

SmartLine Manifolds Specification

34-ST-03-149, April 2020



Introduction

Honeywell SmartLine Manifolds are a perfect compliment to SmartLine Pressure transmitters to provide factory tested, calibrated and certified equipment for accurate, reliable and safe measurement in process applications.

- Available for entire range of SmartLine Pressure Transmitters
- Block and Bleed models for in-line transmitters
- 2, 3 and 5-valve manifold configurations for dual head AP, GP and DP transmitters
- Wide and compact body styles
- Traditional and wafer style variants
- Available in various materials including NACE compliant materials of construction
- Every unit is factory leak tested
- Available with manifold mounting brackets
- Factory integration option with transmitter for hassle-free experience
- Various certification options
- Full material traceability



6000 psi Pressure Version

PTFE

- Maximum pressure 413 bar (6000 psi) at -40 to 100°C (212°F)
- Maximum pressure 206 bar (3000 psi) at 215°C (420°F)

Graphite

- Maximum pressure 250 bar (3625 psi) at -40 to 100°C (212°F)
- Maximum pressure 155 bar (2250 psi) at 450°C (842°F)

Salient Features

Dual Grade as Standard

- All stainless steel SmartLine manifolds in stainless steel are SS 316/316L dual grade certified. All non-wetted components are SS316/316L

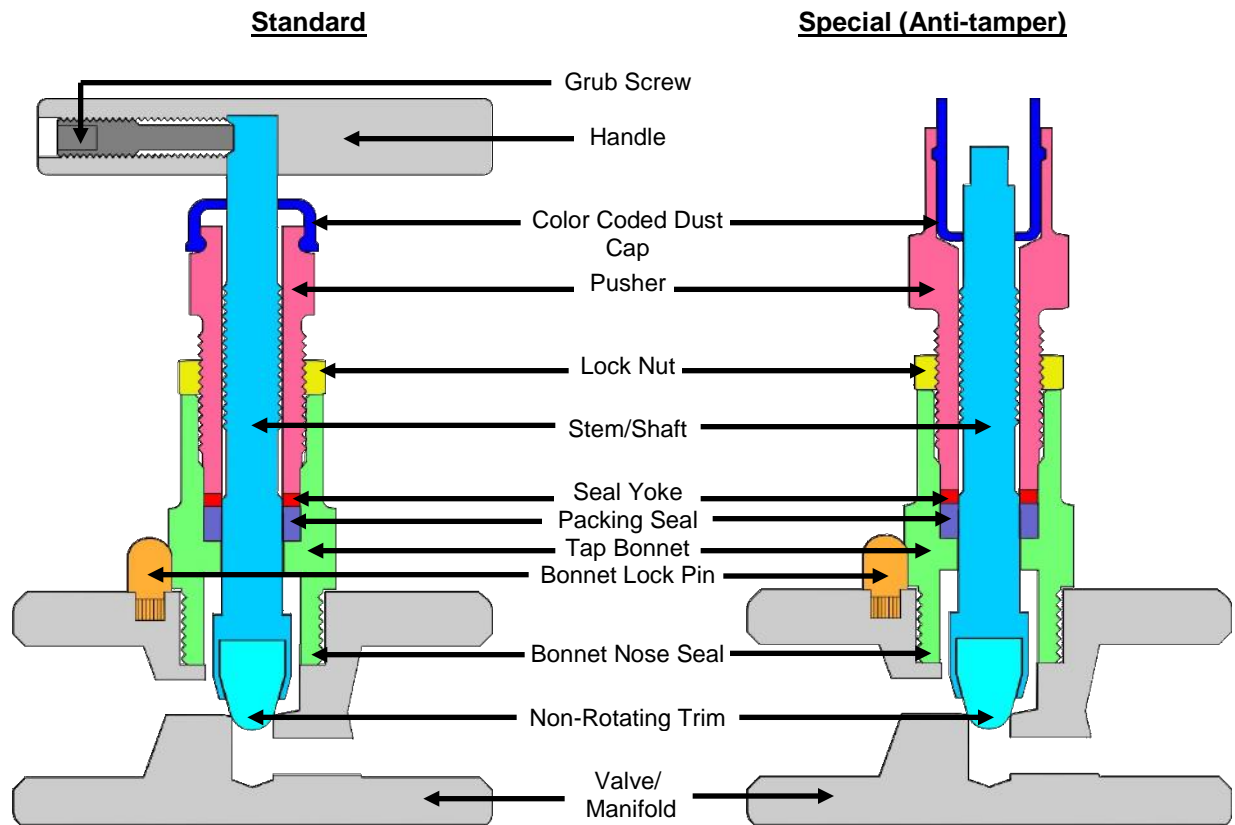
Safety Assured

- Each manifold model is designed to withstand a destructive test of 4 x "Over Pressure" (per ASME VIII, B31.1, B31.3 standards) to ensure reliable and safer operations in the field

User Friendly Design

- The T-bar on valveheads has a hidden screw to enable smooth and hassle-free operation of valves.
- No short handles for effortless valve operation
- Ergonomic valvehead placements to avoid "pinching fingers"

The Valvehead Design



- Low Operating Torque
- Safety Back Seating of Stem
- Anti Blow-Out Shaft
- Stem Seal below the Threads
- Bonnet Seal located below Threads
- External adjustment of packing seal
- Non-Rotating Trim
- Color Coded Valve Function
- Hidden Tap Handle
- Locating Screw
- Full Traceability
- Lock Nut
- Bonnet Lock Pin
- Stem dust cap
- Mirror Finish Burnished Stem Seal Surface
- Single Point Machined Threads
- Tap Assembly Tracker Code

Features and Benefits Explained

Safety Back Seating of Stem

This function prevents accidental removal of the stem while in operation. When the tap is in the fully opened position the stem produces a metal to metal secondary back seal, removing continuous pressure from the packing.

Anti Blow-Out Shaft

Reduces risk of injury as the shaft will be contained in the unlikely event of a shaft thread failure due to unforeseen circumstances.

Stem Seal below the Threads

This isolates the stem threads from the process media, preventing thread corrosion and keeps solids from entering the thread area which can cause galling. It also isolates the thread lubricant from the process, preventing process contamination as well as lubricant washout.

Bonnet Seal located below Threads

A metal to metal seal is utilized to provide a positive seal that maintains its effectiveness even at high temperatures. This seal is located below the bonnet threads isolating them from the process media.

Bonnet Lock Pin

All taps are secured by a Bonnet lock pin. These pins are machined from billet rather than using a roll pin. The result is a shouldered bonnet lock pin that is knurled on the insertion point.

Non-Rotating Trim

This stops galling or damage to the seat face by not allowing the trim to rotate while lifting off, and seating down on, the seating surface. For added security the trim is produced from billet rather than using a sphere (pure ball) as a ball does not have polarity. This ensures the trim can only rotate around the same axis as the stem.

Single Point Machined Threads

Produces high accuracy threads as opposed to tapping.

100% Pressure Tested

Each manifold is tested with nitrogen gas to a minimum of 750 psi. Hydrostatic testing at 1.5 x MAWP is also available as an option.

External adjustment of packing seal

The stem seal can be easily adjusted insitu, without any disassembly of the valve or manifold.

Stem dust cap

Protects stem threads against contaminants in the atmosphere.

Color Coded Valve Function

Tap function easily identifiable through color coded dust caps.

Full Traceability

All components are fully traceable back to source.

Locknut

Ensures safe operation under high vibration conditions.

Seal Yoke

The high precision yoke provides good encapsulation and integrity of the stem seal.

Hidden Tap Handle Locating Screw

This improves the feel to the user when operating the tap as there are no sharp edges or protruding bolts.

Mirror Finish Burnished Stem Seal Surface

The face where the seal contacts the stem is burnished to a mirror like finish. This reduces operating torque and extends the life of the seal.

Tap Assembly Tracker Code

All taps are assembled with a tracker code to ensure 100% traceability.

Valvehead Materials

Across SmartLine manifolds, all wetted components of the valvehead are produced from the same material grade as the manifold body. When special alloys are used, the non-wetted components will be produced from 316/316L SS. Below is a list of a few common materials to illustrate the list of materials used. Care should be taken to specify the correct material for the process media and conditions.

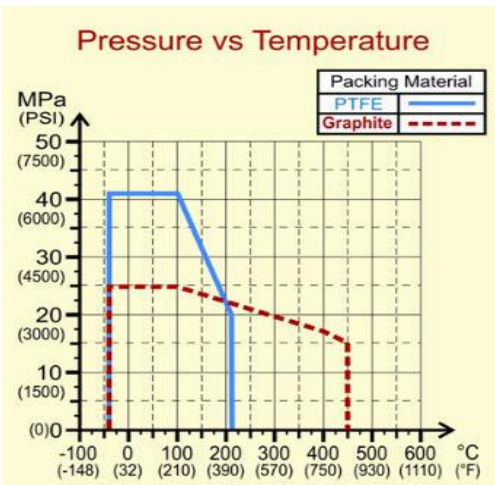
| Valvehead Component | Manifolds Body Material of Construction | | | | | | | | | |
|---------------------------|---|------------------|-----------------------------|-----------------------------|------------------|-------------------------------------|------------------|-------------|--------------------------|-----------------------------------|
| | SS 316/316L Dual Certified | | | | Hastelloy® C-276 | Duplex stainless steel W Nr: 1.4462 | Inconel 625 | Monel® 400 | Carbon Steel (ASTM A105) | |
| Bonnet | SS 316/316L Dual Certified | Hastelloy® C-276 | SS 316/316 L Dual Certified | SS 316/316 L Dual Certified | Hastelloy® C-276 | Duplex stainless steel W Nr: 1.4462 | Hastelloy® C-276 | Inconel 625 | Monel® 400 | CS (ASTM A105) |
| Shaft/Stem | | | Hastelloy® C-276 | Monel® 400 | Hastelloy® C-276 | | | | | SS 304 |
| Trim | | | Hastelloy® C-276 | Monel® 400 | Hastelloy® C-276 | | | | | SS 304 Tungsten Carbide Ball |
| Pusher | SS 316/316 L | | | | | | | | | CS (ASTM A105) |
| Yoke | | | | | | | | | | CS (ASTM A105) |
| Handle | | | | | | | | | | CS (ASTM A105) |
| Grub Screw | | | | | | | | | | SS 304 |
| Bonnet Lock Pin | | | | | | | | | | SS 304 |
| Lock Nut | | | | | | | | | | SS 304 |
| Dust Cap | | | | | | | | | | UV Stabilized Nylon - Color Coded |
| Packing Seal | PTFE or Graphite | | | | | | | | | |
| Manifold Mounting Bracket | Available as an option in Carbon Steel or SS 316 for all manifolds, suitable for 2" pipe mounting | | | | | | | | | |

| | |
|--|---------------------------|
| | Process wetted components |
| | Non-wetted components |
| | Manifold Mounting Bracket |

* Monel® 400 or UNS N04400.

** Hastelloy® C-276 or UNS N10276.

Pressure / Temperature Ratings



6000 psi Pressure Version (Standard)

PTFE

- Maximum pressure 413 bar (6000 psi) at -40 to 100°C (212°F)
- Maximum pressure 206 bar (3000 psi) at 215°C (420°F)
- Graphite
- Maximum pressure 250 bar (3625 psi) at -40 to 100°C (212°F)
- Maximum pressure 155 bar (2250 psi) at 450°C (842°F)

Materials Certificates, Testing and Traceability

Material Certificates and Traceability

Each SmartLine manifold body is permanently marked with an alphanumeric traceability code called assembly A-number.

Furthermore, the individual valveheads are pre-assembled and get their own traceability code marked onto them before being installed into the manifold bodies. These codes link each component to manufacturing, assembly and mill test reports (MTR's).

The A-Number is stored in our ISO 9001 quality management system and corresponds to our Material Certificate Register (MCR).

An MCR is supplied with every order to the customer. This document gives a list of the corresponding material batch numbers and grades for all wetted components used to assemble that specific batch of manifolds. Along with this MCR, mill test reports (MTR's) are also supplied in a mini data book.

All SmartLine manifolds carry permanent markings of complete model code (including material of construction, certificates etc.), pressure and temperature ratings and a logic diagram.

The material of construction marking pertains to all the wetted components in the valve/manifold.

Testing and Quality Control

All components undergo 100% size testing during the manufacturing process. From there the components will be assembled into the final product which gets pressure tested to confirm correct operation. To keep to the highest possible standard, 100% of the finished products are tested.

Honeywell's standard testing procedure conforms to MSS-SP-99*. Each manifold is tested in such a way that every valve seat in the manifold, as well as every valvehead's stem packing and bonnet to body seal is checked. This test utilizes pressurized nitrogen gas at a minimum of 750 psi (MSS-SP-99 only requires 80 psi). Honeywell does not permit any leakage at all through the seat or the stem packing during testing.

The results are then recorded, and a report compiled.

Refer to the Model Selection Guide section (Table 4) for the available certificate options.

* For code applications where a hydrostatic 1.5X over-pressure shell test needs to be performed, Honeywell uses the MSS-SP-105 testing procedure. This testing is done on special request.

