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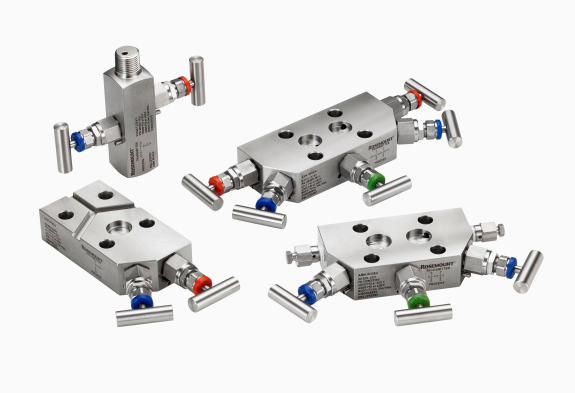
Product Data Sheet
00813-0100-4733, Rev RC
December 2019

Rosemount™ Manifold Solutions



To meet your variety of manifold connection system needs, Rosemount Manifolds deliver a diverse product offering that is easy to order, install, and operate. The portfolio includes a wide variety of styles, materials of construction, and valving configurations to address almost any application. Purchasing a Rosemount Manifold with your Rosemount Pressure Transmitter can provide you with highest amount of value. When you bundle these two products, you'll receive a fully assembled, calibrated, and leak-tested solution that is ready for installation out of the box.

Overview



- Factory assembled, leak-tested, and calibrated
- Full breadth offering including integral, in-line, and conventional styles
- Integral design enables flangeless connection to instrument reducing weight, space, and leak points
- Block-and-bleed, two-, three-, and five-valve configurations
- Compact, lightweight design
- Easy in-process calibration
- Direct-mount capability
- Available in NACE®-compliant materials of construction
- Available with Pressure-Lock™ Valve

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Selection guide

Rosemount 305 Coplanar™ Style



Rosemount R305 three-valve manifold



Rosemount 3051S aseembled to R305 five-valve manifold

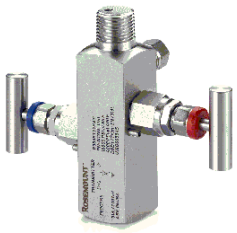
Standard features

- Assembled directly to transmitter, eliminating the need for a flange
- Factory leak tested and calibrated
- Two-, three-, and five-valve configurations
- Available with female NPT process connections
- No exposed bolt configuration enhances reliability
- Fifty percent fewer leak points than conventional transmitter to flange to manifold interface
- Special cleaning options available
- Available with five valve natural gas metering pattern
- Available with IEC flanged, ½-in. NPT bottom and ½-in. NPT side entry process connections

Rosemount R305 exclusive features

- Pressure-Lock Valve with two-piece stem design
- Large internal process bore to resist plugging

Rosemount 306 In-line Style



Rosemount R306 two-valve manifold



Rosemount R306 two-valve manifold

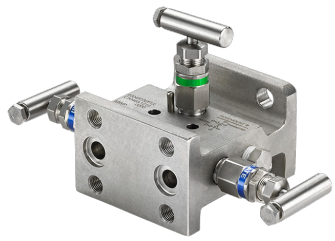
Standard features

- Assembled directly to transmitter or Rosemount Pressure Gauge
- Factory leak tested and calibrated
- Block-and-bleed and two-valve configurations
- Available with female NPT process connections
- Special cleaning options available

Rosemount R306 exclusive features

- Pressure-Lock Valve with two-piece stem design
- Large internal process bore to resist plugging

Rosemount 304 Conventional Style



Rosemount 304 three-valve manifold



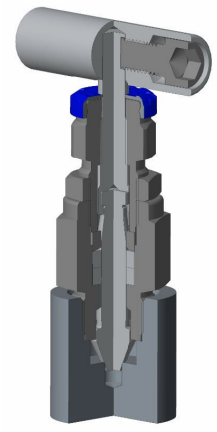
Rosemount 304 conventional manifold wafer style

Standard features

- Attaches to transmitter flange
- Two, three, and five-valve configuration
- Traditional (flange x flange, flange x NPT) and wafer styles
- Available with five-valve natural gas metering pattern
- Factory assembled, seal-tested, and calibrated

Rosemount Pressure-Lock™ valve technology

Exclusively featured on the Rosemount R305 and R306 manifolds



Simplified operation

- Two-piece valve stem design provides easier handle turn operation

Increased operator safety

- Needle-tip safety back seating ensures operator safety during process blowout events

Enhanced reliability

- Process-isolated stem threads increase overall valve life

Note

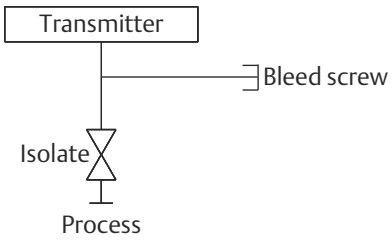
For more information on the Pressure-Lock Valve, reference Rosemount Pressure-Lock Valve Configuration.

Valve configuration

Block-and-bleed

The block-and-bleed configuration is available on the Rosemount 306 Manifold for use with in-line gage and absolute pressure transmitters. A single isolate valve provides instrument isolation and a bleed screw provides drain/vent capabilities.

Figure 1: Rosemount 306 Manifold



Two-valve

The two-valve configuration is available on Rosemount 305, 306, and 304 Manifolds for use with absolute and gage pressure transmitters. An isolate valve provides instrument isolation and a drain/vent valve allows venting, draining, or calibration.

Figure 2: Rosemount 305 and 306 Manifolds

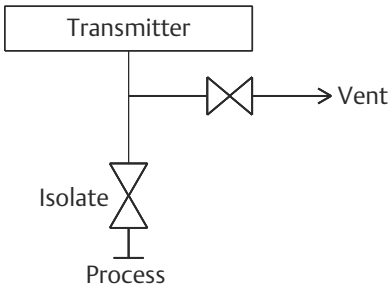
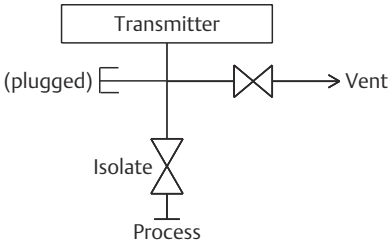


Figure 3: Rosemount 304 Manifold



Three-valve

The three-valve configuration is available on Rosemount 305 and 304 Manifolds for use with differential pressure and multi-variable transmitters. Two isolate valves provide instrument isolation and one equalize valve is positioned between the high and low process connections.

Figure 4: Rosemount 305 Manifolds

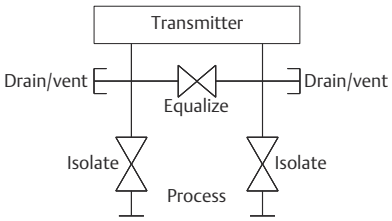


Figure 5: Rosemount 304 (Traditional) Manifold

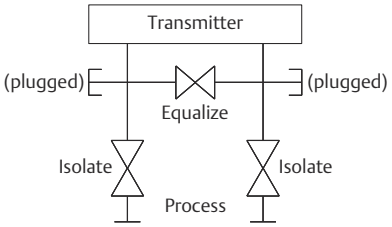
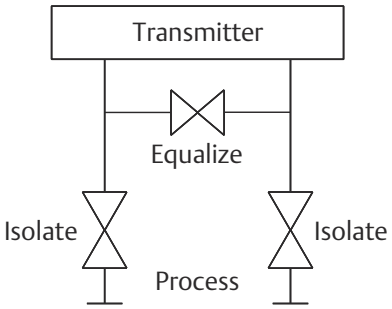


Figure 6: Rosemount 304 (Wafer) Manifold



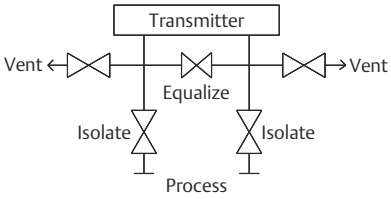
Note
Vent ports receive plastic caps to protect threaded connections unless otherwise noted.

Note
Plugged connections receive ¼-in. NPT plugs unless otherwise noted.

Five-valve

The five-valve configuration is available on Rosemount 305 and 304 Manifolds for use with differential pressure and multi-variable transmitters. Two isolate valves provide instrument isolation and one equalize valve is positioned between the high and low process connections. In addition, two drain/vent valves allow for controlled venting, 100 percent capture of vented or drained process, and simplified in-process calibration capability.

Figure 7: Rosemount 305 Manifolds and 304 (Wafer)

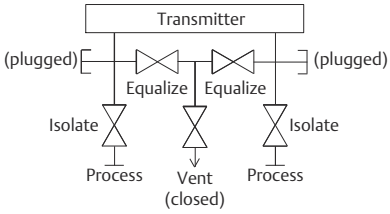


Five-valve natural gas

The five-valve natural gas configuration is available on the Rosemount 305 and 304 Manifolds for use with differential pressure and multi-variable transmitters. Two isolate valves provide instrument isolation and a single drain/vent valve allows for controlled venting, 100 percent capture of vented or drained process, and simplified in-process calibration capability. In addition, two equalize valves provide extra protection from leaking to ensure DP signal integrity.

- NG option includes wide handle pattern and soft seats for ease of use as well as a larger bore to reduce plugging

Figure 8: Rosemount 305 Manifolds and 304 (Traditional)



Note
Vent ports receive plastic caps to protect threaded connections unless otherwise noted.

Note
Plugged connections receive ¼-in. NPT plugs unless otherwise noted.

Note
Natural gas metering pattern only available on Rosemount 0305 Coplanar Manifold.

Ordering information

Rosemount Manifolds can be ordered as a stand-alone product or as an integrated assembly attached to a transmitter.

Order a stand-alone manifold

Procedure

1. Reference the Selection guide for assistance on choosing the type of manifold.
2. Specify a completed model number by referencing the applicable ordering table for the selected manifold type:
   - Rosemount 305 Integral Manifold, see Rosemount 305 Coplanar Manifolds
   - Rosemount 306 In-line Manifold, see Rosemount 306 In-line Manifolds
   - Rosemount 304 Conventional Manifold, see Rosemount 304 Conventional Manifolds

Order a transmitter/manifold assembly

Table 1: Ordering Codes for a Transmitter/Manifold Assembly

Transmitter	Manifold	Process connection code	Manifold option code
Rosemount 3051S	305	A11	N/A
	306	A11	N/A
	304	A12	N/A
Rosemount 3051/2051	305	N/A	S5
	306	N/A	S5
	304	N/A	S6
Rosemount 2088	305	N/A	N/A
	306	N/A	S5
	304	N/A	N/A
Rosemount 4088	305	A11	N/A
	306	A11	N/A
	304	A12	N/A

Procedure

1. Specify a completed Rosemount transmitter model number by referencing the applicable product data sheet.
2. Specify a completed manifold model number by referencing the applicable ordering table for the selected manifold type:
   - Rosemount 305 Integral Manifold, see Rosemount 305 Coplanar Manifolds
   - Rosemount 306 In-line Manifold, see Rosemount 306 In-line Manifolds
   - Rosemount 304 Conventional Manifold, see Rosemount 304 Conventional Manifolds
3. Verify the transmitter model number contains the correct process connection code or manifold option code for the desired transmitter manifold assembly (see Table 1).

Rosemount 305 Coplanar Manifolds



Rosemount Coplanar manifolds provide a leak checked and pressure tested single point solution when assembled to Rosemount pressure transmitters. The coplanar platform reduces potential leak paths by 50 percent over conventional style process connections while also reducing overall connection system weight.

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See Material selection for more information.

Table 2: Rosemount R305 Integral Manifold Ordering Information

The starred offerings (★) represent the most common options and should be selected for best delivery. The non-starred offerings are subject to additional delivery lead time.

