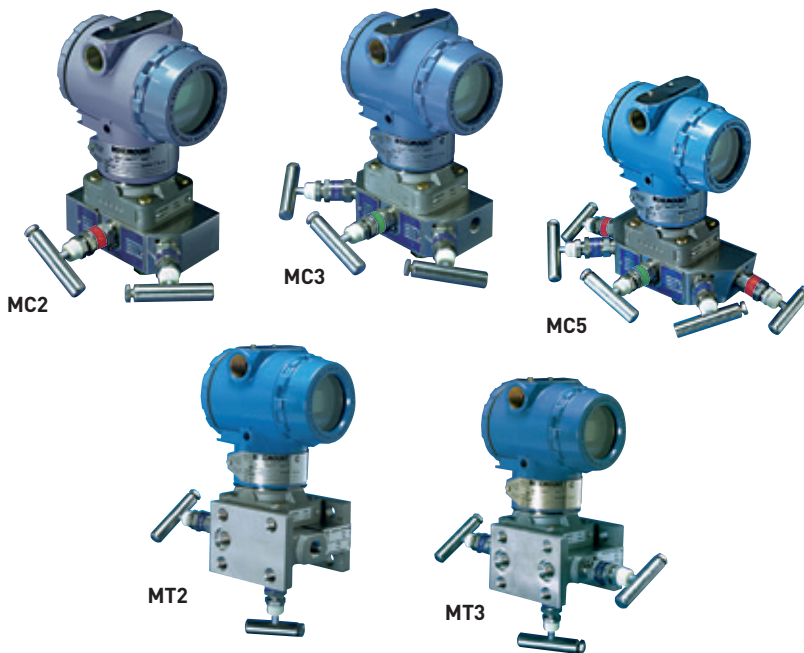


ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

A range of 2, 3 and 5 valve integral manifolds to be used with Rosemount® Coplanar™ style transmitters for static and differential pressure applications



FEATURES

- Compatible with Rosemount® Coplanar™ style pressure transmitter models 3051C, 3051P, 2024 and 3095 Multivariable™.
- Ball end stems eliminate seat galling, provide bubble-tight shutoff and long life. Hardened, non-rotating balls ensure perfectly aligned closure.
- Packing below threads prevents lubricant washout, thread corrosion, process contamination and eliminates galling.
- Easily adjustable PTFE packing decreases replacement downtime and increases valve life.
- Dust covers protect stems from lubricant contamination.
- Safety back seating prevents stem blowout or accidental removal and provides a metal-to-metal secondary stem seal while in the fully open position.
- ENC plated 316 SS stems prevent galling or freezing of stem threads.
- Rolled stem and bonnet threads provide additional strength.
- Mirror stem finish in the packing areas provides smooth operation and extends packing life.
- Metal-to-metal body-to-bonnet seals in constant compression prevent bonnet thread corrosion, eliminate possible tensile breakage and give a reliable seal.
- Bonnet lock pins prevent accidental separation from the body while enabling easy maintenance and repair.
- Patented porting design allows complete venting of process fluids before start-up for easy installation commissioning, not trapping unwanted liquid or gas process fluids.

GENERAL APPLICATION

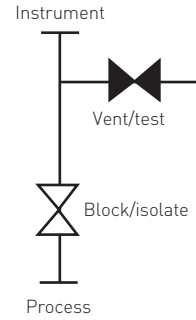
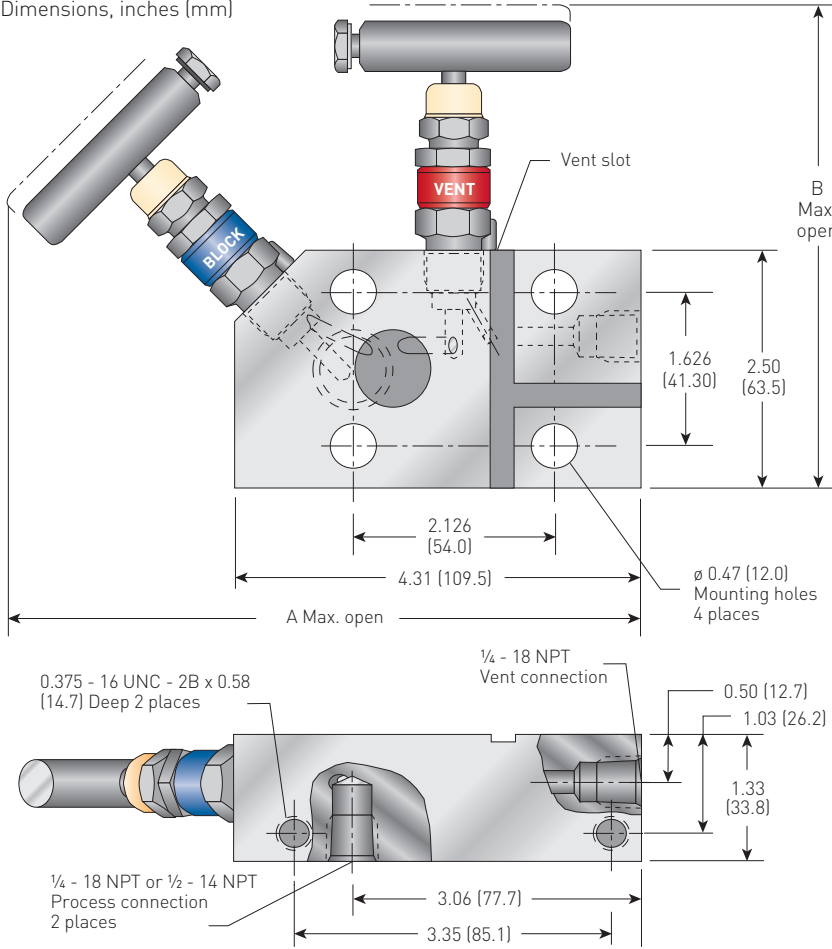
The MC/MT series includes 2 valve manifolds for static pressure; 3 and 5 valve models for differential pressure transmitters with specific variants for gas and power services, including those that meet ASME B31.1 or B31.3 for fossil fuel power plants.