Specifications

Manufacturing Standards and Compliance

SmartLine Manifolds are designed, manufactured and tested to the highest possible standards and can have the following standards and regulations applied as required:

| | |
|-------------------------|---|
| ASME BPVC VIII Div 1 | ASME Boiler Pressure Vessel Code Section 8 Division 1 |
| ASME B31.1 | Power Piping |
| ASME B31.3 | Process Piping |
| ASME B16.34 | Valves Flanged, Threaded |
| ISO 9001:2008 | Certified Quality System |
| MSS-SP-99 | Instrument Valves |
| MSS-SP-105 | Instrument valves for code applications |
| MSS-SP-25 | Standard marking system for valves, fittings, flanges and unions |
| MSS-SP-61 | Hydrostatic testing of steel valves |
| NACE | National Association of Corrosion Engineers |
| NACE MR0175 / ISO 15156 | Materials for use in H ₂ S-containing environments in oil and gas production |
| NACE MR0103 | Materials Resistant to Sulfide Stress Cracking in Corrosive Petroleum Refining Environments |
| NORSOK M650 | Qualification of manufacturers of special materials |
| EN 10204 3.1 or 3.2 | Mill Test Reports |
| ASME B1.20.1 | General Pipe Threads or high tolerance thread |
| ASTM A182 | Forged or Rolled Alloy - Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High Temperature Service |
| ASTM A276 | Standard Specification for Stainless Steel Bars and Shapes |
| ASTM A479 | Stainless Steel Bars and Shapes for Use in Boilers and other Pressure Vessels |
| SANS 347 | Categorization and conformity assessment criteria for all pressure equipment |
| P.E.R | Pressure Equipment Regulations (South Africa) |
| P.E.D | Pressure Equipment Directive (Europe) |
| CSA B 51.03 CRN | Canadian Standards Association (CRN (CSAB51.03) |
| CRN* | Canadian Registration Number |

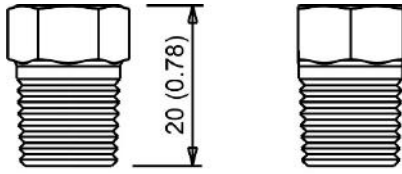
*CRN Registration in Process

Pressure Equipment Directive (P.E.D 97/23/EC) (Europe)

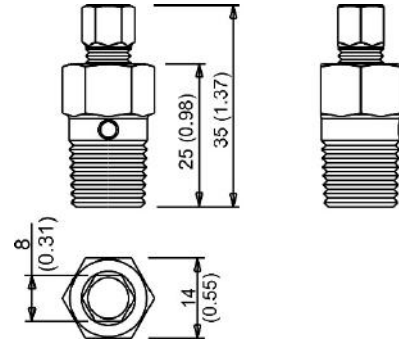
Due to internal bore size and internal volumes up to and including 1"/25mm, products offered in this catalogue comply with S.E.P (Sound Engineering Practice) article 3, paragraph 3 of the Pressure Equipment Directive P.E.D 97/23/EC and therefore CE marking is not applicable.

Vent / Bleed Port Plugs

Following vent / bleed / test port plug options are available in matching material of construction of manifolds.



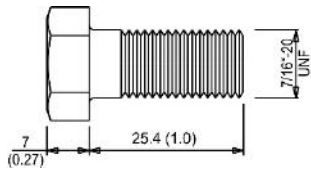
Standard Plug



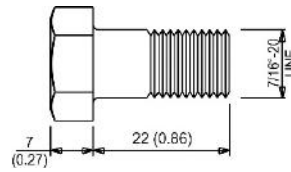
Bleed Plug

Bolts

Bolts for Traditional Style Manifolds (Wide / Compact Bodies)



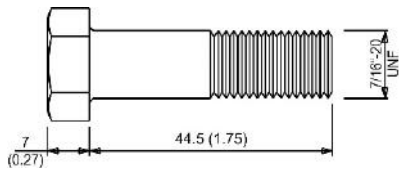
Carbon Steel Bolt



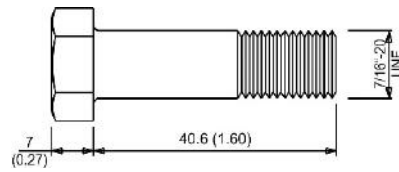
Stainless Steel / Exotic Material Bolt



Bolts for Wafer Style Manifolds



Carbon Steel Bolt



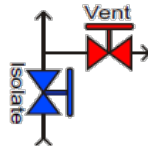
Stainless Steel / Exotic Material Bolt



Manifold Section

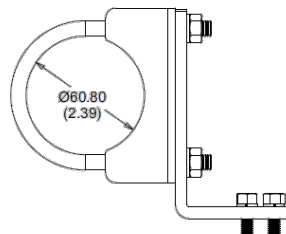
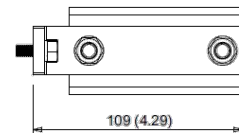
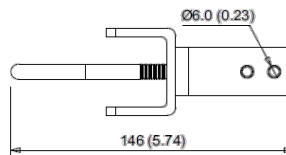
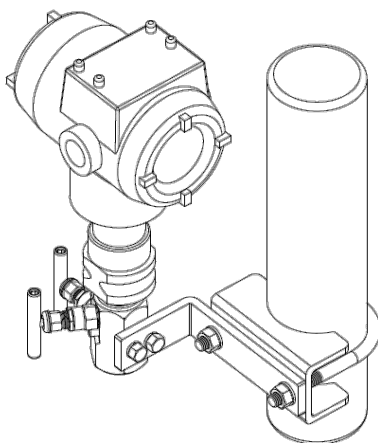
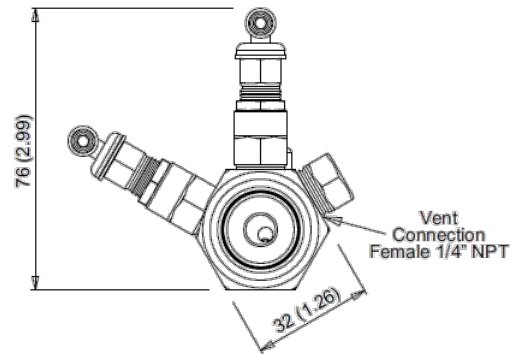
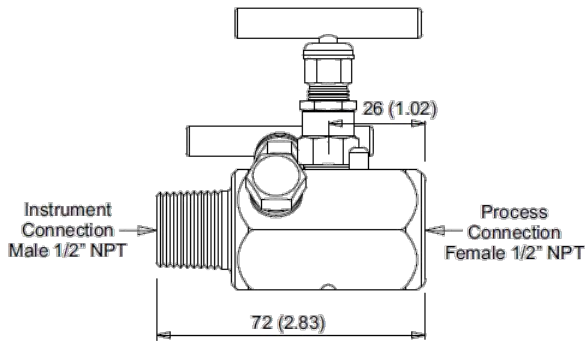
All designs are available with anti-tamper taps. An anti-tamper key (see Accessories list) shall be ordered separately whenever manifolds are ordered with anti-tamper taps..

Single Block and Bleed Manifolds



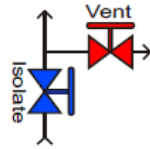
Process connection:
 ½" NPT Female
Transmitter Connection:
 ½" NPT Male
Vent/ Bleed / Drain Location:
 Side
Approximate Weight:
 0.50 kg (1.10 lbs.)

MSG Option:
 STMSB - A _ _



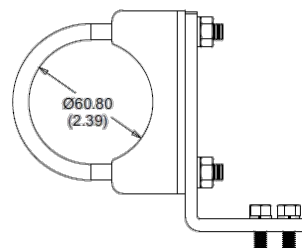
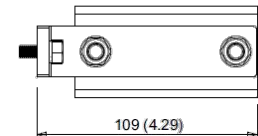
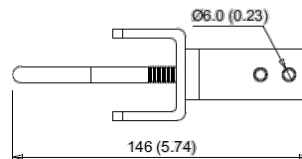
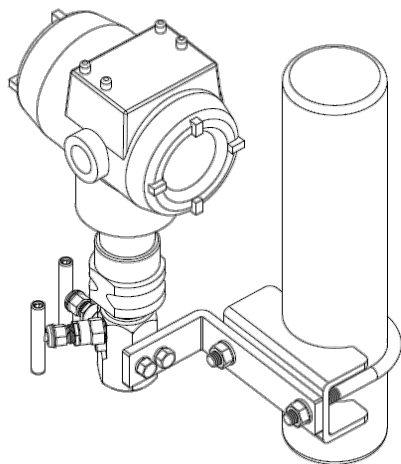
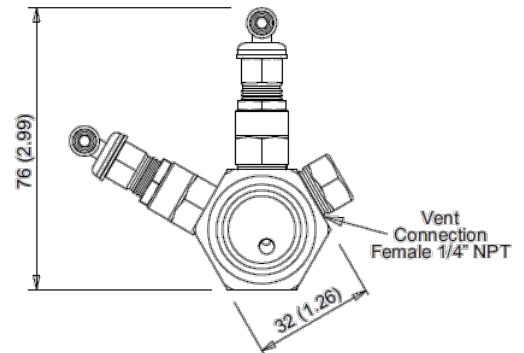
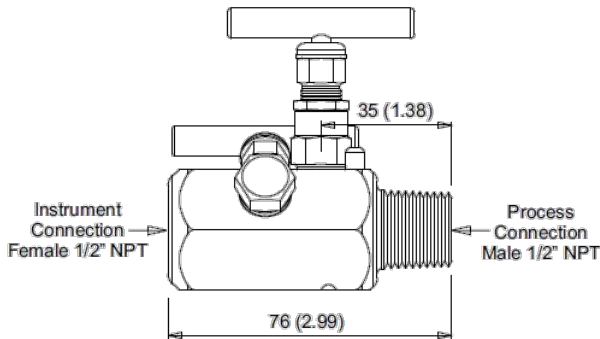
Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

Single Block and Bleed Manifolds



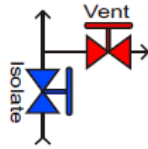
Process connection:
 1/2" NPT Male
Transmitter Connection:
 1/2" NPT Female
Vent/ Bleed / Drain Location:
 Side
Approximate Weight:
 0.50 kg (1.10 lbs.)

MSG Option:
 STMSB - B_ _



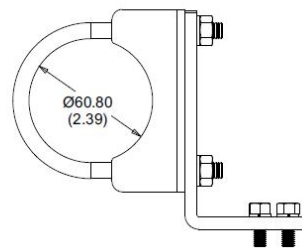
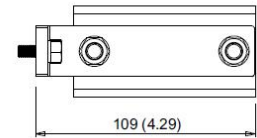
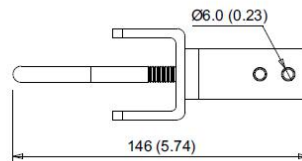
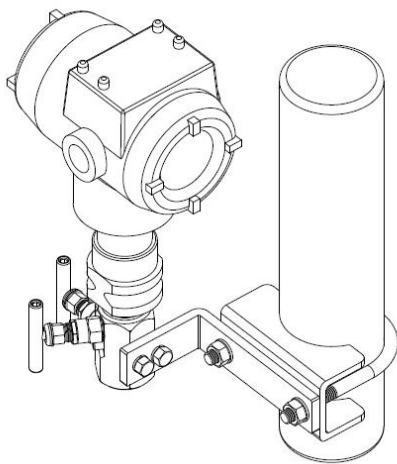
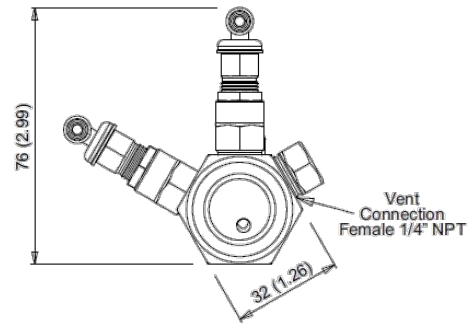
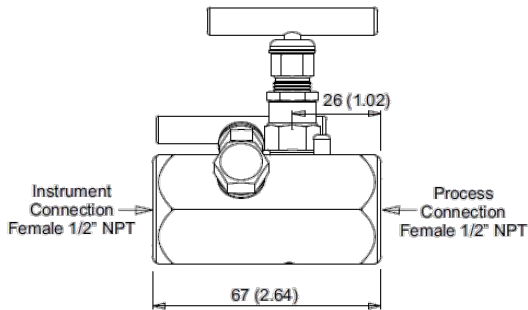
Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)
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Single Block and Bleed Manifolds



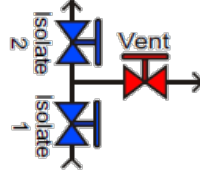
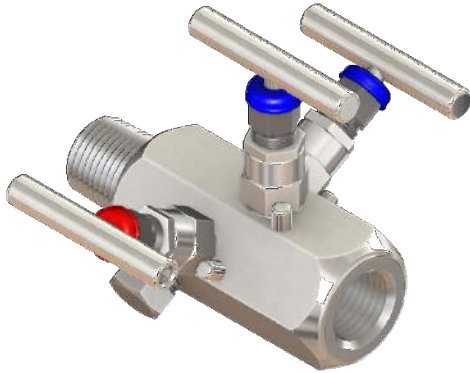
Process connection:
 1/2" NPT Female
Transmitter Connection:
 1/2" NPT Female
Vent/ Bleed / Drain Location:
 Side
Approximate Weight:
 0.50 kg (1.10 lbs.)

MSG Option:
 STMSB - C_ _



Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

Double Block and Bleed Manifolds



Process connection:

1/2" NPT Female

Transmitter Connection:

1/2" NPT Male

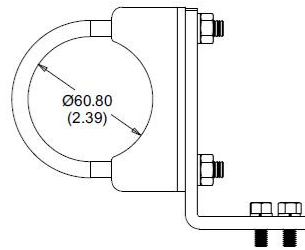
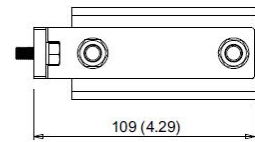
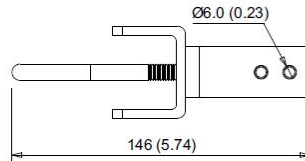
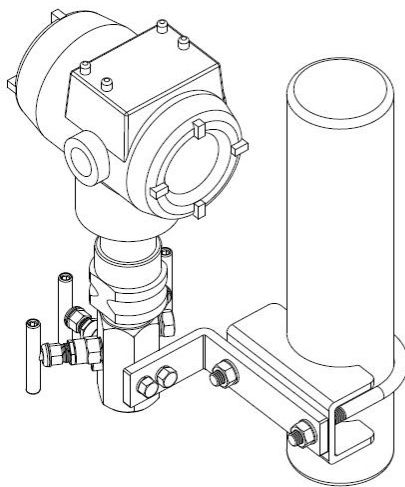
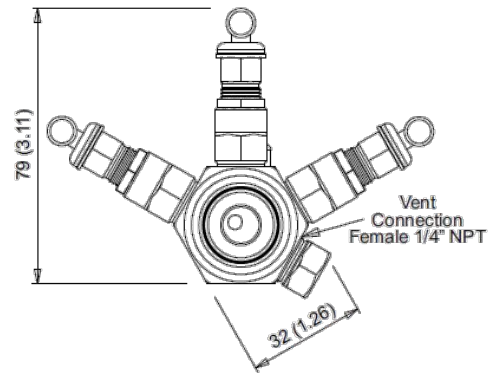
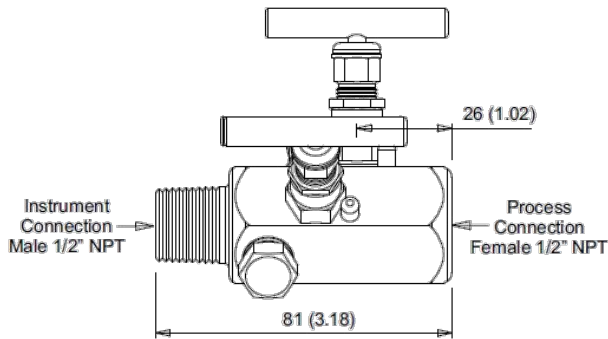
Vent/ Bleed / Drain Location:
Side

Approximate Weight:

0.59 kg (1.30 lbs.)