Model	**Product description**				
R305	Integral manifold				
Design class					
E	Enhanced				★
Manifold style					
C	Coplanar				★
Manifold type					
2	Two-valve				★
3	Three-valve				★
5	Five-valve				★
Body(1)		**Bonnet**	**Stem and tip**	**Drain/vent**	
2	316 stainless steel (SST)	316 SST	316 SST	316 SST	★
Process connection					
B	½–14 NPT female				★
Packing material					
1(2)	PTFE				★
2(3)	Graphite-based				
Valve seat					
1	Integral				★
Options					
Extended product warranty					
WR3	3-year limited product warranty				
WR5	5-year limited product warranty				

Table 2: Rosemount R305 Integral Manifold Ordering Information *(continued)*

Model	Product description	
Mounting bracket		
B4	SST mounting bracket for 2-in. (50.8 mm) pipe mount with series 300 SST bolts	
BE	316 SST bracket for 2-in. (50.8 mm) pipe mount with 316 SST bolts	
BF	Carbon steel (CS) panel mount bracket	
BG	316 series SST panel mount bracket	
Bolting materials		
L4	Austenitic 316 SST bolts	
L5	ASTM A193 B7M bolts	
L8	ASTM A193 Grade B8M, Class 2	
Cleaning[4]		
P2	Cleaning for special services	
Material recommendation for NACE[5]		
SG	Sour gas (meets NACE MR0175/ISO 15156, MR 01031)	
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1	
NACE Certificate		
Q15	Certificate of Compliance to NACE MR0175/ISO 15156 for wetted materials	★
Q25	Certificate of Compliance to NACE MR0103 for wetted materials	★
Bolts		
TD	For assembly to Rosemount 3051D	★
Typical coplanar integral manifold model number: R305EC32B11B4		

(1) *Refer to Materials of construction for additional detail on process wetted materials of construction.*
(2) *Includes PTFE tape on drain/vent valves and plugs.*
(3) *Includes graphite tape on drain/vent valves and plugs.*
(4) *Not available with graphite-based packing material code 2.*
(5) *Valve stem tip material is C-276.*

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See Material selection for more information on material selection.

Table 3: Rosemount 305 Integral Manifold Ordering Information

The starred offerings (★) represent the most common options and should be selected for best delivery. The non-starred offerings are subject to additional delivery lead time.

Model	Product description			
0305	Integral manifold			
Manufacturer				
R	Rosemount			★
Manifold style				
C	Coplanar			★
T	Traditional			★
M	Traditional (DIN-compliant flange)			★
Manifold type				
2	Two-valve			★
3	Three-valve			★
5(1)	Five-valve			★
6(2)	Five-valve natural gas metering pattern			★
7(2) (3)	Two-valve (per ASME B31.1 [ANSI] power and piping code)			
8(2) (3)	Three-valve (per ASME B31.1 [ANSI] power and piping code)			
9(2) (3)	Five-valve (per ASME B31.1 [ANSI] power and piping code)			
Body(4)		**Bonnet**	**Stem and tip/ball**	
2	316 SST/316L SST	316 SST	316 SST	★
3(5)	Alloy C-276	Alloy C-276	Alloy C-276	
4(5) (6)	Alloy 400	Alloy 400	Alloy 400	
8(7)	Alloy 625	Alloy 625	Alloy 625	
9(7)	All super duplex SST (UNS S32760)			
Process connection style				
A(8)	¼–18 NPT female			★
B(9)	½–14 NPT female			★
S(10)	½–14 NPT female side entry for coplanar style			★
Packing material				
1(11)	PTFE			★
2(12)	Graphite-based			
Valve seat				
1	Integral			★
5	Soft POM (only available with natural gas metering pattern)			★

Table 3: Rosemount 305 Integral Manifold Ordering Information *(continued)*

Model	Product description	
Options		
Extended product warranty		
WR3	3-year limited warranty	★
WR5	5-year limited warranty	★
Mounting brackets		
B1	Bracket for 2-in. (50.8 mm) pipe mounting, CS bolts	★
B3[13]	Flat bracket for 2-in. (50.8 mm) pipe mounting, CS bolts	★
B4	SST mounting bracket for 2-in. (50.8 mm) pipe mounting, 300 SST bolts	★
B7	B1 bracket with 316 SST bolts	★
B9[13]	B3 bracket with 316 SST bolts	★
BA	316 SST B1 bracket with 316 SST bolts	★
BC[13]	316 SST B3 bracket with 316 SST bolts	★
BE	316 SST B4 bracket with 316 SST bolts	★
BF	CS panel mount bracket	★
BG	316 SST panel mount bracket	★
Bolt materials		
L4[14]	Austenitic 316 SST bolts	★
L5	ASTM A193, Grade B7M bolts	★
L8	ASTM A193, Grade B8M bolts, Class 2	★
Cleaning[15]		
P2	Cleaning for special services	★
Material recommendations for NACE [5] [16]		
SG	Sour gas (meets NACE MR0175/ISO 15156, MR0103)	★
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1	
Adapters[17]		
DF	½–14 NPT female flange adapter	★
DQ	0.47-in. (12 mm) ferrule tube flange adapter	
Cold temperature[18]		
CW1	–67 °F (–55 °C) cold temperature operation	
BR6	–76 °F (–60 °C) cold temperature operation	
Process flow meter configuration		
PF	Relocated equalize valve for 9295 process flow meter	
Process flange bolting connection[19]		
HK	0.39-in (10 mm) (M10) process flange bolting connection	★

Table 3: Rosemount 305 Integral Manifold Ordering Information *(continued)*

Model	Product description	
HL	0.47-in. (12 mm) (M12) process flange bolting connection	★
Typical coplanar integral manifold model number: 305 R C 3 2 B 1 1 B4		

(1) *Not available with traditional manifold style T.*
(2) *Only available with coplanar manifold style code C.*
(3) *Only available with 316 SST materials of construction code 2 and graphite-based packing code 2.*
(4) *Refer to Materials of construction for additional detail on process wetted materials of construction.*
(5) *Materials of construction comply with recommendations per NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103/ISO 17495 for sour refining environments.*
(6) *Includes alloy C - 276 drain vents.*
(7) *Only available with two-, three-, and five-valve manifold type.*
(8) *Only available with traditional manifold style codes T and M.*
(9) *Not available with traditional manifold style code M. Manifold style code T does not include mounting holes on process flange.*
(10) *Only available with coplanar manifold style C, two-, three-, and five-valve manifold type, 316 SST or alloy C-276, alloy 400 materials of construction, integral valve seat code 1, mounting bracket code B4, BE, and sour gas code SG.*
(11) *Includes PTFE tape on drain/vent valves and plugs.*
(12) *Includes graphite tape on drain/vent valves and plugs.*
(13) *Not compatible with the Rosemount 3095 Transmitter.*
(14) *Not available with ASME B31.1 manifold type codes 7, 8, and 9.*
(15) *Not available with graphite-based packing material code 2.*
(16) *Only allowed with material of construction code 2.*
(17) *Only allowed with traditional manifold style codes T and M. Not allowed with graphite-based packing code 2.*
(18) *Only available with two, three, and five-valve manifold type, 316 SST or alloy C-276 materials of construction and integral valve seat.*
(19) *Only available with traditional manifold style code M.*

Rosemount 306 In-line Manifolds



Rosemount In-Line manifolds provide a leak checked and pressure tested single point solution when assembled to Rosemount pressure transmitters. The in-line, compact design is available with a lightweight block and bleed or two-valve configurations.

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See Material selection for more information on material selection.

Table 4: Rosemount R306 Integral Manifold Ordering Information

The starred offerings (★) represent the most common options and should be selected for best delivery. The non-starred offerings are subject to additional delivery lead time.

Model	Product description				
R306	In-line manifold				
Design class					
E	Enhanced				★
Manifold style					
T	Threaded				★
Manifold type					
1	Block-and-Bleed				★
2	Two-valve				★
Body		**Bonnet**	**Stem and tip**	**Drain/vent**	
2	316 SST	316 SST	316 SST	316 SST	★
Process connection					
AA	½–14 male ANPT process connection for in-line transmitter				★
BA	½–14 female ANPT process connection for in-line transmitter				★
Packing material					
1(1)	PTFE				★
2(2)	Graphite-based				
Valve seat					
1	Integral				★

Table 4: Rosemount R306 Integral Manifold Ordering Information *(continued)*

Model	Product description	
Options		
Extended product warranty		
WR3	3-year limited product warranty	
WR5	5-year limited product warranty	
Cleaning[3]		
P2	Cleaning for special services	
Material recommendation for NACE[4]		
SG	Sour gas (meets NACE MR0175/ISO 15156, MR 0103)	
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1	
NACE Certificate		
Q15	Certificate of Compliance to NACE MR0175/ISO 15156 for wetted materials	★
Q25	Certificate of Compliance to NACE MR0103 for wetted materials	★
Typical coplanar integral manifold model number: R306ET22BA11		

(1) *Includes PTFE tape on drain/vent valves and plugs.*
(2) *Includes graphite tape on drain/vent valves and plugs.*
(3) *Not available with graphite-based packing material code 2.*
(4) *Valve stem tip material is C-276.*

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See Material selection for more information.

Table 5: Rosemount 306 Pressure Manifold Ordering Information

The starred offerings (★) represent the most common options and should be selected for best delivery. The non-starred offerings are subject to additional delivery lead time.

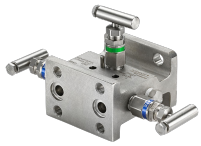
Model	Product description			
0306	In-line manifold			
Manufacturer				
R	Rosemount			★
Manifold style				
T	Threaded			★
Manifold type				
1	Block-and-bleed			★
2	Two-valve			★
3(1)	Two-valve (per ASME B31.1 power piping code)			
Body(2)		**Bonnet**	**Stem and tip/ball**	
2	316/316L SST	316 SST	316 SST	★
3(3) (4)	Alloy C-276	Alloy C-276	Alloy C-276	
4(3)	Alloy 400	Alloy 400	Alloy 400/K-500	
8(3)	Alloy 625	Alloy 625	Alloy 625	
9(3)	All super duplex SST (UNS S32760)			
Process connection				
AA	½–14 male NPT process connection for in-line transmitter			★
AW	½–14 male NPT process connection for Rosemount Wireless Pressure Gauge			★
BA(3)	½–14 female NPT process connection for in-line transmitter			★
BW	½–14 female NPT process connection for Rosemount Wireless Pressure Gauge			★
Packing material				
1(5)	PTFE			★
2(6)	Graphite-based			
Valve seat				
1	Integral			★
Options				
Extended product warranty				
WR3	3-year limited warranty			★
WR5	5-year limited warranty			★
Cleaning(7)				
P2	Cleaning for special services			

Table 5: Rosemount 306 Pressure Manifold Ordering Information *(continued)*

Model	Product description	
Cold temperature[8]		
CW1	–67 °F (–55 °C)	
BR6	–76 °F (–60 °C)	
Material recommendations for NACE [4] [9]		
SG	Sour gas (meets NACE MR0175/ISO 15156, MR0103)	★
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1	★
Typical integral manifold model number: 306 R T 2 2 BA 1 1		

(1) *Only available with 316 SST materials of construction and graphite-based packing.*
(2) *Refer to Materials of construction for additional detail on process wetted materials of construction.*
(3) *Not available with block-and-bleed manifold type.*
(4) *Materials of Construction comply with recommendations per NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103/ISO 17495 for sour refining environments.*
(5) *Includes PTFE tape on drain/vent valves and plugs.*
(6) *Includes graphite tape on plugs.*
(7) *Not available with graphite-based packing material code 2.*
(8) *Only available with two-valve manifold type, 316 SST or alloy C-276 materials of construction, ½–14 male and female NPT process connection for in-line transmitters and integral valve seat.*
(9) *Only allowed with material of construction code 2.*

Rosemount 304 Conventional Manifolds



Rosemount Conventional manifolds provide a leak-checked and pressure-tested single-point solution when assembled to Rosemount pressure transmitters. The conventional platform delivers a like-for-like replacement for traditional style manifolds with threaded or flanged side process entries.

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See Material selection for more information.

Table 6: Rosemount 304 Conventional Manifold Ordering Information

The starred offerings (★) represent the most common options and should be selected for best delivery. The non-starred offerings are subject to additional delivery lead time.

