

Manifolds - Two Valve

Compact stainless steel block and bleed static pressure manifold incorporating mini-valve bonnets with an interchangeable hard or soft seat

General Application

Suitable for use in compact instrument control loops for static pressure/gauge instruments; for mounting in control panels and for gas sampling equipment.

TECHNICAL DATA

Materials

316 SS

Seats:

Metal or soft

Connections:

Instrument: 1/4" NPT

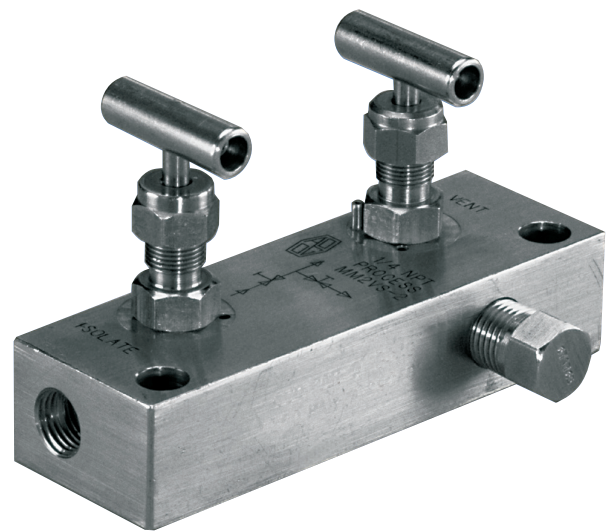
Process: 1/4" NPT

Pressure (max):

6000 psig (414 barg)

Temperature (min/max):

70°F to 1000°F
(-57°C to 538°C)



Features

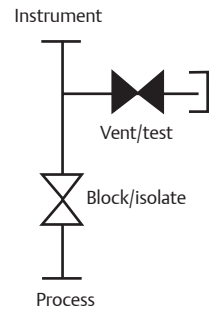
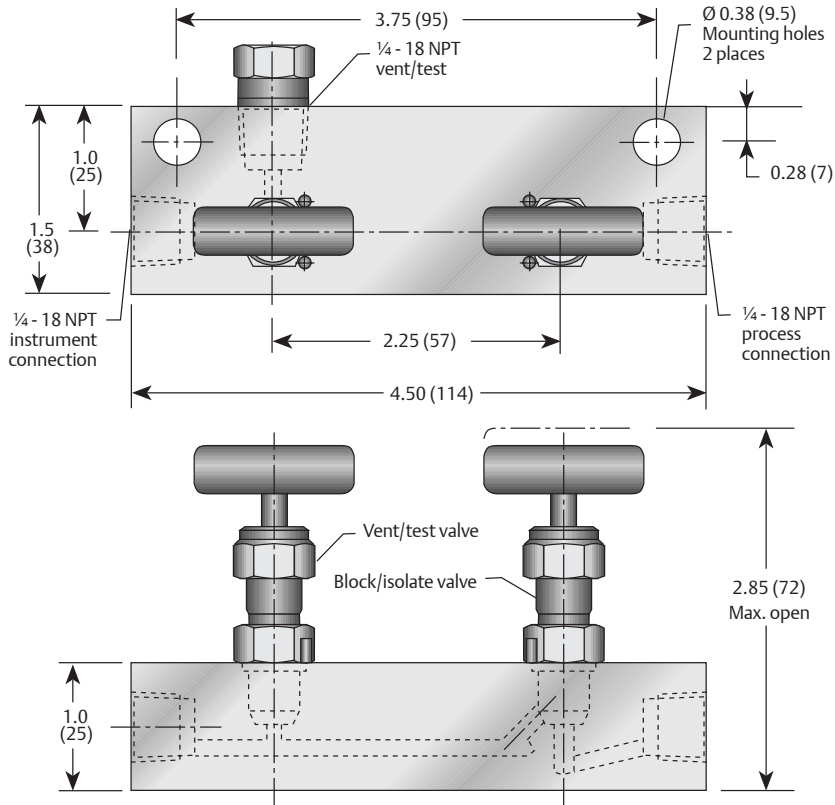
- Remote mounting compact design requires minimum space for operation and installation.
- Reduced installation costs by manifolding the valves, eliminating several parts essential for 'piping-up.'
- Unique seat design enables conversion from metal to soft simply by fitting a soft seat and flow washer.
- Soft seats are field replaceable for easy maintenance, extending valve life.
- Rolled stem threads provide increased strength and smooth valve operation, extending valve life.
- Back seat stem prevents blowout under pressure or during operation.
- Threaded vent ports allow vent to be piped away safely. Supplied plugged as standard.
- All manifolds supplied with mounting holes as standard to enable surface or cabinet mounting.

MM2 SERIES

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MM2 Dimensions

Dimensions, inches (mm) Threaded x Threaded



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Standard Materials - metal seat

Valve ^[1]	Body	Bonnet	Stem	Packing	Seat
316 SS	316 SS	316 SS	316 SS	PTFE, FKM O-ring or GRAFOIL®	Integral
SG ^[3]	316 SS	316 SS	Monel® 400	PTFE	Integral

Standard Materials - soft seat

Valve ^[1]	Body	Bonnet	Stem	Packing	Flow washer	Seat
316 SS	316 SS	316 SS	316 SS	PTFE or FKM O-ring	316 SS	PCTFE ^[2]

Connections

Standard connections

Threaded - ¼-inch NPT to ANSI/ASME B1-20-1.

Bonnet Assembly

The MM2 features the mini-valve bonnet assembly with a compact design and a one-piece rotating stem which is 'V' tipped with a shoulder for use as a metal or soft seated valve. The stem threads are rolled and lubricated to prevent galling and reduce operating torque.