MSG Option:

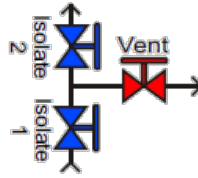
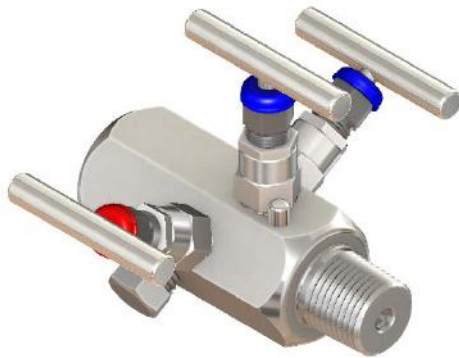
STMDB - A_ _



Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)

Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

Double Block and Bleed Manifolds



Process connection:

1/2" NPT Male

Transmitter Connection:

1/2" NPT Female

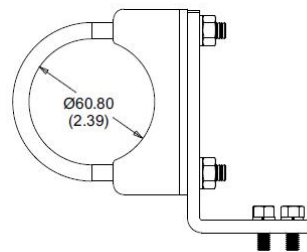
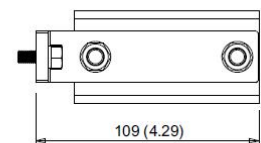
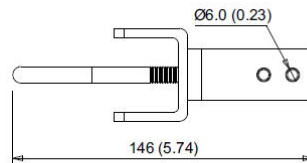
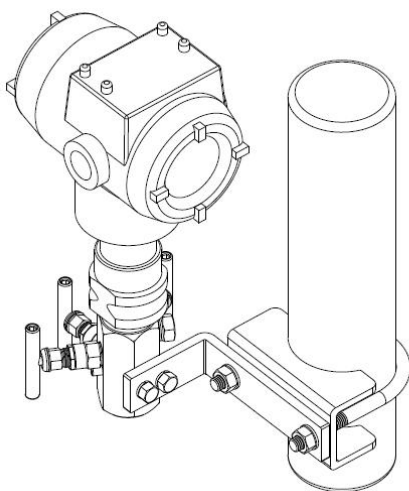
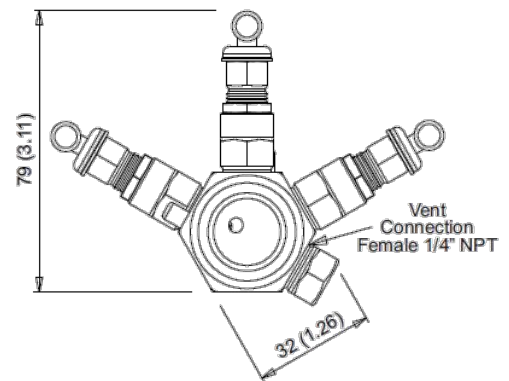
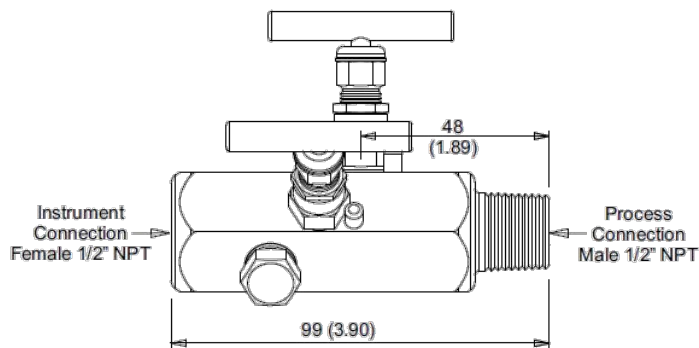
Vent/ Bleed / Drain Location:
Side

Approximate Weight:

0.59 kg (1.30 lbs.)

MSG Option:

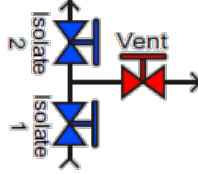
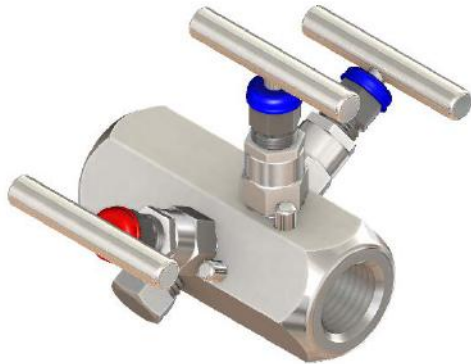
STMDB - B_ _



Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)

Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

Double Block and Bleed Manifolds



Process connection:

½" NPT Female

Transmitter Connection:

½" NPT Female

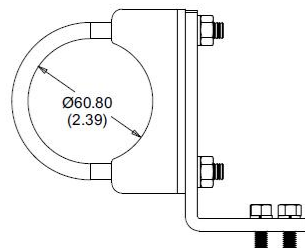
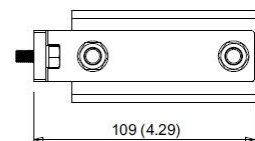
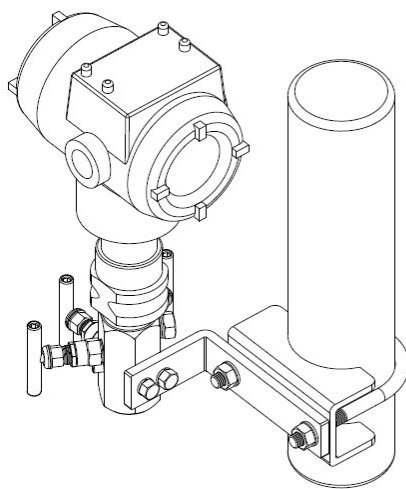
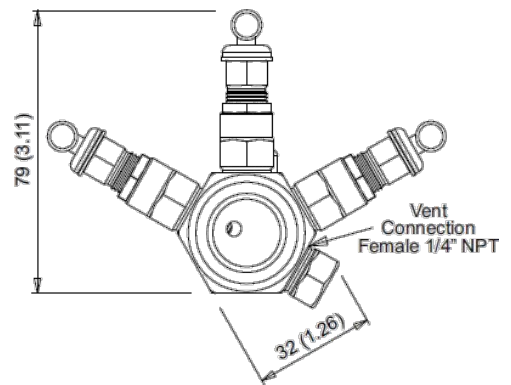
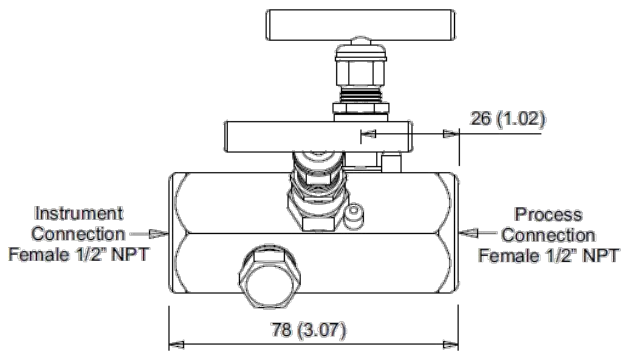
Vent/ Bleed / Drain Location:
Side

Approximate Weight:

0.59 kg (1.30 lbs.)

MSG Option:

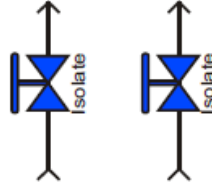
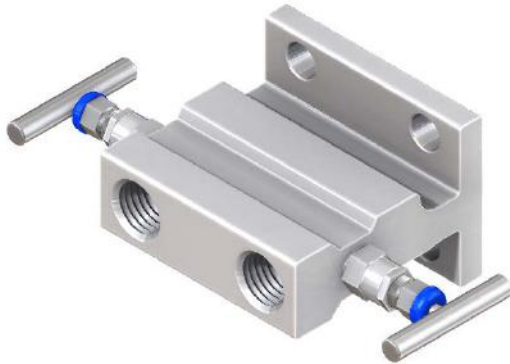
STMDB - C__



Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)

Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

2 Valve Wide Liquid Level Manifold



Process connection:

1/2" NPT Female

Transmitter Connection:

Flanged

Vent/ Bleed / Drain Location:

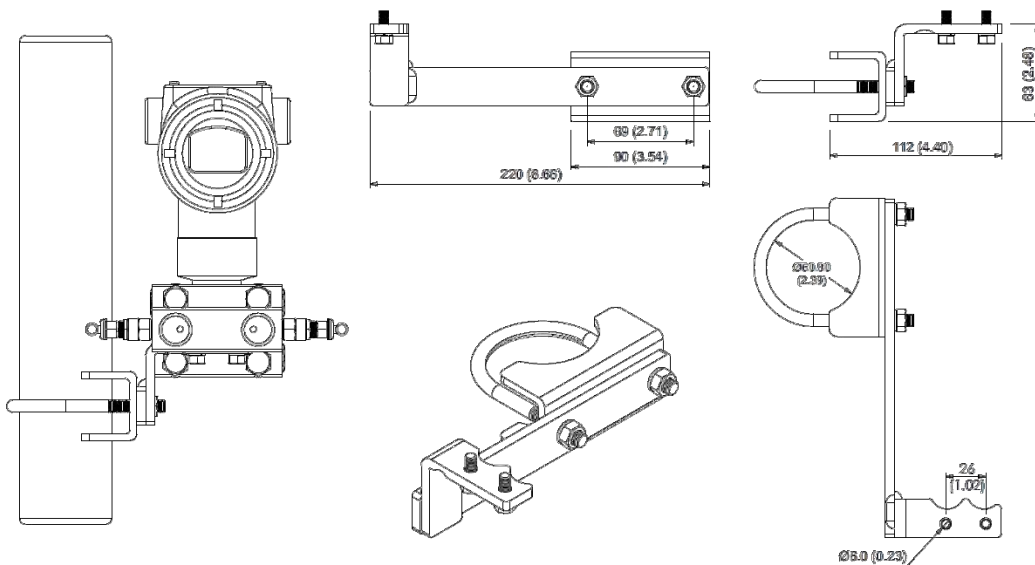
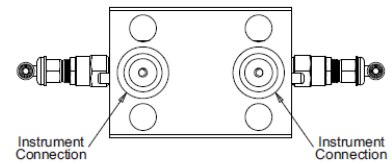
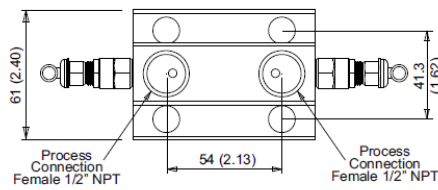
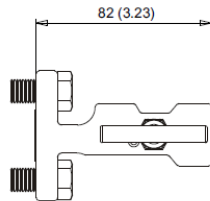
N/A

Approximate Weight:

1.45 kg (3.19 lbs.)

MSG Option:

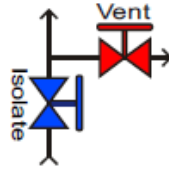
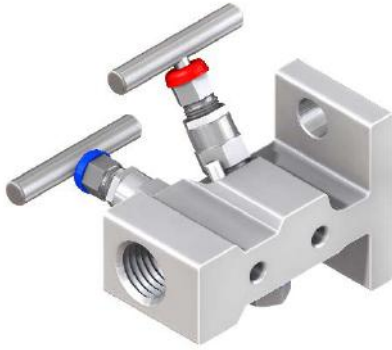
STMD2 - D__



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)

Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

2 Valve Compact Body Manifold



Process connection:

½" NPT Female

Transmitter Connection:

Flanged

Vent/ Bleed / Drain Location:

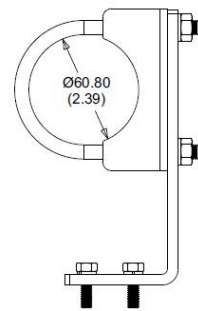
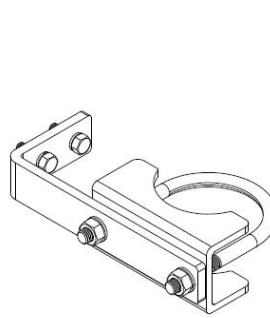
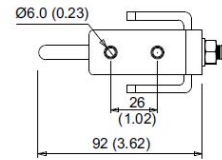
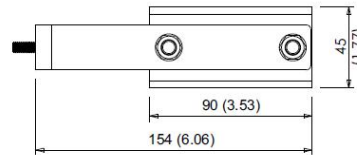
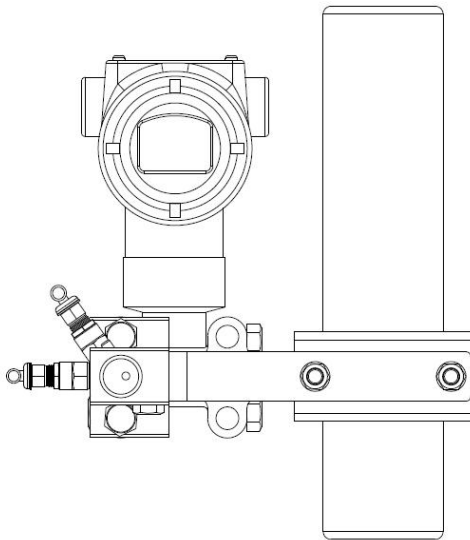
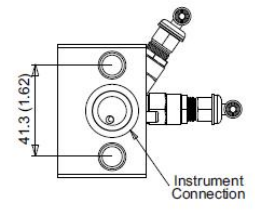
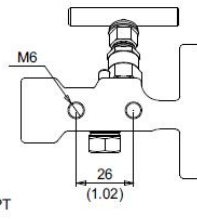
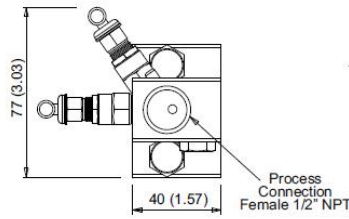
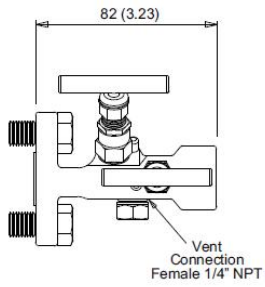
Bottom

Approximate Weight:

0.80 kg (1.76 lbs.)

