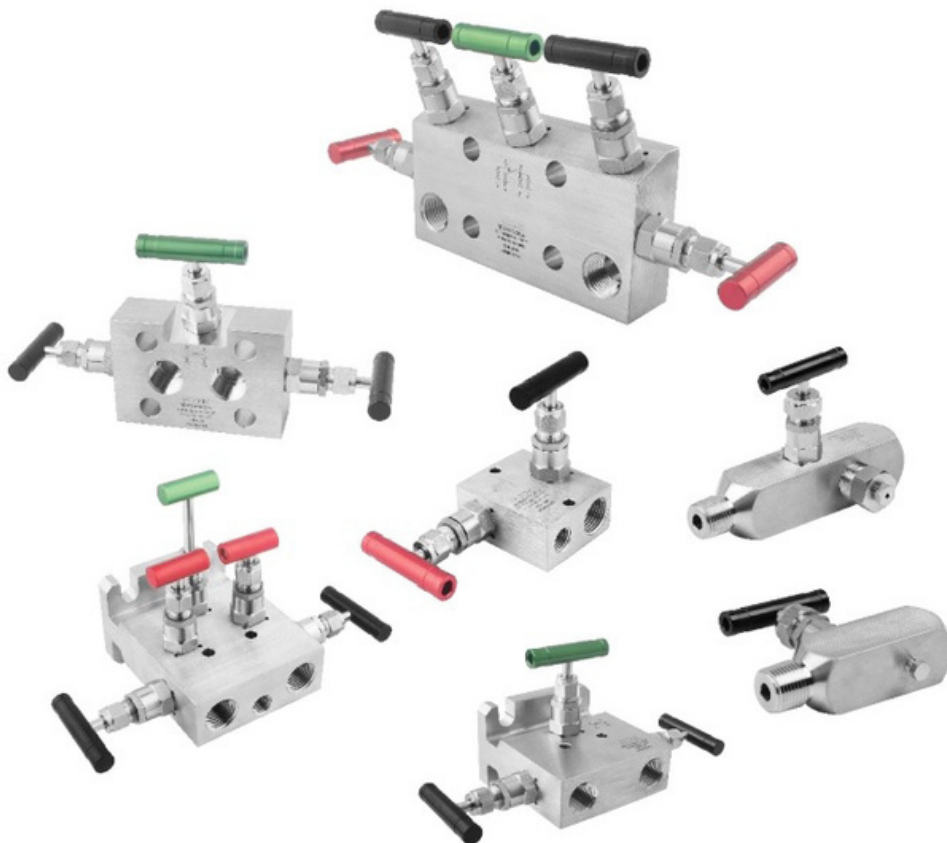


GaugeValves and Instrumentation Manifolds



Contents

Gauge Valves

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Instrumentation Manifolds

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Gauge Valves

GV Series, GVH Series and GR Series

Features

- Working pressure (stainless steel):
 - GV, GR series up to 6000 psig (414 bar)
 - GVH series up to 10000 psig (690 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)
 - Acetal seat: -20°F to 250°F (-28°C to 121°C)
 - PEEK seat: -20°F to 400°F (-28°C to 204°C)
- Orifice: GV and GVH Series: 0.157" (4.0 mm)
GR Series: 0.25" (6.4 mm)
- Non-rotating lower stem, GV/GVH series lower stem ball tip design, GR series lower stem plug tip design
- Safety backseating 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
- Option for different colored handles
- Every gauge valve leak tested at factory at rated working pressure

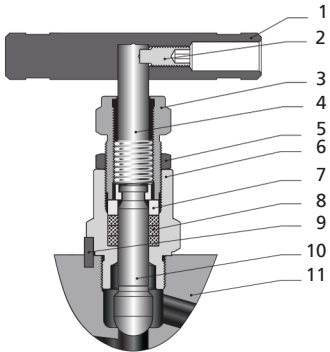


Standard Materials of Construction

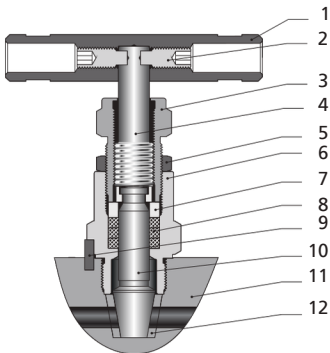
Item	Component	Material Grade/ASTM Specification
1	Handle	Aluminum alloy
2	Set Screw	Zinc-plated carbon steel
3	Packing Bolt	304 SS/A479
4	Upper Stem	316 SS/A479
5	Lock Nut	Stainless steel
6	Bonnet	316 SS/A479
7	Gland	316 SS/A479
8	Packing	PTFE or graphite
9	Lock Pin	Stainless steel
10	Lower Stem	Hardened 316 SS/A479
11	Body	316 SS/A182
12	Seat	Acetal or PEEK (GR series only)
	Lubricant	Molybdenum disulfide-based

Note: Wetted components are listed in italics.

Ball Tip Design Valves (GV, GVH)

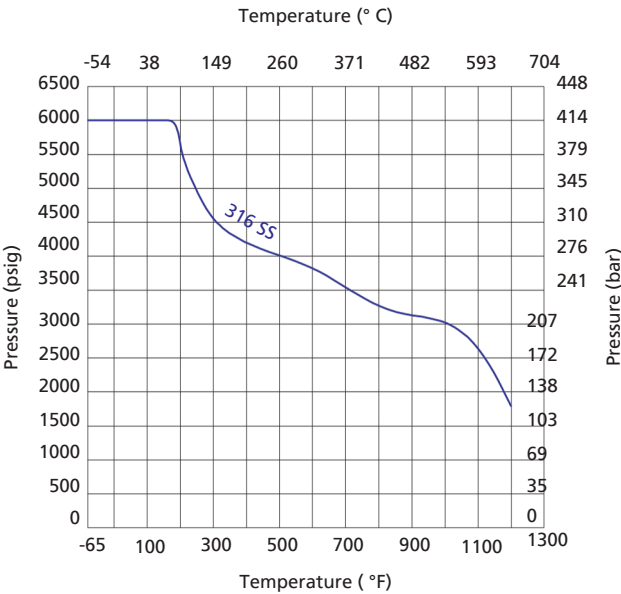


Plug Tip Design Valves (GR)

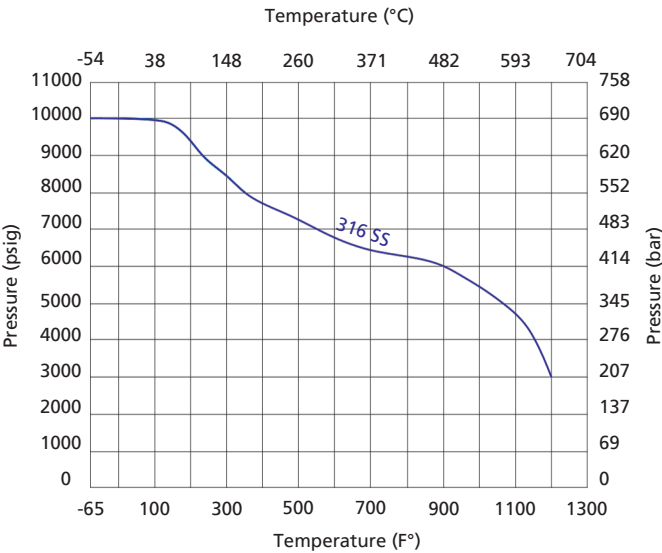


Pressure vs. Temperature

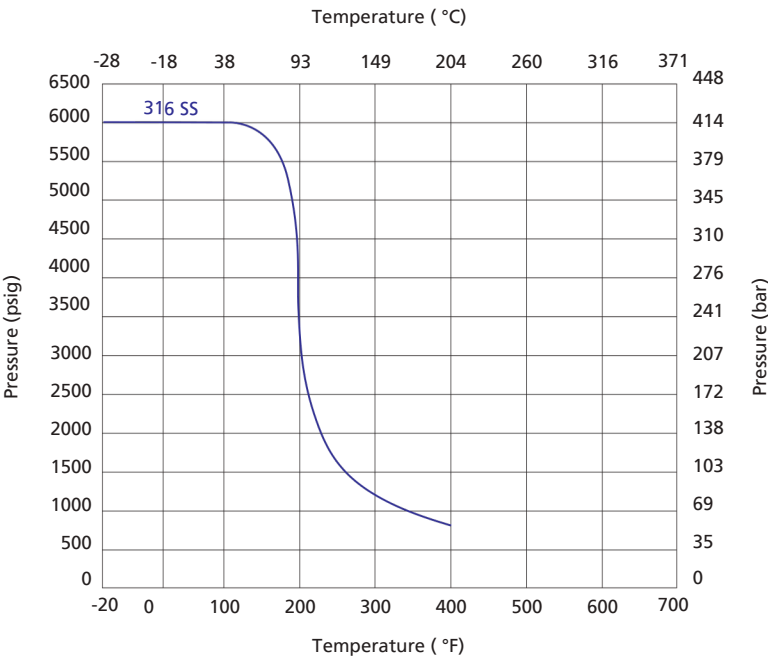
GV Series



GVH Series



GR Series

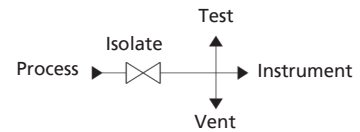
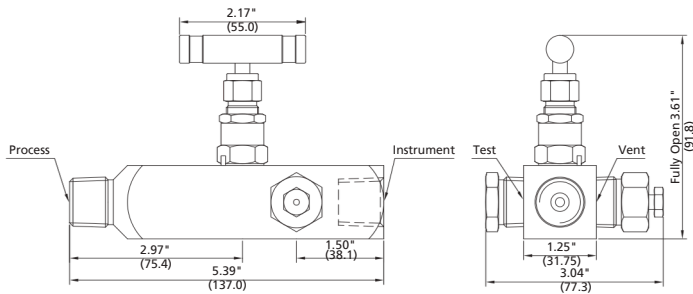


1. GV, GVH series are based on graphite packing.
2. GR series are based on PEEK seat and PTFE packing.

Types and Dimensions

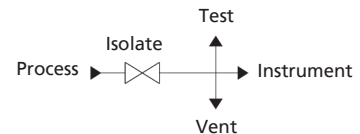
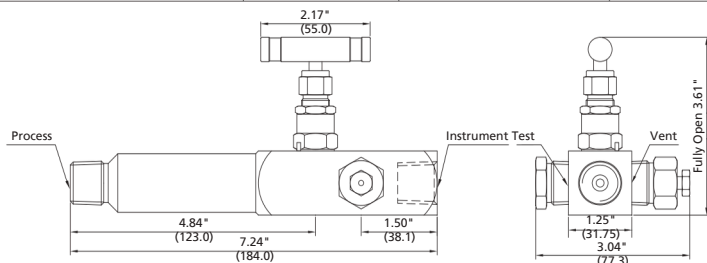
Standard Type

Basic Ordering Number	Process	Instrument	Vent & Test
GV □ □ -NS8-FNS8	1/2 Male NPT	1/2 Female NPT	1/2 Female NPT (Bleed Valve with Plug)
GVH □ □ -NS8-FNS8			
GR □ □ -NS8-FNS8			
GV □ □ -NS12-FNS8	3/4 Male NPT		
GVH □ □ -NS12-FNS8			
GR □ □ -NS12-FNS8			



