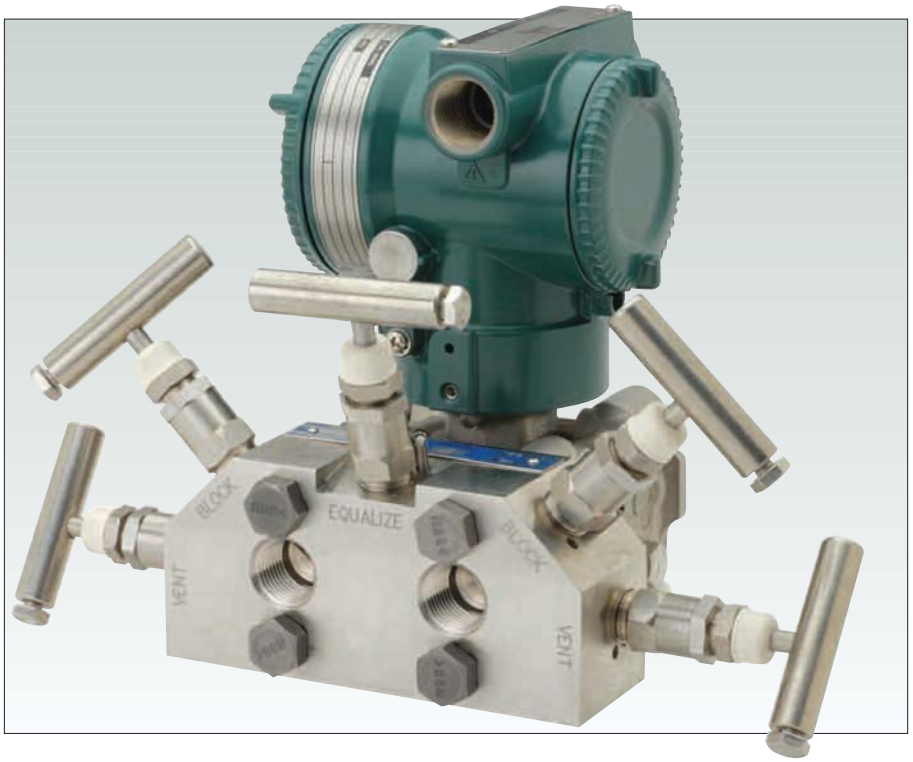
Model	Instrument Connection	Process Connection
MDP	½"FNPT	½"FNPT
MDPT	Flange	½"FNPT
MDPA	Flange	Flange

Differential Pressure Manifolds – MDP 5-Valve



Product Overview

The MDP is a five valve manifold designed for direct mounting to differential pressure transmitters. Lightweight and with compact dimensions, MDP manifolds enable instrument operation, isolation, zeroing and venting in a single unit.

Manufactured with two block valves, an equalize valve and two instrument vent/calibrate valves, the MDP is coupled directly to differential pressure transmitters via standard instrument flanged connections on 2 1/8-inch [54 mm] centers. (Non-standard instrument centers are also available). Process connections are available threaded or flanged to accept standard futbol flanges. Vent connections are threaded 1/4-inch on all manifolds and provided with vent plugs as standard. Suitable for pressures of up to 6000 psig [414 barg] and temperatures of up to 1000°F [538°C]. MDP is available with a metal seat and the option of Teflon® or GRAFOIL® stem packing.