MSG Option:

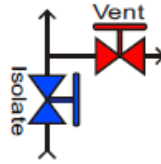
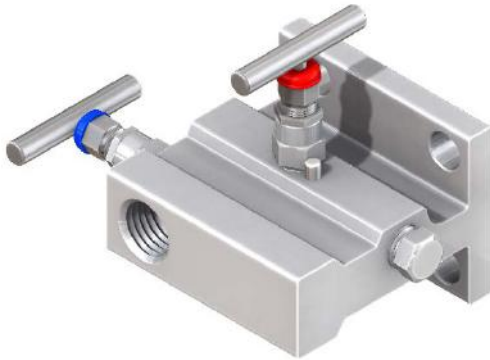
STMD2 - E _ _



Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)

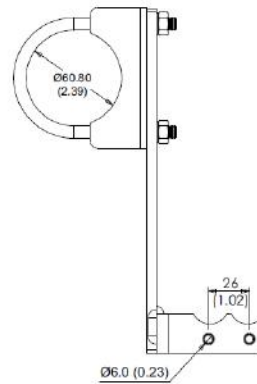
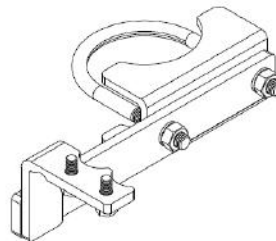
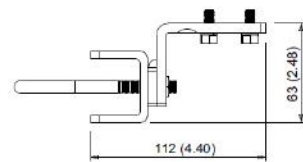
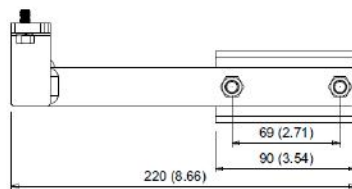
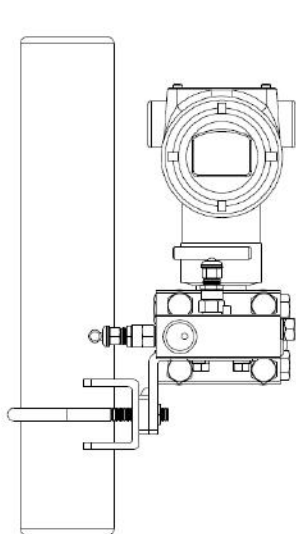
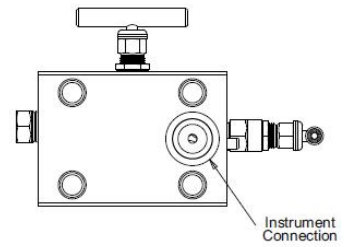
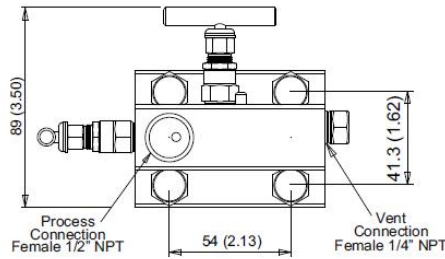
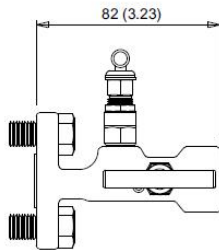
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

2 Valve Wide Body Manifold



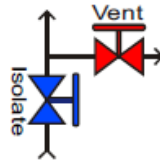
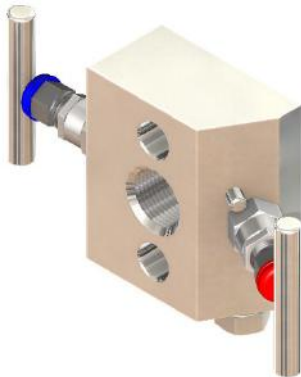
Process connection:
 ½" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 Side
Approximate Weight:
 1.4 kg (3.08 lbs.)

MSG Option:
 STMD2 - F __



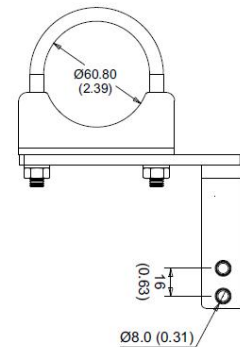
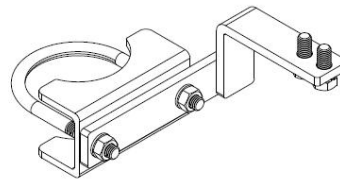
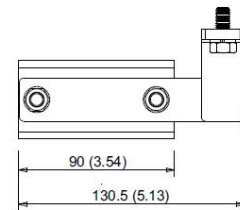
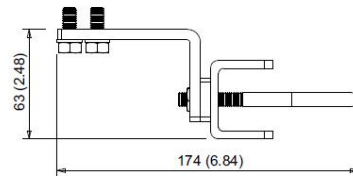
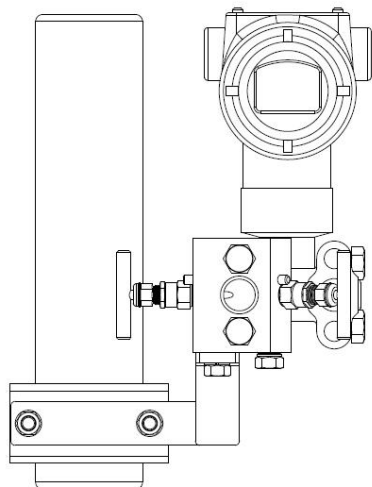
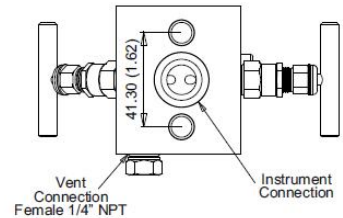
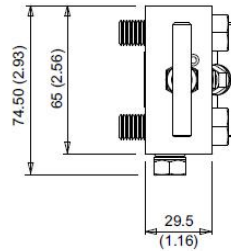
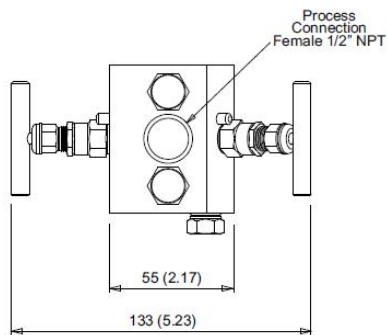
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

2 Valve Wafer Style Manifold



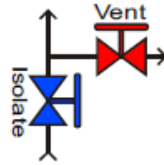
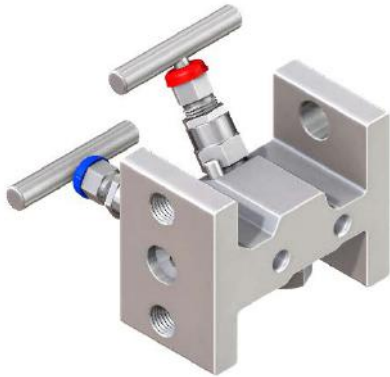
Process connection:
 1/2" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 Bottom
Approximate Weight:
 1.40 kg (3.08 lbs.)

MSG Option:
 STMD2 - G __



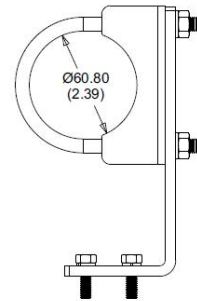
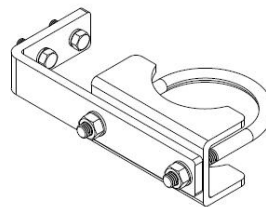
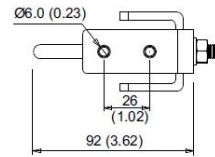
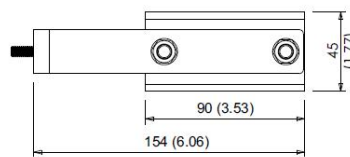
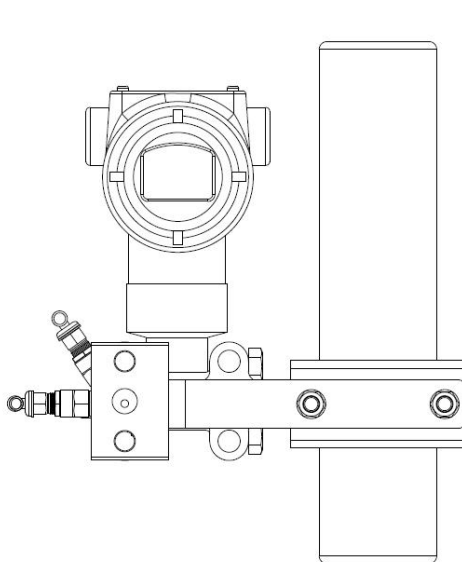
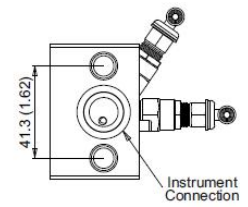
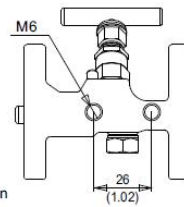
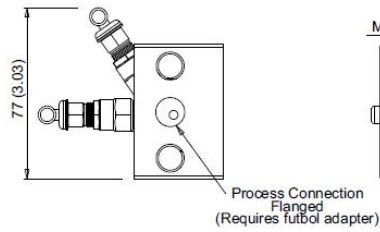
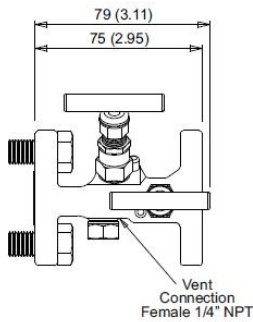
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

2 Valve Compact Body Manifold (Flange X Flange)



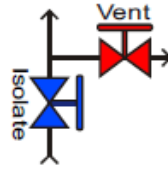
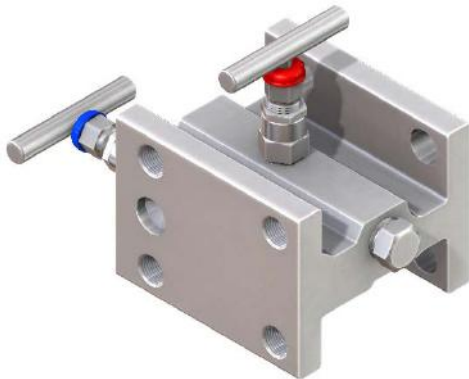
Process connection:
Flanged
Transmitter Connection:
Flanged
Vent/ Bleed / Drain Location:
Side
Approximate Weight:
0.85 kg (1.87 lbs.)

MSG Option:
STMD2 - H __



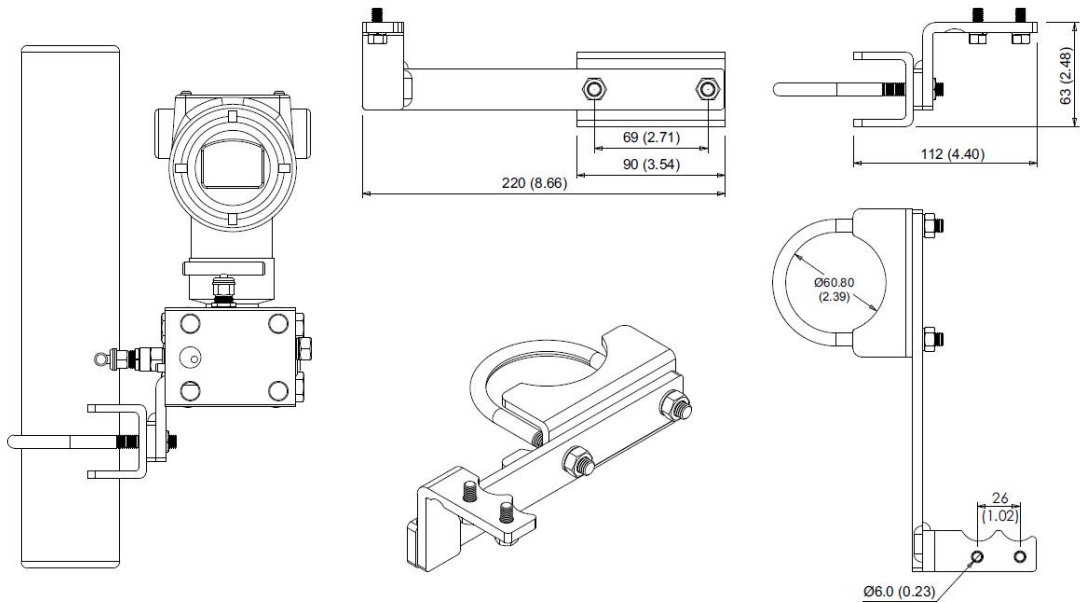
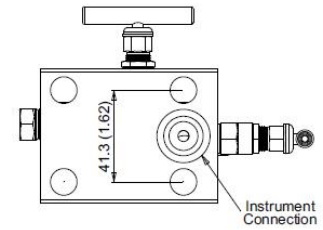
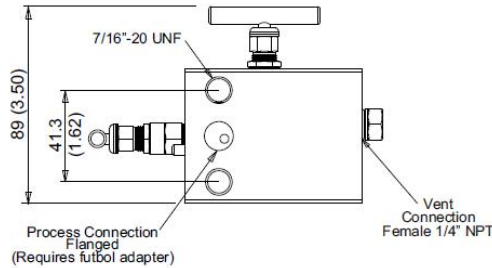
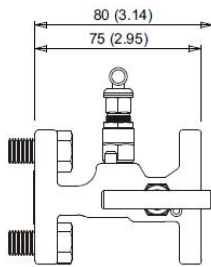
Approximate Weight of Mounting Bracket: 0.60kg (1.32lbs.)
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

2 Valve Wide Body Manifold (Flange X Flange)



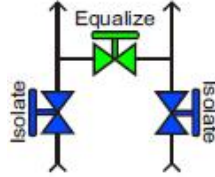
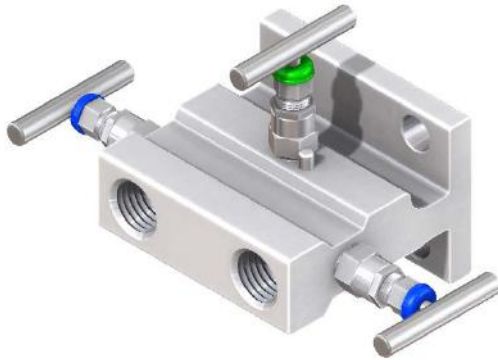
Process connection:
Flanged
Transmitter Connection:
Flanged
Vent/ Bleed / Drain Location:
Side
Approximate Weight:
1.5 kg (3.30 lbs.)