TECHNICAL DATA

Materials:	SS, Hastelloy®
Seats:	Metal
Connections	
MC:	Pipe x flange
MT:	Flange x flange
MC:	½" NPT
MT:	Double flanged or ¼" NPT for futbol mounting
Orifice size:	0.156" (4.8 mm) 0.136" (3.5 mm) for gas service
Pressure (max.):	6000 psig (414 barg)
Temperature (max.):	1000°F (538°C)

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MC2 2-VALVE MANIFOLD FOR STATIC PRESSURE
Dimensions, inches (mm)



NOTES

1. Approximate valve weight: 4.1 lb (1.9 kg).
0.156 inch (4.0 mm) diameter orifice.
Valve C_v 0.36 maximum.
2. Body face is slotted to assure atmospheric vent when a differential transmitter is used.
3. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103.
4. SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l [ppm]).
5. Optional bolting 2.25" consult factory

PRESSURE AND TEMPERATURE RATINGS

Valve	Packing	Ratings
SS	PTFE	6000 psig at 200°F (414 barg at 93°C)
		4000 psig at 500°F (276 barg at 260°C)
SS	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C)
		1500 psig at 1000°F (103 barg at 538°C)
SG ^[3]	PTFE	6000 psig at 200°F (414 barg at 93°C)
		4000 psig at 500°F (276 barg at 260°C)
SG ^[3]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C)
		1500 psig at 1000°F (103 barg at 538°C)
SG3 ^[4]	PTFE	6000 psig at 200°F (414 barg at 93°C)
		4000 psig at 500°F (276 barg at 260°C)
SG3 ^[4]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°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)
316 SS, Monel®, Hastelloy®, Grafoil® packed	-70°F (-57°C)

NOTE

-70°F (-57°C) minimum temperature

STANDARD MATERIALS

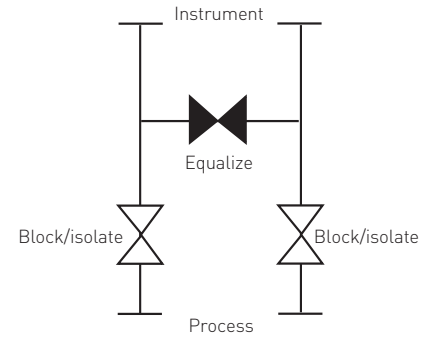
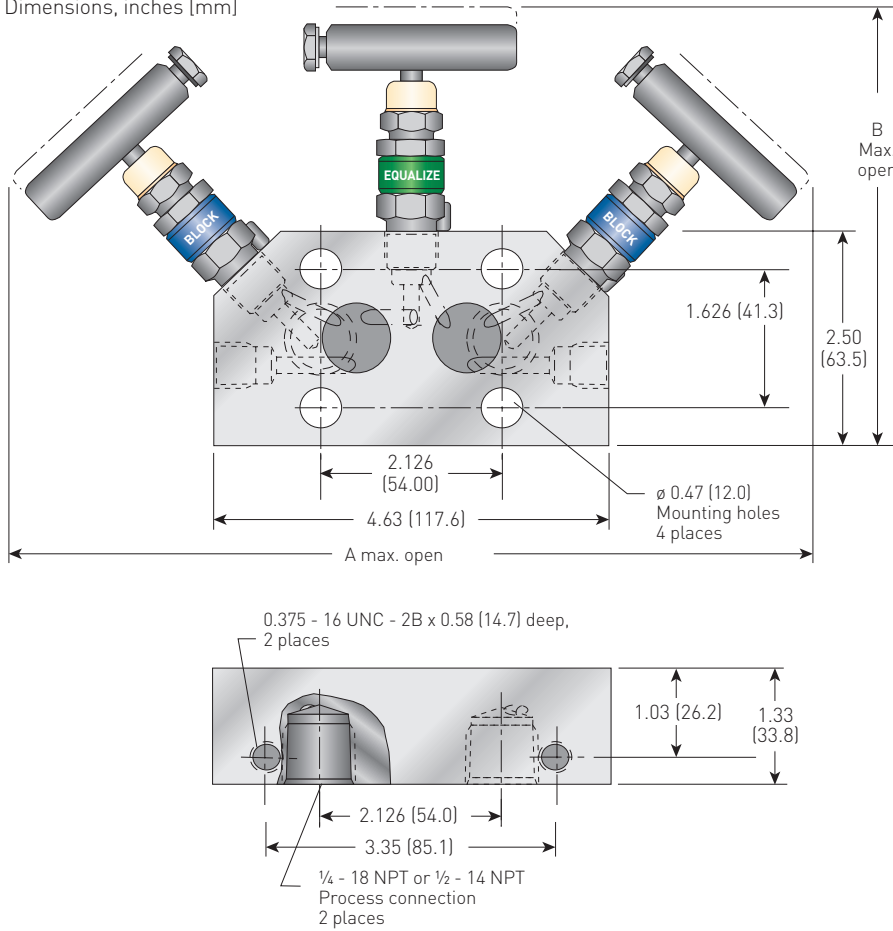
Valve	Body and bonnet ^[2]	Stem and ball
SS	A479-316	A276-316
	316	316
SG ^[3]	A479-316	Monel® 400
	316	Monel® K500
SG3 ^[4]	Hastelloy® C-276	Hastelloy® C-276 Elgiloy®

