

# 200 Series 2-Valve Manifolds

## M-220 & M-222

The model M-220 2-Valve Manifold is designed for remote mounting of a static or gauge transmitter. This design permits the user to mount each unit separately in convenient and accessible locations.

The model M-222 2-Valve Manifold is designed for direct mounting the manifold and transmitter together in a convenient and accessible location.

Both manifolds have bonnet labels that designate the isolation and vent valves. Standard materials are Carbon Steel and 316 SS, with exotic materials available for severe applications. All flanged manifolds are supplied with two Teflon® seal rings and four mounting bolts as standard.

## Features

### Patented Teflon® Pressure-Core™ Stem Seal

- Leak-free performance
- No maintenance requirements
- 5 year warranty against stem seal leaks

### Standard Carbide Ball Seat

- Non-rotating ball eliminates seat galling or creasing to create bubble-tight seating

### All 316 SS Manifolds Conform to NACE (MR-01-75) as Standard

- Reduces lead times and inventory cost
- Improves inventory safety

### Seal Below Stem Thread

- Prevents media contamination of stem threads and lubricant wash-out

### Positive Back Seat Design

- Prevents accidental blow-out or stem removal while operating
- Provides secondary seal in full open position

### Bracket Mounting Holes (Standard)

- When used with the optional bracket, manifold can mount to a 2" pipe stand or flat surface to facilitate installation and removal of transmitter

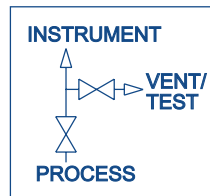


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# 200 Series 2-Valve Manifolds

| BODY STYLE       | BODY CODE | SEAT CODE | STEM SEAL CODE | OPTION CODES |
|------------------|-----------|-----------|----------------|--------------|
| <b>Hard Seat</b> |           |           |                |              |
| M - 2 2 0        |           |           | -              |              |
| M - 2 2 2        |           |           | -              |              |



| BODY CODE           |          |
|---------------------|----------|
| [Std.] Carbon Steel | <b>C</b> |
| [Std.] 316 SS       | <b>S</b> |
| Monel®              | <b>M</b> |
| Hastelloy-C®        | <b>H</b> |

| HARD SEAT CODE |                    |
|----------------|--------------------|
| <b>C</b>       | Carbon Ball [Std.] |
| <b>R</b>       | Ceramic Ball       |
| <b>6</b>       | 316 SS Ball        |
| <b>H</b>       | Hastelloy-C® Ball  |
| <b>N</b>       | K-Monel® Ball      |

| STEM SEAL CODE                |          |
|-------------------------------|----------|
| [Std.] Teflon® Pressure-Core™ | <b>T</b> |
| Grafoil Packed                | <b>G</b> |
| Viton® O-Ring                 | <b>V</b> |
| Teflon® Packed                | <b>P</b> |
| Low-Temp Pressure-Core™       | <b>J</b> |

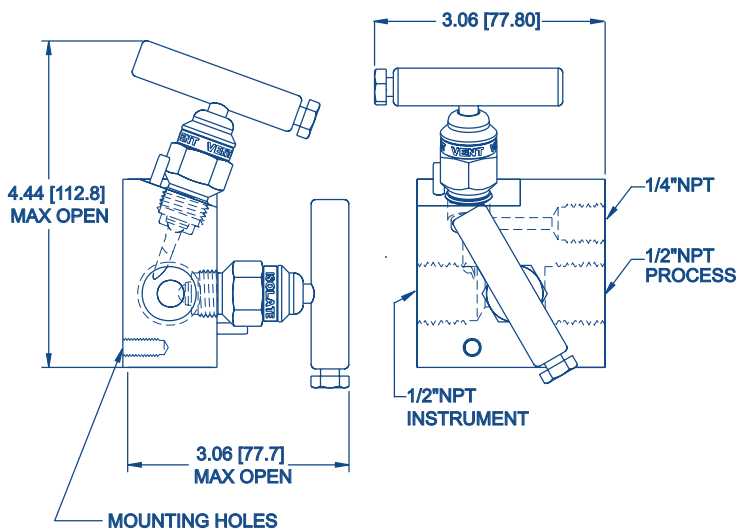
| OPTION DESCRIPTION |                                  |
|--------------------|----------------------------------|
| <b>GA</b>          | Anti-Tamper Bonnets              |
| <b>TH</b>          | Hydrostatic Testing              |
| <b>VCH</b>         | Carbon Steel Manifold Bracket    |
| <b>VSH</b>         | Stainless Steel Manifold Bracket |
| <b>W</b>           | Safety Bonnet Lock Plate         |
| <b>XL</b>          | Clean for Oxygen Service         |
| <b>XC</b>          | Clean for Chlorine Service       |