Lagging Extension Body Type

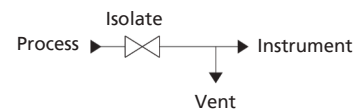
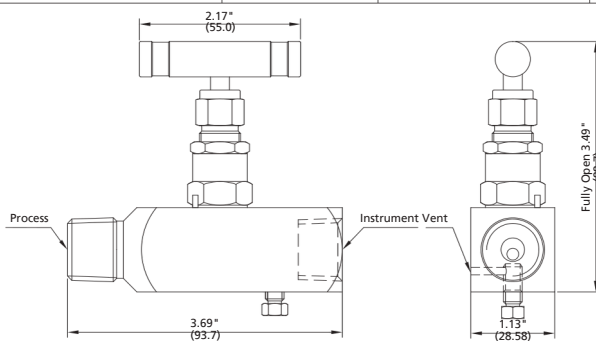
Basic Ordering Number	Process	Instrument	Vent & Test
GV □ □ -NS8-FNS8-E	1/2 Male NPT	1/2 Female NPT	1/2 Female NPT (Bleed Valve with Plug)
GVH □ □ -NS8-FNS8-E			
GR □ □ -NS8-FNS8-E			



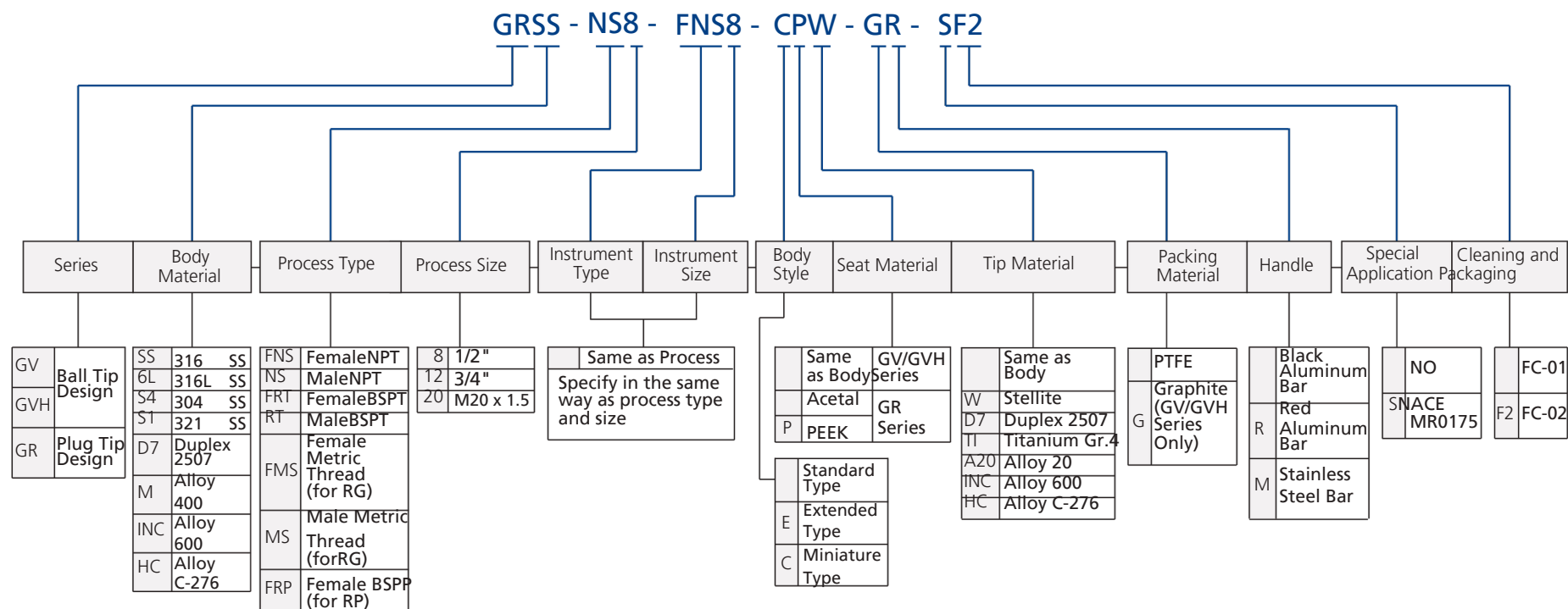
Lagging extension body is inserted through pipe insulation.

Miniature Type

Basic Ordering Number	Process	Instrument	Vent
GV □ □ -NS8-FNS8-C	1/2 Male NPT	1/2 Female NPT	Vent stem
GVH □ □ -NS8-FNS8-C			
GR □ □ -NS8-FNS8-C			



Ordering Number Description



Notes:

1. Cleaning and Packaging:

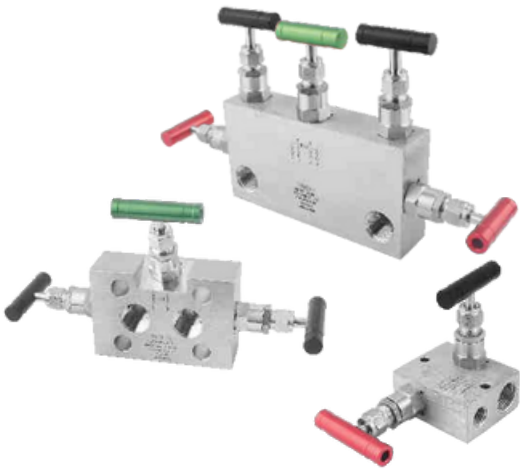
FC-01: Standard cleaning and packaging for general industrial procedures.

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

Instrumentation Manifolds

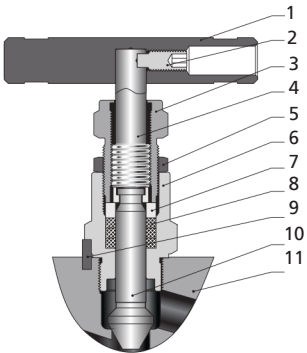
Features

- Working pressure:
2D, 2R, 3D, 3R, 5D, 5R series up to 6000 psig (414 bar)
2DH, 2RH, 3DH, 3RH, 5DH, 5RH series up to 10000 psig (690 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)
- Two-piece stem design: Upper stem threads cold rolled and lower stem hardened for high strength and smooth operation
- Upper stem thread lubricant isolated from system media
- Linear instead of rotary motion of the rising, non-rotating stem minimizes packing abrasion and reduces the friction between the seat and the tip
- Safety back seating seals in fully open position
- Steady and durable fastening of the handle by handle set screw
- Every manifold leak tested at factory at rated working pressure



Standard Materials of Construction

Item	Component	Valve Body Material	
		316 SS	Alloy C-276
		Material Grade/ASTM Specification	
1	Handle	Aluminum alloy	
2	Set Screw	Zinc-plated carbon steel	
3	Packing Bolt	304 SS/A479	
4	Upper Stem	316 SS/A479	
5	Lock Nut	Stainless steel	
6	Bonnet	316 SS/A479	Alloy C-276/B574
7	Gland	316 SS/A479	
8	Packing	PTFE or Graphite	
9	Lock Pin	Stainless steel	
10	Lower Stem	Hardened 316 SS/A479	Alloy C-276/B574
11	Body	316 SS/A479 316 SS/A182	Alloy C-276/B564
	Lubricant	Molybdenum disulfide-based	

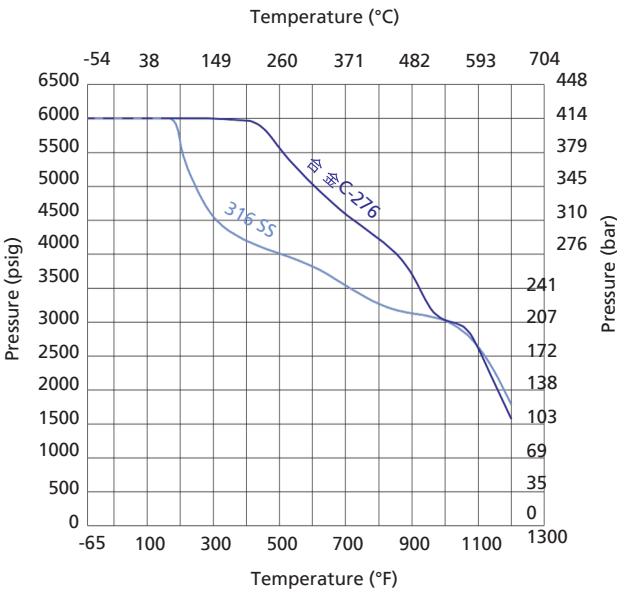


Handle colors indicate function:
BLACK=Isolate
RED=Vent
GREEN=Equalize

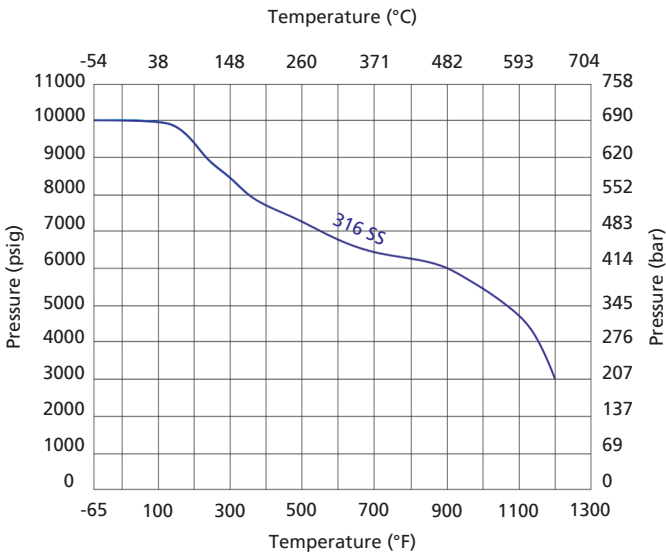
Note: Wetted components are listed in italics.

