

1-, 2-, 3-, and 5-Valve Manifolds
For Use With I/A Series[®] Pressure Transmitter Family

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1. Introduction

Overview

These manifolds are for use with I/A Series Pressure Transmitters. 1- and 2-valve manifolds are available for threading into a direct connect absolute or gauge pressure transmitter. 2-, 3-, and 5-valve manifolds are available for attaching to a bracket mounted absolute or gauge pressure transmitter with a traditional structure or to a bracket mounted d/p Cell[®] transmitter with either a traditional or low profile structure. Refer to Table 1 for manifold and transmitter compatibility.

Manifold and Transmitter Compatibility

Table 1. Manifold and Transmitter Compatibility

Transmitter Description		Manifold Models with Transmitter Structures		
Xmtr Model	Transmitter Mounting and Measurement (a)	Commodity Version with Direct Conn. Transmitters (b)	Standard Version with Traditional Structure	Standard Version with Low Profile Structure (c)
I/A Series Electronic Pressure Transmitter Family				
IAP10	Direct Connect - AP	1-Valve: M9 2-Valve: PTM	2-Valve: M25 PT7 PT7M	Not Applicable
IGP10	Direct Connect - GP			
IGP25	Direct Connect/ Multirange - GP			
IGP50	Direct Connect/ Premium Performance - GP			
IAP20	Bracket Mounted - AP	Not Applicable	2-Valve: M4AP M4TP	Not Applicable
IGP20	Bracket Mounted - GP			
IDP10	Bracket Mounted - DP	Not Applicable	3-Valve: M4A M4T 5-Valve: M6TA, M6T M24A M24T	3-Valve: MB3 5-Valve: MB5G MB5P
IDP25	Bracket Mounted/ Multirange - DP			
IDP50	Bracket Mounted/ Premium Performance - DP			
IMV25	Bracket Mounted/ Multivariable - P, DP, T	Not Applicable	3-Valve: M4A M4T 5-Valve: M6TA M6T M24A M24T	Not Applicable
IMV30	Bracket Mounted/ Multivariable P, DP, T			
IMV31	Bracket Mounted/ Multivariable TP, DP, T			

Table 1. Manifold and Transmitter Compatibility (Continued)

Transmitter Description		Manifold Models with Transmitter Structures		
Xmtr Model	Transmitter Mounting and Measurement (a)	Commodity Version with Direct Conn. Transmitters (b)	Standard Version with Traditional Structure	Standard Version with Low Profile Structure (c)
Pneumatic d/p Cell Transmitter Family				
13A	Bracket Mounted - DP	Not Applicable	3-Valve: M4A M4T 5-Valve: M6TA M6T M24A M24T	Not Applicable
13HA	Bracket Mounted - DP			
15A	Bracket Mounted - DP			

(a) AP=Absolute Pressure; GP=Gauge Pressure; DP=Differential Pressure; T=Temperature; and TP=Tank Pressure.

(b) The Commodity Version is a low cost offering available with direct connect transmitters.

(c) The Low Profile Structure is for transmitters with either an LP1 or LP2 configuration.

Reference Documents

In addition to this instruction, there is other user documentation supporting manifolds for use with the I/A Series pressure family of transmitters as listed below.

Document Number	Document Description
Dimensional Prints	
DP 022-146	1-Valve Manifolds
DP 022-147	2-Valve Manifolds
DP 022-148	3-Valve Manifolds
DP 022-149	5-Valve Manifolds
Parts Lists	
PL 006-152	1, 2, 3, and 5-Valve Manifolds

Specifications

Materials of Construction

See Table 2.

Approximate Mass

See Table 2.

Pressure-Temperature Ratings

See Table 2.

⚠ WARNING

Do not exceed the rating of the transmitter used with the manifold.

Table 2. Materials of Construction, Approximate Mass, and Pressure-Temperature Ratings

Model	No. of Valves	Version Struct. (a)	Approx. Mass	Materials			Pressure - Temperature Rating (b)
				Body	Seat	Packing	
M9 (c)	1	Com. (j)	0.54 kg (1.2 lb)	cs, ss, H, M(h)	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F) 27.6 MPa @ 260 °C (4000 psi @ 500 °F)
PTM	2	Com. (j)	1.5 kg (3.3 lb)	cs, ss, H, M(h)	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F) 27.6 MPa @ 260 °C (4000 psi @ 500 °F)
PT7 (g)	2	Std. Trad	1.4 kg (3.0 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M25	2	Std. Trad	1.2 kg (2.7 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M4AP (d)	2	Std. Trad	2.7 kg (6.0 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M4TP (e)	2	Std. Trad	2.3 kg (5.0 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M4A (d)(g)	3	Std. Trad	2.7 kg (6.0 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M4T (e)(g)	3	Std. Trad	2.3 kg (5.0 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
MB3	3	Std. Lo-Pro	2.0 kg (4.4 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M6TA (d)(f)	5	Std. Trad	3.2 kg (7.0 lb)	cs, ss	Delrin	Teflon	26.7 MPa @ 93 °C (3000 psi @ 200 °F)
M6T (e)(f)	5	Std. Trad	3.2 kg (7.0 lb)	cs, ss	Delrin	Teflon	20.7 MPa @ 93 °C (3000 psi @ 200 °F)
MB5G (e)(f)	5	Std. Lo-Pro	2.5 kg (5.6 lb)	ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F) 27.6 MPa @ 260 °C (4000 psi @ 500 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
MB5P (e)	5	Std. Lo-Pro	2.5 kg (5.6 lb)	cs, ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M24A (d)(g)	5	Std. Trad	3.1 kg (6.8 lb)	ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)
M24T (e)(g)	5	Std. Trad	3.2 kg (7.0 lb)	ss, Hast.	Integral	Teflon	41.4 MPa @ 93 °C (6000 psi @ 200 °F)
						Grafoil	10.34 MPa @ 538 °C (1500 psi @ 1000 °F)

(a) Com = Commodity Version; Std = Standard Version; Trad = Traditional Structure; Lo-Pro = Low Profile Structure.

(b) Do not exceed the pressure-temperature rating of the transmitter.

(c) Commonly referred to as a Block and Bleed Valve.

(d) These manifolds have a flange end connection to the process.

(e) These manifolds have a 1/2-14 NPT end connection to the process.

(f) These manifolds are recommended specifically for natural gas applications.

(g) These transmitters are recommended for use in power industry installations.

(h) H = Hastelloy C-276, and M = Monel 400.

(j) Used with direct connect absolute and gauge pressure transmitter.

