# **Rosemount**<sup>™</sup> **Manifold Solutions**



- 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, 2-, 3-, and 5-valve configurations
- Compact, lightweight design
- Easy in-process calibration
- Direct-mount capability
- Available in NACE®-compliant materials of construction
- Available with Pressure-Lock<sup>™</sup> Valve



# **Selection guide**

## **Rosemount 305 Coplanar Style**



Rosemount R305 three-valve manifold

## Standard features

- Assembled directly to transmitter, eliminating the need for flange
- Factory leak tested and calibrated
- Two, three, and five-valve configurations
- Available with female NPT process connections
- No exposed bolt configuration enhances reliability
- 50 percent fewer leak points than conventional transmitter to flange to manifold interface
- Special cleaning options available
- Rosemount 305 available with five-valve natural gas metering pattern



Rosemount 3051S assembled to R305 five-valve manifold

## Rosemount R305 exclusive features

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

# Rosemount 306 In-line Style



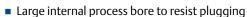
Rosemount R306 two-valve manifold

## **Standard features**

- Assembled directly to transmitter or Rosemount Pressure Gauge
- Factory leak tested and calibrated
- Block-and-bleed and two-valve configurations(1)
- Available with female NPT process connections
- Special cleaning options available

## Rosemount R306 exclusive features







Rosemount 3051S assembled to 306 two-valve manifold

<sup>1.</sup> Rosemount R306 manifold only available with two-valve configuration.

# **Rosemount 304 Conventional Style**



Rosemount 304 three-valve conventional manifold

## 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 304 conventional manifold - wafer style

## **Rosemount Pressure-Lock Valve**

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

Pressure-Lock Valve, reference detailed design on page 27

# Contents

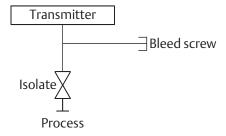
Valve configuration	Specifications
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# Valve configuration

## **Block-and-bleed**

The block-and-bleed configuration is available on the Rosemount R306/306 Manifolds 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.

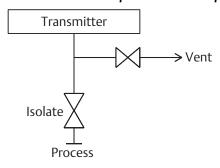
## **Rosemount 306 Manifold**



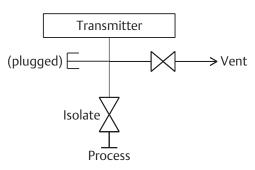
## **Two-valve**

The two valve configuration is available on Rosemount R305/305, R306/306, 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.

## Rosemount R305/305 and R306/306 Manifolds



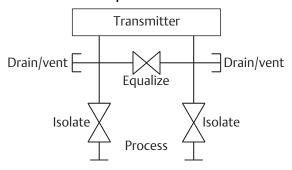
#### **Rosemount 304 Manifold**



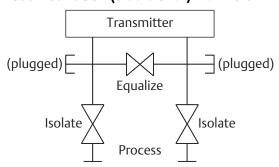
## Three-valve

The three valve configuration is available on Rosemount R305/305 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.

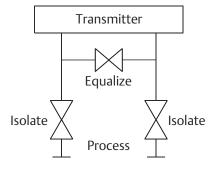
## Rosemount R305/305 Manifolds



## Rosemount 304 (traditional) Manifold



## Rosemount 304 (wafer) Manifold



#### Note

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

#### Note

Plugged connections receive 1/4-in. NPT plugs unless otherwise noted.

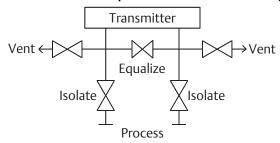
Rosemount Manifolds

## **Five-valve**

January 2019

The five valve configuration is available on Rosemount R305/305 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.

## Rosemount R305/305 Manifolds and 304 (wafer)

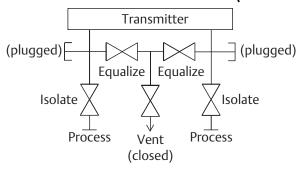


## Five-valve natural gas

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

#### Rosemount 305 Manifolds and 304 (traditional)



#### Note

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

#### Note

Plugged connections receive 1/4-in. NPT plugs unless otherwise noted.

# **Ordering information**

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

## Stand-alone manifold

- 1. Reference the "Selection guide" on page 2 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 page 6.
  - Rosemount 306 In-line Manifold, see page 11.
  - Rosemount 304 Conventional Manifold, see page 15.

# Transmitter/manifold assembly

- 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 page 6.
  - Rosemount 306 In-line Manifold, see page 11
  - Rosemount 304 Conventional Manifold, see page 15.
- 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).

Table 1. Ordering Codes for a Transmitter/Manifold
Assembly

Transmitter	Manifold	Process connection code	"Manifold" option code
	R305/305	A11	N/A
Rosemount 3051S	R306/306	A11	N/A
30313	304	A12	N/A
	R305/305	N/A	S5
Rosemount 3051/2051	R306/306	N/A	S5
3031/2031	304	N/A	S6
	R305/305	N/A	N/A
Rosemount 2088	R306/306	N/A	S5
2000	304	N/A	N/A

# **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 page 18 for more information on material selection.

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				*
Manifo	ld style				
С	Coplanar				*
Manifo	ld type				
2	Two valve				*
3	Three valve				*
5	Five valve				*
Body <sup>(1)</sup>		Bonnet	Stem and tip	Drain/vent	
2	316 stainless steel (SST)	316 SST	316 SST	316 SST	*
Process	connection				
В	<sup>1</sup> / <sub>2</sub> –14 NPT female				*
Packing	g material				
1 <sup>(2)</sup>	PTFE				*
2 <sup>(3)</sup>	Graphite-based				
Valve se	eat				
1	Integral				*
Extend	ed product warranty				
WR3	3-year limited product warra	anty			
WR5 5-year limited product warranty					
Mounti	ng bracket				
B4	316 SST mounting bracket f	or 2-in. pipe mount with ser	ies 300 SST bolts		
BE	316 SST bracket for 2-in pipe mount with 316 SST bolts				
BF	Carbon steel (CS) panel mou	ınt bracket			
BG	316 Series SST panel mount	bracket			
	·				