Pressure vs. Temperature

2D, 2R, 3D, 3R, 5D, 5R Series

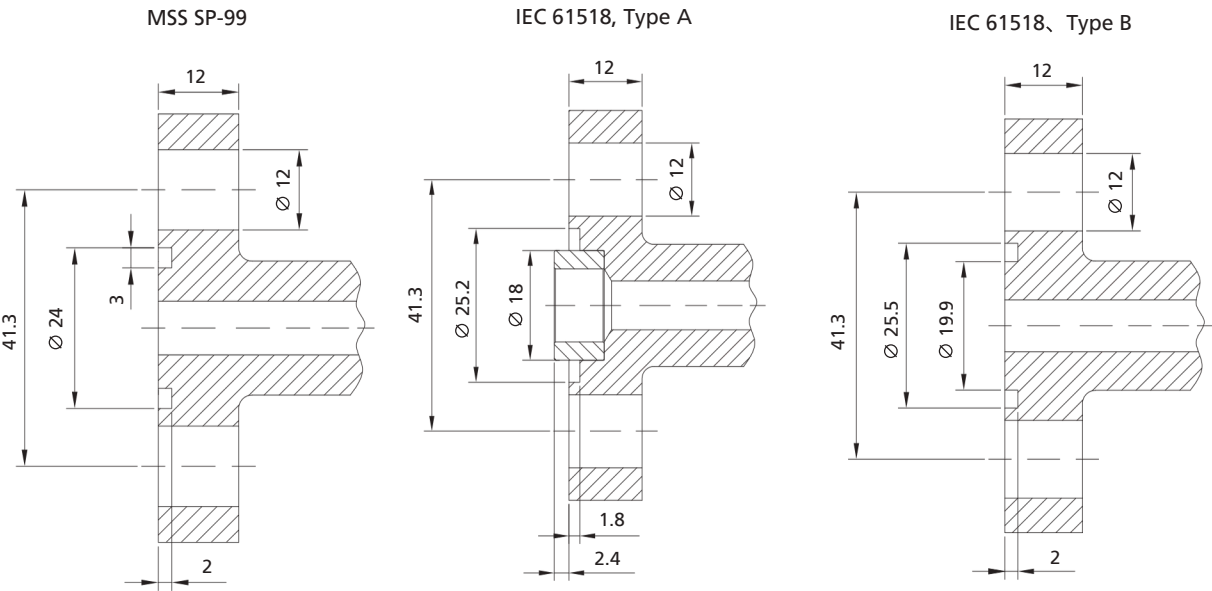


2DH, 2RH, 3DH, 3RH, 5DH, 5RH Series



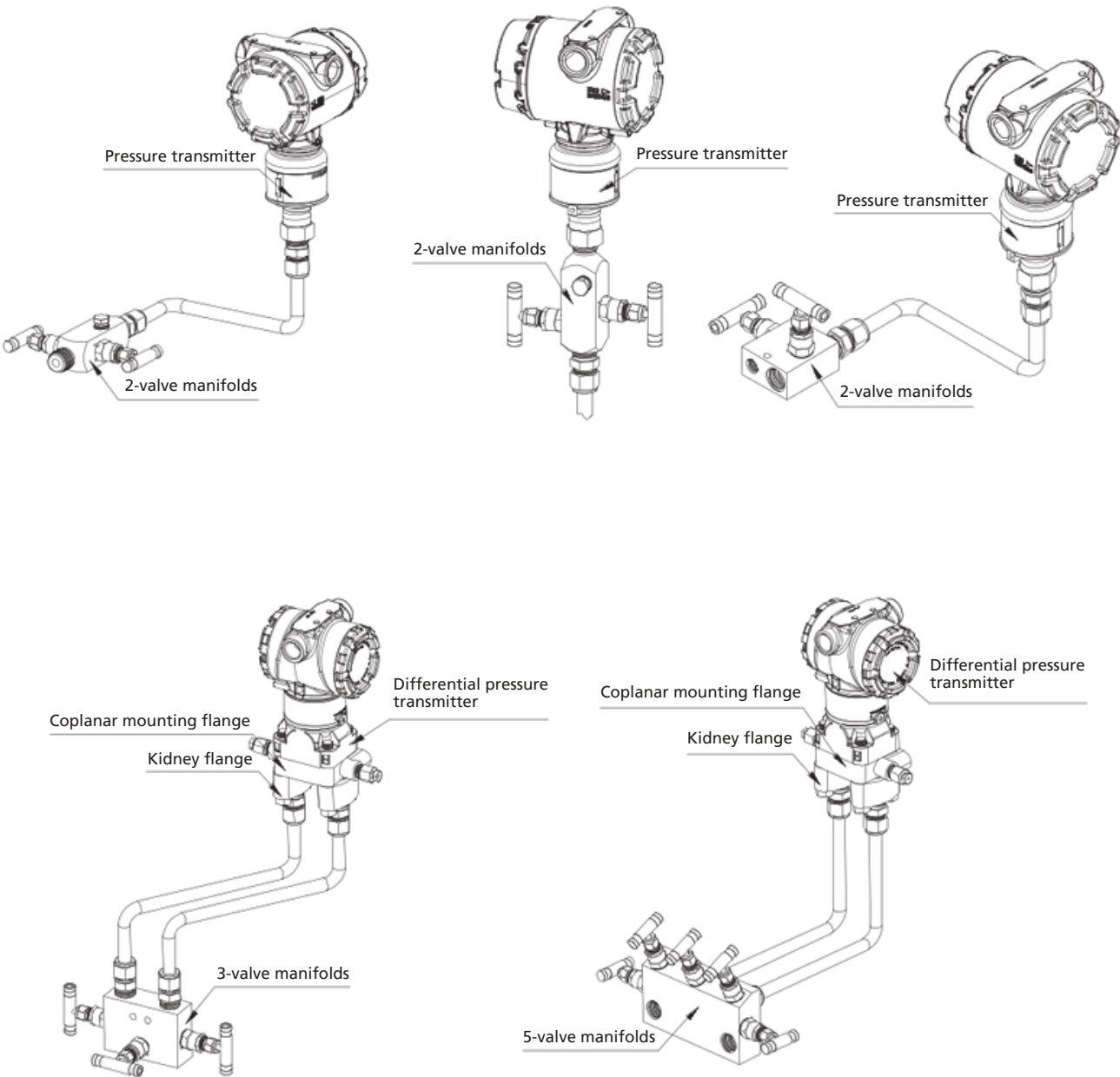
Design Standards

© Flanges in compliance with MSS SP-99 or IEC 61518 are available. Dimensions are as follows.

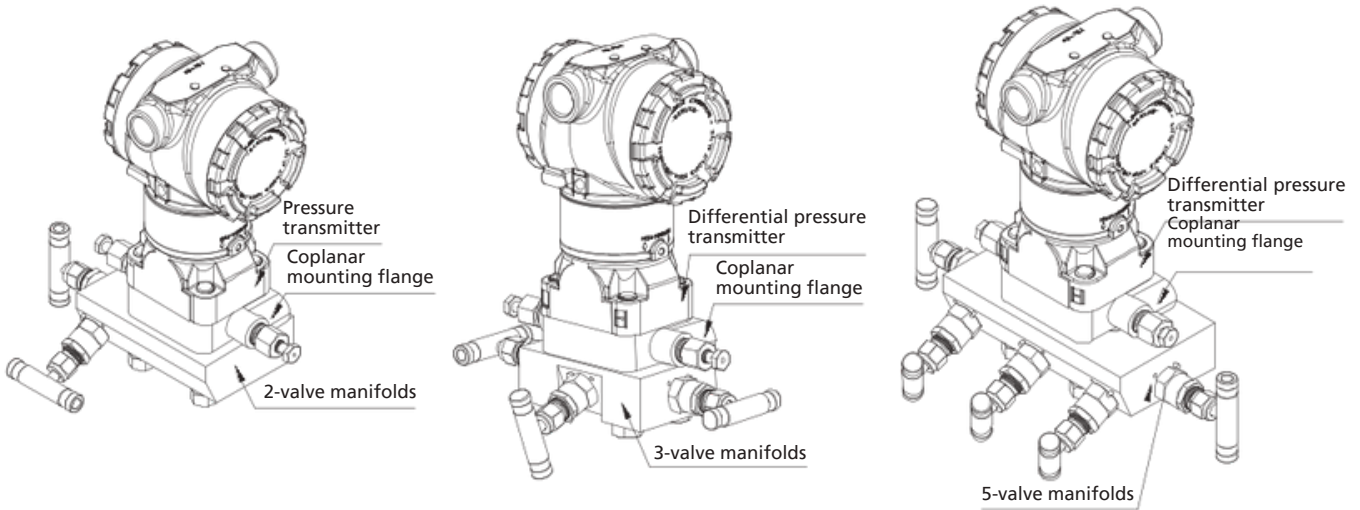


Manifolds Mounting Application

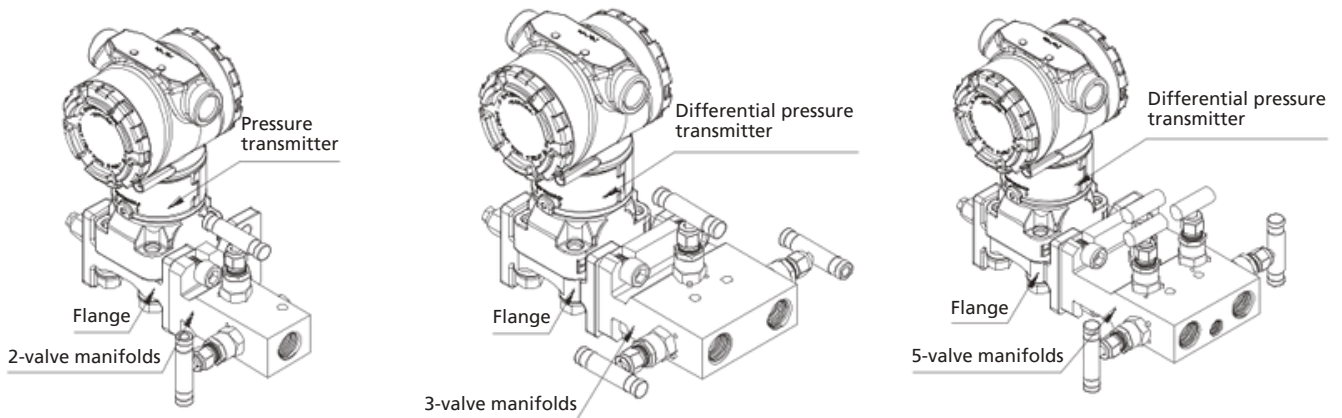
- Remote Mount Manifolds (with transmitter)
For 2R, 2RH, 3R, 3RH, 5R, 5RH series manifolds



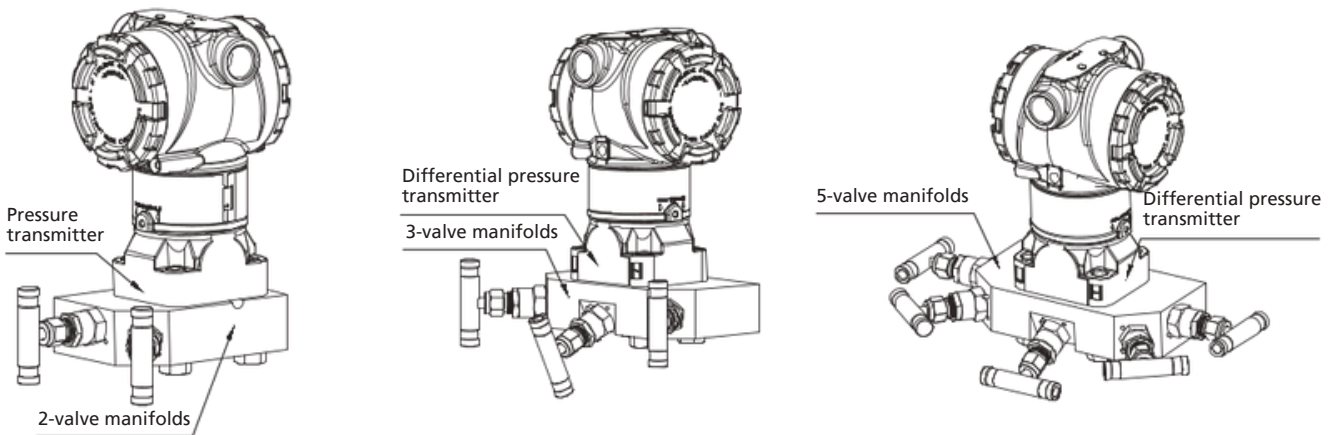
- Direct Mount Manifolds (transmitter with coplanar mounting flange)
For 2D, 2DH, 3D, 3DH, 5D, 5DH series layout type A and type L manifolds



- Direct Mount Manifolds (transmitter with traditional flange)
For 2D, 2DH, 3D, 3DH, 5D, 5DH series layout type V manifolds



- Direct Mount Manifolds (transmitter without flange)
For integrated mount 2D55-FNS8-C, 3D55-FNS8-C-T, 5D55-FNS8-C manifolds only

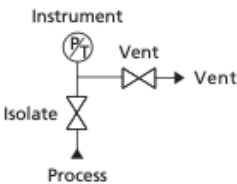
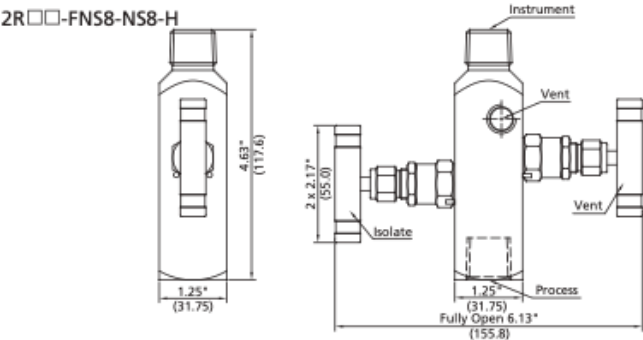