Schematic Diagrams

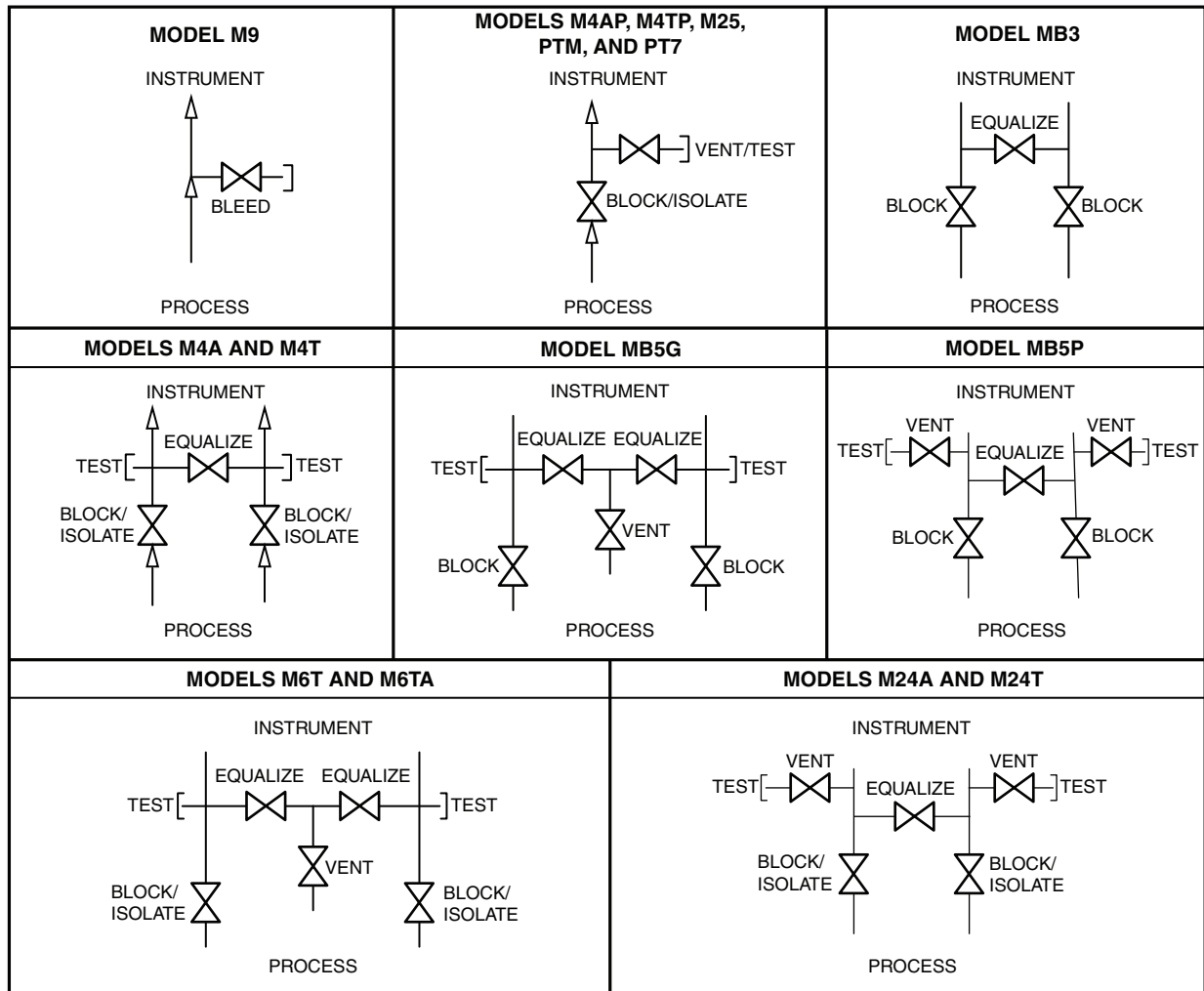


Figure 1. Schematic Diagrams of Manifolds

2. Installation

Each of the manifolds are designed to be used with specific transmitters. See Table 1 to ascertain which manifolds can be used with your transmitter.

Some manifolds can be optionally be mounted on a -AM mounting bracket. If such a bracket is available for your manifold, the installation diagrams in this section show a mounting using the bracket.

CAUTION

Ensure that the transmitter's stated vibration specification is not exceeded when installed in the operating environment. When pipe mounting using an -AM mounting bracket in an area with significant vibration, mount the manifold in such a way that the transmitter is located as close to the pipe as possible.

Tighten the bolts fastening the manifold to the transmitter and the bolts fastening the connector to the manifold to a torque of 61 N•m (45 lb•ft)

