## 7000 Series Bronze Globe Valves
### Two-Way Normally Open

#### 1/2 to 2 in. Screwed NPT
- Two-Way Normally Open
- Spring Return
- Stem Up Open

| Flow Type   | Equal %.
|-------------|----------
| Body        | Bronze.  
| Seat        | Bronze.  
| Stem        | Stainless steel.  
| Plug        | Brass.  
| Packing     | Spring loaded EPDM and TFE.  
| Disc        | Composition.  
| ANSI Pressure Class | 250 psig (1723 kPa).  
| Max. Inlet Pressure Steam | 35 psig (240 kPa).  
| Allowable Control Media Temperature | 20 to 281 °F (-7 to 138 °C).  
| Differential Pressure psi (kPa) |  

#### Material
- **Body**: Bronze.  
- **Seat**: Bronze.  
- **Stem**: Stainless steel.  
- **Plug**: Brass.  
- **Packing**: Spring loaded EPDM and TFE.  
- **Disc**: Composition.  

#### ANSI Pressure Class
- 250 psig (1723 kPa).  

#### Max. Inlet Pressure Steam
- 35 psig (240 kPa).  

#### Allowable Control Media Temperature
- 20 to 281 °F (-7 to 138 °C).  

#### Differential Pressure psi (kPa)
- **Water**: 35 (241).  
- **Steam**: 20 (138).  

#### Close-Off Rating
- ANSI IV (0.01% leakage)

### Two-Way Normally Open Assemblies

<table>
<thead>
<tr>
<th>Size</th>
<th>Cv (Kv)</th>
<th>Close-Off Pressure psi (kPa)</th>
<th>Two Position</th>
<th>Three Wire Floating 24 Vac</th>
<th>Proportionala 2-10 Vdc or 4-20 ma</th>
<th>Voltage Vac</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>0.4 (0.34)</td>
<td>250 (1723)</td>
<td>VA-7213-801-4-01</td>
<td>—</td>
<td>—</td>
<td>120</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>VA-7213-804-4-01</td>
<td>VF-7213-804-4-01</td>
<td>VS-7213-804-4-01</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>1.3 (1.1)</td>
<td></td>
<td>VA-7213-801-4-02</td>
<td>—</td>
<td>—</td>
<td>120</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>VA-7213-804-4-02</td>
<td>VF-7213-804-4-02</td>
<td>VS-7213-804-4-02</td>
<td>24</td>
</tr>
<tr>
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<td>2.2 (1.9)</td>
<td></td>
<td>VA-7213-801-4-03</td>
<td>—</td>
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<td>120</td>
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<td>VA-7213-804-4-03</td>
<td>VF-7213-804-4-03</td>
<td>VS-7213-804-4-03</td>
<td>24</td>
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<td>4.4 (3.8)</td>
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<td>VA-7213-801-4-04</td>
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<td>120</td>
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<td>VA-7213-804-4-04</td>
<td>VF-7213-804-4-04</td>
<td>VS-7213-804-4-04</td>
<td>24</td>
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<tr>
<td>3/4</td>
<td>5.5 (4.7)</td>
<td>200 (1379)</td>
<td>VA-7213-801-4-05</td>
<td>—</td>
<td>—</td>
<td>120</td>
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<tr>
<td></td>
<td>7.5 (6.5)</td>
<td></td>
<td>VA-7213-804-4-05</td>
<td>VF-7213-804-4-05</td>
<td>VS-7213-804-4-05</td>
<td>24</td>
</tr>
<tr>
<td>1</td>
<td>10 (8.6)</td>
<td>150 (1034)</td>
<td>VA-7213-801-4-07</td>
<td>—</td>
<td>—</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>14 (12)</td>
<td></td>
<td>VA-7213-804-4-07</td>
<td>VF-7213-804-4-07</td>
<td>VS-7213-804-4-07</td>
<td>24</td>
</tr>
<tr>
<td>1-1/4</td>
<td>20 (17.3)</td>
<td>90 (620.5)</td>
<td>VA-7213-801-4-09</td>
<td>—</td>
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<td>120</td>
</tr>
<tr>
<td>1-1/2</td>
<td>28 (21.2)</td>
<td>60 (413.6)</td>
<td>VA-7213-801-4-10</td>
<td>—</td>
<td>—</td>
<td>120</td>
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<tr>
<td>2</td>
<td>40 (34.6)</td>
<td>32 (222.6)</td>
<td>VA-7213-801-4-11</td>
<td>—</td>
<td>—</td>
<td>120</td>
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#### Higher Close Off

<table>
<thead>
<tr>
<th>Size</th>
<th>Cv (Kv)</th>
<th>Close-Off Pressure psi (kPa)</th>
<th>Two Position</th>
<th>Three Wire Floating 24 Vac</th>
<th>Proportionala 2-10 Vdc or 4-20 ma</th>
<th>Voltage Vac</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/4</td>
<td>20 (17.3)</td>
<td>150 (1034)</td>
<td>VA-7213-592-4-09</td>
<td>—</td>
<td>—</td>
<td>120</td>
</tr>
<tr>
<td>1-1/2</td>
<td>28 (21.2)</td>
<td>100 (689.5)</td>
<td>VA-7213-592-4-10</td>
<td>—</td>
<td>—</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>40 (34.6)</td>
<td>60 (413.6)</td>
<td>VA-7213-592-4-11</td>
<td>—</td>
<td>—</td>
<td>120</td>
</tr>
</tbody>
</table>

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a Factory proportional control signal is direct-acting. An increase in control signal will open a N.C. valve and close a N.O. valve.
7000 Series Globe Valve Actuator Product Range
Spring Return

Mx51-7103 Series
(804)
TAC DuraDrive®
24 Vac
105 in-lb (11.9 Nm)

Specifications

Connection:
3 ft. (0.9 m) Plenum cable

Housing:
Polymer, NEMA 2

Dimensions:
6-5/16 x 6-3/4 x 3-1/2
(160 x 170 x 90 mm)

Position Indicator:
Visual indicator

Override:
Manual

Control Signal:
MA51-7103-100: Two-position SPST
MF51-7103-100: Floating
MS51-7103-100: 2-10 Vdc

The control signal is factory set for direct action. It can be changed in the field for reverse action.