Model	**Product description**				
0304	Conventional manifold				
Manufacturer					
R	Rosemount				★
Manifold style					
T	Traditional (flange x flange or flange x NPT)				★
W(1)	Wafer				
Manifold type					
2(2)	Two-valve				★
3	Three-valve				★
5(3)	Five-valve				★
6(2)	Five-valve natural gas metering pattern				★
7(2) (4)	Two-valve (per ASME B31.1 [ANSI] power and piping code)				
8(2) (4)	Three-valve (per ASME B31.1 [ANSI] power and piping code)				
Body (5)		**Bonnet**	**Stem**	**Tip**	
2	316/316L SST	316 SST	316 SST	316 SST	★
4(6)	Alloy 400	Alloy 400	Alloy 400	Alloy 400	
5	CS	316 SST	316 SST	316 SST	★
Process connection style					
B	½–14 NPT				★
F(2)	Flanged				★
Packing/stem seal material					
1(7)	PTFE				★
2(1) (8)	Graphite-based				

Table 6: Rosemount 304 Conventional Manifold Ordering Information *(continued)*

Model	Product description	
3[9]	FKM elastomer O-ring	★
Bolts		
1	For assembly to Rosemount 2051/3051 traditional flange	★
2	For assembly to Rosemount 2051/3051 DIN-compliant traditional flange	★
3	For assembly to Rosemount 2051/3051 Coplanar™ flange	★
Options		
Gas-metering configuration[10]		
NG	Wide handle pattern, ⅜-in. (9.53 mm) bore, soft POM seat	★
Extended product warranty		
WR3	3-year limited warranty	★
WR5	5-year limited warranty	★
Mounting brackets		
VC[2]	Manifold heavy duty mounting bracket, CS for traditional style	★
VS[2]	Manifold heavy duty mounting bracket, 316 SST for traditional style	★
B4[3]	Manifold SST mounting bracket for 2-in. (50.8 mm) pipe mount with series 300 SST bolts for wafer style	★
Adapters and connectors[11]		
DF	½–14 NPT female flange adapter	★
DT	½-in. (12.7 mm) ferrule tube flange adapter	★
DQ	0.47-in (12 mm) ferrule tube flange adapter	★
DV[12]	½–14 NPT male non-stabilized connectors	★
DH[12]	½–14 NPT male stabilized extended connectors	★
Dielectric isolator kits[13]		
G2	Dielectric isolators and bolt sleeves for connectors	★
Bolt material		
L4[14]	Austenitic 316 SST bolts	★
L5	ASTM A193, Grade B7M bolts	★
L8	ASTM A193, Grade B8M bolts, Class 2	★
Material recommendations for NACE[1] [15]		
SG	Sour gas (meets NACE MR0175/ISO 15156, MR0103/ISO 17954)	★
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1	
Cleaning[16]		
P2	Cleaning for special service	
Heater block kits[17]		
SB	Steam block kit, ¼-in. NPT connection	★

Table 6: Rosemount 304 Conventional Manifold Ordering Information *(continued)*

Model	Product description
Typical model number: 0304 R T 3 2 B 1 1 VS	

(1) *Only allowed with material of construction code 2.*
(2) *Not available with wafer manifold style code W.*
(3) *Not available with traditional manifold style code T.*
(4) *Only available with 316 SST materials of construction code 2 and graphite-based packing code 2.*
(5) *Refer to Material selection for additional detail on process wetted materials of construction.*
(6) *Only available with wafer manifold style and two-valve manifold type.*
(7) *Includes PTFE tape on drain/vent valves and plugs.*
(8) *Includes graphite tape on plugs.*
(9) *Only available with option code NG.*
(10) *Only available with manifold type code 6.*
(11) *Only allowed with both manifold style code T and process connection code F. Not allowed with graphite-based packing code 2.*
(12) *Only available with manifold style code 3 and 6.*
(13) *Only available with option codes DV and DH.*
(14) *Not available with manifold type codes 7, 8.*
(15) *Materials of construction comply with recommendations per NACE MR0175/ISO 1516 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103/ISO 17495 for sour refining environments.*
(16) *Not available with Graphite-based packing material code 2.*
(17) *Not available with manifold type code 6.*

Specifications

Material selection

Emerson provides a variety of Rosemount product with various product options and configurations including materials of construction that can be expected to perform well in a wide range of applications. The Rosemount product information presented is intended as a guide for the purchaser to make an appropriate selection for the application. It is the purchaser's sole responsibility to make a careful analysis of all process parameters (e.g., all chemical components, temperature, pressure, flow rate, abrasives, contaminants), when specifying product, materials, options and components for the particular application. Emerson is not in a position to evaluate or guarantee the compatibility of the process fluid or other process parameters with the product, options, configuration or materials of construction selected. For more information on material compatibility, refer to the Material Selection and Compatibility Considerations for Rosemount Pressure Transmitters

Pressure and temperature ratings

Figure 9: Rosemount R305 Integral Manifolds

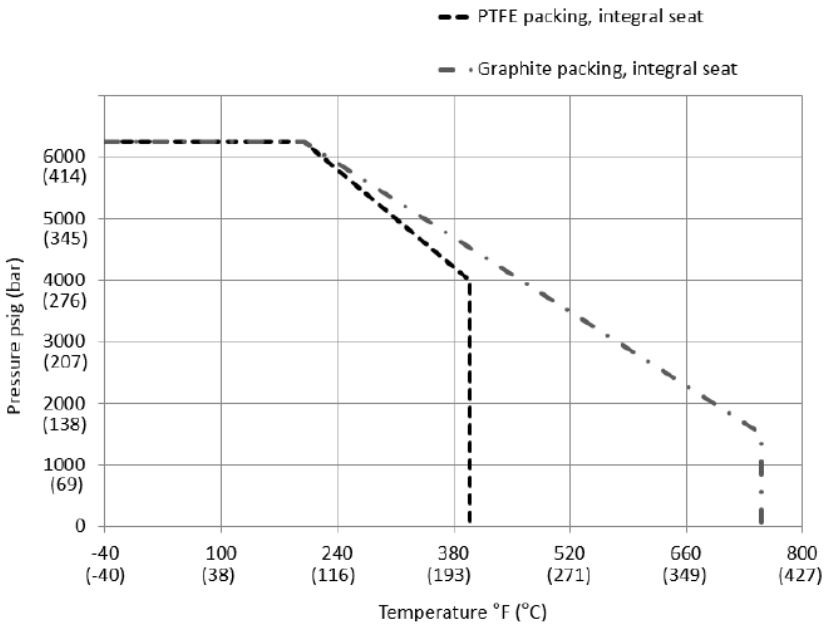


Table 7: Rosemount R305 Integral Manifolds

Packing	Seat	Pressure and temperature ratings
PTFE	Integral	6250 psi at –40 to 200 °F (431 bar at –40 to 93 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6250 psi at –40 to 200 °F (431 bar at –40 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)

Figure 10: Rosemount 305 Integral Manifolds

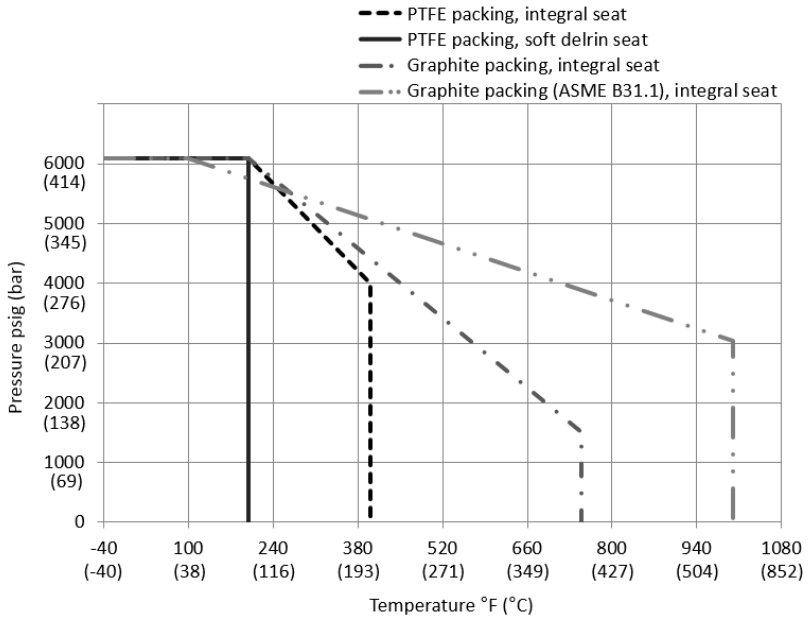


Table 8: Rosemount 0305 Integral Manifolds [1]

Packing	Seat	Pressure and temperature ratings
PTFE	Integral	6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C) 4000 psi at 400 °F (276 bar at 204 °C)
	Soft POM	6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C)
Graphite	Integral	6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)
Graphite (ASME B31.1)		6092 psi at –40 to 100 °F (420 bar at –40 to 38 °C) 3030 psi at 1000 °F (209 bar at 538 °C)
Option CW1 - Temperature rating –67 °F (–55 °C)		
PTFE	Integral	6092 psi at –67 to 200 °F (420 bar at –55 to 93 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6092 psi at –67 to 200 °F (420 bar at –55 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)
Option BR6 - Temperature rating –76 °F (–60 °C)		
PTFE	Integral	6092 psi at –76 to 200 °F (420 bar at –60 to 93 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6092 psi at –76 to 200 °F (420 bar at –55 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)

(1) *Except option HK: PTFE, integral seat: 2324 psi at 200 °F (160 bar at 93 °C), 1680 psi at 400 °F (116 bar at 204 °C) Graphite, integral seat: 2324 psi at 200 °F (160 bar at 93 °C), 1125 psi at 750 °F (78 bar at 399 °C)*

Note
Ambient and storage temperature ratings follow associated process temperature rating shown in table.

Figure 11: Rosemount R306 In-Line Manifolds

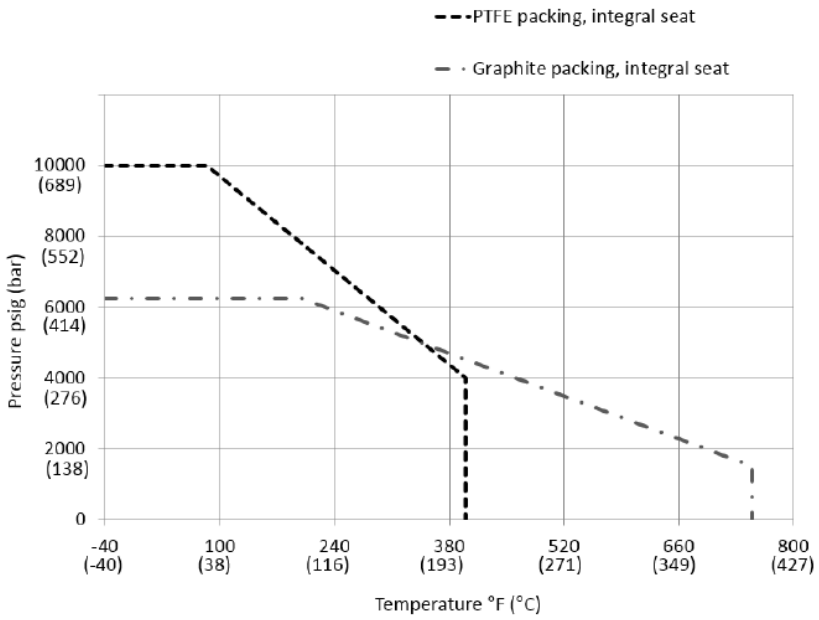


Table 9: Rosemount R306 In-Line Manifolds

Packing	Seat	Pressure and temperature ratings
PTFE	Integral	10000 psi at –40 to 85 °F (689 bar at –40 to 29 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6250 psi at –40 to 200 °F (431 bar at –40 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)

Figure 12: Rosemount 306 In-line Manifolds

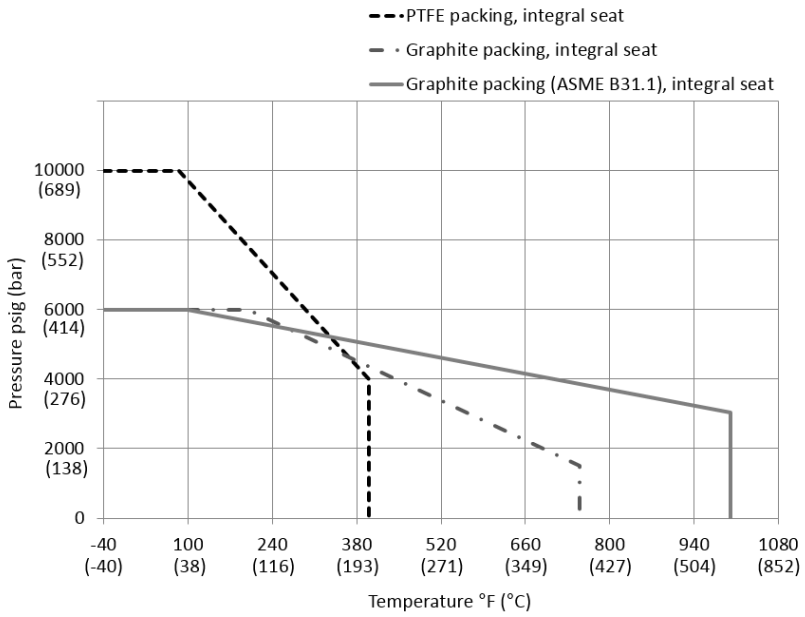


Table 10: Rosemount 306 In-line Manifolds

Packing	Seat	Pressure and temperature ratings
PTFE	Integral	10000 psi at –40 to 85 °F (689 bar at –40 to 29 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6000 psi at –40 to 200 °F (414 bar at –40 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)
Graphite (ASME B31.1)		6000 psi at –40 to 100 °F (414 bar at –40 to 38 °C) 3030 psi at 1000 °F (209 bar at 538 °C)
Option CW1 - Temperature rating –67 °F (–55 °F)		
PTFE	Integral	10000 psi at –67 to 85 °F (689 bar at –55 to 29 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6000 psi at –67 to 200 °F (414 bar at –55 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)
Option BR6 - Temperature rating –76 °F (–60 °F)		
PTFE	Integral	10000 psi at –76 to 85 °F (689 bar at –60 to 29 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite		6000 psi at –76 to 200 °F (414 bar at –60 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)

Note
Ambient and storage temperature rating follow associated process temperature ratings shown in table.