1-Valve Manifold

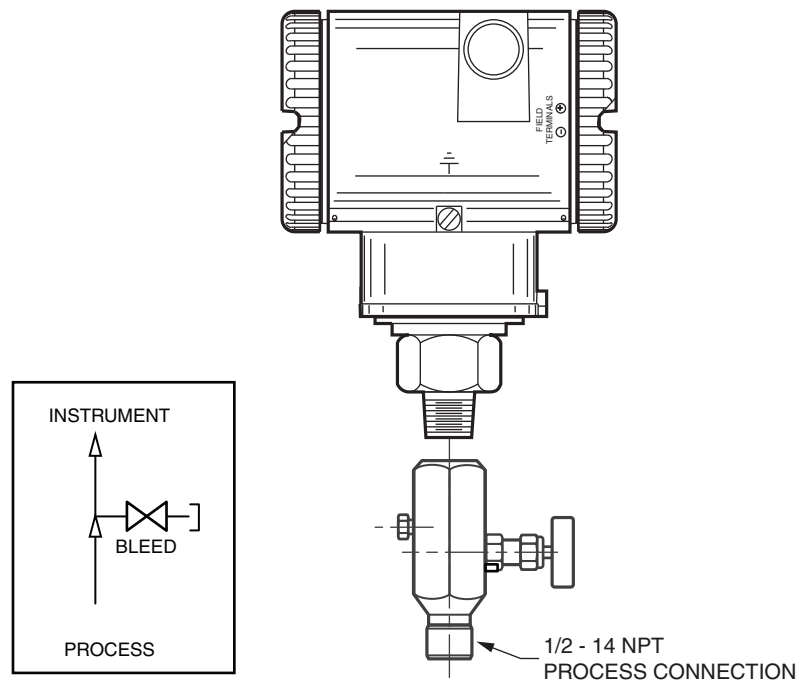


Figure 2. Model M9 1-Valve Manifold

2-Valve Manifolds

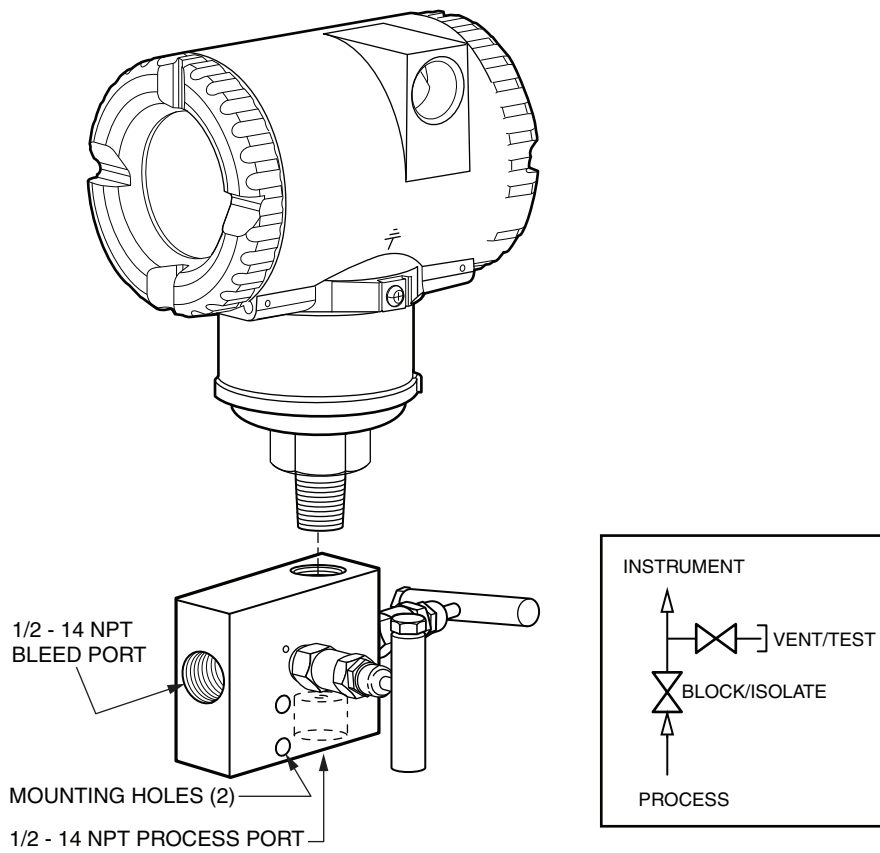


Figure 3. Model PTM 2-Valve Manifold

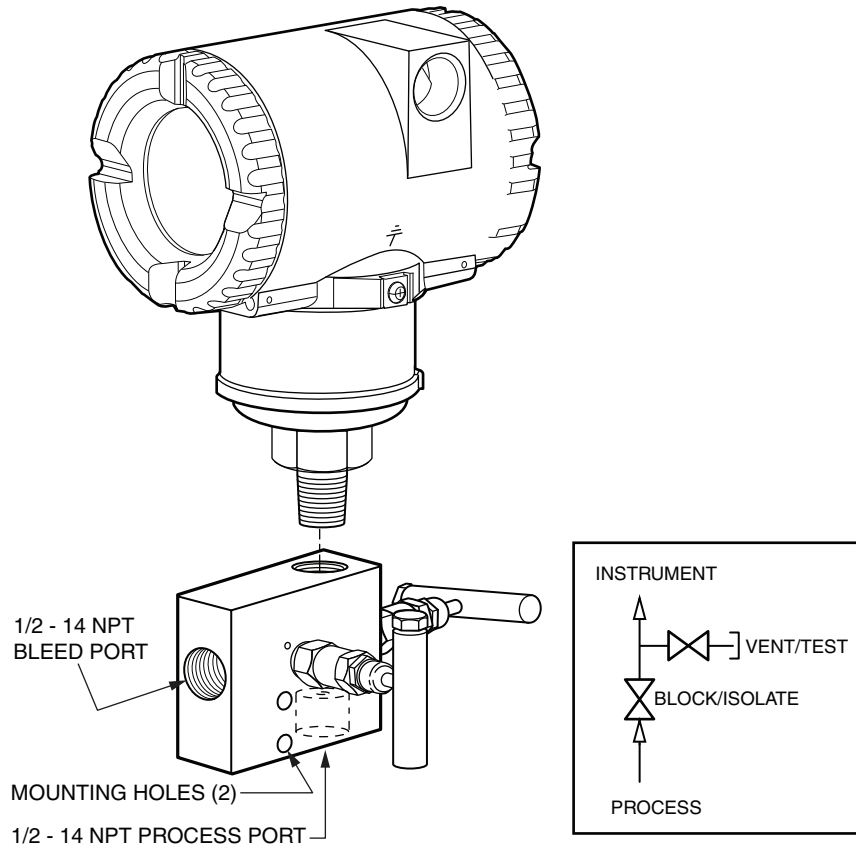