Types and Dimensions

Remote Mount Manifolds

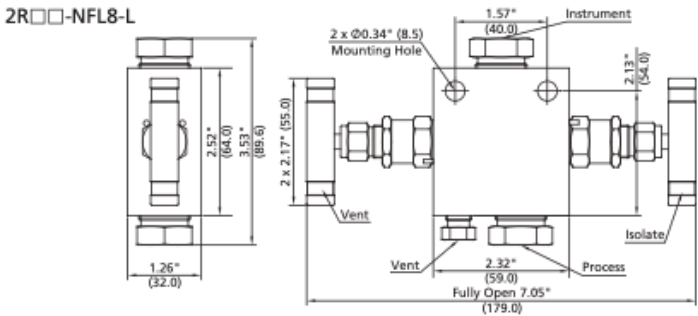
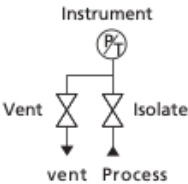
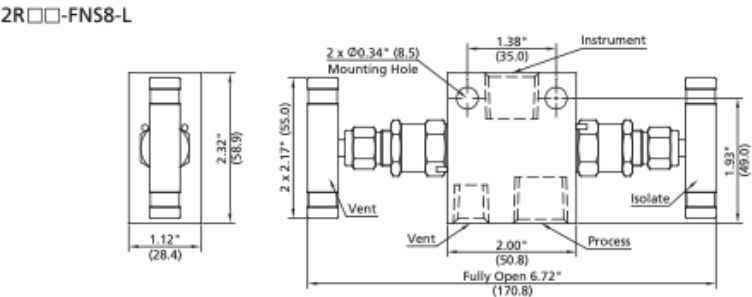
2-valve manifolds

Basic Ordering Number	Process	Instrument	Vent
2R□□-FNS8-NS8-H	1/2 Female NPT	1/2 Male NPT	1/4 Female NPT
2RH□□-FNS8-NS8-H			
2R□□-NS8-H	1/2 Male NPT		
2RH□□-NS8-H			
2R□□-NS8-H-P			
			1/4 Female NPT with plug



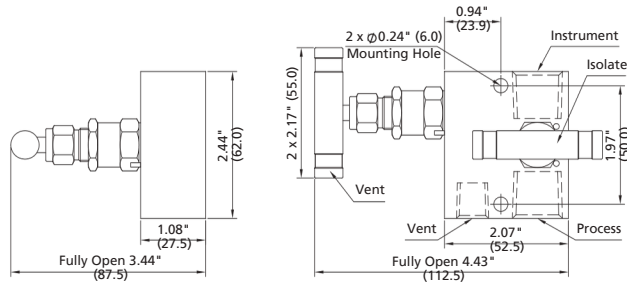
The dimensions shown are for 2R series manifolds. If you need the dimensions of 2RH series, please contact us.

Basic Ordering Number	Process	Instrument	Vent
2R□□-FNS8-L	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT
2R□□-FNS8-L-P			1/4 Female NPT with Plug
2R□□-NFL8-L	1/2" Female OJ Tube Fitting	1/2" Female OJ Tube Fitting	1/4" Female OJ Tube Fitting

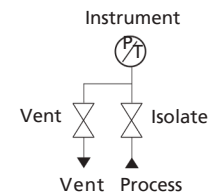
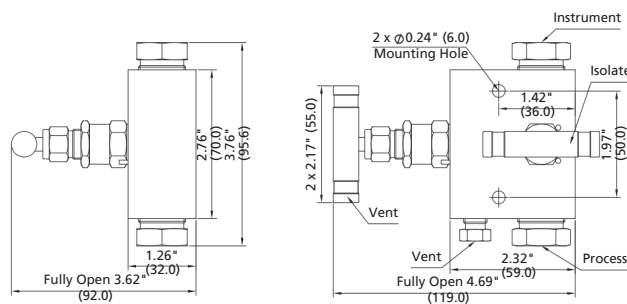


Basic Ordering Number	Process	Instrument	Vent
2R □ -FNS8-V	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT
2R □ -FNS8-V-P			1/4 Female NPT with Plug
2R □ -NFL8-V	1/2 "Female OJ Tube Fitting	1/2 "Female OJ Tube Fitting	1/4 "Female OJ Tube Fitting

2R □ -FNS8-V



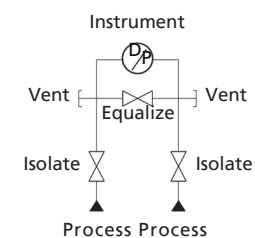
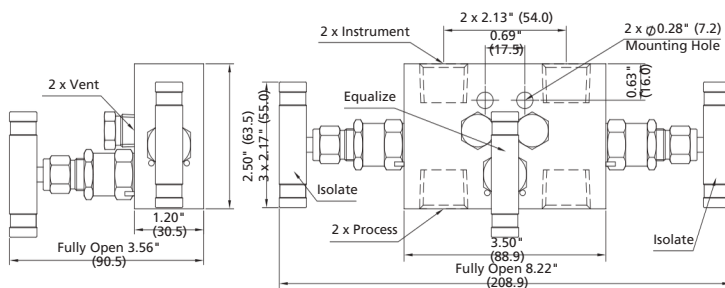
2R □ -NFL8-V



3-valve manifolds

Basic Ordering Number	Process	Instrument	Vent
3R □ -FNS8-V	1/2 Female NPT	1/2 Female NPT	-
3RH □ -FNS8-V-P			1/4 Female NPT with Plug
3R □ -NFL8-V	1/2 "Female OJ Tube Fitting	1/2 "Female OJ Tube Fitting	-

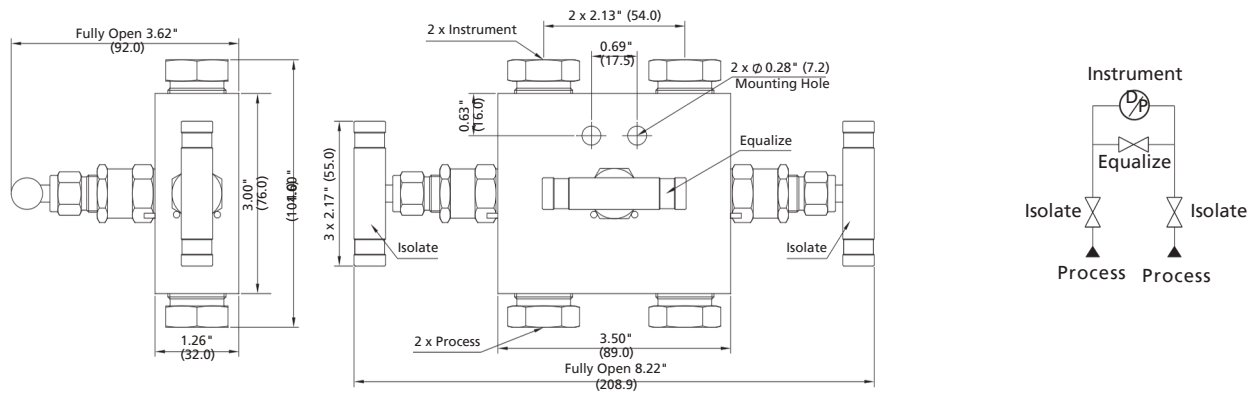
3R □ -FNS8-V-P



The dimensions shown are for 3R series manifolds. If you need the dimensions of 3RH series, please contact us.

C-14 Gauge Valves and Instrumentation Manifolds

3R □ -NFL8-V

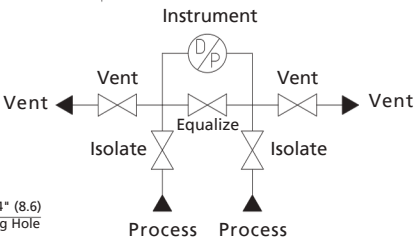
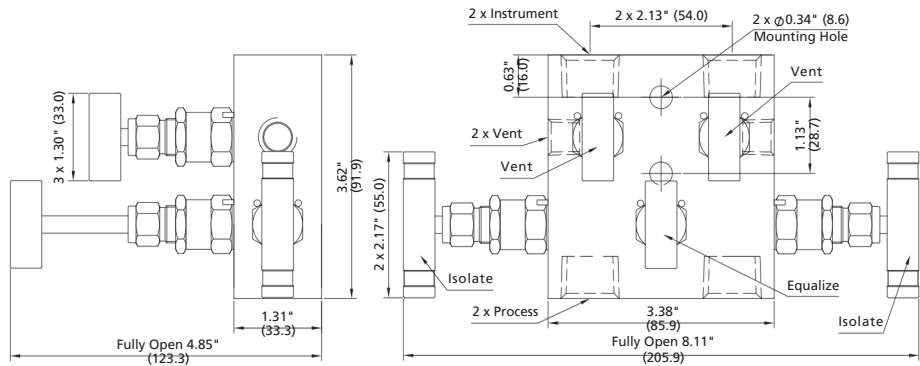


5-valve manifolds

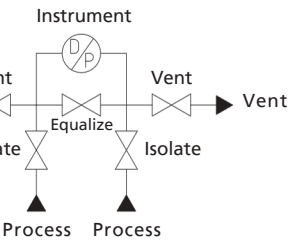
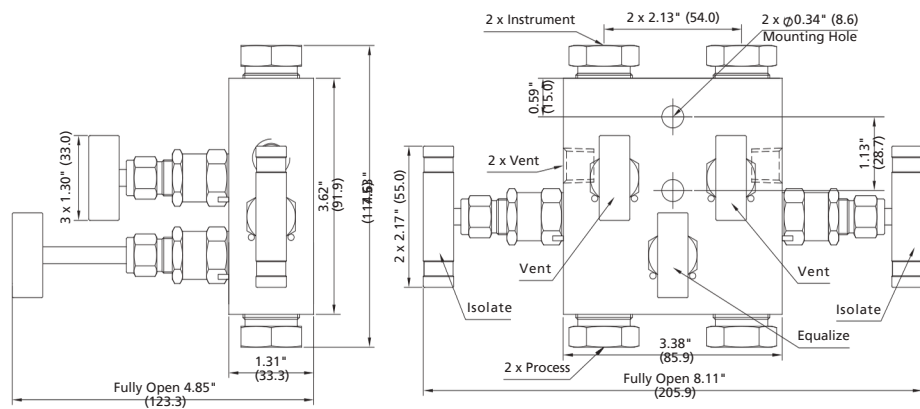
Basic Ordering Number	Process	Instrument	Vent
5R □ -FNS8-V	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT
5R □ -FNS8-V-P			1/4 Female NPT with Plug
5R □ -NFL8-V	1/2" Female OJ Tube Fitting	1/2" Female OJ Tube Fitting	1/4 Female NPT



