlet pressure: 0.06
- Working temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ⩽$2x10^{-8}$ atm · cc/sec He
- Large convoluted diaphragm for extreme sensitivity
- Metal-to-metal diaphragm seal
- Extreme sensitivity: ±1% of outlet pressure range
- Good repeatability
- A filter installed in inlet
- Panel mounting available



Medium Flow Pressure Reducing Regulator

PM Series

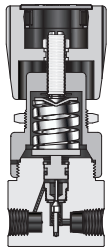
- Maximum inlet pressure: 500, 3000 psig
- Outlet pressure ranges: 0~25, 0~50, 0~100, 0~150, 0~200 psig
- Flow coefficient (Cv): 1.0
- Working temperature: -40°F~+140°F (-40°C~+60°C)
- Leak rate:
  Internal: Bubble-tight
  External: ⩽$2x10^{-8}$ atm · cc/sec He
- Large diameter convoluted diaphragm for increased pressure sensitivity
- Metal-to-metal diaphragm seal
- Large flow, minimal droop
- Panel mounting available



General High Pressure Reducing Regulator

PH Series

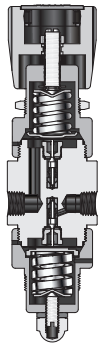
- Maximum inlet pressure: 3000, 6000 psig
- Outlet pressure ranges: 0~250, 0~500, 0~1500, 0~2500 psig
- Flow coefficient (Cv):
  Non-vent: 0.06
  Vent: 0.1
- Working temperature: -15°F~+165°F (-26°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: Bubble-tight
- Robust piston sensed design
- A filter installed in inlet
- Venting model optional
- Panel mounting available



Two Stage Pressure Reducing Regulator

PD Series

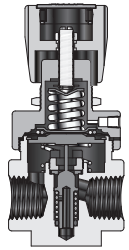
- Maximum inlet pressure: 3000 psig
- Outlet pressure ranges: 0~25, 0~50, 0~100, 0~150, 0~250 psig
- Flow coefficient (Cv):0.05
- Working temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ⩽$2x10^{-8}$ atm · cc/sec He
- Accurate and stable outlet pressure
- Two-stage pressure reducing construction
- Diaphragms are convoluted for greater accuracy and sensitivity
- Filter installed in inlet
- Panel mounting available



High Flow Pressure Reducing Regulator

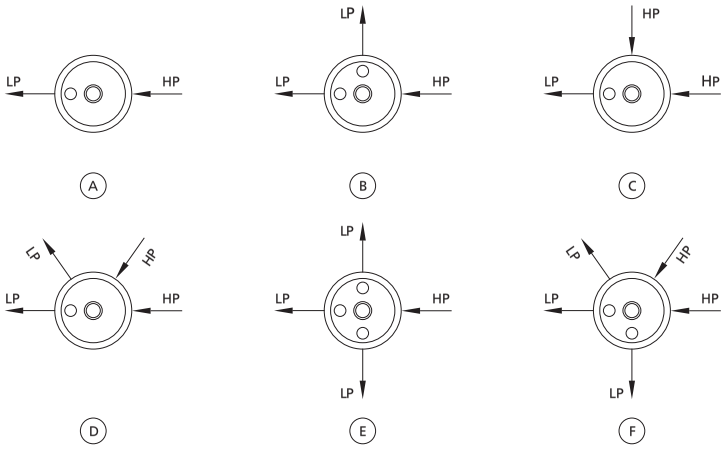
PL Series

- Maximum inlet pressure: 500 psig
- Outlet pressure ranges: 0~15, 0~30, 0~75, 0~150 psig
- Flow coefficient (Cv): 1.8
- Working temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ⩽$2x10^{-8}$ atm · cc/sec He
- Large diameter convoluted diaphragm for increased pressure sensitivity
- Metal-to-metal diaphragm seal
- Large flow, minimal droop
- Panel mounting available



