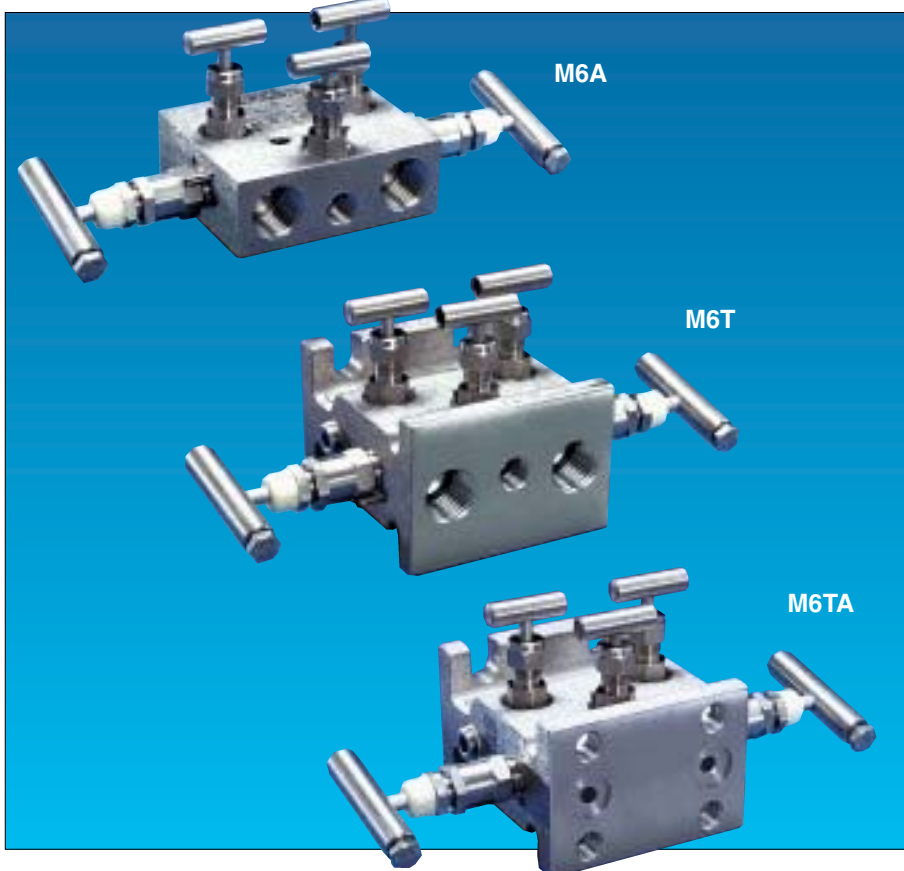


Natural Gas Manifolds – M6A, M6T, M6TA 5-Valve Manifolds



Product Overview

The M6A 5-Valve Manifold for natural gas applications was first designed and manufactured in 1960. It soon took over as the standard for recording orifice meters. Today, it is still widely used. The M6A is usually supported in the vertical meter tubing from the orifice flange union. Static pressure and calibration test connections are standard. The unit is available with integral tube fittings, if desired.

Differential pressure transmitter accuracy and stability have improved, resulting in their broader use for natural gas measurement in production and transmission applications.

To meet the requirements for differential pressure transmitter applications, the M6T (pipe x flange) and M6TA (flange x flange) were designed to provide the family of M6A, M6T, M6TA for various field applications.

Recent natural gas measurement field research has shown that better accuracy results when the transmitter is installed

directly on the orifice flanges or orifice fitting. Anderson Greenwood has designed a family of manifolds and installation configurations to meet the more accurate installations and users' requirements.

Refer to ACCU-Mount™ Catalog.

Features and Benefits

M6A

- **Easy Installation.** The lightweight M6A is easily installed in meter tubing. No additional support is generally required.
- **Upstream or downstream 1/4-inch FNPT ports** are standard for connecting the static pressure to the meter.
- **Available with soft or hard seats.** Soft seats are easily replaced in the field in the event of damage from hydrated or sand. Soft seats are tolerant to much abuse from sand, grit, etc. remaining bubble-tight.
- **Bonnet-to-body and stem threads** are isolated from process corrosion – important in sour gas applications.

