

Instrument Manifolds

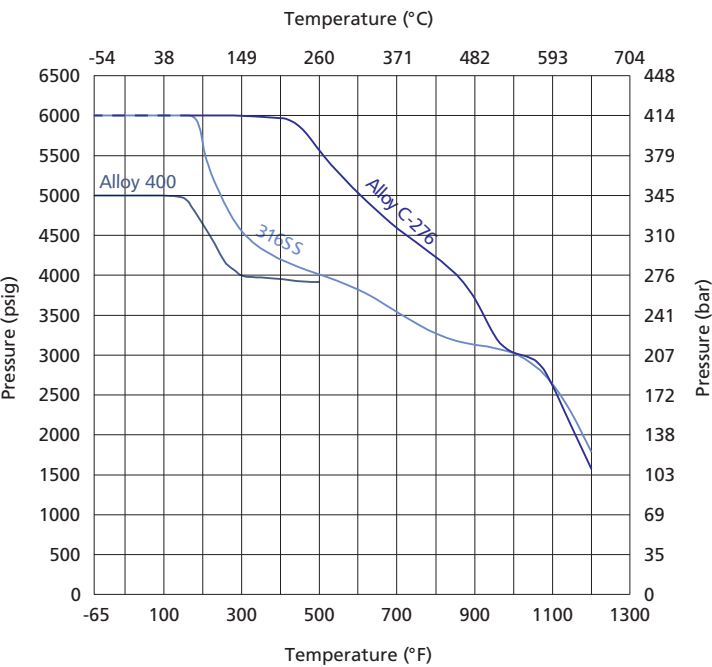
General Information

Features

- Maximum working pressure:
 - Stainless steel: up to 6000 psig (414 bar)
 - Alloy C-276: up to 6000 psig (414 bar)
 - Alloy 400: up to 5000 psig (345 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



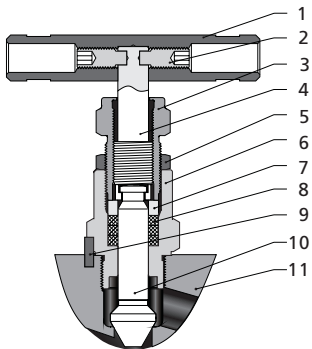
Pressure vs. Temperature



1. Based on graphite stem packing.
2. Contact the authorized representative or FITOK Group for curve graph of other materials.

Standard Materials of Construction

Item	Part	Valve Body Material		
		316 SS	Alloy 400	Alloy C-276
1	Handle	Anodized aluminum		
2	Set Screw	Stainless steel		
3	Packing Bolt	304 SS/A276		
4	Upper Stem	316 SS/A276		
5	Lock Nut	17-4PH		
6	Bonnet	316 SS/A479	Alloy R-405/B164	Alloy C-276/B574
7	Gland	316 SS/A276		
8	Packing	PTFE or PEEK or graphite		
9	Lock Pin	304 SS/A276		
10	Lower Stem	Chrome-plated 316 SS/A276	Alloy R-405/B164	Alloy C-276/B574
11	Body	316 SS/A479 316 SS/A182	Alloy 400/B164, B127,B564	Alloy C-276/B564
Lubricant		Molybdenum disulfide-based		



Handle color codes for functions:
BLACK=Isolate/block
RED=Test/vent
GREEN=Equalize

Process interface valves for sour gas service are available. Materials are selected in accordance with NACE MR0175/ISO 15150. Contact the authorized representative or FITOK Group if any request.

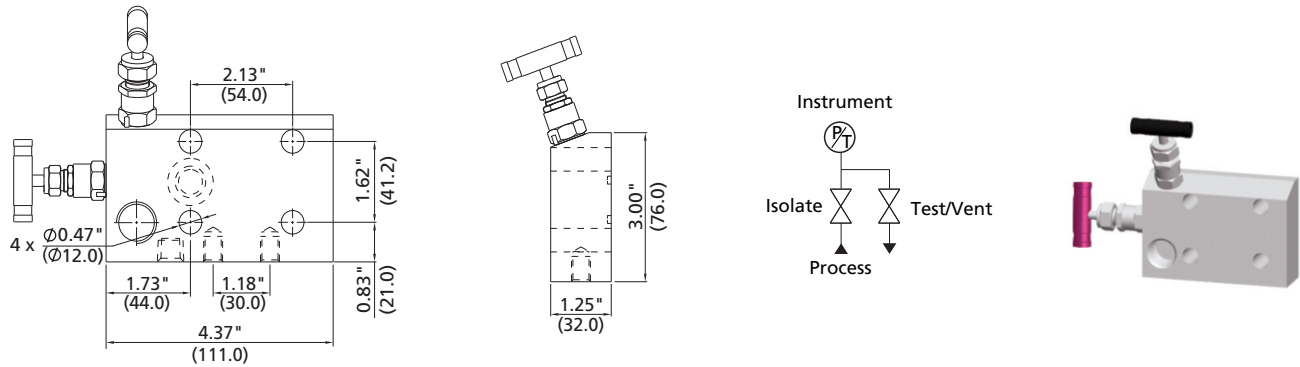
Instrument Manifolds

- Instrument manifolds are manufactured in accordance with ANSI B31.1 and B31.3, specifications meet MSS-SP-105. Flange design meets the requirements of MSS SP-99.
- 2-valve manifold is used with pressure gauges or pressure transmitters.
- 3-valve and 5-valve manifolds are used with differential pressure transmitters.

2-valve Manifolds

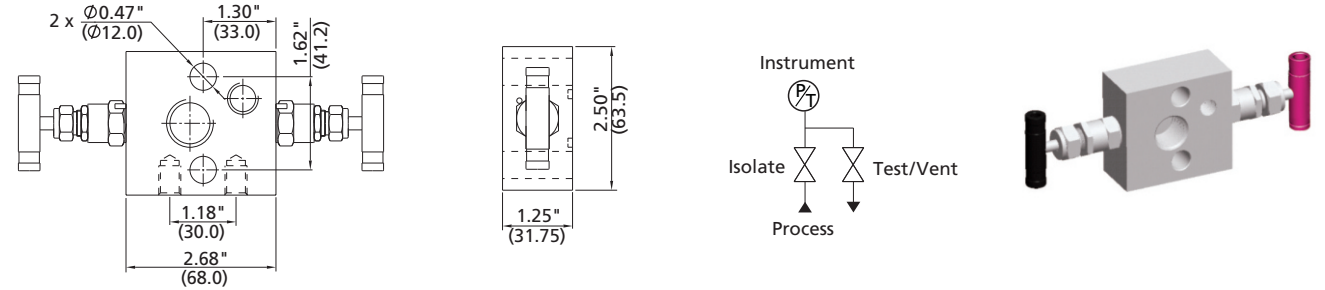
Consist of one block valve and one bleed valve

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2D□□-FNS8-A	1/2 Female NPT	Flanged	1/4 Female NPT



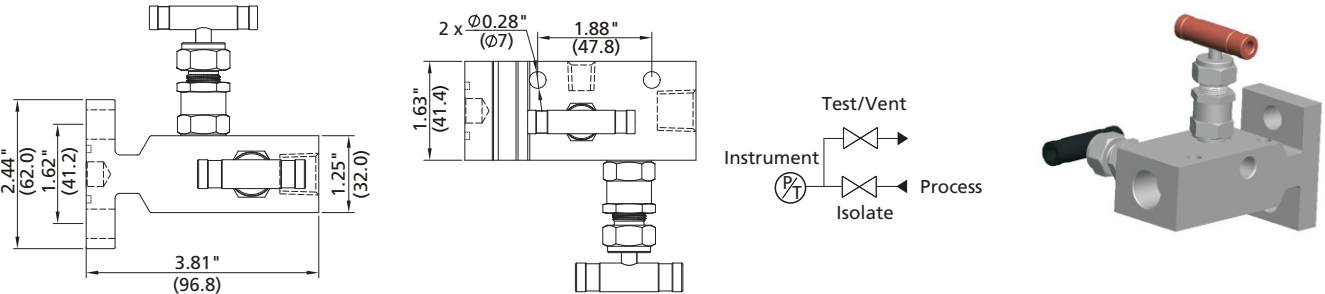
Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2D□□-FNS8-L	1/2 Female NPT	Flange	1/4 Female NPT



