Multi-Port Gauge Valves – M5A

Product Overview
The M5A gauge valve is a 3/8-inch [9.5 mm] orifice multi-port gauge valve. It is designed to be used with gauge mounting and other instrument ties in the process industries, without requiring additional penetrations of the main piping. The M5A provides premium performance and long valve life.

This valve is available with replaceable, roddable, metal or soft seats with 3/8-inch [9.5 mm] diameter orifice. The unique metal seat design, an exclusive feature of Anderson Greenwood, offers bubble-tight shutoff with straight-through flow characteristics.

Features and Benefits
- **Cost savings;** multi-port outlet reduces the number of components required for instrument installation while decreasing possible leak points.
- **Compact design** requires minimum space for operation and installation. Lower valve weight increases strength at the process connection and reduces gauge whip.
- **Unique metal seat** has straight-through flow path design for reduced plugging in high-temperature service.
- **Long body configuration** allows for a maximum of 4-inch [102 mm] pipe insulation.
- **Roddable seat design** is supplied with replaceable seats, providing easy clean-out and seat replacement.
- **Replaceable soft seat** allows replacement of the soft seat insert without removing the valve from the line. It operates in dirty service with repetitive bubble-tight shutoff.
- **Mirror stem finish** burnished to a 16 RMS finish in the packing area enables smooth stem operation and extends packing life.
- **Body-to-bonnet seal** is metal-to-metal in constant compression below the bonnet threads. Prevents bonnet thread corrosion, eliminates possible tensile breakage of bonnet, and gives a reliable seal point.
- **Ball end stem** eliminates seat galling, provides bubble-tight shutoff and long life. The hardened, non-rotating ball ensures perfect alignment closure.
- **Packing below threads** prevents lubricant washout, thread corrosion, and keeps solids from entering the thread area, which can cause galling. It also prevents process contamination.
- **Adjustable packing** adjusts easily – loosen jam nut, tighten bushing slightly, then retighten jam nut. Decreases packing replacement downtime and increases valve life.
- **Dust cover** prevents lubricant washout and keeps contaminants (dirt, rain, etc.) out of bonnet assembly.
- **Safety back seating** prevents stem blowout or accidental removal while in operation and provides a metal-to-metal secondary stem seal while in the full open position.
- **Chrome plating of 316 SS** prevents galling or freezing of stem threads when similar metals mate. CS valves use a 303 SS stem.
- **Rolled threads** provide additional thread strength. The stem, bonnet, and male NPT threads are rolled, not cut.
- **Bonnet lock pin** is another safety feature which prevents the accidental separation of the bonnet from the body. However, normal valve maintenance and repair are still easily accomplished.
Multi-Port Gauge Valves – M5A Specifications

**Notes**

1. Long body length 7.75-inch [196.8 mm].
   Extra long body length 8.80-inch [223.5 mm].

2. CS is zinc-cobalt plated to prevent corrosion.
3. SG (Sour Gas) meets the requirements of NACE MR0175-latest revision.

**Dimensions, inches [mm]**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Stem Bonnet</td>
<td>2.31 [58.7]</td>
</tr>
<tr>
<td>Sq. Stk.</td>
<td>1.50 [38.1]</td>
</tr>
<tr>
<td>Max. Open</td>
<td>5.50 [139.7]</td>
</tr>
<tr>
<td>1/2 - 14 NPT</td>
<td></td>
</tr>
<tr>
<td>3 Places</td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td></td>
</tr>
<tr>
<td>5.38 [136.7]</td>
<td></td>
</tr>
</tbody>
</table>

**Standard Materials – Metal and Soft Seats**

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>Body</th>
<th>Stem</th>
<th>Bonnet</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS²</td>
<td>A105 CS</td>
<td>A582-303 SS</td>
<td>A108 CS</td>
</tr>
<tr>
<td>316 SS</td>
<td>A479-316 SS</td>
<td>A276-316 SS</td>
<td>A479-316 SS</td>
</tr>
<tr>
<td>316L SS</td>
<td>A479-316L SS</td>
<td>A276-316 SS</td>
<td>A479-316 SS</td>
</tr>
<tr>
<td>SG²</td>
<td>A479-316 SS</td>
<td>Monel® R405</td>
<td>A479-316 SS</td>
</tr>
<tr>
<td>Monel®</td>
<td>Monel® 400</td>
<td>Monel® R405</td>
<td>Monel® R405</td>
</tr>
</tbody>
</table>