INSTRUMENTS • CONTROLS • VALVES

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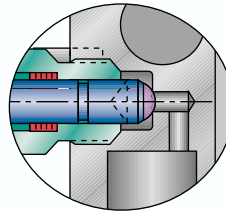
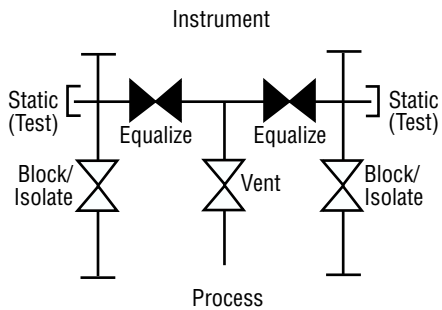
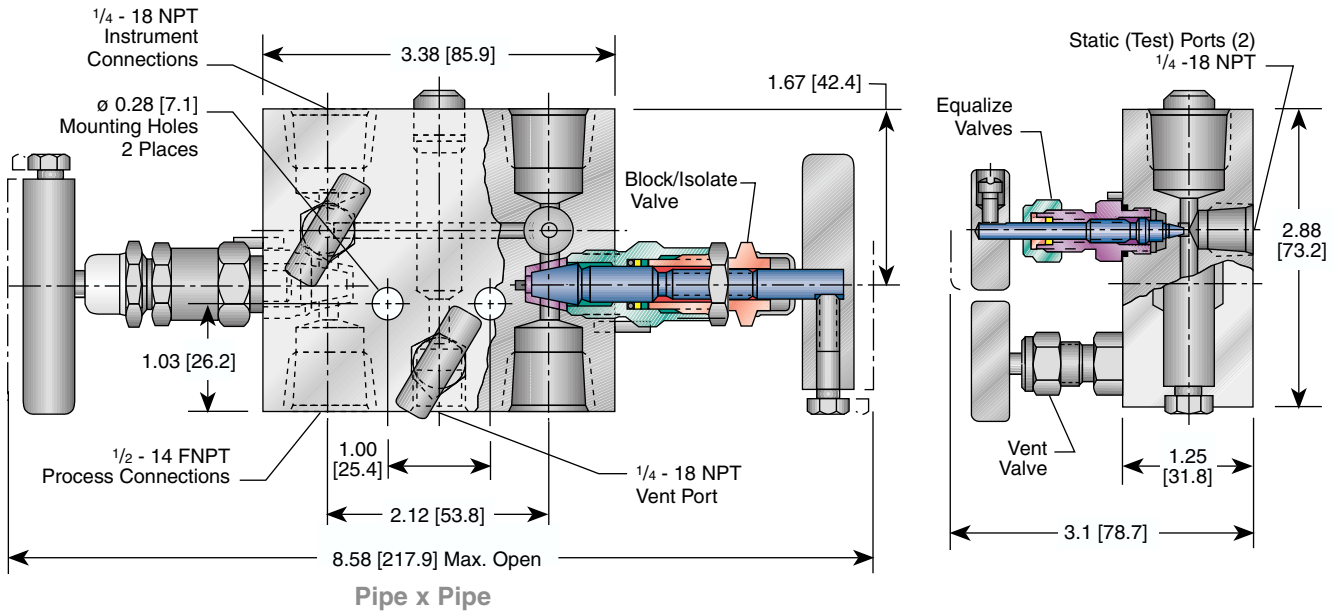
- **Stem backout prevention** eliminates accidental removal while under pressure.
- **Stem packing** is standard Viton® O-ring with TFE back-up ring with long life assured by mirror finish on stem in the packing area.
- **Integral hard backseat** forms a secondary seal for the stem threads when valve is fully opened.
- **Stem threads** are rolled (not cut) to increase strength and longer life.
- **Either single or double ferrule tube fittings** are available integral to the body. This reduces potential leak points.

M6T and M6TA

- **Same features and benefits as the M6A** plus the following.
- **May be pipestand mounted** using the appropriate AGCO Mount Kit. This allows the manifold to be mounted prior to receipt of transmitter. Makes it easier and quicker to remove the transmitter for servicing since it is attached only to the manifold and power source.