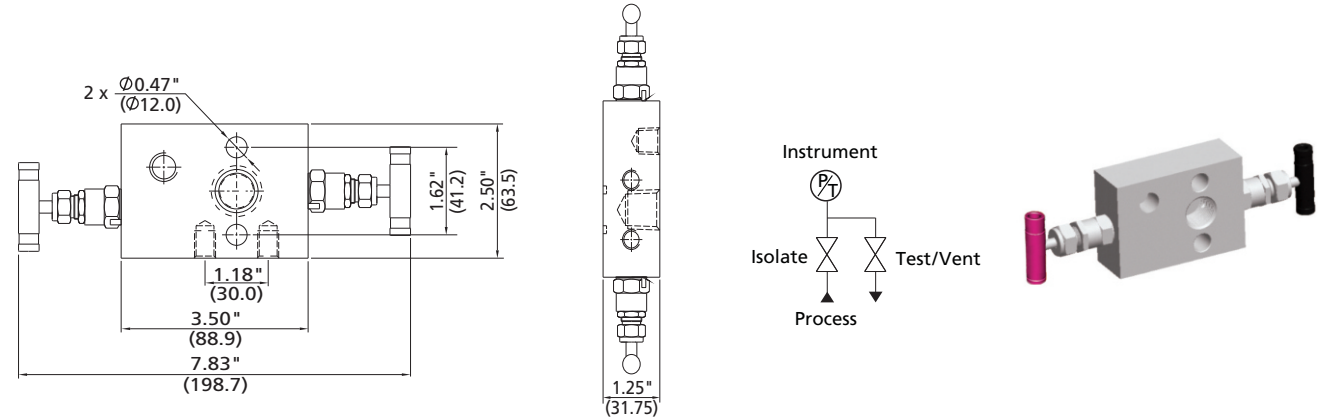
Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and two 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2D□□-FNS8-T	1/2 Female NPT	Flange	1/4 Female NPT



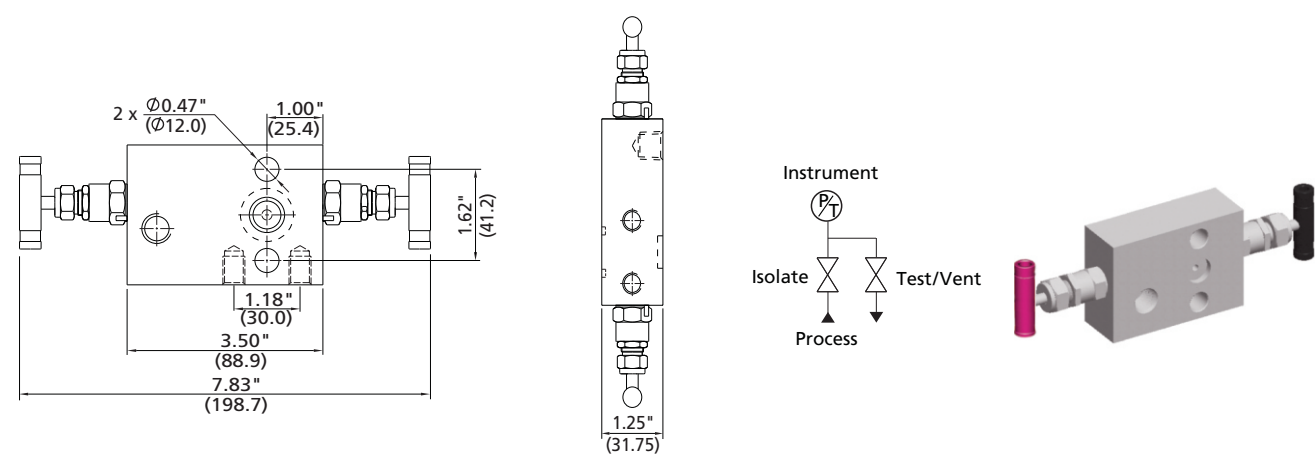
Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and two 7/16" UNF x 24 mm high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2D□□-FNS8-H	1/2 Female NPT	Flange	1/4 Female NPT



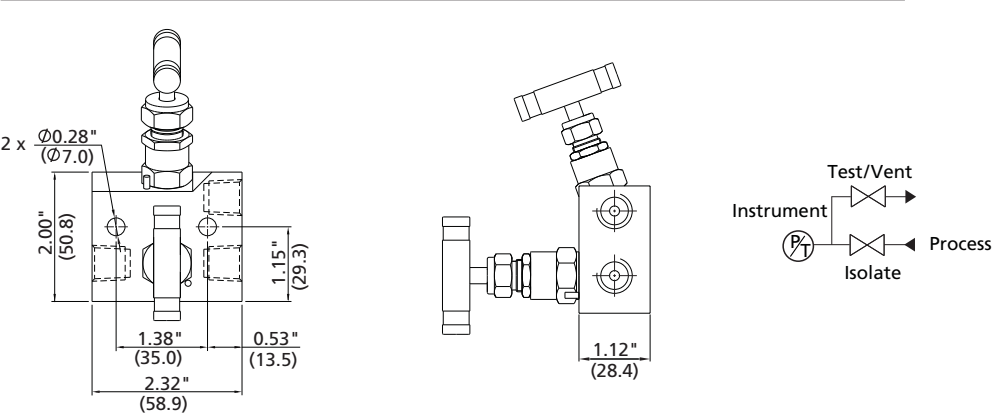
Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and two 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2D□□-F-H	Flange	Flange	1/4 Female NPT

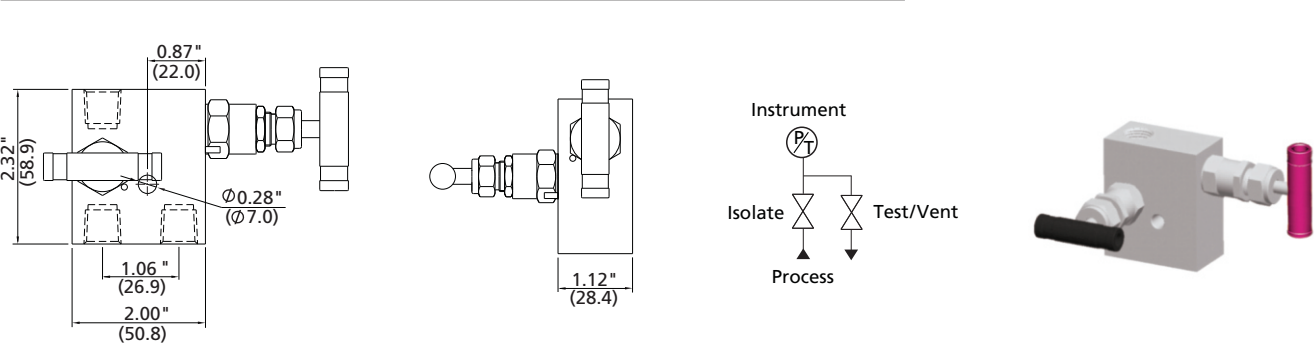


Every manifold is supplied with one PTFE sealing ring for manifold-to-instrument and two 7/16" UNF x 1.75" high tensile bolts.