5R □ -FNS8-V



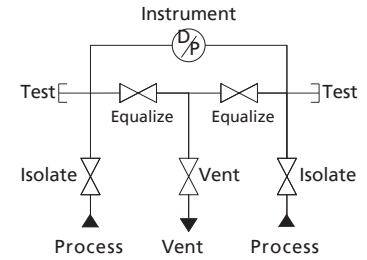
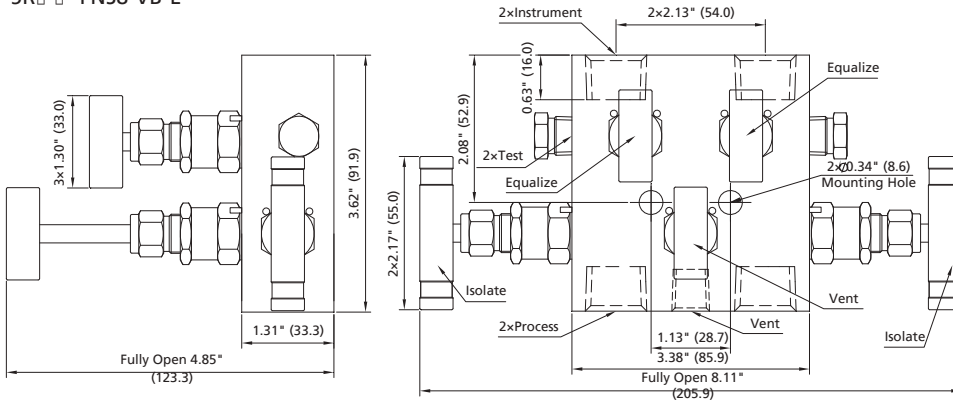
5R □ -NFL8-V



Basic Ordering Number	Process	Instrument	Vent	Test
5R □ -FNS8-VB	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT	-
5R □ -FNS8-VB-P			1/4 Female NPT With Plug	
5R □ -FNS8-VB-E			1/4 Female NPT	1/4 Female NPT with Plug



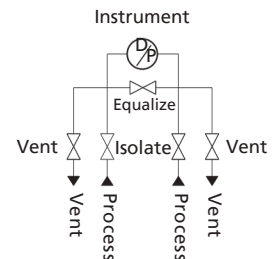
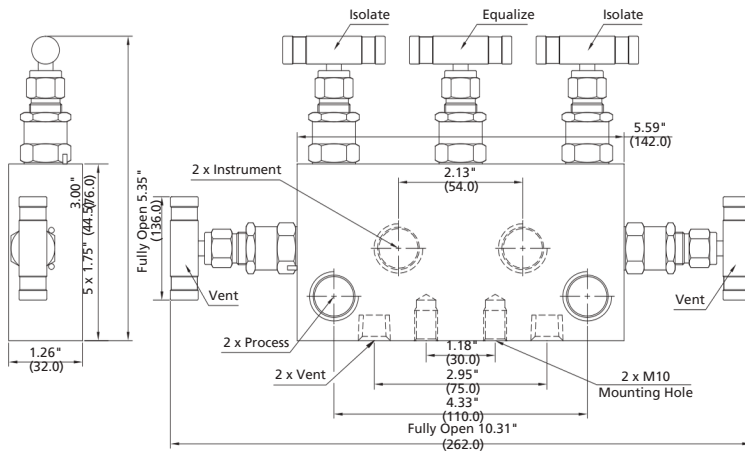
5R □ -FNS8-VB-E



Basic Ordering Number	Process	Instrument	Vent
5R □ -FNS8-L	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT
5R □ -FNS8-L-P			1/4 Female NPT with Plug
5RH □ -FNS8-L			1/4 Female NPT

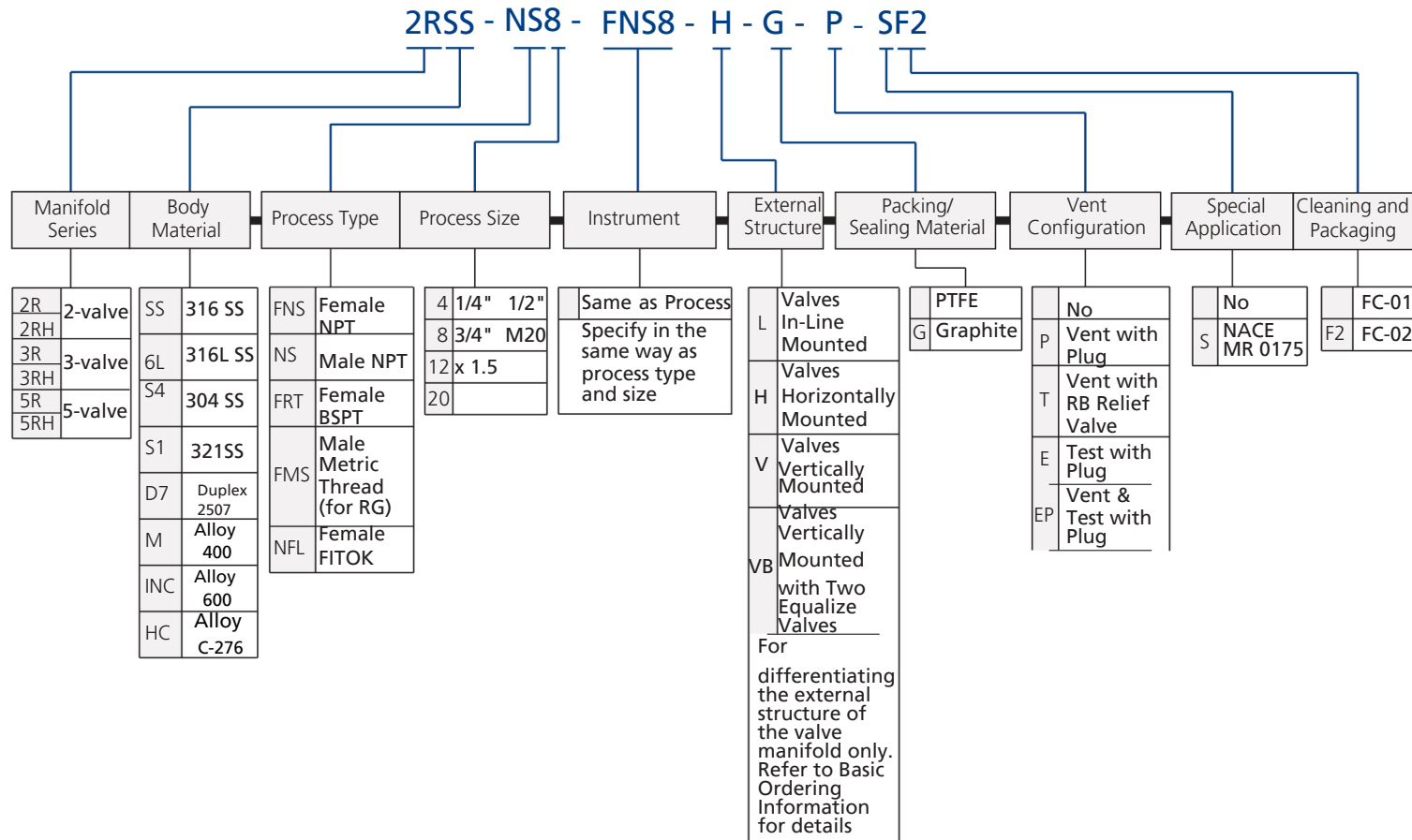


5R □ -FNS8-L



The dimensions shown are for 5R series manifolds. If you need the dimensions of 5RH series, please contact us.

Ordering Number Description



Notes:

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.

Direct Mount Manifolds (transmitter with coplanar mounting flange)

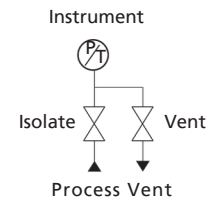
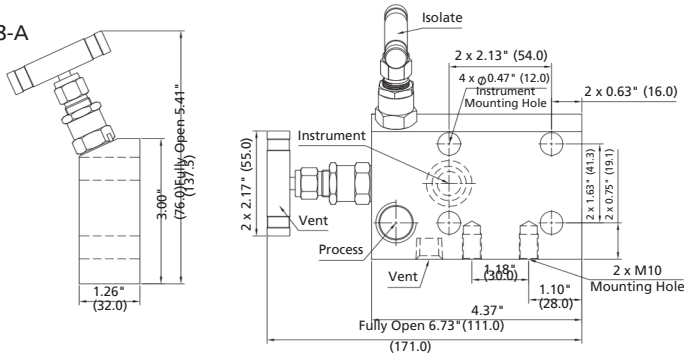
This type of manifolds is designed for Rosemount[®]coplanar[™] pressure transmitter. Manifolds for other companies' transmitters, please contact us.

2-valve Manifolds

Basic Ordering Number	Process	Instrument	Vent
2D□ □ -FNS8-A	1/2 Female NPT	MSS SP-99 Flange	1/4 Female NPT
2D□ □ -FNS8-A-P			1/4 Female NPT with Plug
2DH□ □ -FNS8-A			1/4 Female NPT



2D□ □ -FNS8-A



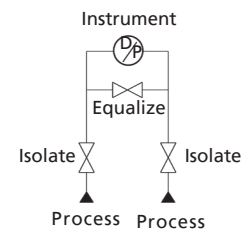
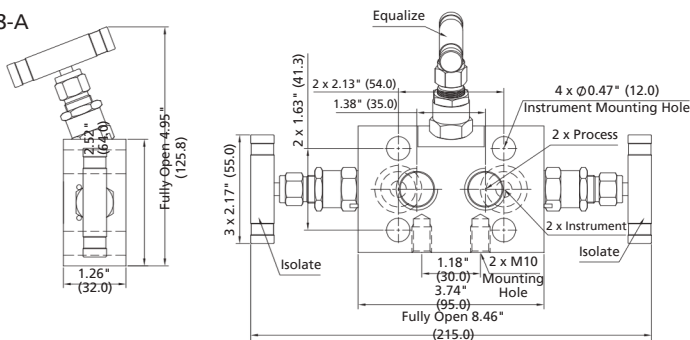
Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts. Dimensions shown are for 2D Series manifolds. For dimensions of 2DH Series manifolds, please contact us.

3-valve Manifolds

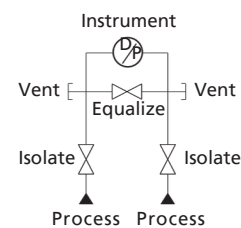
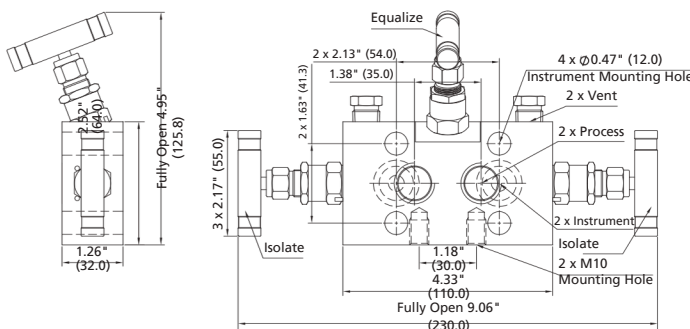
Basic Ordering Number	Process	Instrument	Vent
3D□ □ -FNS8-A	1/2 Female NPT	MSS SP-99 Flange	-
3D□ □ -FNS8-A-P			1/4 Female NPT with Plug
3DH□ □ -FNS8-A			-



3D□ □ -FNS8-A



3D□ □ -FNS8-A-P

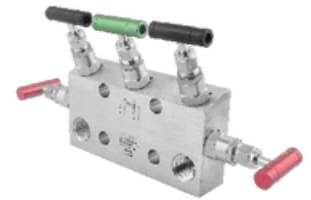


Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts. Dimensions shown are for 3D Series manifolds. For dimensions of 3DH Series manifolds, please contact us.

