

Manifolds - Two Valve

Block and bleed manifold for static pressure measurement devices. Single or dual outlet for local indication for static pressure to 6000 psig (414 barg)

General Application

MP1 is a two-valve manifold for single instrument applications, such as block and bleed, test and calibration and instrument zeroing. MP2 is designed to mount two different pressure instruments simultaneously from a single pressure source.

TECHNICAL DATA

Materials

CS, 316 SS, Monel

Seats:

Metal

Connections:

Instrument: 1/2" (15mm) NPT

Process: 1/2" (15mm) NPT

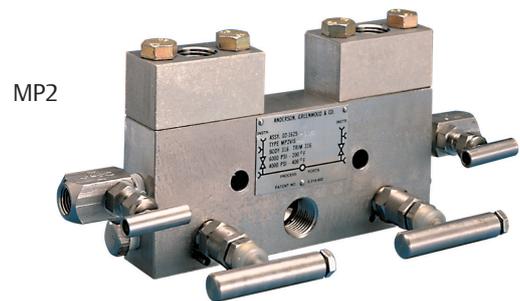
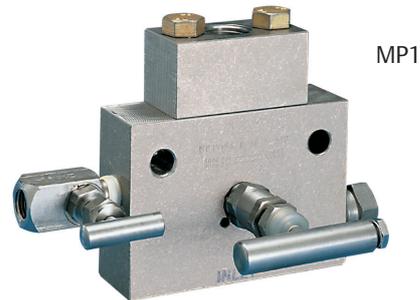
Pressure (max):

6000 psig (414 barg)

Temperature range (min/max):

-70°F to 1000°F

(-57°C to 538°C)