Natural Gas Manifolds – M6A Specifications

M6A Soft Seat (Metal Seat available) Dimensions, inches [mm]



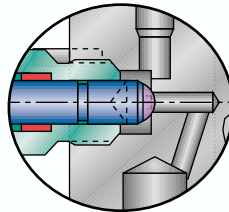
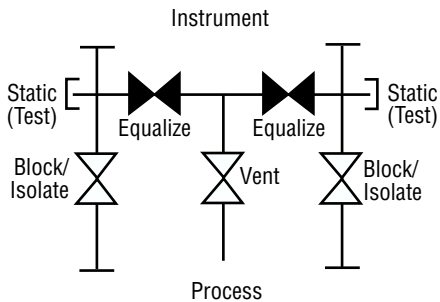
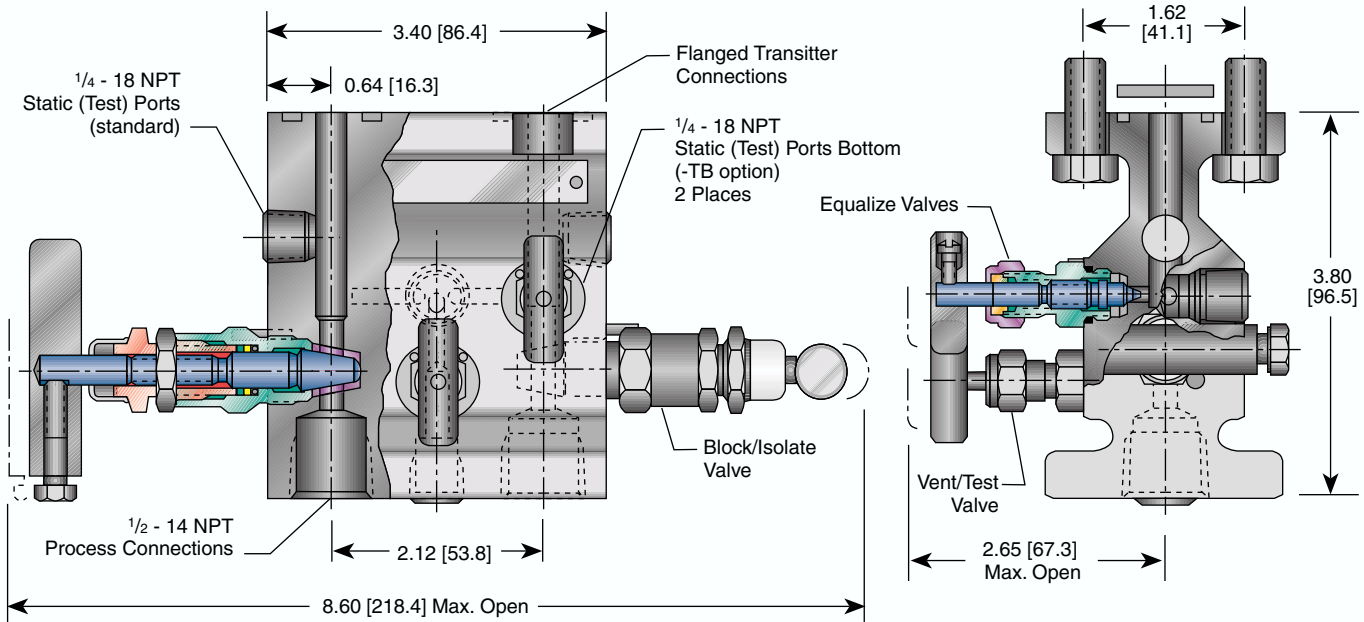
Metal Seat

Note

1. Approximate valve weight: 4.0 lb [1.8 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.

Natural Gas Manifolds – M6T Specifications

M6T Soft Seat (Metal Seat available) Dimensions, inches [mm]