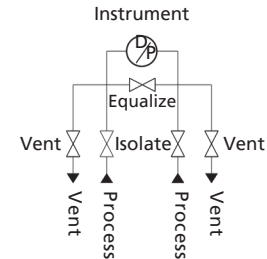
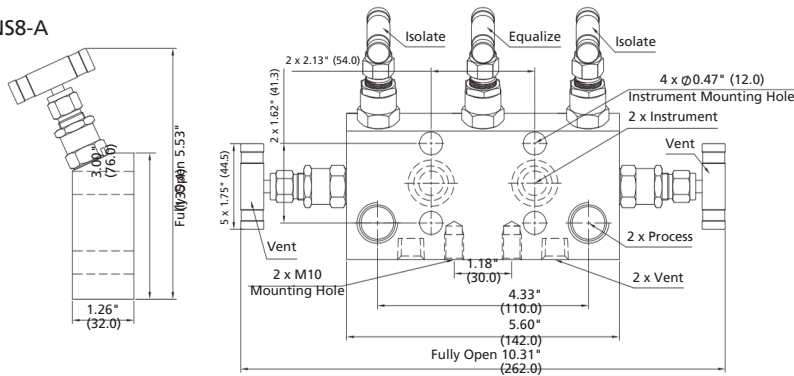
C-18 Gauge Valves and Instrumentation Manifolds

5-valve Manifolds

Basic Ordering Number	Process	Instrument	Vent
5D □ -FNS8-A	1/2 Female NPT	MSS SP-99 Flange	1/4 Female NPT
5D □ -FNS8-A-P			1/4 Female NPT with Plug
5DH □ -FNS8-A			1/4 Female NPT



5D □ -FNS8-A



Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts. Dimensions shown are for 5D Series manifolds. For dimensions of 5DH Series manifolds, please contact us.

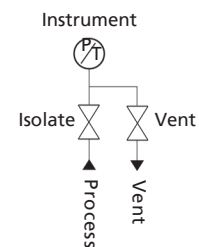
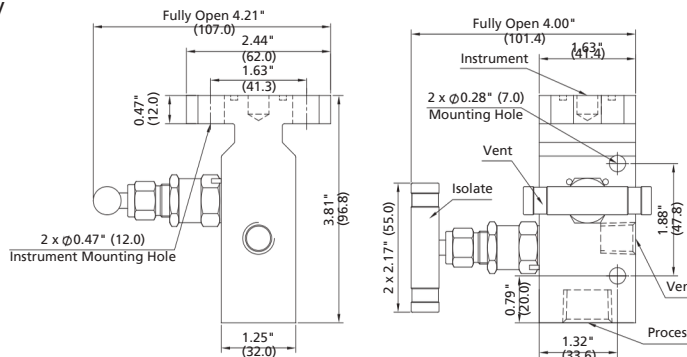
Direct Mount Manifolds (transmitter with traditional flange)

2-valve Manifolds

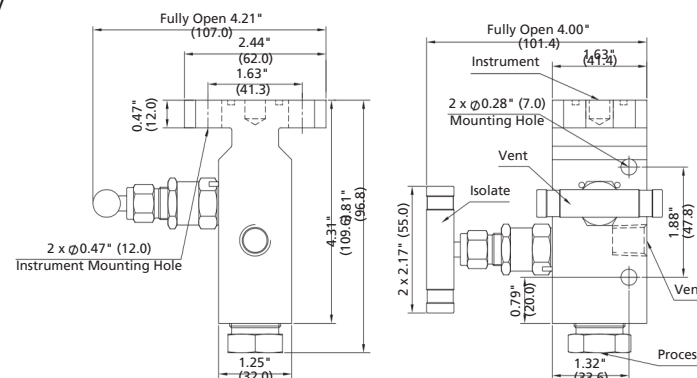
Basic Ordering Number	Process	Instrument	Vent
2D □ -FNS8-V	1/2 Female NPT	MSS SP-99 Flange	1/4 Female NPT
2D □ -FNS8-V-P			1/4 Female NPT with Plug
2D □ -NFL8-V	1/2" Female OJ Tube Fitting		1/4 Female NPT



2D □ -FNS8-V



2D □ -NFL8-V



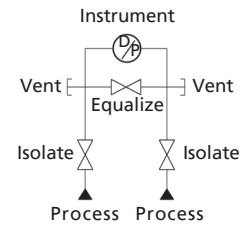
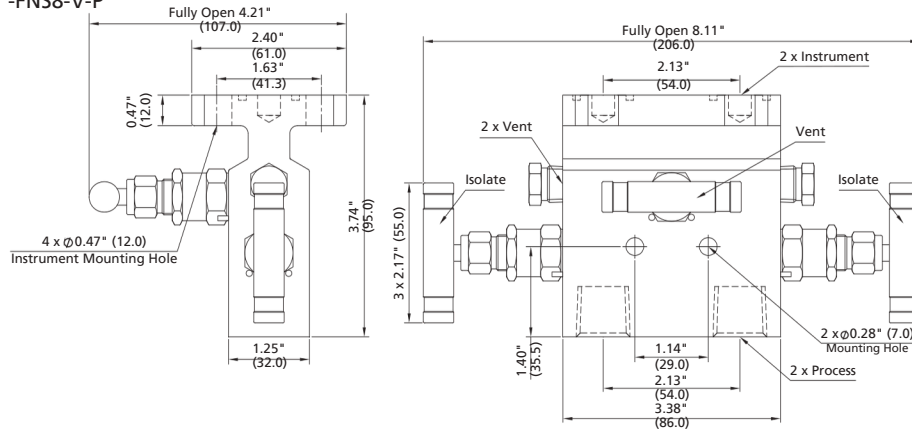
Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and two 7/16" UNF x 24mm high tensile bolts.

3-valve Manifolds

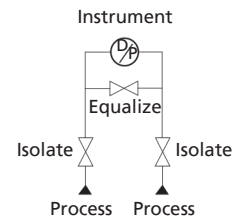
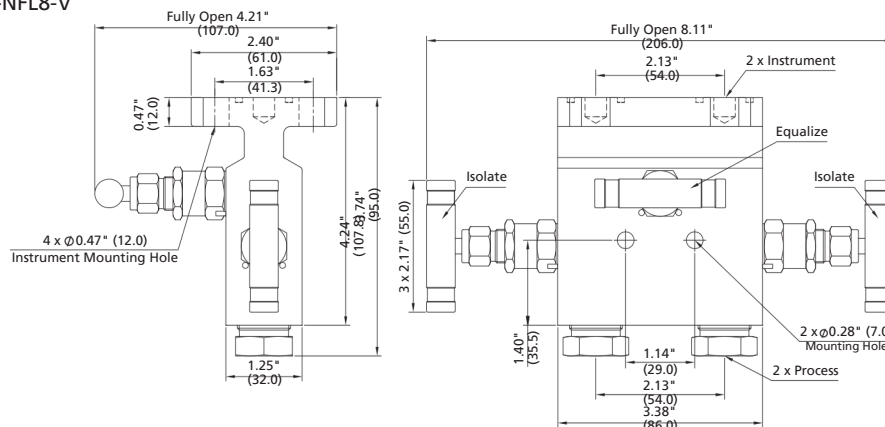
Basic Ordering Number	Process	Instrument	Vent
3D□ □ -FNS8-V	1/2 Female NPT	MSS SP-99 Flange	-
3D□ □ -FNS8-V-P			1/4 Female NPT with Plug
3D□ □ -NFL8-V	1/2" Female OJ Tube Fitting		-



3D□ □ -FNS8-V-P



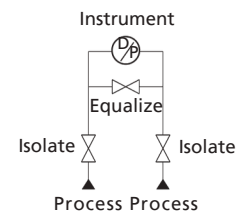
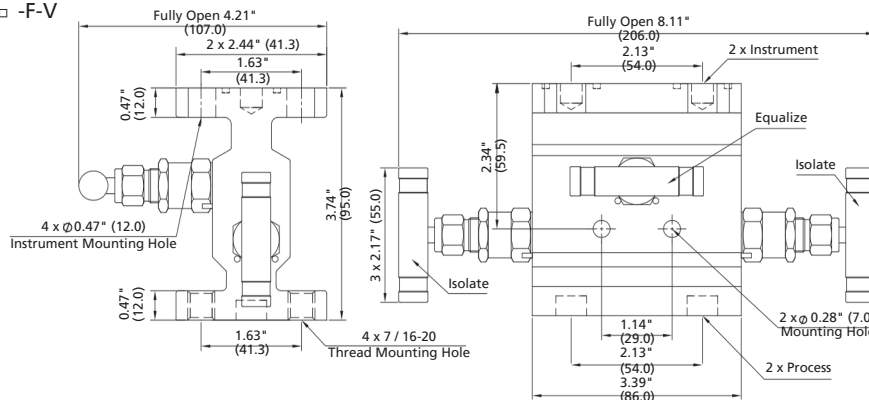
3D□ □ -NFL8-V



Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 24mm high tensile bolts.

Basic Ordering Number	Process	Instrument	Vent
3D□ □ -F-V	Flange	MSS SP-99 Flange	-
3D□ □ -F-V-P			1/4 Female NPT with Plug

3D□ □ -F-V

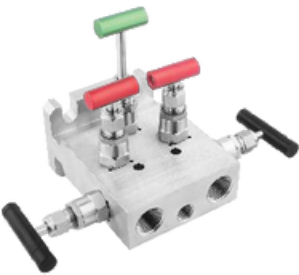


Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 24mm high tensile bolts.

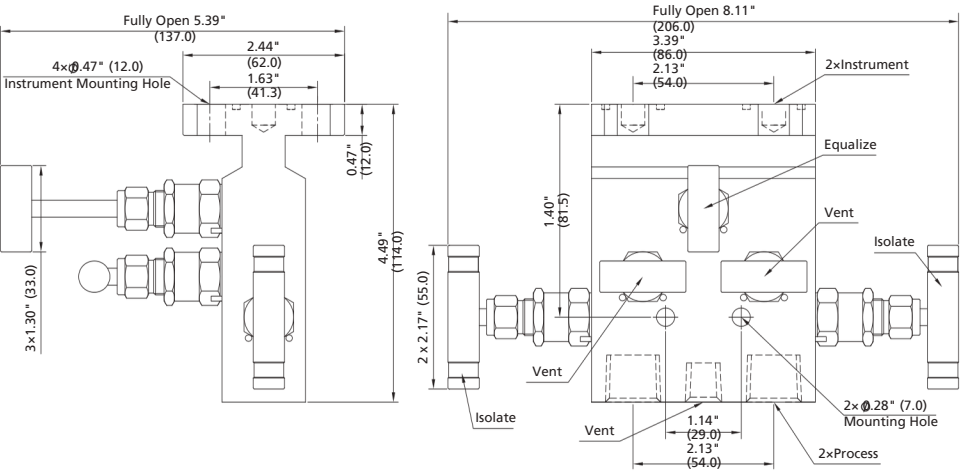
C-20 Gauge Valves and Instrumentation Manifolds