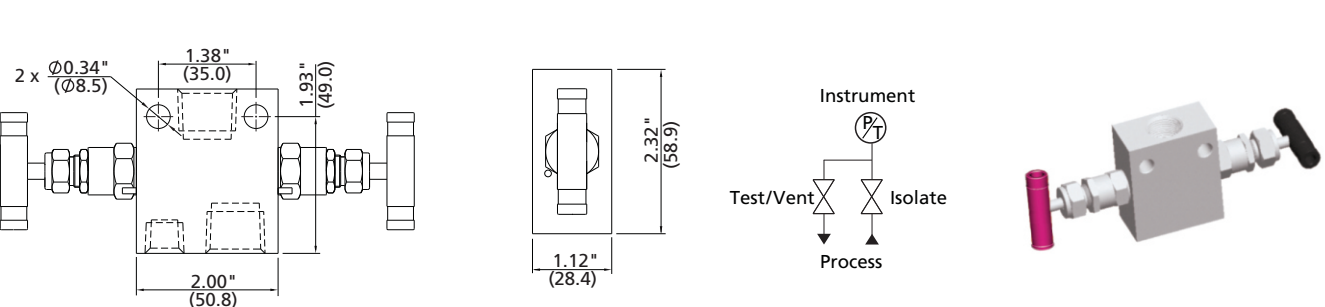
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2R□□-FNS4-A	1/4 Female NPT	1/4 Female NPT	1/4 Female NPT



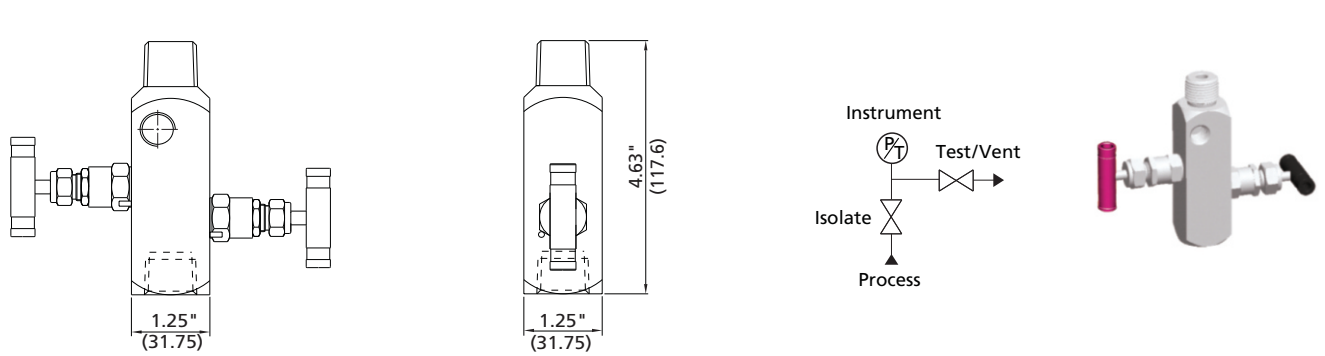
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2R□□-FNS4-C	1/4 Female NPT	1/4 Female NPT	1/4 Female NPT



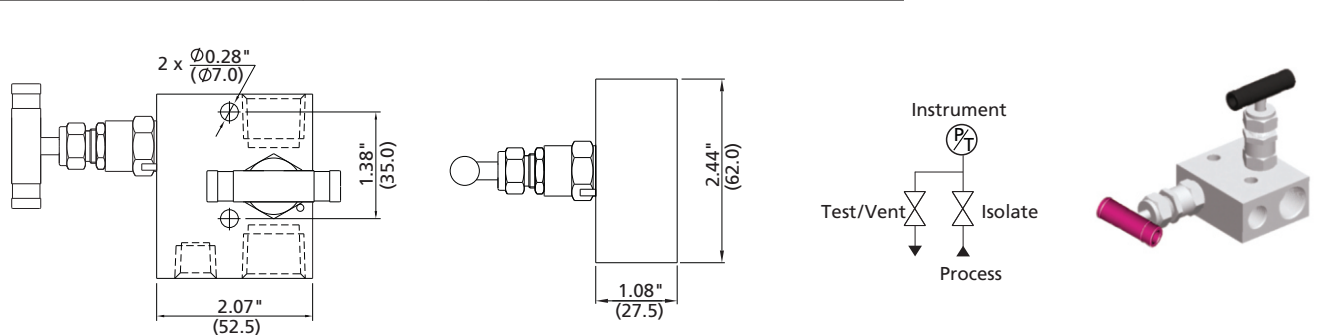
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2R□□-FNS8-L	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT



Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2R□□-FNS8-NS8-H	1/2 Female NPT	1/2 Male NPT	1/4 Female NPT
2R□□-NS8-H	1/2 Male NPT	1/2 Male NPT	1/4 Female NPT



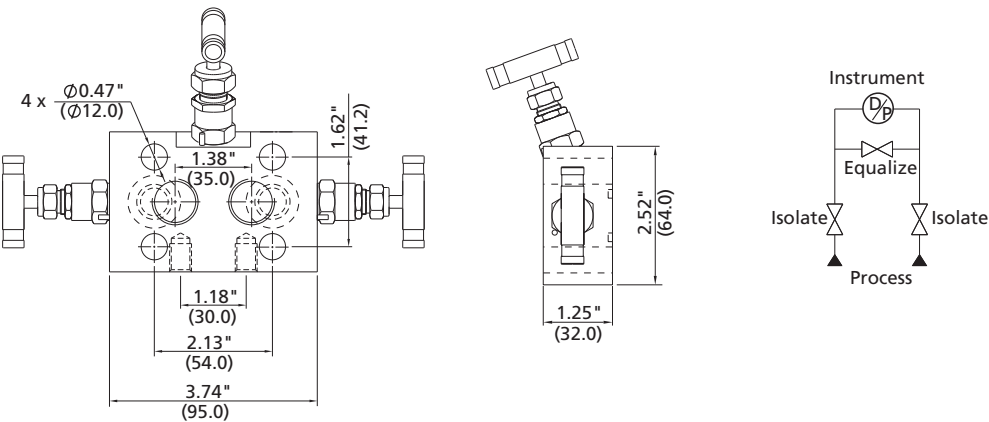
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2R□□-FNS8-V	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT



3-valve Manifolds

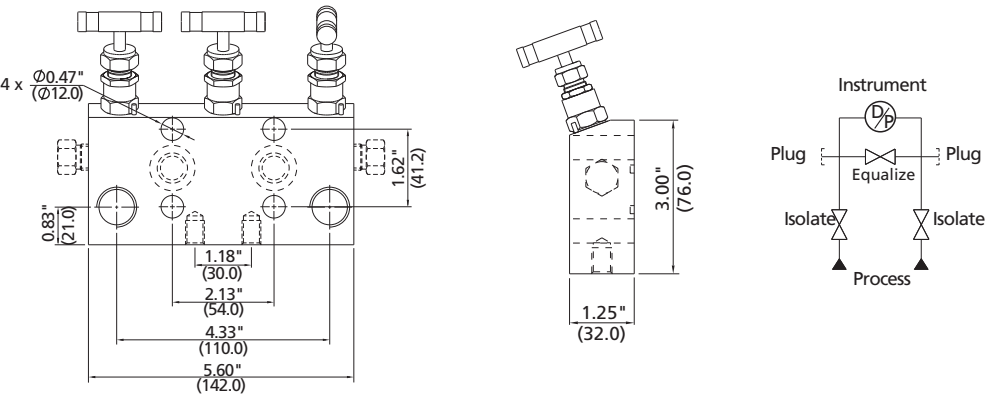
Consist of two block valves and one equalizer valve

Basic Ordering Number	Inlet/Process	Outlet/Instrument
3D□□-FNS8-A	1/2 Female NPT	Flange



