

Manifolds - Two/Three/Five Valve

2, 3 and 5 valve manifolds that provide simple and effective installation, calibration and servicing of Coplanar™ style transmitters at pressures to 6000 psig (414 barg)

General Application

IMSA is a direct mounted design primarily for horizontal installations, providing true direct coupling in the smallest possible space. IMST is for remote mounting in more traditional applications on gas, vapor or liquid services.

TECHNICAL DATA

Materials

316 SS

Seats:

Metal or soft

Connections:

Pipe x flanged

Flanged x flanged

IMSA:

Flanged

IMST:

1/2" NPT and flanged

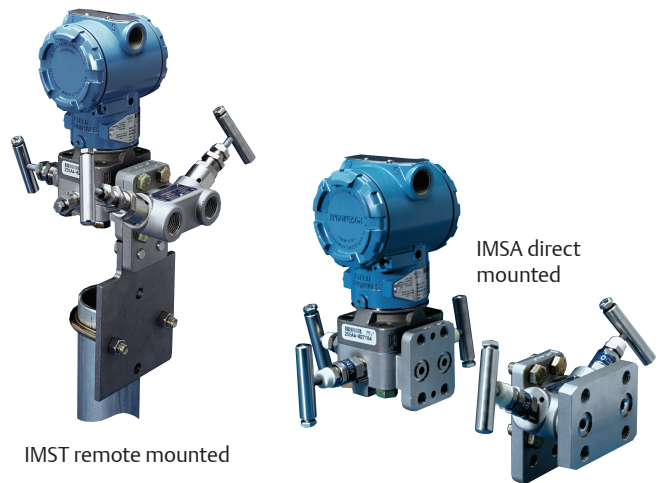
Pressure (max):

6000 psig (414 barg) standard

Temperature range (min/max):

-70°F to 1000°F

(-57°C to 538°C)



IMST remote mounted

IMSA direct mounted

Features

- Compatible with Rosemount® Coplanar™ style pressure transmitter models 3051C, 3051P, 2024 and 3095 Multivariable™.
- Two-piece modular assembly comprising block-valve module with two isolation valves and instrument module containing equalize and vent valves.
- Direct mounting to the transmitter, eliminates the need for flange adapters.
- Modular construction allows independent field installation of the block-valve module, which remains in place during instrument calibration eliminating the need for separate isolation valves.
- Maximum accuracy achieved by positioning transmitter isolation diaphragms within 1/2" (13 mm) of the process taps' axis.
- Instrument module with large bore passages provides accuracy and improves response time.
- Modular design allows the instrument module and transmitter to be removed in the field easily while the block valve module remains, facilitating both field service and shop transmitter calibration.
- Compact design for ease of installation, calibration, maintenance and accessibility for operation in cabinet systems.
- Transmitter venting by standard vent plugs or 1/4" NPT controlled vent outlets captures environmentally sensitive process fluids.