Features

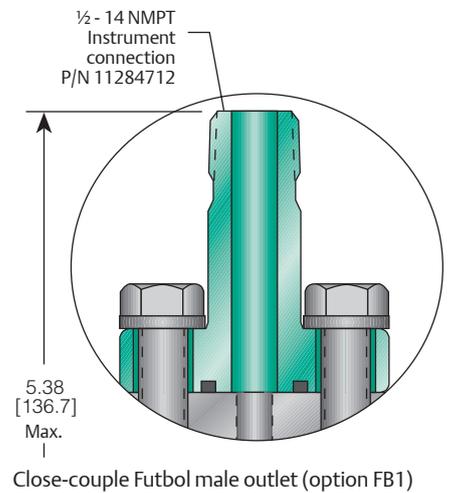
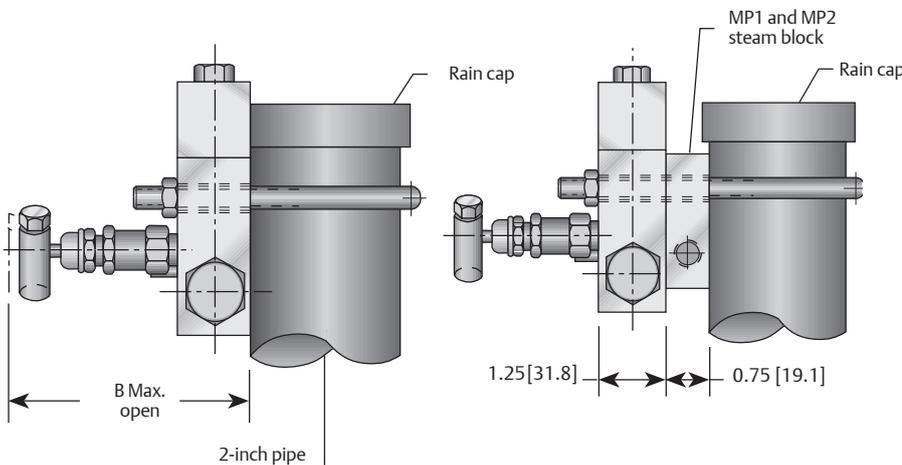
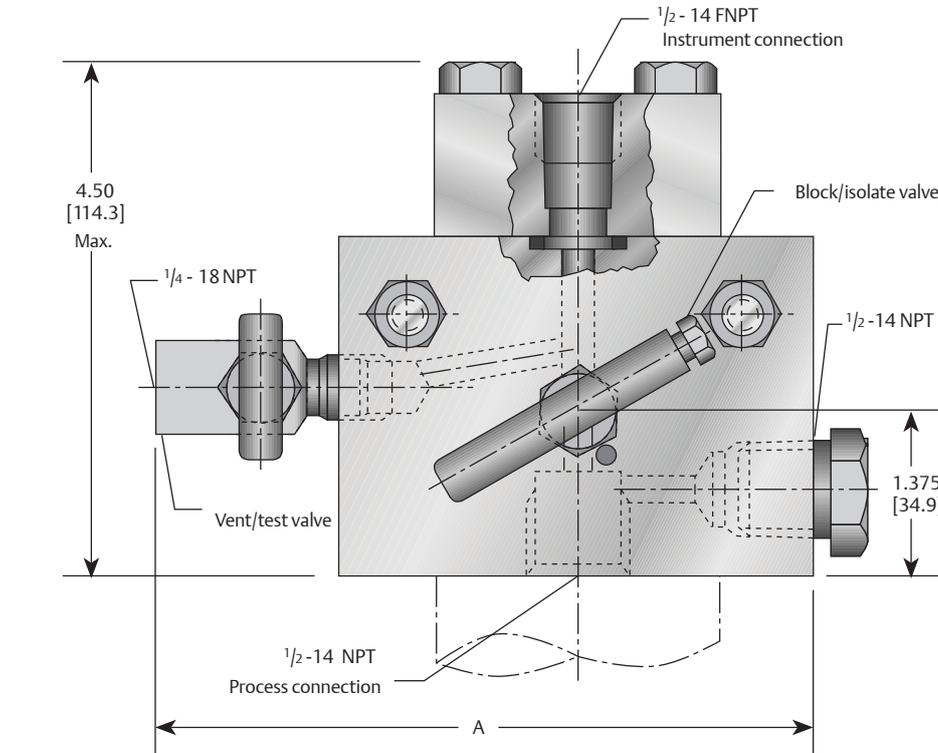
- Cost savings of 20-30% when manifolding instruments by eliminating several parts used in conventional methods of 'piping up'.
- Compact design requires minimum space for operation and installation.
- Fewer leak points reduce leakage by having fewer parts to assemble.
- Free-swivelling ball end stem design ensures bubble-tight valve closure without seat galling.
- Reduced piping costs by mounting two instruments on the same manifold and pipe stand.
- Immediate installation with AGCO Mount as the manifold, steam block, bracket and all associated piping can be installed without the instrument at the time of plant construction.
- Secure mounting provided by the AGCO Mount. Instrument piping stability is enhanced when directly supported by the pipe stand through the manifold.
- All block valve threading is isolated. Packing is below stem threads, body-to-bonnet seal is below the threads minimizing process fluid corrosion.
- Reduced chance of instrument damage. With the AGCO Mount, the instrument can be warehoused safely until final 'loop' checkout.

MP1 SERIES

Manifolds - Two Valve

MP1 Dimensions

MP1 dimensions, inches (mm)

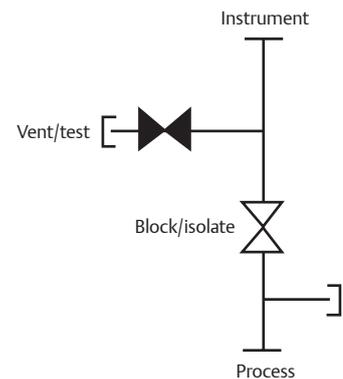


Dimensions

Packing	A	B
PTFE	5.62 (142.7)	3.85 (97.8)
GRAFOIL®/Low emissions graphite	8.20 (208.3)	4.50 (114.3)