DIMENSIONS - inches (mm)

Valve ^[1]	PTFE packed	GRAFOIL® and Low emissions graphite packed
	A	6.85 (174.0)
B	5.10 (129.5)	5.75 (146.1)

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MC3 3-VALVE MANIFOLD WITH OPTIONAL EXTERNALLY VALVED TEST PORTS
Dimensions, inches [mm]



NOTES

- Approximate valve weight:
5.0 lb (2.3 kg) for MC3VI ()-2-H5,
.4 lb (2.0 kg) for MC3VI ()-2
0.156 inch (4.0 mm) diameter orifice.
Valve C, 0.36 maximum.
- Optional test port valves are H5VDS-22, convertible soft-to-metal seat.
- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103.
- SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l [ppm]).
- Optional bolting 2.25", consult factory.

PRESSURE AND TEMPERATURE RATINGS

Valve	Packing	Rated
SS	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
SS	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C) 1500 psig at 1000°F (103 barg at 538°C)
SG ^[3]	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
SG ^[3]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C) 1500 psig at 1000°F (103 barg at 538°C)
SG3 ^[4]	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
SG3 ^[4]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°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)
316 SS, Monel®, Hastelloy®, Grafoil® packed	-70°F (-57°C)

NOTE

-70°F (-57°C) minimum temperature

STANDARD MATERIALS

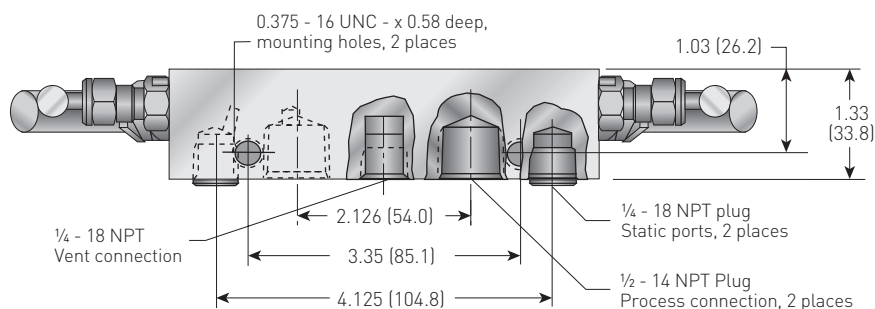
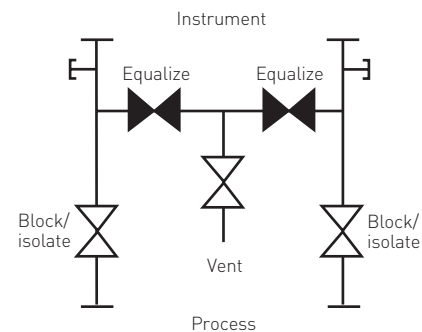
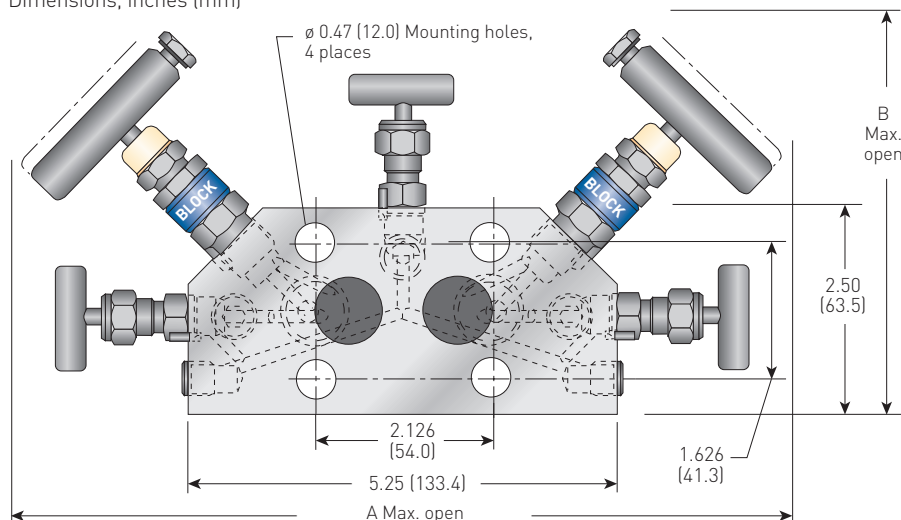
Valve ^[2]	Body and bonnet	Stem and ball
SS	A479-316 316	A276-316 316
SG ³	A479-316 316	Monel® 400 Monel® K500
SG3 ^[4]	Hastelloy® C-276	Hastelloy® C-276 Elgiloy®

