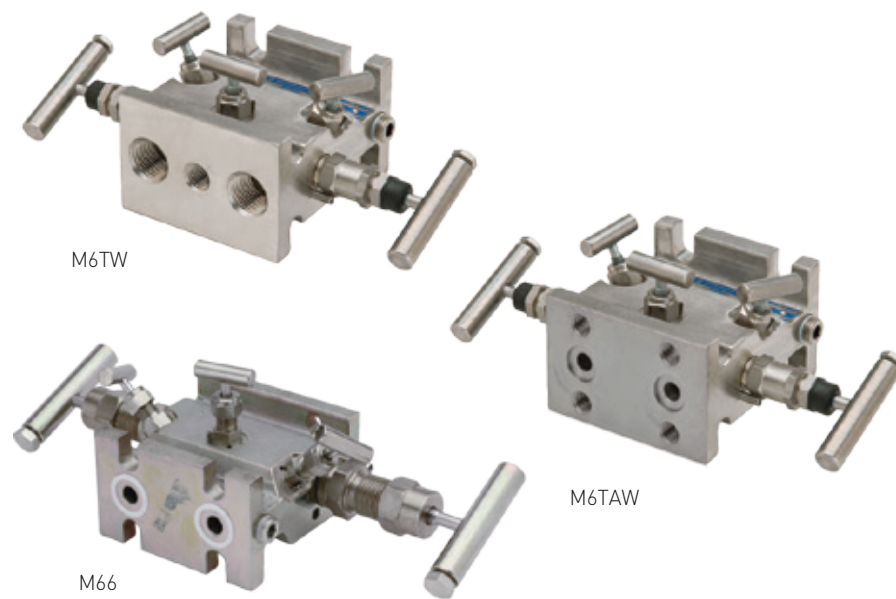


ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

Three or five valve manifolds with a $\frac{3}{16}$ " (4.8 mm) or $\frac{3}{8}$ " (9.5 mm) orifice for differential pressure natural gas services to 6000 psig (414 barg)



FEATURES

- Easy Installation of lightweight M6TW and M66 using pipestand mount with no additional support required.
- Available as 3 valve equalizer or 5 valve gas pattern assemblies.
- Upstream or downstream $\frac{1}{4}$ " FNPT ports for connecting the static pressure to the meter.
- Hard or field-replaceable soft seats for bubble-tight performance in abrasive applications.
- Bonnet-to-body and stem threads isolated from process corrosion - important in sour gas applications.
- Stem backout prevention eliminates accidental removal while under pressure.
- FKM O-ring with PTFE back-up ring standard stem packing with long life assured by mirror finish stem in the packing area.
- Integral hard back seat forms a secondary seal for the stem threads when valve is fully opened.
- Rolled stem threads increase strength and extend life.
- Single or double ferrule tube fittings integral to the body reduce potential leak points.