NOTES

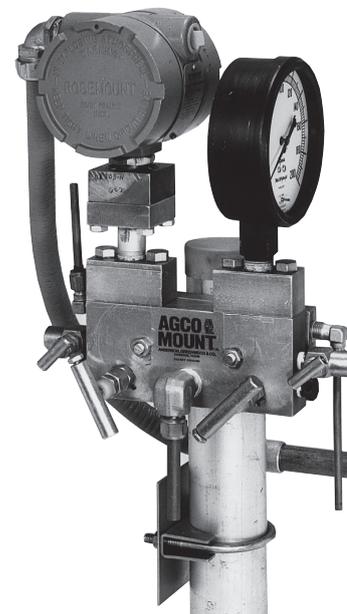
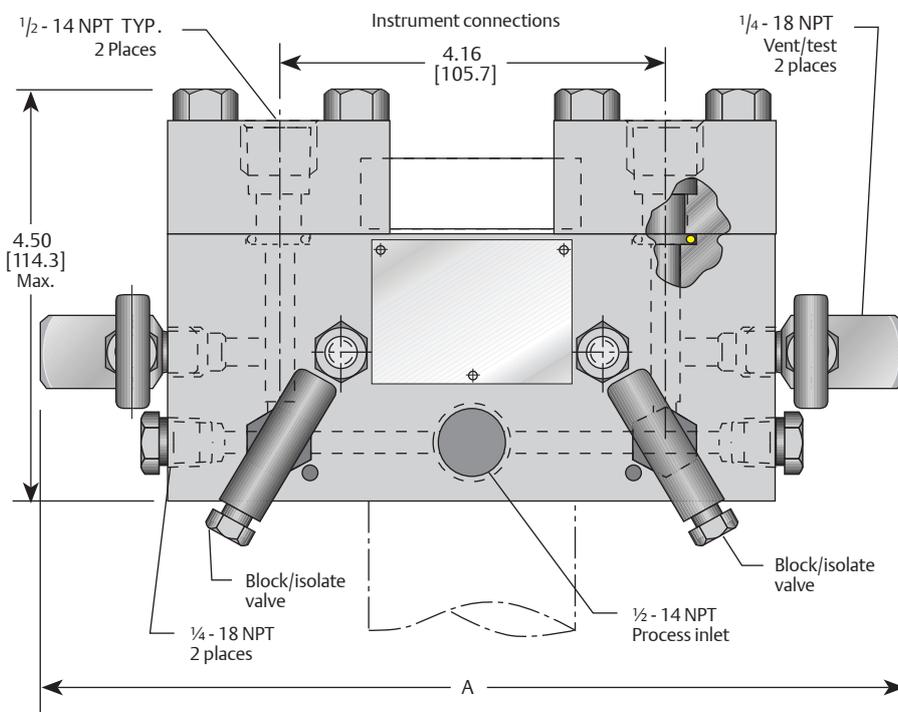
- Pressure seal between union connectors and manifold body is FKM O-ring for PTFE packed valves, GRAFOIL® for GRAFOIL® packed valves.
- Approximate valve weight: 6.0 lb (2.72 kg).
0.187-inch (4.8 mm) diameter orifice.
Valve Cv 0.52 maximum.