Porting configurations

6 Types: A, B, C, D, E, F, all ports are 1/4" Female NPT.
HP: High pressure inlet LP: Low pressure outlet



Part Number Description

PR6L – E52WP – ML6 – FNS4 – VZR – F2

Series	Body Materials	Ports	Inlet Pressure	Outlet Pressure	Inlet Gauge	Outlet Gauge	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seat material	Panel	Relief Valve	Cleaning and Packing
PR	6L 316L SS	A 1 In 1 Out	PR	PR 1 0-25 psig	W Without Gauge	W Without Gauge	FNS Female NPT	2 1/8"	Same as inlet type and size		PCTFE	NO	NO	FC-01
PS	SS 316 SS	B 1 In 2 Out	5 500 psig	2 0-50 psig	M With Gauge (Mpa)	M With Gauge (Mpa)	NS Male NPT	4 1/4"			V Vespel	Z Panel nut	R YES	F2 FC-02
PM	B Brass	C 2 In 1 Out	6 3000 psig	3 0-100 psig	P With Gauge (psig)	P With Gauge (psig)	FL Fractional Tube Fitting	6 3/8" or 6 mm				N Bolts for assembly		
PH		D 2 In 2 Out	PS	4 0-250 psig	B With Gauge (bar)	B With Gauge (bar)	ML Metric Tube Fitting	8 1/2" or 8 mm						
PD		E 1 In 3 Out	5 500 psig	5 0-500 psig			Cylinder connection and the other fittings are available	10 10 mm						
PL		F 2 In 3 Out	6 3000 psig	PS 1 0-25 psig				12 3/4" or 12 mm						
			PM	2 0-50 psig										
			5 500 psig	3 0-100 psig										
			6 3000 psig	4 0-150 psig										
			PH	5 0-200 psig										
			5 3000 psig	PM 1 0-25 psig										
			6 6000 psig	2 0-50 psig										
			PD	3 0-100 psig										
			6 3000 psig	4 0-150 psig										
			PL	5 0-200 psig										
			5 500 psig	PH 1 0-250 psig										
				2 0-500 psig										
				3 0-1500 psig										
				4 0-2500 psig										
				PD 1 0-25 psig										
				2 0-50 psig										
				3 0-100 psig										
				4 0-150 psig										
				5 0-250 psig										
				PL 1 0-15 psig										
				2 0-30 psig										
				3 0-75 psig										
				4 0-150 psig										

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Back Pressure Regulator

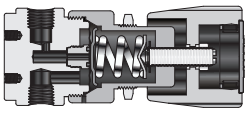
General Purpose Back Pressure Regulator

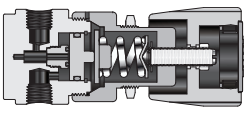
BPR Series

- Maximum control pressure: 250 psig
- Controlled pressure ranges: 0~25, 0~50, 0~100, 0~250 psig
- Flow coefficient (Cv): 0.3
- Working temperature: -15°F~+165°F (-26°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ≤$2x10^{-8}$ atm· cc/sec He
- Convoluted diaphragm provides accurate pressure adjustment
- Metal to metal diaphragm seal
- Panel mounting available

BPH Series

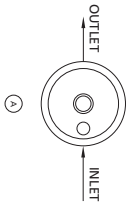
- Maximum control pressure: 300 psig
- Controlled pressure ranges: 0~50, 0~100, 0~300 psig
- Flow coefficient (Cv): 0.3
- Working temperature: -15°F~+200°F (-26°C~+93°C)
- Leak rate: Bubble-tight
- Robust piston sensed design
- Low hand knob torque
- Panel mounting available