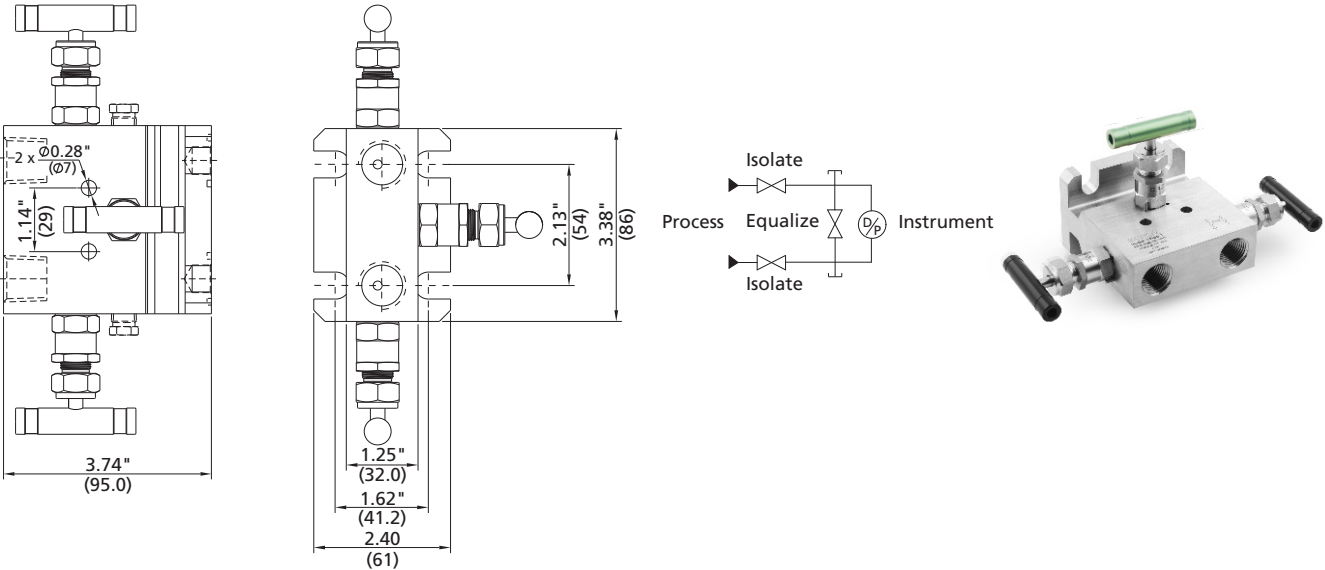
Every manifold is supplied with two PTFE sealing rings manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
3D□□-FNS8-L	1/2 Female NPT	Flange	Optional



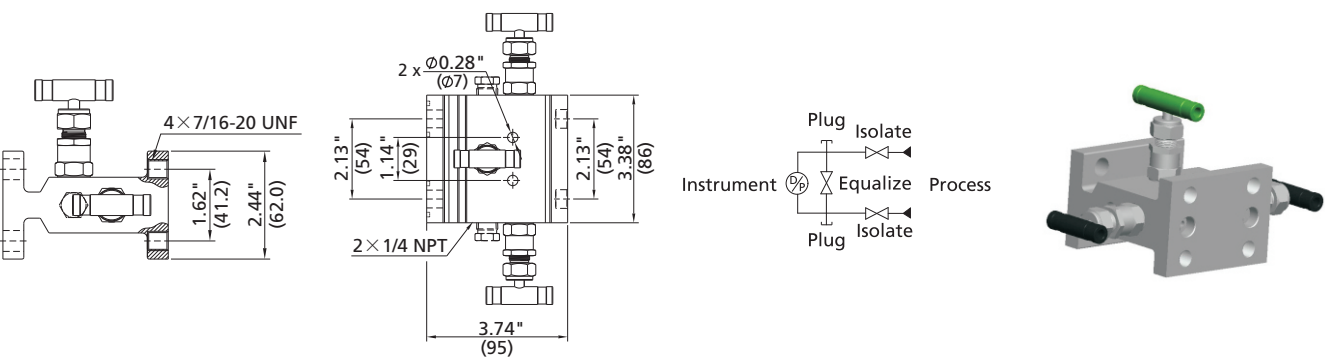
Every manifold is supplied with two PTFE sealing rings for manifold-to- instrument and four 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
3D□□-FNS8-T	1/2 Female NPT	Flanged	Optional



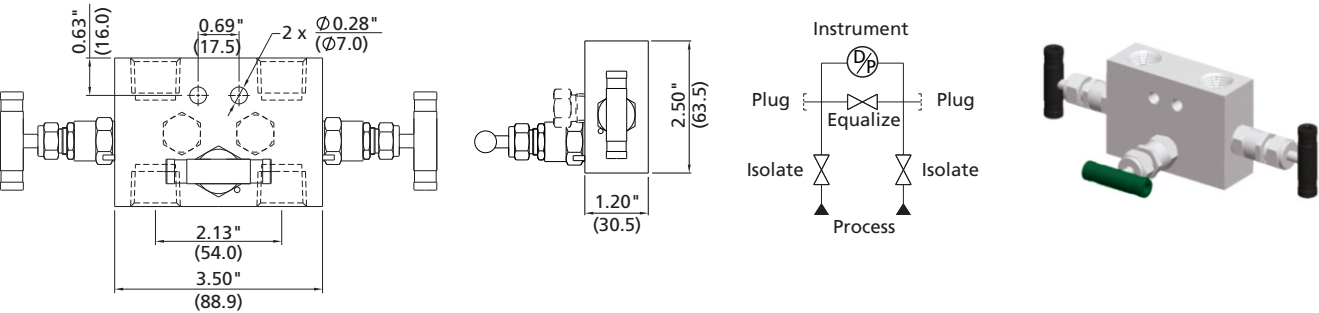
Every manifold is supplied with two PTFE sealing ring for manifold-to-instrument and four 7/16" UNF x 24 mm high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
3D□□-F-I	Flanged	Flanged	Optional



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

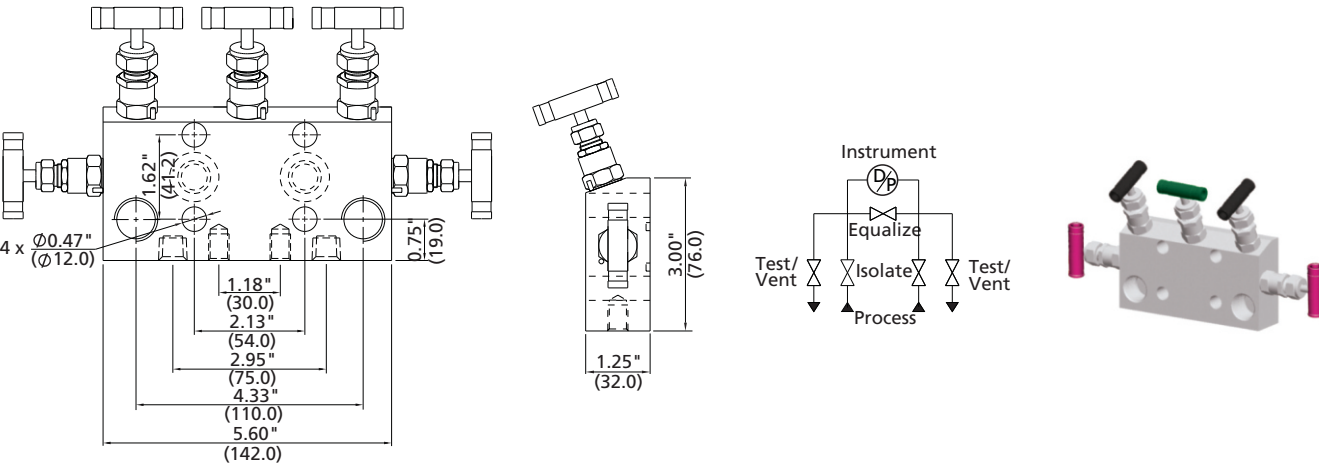
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
3R□□-FNS8-V	1/2 Female NPT	1/2 Female NPT	Optional