MSG Option:
STMD2 - J _ _



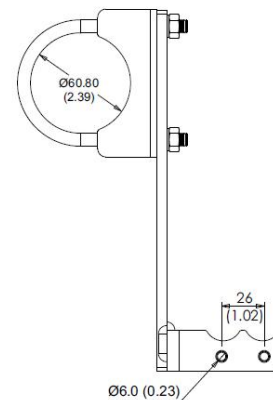
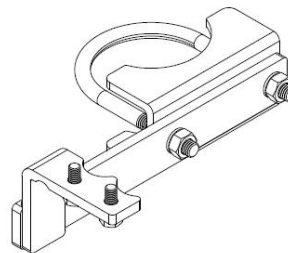
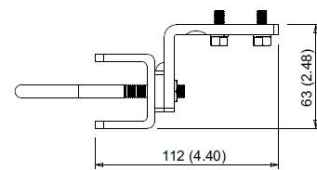
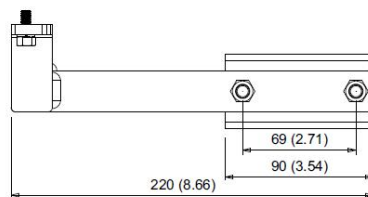
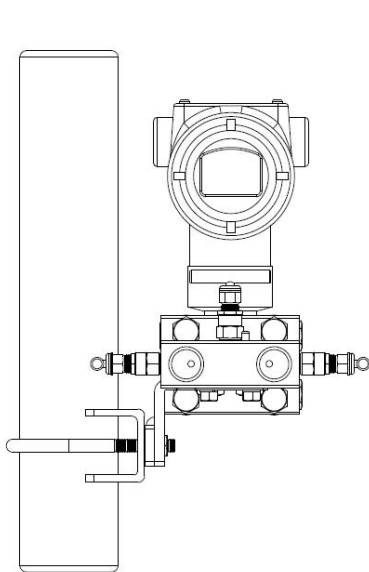
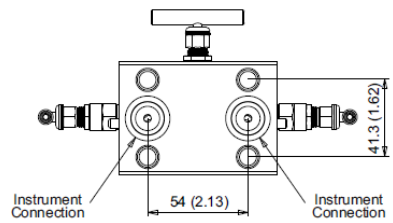
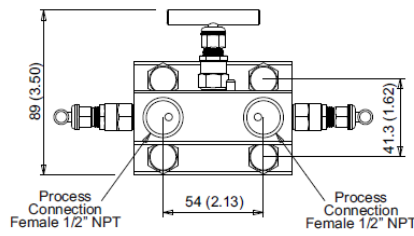
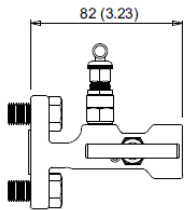
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

3 Valve Wide Body Manifold



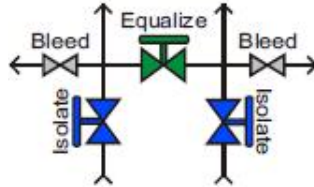
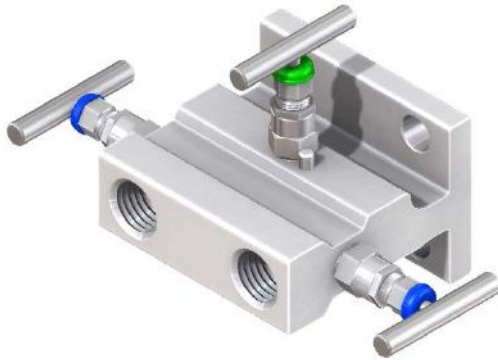
Process connection:
 ½" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 N/A
Approximate Weight:
 1.65 kg (3.63 lbs.)

MSG Option:
 STMD3 - K __



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

3 Valve Wide Body Manifold with Bleed Ports



Process connection:

½" NPT Female

Transmitter Connection:

Flanged

Vent/ Bleed / Drain Location:

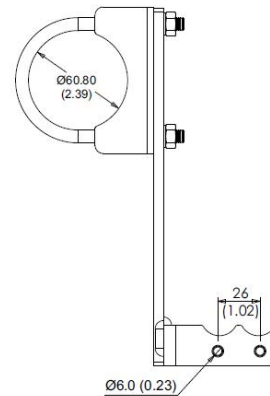
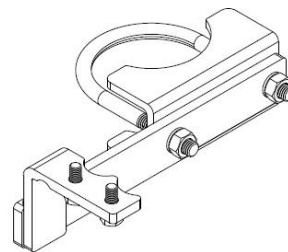
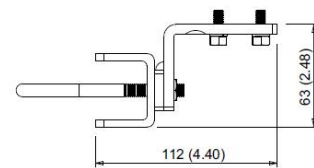
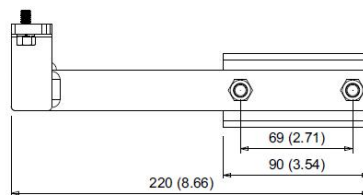
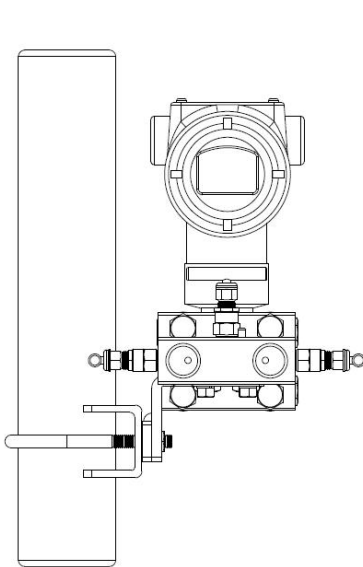
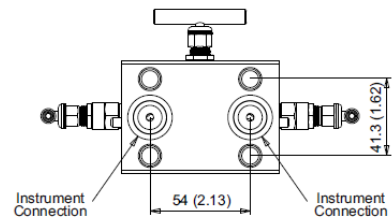
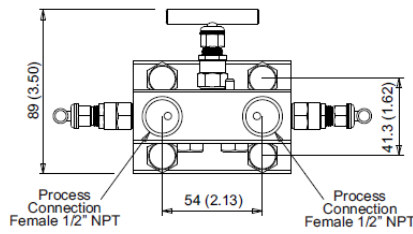
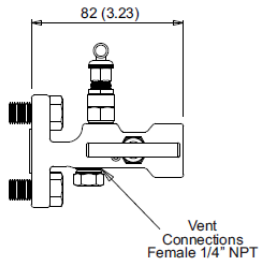
Bottom

Approximate Weight:

1.65 kg (3.63 lbs.)

MSG Option:

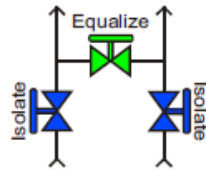
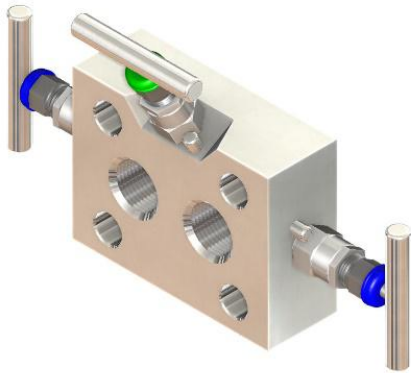
STMD3 - L _ _



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)

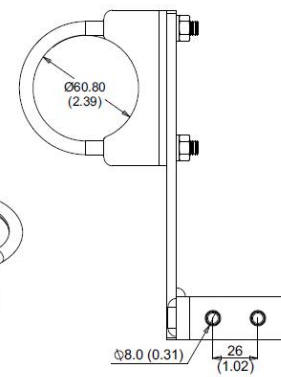
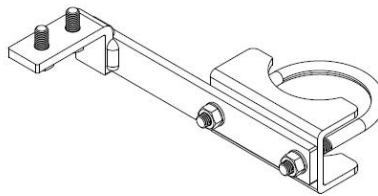
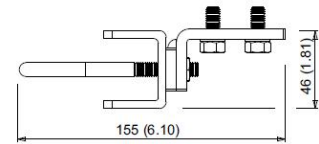
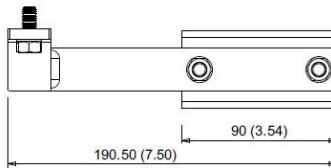
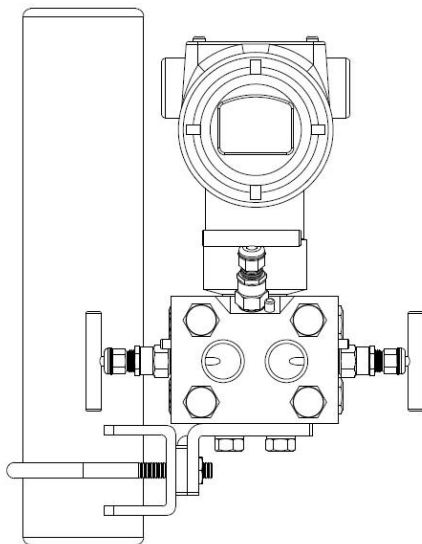
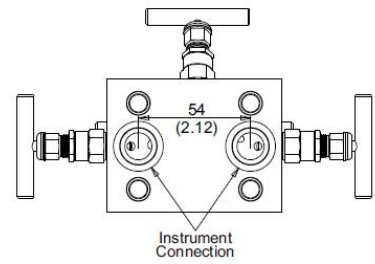
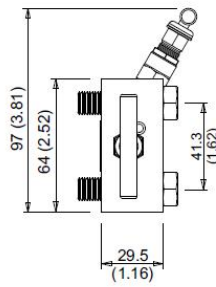
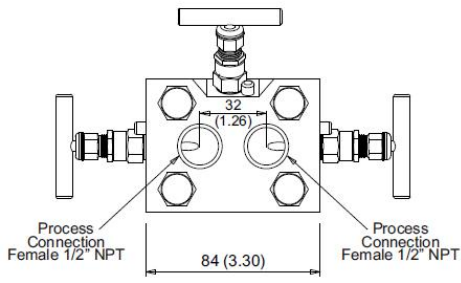
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

3 Valve Wafer Style Manifold



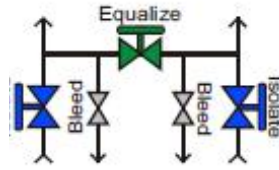
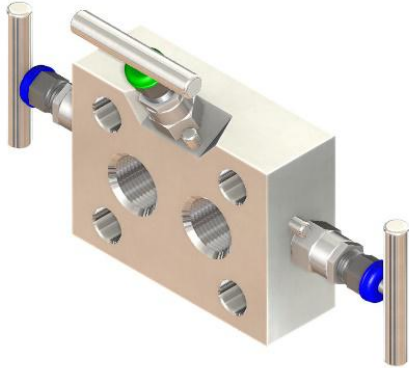
Process connection:
 1/2" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 N/A
Approximate Weight:
 1.52 kg (3.34 lbs.)

MSG Option:
 STMD3 - M __



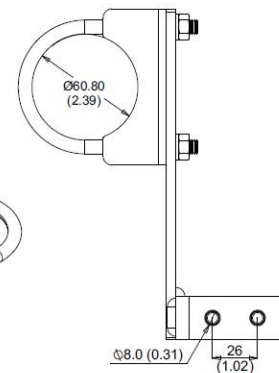
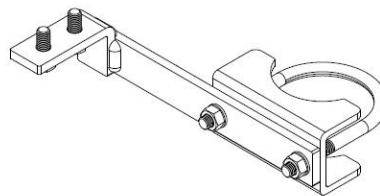
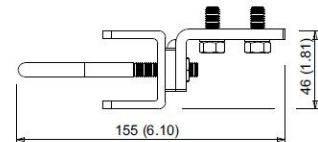
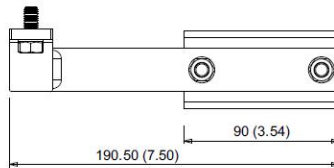
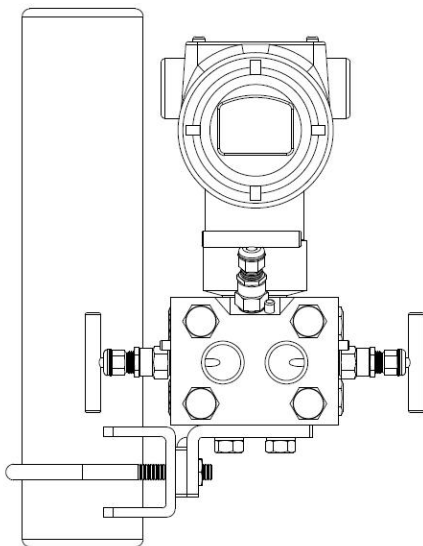
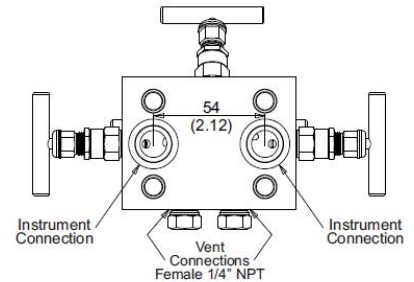
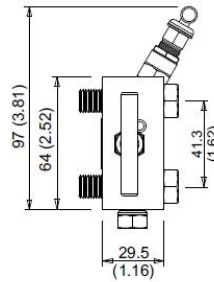
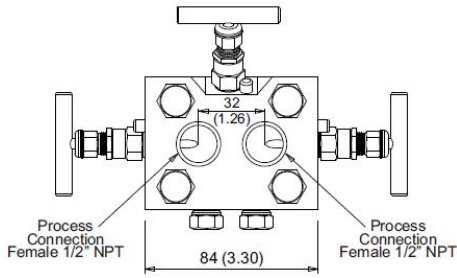
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options..

