Available For Quick Delivery

Bronze and Stainless Steel 2-Way

SOLENOID VALVES

For Control Of
WATER • OIL • STEAM
AIR • GAS • CRYOGENICS
SOLVENTS • OXYGEN
CORROSIVE FLUIDS

Catalog 3006
Magnatrol Valve Corp.

- Established 1936
- Experienced Dedicated Sales Staff
- Application / Engineering Assistance
- Excellent Product Support
- Quick Delivery

Our continued success has come from manufacturing a top quality product, product support, commitment to service and on-time delivery assuring complete customer satisfaction.

Our Products

Every valve is manufactured and tested in-house following Quality Assurance Standards where production operations are under the control of our dedicated, experienced staff and workforce.

- High Quality Bronze and Stainless Steel Solenoid Valves*
- Pressures up to 500 PSI *
- Temperatures up to 400° F *
- Cryogenic and Oxygen Service Applications
- Normally Closed (Energize to Open)
- Normally Open (Energize to Close)
- Continuous Duty Coils for all AC & DC Voltages
- NO Differential Pressure Required to Open
- Full Port-Internal Pilot Operated or Direct Acting
- 2-Way Straight Thru Design
- Packless Construction

* Custom Engineered Valves, Special Alloys, Temperatures, Pressures and Applications as well as Modifications to Standard Magnatrol Valves are available through Magnatrol’s Clark-Cooper Division. (See bottom of page 3)
BULLETIN 3006-VALVE SELECTION CHART

VALVE SELECTION CHART

(For Fluids/Gases Not Listed And For Special Applications, Consult Factory)

<table>
<thead>
<tr>
<th>Max. Temperature</th>
<th>Up To 212°F</th>
<th>Up To 400°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Bronze</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>Valve Type</td>
<td>D</td>
<td>G/GR</td>
</tr>
<tr>
<td>Page</td>
<td>18</td>
<td>16 &amp; 17</td>
</tr>
<tr>
<td>Max. Diff. Pressure</td>
<td>30 PSI</td>
<td>50 PSI</td>
</tr>
<tr>
<td>Pipe Size Inches</td>
<td>3/8&quot;-2&quot;</td>
<td>1&quot;-3&quot;</td>
</tr>
<tr>
<td>Internal Port Size</td>
<td>Full</td>
<td>Full</td>
</tr>
<tr>
<td>Air</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Brine</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Gas</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Oil</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Solvents</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Water</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Vacuum</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Steam</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Cryogenic</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Oxygen, Liquid</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Oxygen, Gaseous</td>
<td>✥</td>
<td>✥</td>
</tr>
<tr>
<td>Corrosive</td>
<td>✥</td>
<td>✥</td>
</tr>
</tbody>
</table>

Use the chart above to determine suitable types of Magnatrol valves for a given application.

Example: A normally closed 1/2" valve for use on 100 psi steam, there are three types suitable and the final selection can only be made after referring to Bulletins 3006-M, 3006-S and 3006-W on pages 10, 12 and 22 respectively.

Maximum Differential Pressure:
When specifying a valve, the Maximum Differential Pressure must be equal to or greater than the application. Care should be taken not to “over specify” the valve by choosing a valve with a Maximum Differential Pressure that is excessively beyond the application. If you are unsure please consult the factory.

For Custom Engineered Valves, modifications to standard Magnatrol valves and valves that fall outside standard valve capabilities, contact Magnatrol's Clark Cooper Division

2-Way and 3-Way • 1/4” Thru 6”
- Pressures to 10,000
- Fluid Temperatures up to 550°F
- Dirty / Viscous & Corrosive Fluids
- Bronze, 316SS, Monel, Alloy 20 & Hastelloy
- End connections: NPT, Flange, Union, Socket Weld, Butt Weld, Pipe Nipples etc.
- Options: Remote Trip with Manual or Automatic Reset and many others

For Custom Engineered Valves, modifications to standard Magnatrol valves and valves that fall outside standard valve capabilities, contact Magnatrol’s Clark Cooper Division

Clark - Cooper Div.
855 Industrial Highway - #4
Cinnaminson, NJ 08077

Phone: 856 - 829 - 4580 • Fax: 856 - 829 - 7303
Email: techsupport@clarkcooper.com
Web: www.clarkcooper.com
ELECTRICAL CHARACTERISTICS

Coils are stocked for the following voltages:

<table>
<thead>
<tr>
<th>Voltage</th>
<th>6</th>
<th>12</th>
<th>24</th>
<th>32</th>
<th>48</th>
<th>64</th>
<th>75</th>
<th>120</th>
<th>208</th>
<th>240</th>
<th>480</th>
<th>575</th>
</tr>
</thead>
<tbody>
<tr>
<td>50, 60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hertz AC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

75V DC for locomotive applications  * Furnished with surge protecting capacitor

Reference should be made to the Bulletins to determine the availability of a required valve for a specific power supply.

Consult the factory for information regarding voltage and frequencies not listed.

Valves for A.C. service can be converted for use on other A.C. voltages simply by changing the coil. Similarly D.C. valves can be converted for other D.C. voltages. Consult factory regarding conversion from A.C. to D.C. or D.C. to A.C.

CURRENT CONSUMPTION:

Current values shown in the bulletins are for 120 volts, 60 hertz. For other voltages the current is inversely proportional: For instance, if a given valve draws 0.5 amperes on 120 volts it would draw 0.25 amperes on 240 volts, or 0.125 amperes on 480 volts. Where power consumption is shown in D.C. watts, the values given should be divided by line voltage to obtain the current in amperes. Power consumption for all valves is shown in the individual bulletins.

CONSTRUCTION:

Continuous Duty Construction: Coils can be energized continuously without overheating or failure.

Wire Leads: 18” long 18 gauge wire standard (longer continuous leads available)

Encapsulated: Coils are encapsulated for temperature of intended service, providing excellent resistance to shock, moisture, oil and chemicals

COIL CLASS:

<table>
<thead>
<tr>
<th>GENERAL SERVICE - CLASS “B”</th>
<th>HIGH TEMPERATURE - CLASS “H”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Fluid Temperature</td>
<td>Maximum Ambient Temperature</td>
</tr>
<tr>
<td>212°F (° C)</td>
<td>04°F (40°C)</td>
</tr>
<tr>
<td>Maximum Fluid Temperature</td>
<td>Maximum Ambient Temperature</td>
</tr>
<tr>
<td>200°F (206°C)</td>
<td>012°F (100°C)</td>
</tr>
</tbody>
</table>

INSTALLATION:

The coil is a two wire device which may be controlled by either a single or double pole switch. The switch should always be installed in the hot leg of 120 volt circuits. Where both legs are hot, such as 240 or 480 volt circuits, a double pole switch is preferable, however, if a single pole switch is used, then the wiring should have top quality insulation since even minute leakage currents may give rise to sticking problems. On motor hookup with step control starter, full voltage should be supplied to coil immediately.

Note: Coil can be readily changed while valve is still under pressure.
**Valve Construction Features:**

- 2-way straight thru globe design
- Bronze or Stainless Steel body w/ female NPT threads standard
- Stainless Steel available with 150# and 300# flanged ends
- Full port-internal pilot operated or direct acting
- Packless construction
- Continuous duty coils for all voltages
- No differential pressure required to open

**Easy In-Line Service**

Inspect, clean or service all internal parts of full port-internal pilot operated or direct acting solenoid valves while the valve body remains in the pipeline shortening costly down time and increasing productivity.