GENERAL APPLICATION

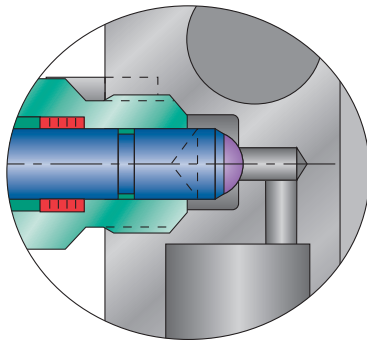
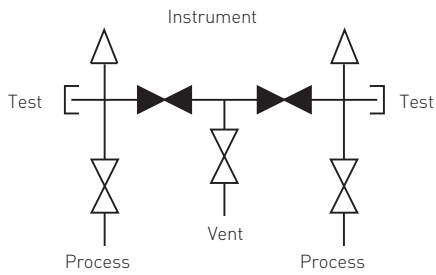
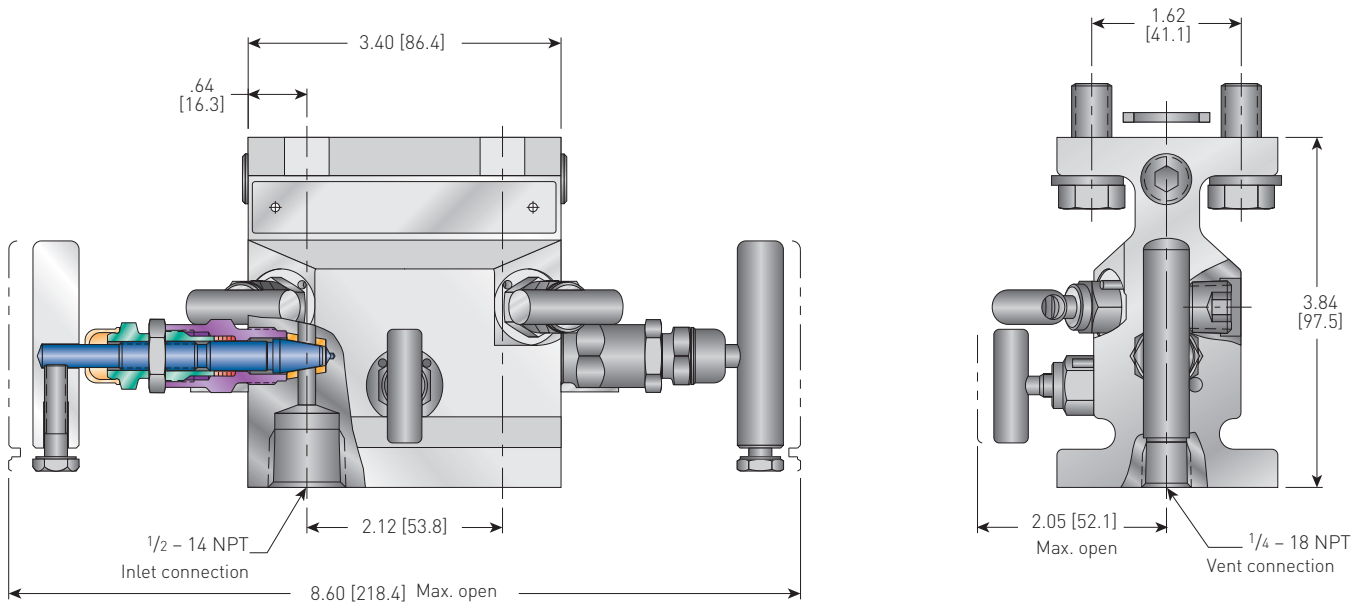
M6TW and M6TAW offer a choice of connection options for remotely mounted differential pressure transmitter applications. The M66 offers a larger orifice for positive drainage of wet gas and hydrates and reduced signal variance in pulsating flows.

TECHNICAL DATA

Materials:	CS, SS, Hastelloy [®]
Seats:	Metal or soft
Connections	
Instrument:	Flanged
Process:	Flanged or $\frac{1}{2}$ " NPT
Pressure (max.):	6000 psig (414 barg)
Temperature (max.):	500°F (260°C)

ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

M6TW DIMENSIONS, INCHES (mm)
Soft seat (metal seat available)



M6TW and M6TAW Metal Seat

NOTES

- M6TW installation kit consists of 4 bolts 7/16-inch -20 x 1-inch A193-B7, 4 washers, and 2 PTFE gaskets.
- Approximate valve weight: 6.0 lb [2.7 kg].

Metal seat:

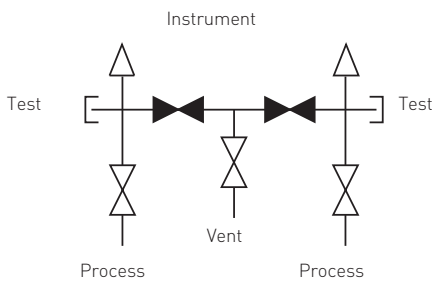
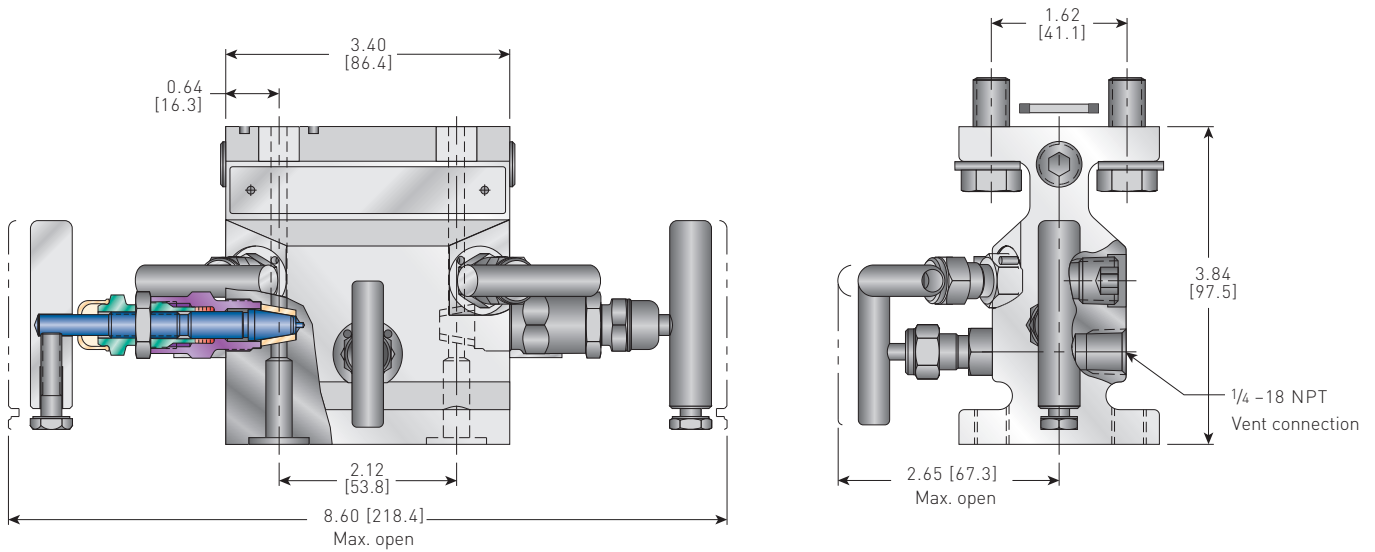
0.156-inch [4.0 mm] diameter orifice.
Valve C_v 0.36 maximum.

Soft seat:

0.187-inch [4.8 mm] diameter orifice.
Valve C_v 0.83 maximum.

ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

M6TAW DIMENSIONS, INCHES (mm)
 Soft seat (metal seat available)



NOTES

1. Approximate valve weight: 6.0 lb (2.7 kg).
Metal seat:
 0.156-inch (4.0 mm) diameter orifice.
 Valve C_v 0.36 maximum.
Soft seat:
 0.187-inch (4.8 mm) diameter orifice.
 Valve C_v 0.83 maximum.
2. M6TAW installation kit consists of 4 bolts
 7/16-inch -20 x 1-inch A193-B7, 4 washers,
 and 2 PTFE gaskets.
3. The M6TAW high pressure extrusion has flanged
 (integral) instrument and process connections.

ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

M6TW/M6TAW SPECIFICATIONS

STANDARD MATERIALS

Valve	Seat	Body	Bonnet	Stem	Ball	Flow washer
CS ¹	Soft	A105	A108	A581-303	N/A	316
CS ¹	Integral	A105	A108	A581-303	17-4PH	N/A
SS	Soft	A479-316	A479-316	A276-316	N/A	316
SS	Integral	A479-316	A479-316	A276-316	316	N/A
SG	Soft	A479-316	A479-316	Monel [®] 400	N/A	316
SG ⁴	Integral	A479-316	A479-316	Monel [®] 400	Monel [®] K500	N/A
SG3 ⁵	Hastelloy [®] C-276	Hastelloy [®] C-276	Hastelloy [®] C-276	Hastelloy [®] C-276	Elgiloy [®]	Hastelloy [®]