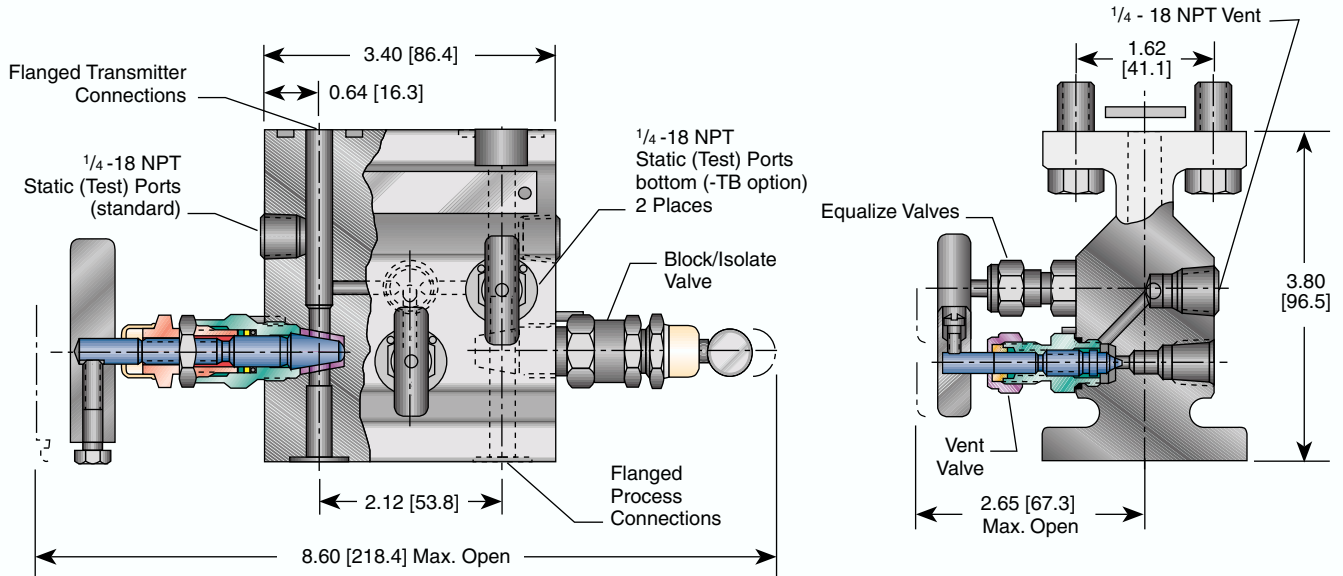
M6T and M6TA Metal Seat

Notes

- M6T Installation Kit consists of 4 bolts $\frac{7}{16}$ -inch -20 x 1-inch A193-B7, 4 washers, and 2 Teflon® 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.
- See Specifications, pages 128 - 129 and Ordering Information, page 130.

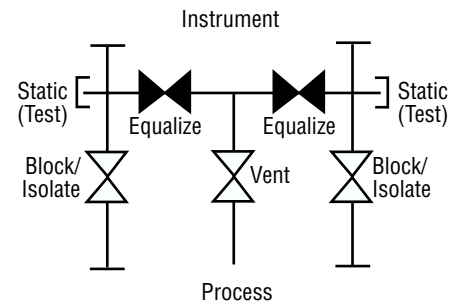
Natural Gas Manifolds – M6TA Specifications

M6TA Soft Seat (Metal Seat available) Dimensions, inches [mm]



Notes

- 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.
- M6TA Installation Kit consists of 4 bolts 7/16-inch -20 x 1-inch A193-B7, 4 washers, and 2 Teflon® gaskets.
- The M6TA high pressure extrusion has flanged (integral) instrument and process connections.



Natural Gas Manifolds – M6A, M6T, M6TA Specifications

Standard Materials

Valve	Seat	Body	Bonnet	Stem	Ball	Flow Washer
CS ¹	Soft	A105 ²	A108	A581-303	N/A	316
CS ¹	Integral	A105 ²	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 ³	Soft	A479-316	A479-316	Monel [®] 400	N/A	316
SG ³	Integral	A479-316	A479-316	Monel [®] 400	Monel [®] K500	N/A