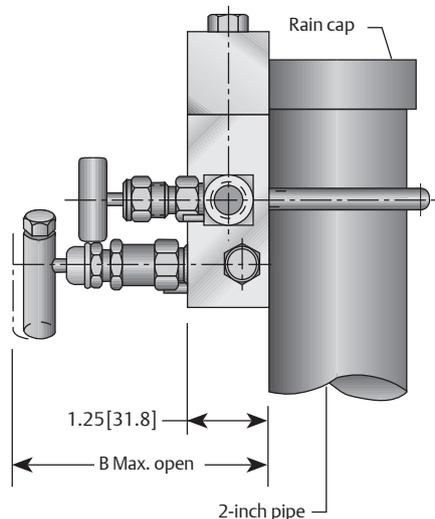
Manifolds - Two Valve

MP2 Dimensions

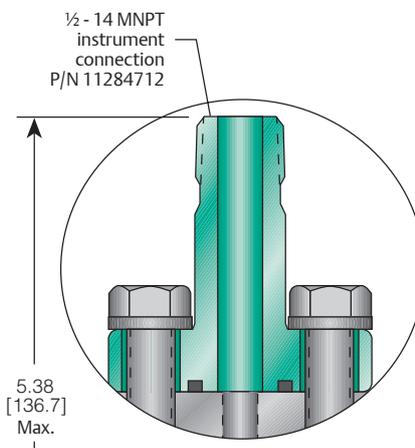
MP2 dimensions, inches (mm)



MP2 dual pressure mount



2-inch pipe



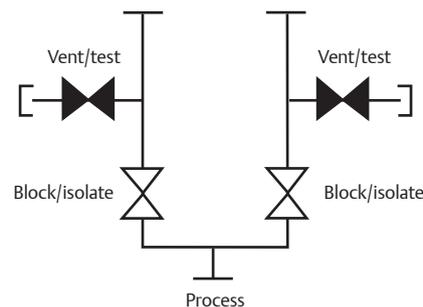
Close-couple Futbol male outlet (option FB1)

Dimensions, inches (mm)

Packing	A	B
PTFE	9.81 (105.7)	3.85 (97.8)
GRAFOIL®/Low emissions graphite	13.98 (355.1)	4.50 (114.3)

NOTES

- Pressure seal between union connectors and manifold body is FKM O-ring for PTFE packed valves, GRAFOIL® for GRAFOIL® packed valves.
- Approximate valve weight:
10.0 lb(4.54 kg).
0.187-inch (4.8 mm) diameter orifice.
Valve Cv 0.52 maximum.



MP1/MP2 SERIES

Manifolds - Two Valve

Product Overview

Both the MP1 and MP2 serve as manifold and mount in one unit.
 The MP2 has dual block and bleed valves, each operating independently of the other utilizing a single input.
 The block valves are used to isolate the pressure devices from the process. During normal operation the block valves are open.
 The static pressure line is connected to the manifold with a ½” (15mm) FNPT connection.

Bonnet Assembly Options

The MP1 and MP2 feature metal-seated bonnet assemblies which have a rotating stem with free swivel ball-type seat for long service life. The 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. A protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants. The specially hardened ball seat is ideal for both gas and liquid service. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service.

Standard Materials - MP1

Valve	Body	Bonnet	Stem/ball (block valve)	Stem (bleed valve)	Vent/test valve	Bolts
CS ^[1]	A105	A108 17-4 ball	A581-303 stem	A581-303	A1053	A193-B7
316 SS	A479-316	A479-316	A276-316 stem 316 SS ball	A276-316	A479-316	A193-B7
SG ^[2]	A479-316	A479-316	Monel [®] 400 stem Monel [®] K-500 ball	Monel [®] R405	A479-316	A193-B7
Monel [®]	Monel [®] 400	Monel [®] R405	Monel [®] 400 stem Monel [®] K-500 ball	Monel [®] R405	Monel [®]	A193-B7

Standard Materials - MP2

Valve	Body	Bonnet	Stem/ball (block valve)	Stem (bleed valve)	Vent/test valve	Bolts
CS ^[1]	A108	A108	A581-303 stem 17-4 ball	A581-303	A1053	A193-B7
316 SS	A479-316	A479-316	A276-316 stem 316 SS ball	A276-316	A479-316	A193-B7
SG ^[2]	A479-316	A479-316	Monel [®] 400 stem Monel [®] K-500 ball	Monel [®] 405 ⁴	A479-316	A193-B7