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**MAGNATROL SOLENOID OPERATED VALVES** are used to control the flow of liquids or gases, generally in conjunction with automatic control apparatus such as thermostat, float switch, time switch, or flow meter.
BULLETIN 3006-N

BRONZE SOLENOID VALVES
Dependable • Packless

TYPE “N” - NORMALLY CLOSED
1/2” TO 3/4” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

DIRECT ACTING - ORIFICE SIZES 3/32” TO 1/2”

OPERATION:
Valve opens when energized and closes when de-energized. In this direct acting valve, when the coil is energized, the stem is lifted from its conical seat by the plunger.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Coil Enclosure - Malleable Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Valve Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - 302 Stainless Steel
*Body Seal - Buna N
*Orifice Seal - Metal to Metal
*AC Shading Coil - Copper
*Stem Pin - Inconel
*Coil - Encapsulated Class B, 18” leads - (Class H available)

APPLICATION:
To control the flow of Water, Oil, Air, Gas, Solvents, Brine, Vacuum and any other fluids not reactive with construction materials and free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

### Pipe Size | Valves
---|---
3/8 | DISCONTINUED – USE 1/2” VALVE WITH BUSHING
1/2 | 3/8 |
25 | 18N22 |
50 | 18N42 |
75 | 18N52 |
100 | 18N82 |
150 | 18N62 |
225 | 18N72 |
1/4 | 3/8 |
50 | 33N22 |
75 | 33N32 |
100 | 33N42 |
150 | 33N52 |
300 | 33N62 |
1/2 |
15 | 1/2 |
35 | 18N13 |
35 | 18N33 |
1/2 |
30 | 1/2 |
50 | 18N33 |
75 | 33N33 |
Optional “Soft Seat” Orifice Seal (for applications requiring tight seating)
Viton - Suitable for Fuel Oils, Gaseous Oxygen and other compatible fluids

FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27
BRONZE SOLENOID VALVES
Dependable • Packless

TYPE “NR” - NORMALLY OPEN
1/2” TO 3/4” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

DIRECT ACTING - ORIFICE SIZES 3/32” TO 1/2”

OPERATION:
Valve closes when energized and opens when de-energized. In this direct acting valve, when the coil is energized, the stem is pressed into its conical seat by the plunger.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Coil Enclosure - Malleable Iron, 1/2" NPS conduit conn.
*Plunger - 430 Stainless Steel
*Poppet - 304 Stainless Steel
*Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Buna N
*Orifice Seal - Metal to Metal
*AC Shading Coil - Copper
*Stem Pin - 304 Stainless Steel
Coil - Encapsulated Class B, 18" leads - (Class H available)

APPLICATION:
To control the flow of Water, Oil, Air, Gas, Solvents, Brine, Vacuum and any other fluids not reactive with construction materials and free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

Optional “Soft Seat” Orifice Seal (for applications requiring tight seating)
Viton - Suitable for Fuel Oils, Gaseous Oxygen and other compatible fluids

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

MAX. FLUID TEMP. 212° F
MAX. STATIC PRESSURE 300 PSI

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Max. Diff. PSI</th>
<th>Valve Port Size</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8</td>
<td></td>
<td></td>
<td></td>
<td>18NR22</td>
<td>25</td>
<td>0.5</td>
<td>1.5</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>1/2</td>
<td></td>
<td></td>
<td></td>
<td>33NR22</td>
<td>45</td>
<td>1.0</td>
<td>2.7</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>3/4</td>
<td></td>
<td></td>
<td></td>
<td>18NR13</td>
<td>25</td>
<td>0.5</td>
<td>1.6</td>
<td>18</td>
<td>7</td>
</tr>
</tbody>
</table>
**BRONZE SOLENOID VALVES**

**Dependable • Packless**

**TYPE “A” FULL PORT - NORMALLY CLOSED**

**1/2” TO 3” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**MAX. FLUID TEMP.**

212° F

**MAX. STATIC PRESSURE**

300 PSI

Except valves listed for 500 PSI

---

**OPERATION:**

Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

**CONSTRUCTION:** (*Wetted parts)

*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Piston - Bronze
*Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Pilot Valve - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Body Seal - Buna N or Non Asbestos Gasket
*Pilot Valve - 303 Stainless Steel
*Plunger - 430 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - 302 Stainless Steel

---

**APPLICATION:**

To control the flow of Water, Oil, Air, Gas, Solvents, Brine, Vacuum and any other fluids not reactive with construction materials and free of sediment. Valve operates from zero to maximum vacuum.

---

**FOR OPTIONS & ACCESSORIES**

SEE PAGES 26 & 27

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**Strainers are recommended for use with solenoid valves**

(See page 19)

---

When you order please supply the following:

- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features

(See pages 26 & 27)

---

†† Not available for DC operation

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**Dimensions In Inches**

**FOR OPTIONS & ACCESSORIES**

SEE PAGES 26 & 27

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Magnatrol Valve Corporation • P.O. Box 17 • 67 Fifth Avenue • Hawthorne • New Jersey • 07507

info@magnatrol.com • Phone: 973-427-4341 • Fax: 973-427-7611 • www.magnatrol.com
OPERATION:
Valve closes when energized and opens when de-energized. When the coil is energized the plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving the pressure above the piston allowing it to leave its seat. The bottom spring allows the valve to operate at zero pressure drop.

CONSTRUCTION:
* Valve Body - Cast Bronze, Globe Pattern - NPT ends
* Piston - Bronze
* Coil Enclosure - Malleable or Cast Iron, 1/2" NPS conduit conn.
* Plunger - 430 Stainless Steel
* Bonnet Tube - 304 Stainless Steel
* Pilot Valve - 303 Stainless Steel
* Spring - 302 Stainless Steel
* Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
* AC Shading Coil - Copper
* Stem Pin - Inconel
* DC operation

APPLICATION:
To control the flow of Water, Oil, Air, Gas, Solvents, Brine, Vacuum and any other fluids not reactive with construction materials and free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