5-valve Manifolds

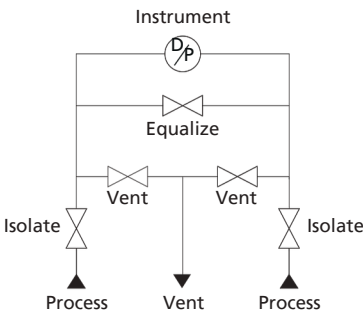
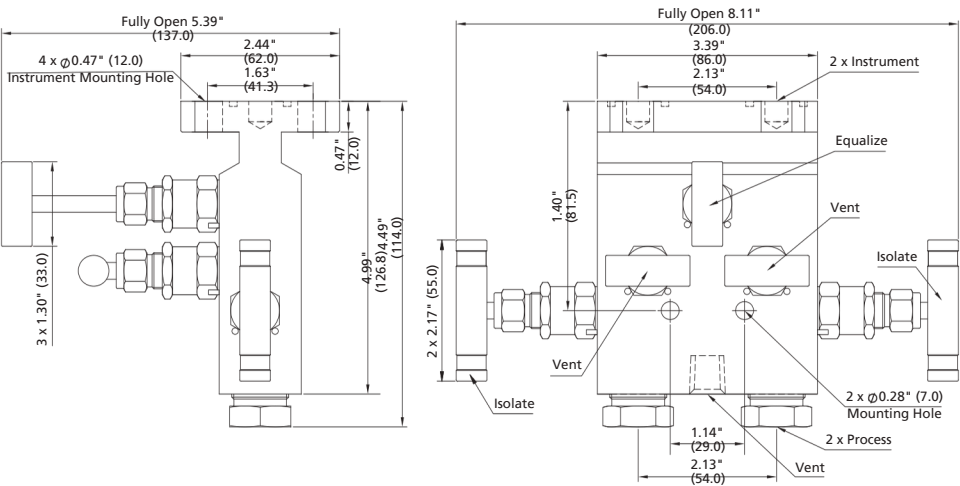
Basic Ordering Number	Process	Instrument	Vent
5D □ -FNS8-V	1/2 Female NPT	MSS SP-99 Flange	1/4 Female NPT
5D □ -FNS8-V-P			1/4 Female NPT with Plug
5D □ -NFL8-V	1/2" Female OJ Tube Fitting		1/4 Female NPT



5D □ -FNS8-V



5D □ -NFL8-V

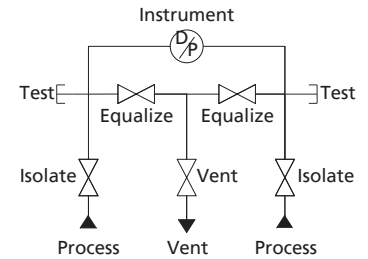
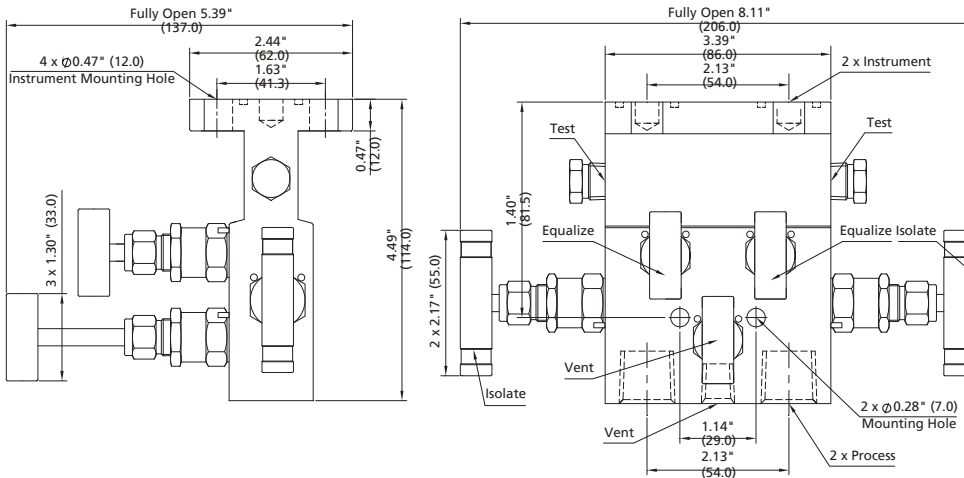


Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 24mm high tensile bolts.

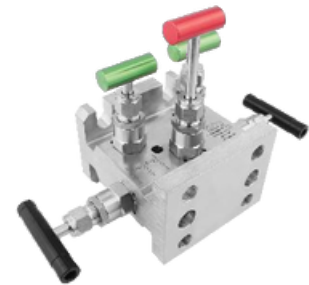
Basic Ordering Number	Process	Instrument	Vent	Test
5D □ -FNS8-VB	1/2 Female NPT	MSS SP-99 Flange	1/4 Female NPT	-
5D □ -FNS8-VB-P			1/4 Female NPT with Plug	
5D □ -FNS8-VB-E			1/4 Female NPT	1/4 Female NPT with Plug



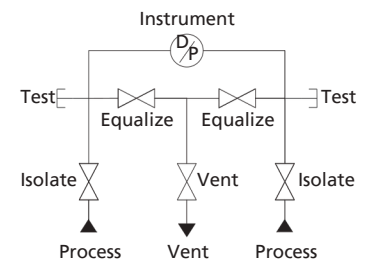
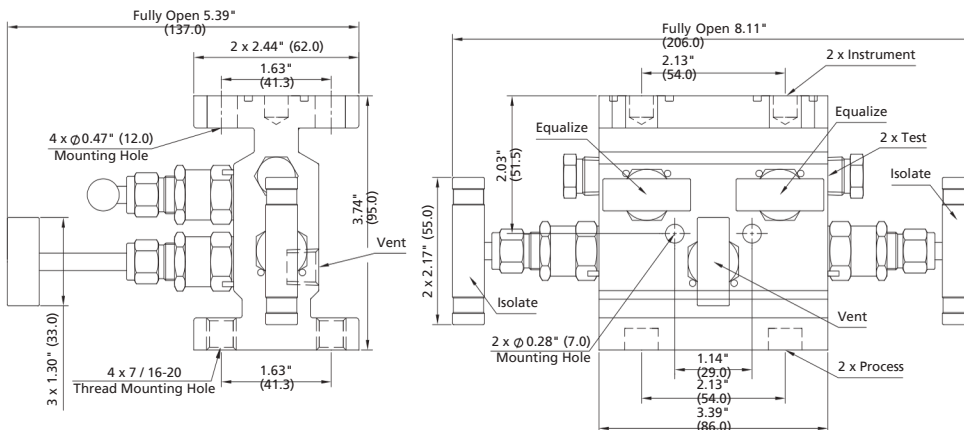
5D □ -FNS8-VB-E



Basic Ordering Number	Process	Instrument	Vent	Test
5D □ -F-VB	Flange	MSS SP-99 Flange	1/4 Female NPT	-
5D □ -F-VB-P			1/4 Female NPT with Plug	
5D □ -F-VB-E			1/4 Female NPT	1/4 Female NPT with Plug

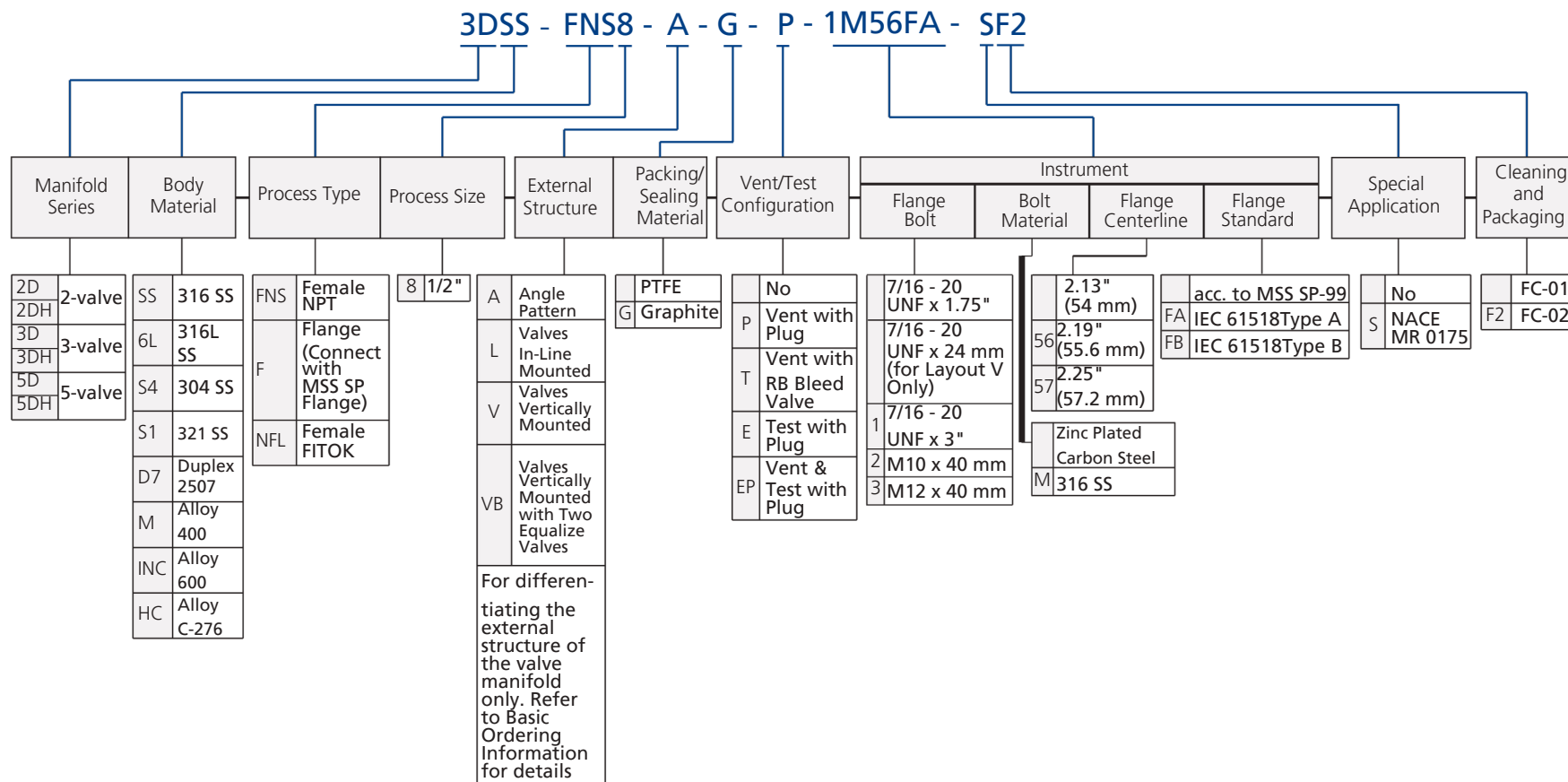


5D □ -F-VB-E



Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 24mm high tensile bolts.

Ordering Number Description



Notes:

1. Standard manifold instrument is flange (according to MSS SP-99), flange distance (center-to-center) is 2.13" (54 mm).

Distance of 2.19" (55.6 mm) suitable for transmitters of range 6, 7 and 1151.

Distance of 2.25" (57.2 mm) transmitters of range 8 and 1151.

2. 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.

3. "Ordering Number Description" is a reference to understand the combination rules of us.

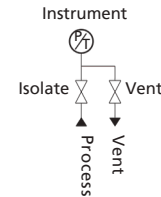
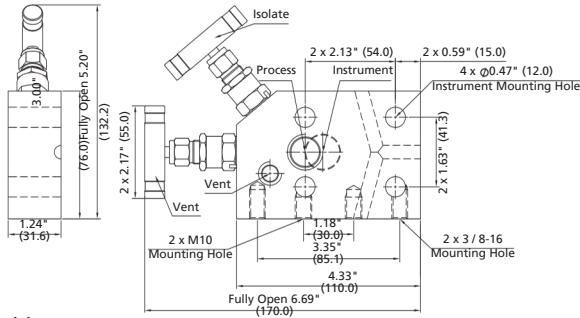
Direct Mount Manifolds (transmitter without flange)

Specifically designed for assembly to Rosemount[®] coplanar[™] pressure transmitters (including 3051C, 3051S, 2024 and 3095 models). Each manifold is included with: 4 pcs 7/16" UNF x 2" high tensile bolts. Assembles directly to transmitter.