**Pressure and Temperature Ratings**

**Metal Seat**

| Material        | Pressure @ Temperature | | |
|-----------------|------------------------|---------|
| Teflon® packed  | 1500 psig @ 500°F [103 barg @ 260°C] |
| GRAFOIL® packed | 1500 psig @ 850°F [103 barg @ 454°C] |

**Soft Seat**

<table>
<thead>
<tr>
<th>Material</th>
<th>Pressure @ Temperature</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Delrin</td>
<td>6000 psig @ 200°F [414 barg @ 93°C]</td>
<td></td>
</tr>
<tr>
<td>PCTFE</td>
<td>5000 psig @ 200°F [345 barg @ 93°C]</td>
<td></td>
</tr>
<tr>
<td>PEEK</td>
<td>6000 psig @ 200°F [414 barg @ 93°C]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2000 psig @ 400°F [138 barg @ 204°C]</td>
<td></td>
</tr>
<tr>
<td>Teflon®</td>
<td>1000 psig @ 150°F [69 barg @ 66°C]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200 psig @ 500°F [14 barg @ 260°C]</td>
<td></td>
</tr>
</tbody>
</table>

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Multi-Port Gauge Valves – M5A Specifications

Pressure vs. Temperature – Metal Seat

![Graph showing pressure vs. temperature for metal seat with Teflon® and GRAFOIL® packed valves.]

Note

1. PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.
## Multi-Port Gauge Valves – M5A Specifications

### Ordering Information – Metal Seat

<table>
<thead>
<tr>
<th>M5A</th>
<th>H</th>
<th>S</th>
<th>S – 44L</th>
<th>SG</th>
</tr>
</thead>
</table>

#### Packing

- **H** – GRAFOIL®
- **V** – Teflon®

#### Seat

- **S** – 316 SS (standard)
- **M** – Monel®

#### Body Material

- **C** – CS, A105
- **S** – SS, A479-316
- **M** – Monel® 400
- **W** – SS, A479-316L

#### Connections (Input/Output)

- **44** – 1/2-inch MNPT x (3) 1/2-inch FNPT
- **46** – 3/4-inch MNPT x (3) 1/2-inch FNPT

- **C** – Male socket weld
- **L** – Long body (7.75-inch [196.8 mm])
- **LL** – Extra long body (8.80-inch [223.5 mm])

#### Options

- **BL** – Bonnet Lock Device (patent protected)
- **CLC** – Chlorine Cleaning
- **HD** – Hydrostatic Testing (100%) (MSS-SP-61)
- **OC** – Oxygen Cleaning
- **SG** – Sour Gas meets the requirements of NACE MR0175-latest revision (SS only)
- **SP** – Special Requirements - please specify
## Multi-Port Gauge Valves – M5A Specifications

### Ordering Information – Soft Seat

<table>
<thead>
<tr>
<th>M5A</th>
<th>V</th>
<th>D</th>
<th>S</th>
<th>44L</th>
<th>SG</th>
</tr>
</thead>
</table>

**Packing**
- V – Teflon®

**Seat**
- V – Teflon®
- D – Delrin® (standard)
- E – PEEK
- K – PCTFE¹

**Body Material**
- C – CS, A105
- S – SS, A479-316 SS
- M – Monel® 400
- W – SS, A479-316L

**Connections (Input/Output)**
- 44 – ¹/₂-inch MNPT x (3) ¹/₂-inch FNPT
- 46 – ¾-inch MNPT x (3) ¹/₂-inch FNPT
- C – Male socket weld
- L – Long body (7.75-inch [196.8 mm])
- LL – Extra long body (8.80-inch [223.5 mm])

**Options**
- BL – Bonnet Lock Device (patent protected)
- CLC – Chlorine Cleaning
- HD – Hydrostatic Testing (100%) (MSS-SP-61)
- OC – Oxygen Cleaning
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**Note**
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