Voltage:
24 Vac ± 20%
20-30 Vdc

VA @ 60 Hz
MA51-7103-100: 5.3
MF51-7103-100: 6.9
MS51-7103-100: 6.6

Watts @ 60 Hz:
4.7

Auxiliary Switch:
None

Timing (seconds):
Powered <60
Spring return <15

Feedback
MF51 and MS51: 2-10 Vdc

General Instructions:
F-27169

MA51-7100 Series
(801)
TAC DuraDrive®
120 Vac
105 in-lb (11.9 Nm)

Specifications

Connection:
3 ft. (0.9 m) Plenum cable

Housing:
Polymer, NEMA 2

Dimensions:
6-5/16 x 6-3/4 x 3-1/2 (160 x 170 x 90 mm)

Position Indicator:
Visual indicator

Override:
Manual

Control Signal:
MA51-7103-100: Two-position SPST

Voltage:
120 Vac ± 10%

VA @ 60 Hz
7.9

Watts @ 60 Hz:
6.2

Auxiliary Switch:
None

Timing (seconds):
Powered approx. 44
Spring return approx. 19

Feedback
None

General Instructions:
F-27169
Figure 29 MF51-7x03-xxx and MF61-7203.

- Provide overload protection and disconnect as required. If controller uses a full wave power supply and does not provide isolated outputs, a separate transformer must be used.
- Actuators may be wired in parallel. All actuator black wires are connected to the transformer common and all red wires are connected to the hot lead. Power consumption must be observed.
- Cable on some models contains more wires than are used in applications. Only those wires actually used are shown.
- Feedback only available on MF51-7103 models.

Figure 30 MF51-7x03-xxx, MF61-7203 Triac Source.

- Provide overload protection and disconnect as required. If controller uses a full wave power supply and does not provide isolated outputs, a separate transformer must be used.
- Actuators may be wired in parallel. All actuator black wires are connected to the transformer common and all red wires are connected to the hot lead. Power consumption must be observed.
- Cable on some models contains more wires than are used in applications. Only those wires actually used are shown.
- Feedback only available on MF51-7103 models.

Figure 31 MF51-7x03-xxx, MF61-7203 Triac Sink.

- Provide overload protection and disconnect as required. If controller uses a full wave power supply and does not provide isolated outputs, a separate transformer must be used.
- The Common connection from the actuator must be connected to the Hot connection of the controller. The actuator Hot must be connected to the controller Common.
- Cable on some models contains more wires than are used in applications. Only those wires actually used are shown.
- Feedback only available on MF51-7103 models.
Provide overload protection and disconnect as required. If controller uses a full wave power supply and does not provide isolated outputs, a separate transformer must be used.

Actuators may be wired in parallel. All actuator black wires are connected to the transformer common and all red wires are connected to the hot lead. Power consumption must be observed.

Feedback only available on MF51-7103 models.

Cable on some models contains more wires than are used in applications. Only those wires actually used are shown.

Figure 32 MF51-7x03-xxx, MF61-7203 Triac Sink with Separate Transformers.

Figure 33 MF-63123-411 (MF-63123 with MFC-420 Card) 4 to 20 mA Input.
### Dimensions — 1/2” to 2” Globe Valve Assemblies

<table>
<thead>
<tr>
<th>Valve Assembly Part Number</th>
<th>Valve Dimensions in inches (millimetres)</th>
<th>2-Way (Refer to Figure 72)</th>
<th>3-Way (Refer to Figure 73)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>C</td>
<td>E</td>
</tr>
<tr>
<td>NPT 2-Way (N.C.) Vx-7223-8xx-4-P Vx-7253-8xx-4-P Vx-7283-6xx-4-P</td>
<td>1/2</td>
<td>3-1/16 (78)</td>
<td>1-3/16 (30)</td>
</tr>
<tr>
<td></td>
<td>3/4</td>
<td>3-5/8 (92)</td>
<td>1-3/16 (30)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4-5/8 (118)</td>
<td>1-3/4 (44)</td>
</tr>
<tr>
<td></td>
<td>1-1/2</td>
<td>5-3/8 (137)</td>
<td>1-13/16 (46)</td>
</tr>
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<td></td>
<td>2</td>
<td>6-1/8 (156)</td>
<td>2-1/4 (57)</td>
</tr>
<tr>
<td>NPT 2-Way (N.O.) Vx-7213-8xx-4-P Vx-7253-8xx-4-P Vx-7273-6xx-4-P</td>
<td>1/2</td>
<td>3-1/16 (78)</td>
<td>1-3/16 (30)</td>
</tr>
<tr>
<td></td>
<td>3/4</td>
<td>3-5/8 (92)</td>
<td>1-1/16 (27)</td>
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<td>4-5/8 (118)</td>
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<td>1-1/2</td>
<td>5-3/8 (137)</td>
<td>1-1/2 (38)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>6-1/8 (156)</td>
<td>1-9/16 (40)</td>
</tr>
</tbody>
</table>

**Figure 72** Mx51-710x with 1/2 to 2” 2-Way Globe Valve.

**Figure 73** Mx51-710x with 1/2 to 2” 3-Way Globe Valve.