2-valve manifolds

Basic Ordering Number	Process	Instrument	Vent
2D□ □ -FNS8-C	1/2 Female NPT	Flange	1/4 Female NPT
2D□ □ -FNS8-C-P			1/4 Female NPT with Plug
2DH□ □ -FNS8-C			1/4 Female NPT

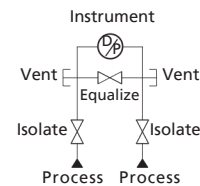
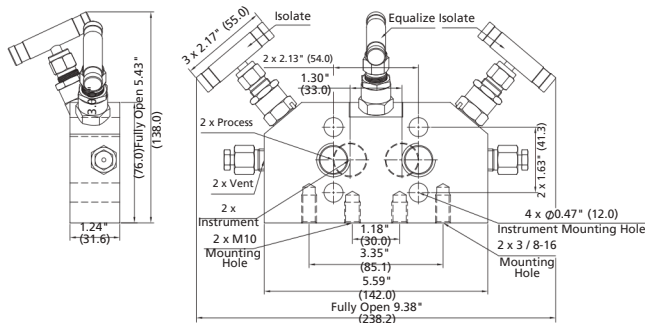
2D□ □ -FNS8-C



3-valve manifolds

Basic Ordering Number	Process	Instrument	Vent
3D□ □ -FNS8-C-T	1/2 Female NPT	Flange	1/4 Female NPT
3DH□ □ -FNS8-C-T			1/4 Female NPT with Relief Valve

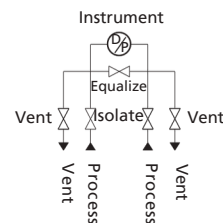
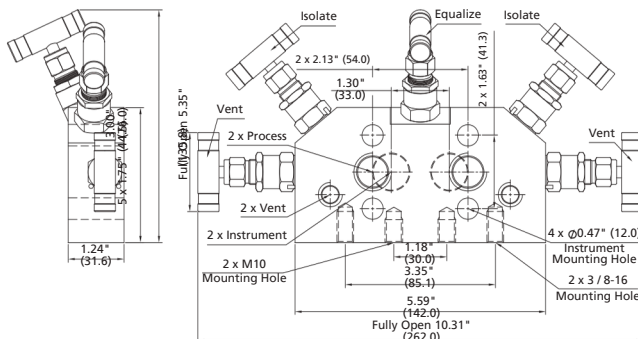
3D□ □ -FNS8-C-T



5-valve manifolds

Basic Ordering Number	Process	Instrument	Vent
5D□ □ -FNS8-C	1/2 Female NPT	Flange	1/4 Female NPT
5D□ □ -FNS8-C-P			1/4 Female NPT with Plug
5DH□ □ -FNS8-C			1/4 Female NPT

5D□ □ -FNS8-C

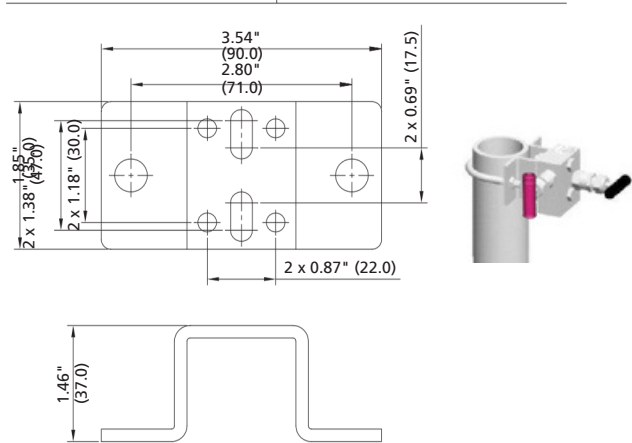


Accessories

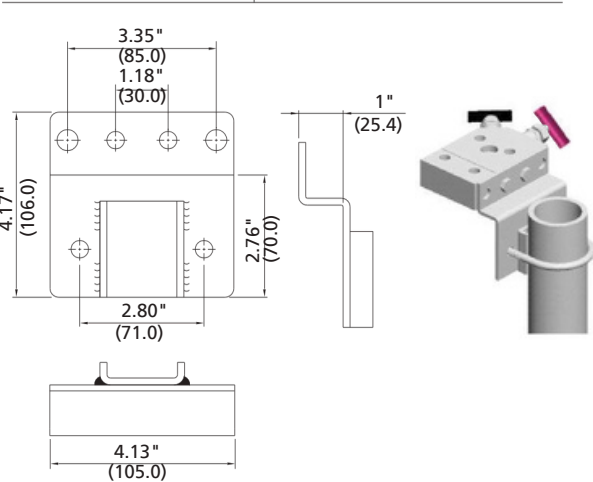
Manifold Mounting Bracket Kit

The integral assembly includes: bracket, U-bolts, bolts, gaskets, nuts

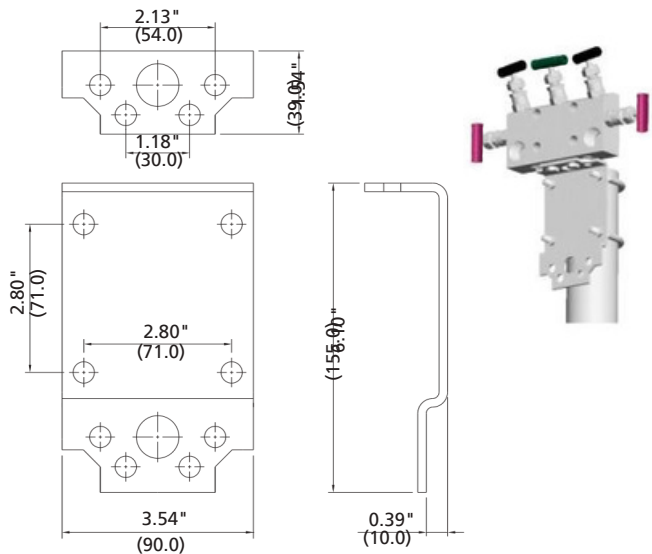
Basic Ordering Number	Mounting Manifold
SS-M2P-2BK	2R□ □ -XX-A, 2R□ □ -XX-L, 2RH□ □ -XX-A
SS-M2P-2BK-50	2R□ □ -XX-V
SS-M2P-2BK-17.5	3R□ □ -XX-V
SS-M2P-2BK-28.7	5R□ □ -XX-VB, 5R□ □ -XX-V



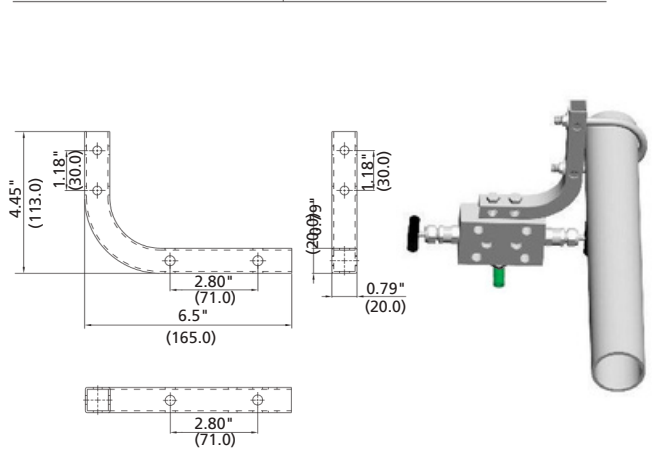
Basic Ordering Number	Mounting Manifold
SS-M2P-6BK	2D□ □ -XX-C, 3D□ □ -XX-C, 5D□ □ -XX-C, 2DH□ □ -XX-C, 3DH□ □ -XX-C, 5DH□ □ -XX-C



Basic Ordering Number	Mounting Manifold
SS-M2P-4BK	2D□ □ -XX-A, 2D□ □ -XX-L, 3D□ □ -XX-A, 3D□ □ -XX-L, 5D□ □ -XX-A, 5D□ □ -XX-AB, 5R□ □ -XX-L, 5R□ □ -XX-AB, 2DH□ □ -XX-A, 3DH□ □ -XX-A, 5DH□ □ -XX-A, 5RH□ □ -XX-AB



Basic Ordering Number	Mounting Manifold
SS-M2P-8BK	2D□ □ -XX-A, D□ □ -XX-A, 3D□ □ -XX-L, 2D□ □ -XX-C, 3D□ □ -XX-C, 5D□ □ -XX-C



Kidney Flanges and Eccentric Flanges

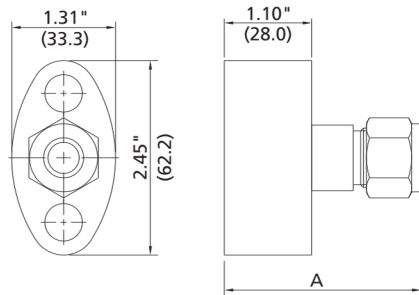
Features

- Working temperature:
PTFE: -65°F to 450°F (-54°C to 232°C)
Graphite: -65°F to 1200°F (-54°C to 649°C)
- Integrally forged body
- Standard material: A182 F316
- The process connection of transmitter can be changed to other connection types

Types and Dimensions

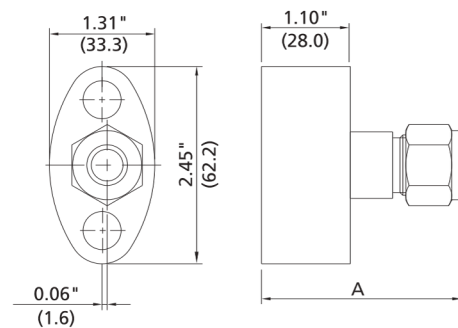
KF Series

Basic Ordering Number	Connection Type and Size	Dimension in. (mm)
		A
SS-KF-FNS4	1/4 Female	1.10 (28.0)
SS-KF-FNS8	1/2 Female	1.10 (28.0)
SS-KF-FL8	1/2	2.48 (63.0)
SS-KF-PB8	1/2 PB	2.10 (53.3)

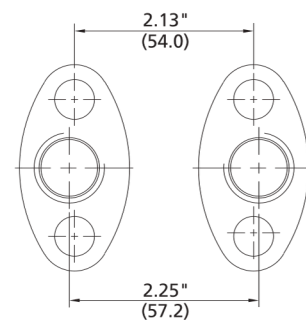
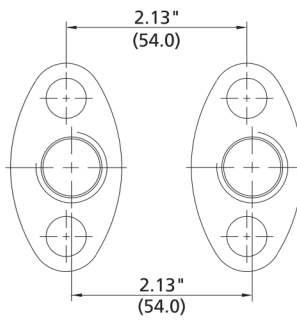
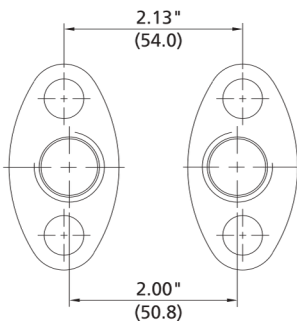


EF Series (Eccentric)

Basic Ordering Number	Connection Type and Size	Dimension in. (mm)
		A
SS-EF-FNS4	1/4 Female	1.10 (28)
SS-EF-FNS8	1/2 Female	1.10 (28)
SS-EF-FL8	1/2	2.48 (63)
SS-EF-PB8	1/2 PB	2.10 (53.3)



- A kidney flange set contains a kidney flange, a PTFE flange seal ring and two 7/16 - 20 UNF high tensile bolts.
- A whole eccentric flange set contains an eccentric flange, a PTFE flange seal ring and two 7/16 - 20 UNF high tensile bolts.
- The standard flange seal material is PTFE, graphite is an option. To order graphite flange seal material, add "- G" as a suffix.
- A variety of center line distances can be obtained by using various combinations of kidney flanges sets: 2.00" (50.8 mm), 2.13" (54.0 mm) and 2.25" (57.2 mm).



Gauge Valves and Instrumentation Manifolds

HUB-LOK

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