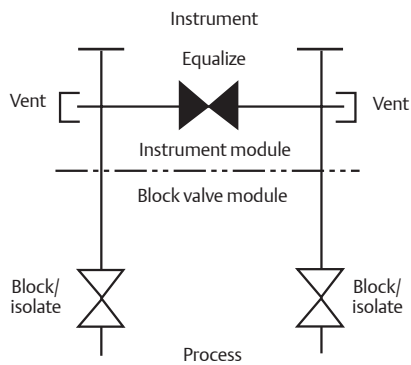
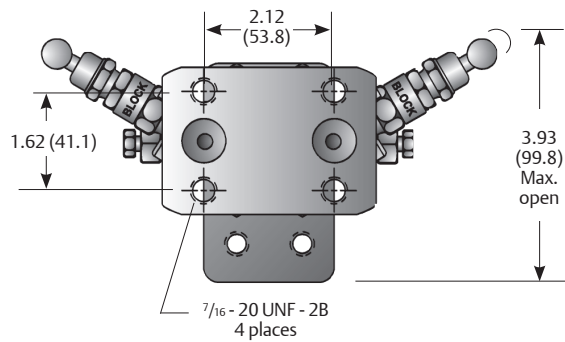
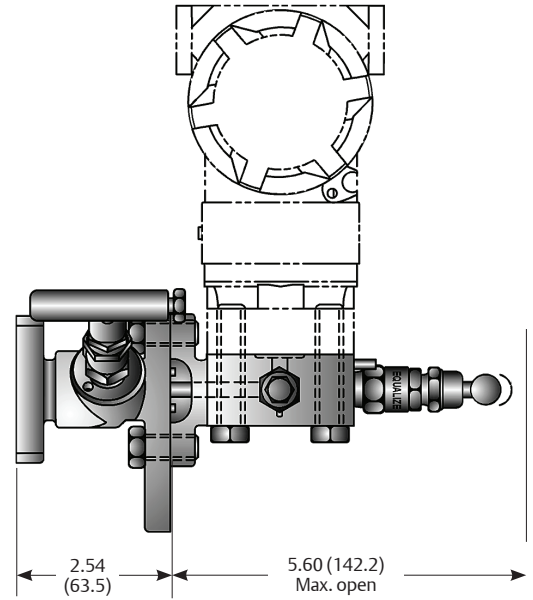
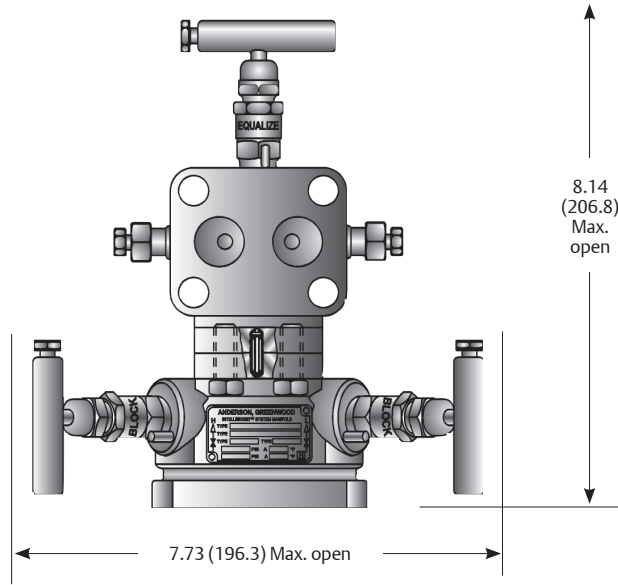
IMSA SERIES

Manifolds - Two/Three/Five Valve

IMSA Dimensions

Direct mounted^[1] - dimensions, inches [mm]