<table>
<thead>
<tr>
<th>Pipe Size Inches</th>
<th>Max Diff. PSI</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>110 200 300</td>
<td>18AR42</td>
<td>25</td>
<td>0.5</td>
<td>1.5</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>E33AR62</td>
<td>45</td>
<td>1.0</td>
<td>2.7</td>
<td>23</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>3/4</td>
<td>50 110</td>
<td>18AR23</td>
<td>25</td>
<td>0.5</td>
<td>1.6</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>200 300</td>
<td>33AR33</td>
<td>45</td>
<td>1.0</td>
<td>2.9</td>
<td>23</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>E133AR63</td>
<td>65</td>
<td>1.5</td>
<td>4.3</td>
<td>33</td>
<td>18</td>
</tr>
<tr>
<td>1</td>
<td>50 110</td>
<td>18AR24</td>
<td>25</td>
<td>1.0</td>
<td>1.8</td>
<td>18</td>
<td>11</td>
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<tr>
<td></td>
<td>200 300</td>
<td>33AR34</td>
<td>45</td>
<td>1.0</td>
<td>3.0</td>
<td>23</td>
<td>14</td>
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<td>4.5</td>
<td>33</td>
<td>19</td>
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<td>50 110</td>
<td>18AR25</td>
<td>25</td>
<td>1.0</td>
<td>1.9</td>
<td>18</td>
<td>13</td>
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<td></td>
<td>200 300</td>
<td>33AR35</td>
<td>45</td>
<td>1.0</td>
<td>3.2</td>
<td>23</td>
<td>17</td>
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<td>60</td>
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<td>6.2</td>
<td>N/A</td>
<td>21</td>
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<tr>
<td>1-1/2</td>
<td>50 115</td>
<td>35AR26</td>
<td>45</td>
<td>1.0</td>
<td>3.8</td>
<td>23</td>
<td>21</td>
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<tr>
<td></td>
<td>200 300</td>
<td>41AR36</td>
<td>60</td>
<td>1.7</td>
<td>6.5</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>141AR66</td>
<td>85</td>
<td>3.5</td>
<td>9.7</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>50 100</td>
<td>36AR27</td>
<td>45</td>
<td>1.0</td>
<td>4.2</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>200 300</td>
<td>42AR37</td>
<td>60</td>
<td>1.7</td>
<td>7.3</td>
<td>35</td>
<td>36</td>
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<td></td>
<td>500</td>
<td>142AR67</td>
<td>85</td>
<td>3.5</td>
<td>11.0</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>2-1/2</td>
<td>50 125 200</td>
<td>43AR28</td>
<td>60</td>
<td>1.7</td>
<td>8.0</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>43AR38</td>
<td>85</td>
<td>3.5</td>
<td>13.0</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>50 100 200</td>
<td>44AR29</td>
<td>60</td>
<td>1.7</td>
<td>8.8</td>
<td>35</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>144AR59</td>
<td>85</td>
<td>3.5</td>
<td>13.0</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

MAX. FLUID TEMP. 212° F
MAX. STATIC PRESSURE 300 PSI
Except valves listed for 500 PSI

FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

†† Not available for DC operation
**BRONZE SOLENOID VALVES**

Dependable • Packless

**TYPE “M” - NORMALLY CLOSED**

3/8” TO 3/4” PIPE SIZE

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

**DIRECT ACTING - ORIFICE SIZES 1/8” TO 1/2”**

**OPERATION:**
Valve opens when energized and closes when de-energized. In this direct acting valve, when the coil is energized, the stem is lifted from its conical seat by the plunger.

**CONSTRUCTION:** (*Wetted parts*)
- Valve Body - Cast Bronze, Globe Pattern - NPT ends
- Coil Enclosure - Malleable Iron, 1/2” NPS conduit conn.
- Plunger - 430 Stainless Steel
- Valve Stem - 303 Stainless Steel
- Body Seal - Non Asbestos Gasket
- Orifice Seal - Metal to Metal
- AC Shading Coil - Copper
- Stem Pin - Inconel
- Valve Body - Encapsulated Class H, 18” leads

**APPLICATION:**
To control the flow of Steam, Hot Liquids, Hot Gases, Cryogenics** and any other fluids not reactive with construction materials and free of sediment. Cryogenic fluids include Liquid Oxygen (-297°F), Liquid Argon (-303°F) and Liquid Nitrogen (-320°F). Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

**Cleaning:**
- Cryogenic valves are degreased and cleaned to keep them free of moisture.
- Oxygen valves are also “black light” tested.

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
<td>25</td>
<td>25</td>
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<td>1.1</td>
<td>18</td>
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<td>50</td>
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<td></td>
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</tr>
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<td>150</td>
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<td>6</td>
<td>1/4</td>
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<td>1-1/2</td>
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<td></td>
</tr>
</tbody>
</table>

Optional “Soft Seat” Orifice Seal (for applications requiring tight seating)

**Viton** - Suitable for Fuel Oils, Gaseous Oxygen and other compatible fluids

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**FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27**
BULLETIN 3006-MR

BRONZE SOLENOID VALVES
Dependable • Packless

TYPE “MR” - NORMALLY OPEN
3/8” TO 3/4” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

DIRECT ACTING - ORIFICE SIZES 1/8” TO 1/2”

OPERATION:
Valve closes when energized and opens when de-energized. In this direct acting valve, when the coil is energized, the stem is pressed into its conical seat by the plunger.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Coil Enclosure - Malleable Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Poppet - 304 Stainless Steel
*Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Metal to Metal
*AC Shading Coil - Copper
*Stem Pin - Inconel
Coil - Encapsulated Class H, 18” leads

APPLICATION:
To control the flow of Steam, Hot Liquids, Hot Gases, Cryogenics** and any other fluids not reactive with construction materials and free of sediment. Cryogenic fluids include Liquid Oxygen (-297°F), Liquid Argon (-303°F) and Liquid Nitrogen (-320°F). Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

Cleaning:
· Cryogenic valves are degreased and cleaned to keep them free of moisture.
· Oxygen valves are also “black light” tested.

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Max. Diff. PSI</th>
<th>Valve Port Size</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions in Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>3/8</td>
<td>1/4</td>
<td>45</td>
<td>0.5</td>
<td>1.4</td>
<td>18</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>70</td>
<td>3/8</td>
<td>1/4</td>
<td>90</td>
<td>0.5</td>
<td>1.4</td>
<td>18</td>
<td>7</td>
<td>7</td>
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<tr>
<td>133</td>
<td>3/8</td>
<td>1/4</td>
<td>25MR21</td>
<td>0.5</td>
<td>1.4</td>
<td>18</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

**Cleaning:
· Cryogenic valves are degreased and cleaned to keep them free of moisture.
· Oxygen valves are also “black light” tested.

Optional “Soft Seat” Orifice Seal (for applications requiring tight seating)
Viton - Suitable for Fuel Oils, Gaseous Oxygen and other compatible fluids
† UL Listed Valves - Consult Factory

MAGNATROL VALVE CORPORATION
Magnatrol Valve Corporation • P.O. Box 17 • 67 Fifth Avenue • Hawthorne • New Jersey • 07507
info@magnatrol.com • Phone: 973-427-4341 • Fax: 973-427-7611 • www.magnatrol.com
TYPE “S” FULL PORT - NORMALLY CLOSED
1/2” TO 3” PIPE SIZE

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION:
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Piston - Bronze
Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Pilot Valve - 303 Stainless Steel
*Bonnet Tube - 303 Stainless Steel
*AC Shading Coil - Copper
*Stem Pin - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Glass Filled Teflon

APPLICATION:
TO CONTROL THE FLOW OF STEAM. Steam must be free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

MAGNATROL VALVE CORPORATION
120-60 Inrush Amps
Strainers are recommended for use with solenoid valves
(See page 19)
When you order please supply the following:
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

† UL Listed Valves - Consult Factory
†† Not available for DC operation
**TYPE “SR” FULL PORT - NORMALLY OPEN**

**1/2” TO 3” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**OPERATION:**
Valve closes when energized and opens when de-energized. When the coil is energized the plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving the pressure above the piston allowing it to leave its seat. The bottom spring allows the valve to operate at zero pressure drop.