**NOTE:** Optional materials, accessories and documentation available upon request.

| PART DESCRIPTION | CARBON STEEL    | 316 SS             | MONEL®                               | HASTELLOY-C®                          |
|------------------|-----------------|--------------------|--------------------------------------|---------------------------------------|
| Body             | ASTM A108-1215  | ASTM A479-316      | ASTM B164-N04405 or ASTM B164-N04400 | ASTM B575-N10276 or ASTM A494 CW-12MW |
| Bonnet           | ASTM A108-1215  | ASTM A479-316      | ASTM B165-N04405                     | ASTM B574-N10276                      |
| Stem             | ASTM A582-303   | ASTM A479-316      | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Seal Retainer    | ASTM A479-316   | ASTM A479-316      | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Handle Assembly  | ASTM A108       | ASTM A582 (18-8)   | ASTM A582 (18-8)                     | ASTM A582 (18-8)                      |
| Plug(s)          | ASTM A108       | ASTM A182-F (18-8) | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Mounting Bolts   | ASTM A449-TYPE1 | ASTM A449-TYPE1    | ASTM F593 (18-8)                     | ASTM F593 (18-8)                      |

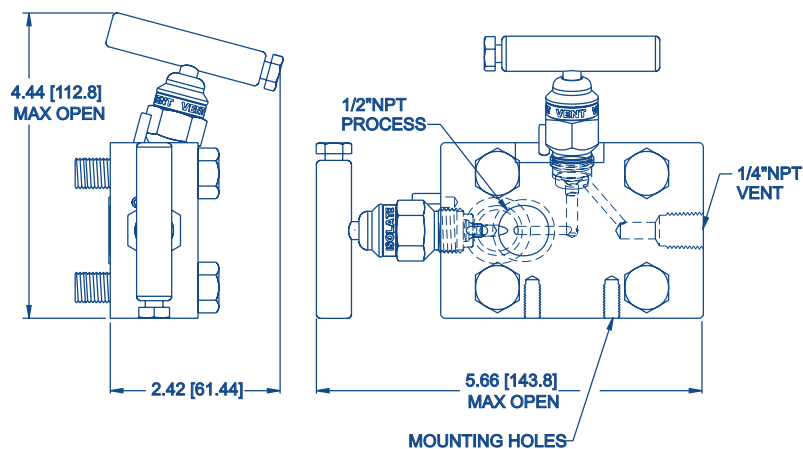
| BODY MATERIAL | HARD SEAT                                 | HARD SEAT                                  |
|---------------|---|--|
|               | Pressure-Core™                            | Grafoil®                                   |
| Carbon Steel  | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 800° F   |
| 316 SS        | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |
| Monel®        | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |
| Hastelloy-C®  | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |

## M-220CCT & M-220SCT



Dimensions in [ ] are in Millimeters.

## M-222CCT & M-222SCT



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# 200 Series

# 3-Valve Manifolds

## M-230 & M-232

The model M-230 3-Valve Manifold is designed for remote mounting of the transmitter. This design allows the user to mount each unit in convenient and accessible locations.

The model M-232 3-Valve Manifold is designed for direct mounting the manifold and transmitter together in a convenient and accessible location.

Both manifolds have bonnet labels that designate the isolation and equalizer valves. Standard materials are Carbon Steel and 316 SS, with exotic materials available for severe applications. All flanged manifolds are supplied with two Teflon® seal rings and four mounting bolts as standard.

## Features

### Patented Teflon® Pressure-Core™ Stem Seal

- Leak-free performance
- No maintenance requirements
- 5 year warranty against stem seal leaks

### Standard Carbide Ball Seat

- Non-rotating ball eliminates seat galling or creasing to create bubble-tight seating

### All 316 SS Manifolds Conform to NACE (MR-01-75) as Standard

- Reduces lead times and inventory cost
- Improves inventory safety

### Seal Below Stem Thread

- Prevents media contamination of stem threads and lubricant wash-out

### Positive Back Seat Design

- Prevents accidental blow-out or stem removal while operating
- Provides secondary seal in full open position

### Bracket Mounting Holes (Standard)

- When used with the optional bracket, manifold can mount to a 2" pipe stand or flat surface to facilitate installation and removal of transmitter