## 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.

•	
) Materials	
Austenitic 316 SST bolts	
ASTM A 193 B7M bolts	
ASTM A 193, Class 2, Grade B8M bolts	
ng <sup>(4)</sup>	
Cleaning for special services	
al recommendation for NACE <sup>(5)</sup>	
Sour gas (meets NACE MR 0175/ISO 15156, MR 0103)	
ertificate	
Certificate of Compliance to NACE MR0175/ISO 15156 for wetted materials	*
Certificate of Compliance to NACE MR0103 for wetted materials	*
onal options	
Drain vent screen	*
For assembly to Rosemount 3051D	*
coplanar integral manifold model number: R305EC32B11B4	
	ASTM A 193 B7M bolts  ASTM A 193, Class 2, Grade B8M bolts  Ing <sup>(4)</sup> Cleaning for special services  al recommendation for NACE <sup>(5)</sup> Sour gas (meets NACE MR 0175/ISO 15156, MR 0103)  Certificate  Certificate of Compliance to NACE MR0175/ISO 15156 for wetted materials  Certificate of Compliance to NACE MR0103 for wetted materials  Drain vent screen

- 1. Refer to page 18 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 page 18 for more information on material selection.

Table 3. Rosemount 305 Integral Manifold Ordering Information

The starred offerings ( $\star$ ) 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			
Manufa	icturer			
R	Rosemount			*
Manifo	ld style			
С	Coplanar			*
T	Traditional			*
M	Traditional (DIN-complian	nt flange)		*
Manifo	ld type			
2	Two valve			*
3	Three valve			*
5(1)	Five valve			*
6 <sup>(2)</sup>	Five valve natural gas met	tering pattern		*
7(2)(3)	Two valve (per ASME B31.1 [ANSI] power and piping code)			
8(2)(3)	Three valve (per ASME B3	1.1 [ANSI] power and p	iping code)	
9(2)(3)	Five valve (per ASME B31.	.1 [ANSI] power and pip	ing code)	
Body <sup>(4)</sup>		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 <sup>(7)</sup>	Alloy 625	Alloy 625	Alloy 625	
9(7)	All super duplex SST (UNS	S S32760)		
Process	connection style			
A <sup>(8)</sup>	<sup>1</sup> /4–18 NPT female			*
B <sup>(9)</sup>	<sup>1</sup> / <sub>2</sub> –14 NPT female			*
Packing	g material			
1(10)	PTFE			*
2 <sup>(11)</sup>	Graphite-based			
Valve se	eat			
1	Integral			*
5	Soft POM (only available v	with natural gas meteri	ng pattern)	*

## Table 3. Rosemount 305 Integral Manifold Ordering Information

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

## **Options**

Optio		
Extend	ed product warranty	
WR3	3-year limited warranty	*
WR5	5-year limited warranty	*
Mount	ing brackets	
B1	Bracket for 2-in. pipe mounting, CS bolts	*
B3 <sup>(12)</sup>	Flat bracket for 2-in. pipe mounting, CS bolts	*
B4	SST mounting bracket for 2-in. pipe mounting, 300 SST bolts	*
В7	B1 bracket with 316 SST bolts	*
B9 <sup>(12)</sup>	B3 bracket with 316 SST bolts	*
BA	316 SST B1 bracket with 316 SST bolts	*
BC <sup>(12)</sup>	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 m	aterials	
L4 <sup>(13)</sup>	Austenitic 316 SST bolts	*
L5	ASTM A193, Grade B7M bolts	*
L8	ASTM A193, Class 2, Grade B8M bolts	*
Cleanir	ng <sup>(14)</sup>	
P2	Cleaning for special services	*
Materi	al recommendations for NACE <sup>(5)(15)</sup>	
SG	Sour gas (meets NACE MR0175/ISO 15156, MR0103/ISO 17495)	*
Adapte	rrs <sup>(16)</sup>	
DF	1/2–14 NPT female flange adapter	*
DQ	12 mm ferrule tube flange adapter	
Cold te	mperature <sup>(17)</sup>	
CW1	−67 °F (−55 °C) cold temperature operation	
Proces	s flow meter configuration	
PF	Relocated equalize valve for 9295 process flow meter	
Proces	s flange bolting connection <sup>(18)</sup>	
НК	10 mm (M10) process flange bolting connection	*
HL	12 mm (M12) process flange bolting connection	*
Typical	coplanar integral manifold model number: 305 R C 3 2 B 1 1 B4	

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 page 25 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. Includes PTFE tape on drain/vent valves and plugs.
- 11. Includes graphite tape on drain/vent valves and plugs.
- 12. Not compatible with the Rosemount 3095 Transmitter.
- 13. Not available with ASME B31.1 manifold type codes 7, 8, and 9.
- 14. Not available with graphite-based packing material code 2.
- 15. Only allowed with material of construction code 2.
- 16. Only allowed with traditional manifold style codes T and M. Not allowed with graphite-based packing code 2.
- 17. Only available with two, three, and five-valve manifold type, 316SST or Alloy C-276 materials of construction and integral valve seat.
- 18. 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 page 18 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.