Integral



3-Valve manifold

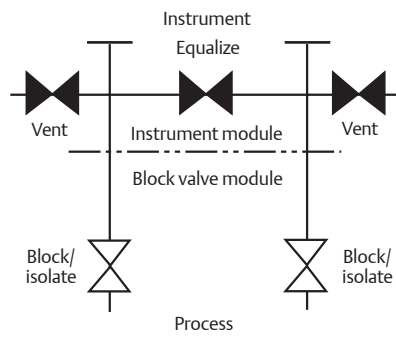
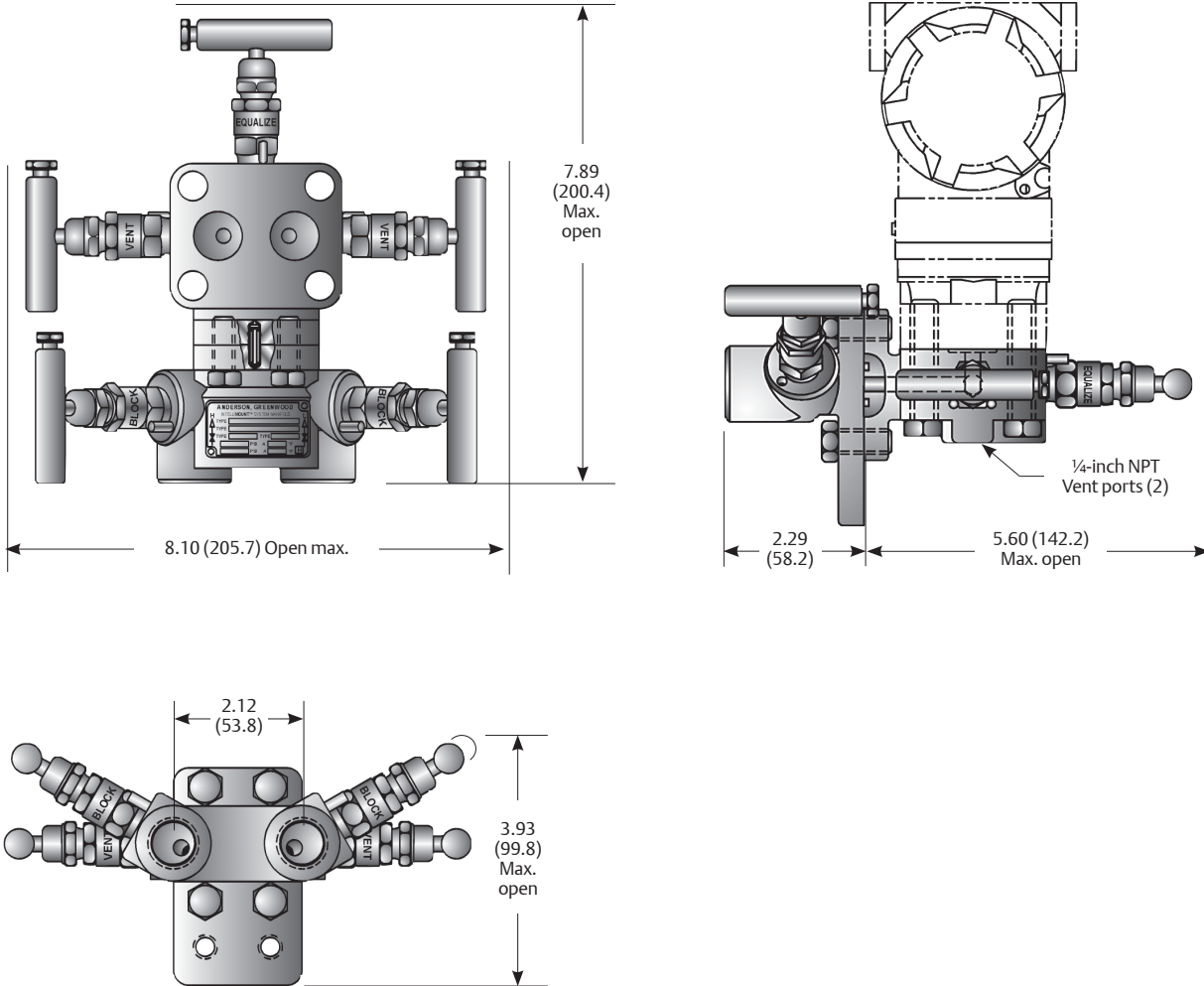
NOTE

1. Three-valve dimensions and schematic shown. Two- and five-valve versions are available.

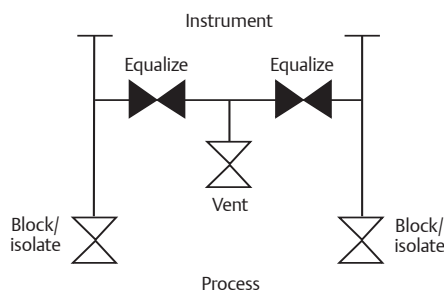
Manifolds - Two/Three/Five Valve

IMST Dimensions

Remote mounted - dimensions, inches [mm]