**CONSTRUCTION:** (*Wetted parts*)
- Valve Body - Cast Bronze, Globe Pattern - NPT ends
- Piston - Bronze
- Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
- Plunger - 430 Stainless Steel
- Body Seal - Non Asbestos Gasket
- Orifice Seal - Glass Filled Teflon
- AC Shading Coil - Copper
- Stem Pin - 304 Stainless Steel
- Bonnet Tube - 304 Stainless Steel
- Stem - 303 Stainless Steel
- Poppet - 303 Stainless Steel
- Piston - Bronze
- Valve Body - Cast Bronze, Globe Pattern - NPT ends
- Pipe Size - 1/2 to 3”
- Max. Fluid Temp. - 400° F
- Max. Static Pressure - 200 PSI

**APPLICATION:**
To control the flow of steam. Steam must be free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

**FOR OPTIONS & ACCESSORIES**
See pages 26 & 27

### Pipe Size

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Watts Hold</th>
<th>Amps</th>
<th>Inrush</th>
<th>Watts</th>
<th>Ship Lbs.</th>
<th>Dimension In Inches</th>
<th>Max Diff. PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>145R22</td>
<td>25</td>
<td>0.5</td>
<td>1.5</td>
<td>18</td>
<td>8</td>
<td>8-1/8</td>
</tr>
<tr>
<td>141R42</td>
<td>40</td>
<td>0.8</td>
<td>2.4</td>
<td>28</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>140</td>
<td>65</td>
<td>1.5</td>
<td>4.3</td>
<td>33</td>
<td></td>
<td></td>
<td>2-7/8</td>
</tr>
</tbody>
</table>

**Strainers are recommended for use with solenoid valves**
(See page 19)

**When you order please supply the following:**
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

* UL Listed Valves - Consult Factory  †† Not available for DC operation
### OPERATION:
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

### CONSTRUCTION: (*Wetted parts*)
- **Valve Body** - Cast Bronze, Globe Pattern - NPT ends
- **Piston** - Bronze
- **Coil Enclosure** - Malleable or Cast Iron, 1/2" NPT conduit conn.
- **Plunger** - 430 Stainless Steel
- **Bonnet Tube** - 304 Stainless Steel
- **Body Seal** - Non Asbestos Gasket
- **Orifice Seal** - Glass Filled Teflon
- **AC Shading Coil** - Copper
- **Stem Pin** - Inconel
- **AC Shading Coil Enclosure** - Malleable or Cast Iron, 1/2" NPT conduit conn.
- **Piston** - Bronze
- **Valve Body** - Cast Bronze, Globe Pattern - NPT ends

**FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27**

### APPLICATION:
To control the flow of Hot Liquids, Hot Gases, Cryogenics** and any other fluids not reactive with construction materials and free of sediment. Cryogenic fluids include Liquid Oxygen (-297°F), Liquid Argon (-303°F) and Liquid Nitrogen (-320°F). Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

### TABLE: 1/2" TO 3" PIPE SIZE

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Watts AC</th>
<th>Amps Inrush 120-60</th>
<th>Ship Wt. Lbs.</th>
<th>Watts DC</th>
<th>Max. Diff.</th>
<th>Max. Static Pressure</th>
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</thead>
<tbody>
<tr>
<td>1/2</td>
<td>110</td>
<td>25</td>
<td>4</td>
<td>1</td>
<td>1.2</td>
<td>18</td>
</tr>
<tr>
<td>200</td>
<td>14L42</td>
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<td>0.8</td>
<td>2.4</td>
<td>23</td>
<td>33</td>
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<tr>
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<td>29L53</td>
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<td>2.4</td>
<td>23</td>
<td>33</td>
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<td>2.4</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>3/4</td>
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<td>18</td>
<td>9</td>
</tr>
<tr>
<td>110</td>
<td>14L23</td>
<td>45</td>
<td>0.8</td>
<td>2.6</td>
<td>23</td>
<td>33</td>
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<td>3.9</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
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<td>E12L63</td>
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<td>3.9</td>
<td>33</td>
<td>33</td>
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<tr>
<td>1</td>
<td>50</td>
<td>25</td>
<td>0.4</td>
<td>1.6</td>
<td>18</td>
<td>12</td>
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<tr>
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<td>2.8</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
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<td>4.2</td>
<td>33</td>
<td>33</td>
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<td>33</td>
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<td>4.2</td>
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<td>33</td>
</tr>
<tr>
<td>1-1/4</td>
<td>50</td>
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<td>0.4</td>
<td>1.6</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>115</td>
<td>17L55</td>
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<td>3.0</td>
<td>33</td>
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</tr>
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<td>4.5</td>
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<td>4.5</td>
<td>33</td>
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</tr>
<tr>
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<td>9.2</td>
<td>N/A</td>
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<tr>
<td>1-1/2</td>
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<td>45</td>
<td>0.8</td>
<td>3.2</td>
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<td>11.0</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>45</td>
<td>0.8</td>
<td>3.5</td>
<td>23</td>
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<td>7.4</td>
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<td>500</td>
<td>142L67</td>
<td>85</td>
<td>2.0</td>
<td>11.0</td>
<td>45</td>
<td>36</td>
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<td>85</td>
<td>2.0</td>
<td>13.0</td>
<td>45</td>
<td>36</td>
</tr>
</tbody>
</table>

**†† Not available for DC operation**

**‡‡ Not available for DC operation**
15

**CLEANING**
- Cryogenic valves are degreased & cleaned to keep them free of moisture.
- Oxygen valves are also “black light” tested.

Strainers are recommended for use with solenoid valves (See page 19)

When you order please supply the following:
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)
**TYPE “G” FULL PORT - NORMALLY CLOSED**

**1” TO 3” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**OPERATION:**
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

**CONSTRUCTION:**
- (*) Wetted parts
  - Valve Body - Cast Bronze, Globe Pattern - NPT ends
  - Piston - Bronze
  - Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
  - Plunger - 430 Stainless Steel
  - Pilot Valve Stem - 303 Stainless Steel
  - Pilot Valve Disc Holder - Brass
  - Pilot Valve Seal - Buna N (Viton available)
  - Bonnet Tube - 304 Stainless Steel
  - Spring - 302 Stainless Steel
  - Body Seal - Buna N or Non Asbestos Gasket
  - Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
  - AC Shading Coil - Copper
  - Stem Pin - Inconel

- Coil - Encapsulated Class B, 18” leads - (Class H available)

**APPLICATION:**
To control the flow of Water, Air, Gas, Solvents, Vacuum and any other fluids not reactive with construction materials and free of sediment. Buna N seating of the pilot and main orifices make the valves ideal for TIGHT SEATING, LOW PRESSURE and LOW FLOW conditions. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

**FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27**

---

### Table: BRONZE SOLENOID VALVES

<table>
<thead>
<tr>
<th>Pipe Size (Inches)</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimension In Inches</th>
<th>Di(Flanged) 150#</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>18G24</td>
<td>25</td>
<td>0.4</td>
<td>1.4</td>
<td>9</td>
<td>9</td>
<td>7-1/2</td>
<td>6-1/8</td>
</tr>
<tr>
<td>1</td>
<td>18G24</td>
<td>40</td>
<td>0.6</td>
<td>2.3</td>
<td>9</td>
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<td>7-1/8</td>
</tr>
<tr>
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<td>65</td>
<td>1.2</td>
<td>4.0</td>
<td>13</td>
<td>13</td>
<td>7-1/2</td>
<td>3-1/2</td>
</tr>
<tr>
<td>1-1/4</td>
<td>18G25</td>
<td>25</td>
<td>0.4</td>
<td>1.5</td>
<td>18</td>
<td>18</td>
<td>8</td>
<td>6-3/8</td>
</tr>
<tr>
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<td>3-1/8</td>
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<td>3-3/4</td>
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<td>1.2</td>
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<td>3-3/4</td>
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</tr>
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<td>13</td>
<td>6-5/8</td>
</tr>
</tbody>
</table>

† UL Listed Valves - Consult Factory

**WHEN YOU ORDER PLEASE SUPPLY THE FOLLOWING:**
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features

(See pages 26 & 27)
**BRONZE SOLENOID VALVES**

**Dependable • Packless**

**TYPE “GR” FULL PORT - NORMALLY OPEN**

**1” TO 3” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**OPERATION:**
Valve closes when energized and opens when de-energized. When the coil is energized the plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving the pressure above the piston allowing it to leave its seat. The bottom spring allows the valve to operate at zero pressure drop.

**CONSTRUCTION:** (*Wetted parts*)
- Valve Body - Cast Bronze, Globe Pattern - NPT ends
- Piston - Bronze
- Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
- Plunger - 430 Stainless Steel
- Pilot Valve Stem - 303 Stainless Steel
- Pilot Valve Disc Holder - Brass
- Pilot Valve Seal - Buna N (Viton available)
- Bonnet Tube - 304 Stainless Steel
- Spring - 302 Stainless Steel
- Body Seal - Buna N or Non Asbestos Gasket
- Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
- AC Shading Coil - Copper
- Stem Pin - Inconel

**APPLICATION:**
To control the flow of Water, Air, Gas, Solvents, Vacuum and any other fluids not reactive with construction materials and free of sediment. Buna N seating of the pilot and main orifices make the valves ideal for TIGHT SEATING, LOW PRESSURE and LOW FLOW conditions. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

**FOR OPTIONS & ACCESSORIES**
SEE PAGES 26 & 27

**MAX. FLUID TEMP.**
212° F

**MAX. STATIC PRESSURE**
150 PSI

**When you order please supply the following:**
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features

(See pages 26 & 27)

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Max. Diff. Pressure</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimension In Inches</th>
</tr>
</thead>
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<td></td>
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<td>A</td>
</tr>
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<td>9</td>
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<td>9-5/8 8-1/4 2-3/4 4-1/8</td>
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<td>10</td>
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<td>† 18GR26</td>
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<td>33GR26</td>
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</tr>
<tr>
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<td>1.0</td>
<td>23</td>
<td>21</td>
<td>11-1/4 9-1/4 3-3/4 5-3/4 10</td>
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<td>47</td>
<td>13-5/8 10-5/8 6-5/8 8 13-5/16</td>
</tr>
</tbody>
</table>

† UL Listed Valves - Consult Factory
BULLETIN 3006-D

BRONZE SOLENOID VALVES
Dependable • Packless

TYPE “D” FULL PORT - NORMALLY CLOSED
3/8” TO 2” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION:
Valve opens when energized and closes when de-energized. In this direct acting valve the disc holder assembly is lifted from its seat by the plunger.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Disc Holder - Brass
Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Body Seal - Buna N
*Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
*AC Shading Coil - Copper
*Stem Pin - Inconel
Coil - Encapsulated Class B, 18” leads - (Class H available)

APPLICATION:
To control the flow of Water, Air, Gas, Solvents, Vacuum and any other fluids not reactive with construction materials and free of sediment. Buna N seating of the main orifice make the valves ideal for TIGHT SEATING, LOW PRESSURE and LOW FLOW conditions. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

† UL Listed Valves - Consult Factory
APPLICATION:
The presence of foreign particles in an automatic valve may seriously affect its dependability. The installation of a strainer close to the inlet side of the valve is the best means of preventing the entrance of pipe chips, scale, rust, pipe dope, welding slag or sediment into the valve, provided the screen is periodically removed for cleaning.

CONSTRUCTION:
Strainer bodies have screwed ends. Screens are stainless steel with opening sizes as listed in tables below. Other sizes can be furnished upon request. Liberal straining area provides for fluid passage at minimum pressure drop. Screens are easily removed for cleaning. Strainers are furnished with NPT blow-off connections unplugged. See charts below for blow-off sizes (C Dim.)

CLEANING FOR CRYOGENIC & OXYGEN SERVICE:
- Strainers for Cryogenic applications are degreased and cleaned to keep them free of moisture.
- Strainers for Oxygen service are degreased and cleaned then “black light” tested.

### BRONZE 1/4” TO 3” PIPE SIZE

<table>
<thead>
<tr>
<th>Pipe Size Inches</th>
<th>Screen Size</th>
<th>Type No.</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>60 Mesh</td>
<td>BR 0</td>
<td>3/4</td>
<td>A: 2-3/4 B: 2-1/4 C: 1/4</td>
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<tr>
<td>3/8</td>
<td>60 Mesh</td>
<td>BR 1</td>
<td>3/4</td>
<td>A: 2-3/4 B: 2-1/4 C: 1/4</td>
</tr>
<tr>
<td>1/2</td>
<td>60 Mesh</td>
<td>BR 2</td>
<td>3/4</td>
<td>A: 2-3/4 B: 2-1/4 C: 1/4</td>
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<td>60 Mesh</td>
<td>BR 3</td>
<td>1-1/2</td>
<td>A: 3 B: 2-9/16 C: 3/8</td>
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<tr>
<td>1</td>
<td>60 Mesh</td>
<td>BR 4</td>
<td>2-1/4</td>
<td>A: 3-3/4 B: 2-3/4 C: 3/8</td>
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<tr>
<td>1-1/4</td>
<td>0.16 Diameter Perforations Lined With 30 Mesh</td>
<td>BR 5</td>
<td>3-1/4</td>
<td>A: 4-7/16 B: 3-5/8 C: 3/4</td>
</tr>
<tr>
<td>1-1/2</td>
<td>0.16 Diameter Perforations Lined With 30 Mesh</td>
<td>BR 6</td>
<td>4-1/2</td>
<td>A: 4-15/16 B: 3-7/8 C: 3/4</td>
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<td>0.16 Diameter Perforations Lined With 30 Mesh</td>
<td>BR 7</td>
<td>7</td>
<td>A: 6-1/8 B: 5-1/16 C: 1</td>
</tr>
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<td>2-1/2</td>
<td>0.16 Diameter Perforations Lined With 30 Mesh</td>
<td>BR 8</td>
<td>12-1/2</td>
<td>A: 8-1/4 B: 6 C: 1-1/4</td>
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<td>3</td>
<td></td>
<td>BR 9</td>
<td>18</td>
<td>A: 9 B: 6-3/4 C: 1-1/2</td>
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</table>