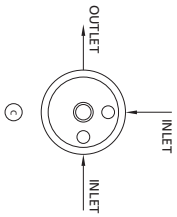




Porting configurations

2 Types: A, C, all ports are 1/4" Female NPT.





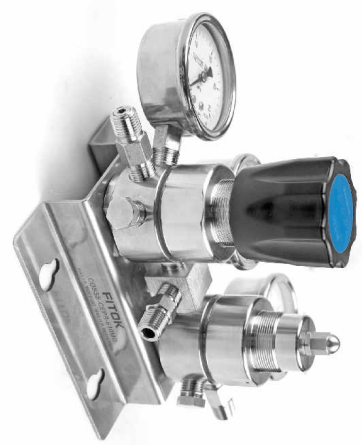
Part Number Description

BPR6L – A2W – ML6 – FNS4 – KZ – F2

Series	Body Material	Ports	Controlled pressure	Inlet Gauge	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seat Material	Panel	Cleaning and Packing
BPR	6L 316L SS	A 1 In 1 Out	1 0-25 psig (BPR)	W Without Gauge	FNS Female NPT	2 1/8"		Same as inlet type and size	Viton©	NO	FC-01
BPH	SS 316 SS	C 2 In 1 Out	2 0-50 psig (BPR)	M With Gauge (Mpa)	NS Male NPT	4 1/4"			K Kalrez®	Z YES	F2 FC-02
	B Brass		3 0-100 psig (BPR)	P With Gauge (psig)	FL Fractional Tube Fitting	6 3/8" or 6 mm					
			4 0-250 psig (BPR)	B With Gauge (bar)	ML Metric Tube Fitting	8 1/2" or 8 mm					
			2 0-50 psig (BPH)		The others are available						
			3 0-100 psig (BPH)								
			4 0-300 psig (BPH)								

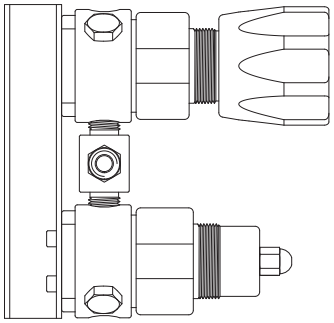
Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

Changeover System



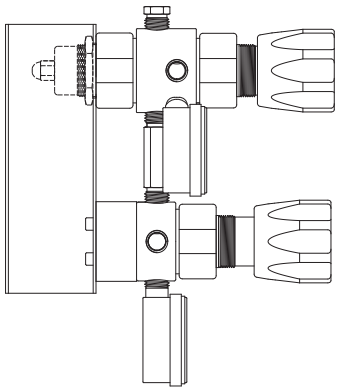
CEPR Series

- Maximum inlet pressure: 3000 psig
- Outlet pressure ranges: 85~115, 135~165, 185~215, 235~265 psig
- Flow coefficient (Cv): 0.06
- Working Temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ⩽2x10^{-8} atm · cc/sec He
- Based on FITOK's PR series regulator
- Mounting bracket standard



DPPR Series

- Maximum inlet pressure: 3000 psig
- Outlet pressure ranges: 0~25, 0~50, 0~100, 0~150 psig
- Flow coefficient (Cv): 0.06
- Working temperature: -40°F~+165°F (-40°C~+74°C)
- Leak rate:
  Internal: Bubble-tight
  External: ⩽2x10^{-8} atm · cc/sec He
- Based on FITOK's PR series regulator
- Mounting bracket standard



Part Number Description

COSSS – CEPR – 610P – FNS4 – NS4 – O

Base Series	Body Material	Embodied Series	Inlet Pressure	Outlet pressure	Gauge	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Check valve
COS	6L 316L SS SS 316 SS B Brass	CEPR DPPR	6 3000 psig	10 85~115 psig 15 135~165 psig 20 185~215 psig 25 235~265 psig (CEPR) 02 0~25 psig 05 0~50 psig 10 0~100 psig 15 0~150 psig (DPPR)	M With Gauge (Mpa) P With Gauge (psig) B With Gauge (bar)	FNS Female NPT NS Male NPT FL Fractional Tube Fitting ML Metric Tube Fitting Other type available	2 1/8" 4 1/4" 6 3/8" or 6 mm 8 1/2" or 8 mm Other size available	Same as inlet type and size	V CV Series O CO Series A COA Series See check valve catalog for the detail	

Note: "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK Group or authorized agent.

Closed-loop Sampling System

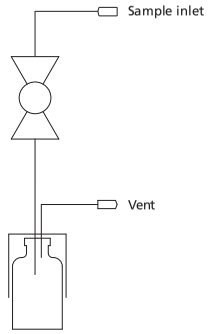
- Two kinds of optional sampling containers: Bottles and Cylinders.
- System main body material: 316 SS, 316L SS, 304L SS etc (Can be customized)
- Connection: 1/4" Tube fitting, 1/2" NPT Thread or NPS 1/2" Flange (Can be customized)
- Working temperature and pressure range: can be customized according to customers' requirements
- Applicable working conditions: High temperature, high pressure, high viscosity, strong corrosive, strong toxicity and hazardous liquid bane to the environment
- Various mounting way