Pressure and Temperature Ratings

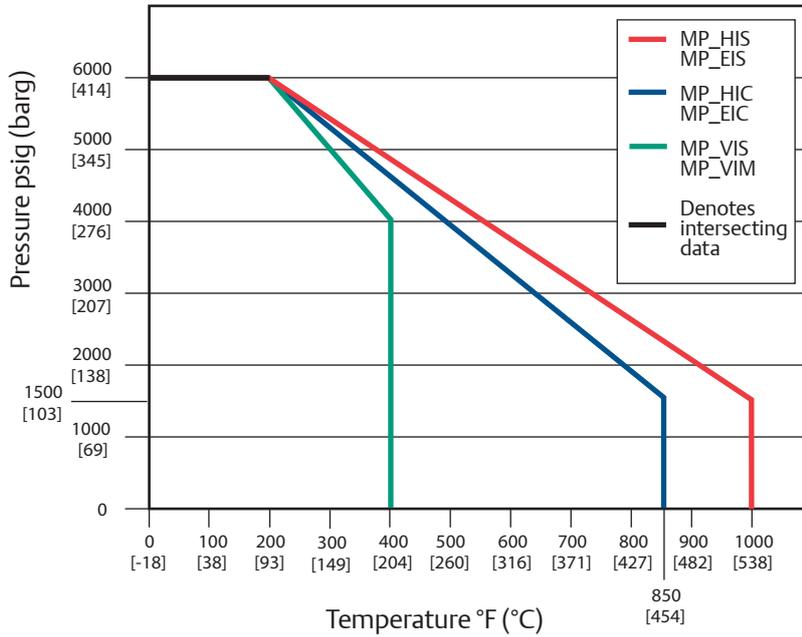
Valve	Packing	Ratings
CS ^[1] , 316 SS and SG ^[2]	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 400°F (276 barg at 204°C)
CS ^[1]	GRAFOIL [®] /Low emissions graphite	6000 psig at 200°F (414 barg at 93°C) 1500 psig at 850°F (103 barg at 454°C)
316 SS	GRAFOIL [®] /Low	6000 psig at 200°F (414 barg at 93°C)
SG ^[2]	emissions graphite	1500 psig at 1000°F (103 barg at 538°C)

NOTES

1. CS parts are zinc TCP plated to prevent corrosion.
2. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l (ppm)) and NACE MR0103-2005.
3. PTFE packed bleed valve body is 10L18 steel.
4. Stem is Monel[®] 400 for hot packed bonnets.
5. Minimum temperature for 316 SS PTFE and Grafoil packed valves: -70°F (-57°C).

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Pressure vs. Temperature



NOTE

1. MP1 and MP2 include U-bolt and nuts for 2-inch pipe mounting.

Selection Guide

MP1		V	I	C	-4	C	-BC
BASIC SERIES	PACKING	SEAT	BODY MATERIAL	CONNECTIONS	OPTIONS ¹		
MP1	Pipe stand mounted static pressure manifold (one instrument)	V PTFE	1 Integral (body material)	C CS	4	Two bolt connector x ½-inch FNPT outlet x ½-inch FNPT inlet x ¼" FNPT vent	BC Accessory bracket conduit connection
MP2	Pipe stand mounted static pressure manifold (two instruments)	H Grafoil®	S 316 SS	S 316 SS	44	Two bolt connector x ½-inch FNPT outlet x two bolt connector ½-inch FNPT inlet x ¼" FNPT vent	BL Bonnet lock device for Graphoil Bonnet only, all others call factory
	E Low emissions graphite		M Monel®	M Monel®	C	Female socket weld	HD Hydrostatic testing (100%) (MSS-SP-61)
			W 316L SS	W 316L SS			OC00 Oxygen clean (OC)
							SB Steam block
							SG (Sour Gas) Meets the requirements of NACE MRO175/ISO15156 (for chloride conditions < 50 mg/l (ppm)) and NACE MRO103-2005
							SG3 (Sour Gas) Meets the requirements of NACE MRO175/ISO15156 (for chloride conditions > 50 mg/l (ppm)) Hastelloy Material used for all wetted material
							SSC 316 flange bolt (B8M) - maximum pressure rating 4500 psig (310 barg)
							SS All 316 SS materials wetted and non wetted components
							PMI00 PMI body only