	Product description				
R306	Integral manifold				
Design o	class				
E	Enhanced				*
Manifol	d style				
Т	Threaded				*
Manifol	d type				
2	2-valve				*
Body		Bonnet	Stem and tip	Drain/vent	
2	316 SST	316 SST	316 SST	316 SST	*
Process	connection				
ВА	<sup>1</sup> /2–14 female ANPT process	connection for in-line trans	mitter		*
Packing	ing material				
1(1)	PTFE				*
2 <sup>(2)</sup>	Graphite-based				
Valve se	at				
1	Integral				*
Extended product warranty					
WR3	3-year limited product warra	inty			
WR5	5-year limited product warra	nnty			
Cleaning	g <sup>(3)</sup>				
P2	Cleaning for special services				
Material recommendation for NACE <sup>(4)</sup>					
SG Sour gas (meets NACE MR MR 0175/ISO 15156, MR 0103)					
NACE Ce	ertificate				
Q15	15 Certificate of Compliance to NACE MR0175/ISO 15156 for wetted materials				*
Q25	Certificate of Compliance to NACE MR0103 for wetted materials				
Typical o	coplanar integral manifo	ld model number: R306	SET22BA11		

- 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 page 18 for more information on material selection.

#### 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	Pressure manifold				
Manufact	turer				
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 <sup>(2)</sup>		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 S	332760)			
Process c	onnection				
AA	<sup>1</sup> /2–14 male NPT process co	onnection for in-line tra	nsmitter	*	
AW	1/2–14 male NPT process co	onnection for Rosemou	nt Wireless Pressure Gauge	*	
BA <sup>(3)</sup>	<sup>1</sup> /2–14 female NPT process	connection for in-line t	ransmitter	*	
BW	<sup>1</sup> /2–14 female NPT process	connection for Rosemo	ount Wireless Pressure Gauge	*	
Packing material					
1 <sup>(5)</sup>	PTFE			*	
2 <sup>(6)</sup>	Graphite-based	Graphite-based			
Valve sea	t				
1	Integral			*	

## **Options**

Extended p	roduct warranty	
WR3	3-year limited warranty	*
WR5	5-year limited warranty	*

## 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.

Cleaning <sup>(7</sup>	)		
P2	Cleaning for special services		
Cold temp	erature <sup>(8)</sup>		
CW1	−67 °F (−55 °C)		
Material r	ecommendations for NACE <sup>(4)(9)</sup>		
SG	Sour gas (meets NACE MR0175/ISO 15156, MR0103/ISO 17495)	*	
Typical int	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 page 25 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, 316SST or Alloy C-276 materials of construction, <sup>1</sup>/2–14 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 page 18 for more information on material selection.

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.

to additional d	ienvery read time.				
Model	Product description				
0304	Conventional manifold	Conventional manifold			
Manufactu	ırer				
R	Rosemount				*
Manifold s	tyle				
T	Traditional (flange x flange	e or flange x NPT)			*
W <sup>(1)</sup>	Wafer				
Manifold t	ype				
2 <sup>(2)</sup>	Two valve				*
3	Three valve				*
5(3)	Five valve				*
6 <sup>(2)</sup>	Five valve natural gas met	ering pattern			*
7 <sup>(2)(4)</sup>	Two valve (per ASME B31.	1 [ANSI] power and piping	g code)		
8(2)(4)	Three valve (per ASME B3	1.1 [ANSI] power and pipi	ng code)		
Body <sup>(5)</sup>		Bonnet	Stem	Tip	
2	316/316L SST	316 SST	316 SST	316 SST	*
4(6)	Alloy 400	Alloy 400/R-405	Alloy 400/R-405	Alloy 400	
5	CS	316 SST	316 SST	316 SST	*
Process co	nnection style				
В	1/2-14 NPT				*
F <sup>(2)</sup>	Flanged				*
Packing/st	em seal material				
1 <sup>(7)</sup>	PTFE				*
2(1)(8)	Graphite-based				
3(9)	FKM elastomer O-ring				*
Bolts					
1	For assembly to Rosemou	nt 2051/3051 traditional	flange		*
2	For assembly to Rosemou	nt 2051/3051 DIN-compl	iant traditional flange		*
3	For assembly to Rosemou	nt 2051/3051 Coplanar™	flange		*

#### 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.

## **Options**

- 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 page 25 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 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 Technical Note.

# Pressure and temperature ratings

Figure 1. Rosemount R305 Integral Manifolds





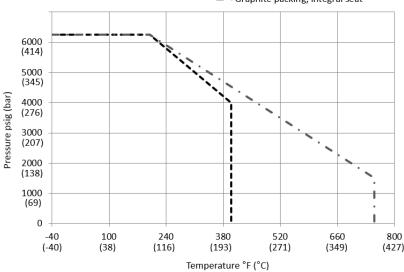
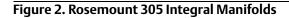


Table 7. Rosemount R305 Integral Manifolds

Packing	Seat Pressure and temperature ratings	
PTFE	lata and	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	htegral	6250 psi at -40 to 200 °F (431 bar at -40 to 93 °C) 1500 psi at 750 °F (103 bar at 399 °C)



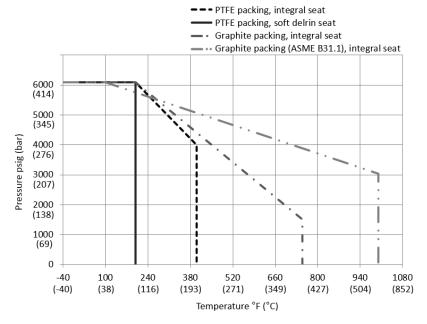


Table 8. Rosemount 305 Integral Manifolds(1)

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	l=4l	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)	Integral	6092 psi at -40 to 100 °F (420 bar at -40 to 38 °C) 3030 psi at 1000 °F (209 bar at 538 °C)	

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)