### STAINLESS STEEL 1/2” TO 2” PIPE SIZE

<table>
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<tr>
<th>Pipe Size Inches</th>
<th>Screen Size</th>
<th>Type No.</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>60 Mesh 0.009 Openings</td>
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<td>A: 3 B: 2-3/8 C: 1/4</td>
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<tr>
<td>3/4</td>
<td>60 Mesh 0.009 Openings</td>
<td>SS 3</td>
<td>2-1/4</td>
<td>A: 3-3/4 B: 2-13/16 C: 3/8</td>
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<tr>
<td>1</td>
<td>60 Mesh 0.009 Openings</td>
<td>SS 4</td>
<td>3-1/4</td>
<td>A: 4-5/8 B: 3-1/8 C: 3/8</td>
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<tr>
<td>1-1/2</td>
<td>0.16 Diameter Perforations Lined w/30 Mesh</td>
<td>SS 5</td>
<td>6-3/4</td>
<td>A: 5-5/8 B: 4-3/4 C: 3/4</td>
</tr>
<tr>
<td>2</td>
<td>0.16 Diameter Perforations Lined w/30 Mesh</td>
<td>SS 6</td>
<td>11-1/2</td>
<td>A: 7 B: 6 C: 1</td>
</tr>
</tbody>
</table>

### PRESSURE TEMPERATURE RATINGS

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<th>MATERIAL</th>
<th>STEAM</th>
<th>LIQUIDS</th>
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<tbody>
<tr>
<td>BRONZE</td>
<td>300 PSI @ 400°F</td>
<td>600 PSI @ 100°F</td>
</tr>
<tr>
<td>STAINLESS STEEL</td>
<td>845 PSI @ 750°F</td>
<td>1,440 PSI @ 100°F</td>
</tr>
</tbody>
</table>
BULLETIN 3006-J
STAINLESS STEEL SOLENOID VALVES
Dependable • Packless

TYPE “J” - NORMALLY CLOSED
3/8” TO 1/2” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

DIRECT ACTING - ORIFICE SIZES 1/8” TO 3/8”

OPERATION:
Valve opens when energized and closes when de-energized. In this direct acting valve, when the coil is energized, the stem is lifted from its conical seat by the plunger.

CONSTRUCTION: (*Wetted parts)
*Valve Body - 304 Stainless Steel Globe Pattern - NPT ends
*Coil Enclosure - Malleable Iron, 1/2" NPT conduit conn.
*Plunger - 430 Stainless Steel
*Valve Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Metal to Metal
*AC Shading Coil - Silver
*Stem Pin - Inconel
  • Encapsulated Class H, 18” leads

APPLICATION:
To control the flow of Steam, Hot Liquids, Hot Gases, Cryogenics and any other fluids not reactive with construction materials and free of sediments. Cryogenic fluids include liquid oxygen (-297ºF), liquid argon (-303ºF) and liquid nitrogen (-320ºF). Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

FOR OPTIONS AND ACCESSORIES
SEE PAGES 26 & 27

Optional “Soft Seat” Orifice Seal:
(for applications requiring tight seating):

• Viton - Suitable for Fuel Oils, Gaseous Oxygen and other compatible fluids

** CLEANING
• Cryogenic valves are degreased & cleaned to keep them free of moisture.
• Oxygen valves are also “black light” tested.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)
BULLETIN 3006-JR

STAINLESS STEEL SOLENOID VALVES
Dependable • Packless

TYPE “JR” - NORMALLY OPEN
3/8” TO 1/2” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

DIRECT ACTING - ORIFICE SIZES 1/8” TO 3/8”

OPERATION:
Valve closes when energized and opens when de-energized. In this direct acting valve, when the coil is energized, the stem is pressed into its conical seat by the plunger.

CONSTRUCTION: (*Wetted parts)
*Valve Body - 304 Stainless Steel Globe Pattern - NPT ends
*Coil Enclosure - Malleable Iron, 1/2” NPT conduit conn.
*Plunger - 430 Stainless Steel
*Poppet - 304 Stainless Steel
*Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Metal to Metal
*AC Shading Coil - Silver
*Stem Pin - Inconel
Coil - Encapsulated Class H, 18” leads

APPLICATION:
To control the flow of Steam, Hot Liquids, Hot Gases, Cryogenics and any other fluids not reactive with construction materials and free of sidement. Cryogenic fluids include liquid oxygen (-297°F), liquid argon (-303°F) and liquid nitrogen (-320°F). Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

** CLEANING
- Cryogenic valves are degreased & cleaned to keep them free of moisture.
- Oxygen valves are also “black light” tested.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Max. Diff. PSI</th>
<th>Valve Port Size</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
</tr>
</thead>
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<td>23</td>
<td>3/8</td>
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<td>2.6</td>
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<td>45</td>
<td>1.0</td>
<td>2.7</td>
<td>23</td>
</tr>
</tbody>
</table>

Optional “Soft Seat” Orifice Seal:
(for applications requiring tight seating):
- Viton - Suitable for Fuel Oils, Gaseous Oxygen and other compatible fluids
**TYPE “K” FULL PORT - NORMALLY CLOSED**

**1/2” TO 3” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**OPERATION:**
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

**CONSTRUCTION:**
- (*Wetted parts - No Copper Bearing Alloys in contact with fluid)*
  - Valve Body - 304 Stainless Steel Globe Pattern - NPT ends
  - (For Flanged Ends see Options page 24)
  - Piston - 303 Stainless Steel
  - Coil Enclosure - Malleable or Cast Iron, 1/2 " NPS conduit conn.
  - Pilot Valve - 303 Stainless Steel
  - Bonnet Tube - 304 Stainless Steel
  - Spring - Inconel
  - Body Seal - Non Asbestos Gasket
  - Orifice Seal - Glass Filled Teflon
  - AC Shading Coil - Silver
  - Stem Pin - Inconel
  - Coil - Encapsulated Class H, 18” leads

**APPLICATION:**
To control the flow of Corrosive Fluids, Deionized Water, Condensate, Ammonias, Vegetable Oils, Fuel Oils, Cryogenics**, Flammable Liquids. Cryogenic fluids include liquid oxygen (-297ºF), liquid argon (-303ºF) and liquid nitrogen (-320 ºF). Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

**FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27**

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Max. Diff. PSI</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
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<td>81</td>
<td>13-3/4</td>
</tr>
</tbody>
</table>

**FOR STEAM APPLICATIONS SEE BULLETIN 3006-W**

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****CLEANING**
- Cryogenic valves are degreased & cleaned to keep them free of moisture.
- Oxygen valves are also “black light” tested.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

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**FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27**

**MAX. FLUID TEMP.** 400° F
**MAX. STATIC PRESSURE** 300 PSI

*Shipping Weights above apply to Threaded Ends Only (except 3” which are Flanged Only)*

*For Flanged Ends contact factory for complete weight and dimensions*

*3” STAINLESS STEEL VALVES ARE SUPPLIED WITH FLANGED ENDS ONLY*
BULLETIN 3006-KR

STAINLESS STEEL SOLENOID VALVES
Dependable • Packless

TYPE “KR” FULL PORT - NORMALLY OPEN
1/2” TO 3” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION:
Valve closes when energized and opens when de-energized. When the coil is energized the plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving the pressure above the piston allowing it to leave its seat. The bottom spring allows the valve to operate at zero pressure drop.