5-valve Manifolds

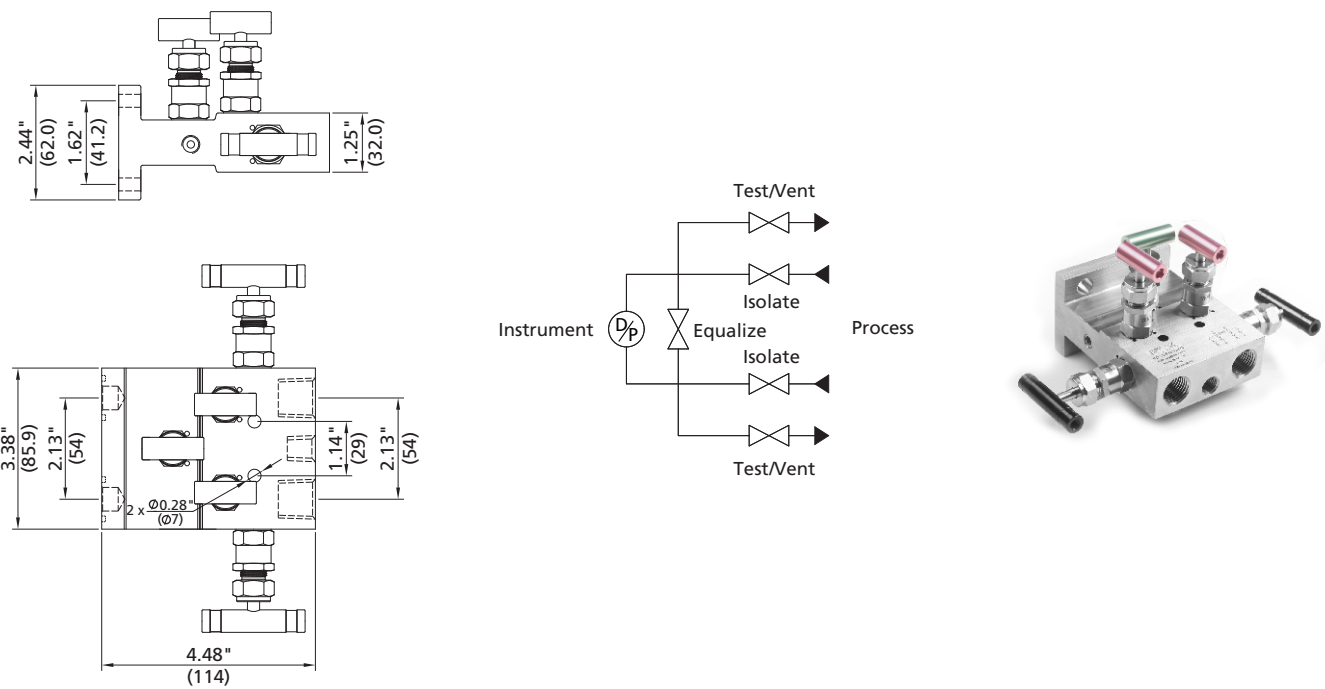
Double-bleed Function of 5-valve Manifold
Consist of two block valves, two bleed valves, and one equalizer valve

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
5D□□-FNS8-A	1/2 Female NPT	Flange	1/4 Female NPT



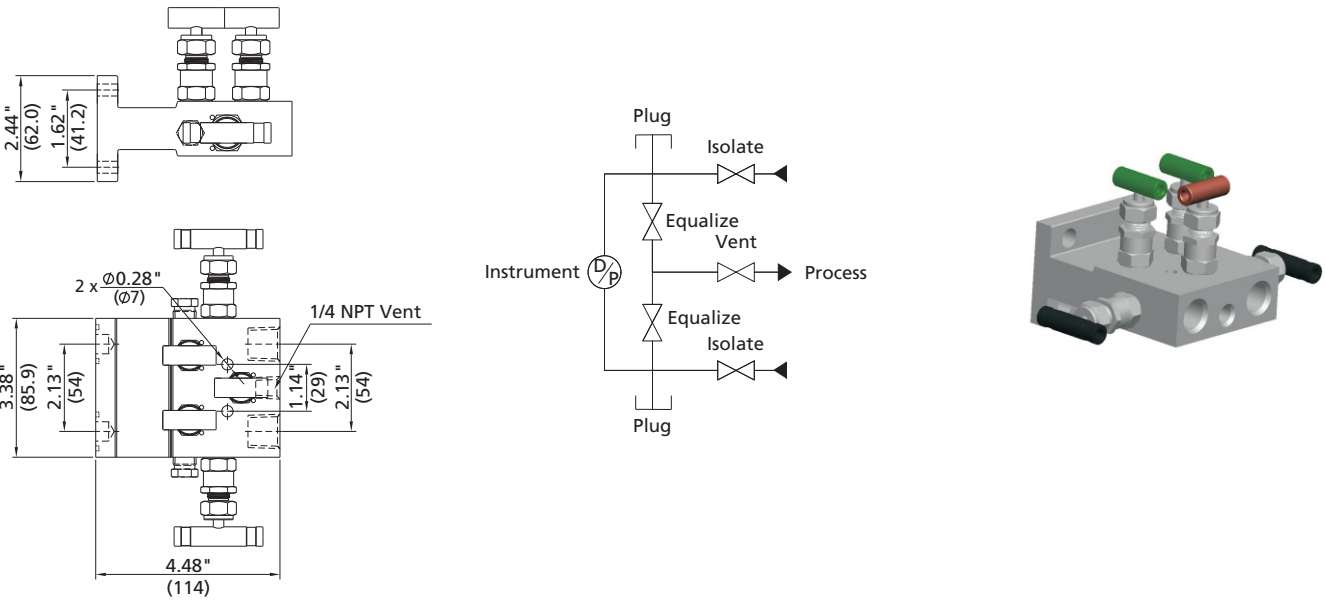
Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
5D□□-FNS8-F	1/2 Female NPT	Flange	1/4 Female NPT



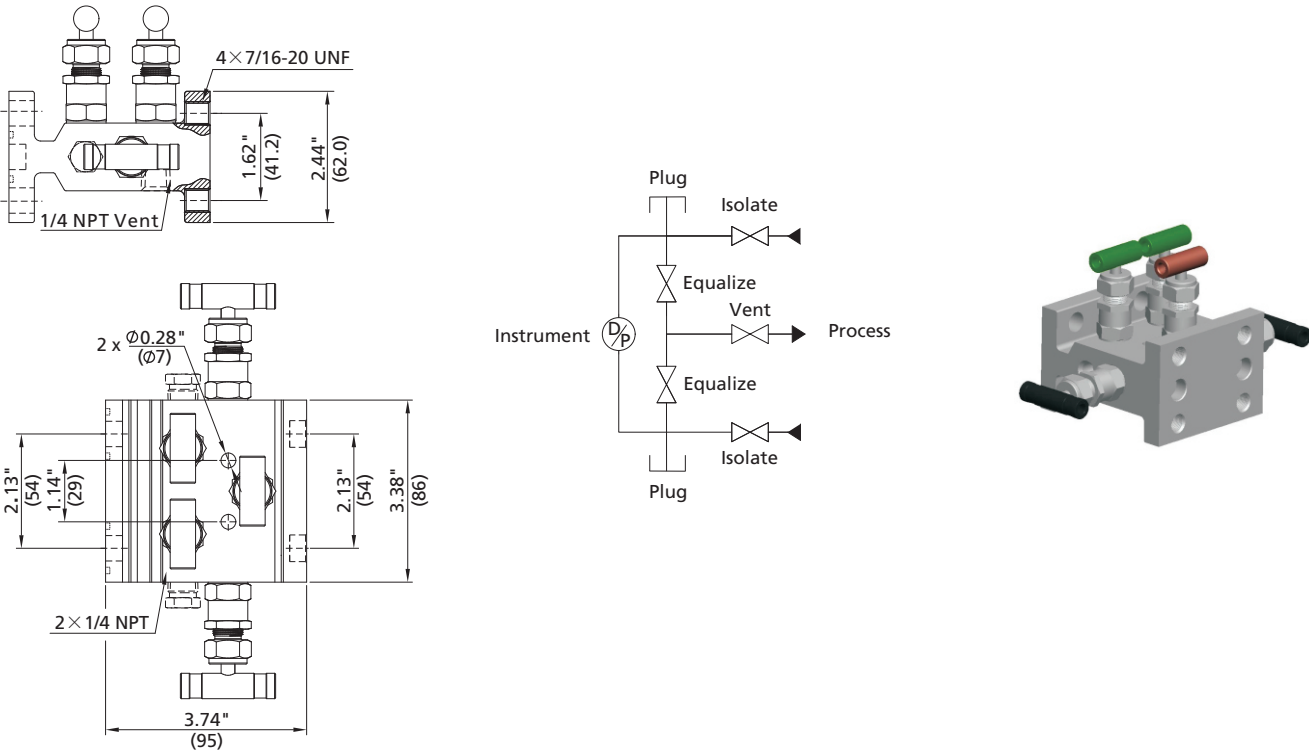
Every manifold is supplied with two PTFE sealing ring for manifold-to-instrument and four 7/16" UNF x 24 mm high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Vent	Test
5D□□-FNS8-TB	1/2 Female NPT	Flange	1/4 Female NPT	Optional