Pressure and Temperature Ratings

Valve	Packing	Seat Material	Standard Bolting		SS Bolting
CS ¹ , SS, SG ³ , Monel [®]	Teflon [®] O-ring	Delrin [®] PCTFE ⁴	3000 psig @ 200°F	[207 barg @ 93°C]	3000 psig @ 200°F [207 barg @ 93°C]
CS ¹ , SS, SG ³	Teflon [®] O-ring	PEEK	6000 psig @ 200°F 3000 psig @ 300°F	[414 barg @ 93°C] [207 barg @ 149°C]	4500 psig @ 100°F [310 barg @ 38°C] 3000 psig @ 300°F [207 barg @ 149°C]
Monel [®]	Teflon [®] O-ring	PEEK	5300 psig @ 200°F ⁵ 3000 psig @ 300°F	[365 barg @ 93°C] [207 barg @ 149°C]	4500 psig @ 100°F [310 barg @ 38°C] 3000 psig @ 300°F [207 barg @ 149°C]
CS ¹ , SS, SG ³ , Monel [®]	Teflon [®]	Teflon ^{®6}	1000 psig @ 150°F 200 psig @ 500°F	[69 barg @ 66°C] [14 barg @ 260°C]	1000 psig @ 150°F [69 barg @ 66°C] 200 psig @ 500°F [14 barg @ 260°C]
CS ¹ , SS, SG ³	Teflon [®] GRAFOIL [®] Low Emissions Graphite	Body Material	4000 psig @ 500°F	[276 barg @ 260°C]	3000 psig @ 500°F [207 barg @ 260°C]
Monel [®]	Teflon [®] GRAFOIL [®] Low Emissions Graphite	Body Material	5300 psig @ 200°F ⁵ 4000 psig @ 500°F	[365 barg @ 93°C] [276 barg @ 260°C]	4500 psig @ 100°F [310 barg @ 38°C] 3000 psig @ 500°F [207 barg @ 260°C]

Notes

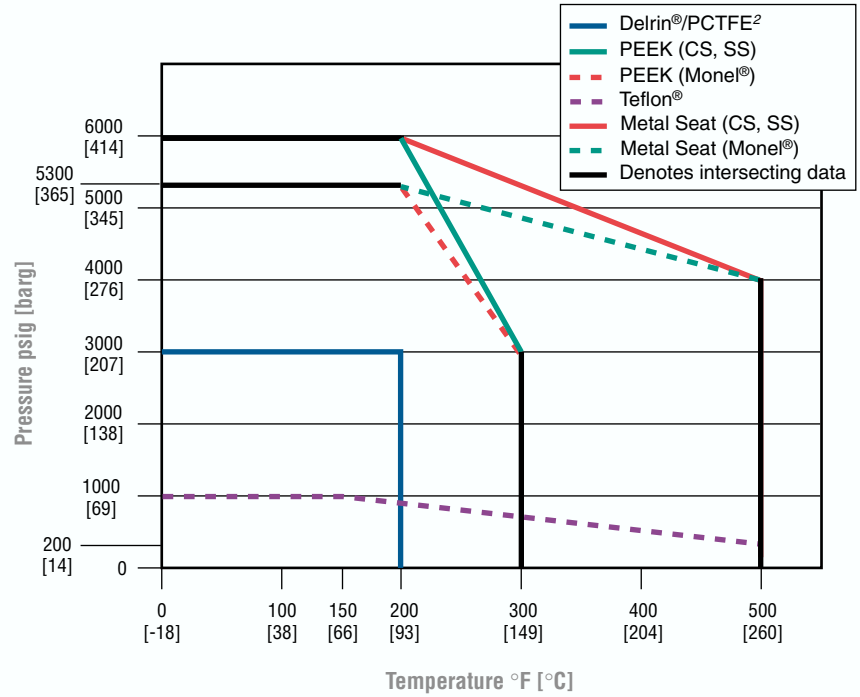
1. CS parts are zinc cobalt plated to prevent corrosion.
2. M6A body material is A108.
3. SG (Sour Gas) meets the requirements of NACE MR0175-latest revision.
4. PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F[®].
5. M6A Monel[®] ratings are:
6000 psig @ 200°F
[414 barg @ 93°C]
4000 psig @ 500°F
[276 barg @ 260°C].
6. Block valves only.