Figure 3. Rosemount R306 In-Line Manifolds

--•PTFE packing, integral seat

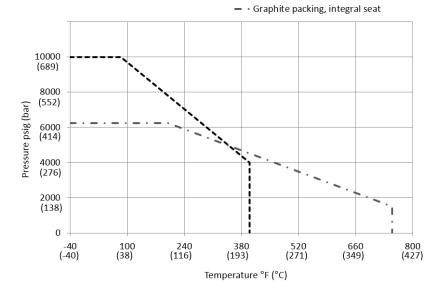


Table 9. Rosemount R306 In-Line Manifolds

Packing	Seat Pressure and temperature ratings	
PTFE		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	Integral	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 4. Rosemount 306 In-line Manifolds

- ■••PTFE packing, integral seat
- ─ · Graphite packing, integral seat

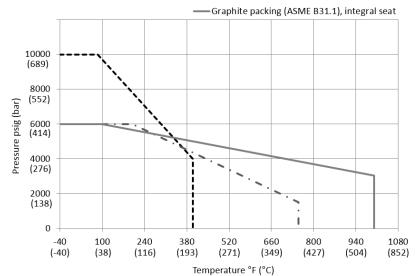
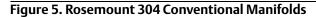


Table 10. Rosemount 306 In-line Manifolds

Packing	Seat	Pressure and temperature ratings	
PTFE		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	Integral	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)	



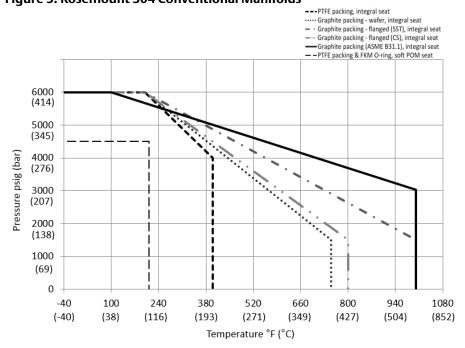


Table 11. Rosemount 304 Conventional Manifolds

Packing	Seat Pressure and temperature ratings		
PTFE <sup>(1)</sup>		6000 psi at -40 to 200 °F (414 bar at -40 to 93 °C) 4000 psi at 400 °F (276 bar at 204 °C)	
Graphite - wafer		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 - flanged (SST)	Integral	6000 psi at –40 to 200 °F (414 bar at –40 to 93 °C) 1500 psi at 1000 °F (103 bar at 538 °C)	
Graphite - flanged (CS)		6000 psi at –40 to 200 °F (414 bar at –40 to 93 °C) 1500 psi at 800 °F (103 bar at 427 °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)	
PTFE	DOM	4500 psi at -67 to 212°F (310 bar at -55 to 100 °C)	
FKM O-ring	POM	4500 psi at –13 to 212°F (310 bar at –25 to 100 °C)	

<sup>1.</sup> Maximum working pressure limited to 4500 psi (310 bar) with G2 option.

## **Instrument connections**

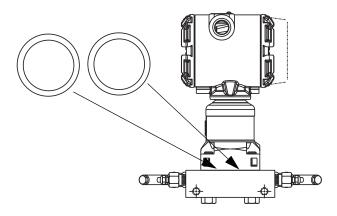
Table 12. Manifold - Transmitter Interface

Model	Connection
Rosemount R305/305 Integral Manifold	Mounted directly to coplanar sensor module of transmitter, 1.3-in. (287 mm) center-to-center process isolators
Rosemount R306/306 In-line Manifold	<sup>1</sup> / <sub>2</sub> –14 male NPT for In-line transmitters <sup>1</sup> / <sub>2</sub> -14 female NPT for Rosemount Wireless Pressure Gauge
Rosemount 304 Conventional Manifold	Mounted to traditional transmitter flange, 21/8-in. (54 mm) center-to-center connection per IEC 61518, type B shut-off device (without spigot)

# **O-rings**

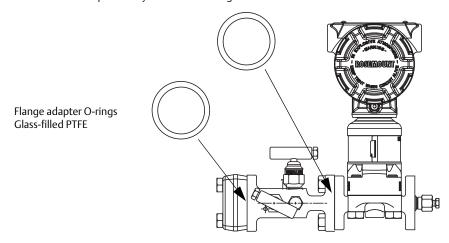
## Figure 6. Rosemount R305/305 Integral Manifold

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



## Figure 7. Rosemount 304 Conventional Manifold

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



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

## **Process connections**

Table 13. Rosemount R305/305 Integral Manifold

Style	Connection
Coplanar	¹/2–14 female NPT
Traditional	1/4–18 female NPT (process adapters optional)

Table 14. Rosemount R306/306 In-line Manifold

Style	Connection	
Block-and-bleed	<sup>1</sup> /2–14 male NPT <sup>(1)</sup>	
2-valve	<sup>1</sup> /2–14 NPT (male or female)	

1. <sup>1</sup>/2-14 female NPT option only available with Wireless Pressure Gauge.

Table 15. Rosemount 304 Conventional Manifold

Style	Connection	
Flange by pipe	<sup>1</sup> /2–14 female NPT	
Flange by flange	2 <sup>1</sup> / <sub>8</sub> -in. (54 mm) center-to-center connection (process adapters required)	
Wafer	<sup>1</sup> /2-14 female NPT	

## **Vent port connections**

1/4-18 female NPT

**Table 16. Adapters and Connectors** 

Option	Description	lmage
DF	<sup>1</sup> / <sub>2</sub> -14 NPT female flange adapter • Available with Rosemount 305 Integral and 304 Conventional Manifolds	
DT	<sup>1</sup> /2-in. ferrule tube flange adapter • Available with Rosemount 304 Conventional Manifold	
DQ	12mm ferrule tube flange adapter • Available with Rosemount 305 Integral and 304 Conventional Manifolds	

**Table 16. Adapters and Connectors** 

Option	Description	Image
DV <sup>(1)</sup>	Non-stabilized connector • 3.00-in. • No stabilizing foot • Includes assembly hardware	
DH <sup>(1)</sup>	Stabilized extended connectors • 4.75-in. • Stabilizing foot • Includes assembly hardware	
G2 <sup>(1)(2)</sup>	Dielectric isolators • Rated to 2500 VDC and 5 mega-Ohms • Includes bolts sleeves and assembly hardware	44

- Only allowed with both Rosemount 304 Manifold type code 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  $-20\,^\circ$ F ( $-29\,^\circ$ C), and 3626 psi (250 bar) at 150  $^\circ$ F ( $66\,^\circ$ C).