DIMENSIONS - inches (mm)

Valve ^[1]	PTFE	GRAFOIL® and Low
	packed	emissions graphite packed
A	9.60 [243.8]	10.98 [278.9]
B	5.10 [129.5]	5.75 [146.1]

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MC5G 5-VALVE MANIFOLD FOR GAS SERVICE (PATENT PROTECTED)
Dimensions, inches (mm)



PRESSURE AND TEMPERATURE RATINGS

Valve	Ratings
SS, SG ^[2] , SG3 ^[3]	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)

Minimum temperature	
316 SS O-ring seal	-20°F (-29°C)
316 SS, Monel®, Hastelloy®, PTFE packed	-70°F (-57°C)
316 SS, Monel®, Hastelloy®, Grafoil® packed	-70°F (-57°C)

STANDARD MATERIALS

Valve ^[1]	Body and bonnet	Stem and ball	Packing
SS	A479-316 316	A276-316 316	PTFE
SG ^[2]	A479-316 316/Monel®	Monel® 400 Monel® K500	PTFE
SG3 ^[3]	Hastelloy® C-276	Hastelloy® C-276 Elgiloy®	PTFE

DIMENSIONS - inches (mm)

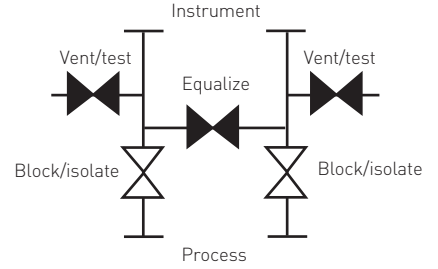
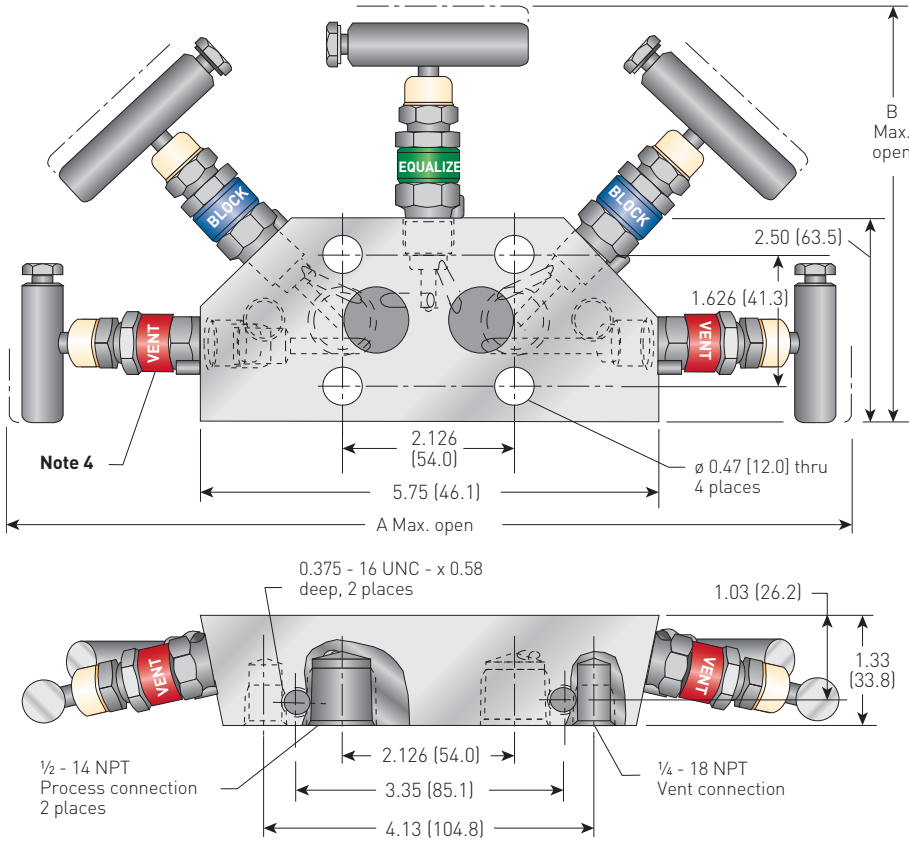
Valve ^[1]	GRAFOIL®
A	10.98 (278.9)
B	5.55 (140.97)

NOTES

- Approximate valve weight: 4.8 lb (2.2 kg).
0.136 inch (3.5 mm) diameter orifice.
Valve C_v 0.24 maximum.
- SG [Sour Gas] meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103.
- SG3 [Sour Gas] meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l [ppm]).
- Static port plug is optional.