Figure 13: Rosemount 304 Conventional Manifolds

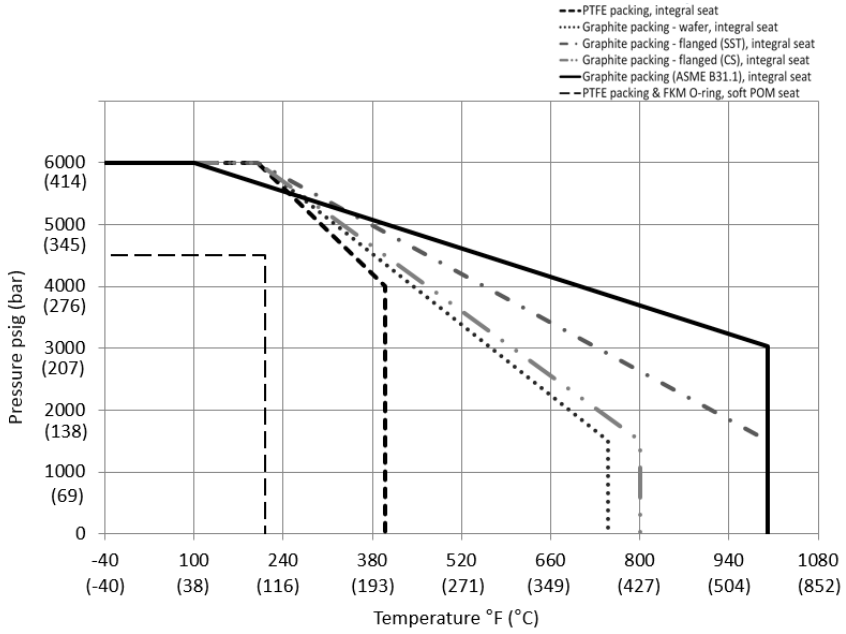


Table 11: Rosemount 304 Conventional Manifolds

Packing	Seat	Pressure and temperature ratings
PTFE (1)	Integral	6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C) 4000 psi at 400 °F (276 bar at 204 °C)
Graphite - wafer		6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)
Graphite - flanged (SST)		6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C) 1500 psi at 1000 °F (103 bar at 538 °C)
Graphite - flanged (CS)		6092 psi at –40 to 200 °F (420 bar at –40 to 93 °C) 1500 psi at 800 °F (103 bar at 427 °C)
Graphite (ASME B31.1)		6092 psi at –40 to 100 °F (420 bar at –40 to 38 °C) 3030 psi at 1000 °F (209 bar at 538 °C)
PTFE	POM	4500 psi at –67 to 212°F (310 bar at –55 to 100 °C)
FKM O-ring		4500 psi at –13 to 212°F (310 bar at –25 to 100 °C)

(1) *Maximum working pressure limited to 4500 psi (310 bar) with G2 option.*

Instrument connections

Table 12: Manifold - Transmitter Interface

Model	Connection
Rosemount 305 Integral Manifold	Mounted directly to coplanar sensor module of transmitter, 1.3-in. (287 mm) center-to-center process isolators
Rosemount 306 In-line Manifold	½–14 female NPT for Rosemount Wireless Pressure Gauge
Rosemount 304 Conventional Manifold	Mounted to traditional transmitter flange, 2⅛-in. (53.98 mm) center-to-center connection per IEC 61518, type B shut-off device (without spigot)

O-rings

Figure 14: Rosemount 305 Integral Manifold

Sensor module-to-manifold O-rings
Specified in the transmitter model number.

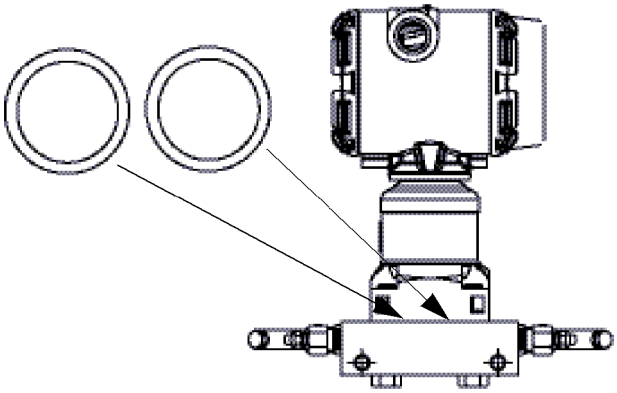
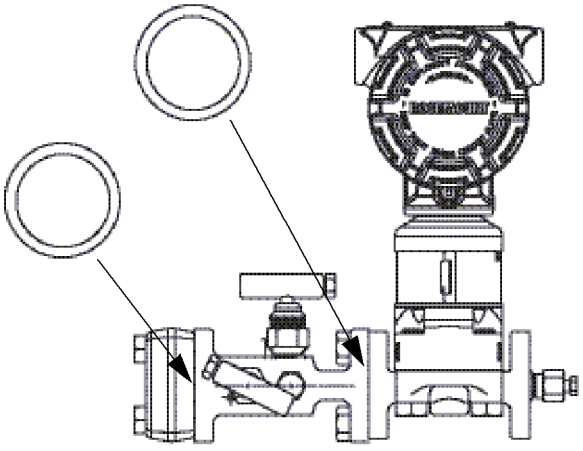


Figure 15: Rosemount 304 Conventional Manifold

Manifold-to-flange O-rings
Same material as specified by manifold packing material selection.(1)

Flange adapter O-rings
Glass-filled PTFE



(1) *Available in packing material code 1 (PTFE) or code 2 (graphite).*

Process connections

Table 13: Rosemount 305 Integral Manifold

Style	Connection
Coplanar	½–14 female NPT
Traditional	¼–18 female NPT (process adapters optional)

Table 14: Rosemount 306 In-line Manifold

Style	Connection
Block-and-bleed	½–14 male NPT(1)
Two-valve	½–14 NPT (male or female)

(1) *½–14 female NPT option only available with wireless pressure gauge.*

Table 15: Rosemount 304 Conventional Manifold

Style	Connection
Flange by pipe	½–14 female NPT
Flange by flange	2⅛-in. (53.98 mm) center-to-center connection (process adapters required)
Wafer	½–14 female NPT

Vent port connections

½–18 female NPT

Table 16: Adapters and Connectors

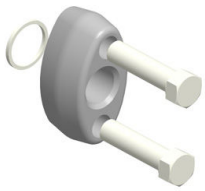
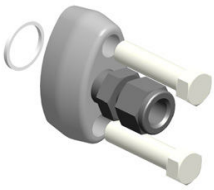
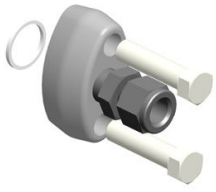
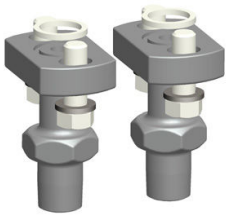
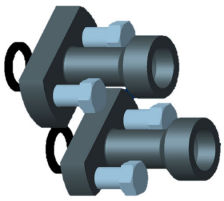
Option	Description	Image
DF	½–14 NPT female flange adapter ■ Available with Rosemount™ 305 Integral and 304 Conventional Manifolds	
DT	½-in. (12.7 mm) ferrule tube flange adapter ■ Available with Rosemount 304 Conventional Manifold	
DQ	0.47-in. (12 mm) ferrule tube flange adapter ■ Available with Rosemount 305 Integral and 304 Conventional Manifolds	

Table 16: Adapters and Connectors *(continued)*

Option	Description	Image
DV[1]	Non-stabilized connector ■ 3-in. (76.2 mm) ■ No stabilizing foot ■ Includes assembly hardware	
DH[1]	Stabilized extended connectors ■ 4.75-in. (120.65 mm) ■ Stabilizing foot ■ Includes assembly hardware	
G2[1] [2]	Dielectric isolators ■ Rated to 2500 Vdc and 5 mega- Ohms ■ Includes bolts sleeves and assembly hardware	

(1) *Only allowed with Rosemount 304 Manifold type codes 3 and 6 and process connection code F. Not allowed with graphite-based packing code 2.*
(2) *Maximum working pressure of assembly limited to 4500 psi (310 bar), 3626 psi (250 bar) at –20 °F (–29 °C), and 3626 psi (250 bar) at 150 °F (66 °C).*

Table 17: Spare Part Adapters and Connectors

Spare part number	Description	Image
03031–1320–XXXX[1]	Socket weld adapter kit ■ 3-in. (76.2 mm) ■ For traditional flange	

(1) *Complete part numbers for specific socket weld adapter kits can be found on the Spare parts list.*

Manifold bolts

Standard material is plated CS per ASTM A449, type 1

Alternative bolt materials offered through option codes:

- L4 for Austenitic 316 SST bolts
- L5 for ASTM A193, Grade B7M bolts
- L8 for ASTM A193, Grade B8M bolts, Class 2

Materials of construction

Process wetted

Table 18: Rosemount R305 Integral Manifold

Component	Option 2	Option 2 with SG
Body	316 SST/316L SST	316 SST/316L SST
Stem	316 SST/316L SST	Alloy C-276
Tip	316 SST	Alloy C-276
Packing	PTFE/graphite	PTFE/graphite
Bonnet	316 SST	316 SST
Pipe plug	316 SST	316 SST
Drain/vent valve	316 SST	Alloy C-276

Table 19: Rosemount 305 Integral Manifold

Component	Option 2	Option 2 with SG	Option 3	Option 4
Body	316 SST/ 316L SST	316 SST/ 316L SST	Alloy C-276	Alloy 400
Ball/tip	316 SST/ 316Ti SST	Alloy C-276	Alloy C-276	Alloy 400
Stem	316 SST	Alloy C-276	Alloy C-276	Alloy 400
Packing	PTFE/ Graphite	PTFE/ graphite	PTFE/ graphite	PTFE/ graphite
Bonnet	316 SST	316 SST	Alloy C-276	Alloy 400
Pipe plug	316 SST	316 SST	Alloy C-276	Alloy 400
Drain/vent valve	316 SST	Alloy C-276	Alloy C-276	Alloy 400

Table 20: Rosemount R306 In-line Manifold

Component	Option 2	Option 2 with SG
Body	316 SST/316L SST	316 SST/316L SST
Stem	316 SST/316L SST	Alloy C-276
Tip	316 SST	Alloy C-276
Packing	PTFE/graphite	PTFE/graphite
Bonnet	316 SST	316 SST
Pipe plug	316 SST	316 SST
Drain/vent valve	316 SST	Alloy C-276

Table 21: Rosemount 306 In-line Manifold

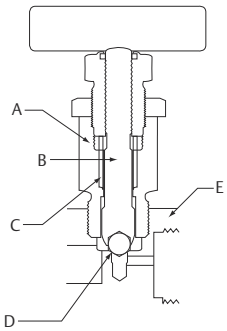
Component	Option 2	Option 2 with SG	Option 3
Body	316 SST/ 316L SST	316 SST/ 316L SST	Alloy C-276
Ball/tip	316 SST/ 316Ti SST	Alloy C-276	Alloy C-276
Stem	316 SST	Alloy C-276	Alloy C-276
Packing	PTFE/ graphite	PTFE/ graphite	PTFE/ graphite
Bonnet	316 SST	316 SST	Alloy C-276
Pipe plug	316 SST	316 SST	Alloy C-276
Bleed screw	316 SST/ 316Ti SST	Alloy C-276	Alloy C-276