Figure 4. Model PT7 and PT7M 2-Valve Manifold

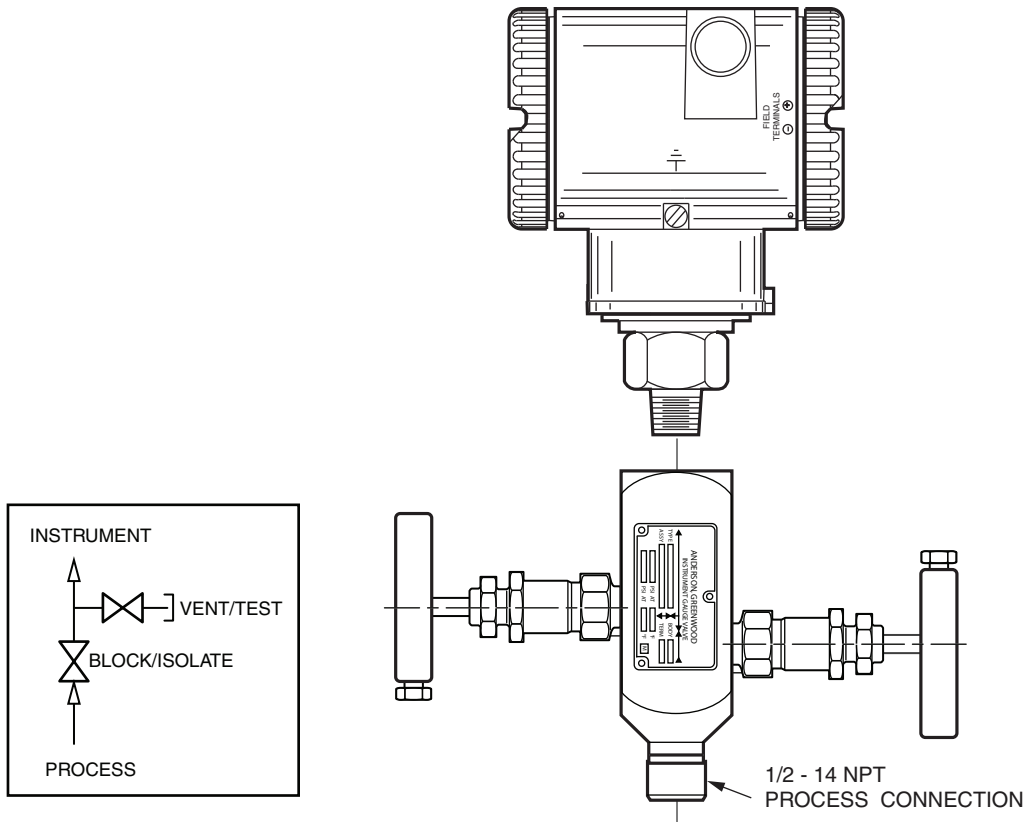


Figure 5. Model M25 2-Valve Manifold

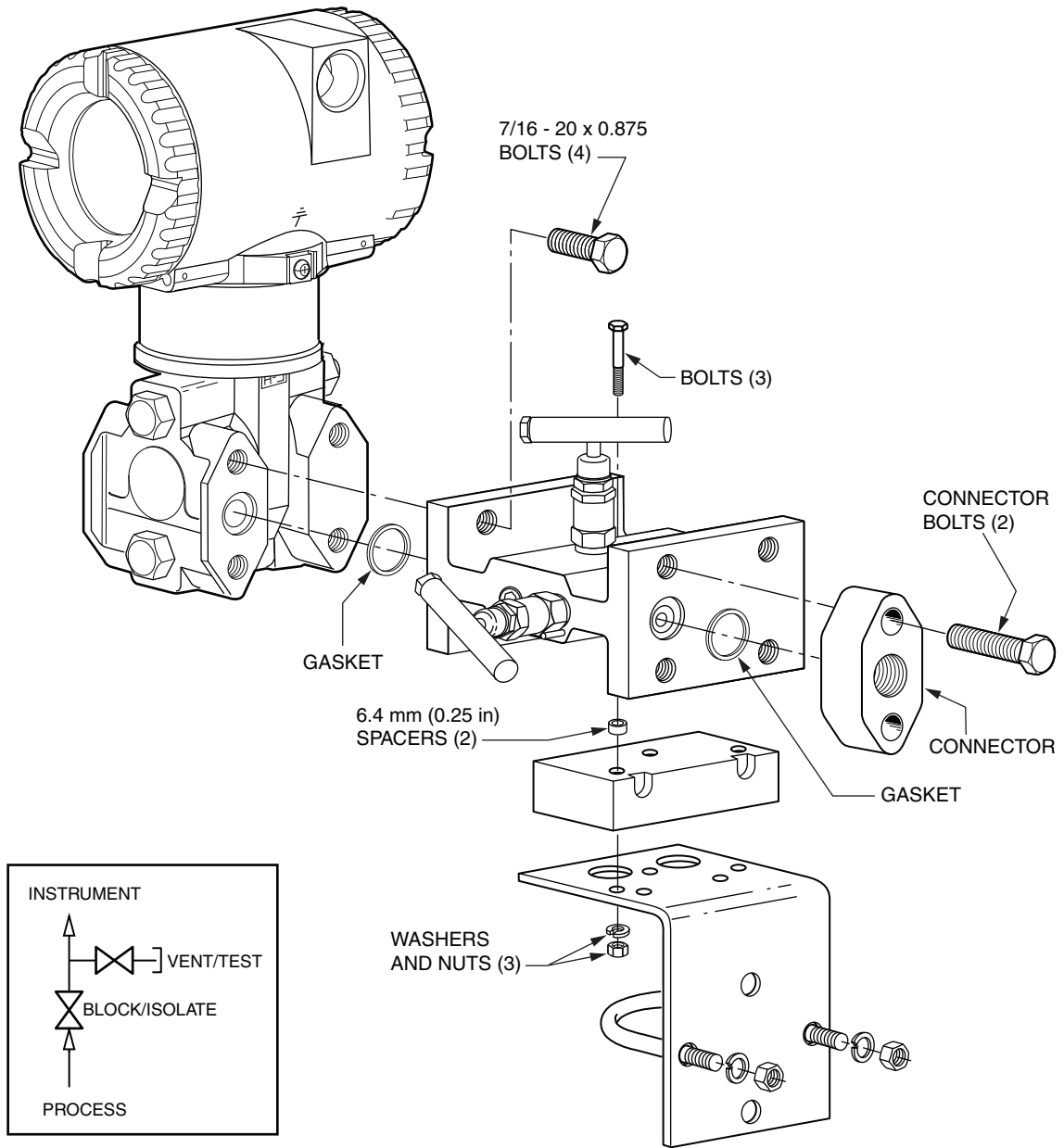


Figure 6. Model M4AP 2-Valve Manifold