Applications

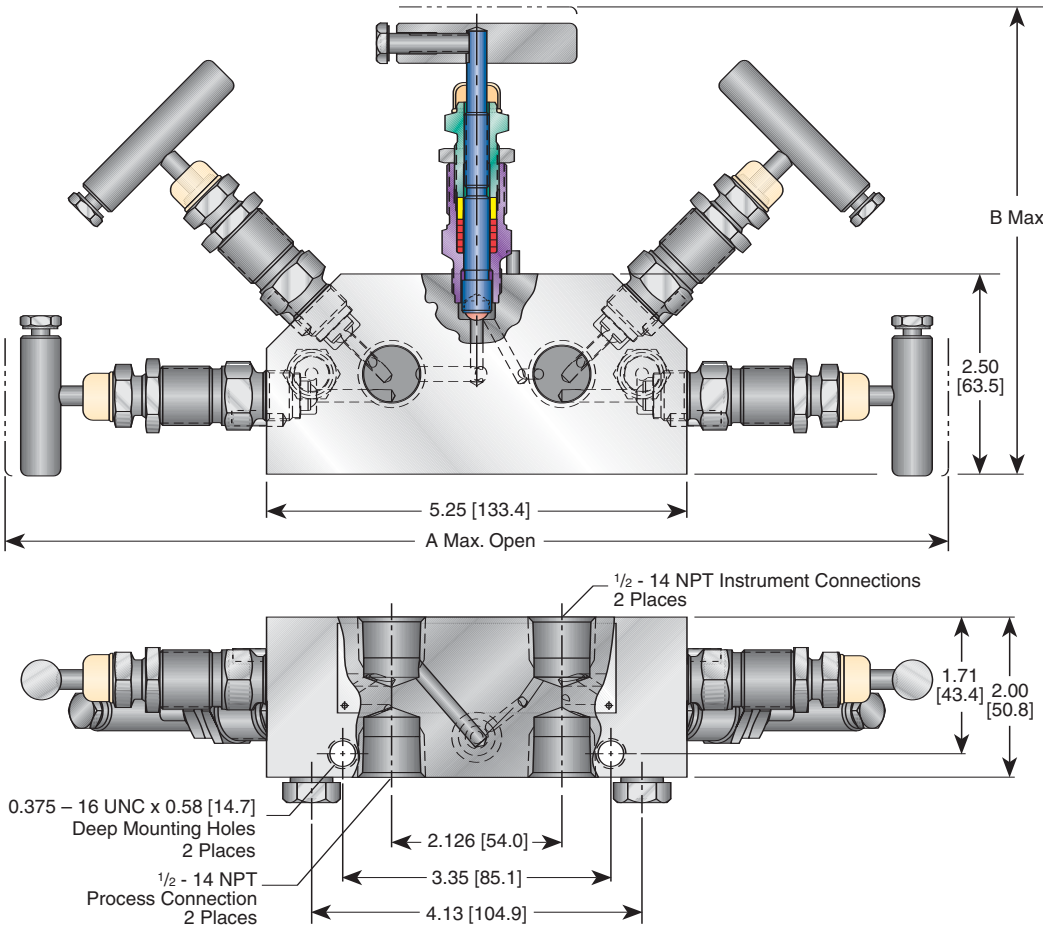
- Direct-mounting differential pressure transmitters.
- Instrument isolation and zeroing.
- Instrument venting to close system.
- Instrument calibration.
- Liquid and vapor service.

Features and Benefits

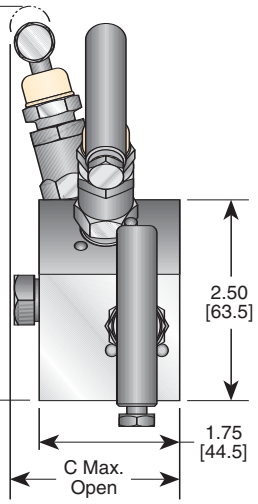
- **Direct mounting compact design** requires a minimum of space for operation and installation with fewer potential leak points.
- **Installation costs reduced** by manifolding the valves, thereby eliminating several components essential for 'piping-up.'
- **Ball end stem** free-swiveling ball-end stem ensures perfect alignment, providing repetitive bubble-tight shut-off and long life.
- **Packing below threads** Teflon® or GRAFOIL® packing below the stem threads prevents lubricant washout and thread corrosion.
- **Back seat stem** prevents stem blow-out or accidental removal while in operation.
- **Threaded vent ports** allow vent to be safely piped away, supplied plugged as standard.
- **Manifold mounting,** standard pipe bracket bolts directly to the manifold providing a rigid support for the transmitter. Instrument can be easily removed for service or repair.

Differential Pressure Manifolds – MDP Specifications

MDP Dimensions, inches [mm]



MDPT



MDP Dimensions, inches [mm]

Valve	A	B
Teflon® Packed	10.45 [265.4]	5.10 [129.5]
GRAFOIL®/ Low Emissions Graphite Packed	11.75 [298.5]	5.75 [146.1]

MDPT Dimensions, inches [mm]

Valve	A	B	C
Teflon® Packed	10.45 [265.4]	4.90 [124.5]	2.11 [53.6]
GRAFOIL®/ Low Emissions Graphite Packed	11.75 [298.5]	5.51 [140.0]	2.34 [59.4]

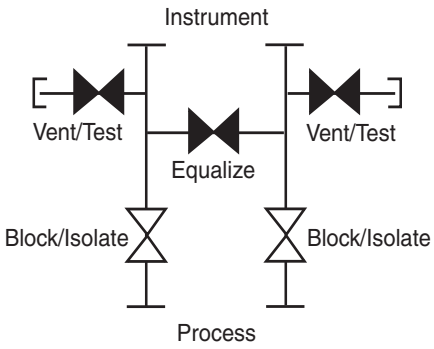
Special Severe Service Materials

Duplex UNS S31803
6MO UNS S31254
Hastelloy® C276
Incoloy® 825

For any other material requirements, please consult the factory.

Standard Materials

Valve[1]	Body	Bonnet	Stem	Ball Seat
SS	SS, A479 316	316 SS	316 SS	316 SS
Monel®	Monel® 400	Monel® 400	Monel® 400	Monel® K500
SG[2]	A479 316 SS	316 SS	Monel® 400	Monel® K500



Notes

1. Approximate valve weight: 6.7 lb [3.0 kg]. 0.156-inch [4.0 mm] diameter orifice. Valve C_V 0.364 maximum.
2. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156-3 Corrigendum 2 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103-2005.