Table 22: Rosemount 304 Conventional Manifold

Component	Option 2	Option 2 with SG	Option 5
Body	316 SST/ 316L SST	316 SST/ 316L SST	CS
Ball/tip	316 SST/ 316Ti SST	Alloy C-276	316 SST
Stem	316 SST	Alloy C-276	316 SST
Packing	PTFE/ graphite	PTFE/ graphite	PTFE
Bonnet	316 SST	316 SST	CS
Pipe plug	316 SST	316 SST	CS

Typical

Figure 16: Rosemount 305, 306, and 304 Manifold Valve



A. Bonnet
B. Stem
C. Packing
D. Ball/tip
E. Body

Estimated weight

Table 23: Rosemount 305 Integral Manifold

Description	Weight
2-valve coplanar	4.5 lb (2.0 kg)
2-valve traditional	6.0 lb (2.7 kg)
3-valve coplanar	4.7 lb (2.1 kg)
3-valve traditional	6.0 lb (2.7 kg)
5-valve coplanar	6.5 lb (3.0 kg)

Table 24: Rosemount 306 In-line Manifold

Description	Weight
Block-and-bleed	1.1 lb (0.5 kg)
Two-valve	2.5 lb (1.1 kg)

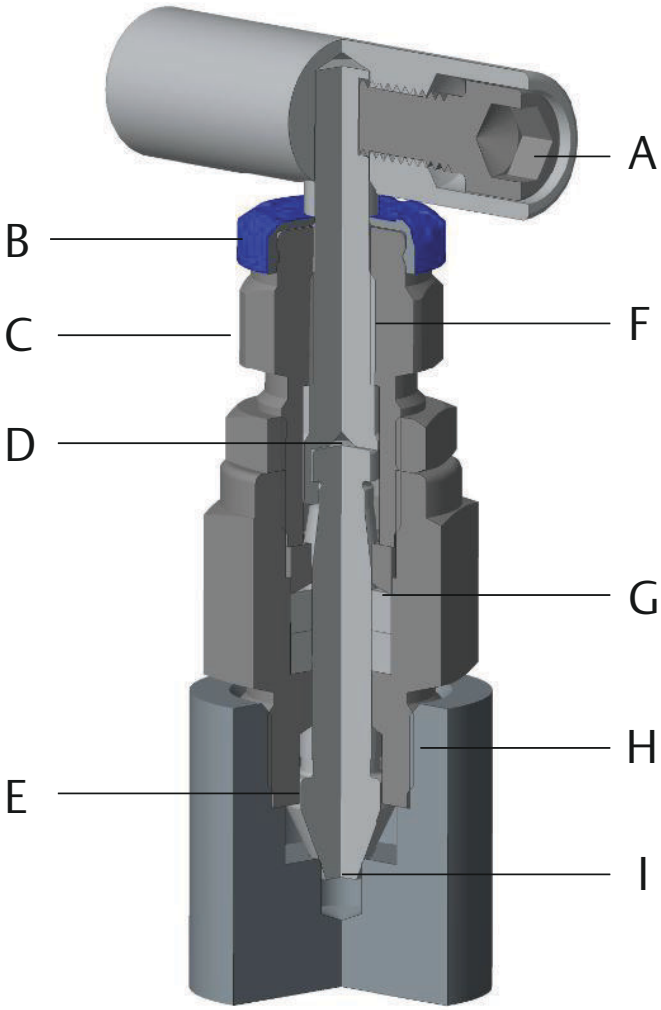
Table 25: Rosemount 304 Conventional Manifold

Description	Weight
Two-valve traditional flange x NPT	5.0 lb (2.3 kg)
Two-valve traditional flange x flange	5.5 lb (2.5 kg)
Three-valve traditional flange x NPT	5.2 lb (2.4 kg)
Three-valve traditional flange x flange	5.7 lb (2.6 kg)
Three-valve wafer flange x NPT	4.0 lb (1.8 kg)
Five-valve wafer flange x NPT	5.7 lb (2.6 kg)
Five-valve traditional flange x NPT	5.7 lb (2.6 kg)
Five-valve traditional flange x flange	5.7 lb (2.6 kg)

Rosemount Pressure-Lock Valve Configuration

Exclusively featured on the Rosemount R305 and R306 manifolds, the Pressure-Lock Valve utilizes a two-piece stem design with a non-rotating needle tip, which offers the end user simplified operation, enhanced reliability, and increased operator safety.

Figure 17: Rosemount Pressure-Lock Valve



Simplified operation

- A. Removable handles - allows for a quick way of adding security and reducing tampering.
- B. Color-coded dust caps - reduces valve confusion, labeled to indicate function.
- C. Packing nut - allows for smooth adjustment of stem packing.
- D. Two-piece stem design with non-rotating tip - provides smooth ergonomic operation, reduces potential leak paths, and decreases overall wear, extending valve life.

Increased operator safety

- E. Safety back seating - provides integral blowout protection.

Enhanced reliability

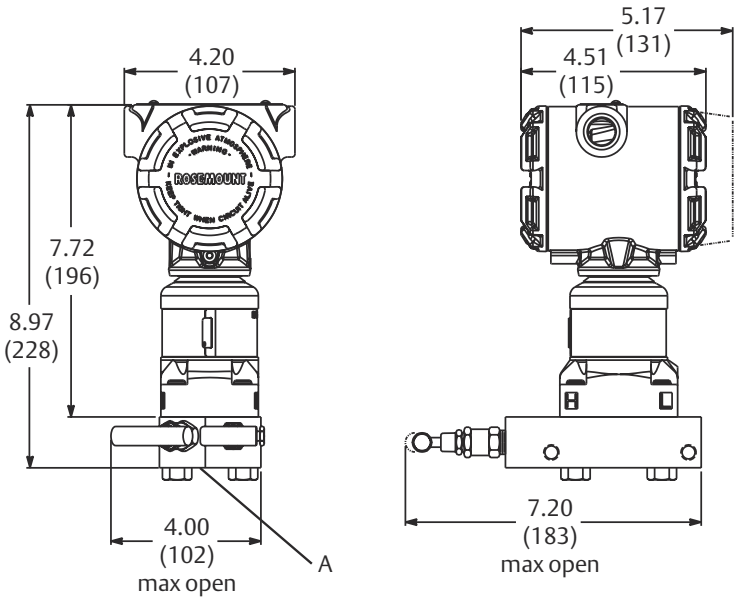
- F. Stem threads isolated from process fluid – increase equipment life and operator safety.
- G. Modular packing – located below stem threads to isolate thread from process fluid, preventing corrosion.
- H. Bonnet threads isolated from process fluid – improves corrosion resistance and equipment life with metal-to-metal, bonnet-to-body seal.
- I. One-piece needle tip stem – ensure seal integrity over wide range of pressures and temperatures.

Dimensional drawings

Rosemount coplanar style manifolds

Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

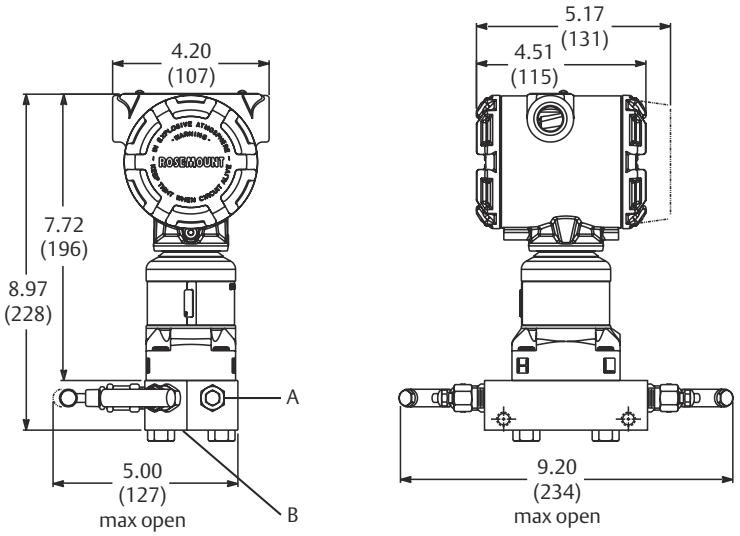
Figure 18: Rosemount 305 Two-Valve Coplanar Style Manifold



A. ½–14 NPT on manifold for process connection, ¼–18 NPT for test/vent connection

Dimensions are in inches (millimeters)

Figure 19: Rosemount 305 Three-Valve Coplanar Style Manifolds

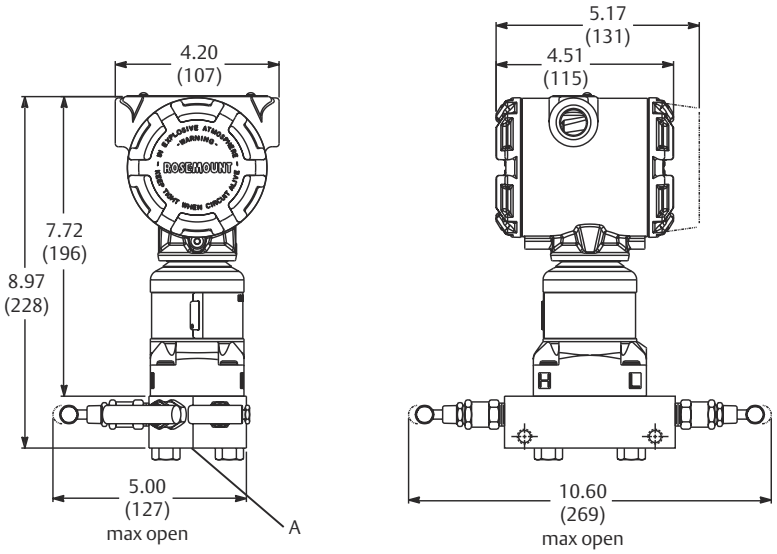


A. Drain/vent valve

B. ½–14 NPT on manifold for process connections, 2⅛-in. (53.98 mm) center-to-center

Dimensions are in inches (millimeters)

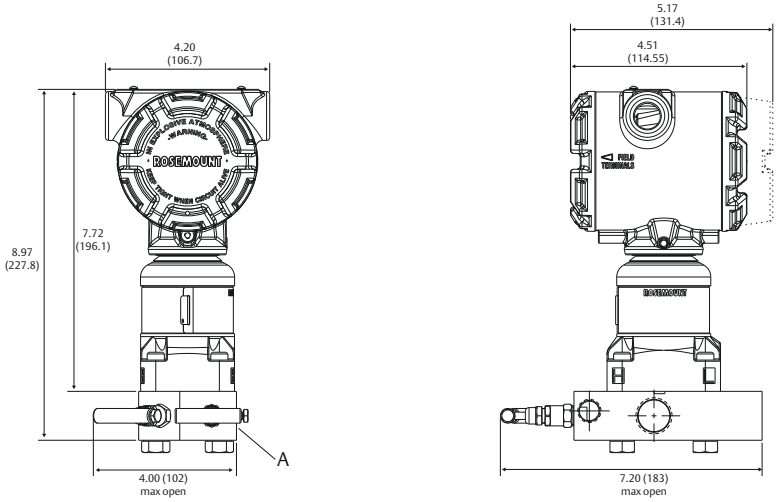
Figure 20: Rosemount 305 Five-Valve Coplanar Style Manifold



A. ½–14 NPT on manifold for process connections, 2⅛-in. (53.98 mm) center-to-center, ¼–18 NPT for test/vent connection

Dimensions are in inches (millimeters).