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MC5P 5-VALVE MANIFOLD WITH TWO INTEGRAL TEST VALVES (PATENT PROTECTED)
Dimensions, inches (mm)



PRESSURE AND TEMPERATURE RATINGS

Valve	Ratings	Packing
SS, SG ^[2] , SG3 ^[3]	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)	PTFE
SS, SG ^[2] , SG3 ^[3]	6000 psig at 200°F (414 barg at 93°C) 1500 psig at 1000°F (103 barg at 538°C)	GRAFOIL [®]

Minimum temperature	
316 SS O-ring seal	-20°F (-29°C)
316 SS, Monel [®] , Hastelloy [®] , PTFE packed	-70°F (-57°C)
316 SS, Monel [®] , Hastelloy [®] , Grafoil [®] packed	-70°F (-57°C)

STANDARD MATERIALS

Valve ^[1]	Body and bonnet	Stem and ball	Packing
SS	A479-316 316	A276-316 316	PTFE
SG ^[2]	A479-316 316/Monel [®]	Monel [®] 400 Monel [®] K500	PTFE
SG3 ^[3]	Hastelloy [®] C-276	Hastelloy [®] C-276 Elgiloy [®]	PTFE

DIMENSIONS - inches (mm)

Valve ^[1]	PTFE	GRAFOIL [®] and Low
	packed	emissions graphite packed
A	10.95 (278.1)	12.40 (315.0)
B	5.10 (129.5)	5.75 (146.1)

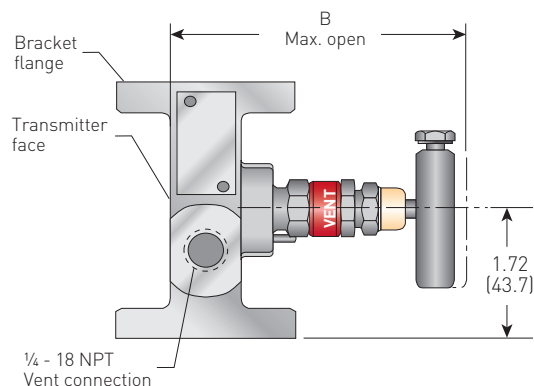
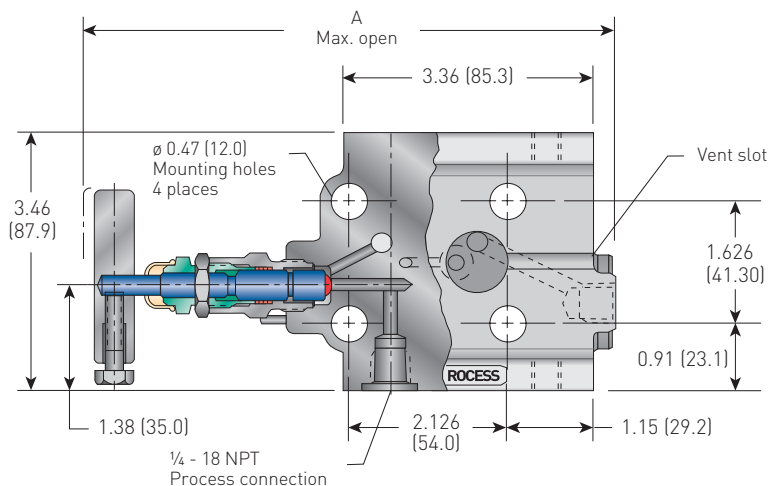
NOTES

- Approximate valve weight: 5.3 lb (2.4 kg).
0.156 inch (4.0 mm) diameter orifice.
Valve C_v 0.36 maximum.
- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions < 50 mg/l (ppm)) and NACE MR0103.
- SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l (ppm)).
- Valve bonnet labels not supplied on GRAFOIL[®] packed bonnets due to temperature limitations.

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MT2 2-VALVE MANIFOLD FOR STATIC PRESSURE

Dimensions, inches (mm)



PRESSURE AND TEMPERATURE RATINGS

Valve	Packing	Rated
SS	PTFE	6000 psig at 200°F (414 barg at 93°C)
		4000 psig at 500°F (276 barg at 260°C)
SS	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C)
		1500 psig at 1000°F (103 barg at 538°C)
SG ^[3]	PTFE	6000 psig at 200°F (414 barg at 93°C)
		4000 psig at 500°F (276 barg at 260°C)
SG ^[3]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C)
		1500 psig at 1000°F (103 barg at 538°C)
SG3 ^[4]	PTFE	6000 psig at 200°F (414 barg at 93°C)
		4000 psig at 500°F (276 barg at 260°C)
SG3 ^[4]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°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)
316 SS, Monel®, Hastelloy®, Grafoil® packed	-70°F (-57°C)