B-Bottle Configuration Sampling System

L Series-Liquid Sampling

SBLA1-On-off Configuration

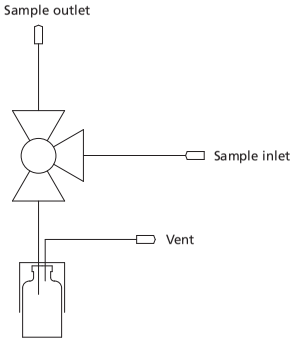
- Sampling directly from process or system, low pressure application



Schematic diagram

SBLA2-Circulation Configuration

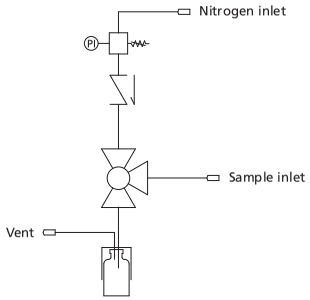
- Sampling directly from process or system, low pressure application
- Sample circulation



Schematic diagram

SBLA3-Back Flow Configuration

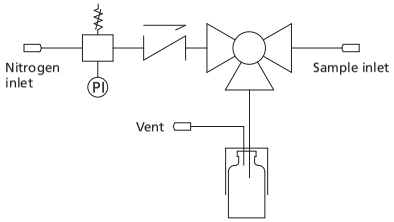
- Sampling directly from process or system, low pressure application
- Back flow



Schematic diagram

SBLA4-Air Replaced and System Purge Configuration Ⅰ

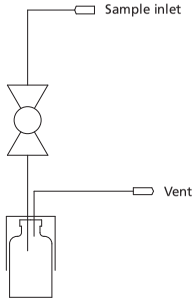
- Sampling directly from process or system, low pressure application
- System purge
- Bottle air replaced



Schematic diagram

SBLB1-Flange On-off Configuration

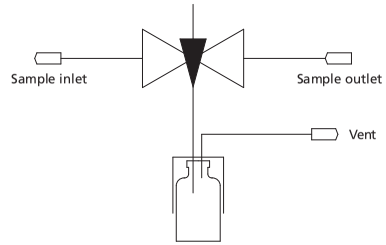
- Applicable for sampling from process and container
- Sampling directly from process and container



Schematic diagram

SBLB2-In Line and Circulation Configuration

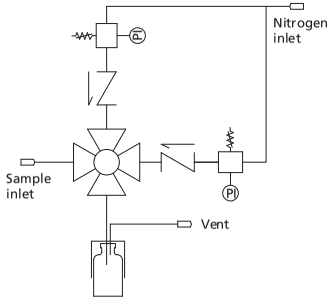
- In line sampling
- Sample circulation
- Suitable for viscous liquid or liquid with few solid particles



Schematic diagram

SBLA5-Back Flow, Air Replaced and System Purge Configuration

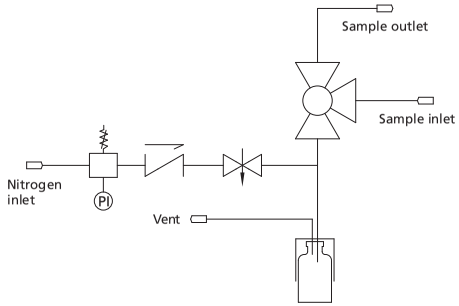
- Sampling directly from process or system, low pressure application
- System purge
- Back flow and bottle air replaced



Schematic diagram

SBLA6-Air Replaced, Circulation and Needle Purge Configuration

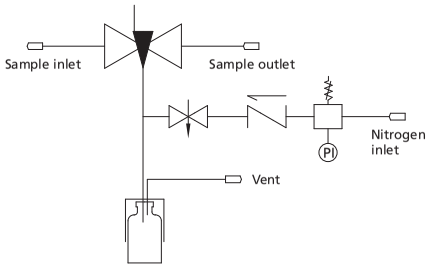
- Sampling directly from process or system, low pressure application
- Needle purge
- Sample circulation and bottle air replaced



Schematic diagram

SBLB3-In Line, Air Replaced and Needle Purge Configuration

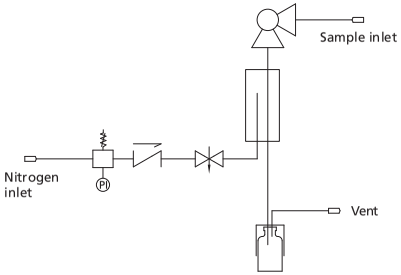
- In line sampling
- Bottle air replaced
- Suitable for viscous liquid or liquid with few solid particles
- Needle purge