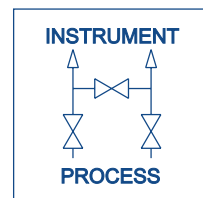


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# 200 Series 3-Valve Manifolds

| BODY STYLE | BODY CODE | SEAT CODE | STEM SEAL CODE | OPTION CODES |
|------------|-----------|-----------|----------------|--------------|
| Hard Seat  |           |           |                |              |
| M - 2 3 0  |           |           | -              |              |
| M - 2 3 2  |           |           | -              |              |



| BODY CODE           |          |
|---------------------|----------|
| [Std.] Carbon Steel | <b>C</b> |
| [Std.] 316 SS       | <b>S</b> |
| Monel®              | <b>M</b> |
| Hastelloy-C®        | <b>H</b> |

| HARD SEAT CODE |                    |
|----------------|--------------------|
| <b>C</b>       | Carbon Ball [Std.] |
| <b>R</b>       | Ceramic Ball       |
| <b>6</b>       | 316 SS Ball        |
| <b>H</b>       | Hastelloy-C® Ball  |
| <b>N</b>       | K-Monel® Ball      |

| STEM SEAL CODE                |          |
|-------------------------------|----------|
| [Std.] Teflon® Pressure-Core™ | <b>T</b> |
| Grafoil Packed                | <b>G</b> |
| Viton® O-Ring                 | <b>V</b> |
| Teflon® Packed                | <b>P</b> |
| Low-Temp Pressure-Core™       | <b>J</b> |

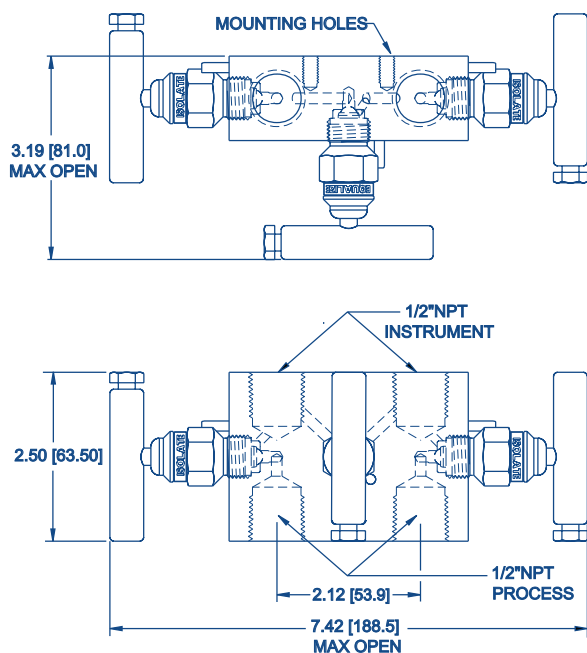
| OPTION DESCRIPTION |                                  |
|--------------------|----------------------------------|
| <b>GA</b>          | Anti-Tamper Bonnets              |
| <b>TH</b>          | Hydrostatic Testing              |
| <b>VCH</b>         | Carbon Steel Manifold Bracket    |
| <b>VSH</b>         | Stainless Steel Manifold Bracket |
| <b>W</b>           | Safety Bonnet Lock Plate         |
| <b>XL</b>          | Clean for Oxygen Service         |
| <b>XC</b>          | Clean for Chlorine Service       |

**NOTE:** Optional materials, accessories and documentation available upon request.

| PART DESCRIPTION | CARBON STEEL    | 316 SS             | MONEL®                               | HASTELLOY-C®                          |
|------------------|-----------------|--------------------|--------------------------------------|---------------------------------------|
| Body             | ASTM A108-1215  | ASTM A479-316      | ASTM B164-N04405 or ASTM B164-N04400 | ASTM B575-N10276 or ASTM A494 CW-12MW |
| Bonnet           | ASTM A108-1215  | ASTM A479-316      | ASTM B165-N04405                     | ASTM B574-N10276                      |
| Stem             | ASTM A582-303   | ASTM A479-316      | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Seal Retainer    | ASTM A479-316   | ASTM A479-316      | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Handle Assembly  | ASTM A108       | ASTM A582 (18-8)   | ASTM A582 (18-8)                     | ASTM A582 (18-8)                      |
| Plug(s)          | ASTM A108       | ASTM A182-F (18-8) | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Mounting Bolts   | ASTM A449-TYPE1 | ASTM A449-TYPE1    | ASTM F593 (18-8)                     | ASTM F593 (18-8)                      |