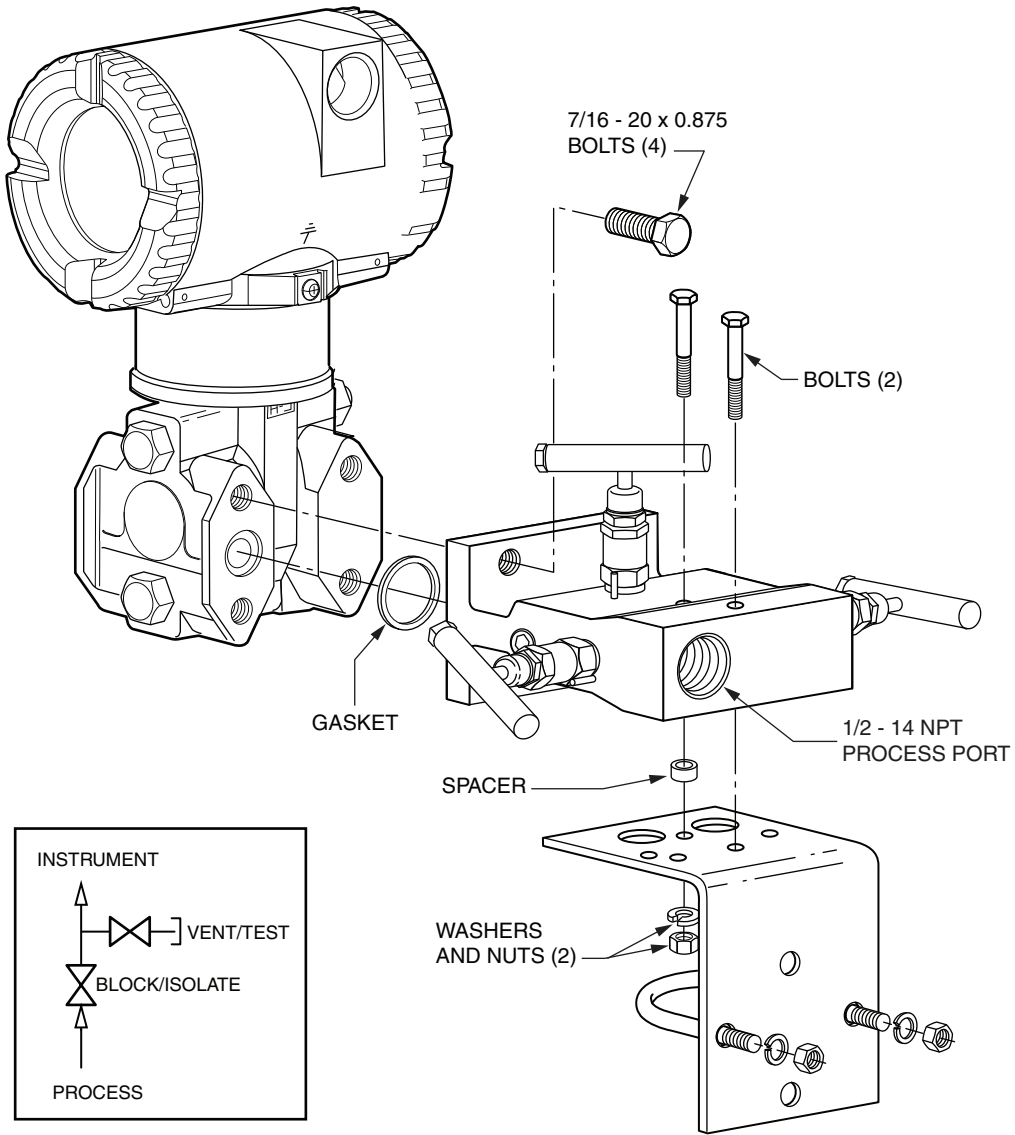


Figure 7. Model M4TP 2-Valve Manifold

3-Valve Manifolds

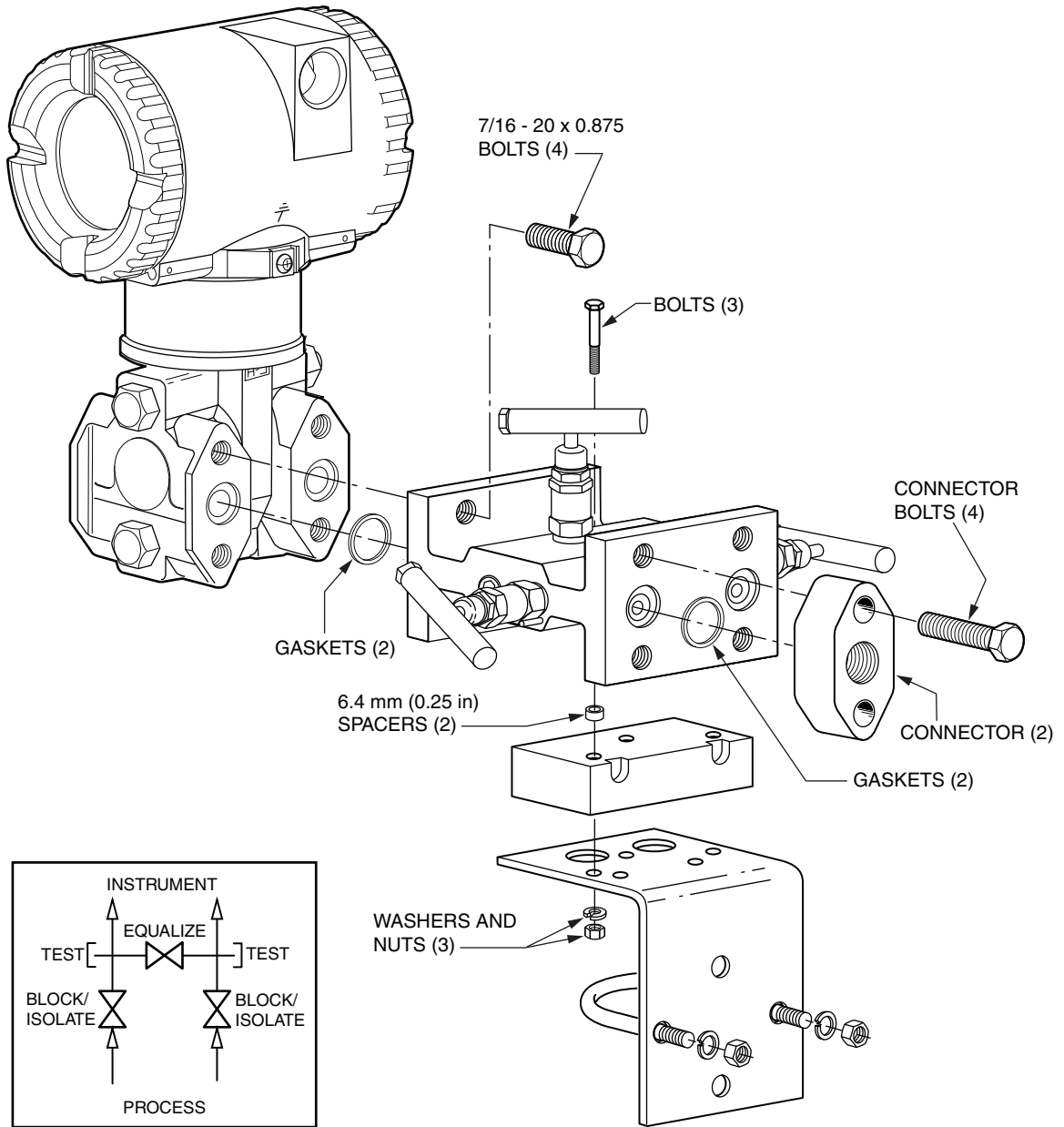


Figure 8. Model M4A 3-Valve Manifold

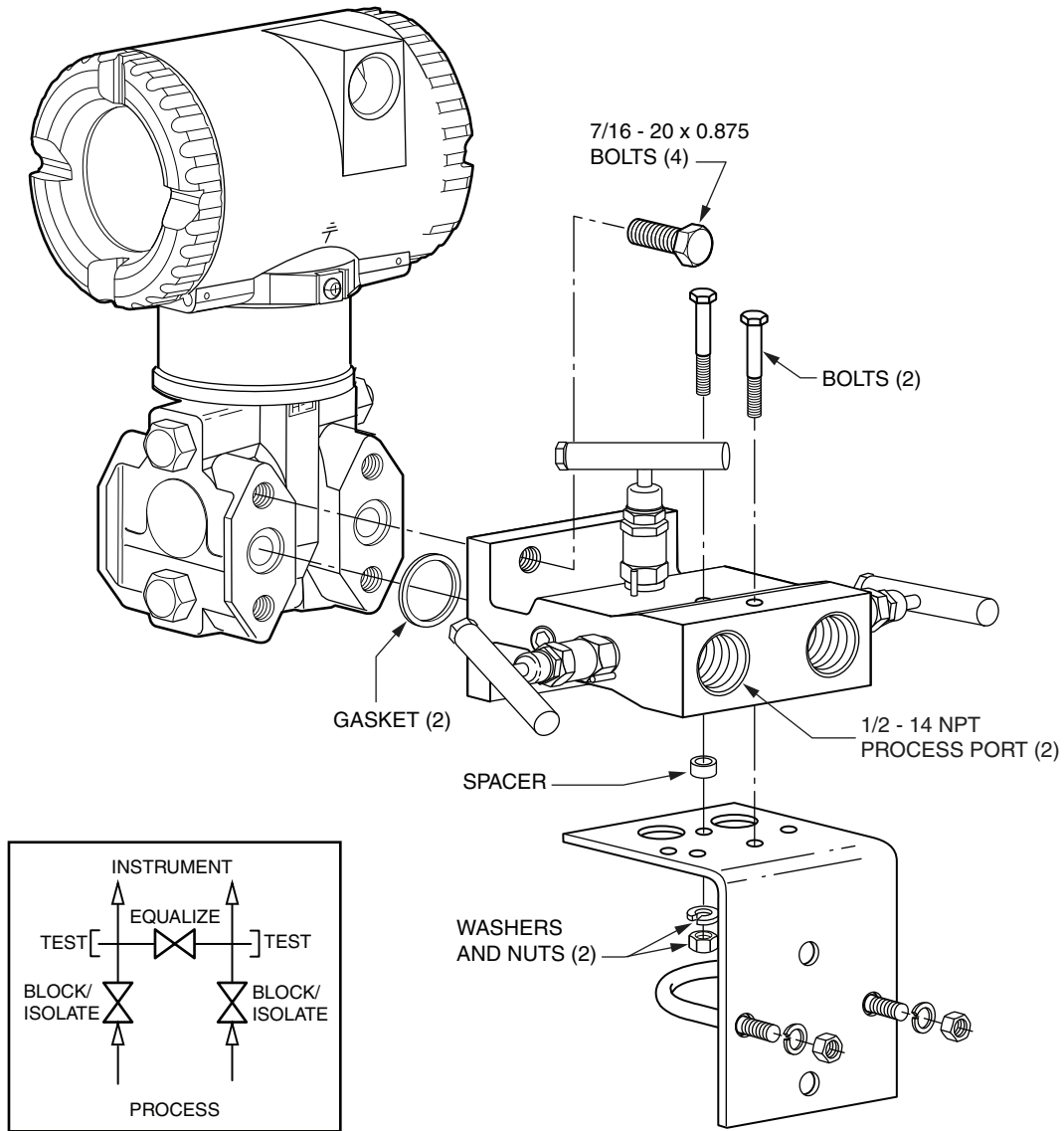