CONSTRUCTION:
(*Wetted parts - No Copper Bearing Alloys in contact with fluid)
*Valve Body - 304 Stainless Steel Globe Pattern - NPT ends
(For Flanged Ends see Options page 24)
*Piston - 303 Stainless Steel
Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Plunger - 303 Stainless Steel
*Stem - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Glass Filled Teflon
*AC Shading Coil - Silver
*Stem Pin - 304 Stainless Steel
Coil - Encapsulated Class H, 18” leads

APPLICATION:
To control the flow of Corrosive Fluids, Deionized Water, Condensate, Ammonias, Vegetable Oils, Fuel Oils, Cryogenics**, Flammable Liquids.
Cryogenic fluids include liquid oxygen (-297°F), liquid argon (-303°F) and liquid nitrogen (-320°F).
Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

** CLEANING
• Cryogenic valves are degreased & cleaned to keep them free of moisture.
• Oxygen valves are also “black light” tested.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

FOR STEAM APPLICATIONS
SEE BULLETIN 3006-WR
Page 23

FOR OPTIONS & ACCESSORIES SEE PAGES 26 & 27

FOR STEAM APPLICATIONS SEE BULLETIN 3006-WR
Page 23

** CLEANING
• Cryogenic valves are degreased & cleaned to keep them free of moisture.
• Oxygen valves are also “black light” tested.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

Shipping Weights above apply to Threaded Ends Only (except 3” which are Flanged Only)
For Flanged Ends contact factory for complete weight and dimensions
3” STAINLESS STEEL VALVES ARE SUPPLIED WITH FLANGED ENDS ONLY

MAX. FLUID TEMP.
400° F
MAX. STATIC PRESSURE
300 PSI
Except valves listed for 500 PSI

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info@magnatrol.com • Phone: 973-427-4341 • Fax: 973-427-7611 • www.magnatrol.com

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**TYPE “W” FULL PORT - NORMALLY CLOSED**

**1/2” TO 3” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**OPERATION:**
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

**CONSTRUCTION:**
*Wetted parts - No Copper Bearing Alloys in contact with fluid*
*Valve Body - 304 Stainless Steel Globe Pattern - NPT ends
*(For Flanged Ends see Options page 24)*
*Piston - 303 Stainless Steel
*Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Glass Filled Teflon
*AC Shading Coil - Silver
*Stem Pin - Inconel

Coil - Encapsulated Class H, 18” leads

**APPLICATION:**
To control the flow of STEAM. Steam must be free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

<table>
<thead>
<tr>
<th>Pipe Size Inches</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1/2</td>
<td>14W22</td>
<td>25</td>
<td>0.4</td>
<td>1.2</td>
<td>18</td>
<td>7</td>
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<tr>
<td>140</td>
<td>114W42</td>
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<td>0.6</td>
<td>1.8</td>
<td>28</td>
<td>10</td>
<td>8</td>
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<tr>
<td>180</td>
<td>129W42</td>
<td>65</td>
<td>1.2</td>
<td>3.6</td>
<td>33</td>
<td>11</td>
<td>8-1/8</td>
</tr>
<tr>
<td>50</td>
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<td>25</td>
<td>0.4</td>
<td>1.3</td>
<td>18</td>
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<td>7-1/8</td>
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<tr>
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<td>8-1/8</td>
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<td>2.0</td>
<td>10.0</td>
<td>45</td>
<td>68</td>
<td>13-3/4</td>
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</table>

**Shipping Weights** above apply to Threaded Ends Only (except 3” which are Flanged Only)

**For Flanged Ends** contact factory for complete weight and dimensions

**3” STAINLESS STEEL VALVES ARE SUPPLIED WITH FLANGED ENDS ONLY**
BULLETIN 3006-WR

STAINLESS STEEL SOLENOID VALVES
Dependable • Packless

TYPE “WR” FULL PORT - NORMALLY OPEN
1/2” TO 3” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION:
Valve closes when energized and opens when de-energized. When the coil is energized the plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving the pressure above the piston allowing it to leave its seat. The bottom spring allows the valve to operate at zero pressure drop.

CONSTRUCTION:
(*Wetted parts - No Copper Bearing Alloys in contact with fluid)
*Valve Body - 304 Stainless Steel Globe Pattern - NPT ends
(For Flanged Ends see Options page 24)
*Piston - 303 Stainless Steel
*Coil - 303 Stainless Steel
*Poppet - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - Inconel
*Body Seal - Non Asbestos Gasket
*Orifice Seal - Glass Filled Teflon
*AC Shading Coil - Silver
*Stem Pin - 304 Stainless Steel
*Coil - Encapsulated Class H, 18” leads

APPLICATION:
To control the flow of STEAM. Steam must be free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

MAX. FLUID TEMP. 400° F
MAX. STATIC PRESSURE 200 PSI

<table>
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<tr>
<th>Pipe Size Inches</th>
<th>Max. Diff. PSI</th>
<th>Watts AC</th>
<th>Type No.</th>
<th>Amps Hold 120-60</th>
<th>Amps Inrush 120-60</th>
<th>Watts DC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimensions In Inches</th>
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<td>B</td>
<td>C</td>
<td>D</td>
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<td>7-1/8</td>
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<td>4-7/8</td>
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<td>10-3/8</td>
<td>8</td>
<td>N/A</td>
<td>9-1/2</td>
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</table>

Shipping Weights above apply to Threaded Ends Only (except 3” which are Flanged Only)
For Flanged Ends contact factory for complete weight and dimensions

3” STAINLESS STEEL VALVES ARE SUPPLIED WITH FLANGED ENDS ONLY

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info@magnatrol.com • Phone: 973-427-4341 • Fax: 973-427-7611 • www.magnatrol.com
## Optional Features

For Dependable • Packless Solenoid Valves

### BOTTOM MOUNTED OPTIONS

**Note:** Only one Bottom Mount Option can be installed on each valve.

<table>
<thead>
<tr>
<th>Manual Override</th>
<th>Lever</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Normally Closed valves only) (Designated by Prefix “MO”) Enables manual opening of solenoid valve during power failure or to override automatic controls.</td>
<td>(Normally Closed valves only) (Designated by Prefix “LV”) Enables rapid opening of solenoid valve. Can be chain operated for use at inaccessible locations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dashpot</th>
<th>Flow Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Designated by Prefix “DP”) Furnished for clean liquids to reduce water hammer effect sometimes encountered in long pipe runs by slowing valve closing.</td>
<td>(Normally Closed, NR &amp; MR valves, only) (Designated by Prefix “FC”) Provides a manual method of reducing or throttling the flow.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mounting Stud</th>
<th>Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Designated by Prefix “MS”) 3/8”-16 thread can be furnished in bottom of body to facilitate mounting on bracket. (Not available on 2”, 2-1/2” and 3”)</td>
<td>(Normally Closed, NR &amp; MR valves, only) (Designated by Prefix “DR”) - 1/4” NPT plug supplied in bottom of valve to facilitate draining of liquid</td>
</tr>
</tbody>
</table>

### Other Options

<table>
<thead>
<tr>
<th>Pilot Tap</th>
<th>DIN Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Designated by Prefix “PT”) Type D, G &amp; GR Valves can be furnished with 1/8” tapped hole for pilot connection or pressure gauge.</td>
<td>(Designated by Suffix “DN”) Provides 3 prong connector for easy power connect / disconnect. Not available for Explosion-Proof.</td>
</tr>
</tbody>
</table>

**“HUM FREE”: (No AC Hum/Buzz)**  
(Designated by Suffix “HF”) - The “HUM FREE” option eliminates the “AC hum” associated with AC operated solenoid valves. Enables valves to be used where an AC hum would not be acceptable and AC is the only power source available. IE: Hospitals, labs, schools (class rooms), homes, office environments etc. & when 24 vac is required for 40 series valves.