Differential Pressure Manifolds – MDP Specifications

Valve Bonnet Identification

Dust Cap Coding: The valve bonnet dust caps are color coded to identify the gland packing/stem.

White: Standard bonnet assembly Teflon® packing.

Green: Sour Gas service Teflon® packing.

Connections

Standard Connections

Process Threaded 1/2-inch NPT to ANSI/ASME B1.20.1.

Instrument Flanged for direct mounting to transmitters on 2 1/8-inch [54 mm] centers. Flanged connections are on 2 1/8-inch [54 mm] centers.

Vent Threaded 1/4-inch NPT to ANSI/ASME B1.20.1.

Notes

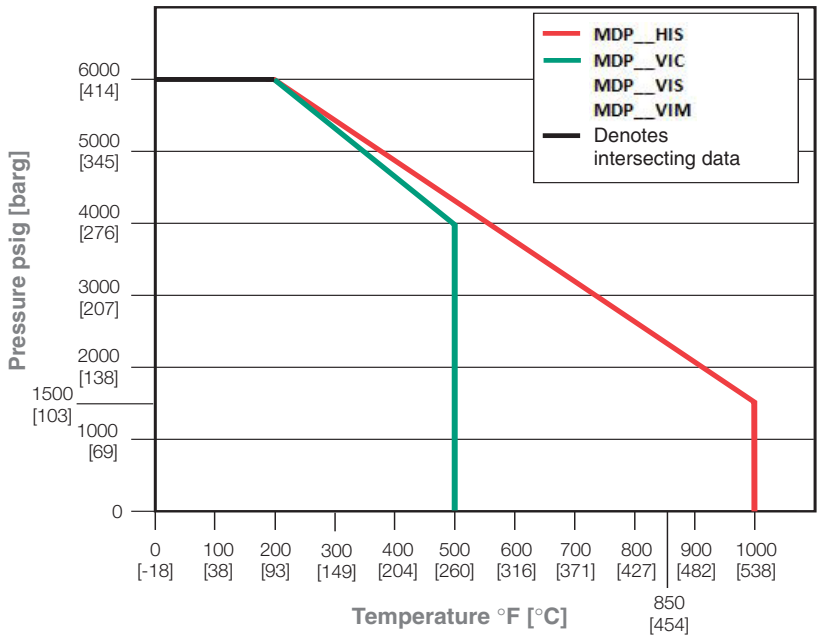
1. Threaded connection: vent supplied with blanking plug as standard.
2. All manifolds are supplied with seal rings and four 7/16-inch UNF HT steel mounting bolts. Teflon® seal rings are supplied with the standard bonnet; Graphite seal rings are supplied with high temperature bonnet.

Pressure and Temperature Ratings

Valve	Teflon® Bonnet
CS, SS and Monel®	6000 psig @ 200°F [414 barg @ 93°C] 4000 psig @ 500°F [276 barg @ 260°C]

Valve	High Temperature
SS	6000 psig @ 200°F [414 barg @ 93°C] 1500 psig @ 1000°F [103 barg @ 538°C]

MDP Pressure vs. Temperature



Differential Pressure Manifolds – MDP Specifications

Ordering Information

MDP, MDPT, MDPA **V** **I** **S** **– 4** **– SG**

Bonnet Packing

V – Teflon®
H – Graphite

Seat

I – Integral

Body Material

C – CS
S – SS
M – Monel®

Process Connections

4 – 1/2-inch FNPT **(Leave blank for MDPA)**

Options

AL – Arctic Lubricant (low temperature service -70°F) - not available for CS valves
AM – AGCO Mount Kit for 2-inch pipe stand mounting of manifold (page 80)
AT – Tamper-proof Bonnet
BL – Bonnet Lock Device (Accessories, page 154)
CB – Ceramic Ball Ended Stem
K – Key for -AT
(2) LAT Lockable Tamper-proof Bonnet (Block Valves only)
(3) LAT Lockable Tamper-proof Bonnet (Block Valves and Vent Valves only)
(5) LAT Lockable Tamper-proof Bonnet (All Valves)
OC – Cleaned for oxygen service
R3V – Add for use with Rosemount® Model 3051C (SS 18-8 Bolts)
SSB – 316 SS Flange Bolt (B8M Class 2) - will provide full pressure rating
SSC[1] – 316 Flange Bolt (B8M) - maximum pressure rating 4500 psi [310 barg]
SG – (Sour Gas) meets the requirements of NACE MR0175/ISO 15156-3 Corrigendum 2 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103-2005 (SS valves only)
SG3 – (Sour Gas) meets the requirements of NACE MR0175/ISO 15156-3 Corrigendum 2 (for Chloride conditions > 50 mg/l [ppm])
ST – Stellite Ball Ended Stem
SP – Special Requirements - please specify

Note

1. 316 SS bolts lower pressure ratings to a maximum of 4500 psi [310 barg]. Consult factory for full rating with 316 SS bolts.