Figure 9. Model M4T 3-Valve Manifold

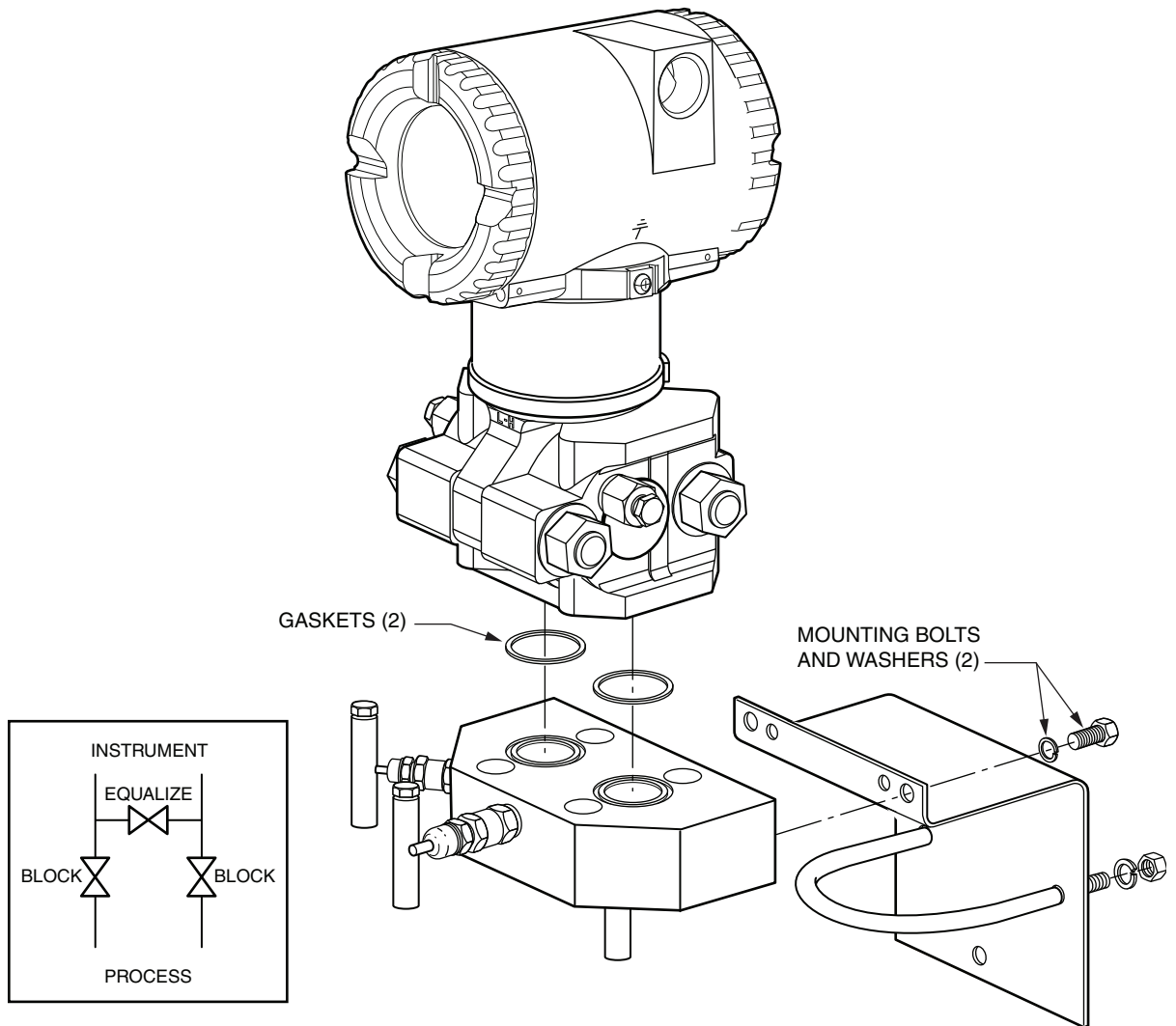


Figure 10. Model MB3 3-Valve Manifold

5-Valve Manifolds

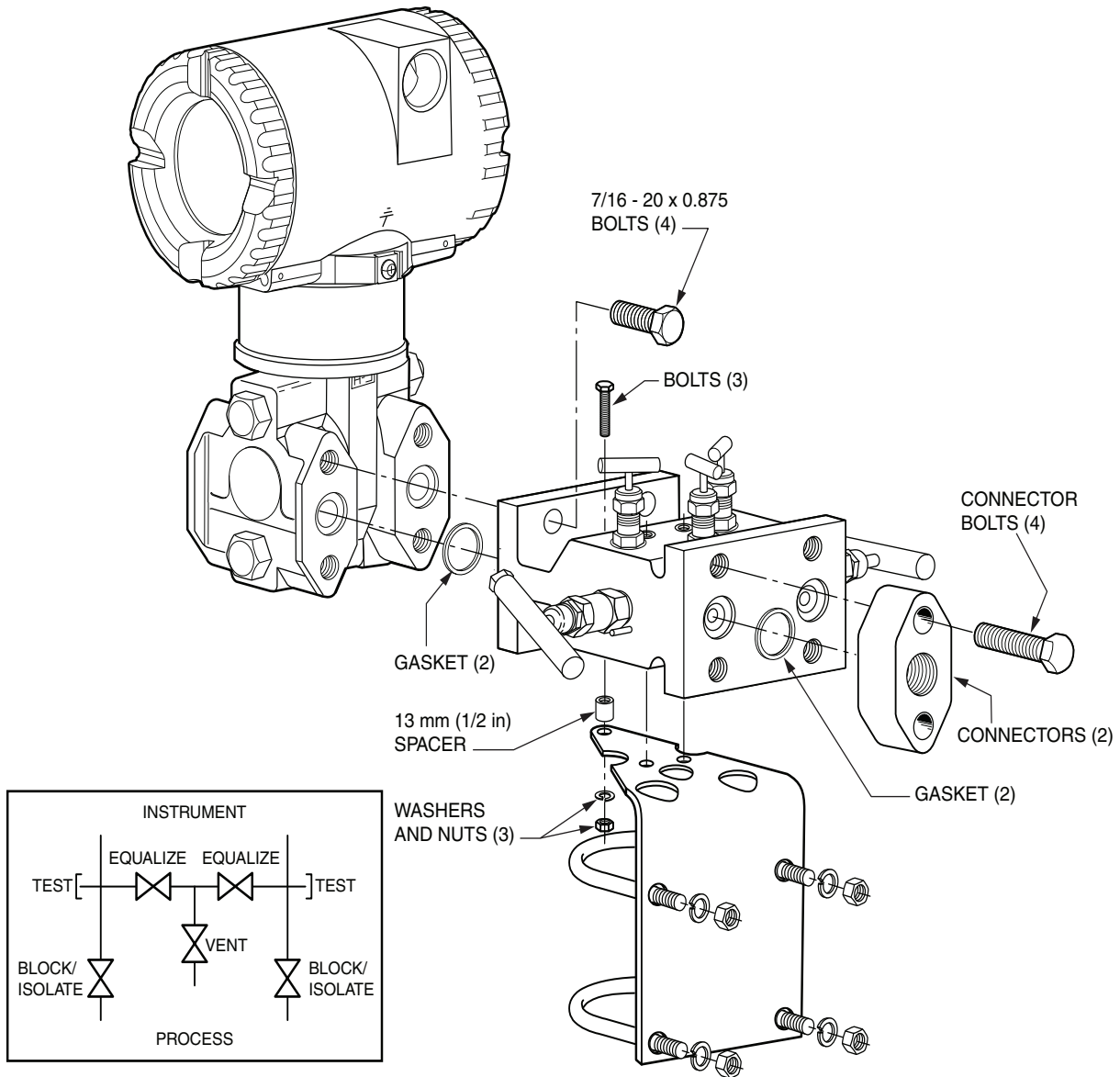


Figure 11. Model M6TA 5-Valve Manifold