**Table 17. Spare Part Adapters and Connectors** 

Spare part number	Description	Image
03031-1320-XXXX (1)	Socket weld adapter kit  • 3.00-in.  • For traditional flange	

 Complete part numbers for specific socket weld adapter kits can be found on page 42.

## **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 Class 2 bolts

## **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

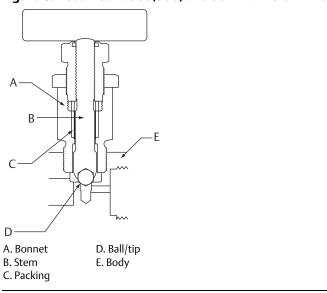
Component	Option 2	Option 2 with SG	Option 3
Body	316 SST/ 316L SST	316 SST/ 316L SST	Alloy C-276
Ball/tip	316 SST/ 316Ti SST	Alloy C-276	Alloy C-276
Stem	316 SST	Alloy C-276	Alloy C-276
Packing	PTFE/ Graphite	PTFE/ Graphite	PTFE/ Graphite
Bonnet	316 SST	316 SST	Alloy C-276
Pipe plug	316 SST	316 SST	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 8. Rosemount 305,306, and 304 Manifold Valve



# **Estimated weight**

Table 23. Rosemount R305/305 Integral Manifold

Description	Weight
2-valve coplanar	4.5 lb (2.0 kg)
2-valve traditional 6.0 lb (2.7	
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 R306/306 In-line Manifold

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

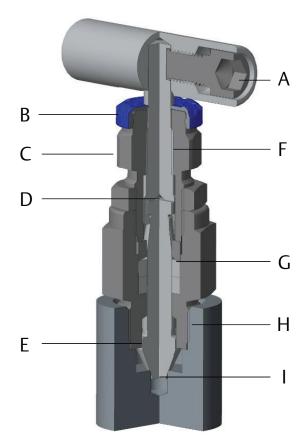
Table 25. Rosemount 304 Conventional Manifold

Description	Weight
2-valve traditional flange x NPT	5.0 lb (2.3 kg)
2-valve traditional flange x flange	5.5 lb (2.5 kg)
3-valve traditional flange x NPT	5.2 lb (2.4 kg)
3-valve traditional flange x flange	5.7 lb (2.6 kg)
3-valve wafer flange x NPT	4.0 lb (1.8 kg)
5-valve wafer flange x NPT	5.7 lb (2.6 kg)
5-valve traditional flange x NPT	5.7 lb (2.6 kg)
5-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 9. Rosemount Pressure-Lock Valve



#### Simplified operation

- A. Removable handles allows for a quick way of adding security and reducing unwanted 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.

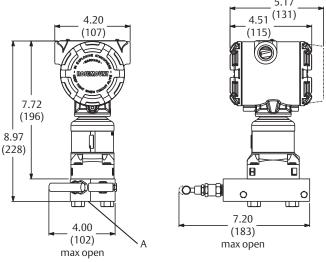
## **Enhanced reliability**

- 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**

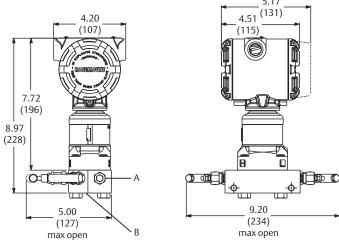
# Rosemount coplanar style manifolds<sup>(1)</sup>

Figure 10. Rosemount R305/305 Two Valve Coplanar Style Manifold



A.  $^{1}/_{2}$ –14 NPT on manifold for process connection,  $^{1}/_{4}$ –18 NPT for test/vent connection Dimensions are in inches (millimeters).

Figure 11. Rosemount R305/305 Three Valve Coplanar Style Manifolds

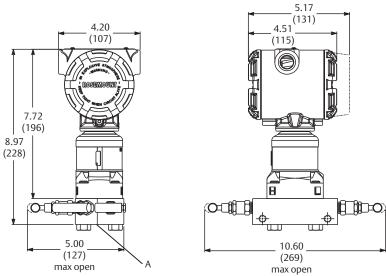


A. Drain/vent valve

B.  $^{1}/_{2}$ – $^{14}$  NPT on manifold for process connections,  $2^{1}/_{8}$ -in. center-to-center Dimensions are in inches (millimeters).

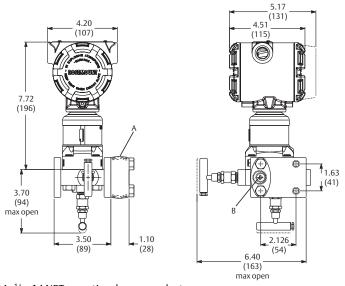
<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Figure 12. Rosemount R305/305 Five Valve Coplanar Style Manifold



A.  $^{1}/_{2}$ -14 NPT on manifold for process connections,  $2^{1}/_{8}$ -in. center-to-center,  $^{1}/_{4}$ -18 NPT for test/vent connection Dimensions are in inches (millimeters).