Schematic diagram

SBLC1-Air Replaced and System Purge Configuration Ⅱ

- Sampling directly from process or system
- System purge
- Bottle air replaced
- Suitable for high viscous liquid



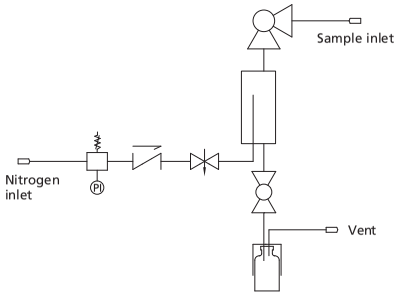
Schematic diagram

Closed-loop Sampling System

FITOK

SBLC2-Fixed Volume, Air Replaced and System Purge Configuration

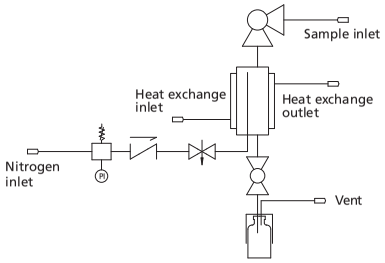
- Sampling directly from process or system
- Bottle air replaced
- Fixed volume
- Suitable for high viscous liquid
- System purge



Schematic diagram

SBLC3-Heating/cooling, Fixed Volume, Air Replaced and System Purge Configuration

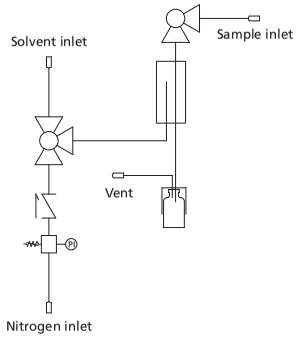
- Sampling directly from process or system
- Bottle air replaced
- Fixed volume
- Suitable for high viscous liquid
- Heating/Cooling jacket ensures sampling at the required temperature
- System purge



Schematic diagram

SBLC4-Solvent Purge, Air Replaced and System Purge Configuration

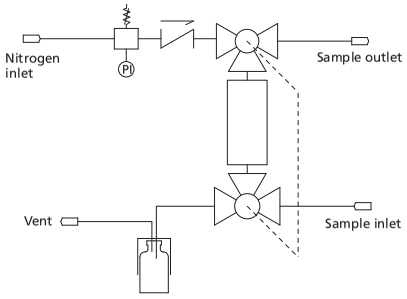
- Sampling directly from process or system
- Bottle air replaced and solvent purge
- Suitable for high viscous liquid
- Solvent purge and system purge function



Schematic diagram

SBLD1-Fixed Volume, Circulation and System Purge Configuration

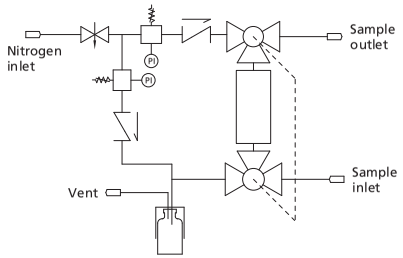
- Sampling directly from process or system
- Fixed volume
- Sample circulation
- System purge
- Linkage ball valve design, easy operation



Schematic diagram

SBLD2-Fixed Volume, Circulation, Air Replaced and System Purge Configuration

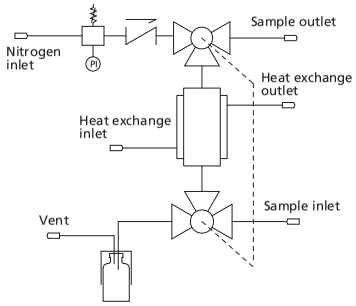
- Sampling directly from process or system
- Fixed volume
- Bottle air replaced
- System purge
- Linkage ball valve design, easy operation
- Sample circulation



Schematic diagram

SBLD3-Heating/Cooling, Circulation, Fixed Volume and System Purge Configuration

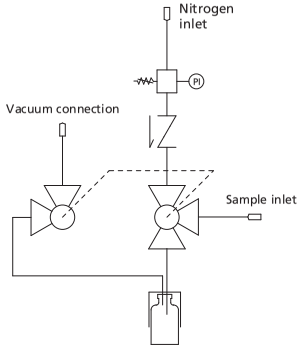
- Sampling directly from process or system
- Fixed volume
- Sample circulation
- System purge
- Heating/Cooling jacket ensures sampling at the required temperature
- Linkage ball valve design, easy operation