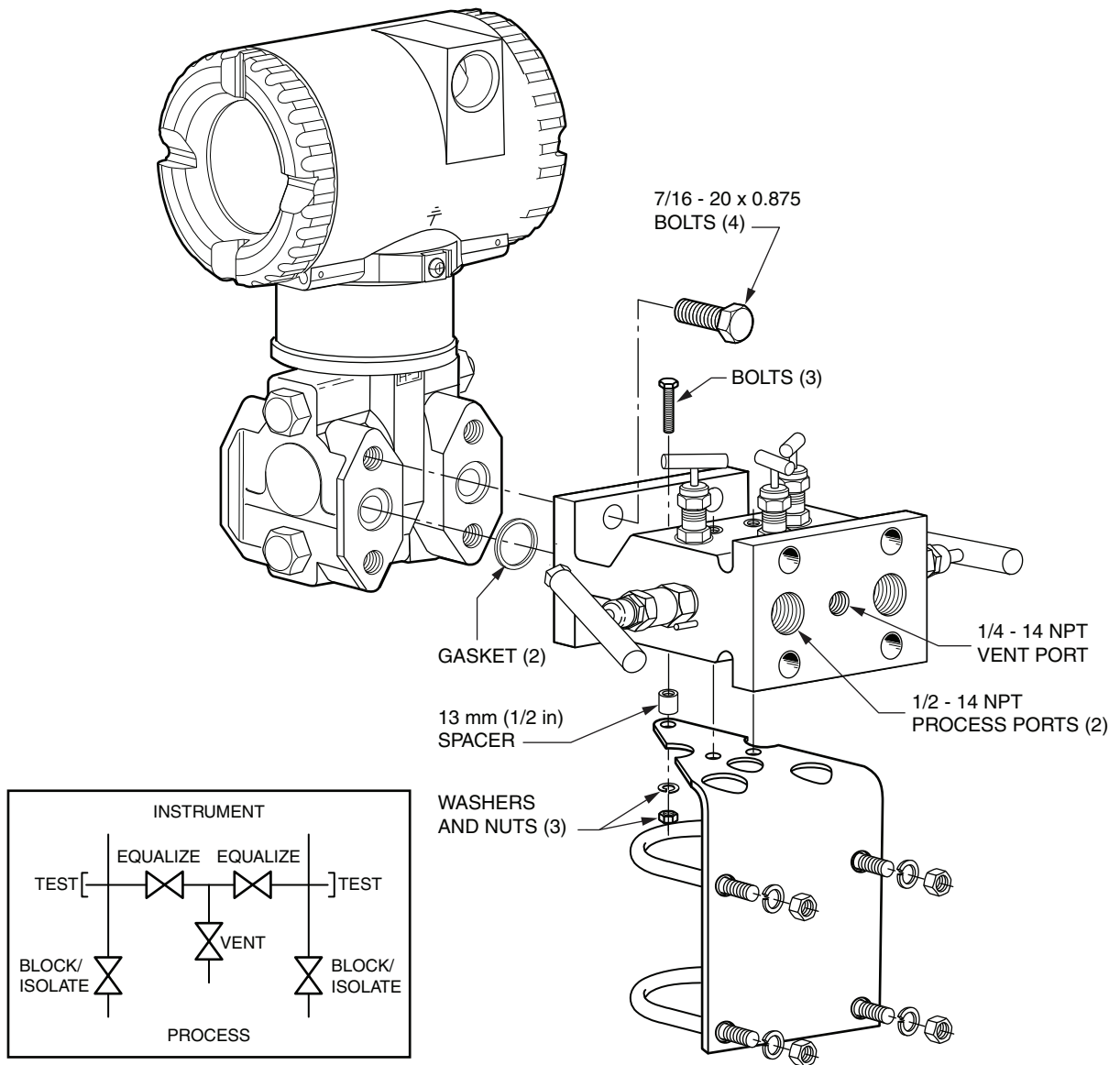


Figure 12. Model M6T 5-Valve Manifold

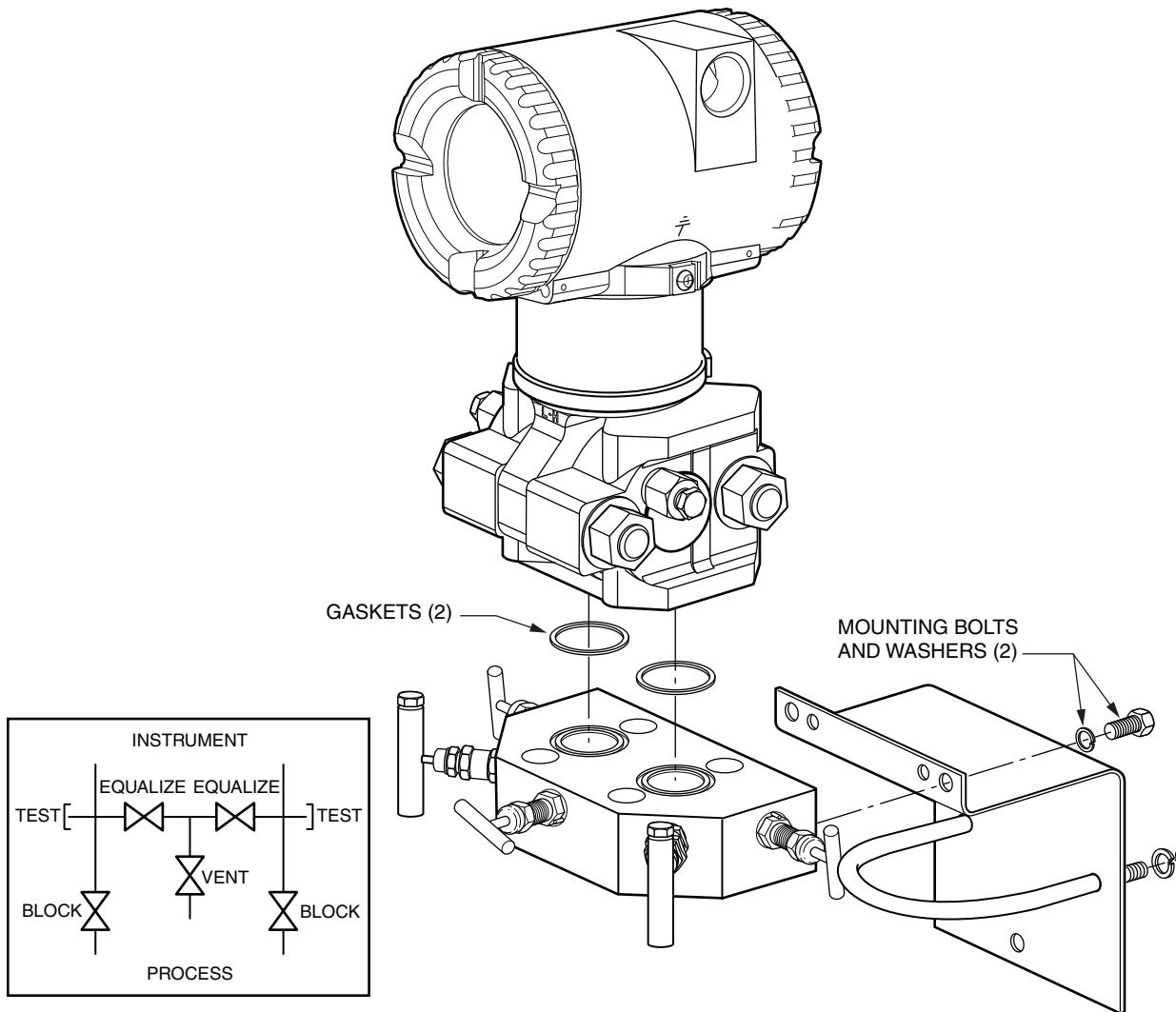


Figure 13. Model MB5G 5-Valve Manifold

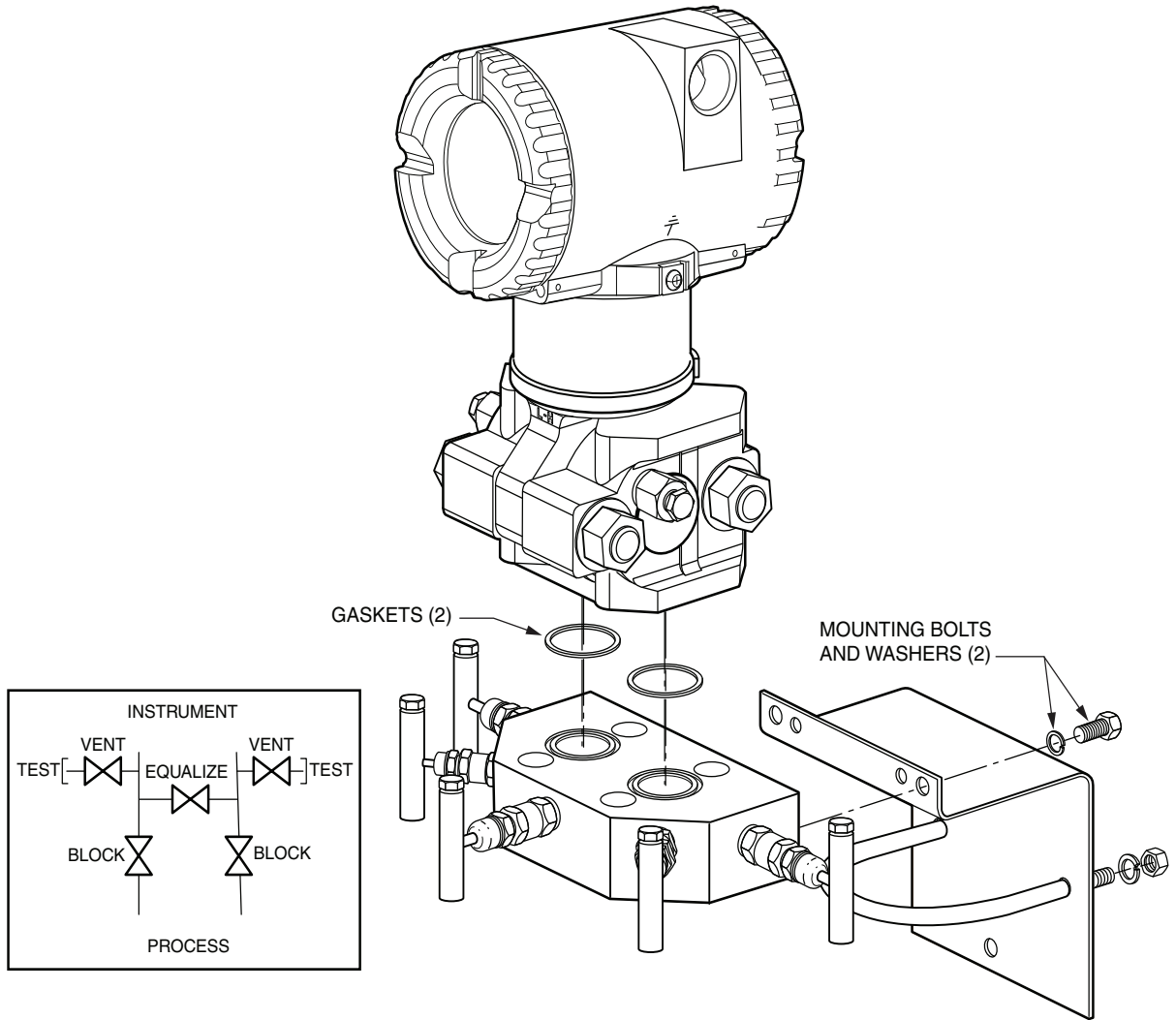


Figure 14. Model MB5P 5-Valve Manifold