The mini-valve bonnet comes in three designs:

- An adjustable PTFE stem packed bonnet which is suitable for panel mounting via external bonnet threads.
- O-ring bonnet assemblies which use a FKM O-ring seal below the stem thread.
- A graphite-packed bonnet suitable for temperatures of up to 1000° F (538° C) which is available for 316 SS valves only.

Soft Seat

All miniature manifolds and valves feature a unique valve seat which may be converted from metal to soft simply by fitting a soft seat and flow washer. 316 SS valves use PCTFE^[2] soft seat as standard. Delrin® and PEEK seats are also available.

NOTES

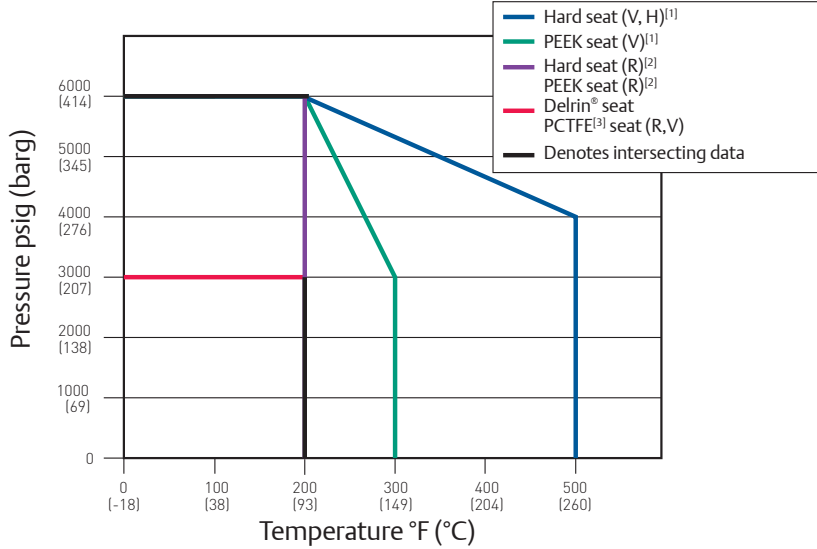
1. Approximate valve weight: 2.0 lb (.90 kg).
0.136-inch (3.5 mm) diameter orifice.
Valve Cv hard seat 0.25 maximum.
Valve Cv soft seat 0.24 maximum.
2. PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.
3. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l (ppm)) and NACE MR0103-2005.
4. Threaded connection: vent supplied with blanking plug as standard.

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Pressure vs. Temperature

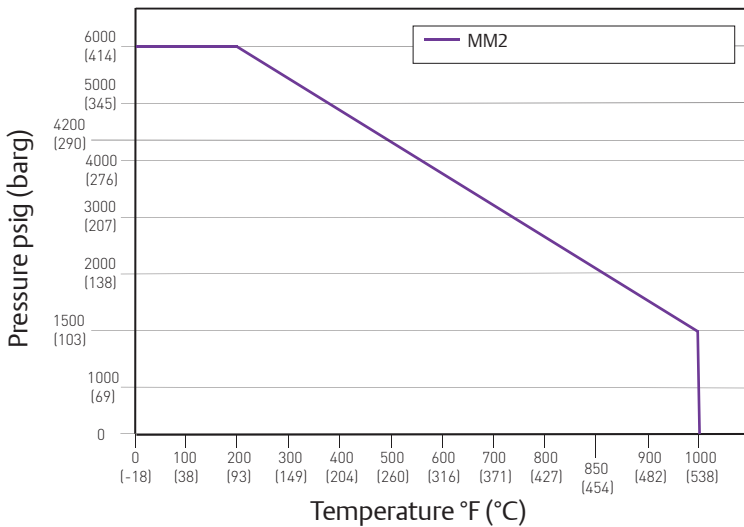
Pressure vs. Temperature - SS valves



NOTES

- (V or H) = with PTFE or GRAFOIL® bonnet assemblies.
- (R) = with O-ring bonnet assembly, minimum temperature -20° (-28.9°C)
- PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.
- 316 SS Teflon and GRFOIL® packing minimum temperature to -70°F (-57°C)
- Delrin® Seat minimum temperature -40°F (-40°C)

Pressure vs Temperature - SS valves with GRAFOIL® bonnet



Pressure and Temperature Ratings

Valve	PTFE packed	GRAFOIL® packed
Hard seat	6000 psig at 200°F (414 barg at 93°C)	6000 psig at 200°F (414 barg at 93°C)
	4000 psig at 500°F (276 barg at 260°C)	1500 psig at 1000°F (103 barg at 538°C)
Delrin®/PCTFE	3000 psig at 200°F (207 barg at 93°C)	
PEEK	6000 psig at 200°F (414 barg at 93°C)	
	3000 psig at 300°F (207 barg at 149°C)	

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Selection Guide

MM2	V	D	S	-2	-SG
BASIC SERIES	BONNET PACKING	SEAT	BODY MATERIAL	CONNECTIONS	OPTIONS
MM2	V PTFE	I Integral (body material)	S 316 SS	2 1/4-inch FNPT	BSPT BSP taper thread
	R O-ring bonnet	D Delrin®			SG Sour Gas meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l (ppm)) and NACE MR0103-2005
	H GRAFOIL® (1000°F (538°C) max)	K PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F® E PEEK			OC00 Cleaned for oxygen service PHB Phenolic black handle PHG Phenolic green handle PHR Phenolic red handle PM Panel mount (PTFE packed only) SS All 316 SS material on non wetted parts

NOTES

Monel® is a registered trademark of the Special Metals Corporation.
 Delrin® is a registered trademark of E.I. du Pont de Nemours and Company.
 GRAFOIL® is a registered trademark of GrafTech International.