5-valve (power/vent) manifold



5-Valve (gas) manifold

Note

1. Five-valve dimensions and schematics shown. Two- and three-valve versions are available.

IMSA/IMST SERIES

Manifolds - Two/Three/Five Valve

Standard Materials

Valve ^[1]	Seat	Packing	Body	Bonnet	Stem	Ball
316 SS	Soft	PTFE	A351-CF8M	316	A276-316	N/A
SG ^[2]	Soft	PTFE	A351-CF8M	316	Monel [®] 400	N/A
316 SS	Integral ^[3]	PTFE	A351-CF8M	316	A276-316	316
SG ^[2]	Integral ^[3]	PTFE	A351-CF8M	316	Monel [®] 400	Monel [®] 500
316 SS	Integral ^[3]	GRAFOIL [®] /Low emissions graphite	A351-CF8M	316	A276-316	316
SG ^[2]	Integral ^[3]	GRAFOIL [®] /Low emissions graphite	A351-CF8M	316	Monel [®] 400	Monel [®] 500

Pressure and Temperature Ratings

Valve	Packing	Seat	Ratings
316 SS, SG ^[2]	PTFE	Delrin [®] /PCTFE	6000 psig at 200°F (414 barg at 93°C)
316 SS, SG ^[2]	PTFE	PEEK	6000 psig at 200°F (414 barg at 93°C) 2000 psig at 400°F (138 barg at 204°C)
316 SS, SG ^[2]	PTFE	PTFE	1000 psig at 150°F (69 barg at 66°C) 200 psig at 500°F (14 barg at 260°C)
316 SS, SG ^[2]	PTFE	Integral ^[3]	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
316 SS, SG ^[2]	GRAFOIL [®] /Low emissions graphite	Integral ^[3]	6000 psig at 200°F (414 barg at 200°C) 1500 psig at 1000°F (103 barg at 538°C)

Minimum temperature

316 SS O-ring seal	-20°F (-29°C)
316 SS, Monel [®] , Hastelloy [®] , PTFE packed	-70°F (-57°C)
Delrin [®] seat	-40°F (-40°C)
316 SS, Monel [®] , Hastelloy [®] , GRAFOIL [®] packed	-70°F (-57°C)

NOTES

- Approximate valve weights:
2 valve - 6.8 lb (3.1 kg).
3 valve - 7.2 lb (3.3 kg).
5 valve - 8.2 lb (3.7 kg).

Metal seat:

0.187 inch (4.8 mm) diameter orifice.
Valve Cv 0.52 maximum.

Soft seat:

0.187 inch (4.8 mm) diameter orifice.
Valve Cv 0.83 maximum.

- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103.
- Body material.



Manifolds - Two/Three/Five Valve

Bonnet Assembly Options

IMSA and IMST offer the option of metal or soft seated bonnet assemblies.

All stem threads are rolled and lubricated to prevent galling and reduce operating torque. The stem seal is a patented PTFE packing gland which is adjustable in service. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service and, for PTFE packed bonnets, a protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants.

Soft-seated Bonnet Assembly

The soft-seated bonnet assembly has a one-piece rotating stem and plug. In addition to the adjustable PTFE packing gland, the bonnet is also available with a FKM O-ring and PTFE back-up ring.

Metal-seated Bonnet Assembly

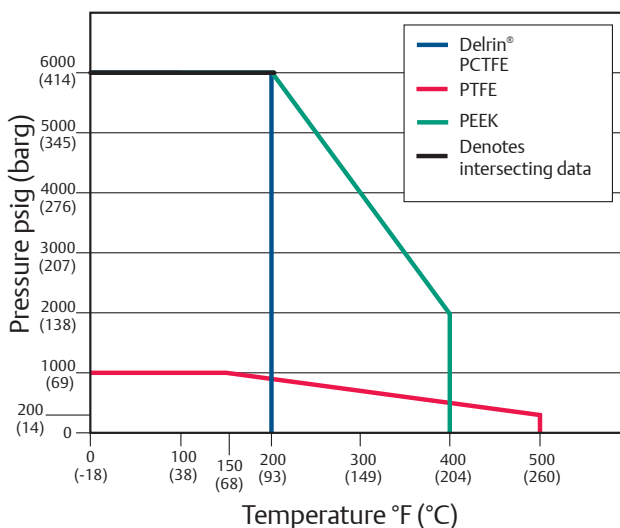
The metal-seated bonnet assembly has a rotating stem with free swivel ball-type seat for long service life. The specially hardened ball seat is ideal for both gas and liquid service.