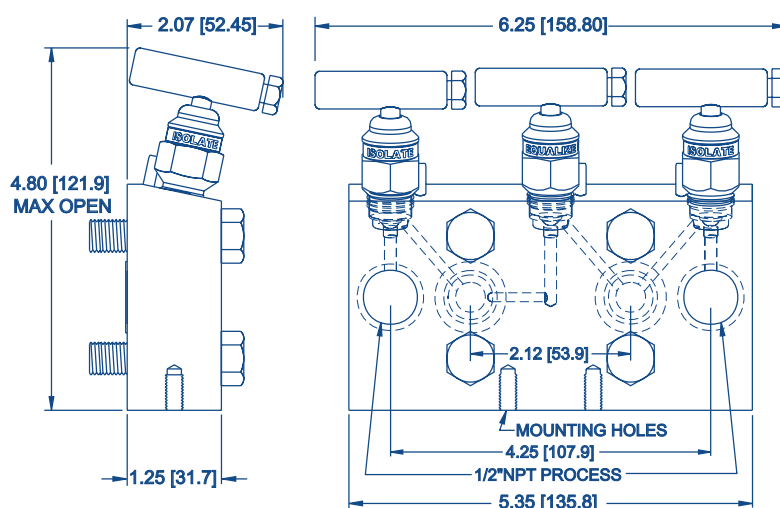
| BODY MATERIAL | HARD SEAT                                 | HARD SEAT                                  |
|---------------|---|--|
|               | Pressure-Core™                            | Grafoil®                                   |
| Carbon Steel  | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 800° F   |
| 316 SS        | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |
| Monel®        | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |
| Hastelloy-C®  | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |

## M-230CCT & M-230SCT



Dimensions in [ ] are in Millimeters.

## M-232CCT & M-232SCT



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# 200 Series

## 5-Valve Manifolds

### M-250 & M-252

The model M-250 5-Valve Manifold is designed for remote mounting of the transmitter. This design allows the user to mount each unit in convenient and accessible locations. It also has the benefit of two controlled vents.

The model M-252 5-Valve Manifold is designed for direct mounting the manifold and transmitter together in a convenient and accessible location. It also has the added benefit of two controlled vents.

Both manifolds have bonnet labels that designate the isolation, vent and equalizer valves. Standard materials are Carbon Steel and 316 SS, with exotic materials available for severe applications. All flanged manifolds are supplied with two Teflon® seal rings and four mounting bolts as standard.

### Features

#### Patented Teflon® Pressure-Core™ Stem Seal

- Leak-free performance
- No maintenance requirements
- 5 year warranty against stem seal leaks

#### Standard Carbide Ball Seat

- Non-rotating ball eliminates seat galling or creasing to create bubble-tight seating

#### All 316 SS Manifolds Conform to NACE (MR-01-75) as Standard

- Reduces lead times and inventory cost
- Improves inventory safety

#### Seal Below Stem Thread

- Prevents media contamination of stem threads and lubricant wash-out

#### Positive Back Seat Design

- Prevents accidental blow-out or stem removal while operating
- Provides secondary seal in full open position

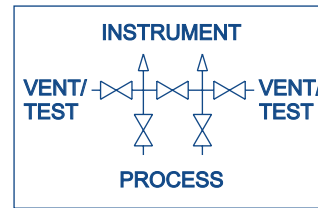
#### Bracket Mounting Holes (Standard)

- When used with the optional bracket, manifold can mount to a 2" pipe stand or flat surface to facilitate installation and removal of transmitter



# 200 Series 5-Valve Manifolds

| BODY STYLE | BODY CODE | SEAT CODE | STEM SEAL CODE | OPTION CODES |
|------------|-----------|-----------|----------------|--------------|
| Hard Seat  |           |           |                |              |
| M - 2 5 0  |           |           | -              |              |
| M - 2 5 2  |           |           | -              |              |



| BODY CODE           |          |
|---------------------|----------|
| [Std.] Carbon Steel | <b>C</b> |
| [Std.] 316 SS       | <b>S</b> |
| Monel®              | <b>M</b> |
| Hastelloy-C®        | <b>H</b> |

| HARD SEAT CODE |                    |
|----------------|--------------------|
| <b>C</b>       | Carbon Ball [Std.] |
| <b>R</b>       | Ceramic Ball       |
| <b>6</b>       | 316 SS Ball        |
| <b>H</b>       | Hastelloy-C® Ball  |
| <b>N</b>       | K-Monel® Ball      |

| STEM SEAL CODE                |          |
|-------------------------------|----------|
| [Std.] Teflon® Pressure-Core™ | <b>T</b> |
| Grafoil Packed                | <b>G</b> |
| Viton® O-Ring                 | <b>V</b> |
| Teflon® Packed                | <b>P</b> |
| Low-Temp Pressure-Core™       | <b>J</b> |