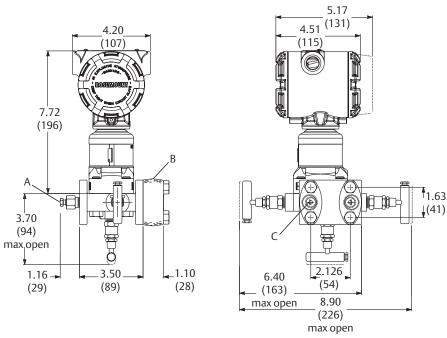
Figure 13. Rosemount 305 Two Valve Traditional Style Manifold



A.  $^{1}/_{2}$ –14 NPT on optional process adapter

B.  $\frac{1}{4}$ -18 NPT on traditional manifold for process connection without the use of a process adapter Dimensions are in inches (millimeters).

Figure 14. Rosemount 305 Three Valve Traditional Style Manifold

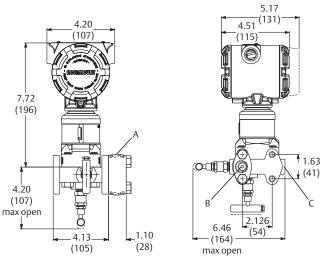


A. Drain/vent valve
B. 1/2–14 NPT on optional process adapter(1)
Dimensions are in inches (millimeters).

C. 1/4–18 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 15. Rosemount 305 Two Valve Traditional DIN Style Manifold

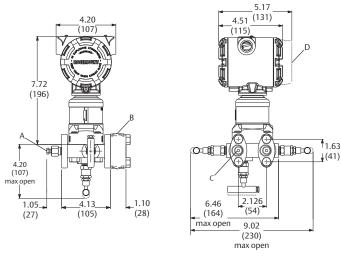


A. <sup>1</sup>/2–14 NPT on optional process adapter

C. <sup>1</sup>/4–18 NPT vent connection

B.  $\frac{1}{4}$  – 18 NPT on traditional manifold for process connection without the use of a process adapter Dimensions are in inches (millimeters).

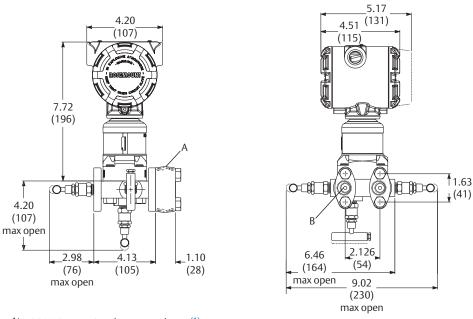
Figure 16. Rosemount 305 Three Valve Traditional DIN Style Manifold



- A. Drain/vent valve
- B. <sup>1</sup>/2–14 NPT on optional process adapter<sup>(1)</sup>
- C.  $^{1}/_{4}$ –18 NPT on traditional manifold for process connections without the use of process adapters D. 0.75 (19) clearance for cover removal
- Dimensions are in inches (millimeters).

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

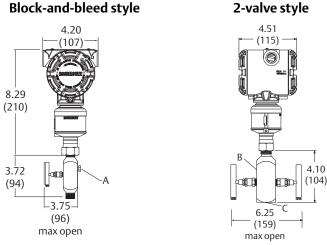
Figure 17. Rosemount 305 Three Valve Traditional DIN Style Manifold



- A. <sup>1</sup>/2–14 NPT on optional process adapter<sup>(1)</sup>
- B.  $\frac{1}{4}$ -18 NPT on traditional manifold for process connections without the use of process adapters Dimensions are in inches (millimeters).
- 1. Adapters can be rotated to give adapter connection centers of 2.0 (51), 2.125 (54), or 2.25 (57).

# Rosemount In-line style(1)

Figure 18. Rosemount R306/306 Pressure Style Manifold (Rosemount 3051S\_T Shown)(2)(3)

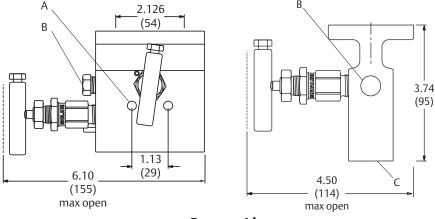


A. Bleed screw (unspecified dimension) - not  $\,$  C.  $^{1}/2-14$  NPT female NPT process connection (code BA) designed for accessory attachments.

B. <sup>1</sup>/<sub>4</sub>-in. vent connection–pipe plug supplied with manifold, but not installed at factory (pipe plug supplied loose) Dimensions are in inches (millimeters).

## Rosemount conventional style<sup>(1)</sup>

Figure 19. Rosemount 304 Two Valve Flange x NPT Conventional Manifold Instrument side



**Process side** 

A.  $\emptyset$  0.281 mounting holes (2)

B. <sup>1</sup>/4-in. NPT test (plugged)

C. <sup>1</sup>/2-in. NPT process connection on 2.125 (54) centers (2)

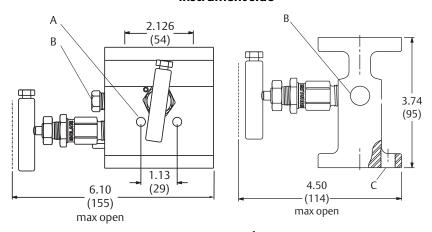
Dimensions are in inches (millimeters).

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

<sup>2.</sup> Manifold valve orientation may vary with respect to transmitter mounting holes.

<sup>3.</sup> Rosemount R306 in-line manifold only available with two valve style.

Figure 20. Rosemount 304 Two Valve Flange x Flange Conventional Manifold<sup>(1)</sup>
Instrument side



**Process side** 

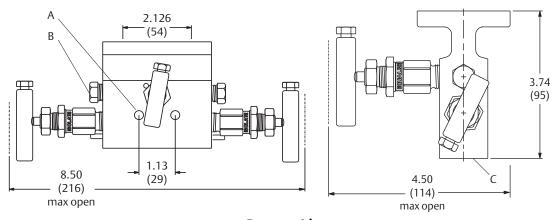
A.  $\varnothing$  0.281 mounting holes (2)

B. <sup>1</sup>/4-in. NPT test (plugged)

C.  $^{7}/_{16}$ –20–UNF mounting holes (4) on a 2.125 x 1.625–in. hole pattern

Dimensions are in inches (millimeters).