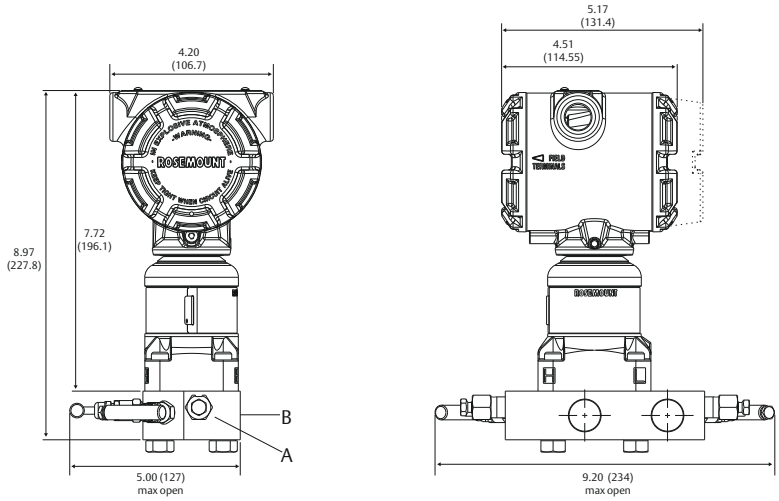
Figure 21: Rosemount 305 Two-Valve Coplanar Style Side Entry Manifold



A. ½–14 NPT on manifold for process connections, ¼–18 NPT for test/vent connection

Dimensions are in inches (millimeters).

Figure 22: Rosemount 305 Three-Valve Coplanar Style Side Entry Manifold

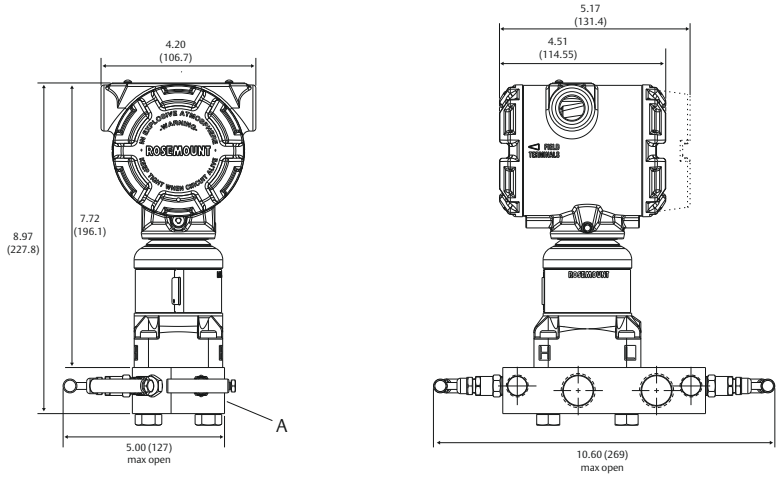


A. Drain/vent valve

B. ½–14 NPT on manifold for process connections, 2⅛-in. (53.98 mm) center-to-center

Dimensions are in inches (millimeters).

Figure 23: Rosemount 305 Five-Valve Coplanar Style Side Entry Manifold

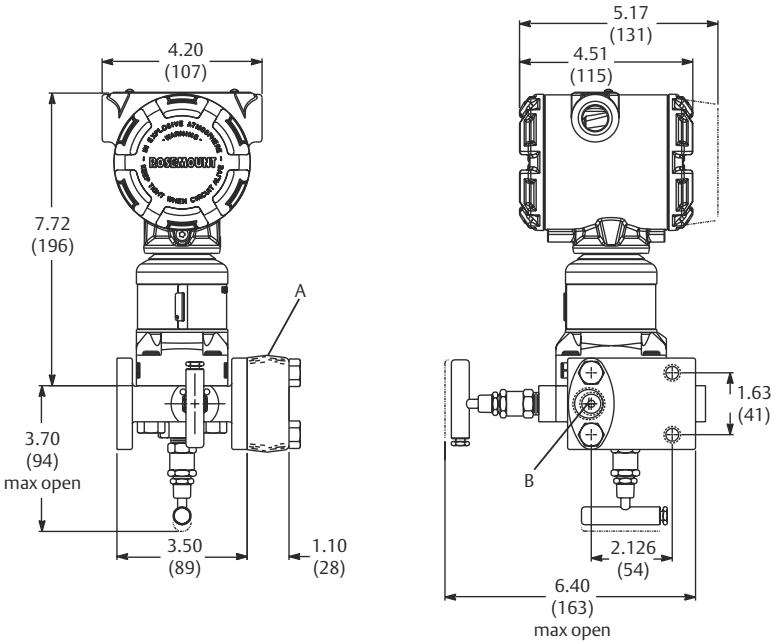


A. ½–14 NPT on manifold for process connections, 2⅛-in. (53.98 mm) center-to-center, ¼–18 NPT for test/vent connection

Dimensions are in inches (millimeters).

Rosemount traditional style

Figure 24: Rosemount 305 Two-Valve Traditional Style Manifold

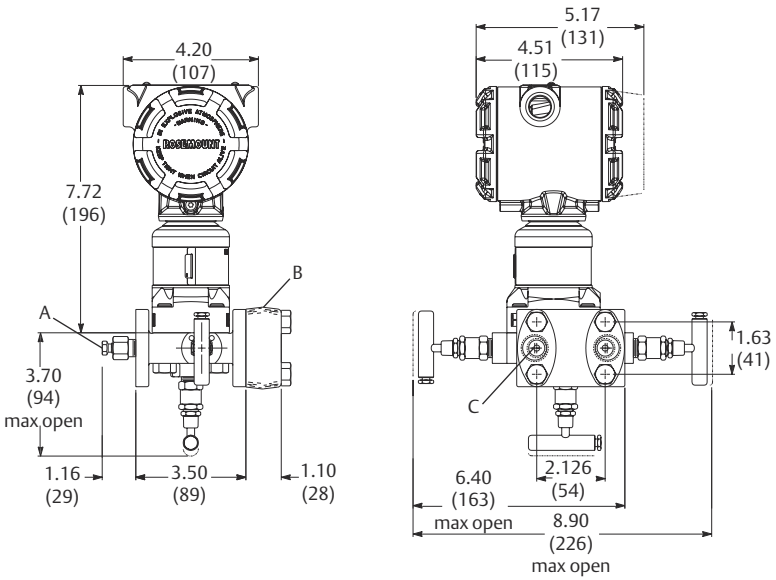


A. ½–14 NPT on optional process adapter

B. ¼–18 NPT on traditional manifold for process connection without the use of a process adapter

Dimensions are in inches (millimeters).

Figure 25: Rosemount 305 Three-Valve Traditional Style Manifold



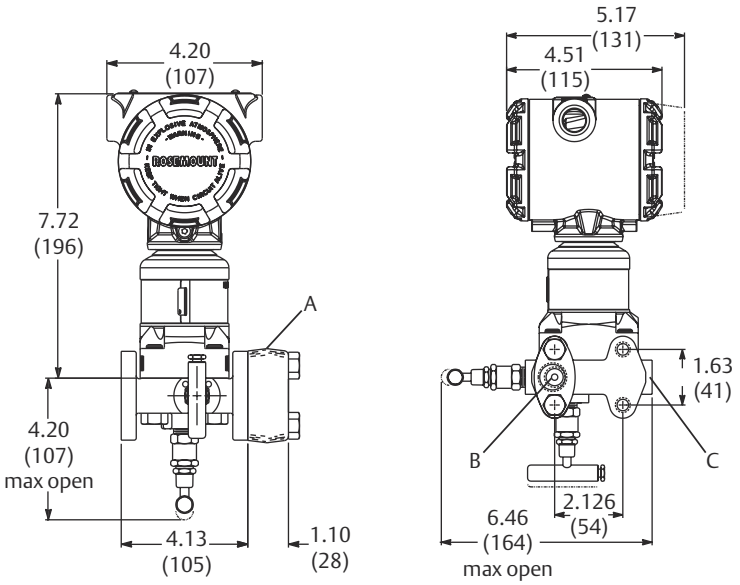
A. Drain/vent valve

B. ½–14 NPT on optional process adapter(1)

C. ¼–18 NPT on traditional manifold for process connections without the use of process adapters

(1) Adapters can be rotated to give adapter connection centers of 2.0 (51), 2.125 (54), or 2.25 (57)

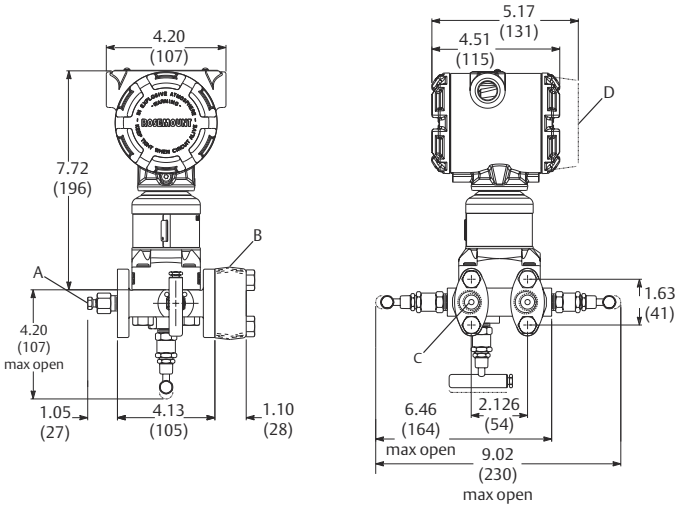
Figure 26: Rosemount 305 Two-Valve Traditional DIN Style Manifold



A. ½–14 NPT on optional process adapter
B. ¼–18 NPT on traditional manifold for process connection without the use of a process adapter
C. ¼–18 NPT vent connection

Dimensions are in inches (millimeters).

Figure 27: Rosemount 305 Three-Valve Traditional DIN Style Manifold

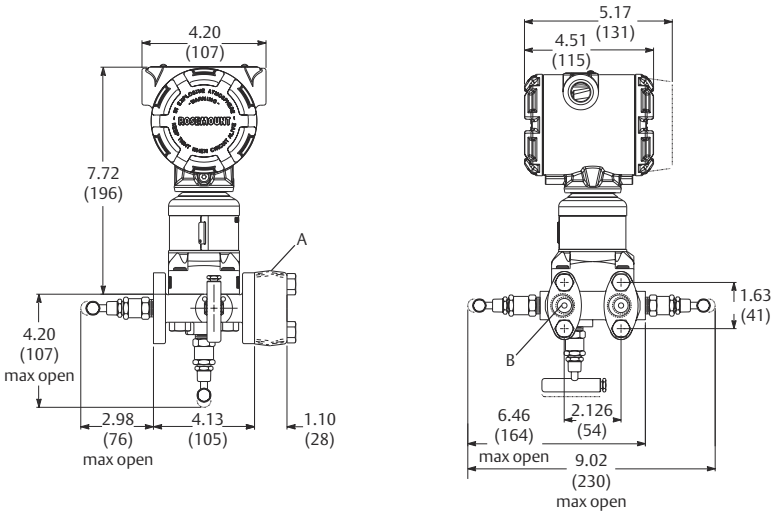


A. Drain/vent valve
B. ½–14 NPT on optional process adapter(2)
C. ¼–18 NPT on traditional manifold for process connections without the use of process adapters

Dimensions are in inches (millimeters).

(2) Adapters can be rotated to give adapter connection centers of 2.0 (51), 2.125 (54), or 2.25 (57)

Figure 28: Rosemount 305 Three-Valve Traditional DIN Style Manifold



A. Drain/vent valve

B. ½–14 NPT on optional process adapter(3)

C. ¼–18 NPT on traditional manifold for process connections without the use of process adapters

Dimensions are in inches (millimeters).

(3) Adapters can be rotated to give adapter connection centers of 2.0 (51), 2.125 (54), or 2.25 (57)

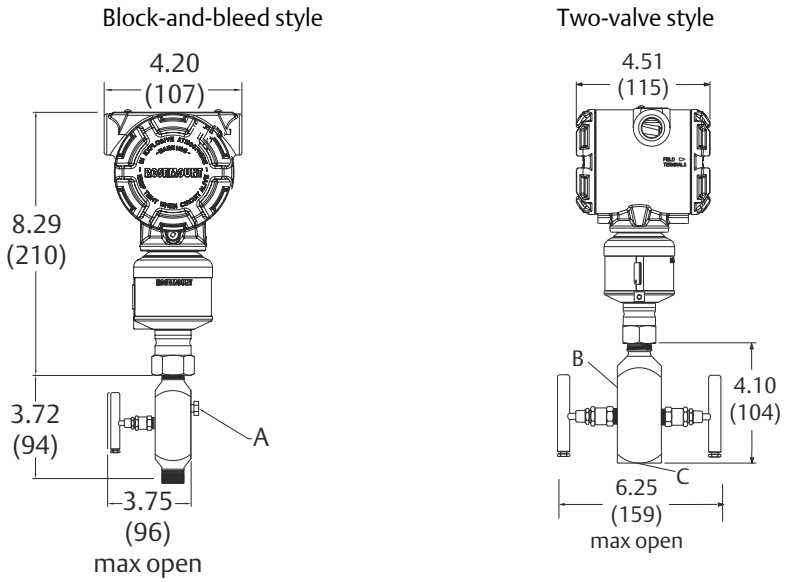
Rosemount In-line style

Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Figure 29: Rosemount 306 Pressure Style Manifold (Rosemount 3051S_T Shown)

Note
Manifold valve orientation may vary with respect to transmitter mounting holes.