STANDARD MATERIALS

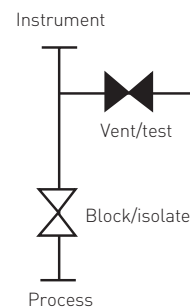
Valve	Body and bonnet ^[2]	Stem and ball
SS	A479-316	A276-316
	316	316
SG ^[3]	A479-316	Monel® 400
	316	Monel® K500
SG3 ^[4]	Hastelloy® C-276	Hastelloy® C-276 Elgiloy®

DIMENSIONS - inches (mm)

Valve ^[1]	PTFE packed	GRAFOIL® and Low emissions graphite packed
	A	6.79 (172.5)
B	4.04 (102.6)	4.69 (119.1)

NOTES

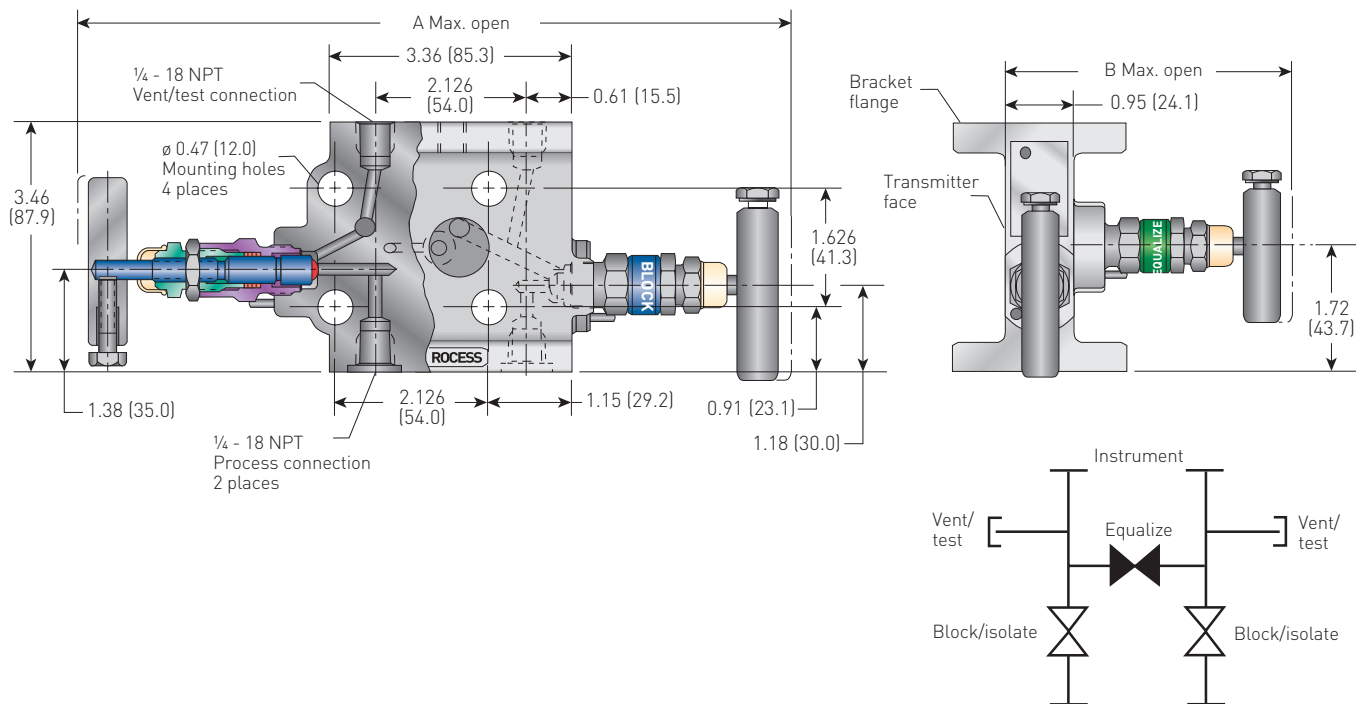
- Approximate valve weight: 4.6 lb (2.09 kg).
0.156 inch (4.0 mm) diameter orifice.
Valve C_v 0.36 maximum.
- Body face is slotted to assure atmospheric vent when a differential transmitter is used.
- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions < 50 mg/l [ppm]) and NACE MR0103.
- SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l [ppm]).



ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MT3 3-VALVE MANIFOLD WITH TEST PORTS

Dimensions, inches [mm]



PRESSURE AND TEMPERATURE RATINGS

Valve	Packing	Ratings
SS	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
SS	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C) 1500 psig at 1000°F (103 barg at 538°C)
SG ^[3]	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
SG ^[3]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°C) 1500 psig at 1000°F (103 barg at 538°C)
SG3 ^[4]	PTFE	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F (276 barg at 260°C)
SG3 ^[4]	Grafoil®/ Low emissions graphite	6000 psig at 200°F (414 barg at 93°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)
316 SS, Monel®, Hastelloy®, Grafoil® packed	-70°F (-57°C)

STANDARD MATERIALS^[2]

Valve	Body and bonnet	Stem and ball
SS	A479-316 316	A276-316 316
SG ^[3]	A479-316 316	Monel® 400 Monel® K500
SG3 ^[4]	Hastelloy® C-276	Hastelloy® C-276 Elgiloy®

DIMENSIONS - inches (mm)

