Natural Gas Manifolds – M19 Meter Manifold

Product Overview
The M19 Meter Manifold is a three- or five-valve manifold specifically designed for use with orifice meters. It is designed for repetitive bubble-tight closure, safety, and a long trouble-free life with easy maintenance. Field replaceable soft seats give premium tightness at closure, even in dirty service. The straight-thru rising plug design provides good regulation and is roddable for easy cleaning.

The M19 Meter Manifold is available in SS or CS and with trim to meet the requirements of NACE MR0175-latest revision.

The 5-valve assembly is indicated for orifice meters remote from the orifice flange union.

The 3-valve manifold is used when the orifice meter is mounted adjacent to the orifice flange and the two process block valves provide convenient closure.

Features and Benefits
• The M19 was designed to overcome the leaking problems experienced with inexpensive valves and 1/4-inch pipe-fitting assemblies made-up under varying conditions.

• Replaceable soft seats allow replacement of the seat insert without removing the valve from the line. Operates in dirty service with repetitive bubble-tight shutoff.

• Adjustable Teflon® packing is easily changed by loosening the jam nut, tightening the bushing slightly, then retightening the jam nut. This feature reduces downtime in packing replacement, and provides for long valve life.

• The O-ring packed design for natural gas is self-adjusting.

• Packing below threads prevents lubricant washout, thread corrosion, and keeps solids from entering thread area causing galling. This also prevents process contamination.

• Mirror stem finish is burnished to a 16 RMS finish in the packing area. This ensures smooth operation and increases the life of the packing.

• Straight-thru flow path. High flow capacity and rodding capabilities.

• Body-to-bonnet seal. The seal is metal-to-metal in constant compression, below the bonnet threads. This prevents bonnet thread corrosion, eliminates possible tensile breakage of bonnet, and gives a reliable seal point.

• Rolled threads. Stem and male NPT threads are rolled rather than cut, giving extra thread strength.

• Chrome plating of 316 SS stem. Hard chrome plating of stem threads prevents galling or freeze-up, which may occur when similar metals mate. CS valves are supplied with SS stems.

• Safety back seating prevents stem blowout or accidental removal while in operation.

• Dust cover. Protects stem from lubricant contamination.
Natural Gas Manifolds – M19 Specifications

**Dimensions, inches [mm]**

<table>
<thead>
<tr>
<th>Block/Isolate Valve (optional)</th>
<th>Vent Valve</th>
<th>Block/Isolate Valve (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equalize Valves</td>
<td>1.25 [31.8] Sq. Stk.</td>
<td>0.62 [15.7]</td>
</tr>
<tr>
<td>Equalize</td>
<td>10.0 [254.0]</td>
<td>6.0 [152.0]</td>
</tr>
<tr>
<td>Max. Open</td>
<td>3.70 [94.0]</td>
<td>7.40 [188.0]</td>
</tr>
<tr>
<td>¼ - 18 FNPT 7 Places</td>
<td>8.74 [222.0]</td>
<td>3.85 [97.8]</td>
</tr>
</tbody>
</table>

**Note**

1. Approximate valve weight: 5.5 lb [2.4 kg]. 8.0 lb [3.6 kg] with optional block valves. 0.187-inch [4.8 mm] diameter orifice. Valve Cv 0.83 maximum.

Optional Teflon® Packed (O-ring, standard)
Notes
1. PCTFE (Polychlorotrifluoroethylene is exact equivalent of Kel-F®), PEEK and Teflon® are available.
2. CS is zinc plated to prevent corrosion.
3. SG (Sour Gas) meets the requirements of NACE MR0175-latest revision.
4. Also available with Teflon® packing (patent protected).

Natural Gas Manifolds – M19 Specifications

Standard Materials

<table>
<thead>
<tr>
<th>Valve</th>
<th>Body</th>
<th>Bonnet</th>
<th>Stem</th>
<th>Packing</th>
<th>Seat</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS</td>
<td>A479-316 SS</td>
<td>A476-316 SS</td>
<td>A276-316 SS</td>
<td>Viton® O-ring with Teflon® backup ring</td>
<td>Delrin®</td>
</tr>
<tr>
<td>SG²</td>
<td>A479-316 SS</td>
<td>A479-316 SS</td>
<td>Monel® R405</td>
<td>Teflon®</td>
<td>Delrin®</td>
</tr>
</tbody>
</table>

Pressure and Temperature Ratings

<table>
<thead>
<tr>
<th>Seat</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delrin® and PCTFE¹</td>
<td>6000 psig @ 200°F [414 barg @ 93°C]</td>
</tr>
<tr>
<td>PEEK</td>
<td>6000 psig @ 200°F [414 barg @ 93°C]</td>
</tr>
<tr>
<td></td>
<td>2000 psig @ 400°F [138 barg @ 204°C]</td>
</tr>
<tr>
<td>Teflon®</td>
<td>1000 psig @ 150°F [69 barg @ 66°C]</td>
</tr>
<tr>
<td></td>
<td>200 psig @ 500°F [14 barg @ 260°C]</td>
</tr>
</tbody>
</table>

Pressure vs. Temperature

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Notes
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2. CS is zinc plated to prevent corrosion.
3. SG (Sour Gas) meets the requirements of NACE MR0175-latest revision.
4. Also available with Teflon® packing (patent protected).
# Natural Gas Manifolds – M19 Specifications

## Ordering Information

<table>
<thead>
<tr>
<th>M19</th>
<th>C</th>
<th>T</th>
<th>-H1</th>
<th>-SG</th>
<th>-B</th>
<th>-S</th>
</tr>
</thead>
</table>

### Materials of Construction

- **C** – CS, A108
- **S** – SS, A479-316

### Configuration

- **T** – Three-valve
- **F** – Five-valve

### Vent Valve Type

- **H1**
- **H5**

### Options

- **–CL** Cleaned for Chlorine Service.
- **–OC** Cleaned for Oxygen Service.
- **–HD** Hydrostatic Testing (100 percent) (MSS-SP-61)
- **–MS** Monel® Stem
- **–PHB** Phenolic Black Handle
- **–SG** Sour Gas meets the requirements of NACE MR0175-latest revision. (SS valves only)
- **–SP** Special options or requirements not otherwise noted by descriptive codes.

### Installation Kit Options

- **–B** Barton
- **–F** Foxboro
- **–A** American

### Installation Kit Material Options

- **–W** Swagelok CS fittings and 304 SS tubing
- **–S** Parker 316 SS CPI fittings and 316 SS tubing
- **–SW** Swagelok 316 SS fittings and 316 SS tubing
- **–O** 304 SS tubing only (seamless, 0.0498-inch wall)
- **–SO** 316 SS tubing only

### Note

1. Standard Tubing and fitting kit includes 304 SS 3/8-inch tubing, 0.0498 wall, and CS Parker CPI fittings.