Figure 21. Rosemount 304 Three Valve Flange x NPT Conventional Manifold<sup>(1)</sup>
Instrument side



**Process side** 

A.  $\varnothing$  0.281 mounting holes (2)

B. <sup>1</sup>/4-in. NPT test (plugged) (2)

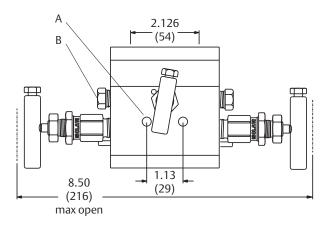
C. <sup>1</sup>/2-in. NPT process connection on 2.125 (54) centers (2)

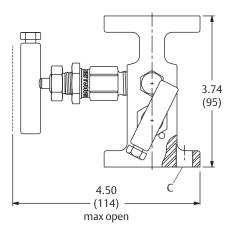
Dimensions are in inches (millimeters).

Emerson.com/Rosemount

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Figure 22. Rosemount 304 Three Valve Flange x Flange Conventional Manifold<sup>(1)</sup>
Instrument side

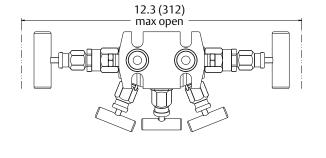


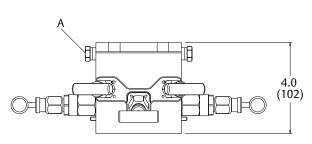


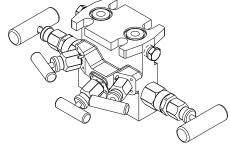
**Process side** 

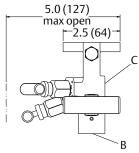
- A.  $\emptyset$  0.281 mounting holes (2)
- B. <sup>1</sup>/4-in. NPT test (plugged) (2)
- C.  $\frac{7}{16}$ -20–UNF mounting holes (4) on a 2.125 x 1.625–in. hole pattern Dimensions are in inches (millimeters).

Figure 23. Rosemount 304 Natural Gas Five Valve Flange x NPT Conventional Manifold with NG Option







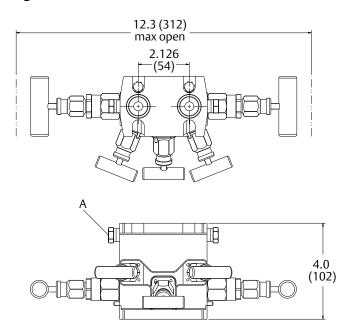


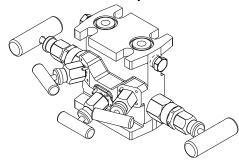
- A. <sup>1</sup>/4-in. NPT test (plugged) (2)
- B. <sup>1</sup>/<sub>2</sub>-in. NPT process connection on 2.125 (54) centers (2)
- C. <sup>1</sup>/<sub>4</sub>-in. NPT vent

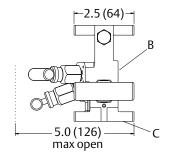
Dimensions are in inches (millimeters).

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

Figure 24. Rosemount 304 Natural Gas Five Valve Conventional Manifold with NG Option





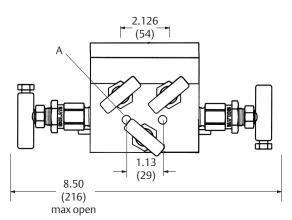


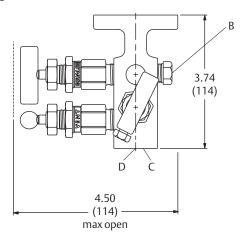
A. <sup>1</sup>/4-in. NPT test (plugged) (2)

B. <sup>1</sup>/<sub>4</sub>-in. NPT vent

C.  $\frac{7}{16}$ –20–UNF mounting holes (4) on a 2.125 x 1.625–in. hole pattern Dimensions are in inches (millimeters).

Figure 25. Rosemount 304 Natural Gas Five Valve Flange x NPT Conventional Manifold<sup>(1)</sup>
Instrument side





**Process side** 

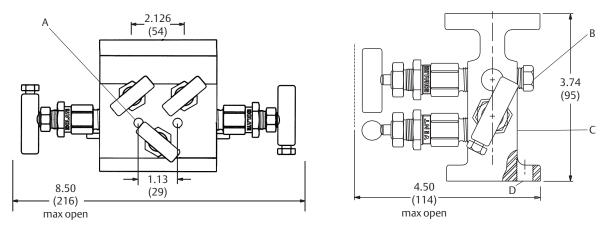
C. <sup>1</sup>/<sub>2</sub>-in. NPT process connection on 2.125 (54) centers (2)

D. <sup>1</sup>/4-in. NPT vent

A. Ø 0.281 mounting holes (2) B. <sup>1</sup>/4-in. NPT test (plugged) (2) Dimensions are in inches (millimeters).

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

Figure 26. Rosemount 304RT Natural Gas Five-Valve Flange x Flange Conventional Manifold<sup>(1)</sup>
Instrument side



**Process side** 

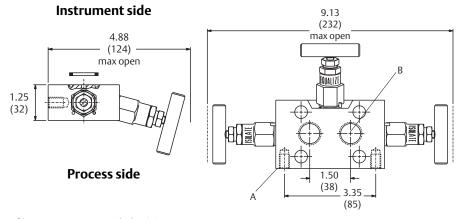
A. Ø 0.281 mounting holes (2) B. <sup>1</sup>/4-in. NPT test (plugged) (2)

Dimensions are in inches (millimeters).