Schematic diagram

SBLE1-Back Flow and Vacuum Configuration

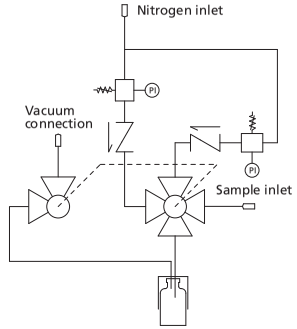
- Sampling directly from process or system
- Applicable for zero-pressure or vacuum process
- Back flow
- Linkage ball valve design, easy operation



Schematic diagram

SBLE2-Back Flow, Air Replaced, Vacuum and System Purge Configuration

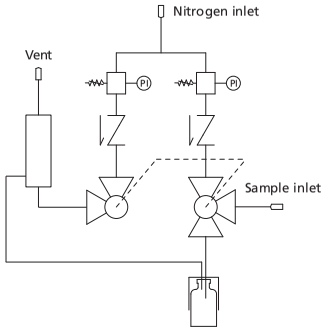
- Sampling directly from process or system
- Applicable for zero-pressure or vacuum process
- Back flow and bottle air replaced
- Linkage ball valve design, easy operation
- System purge



Schematic diagram

SBLE3-Back Flow and Venturi Configuration

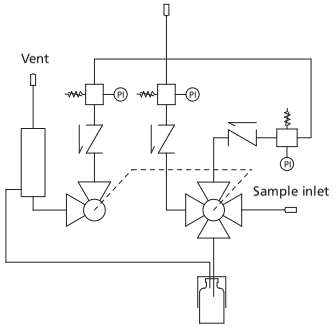
- Sampling directly from process or system
- Applicable for zero-pressure or vacuum process
- Back flow
- Linkage ball valve design, easy operation



Schematic diagram

SBLE4-Back Flow, Air Replaced, Venturi and System Purge Configuration

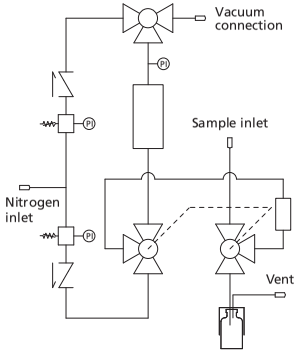
- Sampling directly from process or system
- Applicable for zero-pressure or vacuum process
- Back flow and bottle air replaced
- Linkage ball valve design, easy operation
- System purge



Schematic diagram

SBLE5-Vacuum, Overflow, Fixed Volume, Back Flow and System Purge Configuration

- Sampling directly from process or system
- Applicable for zero-pressure or vacuum process
- Fixed volume
- Back flow and overflow
- Linkage ball valve design, easy operation
- System purge



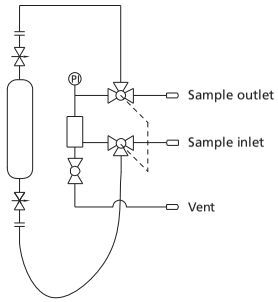
Schematic diagram

C-Cylinder Configuration Sampling System

S Series-Liquefied Gas Sampling

SCSF1-Expansion Chamber Configuration

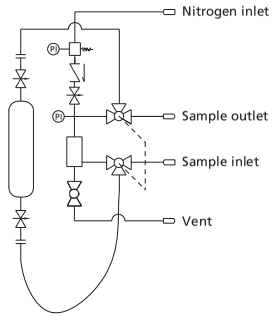
- Sampling directly from process or system
- Sample circularion
- Equipped with pressure relief system, safer for sampling
- Linkage ball valve design, easy operation



Schematic diagram

SCSF2-Expansion Chamber Purge Configuration

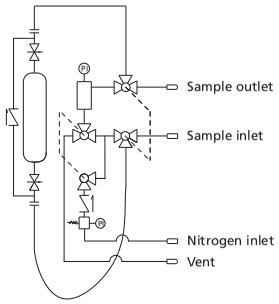
- Sampling directly from process or system
- Sample circulation and expansion chamber purge
- Equipped with pressure relief system, safer for sampling
- Linkage ball valve design, easy operation