3 Valve Wafer Style Manifold with Bleed Ports



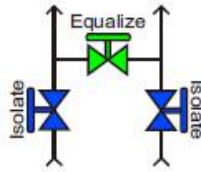
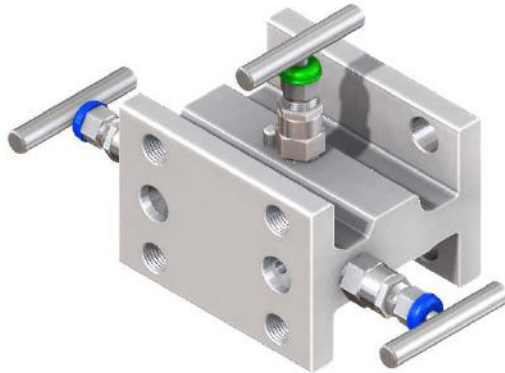
Process connection:
 ½" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 Bottom
Approximate Weight:
 1.52 kg (3.34 lbs.)

MSG Option:
 STMD3 - N __



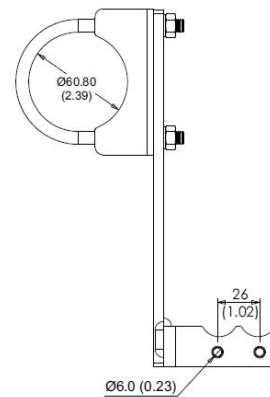
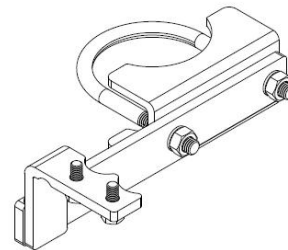
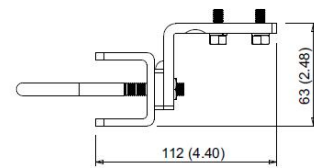
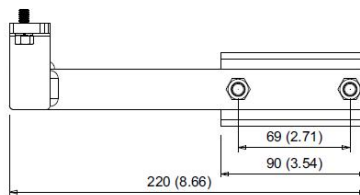
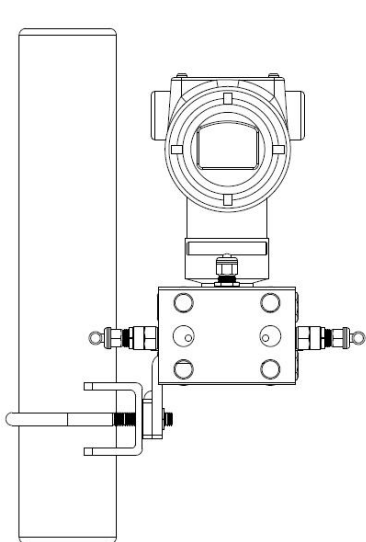
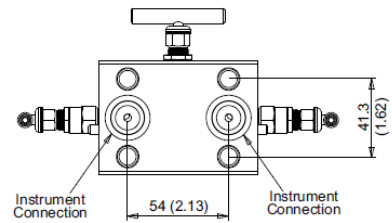
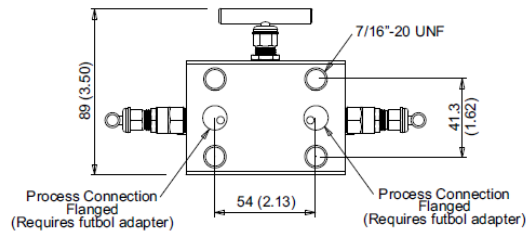
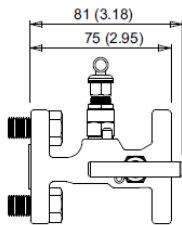
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

3 Valve Wide Body Manifold (Flange X Flange)



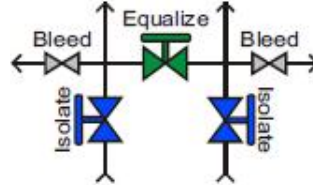
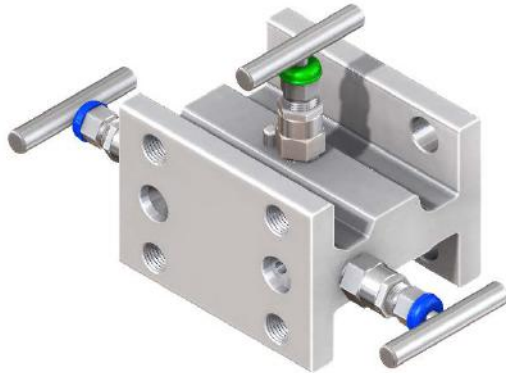
Process connection:
Flanged
Transmitter Connection:
Flanged
Vent/ Bleed / Drain Location:
N/A
Approximate Weight:
1.75 kg (3.85 lbs.)

MSG Option:
STMD3 - O __



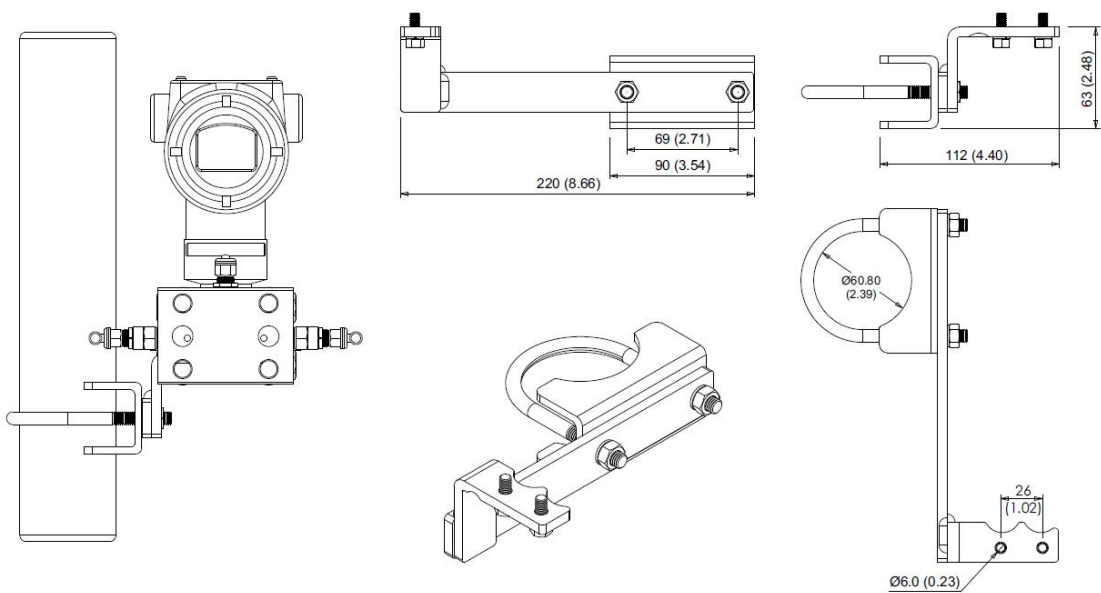
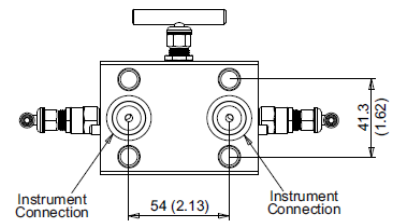
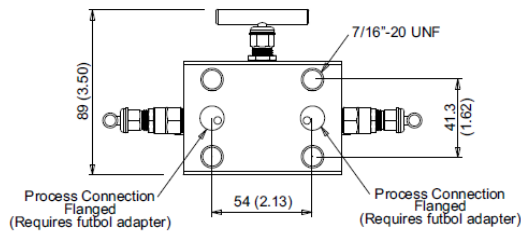
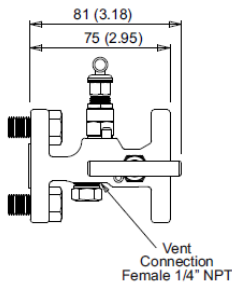
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

3 Valve Wide Body Manifold (Flange X Flange) with Bleed Ports



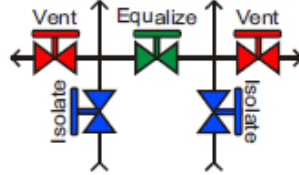
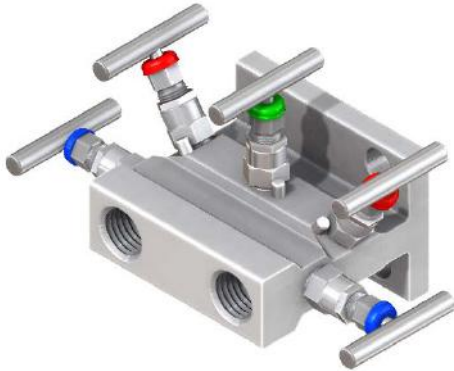
Process connection:
Flanged
Transmitter Connection:
Flanged
Vent/ Bleed / Drain Location:
Bottom
Approximate Weight:
1.75 kg (3.85 lbs.)

MSG Option:
STMD3 - P __



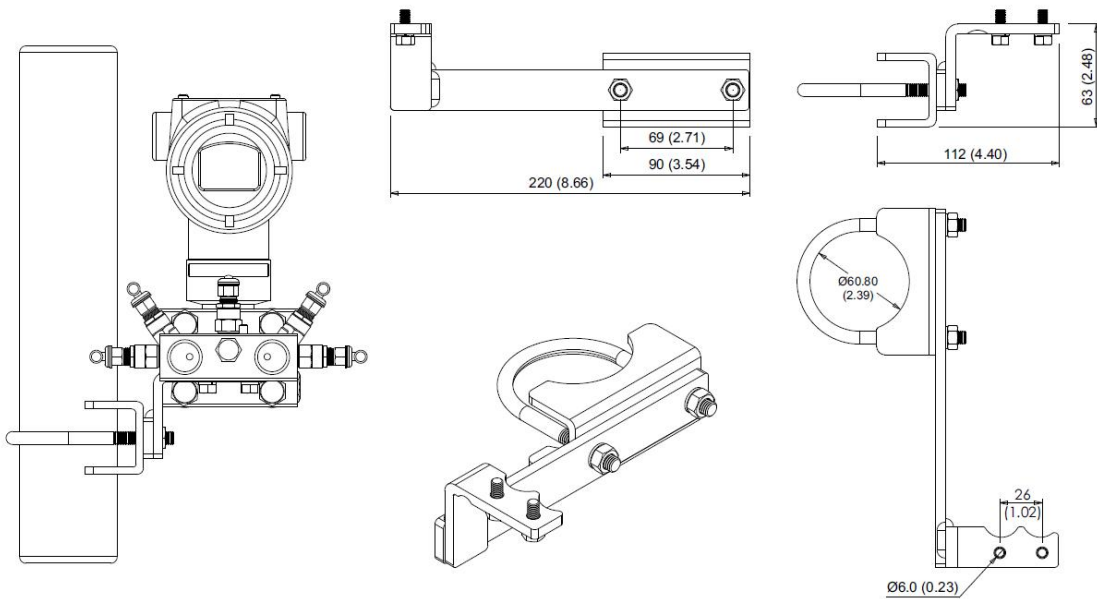
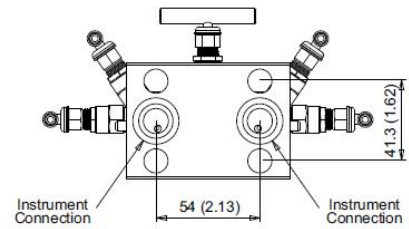
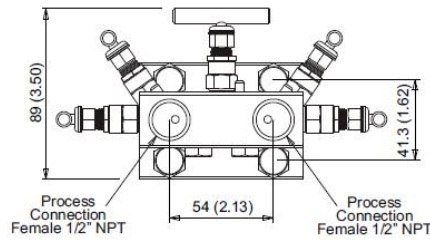
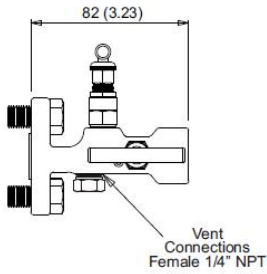
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

5 Valve Wide Body Manifold with Bleed Port at Bottom



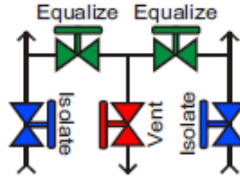
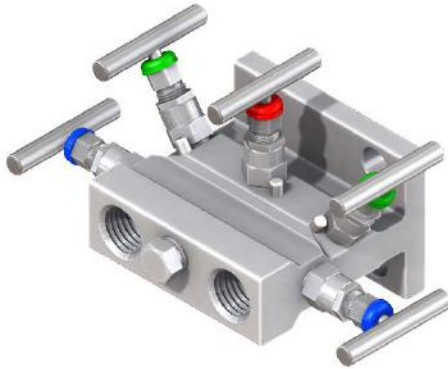
Process connection:
 ½" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 Bottom
Approximate Weight:
 1.70 kg (3.74 lbs.)