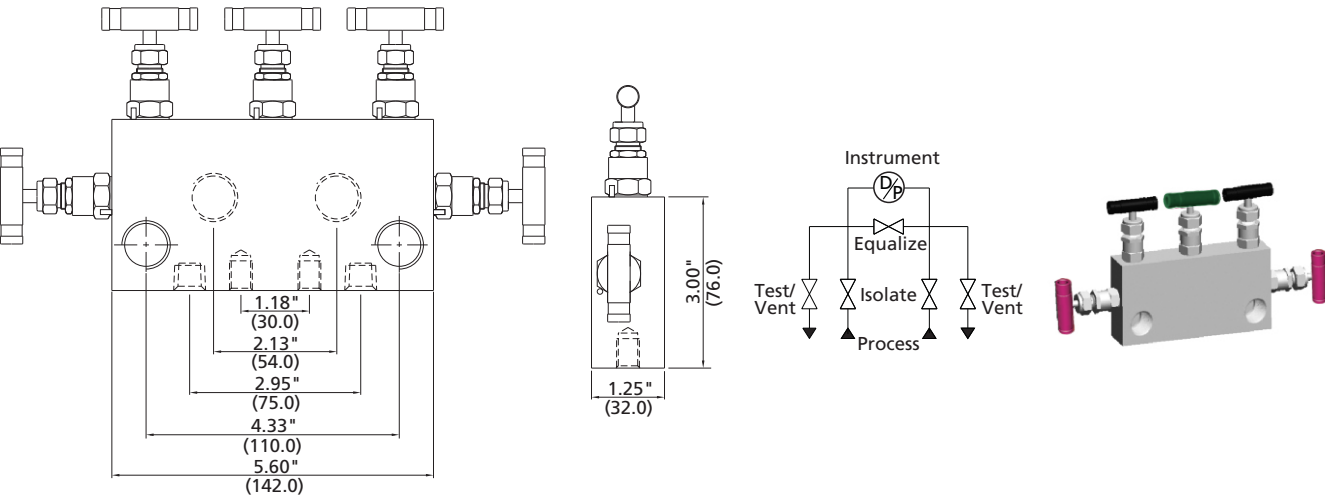
Every manifold is supplied with two PTFE sealing ring for manifold-to-instrument and four 7/16" UNF x 24 mm high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Vent	Test
5D□□-F-I	Flanged	Flanged	1/4 Female NPT	Optional



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

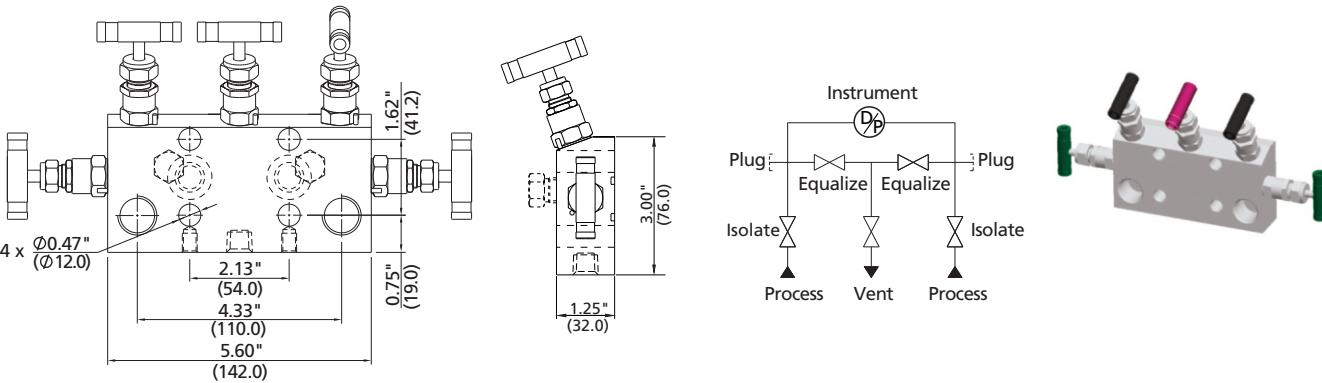
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
5R□□-FNS8-L	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT



5-valve Custody Transfer/Fiscal Metering Manifold

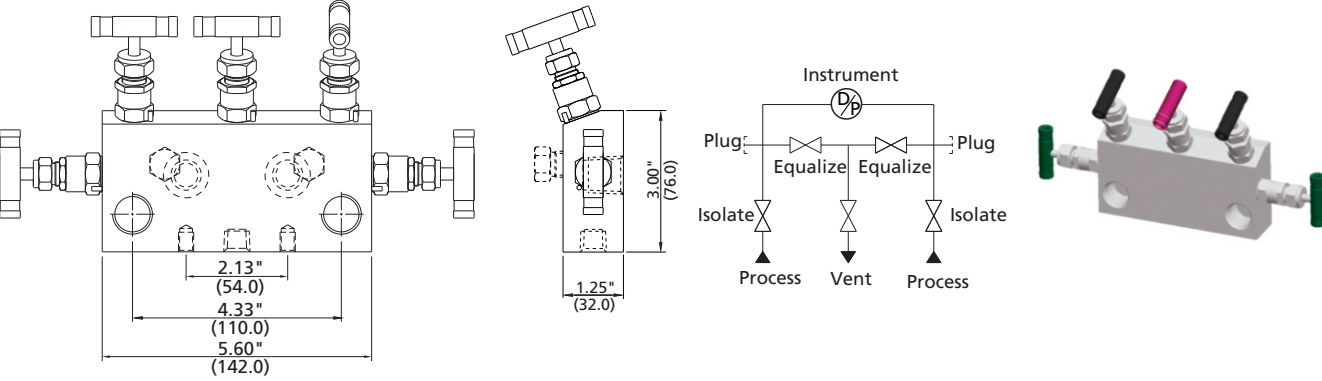
Consist of two block valves, one bleed valve, and two equalizer valves

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Vent	Test
5D□□-FNS8-B	1/2 Female NPT	Flanged	1/4 Female NPT	Optional



Every manifold is supplied with two PTFE sealing rings for manifold-to-instrument and four 7/16" UNF x 1.75" high tensile bolts.

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Vent	Test
5R□□-FNS8-B	1/2 Female NPT	1/2 Female NPT	1/4 Female NPT	Optional



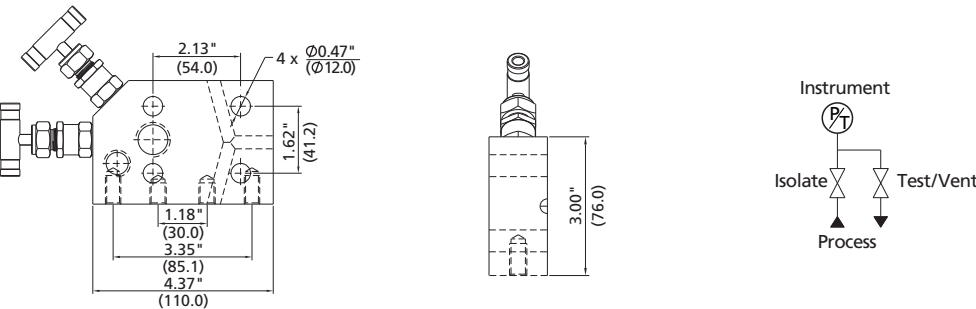
C Integral Manifolds

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

Each of the following manifold contains four 7/16" UNF x 1.75" high tensile bolts.