PRESSURE AND TEMPERATURE RATINGS

Valve	Packing	Seat material	Standard bolting		SS bolting	
CS ¹ , SS, SG ⁴ , SG3 ⁵	PTFE O-ring	Delrin [®] PCTFE ²	3000 psig at 200°F	[207 barg at 93°C]	3000 psig at 200°F	[207 barg at 93°C]
CS ¹ , SS, SG ⁴ , SG3 ⁵	PTFE	PEEK	6000 psig at 200°F	[414 barg at 93°C]	4500 psig at 100°F	[310 barg at 38°C]
	O-ring		3000 psig at 300°F	[207 barg at 149°C]	3000 psig at 300°F	[207 barg at 149°C]
CS ¹ , SS, SG ⁴ , SG3 ⁵	PTFE	PTFE ³	1000 psig at 150°F	[69 barg at 66°C]	1000 psig at 150°F	[69 barg at 66°C]
			200 psig at 500°F	[14 barg at 260°C]	200 psig at 500°F	[14 barg at 260°C]
CS ¹ , SS, SG ⁴ , SG3 ⁵	PTFE GRAFOIL [®] /Low emissions graphite	Body material	6000 psig at 200°F	[414 barg at 93°C]	4500 psig at 100°F	[310 barg at 38°C]
			6000 psig at 200°F	[414 barg at 93°C]	4500 psig at 100°F	[310 barg at 38°C]
			4000 psig at 500°F	[276 barg at 260°C]	3000 psig at 500°F	[207 barg at 260°C]

NOTES

- CS parts are zinc cobalt plated to prevent corrosion.
- PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F[®].
- Block valves only.
- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156-3 (for chloride conditions < 50 mg/l [ppm]) and NACE MR0103-2005.
- SG3 (Sour Gas) meets the requirements of NACE MR0175/ISO 15156-3 (for chloride conditions > 50 mg/l [ppm]).
- 316 SS bolts lower pressure ratings to a maximum of 4500 psi [310 barg]. Consult factory for full rating with 316 SS bolts.

BONNET ASSEMBLIES

The M6TW and M6TAW offer the option of metal or soft seats. All stem threads are rolled and lubricated to prevent galling and reduce operating torque. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service and a protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants.

Soft-seated bonnet assemblies

The soft-seated bonnet assemblies have a one-piece rotating stem and plug with standard stem packing provided by an FKM O-ring and PTFE back-up ring.

Metal-seated bonnet assemblies

The metal-seated bonnet assemblies have a rotating stem with free swivel ball-type seat for long service life. The specially hardened ball seat is ideal for natural gas service. The stem seal is a patented PTFE packing gland which is adjustable in service.

ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

SELECTION GUIDE - M6TW, M6TAW

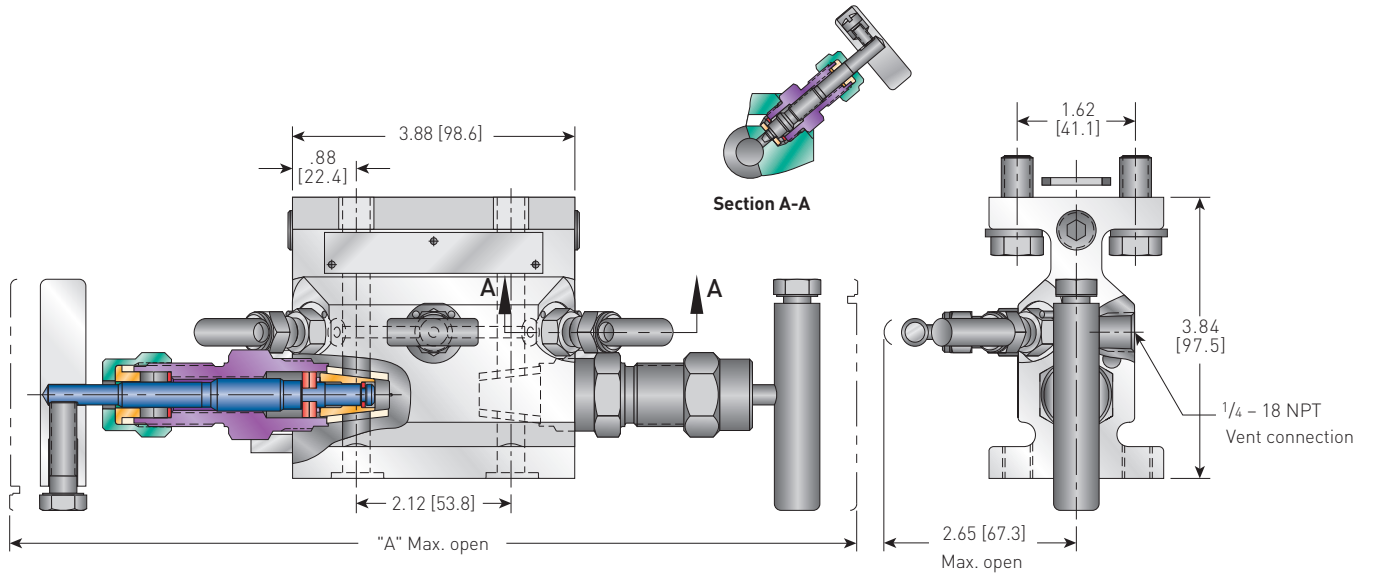
Example:	M6TAW	V	D	S	-4	-SG
Valve type						
³ / ₁₆ -inch (4.8 mm) orifice						
M6TW Pipe x flange						
M6TAW Flange x flange						
Packing						
V PTFE		H GRAFOIL®				
R O-ring		E Low emissions graphite				
Seat						
Soft:		Hard:				
V PTFE (block valves only)		I Integral (body material)				
D Delrin®						
E PEEK						
K PCTFE						
Body material						
C CS, A105		J Hastelloy®				
S SS, A479-316						
Process connections						
4² ½-inch FNPT						
-AT³ Integral single ferrule tube fittings		ATD³ Integral double ferrule tube fittings				
-4AT ½-inch, 316 SS ferrule and nut		-4ATD ½-inch, 316 SS ferrule and nut				
Options						
-AM AGCO Mount kit for 2-inch pipe stand						
-BC Accessory bracket for mounting conduit with AGCO Mount						
-BP Accessory bracket for mounting purge meters with AGCO Mount						
-CL00 Cleaned for chlorine service						
-HD Hydrostatic testing (100 percent) (MSS SP-61)						
-OC00 Cleaned for oxygen service						
-R3V⁴ Add for use with Rosemount® model 3051C (SS 18-8 bolts)						
-SSA⁴ SS Flange bolt (grade 18-8) - maximum pressure rating 4500 psi [310 barg]						
-SSB 316 SS Flange bolt (B8M Class 2) - will provide full pressure rating						
-SSC⁴ 316 Flange bolt (B8M) - maximum pressure rating 4500 psi [310 barg]						
-SG [Sour Gas] meets the requirements of NACE MR0175/ISO 15156-3 for chloride conditions ≤ 50 mg/l [ppm] and NACE MR0103-2005						
-SG3 [Sour Gas] meets the requirements of NACE MR0175/ISO 15156-3 for chloride conditions > 50 mg/l [ppm]						