The high-temperature bonnet assembly uses a strengthened stem and bonnet incorporating adjustable graphite rings and back-up pressure rings to ensure a leak-free stem seal and is fitted with a larger size T-bar handle.

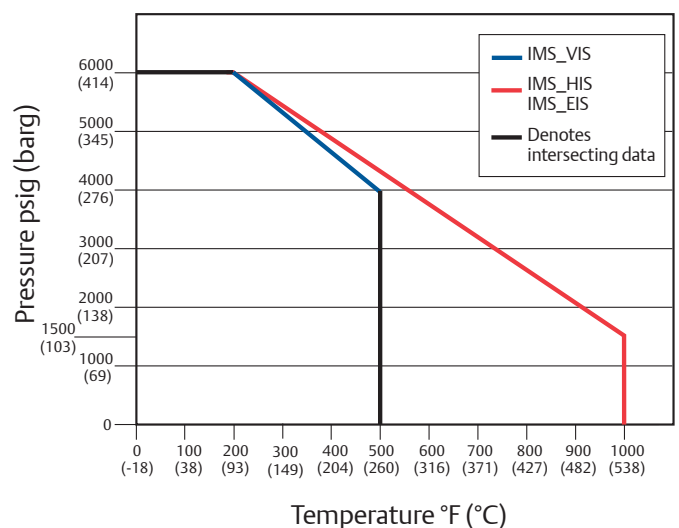
Minimum temperature

316 SS O-ring seal	-20°F (-29°C)
316 SS, Monel®, Hastelloy®, PTFE packed	-70°F (-57°C)
Delrin® seat	-40°F (-40°C)
316 SS, Monel®, Hastelloy®, GRAFOIL® packed	-70°F (-57°C)

Pressure and Temperature Ratings - Soft Seat



Pressure and Temperature Ratings - Metal Seat



IMSA/IMST SERIES

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Selection Guide

IMST	3	V	I	-S	4	-SG
BASIC SERIES	TYPE	PACKING	SEAT	MATERIAL	END CONNECTION (IMST ONLY)	OPTIONS
STYLE						
IMSA Direct mount (flange x flange)	2 2-valve	V PTFE	I Integral	S A351 - CF8M	4 1/2 inch FNPT x flange	HD Hydrostatic testing (100 percent) (MSS SP-61)
IMST Remote mount (pipe x flange)	3 3-valve	H GRAFOIL®	V PTFE			OC00 Cleaned for oxygen service
	5G 5 valve (gas)	E Low emissions graphite	D Delrin®			SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103
	5P 5 valve (power)		E PEEK			SS All 316 SS materials on non wetted components

Selection Guide - Power Industry Applications^[1]

IMST	3HP	S	4
BASIC SERIES	TYPE	MATERIAL	END CONNECTION (IMST ONLY)
STYLE			
IMSA Direct mount (flange x flange)	2HP 2-valve	S A351 - CF8M	4 1/2 inch FNPT x flange
IMST Remote mount (pipe x flange)	3HP 3-valve		SS All 316 SS materials on non wetted components
	5PHP 5 valve (power)		

NOTES

- All manifolds come standard with GRAFOIL® packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.
- Manifold ratings:
SST
6000 psig at 100°F (414 barg at 38°C)
3030 psig at 1000°F (209 barg at 538°C)
- To ASME B31.1 or B31.3 specifications, meets MSS SP-105.