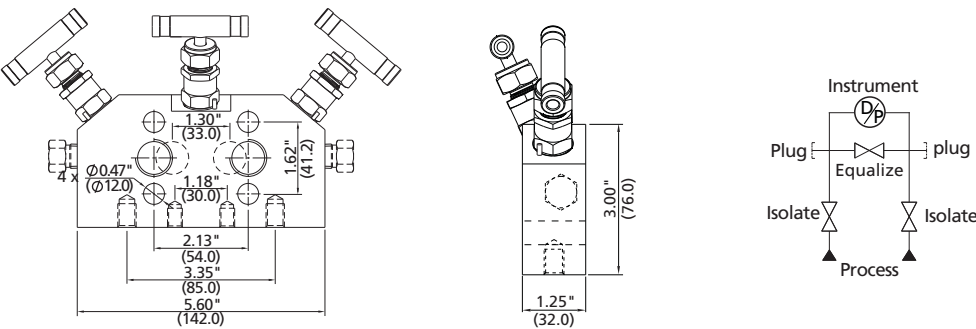
2-valve Manifold

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
2D□□-FNS8-C	1/2 Female NPT	Flanged	1/4 Female NPT



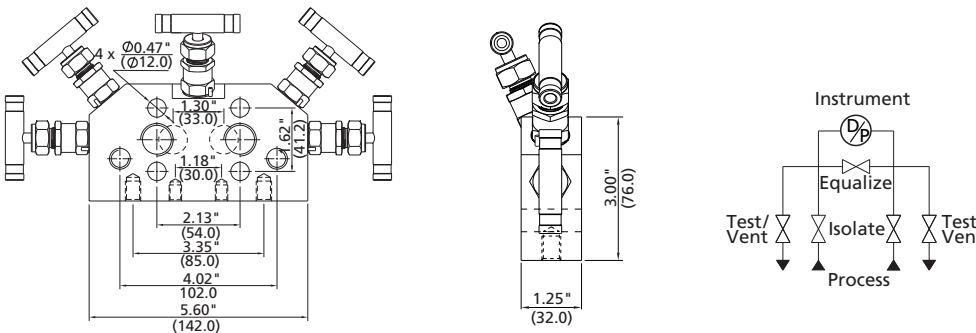
3-valve Manifold

Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
3D□□-FNS8-C	1/2 Female NPT	Flange	Optional



5-valve Manifold

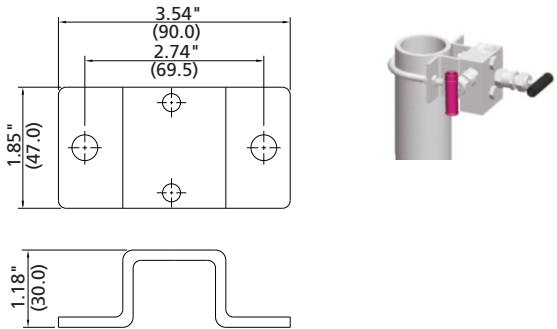
Basic Ordering Number	Inlet/Process	Outlet/Instrument	Test/Vent
5D□□-FNS8-C	1/2 Female NPT	Flange	1/4 Female NPT



Manifold Bracket Supports

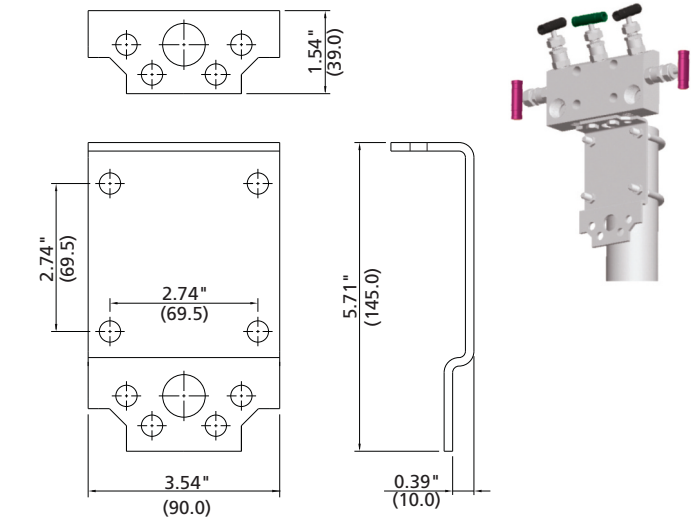
SS-M2P-2BK

- 1. The integral assembly including: bracket, U-bolts, bolts, gaskets, nuts
- 2. Used to fix 2R□□-XX-A, 2R□□-XX-C, 2R□□-XX-L, 2R□□-XX-V



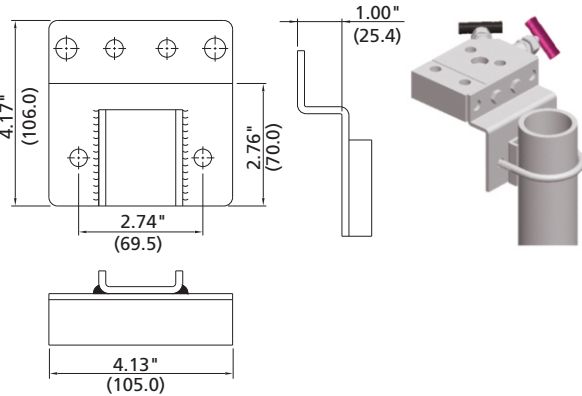
SS-M2P-4BK

- 1. Install support design is available for horizontal or vertical installation
- 2. The integral assembly including: bracket, U-bolts, bolts, gaskets, nuts
- 3. Used to fix 2D□□-XX-A, 2D□□-XX-L, 2D□□-XX-H, 3D□□-XX-A, 3D□□-XX-L, 5D□□-XX-A, 5D□□-XX-B, 5R□□-XX-L, 5R□□-XX-B



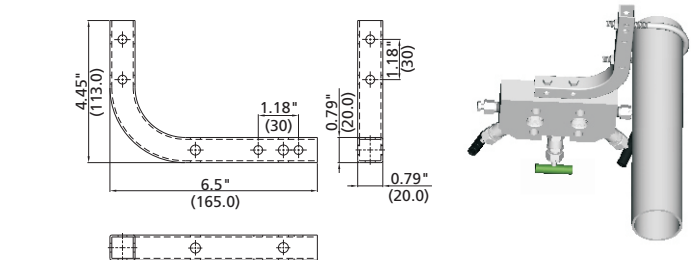
SS-M2P-6BK

- 1. The integral assembly including: bracket, U-bolts, bolts, gaskets, nuts
- 2. Used to fix 2D□□-XX-C, 3D□□-XX-C, 5D□□-XX-C