MSG Option:
 STMD5 - Q _ _



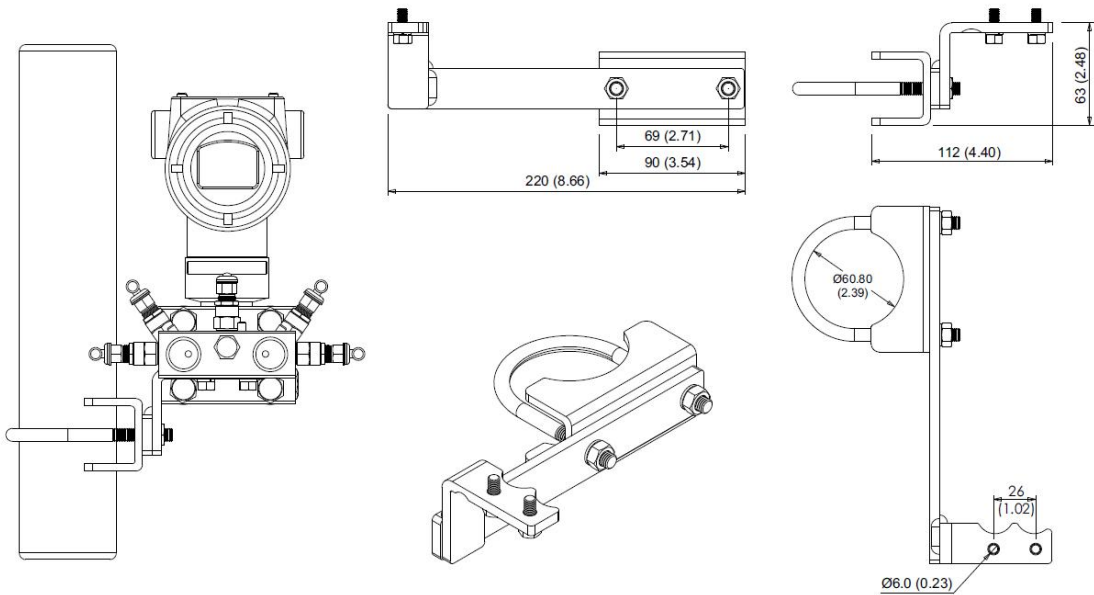
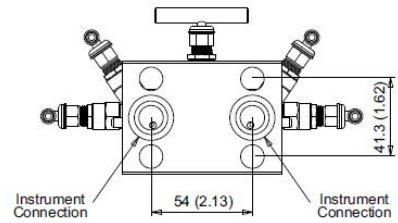
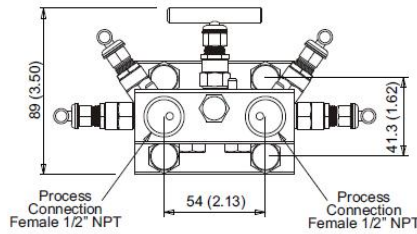
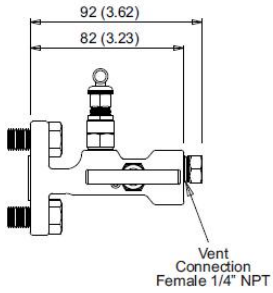
Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

5 Valve Wide Body Manifold with Bleed Port at Front



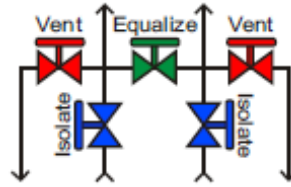
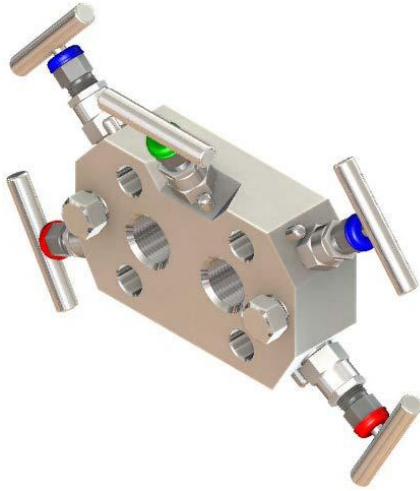
Process connection:
 ½" NPT Female
Transmitter Connection:
 Flanged
Vent/ Bleed / Drain Location:
 Front
Approximate Weight:
 1.70 kg (3.74 lbs.)

MSG Option:
 STMD5 - R __



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
 Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

5 Valve Wafer Style Manifold



Process connection:

½" NPT Female

Transmitter Connection:

Flanged

Vent/ Bleed / Drain Location:

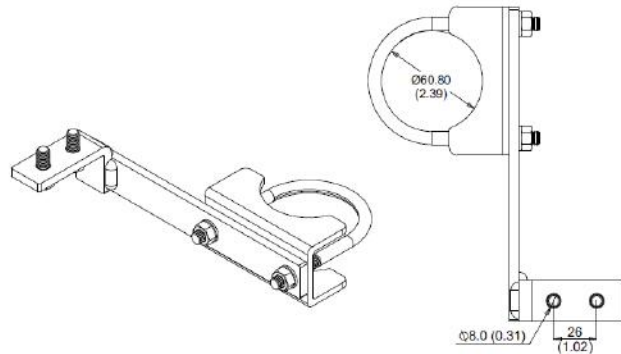
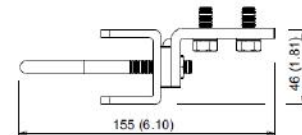
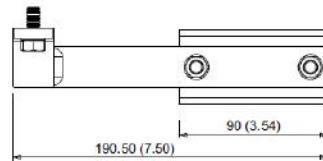
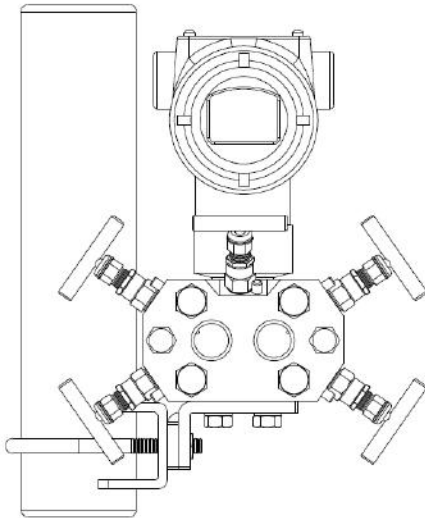
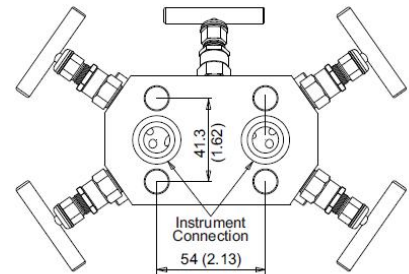
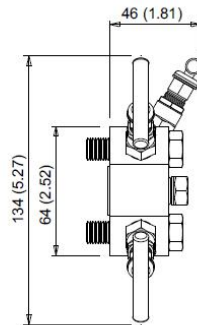
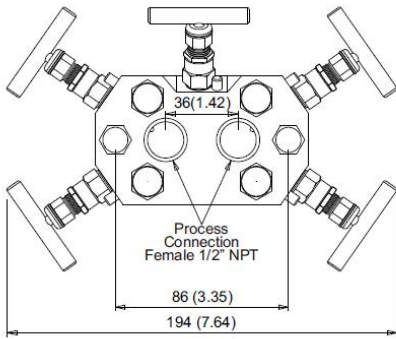
Front

Approximate Weight:

1.63 kg (3.59 lbs.)

MSG Option:

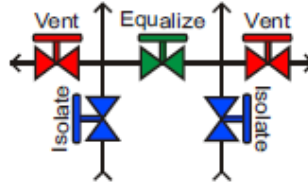
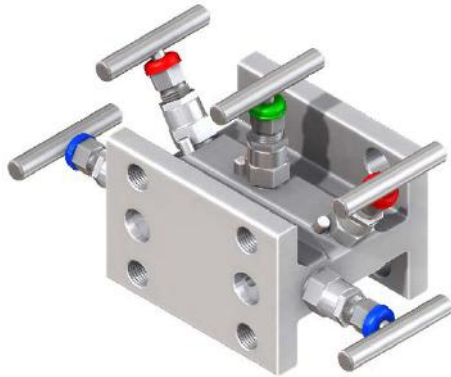
STMD5 - S _ _



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)

Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

5 Valve Wide Body Manifold (Flange X Flange) with Bleed Port at Bottom



Process connection:

Flanged

Transmitter Connection:

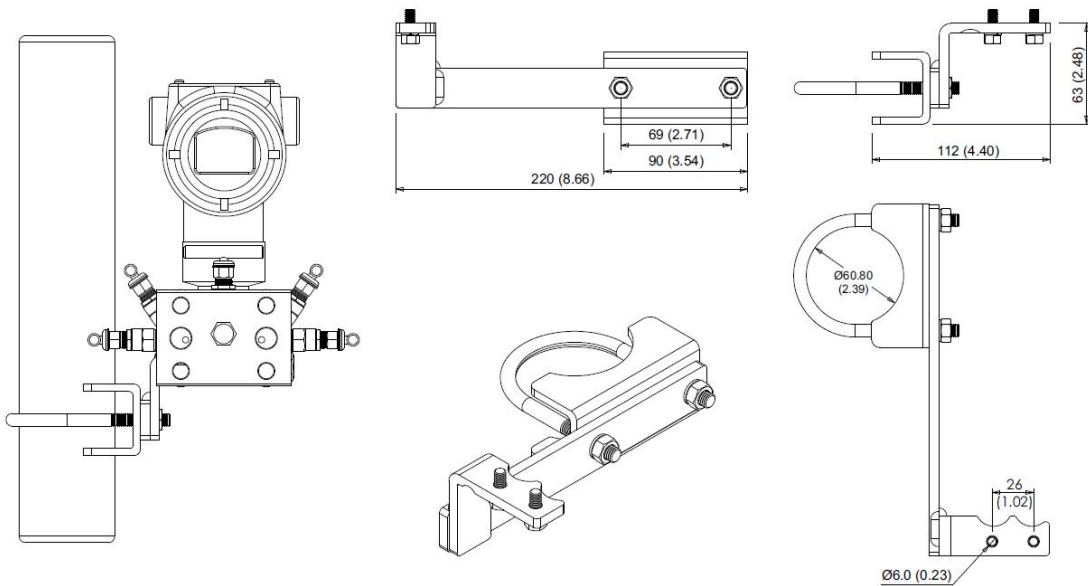
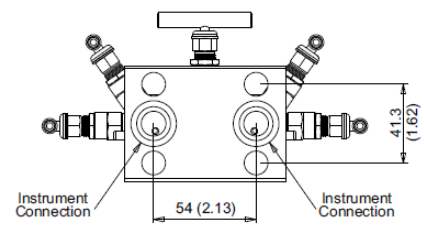
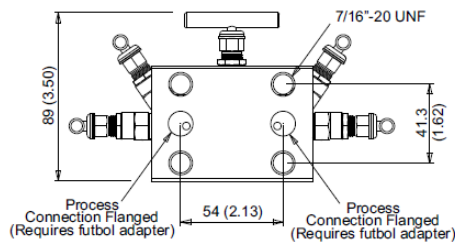
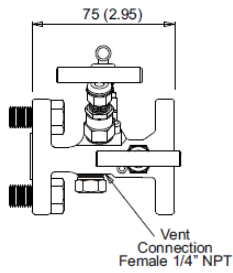
Flanged

Vent/ Bleed / Drain Location:
Bottom

Approximate Weight:
1.85 kg (4.07 lbs.)

MSG Option:

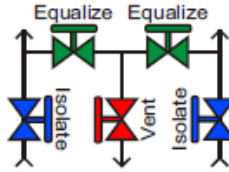
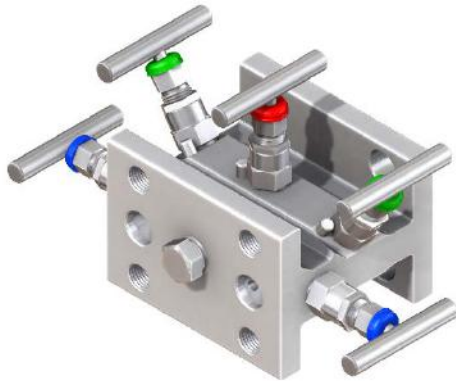
STMD5 - T __



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)

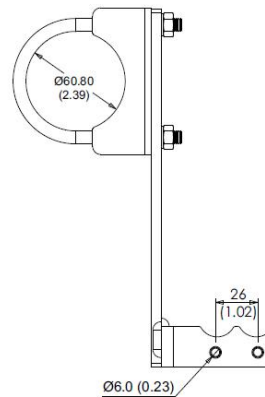
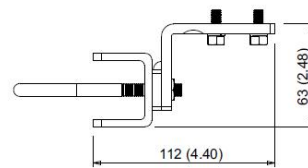
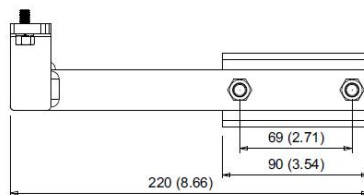
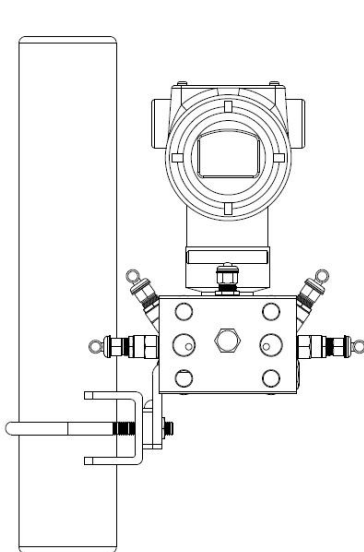
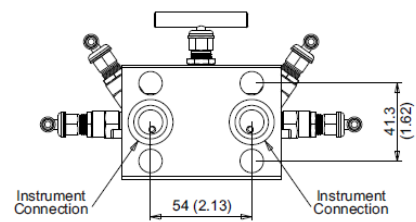
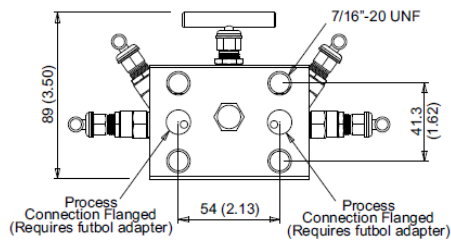
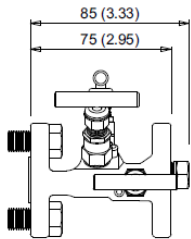
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

5 Valve Wide Body Manifold (Flange X Flange) with Bleed Port at Front



Process connection:
Flanged
Transmitter Connection:
Flanged
Vent/ Bleed / Drain Location:
Front
Approximate Weight:
1.85 kg (4.07 lbs.)