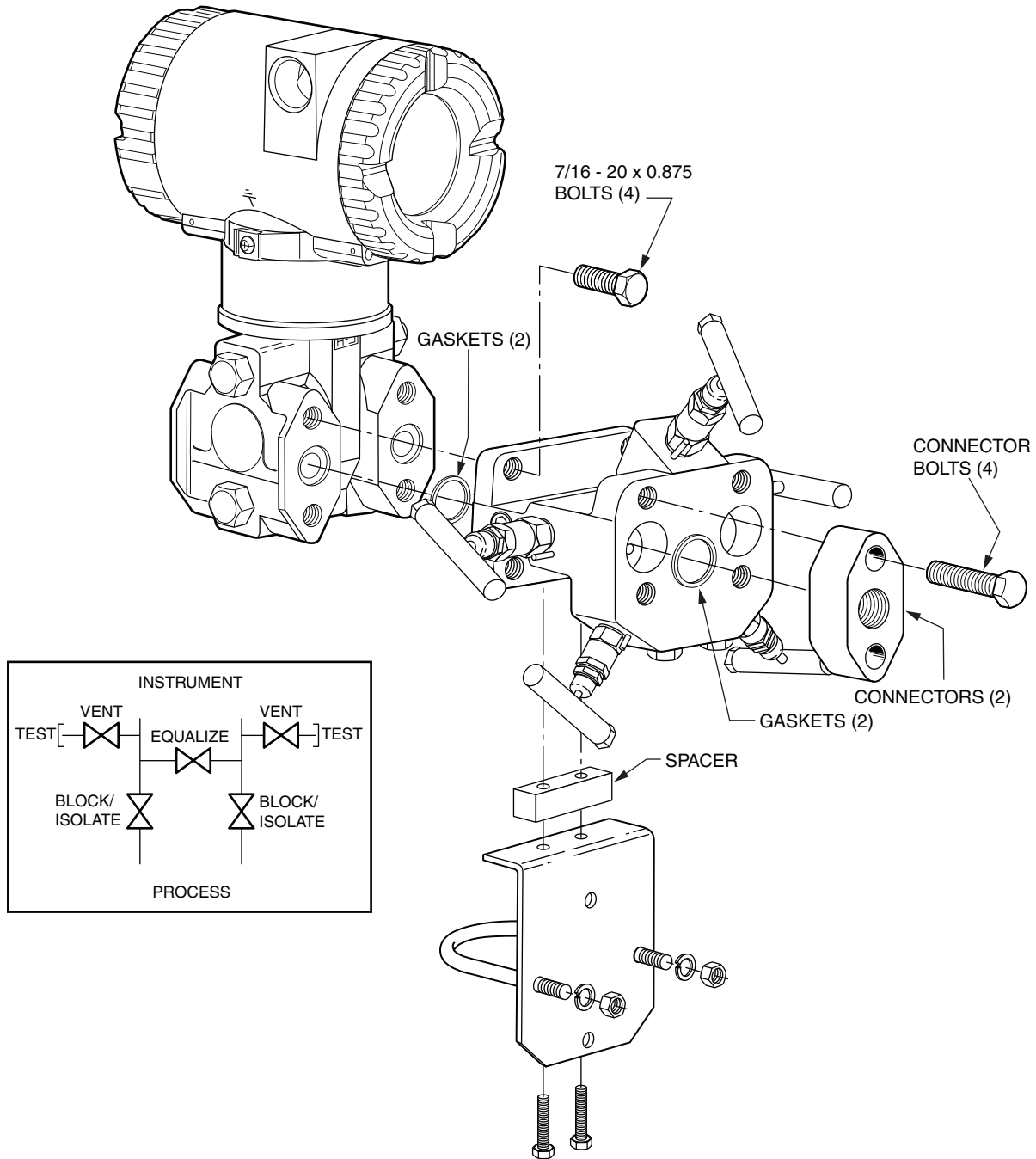


Figure 15. Model M24A 5-Valve Manifold

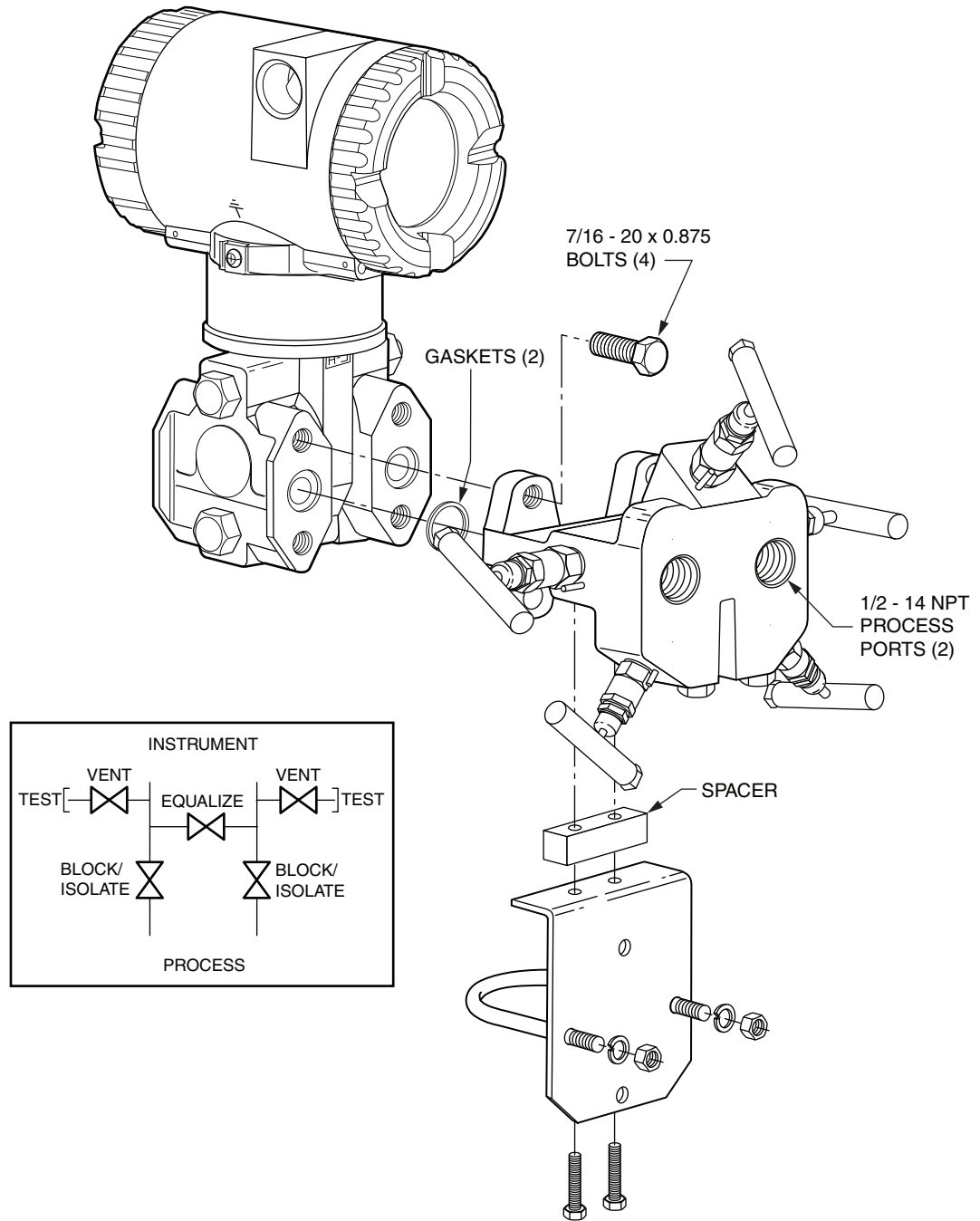


Figure 16. Model M24T 5-Valve Manifold

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