Schematic diagram

SCSF3-Expansion Chamber, Bypass and System Purge Configuration

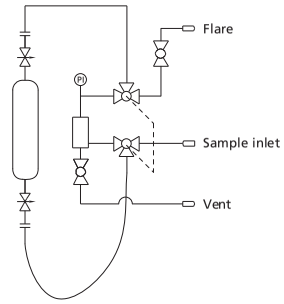
- Sampling directly from process or system
- Sample circulation and system purge
- Equipped with pressure relief system, safer for sampling
- Linkage ball valve design, easy operation



Schematic diagram

SCSF4-Expansion Chamber and Outlet to Flare Configuration

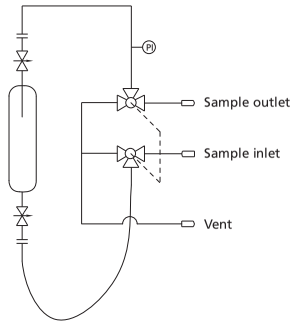
- Sampling directly from process or system
- Applicable for sampling from process or system without process out connection
- Equipped with pressure relief system, safer for sampling
- Linkage ball valve design, easy operation



Schematic diagram

SCSF5-Outage Tube Configuration

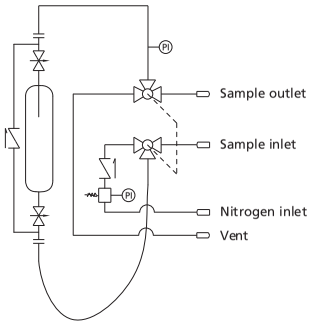
- Sampling directly from process or system
- Sample circulation
- Outage tube within cylinder keep the cylinder safe
- Linkage ball valve design, easy operation



Schematic diagram

SCSF6-Outage Tube, Bypass and System Purge Configuration

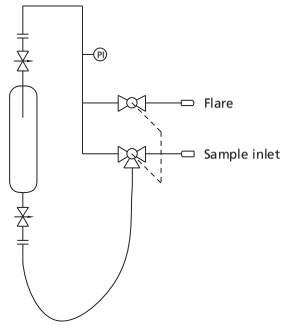
- Sampling directly from process or system
- Sample circulation and system purge
- Outage tube within cylinder keep the cylinder safe
- Linkage ball valve design, easy operation



Schematic diagram

SCSF7-Outage Tube and Outlet to Flare Configuration

- Sampling directly from process or system
- Applicable for sampling from process or system without process out connection
- Outage tube within cylinder keep the cylinder safe
- Linkage ball valve design, easy operation

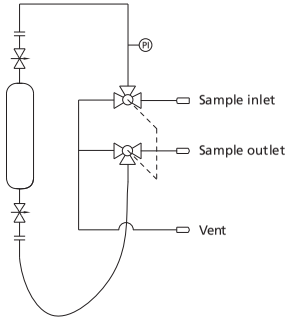


Schematic diagram

G Series-Gas Sampling

SCGG1-Circulation Configuration

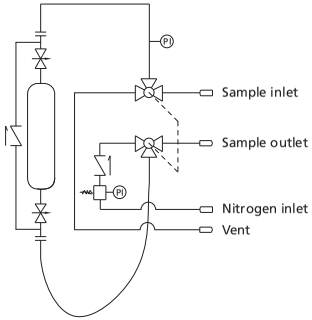
- Sampling directly from process or system
- Sample circulation
- Linkage ball valve design, easy operation



Schematic diagram

SCGG2-Bypass and System Purge Configuration

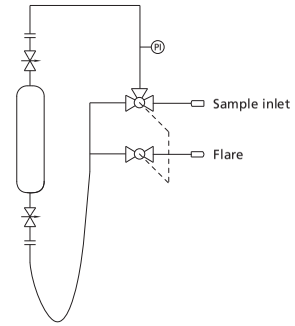
- Sampling directly from process or system
- Sample circulation and system purge
- Linkage ball valve design, easy operation



Schematic diagram

SCGG3-Outlet to Flare Configuration

- Sampling directly from process or system
- Applicable for sampling from process or system without process out connection
- Linkage ball valve design, easy operation



Schematic diagram