Note
Rosemount R306 in-line manifold only available with two-valve style.



A. Bleed screw (unspecified dimension)- not C. ½–14 NPT female NPT process connection (code BA) designed for accessory attachments

B. ¼-in. (6.35 mm) vent connection-pipe plug supplied with manifold, but not installed at the factory (pipe plug supplied loose)

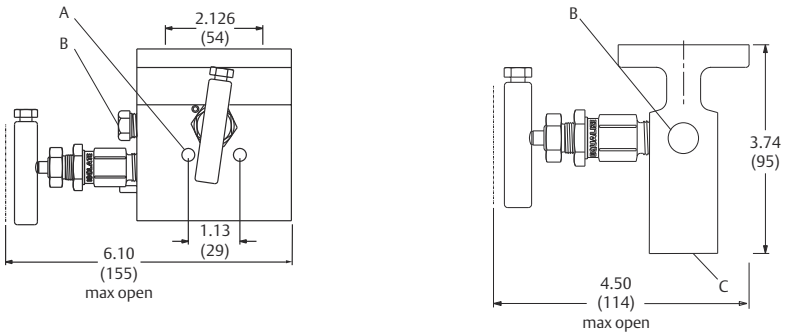
Dimensions are in inches (millimeters).

Rosemount conventional style

Figure 30: Rosemount 304 Two-Valve Flange x NPT Conventional Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side



Process side

A. ∅ 0.281 mounting holes (2)
B. ¼-in. NPT test (plugged)
C. ½-in. NPT process connection on 2.125 (53.98) centers (2)

Figure 31: Rosemount 304 Two-Valve Flange x Flange Conventional Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side



Process side

A. ∅ 0.281 mounting holes (2)
B. ¼-in. NPT test (plugged)
C. 7/16–20–UNF mounting holes (4) on a 2.125 (53.98) x 1.625–in. (41.28 mm) hole pattern

Dimensions are in inches (millimeters).

Figure 32: Rosemount 304 Three-Valve Flange x NPT Conventional Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side



Process side

A. ∅ 0.281 mounting holes (2)
B. ¼-in. NPT test (plugged)
C. ½-in. NPT process connection on 2.125 (53.98) centers (2)

Dimensions are in inches (millimeters).

Figure 33: Rosemount 304 Three-Valve Flange x Flange Conventional Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side

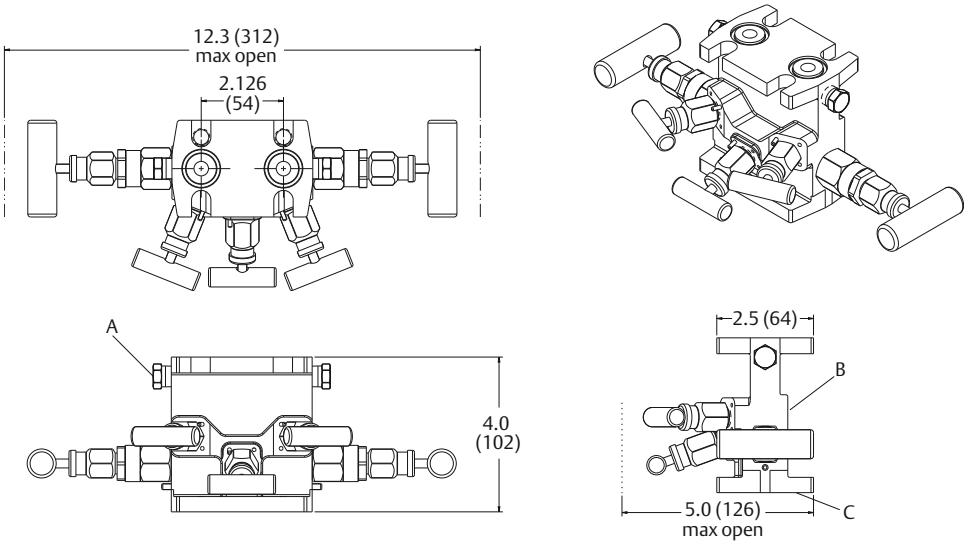


Process side

A. ∅ 0.281 mounting holes (2)
B. 7/16–20–UNF mounting holes (4) on a 2.125 (53.98) x 1.625–in. (41.28 mm) hole pattern

Dimensions are in inches (millimeters).

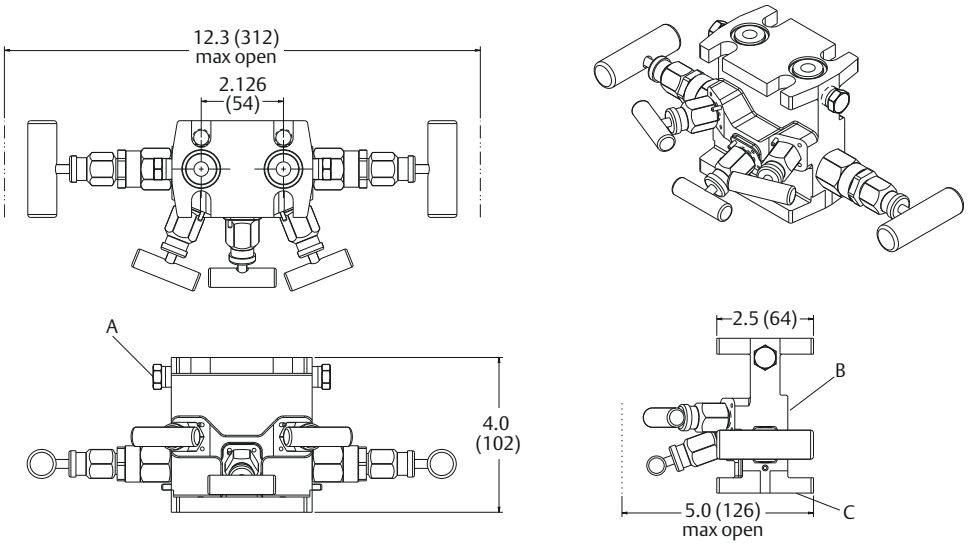
Figure 34: Rosemount 304 Natural Gas Five-Valve Flange x NPT Conventional Manifold with NG Option



A. ∅ 0.281 mounting holes (2)
B. ¼-in. NPT test (plugged) (2)
C. ¼-in. NPT process connection on 2.125 (53.98) centers (2)
D. ¼-in. NPT vent

Dimensions are in inches (millimeters).

Figure 35: Rosemount 304 Natural Gas Five-Valve Conventional Manifold with NG Option



A. 1/4-in. NPT test (plugged) (2)
B. 1/4-in. NPT vent
C. 7/16–20–UNF mounting holes (4) on a 2.125 (53.98) x 1.625–in. (41.28 mm) hole pattern

Dimensions are in inches (millimeters).

Figure 36: Rosemount 304 Natural Gas Five-Valve Flange x NPT Conventional Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side



Process side

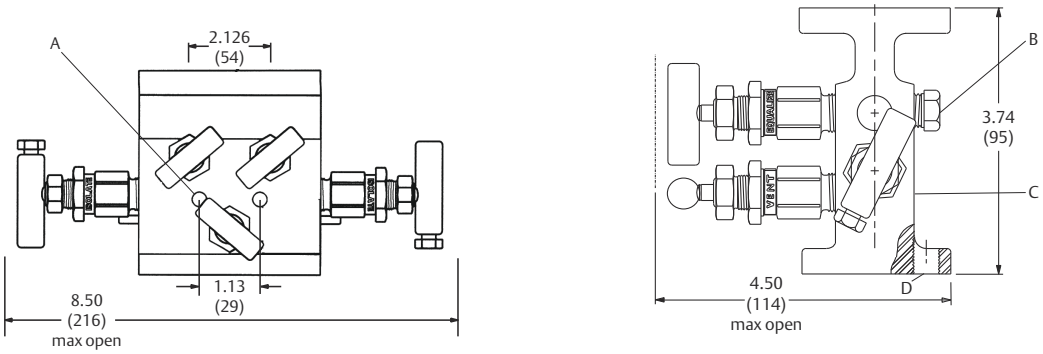
A. ∅ 0.281 Mounting holes(2)
B. ¼-in. NPT test (plugged) (2)
C. ½-in. NPT process connection on 2.125 (53.98) Centers (2)
D. 1¼-in. NPT vent

Dimensions are in inches(millimeters).

Figure 37: Rosemount 304RT Natural Gas Five-Valve Flange x Flange Conventional Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side



Process side

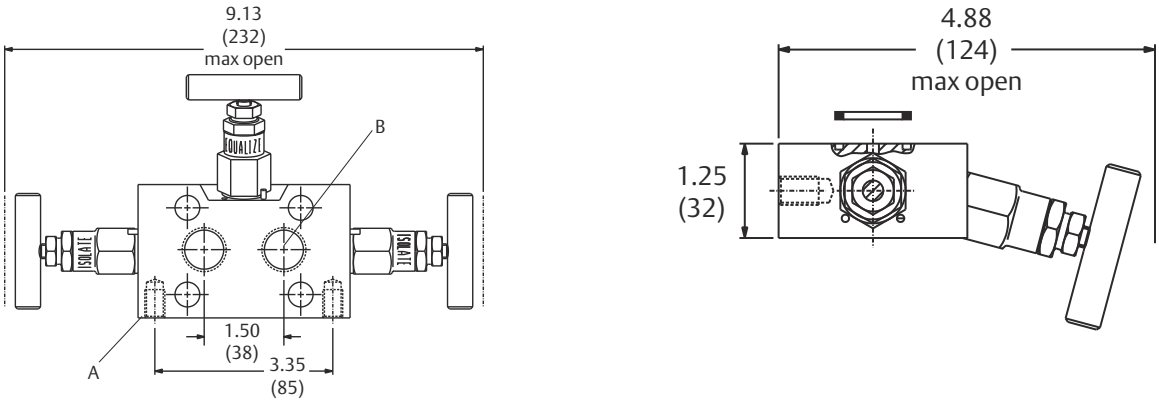
A. ∅ *0.281 mounting holes (2)*
B. *¼-in. NPT test (plugged) (2)*
C. *¼-in. NPT vent*
D. *7/16-20-UNF mounting holes (4) on a 2.125 (53.98) x 1.625–in. (41.28 mm) hole pattern*

Dimensions are in inches(millimeters).

Figure 38: Rosemount 304RW Three-Valve Wafer Manifold

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Instrument side



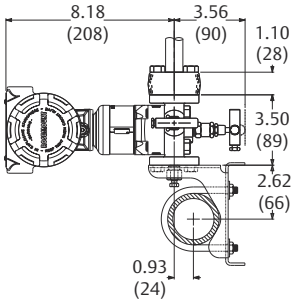
Process side

A. *⅜–16 UNC mounting holes (2)*
B. *½–14 NPT process connection (2)*

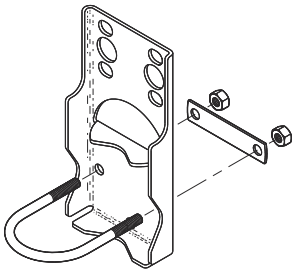
Dimensions are in inches (millimeters).