C. 1/4-in. NPT vent

D.  $\frac{7}{16}$  16–20–UNF mounting holes (4) on a 2.125 x 1.625–in. hole pattern

Figure 27. Rosemount 304RW Three-Valve Wafer Manifold(1)



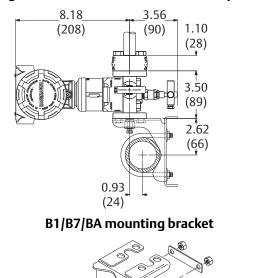
A.  $^3/_{8}$ –16 UNC mounting holes (2) B.  $^1/_{2}$ –14 NPT process connection (2)

Dimensions are in inches (millimeters).

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

# **Rosemount mounting brackets**

Figure 28. Traditional Manifold with Optional Brackets for 2-in. Pipe Mounting<sup>(1)</sup>



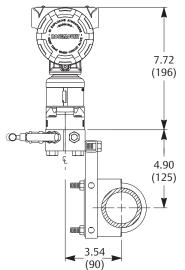
7.72 (196) 1.94 (49.2) 13.03 (331) 5.32 (135) 4.85 (123)

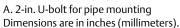
(89)

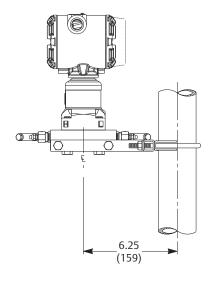
(28)

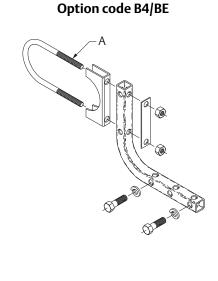
Dimensions are in inches (millimeters).

Figure 29. Coplanar Manifold with Optional Bracket for 2-in. Pipe Mounting<sup>(1)</sup>







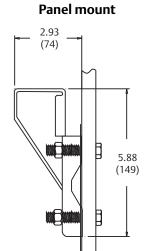


Emerson.com/Rosemount

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

## Figure 30. VS/VC Heavy Duty Manifold Mounting Bracket<sup>(1)</sup> 2-in. pipe mount

# 1.05 (26,67) 4.20 (107) 3.40 (86) (95) B 5.88 (149)



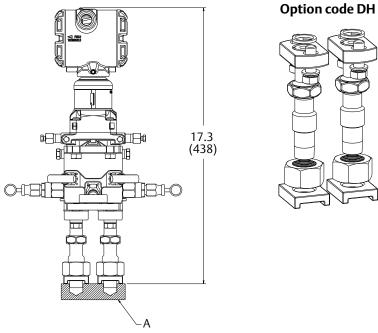
A. Drain/vent valve B. 2-in. pipe

Dimensions are in inches (millimeters).

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

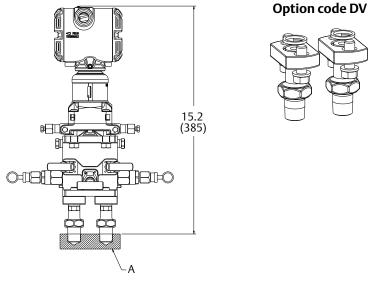
## **Rosemount connectors**

Figure 31. DH Extended Stabilized Connectors for Direct Mounting<sup>(1)(2)</sup>



A. Cross section image is shown for dimensioning purposes only; it is not part of the transmitter assembly Dimensions are in inches (millimeters).

Figure 32. DV Non-Stabilized Connectors for Direct Mounting<sup>(1)(2)</sup>



A. Cross section image is shown for dimensioning purposes only; it is not part of the transmitter assembly Dimensions are in inches (millimeters).

<sup>1.</sup> Manifold handle assembly may vary slightly from image shown. All valve handle assemblies provide the same function and meet all stated drawing dimensions.

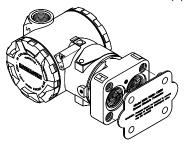
<sup>2.</sup> In default assembly orientation, manifold valves will face towards user when module high side is on user's left.

## **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 cold temperature

This option provides a  $-67\,^{\circ}F$  ( $-55\,^{\circ}C$ ) manifold temperature certification for Rosemount 0305 and 0306 manifolds. CW1 can be paired with BR5 and BR6 options on the Rosemount 3051 pressure transmitter and the BR5 and BR6 options on the Rosemount 3051S pressure transmitter for a complete cold temperature solution. Manifold BR6 option ( $-76\,^{\circ}F$  [ $-60\,^{\circ}C$ ]) is available upon request if the temperature requirement of the application is lower than  $-67\,^{\circ}F$  ( $-55\,^{\circ}C$ ).

#### 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 <a href="mailto:Emerson.com/Rosemount">Emerson.com/Rosemount</a>.

**Rosemount Manifolds** 

# Spare parts list

Table 26. Rosemount R305/305 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
Bolt kits (set of 4)		
CS bolt kit	03031-0311-0001	03031-0312-0001
SST bolt kit	03031-0311-0002	03031-0312-0002
ANSI/ASTM-A-193-B7M bolt kit	03031-0311-0003	03031-0312-0003
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 27. 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. 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) <sup>(1)</sup>		
Steam block kit	00305-0406-0001	N/A
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

Table 27. Rosemount 304 Conventional Manifold

Part description	Part number (traditional style)	Part number (wafer style)
Socket weld adapter kit (qty. 2) <sup>(2)</sup>	'	
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) <sup>(3)</sup>		
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

<sup>1.</sup> Not available with manifold type code 6.

<sup>2.</sup> For H2 traditional flange.

<sup>3.</sup> Only available with manifold type code 6.

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