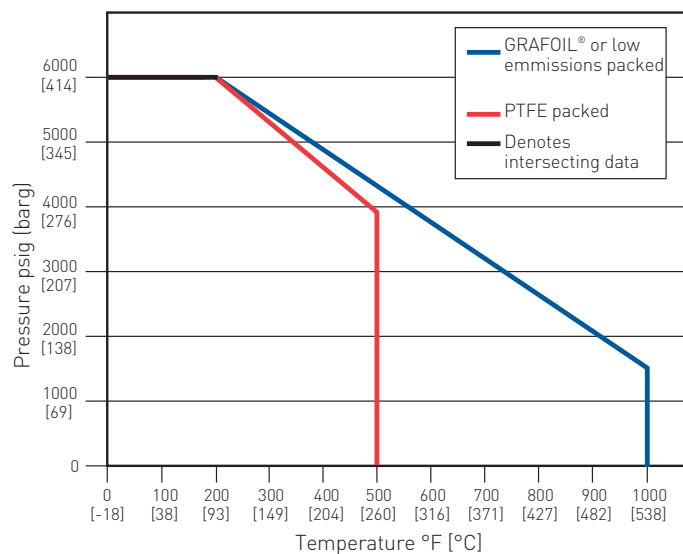
Valve ^[1]	PTFE	GRAFOIL® and Low
	packed	emissions graphite packed
A	9.72 (246.9)	11.02 (279.9)
B	4.04 (102.6)	4.69 (119.1)

NOTES

- Approximate valve weight: 4.9 lb (2.22 kg).
0.156 inch (4.0 mm) diameter orifice.
Valve C_v 0.36 maximum.
- Monel® and Hastelloy® are also available.
- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions < 50 mg/l [ppm]) and NACE MR0103.
- SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/l [ppm]).

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

PRESSURE VS. TEMPERATURE



Minimum temperature	
316 SS O-ring seal	-20°F (-29°C)
316 SS, Monel®, Hastelloy®, PTFE packed	-70°F (-57°C)
316 SS, Monel®, Hastelloy®, Grafoil® packed	-70°F (-57°C)

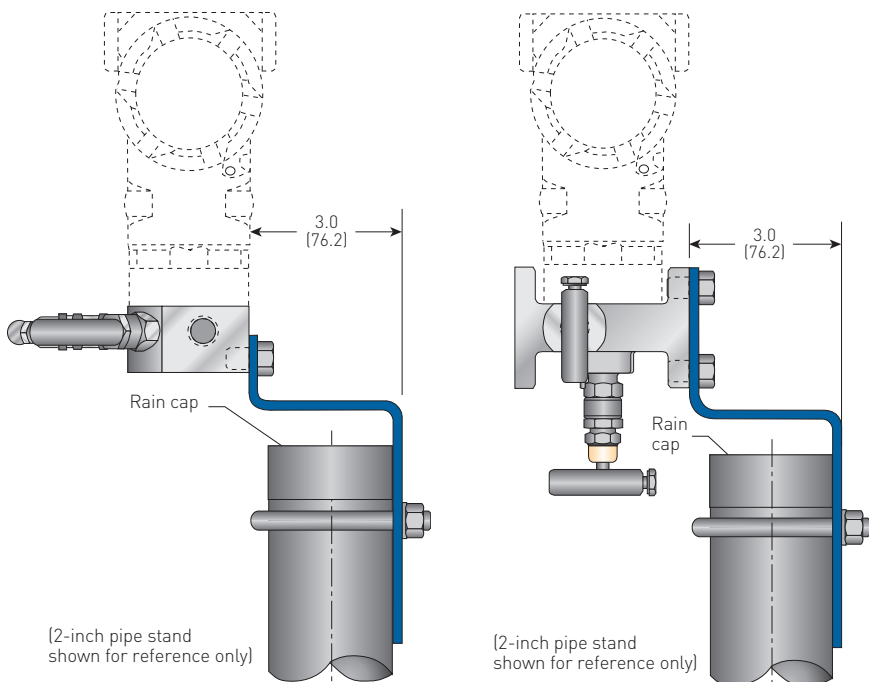
BONNET ASSEMBLIES

The metal-seated bonnet assemblies have rotating stems with free swivel ball-type seats for long service life. The specially hardened ball seat is ideal for gas, steam and liquid service.

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 PTFE assemblies have a protective dust cap fitted to contain stem lubricant and prevent the influx of contaminants.

The high-temperature bonnet assemblies use stems and bonnets incorporating adjustable graphite rings and back-up pressure rings to ensure a leak-free stem seal and are fitted with larger size T-bar handles.