Rosemount mounting brackets

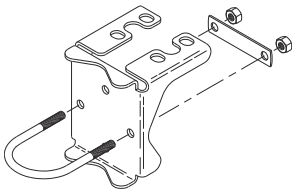
Table 26: Traditional Manifold with Optional Brackets for 2-in. (50.8mm) Pipe Mounting

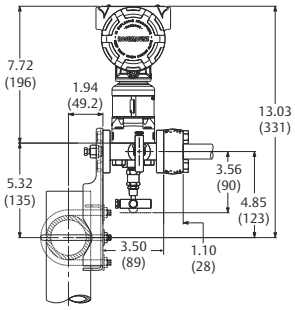


B3/B9/BC mounting bracket



B1/B7/BA mounting bracket



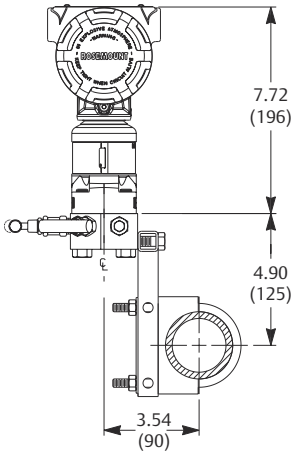


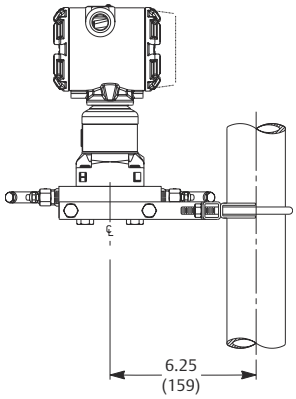
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

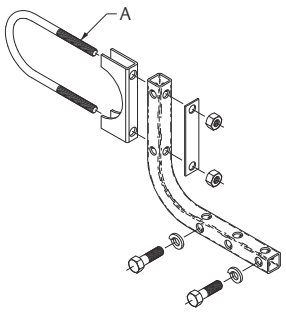
Dimensions are in inches(millimeters).

Table 27: Coplanar Manifold with Optional Bracket for 2-in. (50.8mm) Pipe Mounting

Option code B4/BE





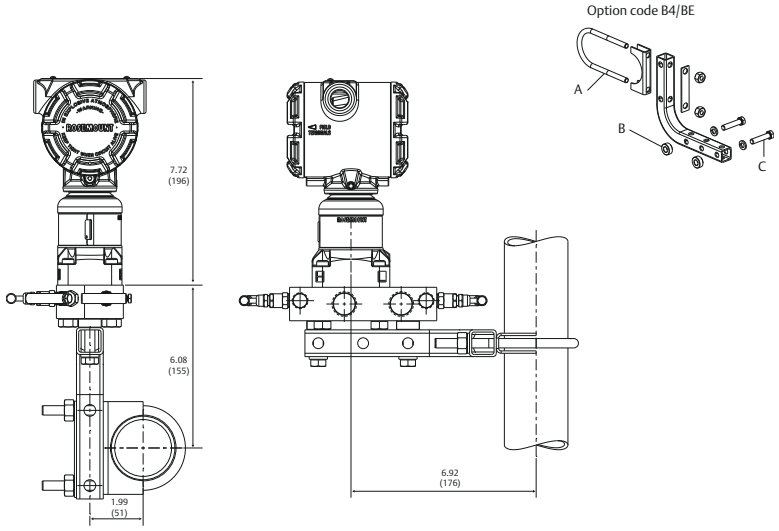


A. 2-in. (50.8mm) U-bolt for pipe mounting

Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Dimensions are in inches(millimeters).

Table 28: Coplanar Side Entry with Optional Bracket for 2-in. (50.8mm) Pipe Mounting



A. 2-in. (50.8mm) U-bolt for pipe mounting
B. Spacer
C. ⅜–16 bolts for transmitter mounting

Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Dimensions are in inches(millimeters).

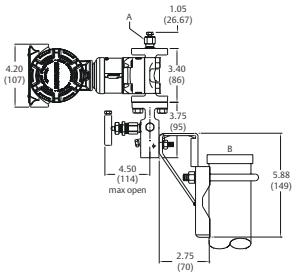
Table 29: Bracket Installation for Coplanar Side Entry Manifold



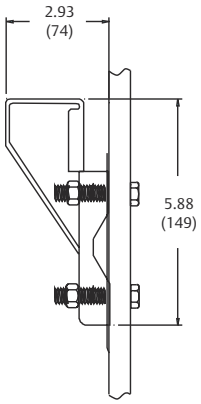
A. Spacer
B. Washer

Table 30: VS/VC Heavy Duty Manifold Mounting Bracket

2-in. pipe mount



Panel mount



A. Drain/vent valve

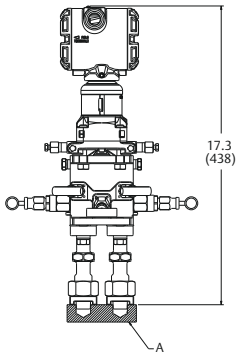
B. 2-in. (50.8mm) pipe

Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

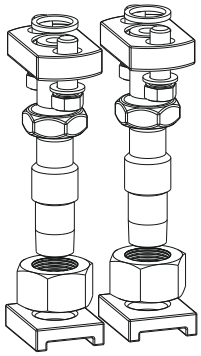
Dimensions are in inches(millimeters).

Rosemount connectors

Table 31: DH Extended Stabilized Connectors for Direct Mounting



Option code DH



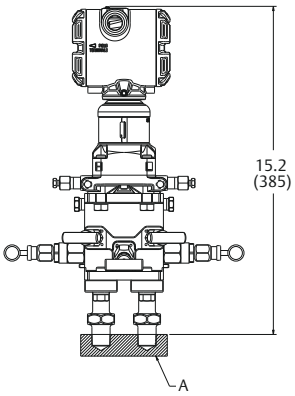
A. Cross section image is shown for dimensioning purposes only; it is not part of the transmitter assembly

Dimensions are in inches (millimeters).

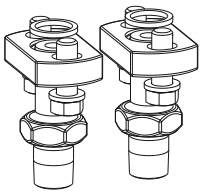
Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Note
In default assembly orientation, manifold valves will face towards user when module high side is on user's left.

Table 32: DV Non-Stabilized Connectors for Direct Mounting



Option code DV



A. Cross section image is shown for dimensioning purposes only; it is not part of the transmitter assembly

Dimensions are in inches (millimeters).

Note
Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

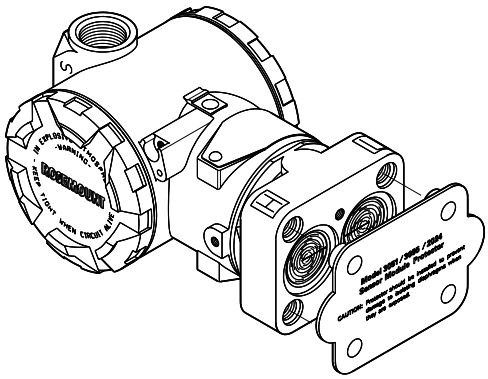
Note
In default assembly orientation, manifold valves will face towards user when module high side is on user's left.

Options

Module guard

A sensor module guard is available to protect the transmitter process isolating diaphragms. This guard should be used whenever the transmitter is removed from the integral manifold to avoid damage to the isolating diaphragms.

Part number: 00305-1000-0001(5/pack)



P2 cleaning for special services

This option minimizes process contaminants and prepares the unit for special service by cleaning wetted surfaces and providing material and packaging considerations per ASTM G93-96.

SG sour gas

Materials of construction comply with recommendations per NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103/ISO 17495 for sour refining environments.

CW1 and BR6 cold temperature

Cold temperature manifolds with options CW1 and BR6 are rated –67 °F (–55 °C) and –76 °F (–60 °C), respectively. Cold temperatures manifolds can be paired with Rosemount 3051 or 3051S transmitters that have the BR5 and BR6 options for a complete cold temperatures solution.

Dielectric isolator kits

POM dielectric isolators and PEEK bolt sleeves are available with the Rosemount 304 5-valve natural gas metering pattern manifold for added instrument protection. Dielectric kits are rated to 2500 Vdc and 5 mega-ohms.

Heat block kits

Rosemount 304 Manifolds are available with steam heat block kits for cold environments and services. The steam block attaches directly to the manifold to prevent the process from freezing.

ASME B31.1 power piping code

Rosemount Manifolds are available in configurations that meet the requirements of the ASME B31.1 power piping code. This code specifies design criteria for most air, gas, steam, water, and oil systems used in electric generating systems, central and district heating systems, industrial power plants, and geothermal plants. ASME B31.1 includes requirements for manifolds, valves, and piping. Transmitters and other measuring devices do not fall within the scope of this code.

Marking

Manifolds are tagged with a part number, schematic drawing, temperature, and pressure limits.

Other publications

For additional information, go to Emerson.com/Rosemount.

Spare parts list

Table 33: Rosemount 305 Integral Manifold

Part Description	Part Number (Traditional Style)	Part Number (Coplanar Style)
Mounting brackets (qty. 1)		
Manifold SST mounting bracket for 2-in pipe mount	N/A	00305-0405-0001
Manifold SST mounting bracket for side entry manifold	N/A	00305-0405-0021
Bolt kits (set of 4)		
CS bolt kit	03031-0311-0001	03031-0311-0001
SST bolt kit	03031-0311-0002	03031-0311-0002
ANSI/ASTM A193 B7M bolt kit	03031-0311-0003	03031-0311-0003
Drain/vents (qty. 1)		
316 SST drain/vent for use with 3-valve Rosemount 305 Manifold	01151-0028-0012	01151-0028-0012
Alloy C-276 drain/vent for use with 3-valve Rosemount 305 Manifold	01151-0028-0013	01151-0028-0013
O-rings (set of 12)		
Manifold-to-module O-ring, glass-filled PTFE	03031-0234-0001	03031-0234-0001
Manifold-to-module O-ring, graphite-filled PTFE	03031-0234-0002	03031-0234-0002
Sensor guard (set of 5)		
Coplanar module sensor guard	00305-1000-0001	00305-1000-0001

Table 34: Rosemount 304 Conventional Manifold

Part description	Part Number (Traditional Style)	Part Number (Wafer Style)
Mounting brackets (qty. 1)		
Manifold heavy duty mounting bracket, CS	01166-8005-0002	N/A
Manifold heavy duty mounting bracket, 316 SST	01166-8005-0001	N/A
Manifold SST mounting bracket for 2-in. (50.8mm) pipe mount	N/A	00305-0405-0001
Coplanar flange kits (qty. 1)		
Differential flange kit, SST	N/A	00305-1001-0001
Gauge flange kit, SST	N/A	00305-1001-1001
O-rings (set of 12)		
Manifold-to-flange O-ring, virgin PTFE	03031-0019-0003	03031-0019-0003
Manifold-to-flange O-ring, graphite	03031-1302-0002	03031-1302-0002
Manifold-to-flange bolt kits (set of 4)		
Consult factory for part numbers	Consult factory	Consult factory
Heater block kits (qty. 1)[(1)]		
Steam block kit	00305-0406-0001	N/A

Table 34: Rosemount 304 Conventional Manifold *(continued)*

Part description	Part Number (Traditional Style)	Part Number (Wafer Style)
DF adapter kit (qty. 2)		
SST adapters, CS bolts, glass-filled PTFE O-rings	03031-1300-0002	N/A
CS adapters, CS bolts, glass-filled PTFE O-rings	03031-1300-0005	N/A
SST adapters, SST bolts, glass-filled PTFE O-rings	03031-1300-0012	N/A
CS adapters, SST bolts, glass-filled PTFE O-rings	03031-1300-0015	N/A
Socket weld adapter kit (qty. 2)(2)		
Virgin PTFE O-rings, carbon steel bolts, 316L SST adapter	03031-1320-0002	N/A
Virgin PTFE O-rings, 316 SST bolts, 316L SST adapter	03031-1320-0012	N/A
Graphite O-rings, CS bolts, 316L SST adapter	03031-1320-0102	N/A
Graphite O-rings, 316 SST bolts, 316L SST adapter	03031-1320-0112	N/A
Natural gas connector and dielectric kits (qty. 2)(3)		
Dielectric isolator kit, 316 SST	00304-1100-1022	N/A
Dielectric isolator kit, CS	00304-1100-1122	N/A
Stabilized extended connector kit, dielectric, 316 SST	00304-1100-2000	N/A
Non-stabilized connector kit, dielectric, 316 SST	00304-1100-2010	N/A
Stabilized extended connector kit, dielectric, CS	00304-1100-2101	N/A
Non-stabilized connector kit, dielectric, CS	00304-1100-2111	N/A
Stabilized extended connector kit, PTFE O-rings, 316 SST	00304-1100-3000	N/A
Non-stabilized connector kit, PTFE O-rings, 316 SST	00304-1100-3010	N/A
Stabilized extended connectors kit, PTFE O-rings, CS	00304-1100-3101	N/A
Non-stabilized connector kit, PTFE O-rings, CS	00304-1100-3111	N/A

(1) *Not available with manifold type code 6.*
(2) *For H2 traditional flange.*
(3) *Only available with manifold type code 6.*

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