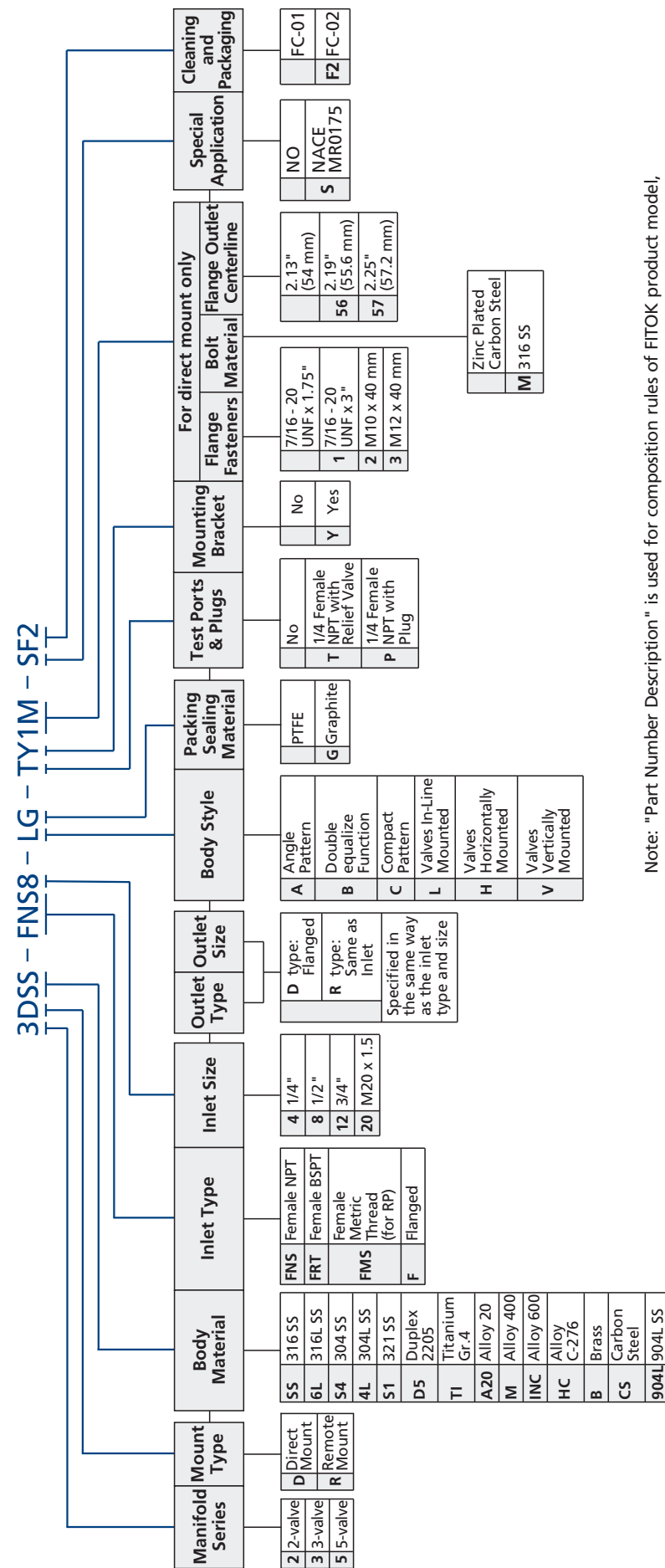
SS-M2P-8BK

- 1. Install support design is available for horizontal or vertical installation
- 2. The integral assembly including: bracket, U-bolts, bolts, gaskets, nuts
- 3. Used to fix 2D□□-XX-A, 2D□□-XX-L, 2D□□-XX-H, 2D□□-XX-V, 3D□□-XX-A, 3D□□-XX-L, 5D□□-XX-A, 5D□□-XX-B



For more installation information regarding other manifolds, please contact the authorized representative or FITOK Group.

Part Number Description

FITOK

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 company or authorized agents.

1. The standard center line distance of direct mounting flange outlet of 3-valve manifold and 5-valve manifold is 2.13" (54 mm). Center line distance of 2.188" (55.6 mm) is suitable for range 6 and 7, 1151 series transmitter.
Center line distance of 2.250" (57.2 mm) is suitable for range 8, 1151 series transmitter.
2. The standard configuration of direct mounting manifold contains PTFE flange seal ring and 7/16-20 UNF X 1.75" high tensile bolts, can be connected with transmitters under main brands,
such as EJA, Honeywell, Foxboro 843 dlp, and Rosemount® 151, 2024, 3051H series.
3. 7/16-20 UNF x 3" high tensile bolts can be supplied, can be used for Rosemount® 3051C transmitter with process flange and coplanar mounting manifold.
4. 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 L

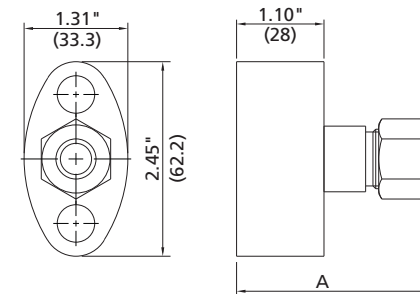
Accessories

Kidney Flange and Eccentric Flange

Features

- ④ Working temperature:
PTFE: -65°F to 450°F (-54°C to 232°C)
Graphite: -65°F to 1000°F (-54°C to 538°C)
- ④ Integral forged body
- ④ Standard material: A182 F316

Kidney Flange



The process connection type of transmitter can be transformed to other connection types.

Ordering Information

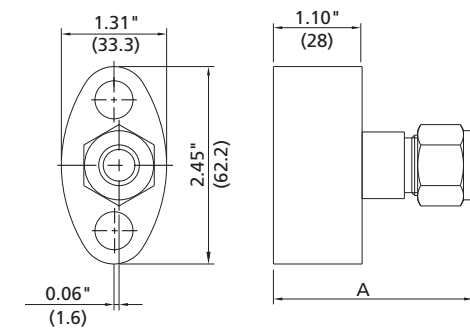
Basic Ordering Information		
Basic Ordering Number	Connection Type and Size	Dimension in. (mm)
		A
SS-KF-FNS4	1/4 Female NPT	1.10 (28)
SS-KF-FNS8	1/2 Female NPT	1.10 (28)
SS-KF-FL8	1/2" FITOK	2.48 (63)
SS-KF-PB8	1/2 PB	2.10 (53.3)

A kidney flange set contains a PTFE flange seal ring and two 7/16 - 20 UNF high tensile bolts.

The Selection of Flange Seal Materials

The standard flange seal material is PTFE, graphite is an option. To order graphite flange seal material, add - G as a suffix.

Eccentric Flange

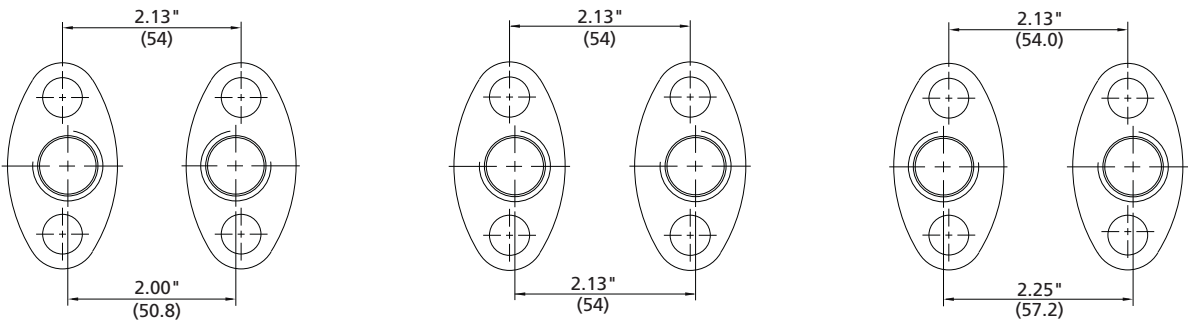


Ordering Information

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

1. Eccentric flange needs to be ordered in whole set.
2. A whole eccentric flange set contains two eccentric flanges, two PTFE flange seal rings and four 7/16 - 20 UNF high tensile bolts.

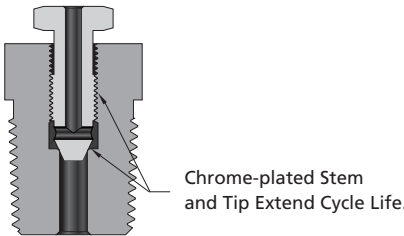
Various Combinations of Eccentric Flange Set



Combinations of eccentric flange set can give different center line distances of 2.0" (50.8 mm), 2.13" (54 mm) and 2.25" (57 mm).

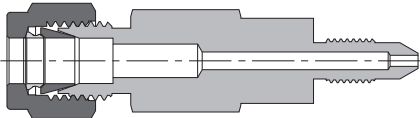
Relief Valve

- RB series RBSS-N54 Bleed Valve is used as standard test/vent valve.
- For more information, refer to FITOK Bleed Valve RB series.



Calibration Fitting

- The calibration fittings can be connected directly with the bleed port of transmitter so that the calibration process can be simplified.
- For more information, refer to FITOK Calibration Fitting.



The auxiliary installation for 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 0 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 0 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
Honeywell Transmitters				
STDXXX-XXA-XXX	A1			
STDXXX-XXH-XXX	A5	A	A5	
STXXX-XXG-XXX			A1	A
STGXXX-XXA-XXX				
SMXXX-XXA-XXX	A1			
SMXXX-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			

A: Connecting with fittings
A1: Connecting with flange and sealing rings, using 7/16 - 20 UNF 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 UNF x 3" bolts
A5: Remove the kidney flanges and then connect with flange and sealing rings