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS



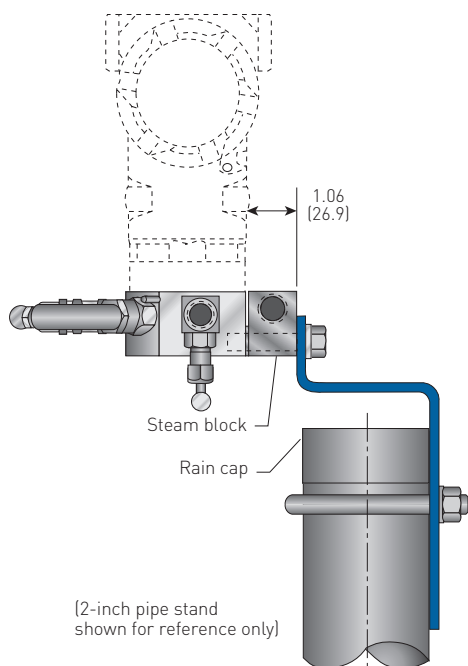
MC/MT AGCO MOUNT KITS

Manifold style	Material
MT	CS ⁽¹⁾
MT	SS
MC	CS ⁽¹⁾
MC	SS

1. Zinc cobalt plated.

MC STEAM BLOCK OPTION KIT

Manifold style	Material
MC	SS



ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MC (ROSEMOUNT® COPLANAR™ ONLY) SPECIFICATIONS

SELECTION GUIDE

Example:	MC	3	V	I	S	-4	-PS
Style							
MC	Coplanar™						
Type							
2	2 valve (static pressure)						
3	3 valve (ΔP)						
5G	5 valve (gas) (ΔP)						
5P	5 valve (power) (ΔP)						
Packing							
V	PTFE						
H	GRAFOIL® (not available for MC5G)						
E	Low emissions graphite (not available for MC5G)						
Seat							
I	Integral (body material)						
Material							
S	316 SS						
J	Hastelloy®						
End connection							
4	½-inch FNPT						
Options							
-AM	AGCO Mount kit for 2-inch pipe stand mounting of manifold						
-BL	Bonnet lock device (standard on power plant manifolds)						
-CB	Ceramic ball ended stem						
-CL00	Cleaned for chlorine service						
-H5	H5VDS-22 vent valve (2) (MC3 only)						
-1H5	H5VDS-22 vent valve (1) (MC2, MC3 only)						
-HD	Hydrostatic testing (100 percent) (MSS SP-61)						
-OC00	Cleaned for oxygen service						
-PS⁽¹⁾	Required MC5G Static test ports only						
-SB	Steam block (MC only)						
-SG	(Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/L [ppm]) and NACE MR0103						
-SG3	(Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions > 50 mg/L [ppm])						

NOTES

1. Required on MC5G Static test.
2. Bolts, plugs, bleed plugs and gaskets are not included; contact factory if bolts, plugs or gaskets are required.

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MT (ROSEMOUNT® COPLANAR™ ONLY) SPECIFICATIONS

SELECTION GUIDE

Example:	MT	3	V	I	S	-2	-SG
Style							
MT	Traditional (double flanged)						
Type							
2	2 valve (static pressure)						
3	3 valve (ΔP)						
Packing							
V	PTFE						
H	GRAFOIL®						
E	Low emissions graphite						
Seat							
I	Integral (body material)						
Material							
S	316 SS						
J	Hastelloy®						
End connection							
2	¼-inch FNPT (use if futbol mounting to inlet)						
Options							
-AM	AGCO Mount kit for 2-inch pipe stand mounting of manifold						
-BL	Bonnet lock device (standard on power plant manifolds)						
-CB	Ceramic ball ended stem						
-CL00	Cleaned for chlorine service						
-HD	Hydrostatic testing (100 percent) (MSS SP-61)						
-OC00	Cleaned for oxygen service						
-SG	[Sour Gas] meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103						
-SG3	[Sour Gas] meets the requirements of NACE MR0175/ISO 15156 (for C-chloride conditions > 50 mg/l [ppm])						

NOTES

Bolts, bleed plugs and gaskets are not included; contact factory if bolts, plugs or gaskets are required.

ANDERSON GREENWOOD MC/MT SERIES INTEGRAL MANIFOLDS

MC and MT ASME B31.1 or B31.3 specifications meets MSS SP-105

SELECTION GUIDE - MC ASME B31.1 - POWER INDUSTRY

Example:	MC	3HP	S	-4 -XP	-AM
Style					
MC	Coplanar™				
Type					
2HP	2 valve (static pressure)				
3HP	3 valve (ΔP)				
5HP	5 valve (power) (ΔP)				
Material					
S	316 SS				
End connection					
4	½-inch FNPT				
Options					
-AM	AGCO Mount kit for 2-inch pipe stand mounting of manifold				

SELECTION GUIDE - MT ASME B31.1 - POWER INDUSTRY

Example:	MT	3HP	S	-2 -XP	-AM
Style					
MT	Traditional (double flanged)				
Type					
2HP	2 valve (static pressure)				
3HP	3 valve (ΔP)				
Material					
S	316 SS				
End connection					
2	¼-inch FNPT (use if futbol mounting to inlet)				
Options					
-AM	AGCO Mount kit for 2-inch pipe stand mounting of manifold				

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)
- Bolts, plugs, bleed plugs and gaskets are not included; contact factory if bolts, plugs or gaskets are required.

INSTRUMENTS • CONTROLS • VALVES

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3317 Gilmore Industrial Blvd.
Louisville, KY 40213

Ph: (502) 966-3134
Fx: (502) 966-3135

www.arcoengineering.com