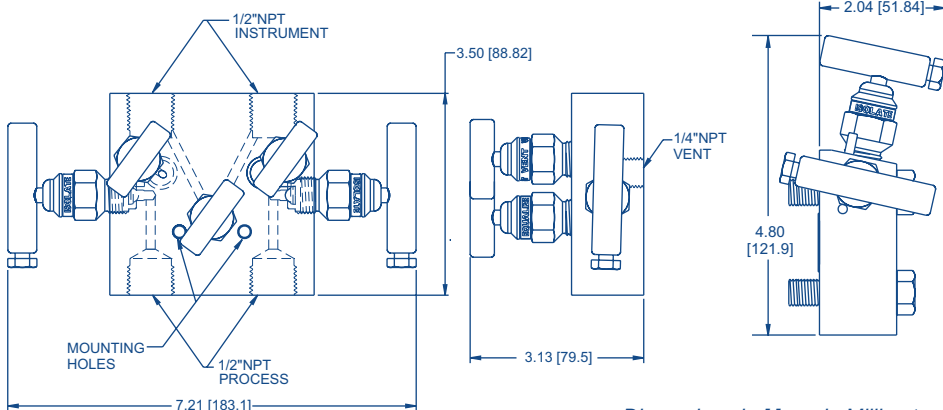
| OPTION DESCRIPTION |                                  |
|--------------------|----------------------------------|
| <b>GA</b>          | Anti-Tamper Bonnets              |
| <b>TH</b>          | Hydrostatic Testing              |
| <b>VCH</b>         | Carbon Steel Manifold Bracket    |
| <b>VSH</b>         | Stainless Steel Manifold Bracket |
| <b>W</b>           | Safety Bonnet Lock Plate         |
| <b>XL</b>          | Clean for Oxygen Service         |
| <b>XC</b>          | Clean for Chlorine Service       |

**NOTE:** Optional materials, accessories and documentation available upon request.

| PART DESCRIPTION | CARBON STEEL    | 316 SS             | MONEL®                               | HASTELLOY-C®                          |
|------------------|-----------------|--------------------|--------------------------------------|---------------------------------------|
| Body             | ASTM A108-1215  | ASTM A479-316      | ASTM B164-N04405 or ASTM B164-N04400 | ASTM B575-N10276 or ASTM A494 CW-12MW |
| Bonnet           | ASTM A108-1215  | ASTM A479-316      | ASTM B165-N04405                     | ASTM B574-N10276                      |
| Stem             | ASTM A582-303   | ASTM A479-316      | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Seal Retainer    | ASTM A479-316   | ASTM A479-316      | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Handle Assembly  | ASTM A108       | ASTM A582 (18-8)   | ASTM A582 (18-8)                     | ASTM A582 (18-8)                      |
| Plug(s)          | ASTM A108       | ASTM A182-F (18-8) | ASTM B164-N04405                     | ASTM B574-N10276                      |
| Mounting Bolts   | ASTM A449-TYPE1 | ASTM A449-TYPE1    | ASTM F593 (18-8)                     | ASTM F593 (18-8)                      |

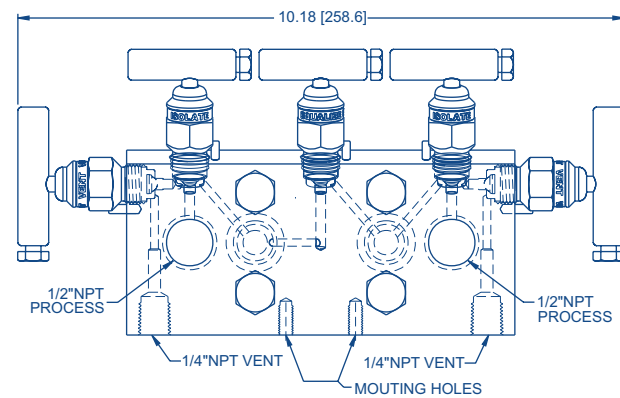
| BODY MATERIAL | HARD SEAT Pressure-Core™                  | HARD SEAT Grafoil®                         |
|---------------|---|--|
|               | Carbon Steel                              | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F  |
| 316 SS        | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |
| Monel®        | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |
| Hastelloy-C®  | 10,000 PSI @ 200° F<br>8,000 PSI @ 450° F | 6,000 PSI @ 200° F<br>1,500 PSI @ 1,000° F |

## M-250CCT & M-250SCT



Dimensions in [ ] are in Millimeters.

## M-252CCT & M-252SCT



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