NOTES

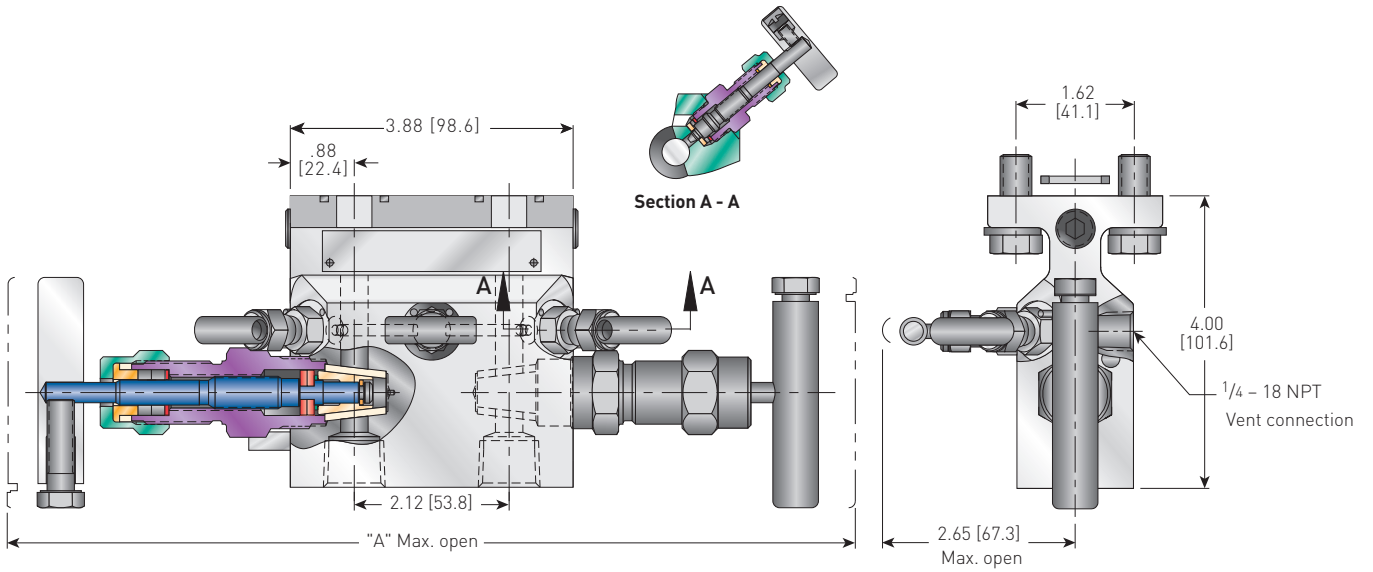
1. For close couple Futbols (NPT and tube-ended) and adapter kits, order by part number noted within respective tables or as part of ACCU-Mount™ Catalog.
2. Available for M6TW only.
3. Available for M6TW only.
4. 316 SS bolts lower pressure ratings to a maximum of 4500 psi [310 barg]. Consult factory for full rating with 316 SS bolts.

ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

M66A DIMENSIONS, INCHES (mm)



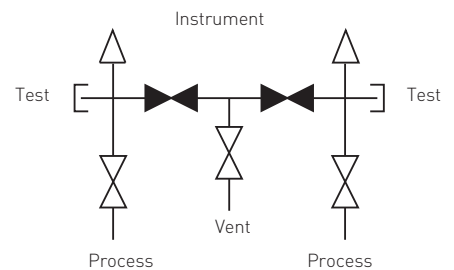
M66T DIMENSIONS, INCHES (mm)



PACKING	A	
PTFE	11.90	[302.3]
O-ring	11.36	[288.5]

NOTES

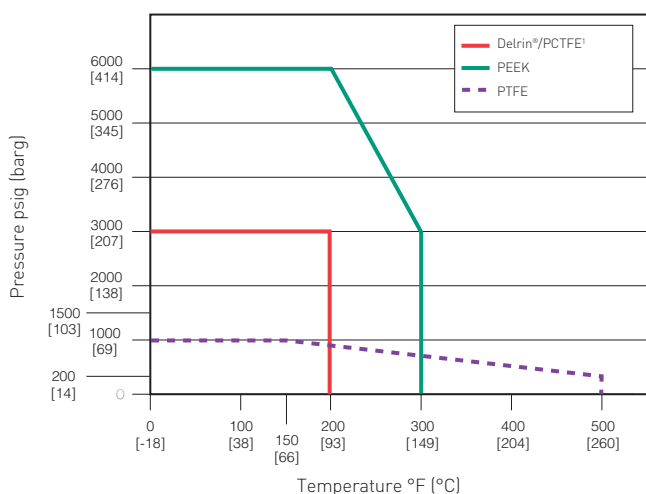
1. Approximate valve weight: 7.6 lb [3.4 kg].
0.375-inch [9.5 mm] diameter orifice.
Valve C_v 3.0 maximum.
2. Bottom static pressure connections
1/4-inch - 18 NPT available.
3. Installation kit consists of 4 bolts
7/16-inch - 20 x 1-inch A193-B7, 4 washers,
and 2 PTFE gaskets.