Natural Gas Manifolds – M6A, M6T, M6TA Specifications

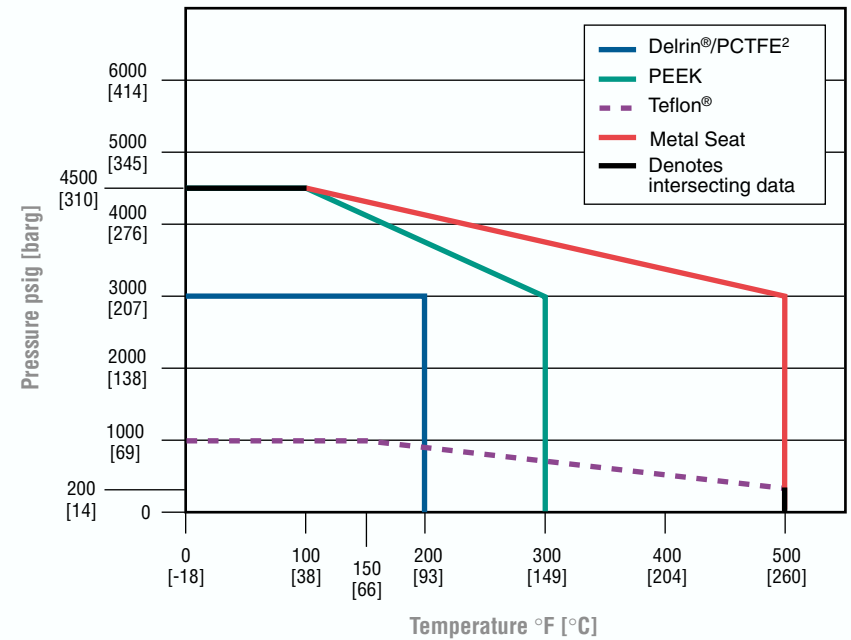
Notes

- PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.
- M6A Monel® ratings are:
6000 psig @ 200°F
[414 barg @ 93°C]
4000 psig @ 500°F
[276 barg @ 260°C].

Pressure vs. Temperature – Standard Bolting



Pressure vs. Temperature – SS Bolting



Natural Gas Manifolds

Ordering Information

M6A V D S -4 -SG

Valve Type

3/16-inch [4.8 mm] orifice

- M6A – Pipe x Pipe
- M6T – Pipe x Flange
- M6TA – Flange x Flange

Packing

- V – Teflon® (patent protected)
- R – O-ring
- H – GRAFOIL®
- E – Low Emissions Graphite

Seat

- | | |
|---------------------------------|------------------------------|
| Soft: | Hard: |
| V – Teflon® (Block Valves only) | I – Integral (body material) |
| D – Delrin® | |
| E – PEEK | |
| K – PCTFE | |

Body Material

- C – CS, A105²
- S – SS, A479-316
- M – Monel®

Process Connections

- 4³ – 1/2-inch FNPT
- | | |
|---|--|
| AT ⁴ – Integral Single Ferrule tube fittings | ATD ⁴ – Integral Double Ferrule tube fittings |
| – 3AT 3/8-inch,
316 SS Ferrule and Nut | – 3ATD 3/8-inch,
316 SS Ferrule and Nut |
| – 4AT 1/2-inch,
316 SS Ferrule and Nut | – 4ATD 1/2-inch,
316 SS Ferrule and Nut |

Options

- AM AGCO Mount Kit for 2-inch pipestand mounting of manifold (page 138).
- BC Accessory bracket for mounting conduit with AGCO Mount.
- BP Accessory bracket for mounting purge meters with AGCO Mount.
- CL Cleaned for Chlorine Service.
- HD Hydrostatic testing - includes test report (MSS-SP-61)
- OC Cleaned for Oxygen Service.
- R3V Add when mounting to Rosemount® Model #3051C, 2024, -3095. Specify on all components. Use SS columns for rating. (M6T, M6TA only)
- SG Sour Gas meets the requirements of NACE MR0175-latest revision. (B7 mounting bolts standard, SS mounting bolts optional) (SS valves only) (Not available for O-ring packed valves)
- TB Static/Test Ports (bottom of manifold) 1/4-inch -18 NPT, 2 places, M6T, M6TA only
- 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

 Elbows provided with 1/4-inch NPT Plugs
- SP Special Requirements - provide complete description of requirements.

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. M6A is A108-10L18.
3. Available for M6A and M6T only.
4. Available for M6T only.