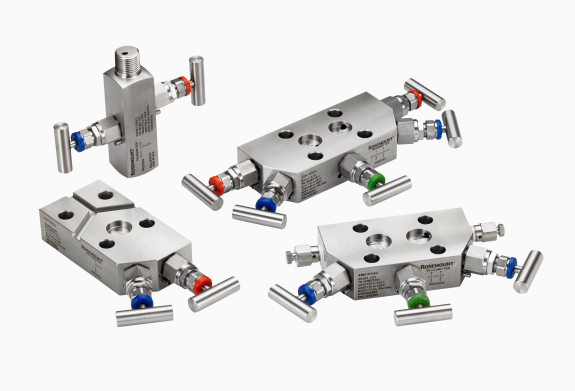
Product Data Sheet
00813-0100-4733, Rev SC
March 2022

Rosemount™ Manifold Solutions

To meet your variety of manifold connection system needs, Rosemount Manifold 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

Contents

Selection guide

Rosemount 305 Coplanar™ Style

Rosemount R305 three-valve manifold

Rosemount 3051S aseembled to R305 five-valve manifold

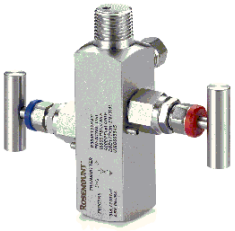
Standard features

- 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

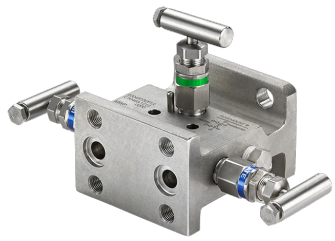
Standard features

- 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

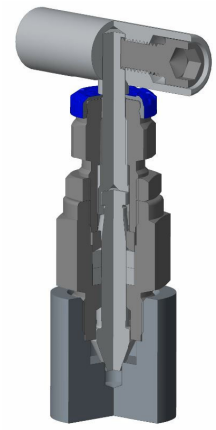
Rosemount 304 conventional manifold wafer style

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

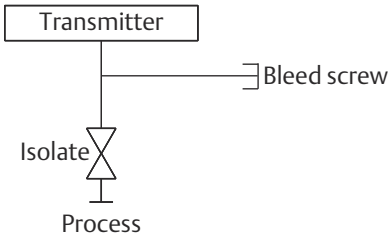
For more information on the Pressure-Lock Valve, reference Rosemount Pressure-Lock Valve configuration.

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

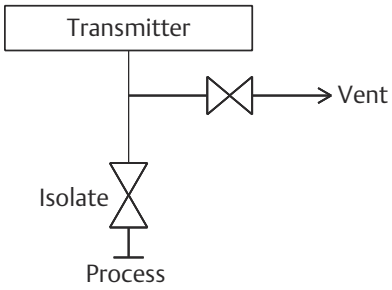
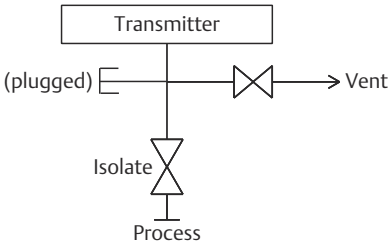


Figure 3: Rosemount 304 Manifold



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

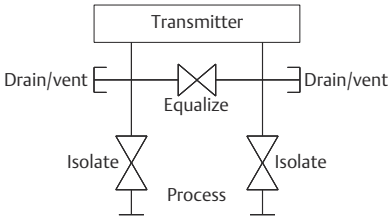


Figure 5: Rosemount 304 (Traditional) Manifold

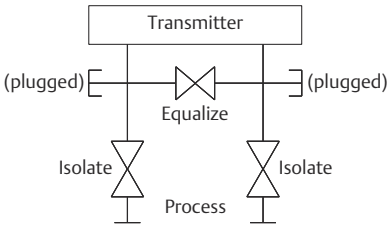
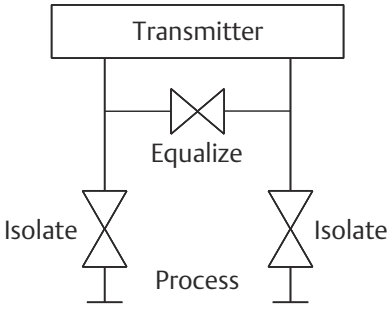


Figure 6: Rosemount 304 (Wafer) Manifold



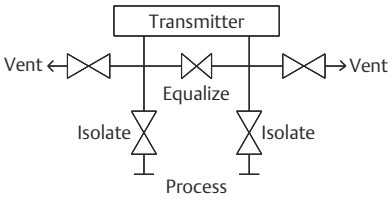
Note

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

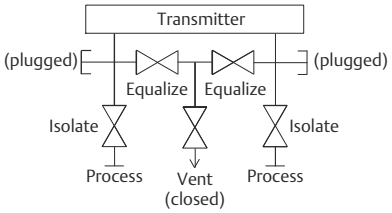


Five-valve natural gas

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.

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

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

Ordering information

Rosemount Manifold 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.

CONFIGURE > VIEW PRODUCT >

Online product configurator

Many products are configurable online using our Product Configurator. Select the **Configure** button or visit our website to start. With this tool's built-in logic and continuous validation, you can configure your products more quickly and accurately.

Specifications and options

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

Model codes

Model codes contain the details related to each product. Exact model codes will vary; an example of a typical model code is shown in Figure 9.

Figure 9: Model Code Example

R305EC32B11 WR5B4

1 2

1. Required model components (choices available on most)
2. Additional options (variety of features and functions that may be added to products)

Optimizing lead time

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.

Rosemount R305 Integral Manifold

Required model components

Model

Code	Description	
R305	Integral manifold	

Design class

Code	Description	
E	Enhanced	★

Manifold style

Code	Description	
C	Coplanar	★

Manifold type

Code	Description	
2	Two-valve	★
3	Three-valve	★
5	Five-valve	★

Body

Refer to Materials of construction for additional detail on process wetted materials of construction.

Code	Description	Bonnet	Stem and tip	Drain/vent	
2	316 stainless steel (SST)	316 SST	316 SST	316 SST	★

Process connection

Code	Description	
B	½-14 NPT female	★

Packing material

Code	Description	
1(1)	PTFE	★