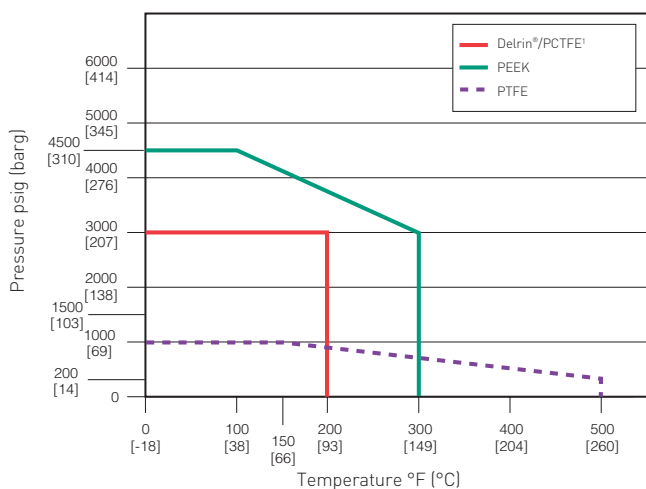
ANDERSON GREENWOOD M6TW/M6TAW/M66 NATURAL GAS MANIFOLDS

SPECIFICATIONS

PRESSURE VS. TEMPERATURE – STANDARD BOLTING¹



PRESSURE VS. TEMPERATURE – SS BOLTING²



Minimum temperature		
Carbon steel	-20°F	[-29°C]
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]

NOTES

1. PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.
2. 316 SS bolts lower pressure ratings to a maximum of 4500 psi [310 barg]. Consult factory for full rating with 316 SS bolts.

BONNET ASSEMBLIES

The M66 offers the option of metal or soft seats.

All stem threads are rolled and lubricated to prevent galling and reduce operating torque. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service and a protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants.

Soft-seated bonnet assemblies

The soft-seated bonnet assemblies have a one-piece rotating stem and plug with standard stem packing provided by an FKM O-ring and PTFE back-up ring.

Metal-seated bonnet assemblies

The metal-seated bonnet assemblies have a rotating stem with free swivel ball-type seat for long service life. The specially hardened ball seat is ideal for natural gas service. The stem seal is a patented PTFE packing gland which is adjustable in service.

ANDERSON GREENWOOD M66T/M66A/M66 NATURAL GAS MANIFOLDS

SELECTION GUIDE - M66

Example:	M66A	V	D	S	-4	-SG
Valve type						
¾ inch (9.5 mm) orifice						
M66T Pipe x flange						
M66A Flange x flange						
Packing						
V PTFE						
R O-ring						
Seat (cone)						
Soft (block valves only)						
V PTFE						
D Delrin®						
E PEEK						
K PCTFE						
Body material						
C CS [zinc cobalt plated to resist corrosion], A105						
S SS, A479-316						
Process connections						
M66T Only						
-4 ½ inch FNPT						
Options code						
-AM AGCO Mount kit for 2" pipestand mounting of manifold.						
-BC Accessory bracket for mounting conduit with AGCO Mount.						
-BP Accessory bracket for mounting purge meters with AGCO Mount.						
-CL00 Cleaned for chlorine service						
-HD Hydrostatic testing - includes test report (MSS-SP-61)						
-OC00 Cleaned for oxygen service						
-R3V Add when mounting to Rosemount® model #3051C, 2024, -3095. Specify on all components. Use SS columns for rating						
-SG NACE MR0175/ISO 15156-3 (for chloride conditions ± 50 mg/l [ppm]) and NACE MR0103-2005 (B7 mounting bolts standard, SS mounting bolts optional) (SS valves only) (not available for O-ring packed valves)						
-SG3 NACE MR0175/ISO 15156-3 (for chloride conditions > 50 mg/l [ppm])						
-SSA SS flange bolts (Grade 18-8) - Max. pressure rating 4500 psi [310 barg]						
-SSC SS flange bolts (316 SS) - Max. pressure rating 4500 psi [310 barg]						
-TB Static/test ports (bottom of manifold) ¼" -18 NPT, 2 places						
-EL () Installed street elbows in static test ports						
EL1 - Elbow facing bottom of manifold						
EL2 - Elbow facing outlet of manifold						
EL3 - Elbow facing top of manifold						