MSG Option:
STMD5 - U __



Approximate Weight of Mounting Bracket: 0.70kg (1.54lbs.)
Refer to Table 3 in [Model Selection Guide](#) for Mounting Bracket Options.

Model Selection Guide

The Model Selection Guide is subject to change and is inserted into the specification as guidance only.

**Model STM
SmartLine Manifolds**

Model Selection Guide:
34-ST-16-126 Issue 2

Instructions: Make selections from all Tables Key through V using column below the proper arrow. Asterisk indicates availability. Letter (a) refer to restrictions highlighted in the restrictions table. Tables delimited with dashes.

| | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|
| Key | Table 1 | Table 2 | Table 3 | Table 4 | Table 5 | Table 6 |
| STM__ - | __ - | __ - | _ - | __ - | _ - | 0000 |

| Key Number | Description | For transmitters | Selection | Availability |
|----------------------|--------------------------------|------------------|-----------|--------------|
| Manifold type | 2 valve single block and bleed | Inline | STMSB | ↓ |
| | 2 valve double block and bleed | Inline | STMDB | ↓ |
| | 2 valve Manifold | Dual Head | STMD2 | ↓ |
| | 3 valve Manifold | Dual Head | STMD3 | ↓ |
| | 5 valve Manifold | Dual Head | STMD5 | ↓ |

| Table 1 | | Manifold Style and Configuration | | | | | | | | | | |
|----------------------------------|------------------------------|---|----------------------|------------------------|-----------------------------------|--------|-----|---|---|---|--|--|
| | | Body Type | Process connection | Transmitter connection | Vent/Bleed/Drain Location(Note 3) | | | | | | | |
| a. Manifold configuration | INLINE AP AND GP ONLY | Block & Bleed (single or double blocks) | 1/2" NPT (Female) | 1/2" NPT (Male) | Side | A__ | * | * | | | | |
| | | Block & Bleed (single or double blocks) | 1/2" NPT (Male) | 1/2" NPT (Female) | Side | B__ | * | * | | | | |
| | | Block & Bleed (single or double blocks) | 1/2" NPT (Female) | 1/2" NPT (Female) | Side | C__ | * | * | | | | |
| | DP ONLY | Wide(Liquid level) | 1/2" NPT (Female) | Flanged (Note 7) | NA | D__ | | | * | | | |
| | | DHAP AND DHGP ONLY | Compact | 1/2" NPT (Female) | Flanged (Note 7) | Bottom | E__ | | | * | | |
| | Wide | | 1/2" NPTF | Flanged (Note 7) | Side | F__ | | | * | | | |
| | Wafer | | 1/2" NPT (Female) | Flanged | Bottom | G__ | | | * | | | |
| | DP ONLY | Compact | Flanged (See Note 8) | Flanged (Note 7) | Side | H__ | | | * | | | |
| | | Wide | Flanged (See Note 8) | Flanged (Note 7) | Side | J__ | | | * | | | |
| | | Wide | 1/2" NPT (Female) | Flanged (Note 7) | NA | K__ | | | | * | | |
| | | Wide | 1/2" NPT (Female) | Flanged (Note 7) | Bottom | L__ | | | | * | | |
| | | Wafer | 1/2" NPT (Female) | Flanged | NA | M__ | | | | * | | |
| | | Wafer | 1/2" NPT (Female) | Flanged | Bottom | N__ | | | | * | | |
| | | Wide | Flanged (See Note 8) | Flanged (Note 7) | NA | O__ | | | | * | | |
| | | Wide | Flanged (See Note 8) | Flanged (Note 7) | Bottom | P__ | | | | * | | |
| | | Wide | 1/2" NPT (Female) | Flanged (Note 7) | Bottom | Q__ | | | | * | | |
| | | Wide | 1/2" NPT (Female) | Flanged (Note 7) | Front | R__ | | | | * | | |
| | | Wafer | 1/2" NPT (Female) | Flanged | Front | S__ | | | | * | | |
| | | Wide | Flanged (See Note 8) | Flanged (Note 7) | Bottom | T__ | | | | * | | |
| | | Wide | Flanged (See Note 8) | Flanged (Note 7) | Front | U__ | | | | * | | |

| | | | | | | | | |
|------------------------------------|---|-----|---|---|---|---|---|---|
| b. Packing/ Gasket Material | Teflon® (Virgin PTFE) packing and gasket (See Note 4, 5, 6) | _1_ | * | * | * | * | * | * |
| | Grafoil® (Graphite) packing and gasket (See Note 4, 5, 6) | _2_ | * | * | * | * | * | * |

| | | Body | Bonnet | Shaft/Stem | Trim | | | | | | | |
|------------------------------------|-----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----|---|---|---|---|---|---|
| c. Material of construction | SS 316/316 L Dual certified | SS 316/316 L Dual certified | SS 316/316 L Dual certified | SS 316/316 L Dual certified | SS 316/316 L Dual certified | __A | * | * | * | * | * | * |
| | | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | __B | * | * | * | * | * | * |
| | | SS 316/316 L Dual certified | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | __C | * | * | * | * | * | * |
| | | SS 316/316 L Dual certified | Monel® 400** | Monel® 400** | Monel® 400** | __D | * | * | * | * | * | * |
| | Carbon Steel (ASTMA105) | CS (ASTMA105) | SS 304 | SS 304 | SS 304 | __E | * | * | * | * | * | * |
| | | CS (ASTMA105) | SS 304 | Tungsten Carbide Ball | Tungsten Carbide Ball | __F | * | * | * | * | * | * |
| | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | __G | * | * | * | * | * | * |
| | | Duplex stainless steel W Nr: 1.4462 | Duplex stainless steel W Nr: 1.4462 | Duplex stainless steel W Nr: 1.4462 | Duplex stainless steel W Nr: 1.4462 | __H | * | * | * | * | * | * |
| | Inconel 625 | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | Hastelloy® C-276* | __J | * | * | * | * | * | * |
| | | Inconel 625 | Inconel 625 | Inconel 625 | Inconel 625 | __L | * | * | * | * | * | * |
| | Monel® 400** | Monel® 400** | Monel® 400** | Monel® 400** | Monel® 400** | __M | * | * | * | * | * | * |
| | | Monel® 400** | Monel® 400** | Monel® 400** | Monel® 400** | __N | * | * | * | * | * | * |

* Hastelloy® C-276 or UNS N10276 ** Monel® 400 or UNS N04400

Model Selection Guide continued ...

| Table 2 | Manifold bolts, tap and plug selection | Selection | Availability |
|------------------|---|-----------|--------------|
| a. Bolt material | No Bolts | 0__ | * * * * * |
| | Carbon steel bolts | C__ | * * c c c |
| | SS 316 / 316 L | S__ | * * k k k |
| | Grade 660 (NACE A286) Bolts | N__ | * * k k k |
| | Monel® bolts | M__ | * * m m m |
| b. Plug type | 1/4" standard plug (OR NO PLUG IF MANIFOLD DOES NOT HAVE PLUG PORTS) (See note 2) | _S_ | * * * * * |
| | 1/4" bleed plug (See note 3) | _B_ | * * d n * |
| c. Tap options | All taps standard "T" bar | __1 | * * * * * |
| | All taps anti-tamper (Anti-tamper key 50154757-502 shall be ordered separately.) | __2 | * * * * * |

| Table 3 | Brackets | Selection | Availability |
|--|-------------------------------|-----------|--------------|
| Mounting Bracket for the Manifold (mounts directly on to the manifold) | None | 0 | * * * * * |
| | Mounting bracket Carbon Steel | 1 | * * e f * |
| | Mounting bracket SS | 2 | * * e f * |

| Table 4 | Other Certifications & Options | Selection | Availability |
|----------------------------------|--|-----------|--------------|
| Certifications & options (Note1) | None - No Additional Options | 00 | * * * * * |
| | Over-Pressure Leak Test Certificate (1.5X MAWP) | TP | * * * * * |
| | NACE MR0175; MR0103; ISO15156 Process wetted parts only | FG | * g g g g b |
| | NACE MR0175; MR0103; ISO15156 Process wetted and non-wetted parts | F7 | * h h h h h |
| | EN10204 Type 3.1 Material Traceability (default per heat code) Only one supplied per heat code | FX | * * * * * |
| | Certificate of Conformance (default per heat code) Only one supplied per heat code | F3 | * * * * * |
| | PMI Certification (PMI Test for Manifold Body only) | P1 | * * * * * |
| | PMI Certification (PMI Test for Process wetted components) (Testing of individual components: Manifold Body, Bonnet, Stem, Trim) | P2 | * * * * * |
| | Cert Clean for O2 (Oxygen Cleaning and Certification) | OX | * j j j j j |

| Table 5 | Accessory Preference (may represent different choices of lead times, approvals and dimensions)* | Selection | Availability |
|------------|---|-----------|--------------|
| Preference | Option X | 1 | * * * * * |

| Table 6 | Manufacturing Specials | Selection | Availability |
|---------|------------------------|-----------|--------------|
| Factory | Factory Identification | 0000 | * * * * * |

* For additional information, contact your Honeywell Account Manager or Honeywell Authorized distributor

Model Selection Guide continued ...

| Accessories | | Kit Number |
|--|--|--------------|
| Certificate of Origin (One per order) | | 50127432-506 |
| Futbol Adapter 1/2" NPT-F IEC61518 316 SS PTFE - Qty. 2 | | 51156563-501 |
| Key for anti tamper taps - 304 SS - QTY 1 | | 50154757-502 |
| Bolt Kit - Traditional - Carbon Steel - QTY 4 | | 50154755-501 |
| Bolt Kit - Traditional - 316 SS - QTY 4 | | 50154755-502 |
| Bolt Kit - Traditional - Grade B8M - QTY 4 | | 50154755-503 |
| Bolt Kit - Traditional - Monel® - QTY 4 | | 50154755-504 |
| Bolt Kit - Wafer - Carbon Steel - QTY 4 | | 50154755-505 |
| Bolt Kit - Wafer - 316 SS - QTY 4 | | 50154755-506 |
| Bolt Kit - Wafer - Grade B8M - QTY 4 | | 50154755-507 |
| Bolt Kit - Wafer - Monel® - QTY 4 | | 50154755-508 |
| Gasket Kit - PTFE - QTY 2 | | 50154756-501 |
| Gasket Kit - Grafoil (Graphite) - QTY 2 | | 50154756-502 |
| Bracket Kit - Traditional - Compact Body - 316 SS | | 50136042-507 |
| Bracket Kit - Traditional - Wide Body - 316 SS | | 50136042-508 |
| Bracket Kit - InLine (common) - 316 SS | | 50136042-504 |
| Bracket Kit - InLine (common, extra strength) - 316 SS | | 50136042-505 |
| Bracket Kit - Traditional - Compact Body - Carbon Steel | | 50136042-522 |
| Bracket Kit - Traditional - Wide Body - Carbon Steel | | 50136042-523 |
| Bracket Kit - InLine (common) - Carbon Steel | | 50136042-519 |
| Bracket Kit - InLine (common, extra strength) - Carbon Steel | | 50136042-520 |
| Bracket Kit - Wafer - 3 and 5 Valve - 316 SS | | 50136042-502 |
| Bracket Kit - Wafer - 3 and 5 Valve - Carbon Steel | | 50136042-517 |
| Bracket Kit - Wafer - 2 Valve - 316 SS | | 50136042-510 |
| Bracket Kit - Wafer - 2 Valve - Carbon Steel | | 50136042-525 |

| Restrictions | | | | |
|--------------------|--|-----------|--------------------|----------------------|
| Restriction Letter | Available only with | | Not available with | |
| | Table | Selection | Table | Selection |
| c | | | 1c | _ _ G, H, J, L, M |
| d | | | 1a | D_ _ |
| e | | | 1a | G_ _ |
| | | | 1c | _ _ G, H, J, L, M |
| f | | | 1a | N_ _ |
| g | | | 1c | _ _ E, F, H, J, L, M |
| h | | | 1c | _ _ E, F, H, J, L, M |
| | | | 2a | C, S, M_ _ |
| j | 1b | _ 1 _ | | |
| k | | | 1c | _ _ E, F |
| m | 1c | _ _ M | | |
| n | | | 1a | K, M, O_ _ |
| b | Select only one option from this group | | | |

| Notes: | |
|--------|--|
| 1 | Customer needs to order same set of certification for integrated version while selecting the transmitter. |
| 2 | Plug material is the same as the manifold body material if the manifold has plug ports. |
| 3 | Vent/Bleed/Drain connection size is 1/4 Inch NPT F |
| 4 | Block and Bleed (Inline GP and AP) valves do not require gaskets, therefore they are not supplied. |
| 5 | 6000 psi Standard Pressure Version PTFE Packing Maximum Pressure 413 bar (6,000 psi) at -30 to 100 deg C (212 deg F) Maximum Pressure 206 bar (3,000 psi) at 215 deg C (420 deg F) GRAPHITE Packing Maximum Pressure 413 bar (6,000 psi) at -30 to 100 deg C (212 deg F) Maximum Pressure 155 bar (2,250 psi) at 450 deg C (842 deg F) |
| 6 | For process temperature greater than 340 F (170 C), grafoil packing needs to be used. |
| 7 | Flange thickness as per IEC 61518 Type B |
| 8 | Requires IEC 61518 Type B Futbol adapter 51156563-5XX. Please refer to the Accessories list to identify the matching material of the adapter to the manifold. |

Sales and Service

For application assistance, current specifications, ordering, pricing, and name of the nearest Authorized Distributor, contact one of the offices below.

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