**Leak / Dead Tight:**  
(Normally Closed valves only) (Designated by Suffix “LT”) - The Leak / Dead Tight Option offers ‘soft’ resilient seating or ‘gapless’ seal for low pressure applications 50 PSI or less. Consult Factory for Max. Diff. Pressure and Valve Type availability.

**Flanged Ends for Bronze and Stainless Steel Valves:**  
(Designated by Suffix “F1” for 150 lb or “F3” for 300 lb Flanges) F1 or F3 Flanged ends available on all stainless steel valves. F1 flanged ends available on bronze valves. F3 Flanged ends for bronze valves available through our Clark-Cooper Division.

**Explosion-Proof and Watertight Solenoids:**  
(Designated by Prefix “F”) – are Explosion-proof and NEMA 4, 7C & D, 9E, F & G suitable for use in hazardous locations requiring Class I, Groups C & D & Class II Groups E, F, and G equipment.

**NEMA 4X:**  
(Designated by Prefix “F” AND Suffix “ZP”) – are suitable for use in locations requiring a NEMA 4X designation. “ZP” (Zinc Plating) replaces the standard paint used on the Coil housing (cup and base). The additional corrosion protection satisfies NEMA 4X requirements. Internal construction, pressure ratings, power consumption, and external dimensions are the same as for standard valves.

**Nickel Plating:**  
(Designated by Suffix “NP”) - Plating is 0.0005” Thick Meets Mil Spec. C26074

**Universal Mount Valves For Mounting In Vertical Pipe Runs**  
(See Magnatrol Universal Mount Catalog 3006-UM)
Position Indicators
For Normally Closed Solenoid Valves

Position Switches

CONSTRUCTION:
- **Housing**: 316 Stainless Steel with 1/2" NPT Conduit Connection
- **Contact**: SPDT (Single Pole/Double Throw)
- **Lead Wires**: 36 inches long, 18 gauge standard leads potted-in PVC

OPERATION:
Switch is activated by a ferromagnetic “target” attached to the valve's piston

"PS" - General Purpose/NEMA 4, 4X
"PSF" - Explosion Proof

SPDT Contact
Electrical Rating:
- 4A @ 120 VAC / 3A @ 24 VDC
- 2A @ 240 VAC / 1.25A @ 48 VDC
- 0.5A @ 125 VDC & 250 VDC

The PS and PSF can be wired AC or DC, N/O or N/C, consume no power to operate, and leave no current leakage or voltage drop

Position Switches With LED Visual Indication

"PL" - General Purpose/NEMA 4, 4X
"PLF" - Explosion Proof

SPDT Contact
Electrical Rating:
- 0.25A @ 120 VAC / 3A @ 24 VDC
  (3A @ 120 VAC / 2A @ 24 VDC without the LEDs)

The PL and PLF can be wired AC or DC, N/O or N/C

Ambient Temperature: -40°F to 221°F (106°C)

Position Display - Visual Indication ONLY

"PD" - General Purpose / NEMA 4, 4X / Explosion Proof

CONSTRUCTION:
- **Housing**: Clear High-Strength Polycarbonate

APPLICATION:
Visual indication that valve is Open / Closed

OPERATION:
When the valve is in the closed position, a ferromagnetic “target” attached to the valve’s piston, lifts a green colored magnet into the adapter hiding it from view. When the valve is energized, (open position), the magnet drops down to a visible position.

**Position Indicators for Normally Closed Valve Only**
Available on Type A, S, L, K, W & G Valves

**NOTE: ONLY ONE BOTTOM MOUNTED OPTION CAN BE INSTALLED ON EACH VALVE**

For multiple switches and where a switch and a bottom mounted option are required, contact our Clark Cooper Division.
(See bottom of Page 3)

**HOW TO ORDER:**
Indicate Option when Ordering:
Use the appropriate Prefix:
PS, PSF, PL, PLF, or PD

Example:
PS18A44 indicates a Position Switch mounted on a Type 18A44 valve.

PS General Purpose & Water Tight (SPDT Switch) shown on 3” Stainless Steel Valve
**Type "P" Full Port - Normally Closed**

**1/2” to 1-1/2” Pipe Size**

**No Differential Pressure Required to Open**

**Operation:**
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build “above” the piston and seat it.

**Construction:** (*Wetted parts*)
- Valve Body - Cast Bronze, Globe Pattern - NPT ends
- Piston - Bronze
- Coil Enclosure - Malleable Iron, 1/2” NPS conduit conn.
- Plunger - 430 Stainless Steel
- Plunger Spring - 304 Stainless Steel
- Pilot Valve - 303 Stainless Steel
- Bonnet Tube - 304 Stainless Steel
- Spring - 302 Stainless Steel
- Body Seal - Buna N or Non Asbestos Gasket
- Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
- AC Shading Coil - Copper
- Stem Pin - Inconel
- Coil - Encapsulated Class B, 18” leads

**Application:**
To control the flow of Water, Oil, Air, Gas, Solvents, Brine, Vacuum and any other fluids not reactive with construction materials and free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top. Valve can be mounted in any position (See box at right).

**Max. Fluid Temp.**
212°F

**Max. Static Pressure**
300 PSI

---

### Table: Pipe Size, Max Diff. PSI, Type No., Watts, and Dimension in Inches

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Max Diff. PSI</th>
<th>Type No.</th>
<th>Watts</th>
<th>Dimension In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>AC</td>
<td>B</td>
</tr>
<tr>
<td><strong>1/2”</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>110</td>
<td>118P42HF</td>
<td>28</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>300</td>
<td>11B312HF</td>
<td>28</td>
<td>8</td>
<td>7-1/2</td>
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<tr>
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<td>7-1/2</td>
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<td>12</td>
<td>8-1/8</td>
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<td><strong>3/4”</strong></td>
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<td>50</td>
<td>118P33HF</td>
<td>28</td>
<td>8</td>
<td>7-7/8</td>
</tr>
<tr>
<td>110</td>
<td>118P43HF</td>
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<td>8</td>
<td>7-7/8</td>
</tr>
<tr>
<td>300</td>
<td>118P53HF</td>
<td>33</td>
<td>14</td>
<td>8-7/8</td>
</tr>
<tr>
<td><strong>1”</strong></td>
<td></td>
<td></td>
<td></td>
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<td>50</td>
<td>118P24HF</td>
<td>28</td>
<td>10</td>
<td>7-7/8</td>
</tr>
<tr>
<td>110</td>
<td>118P44HF</td>
<td>28</td>
<td>10</td>
<td>7-7/8</td>
</tr>
<tr>
<td>300</td>
<td>118P54HF</td>
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<td><strong>1-1/2”</strong></td>
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<td></td>
</tr>
<tr>
<td>115</td>
<td>41P46HF</td>
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<td>24</td>
<td>11</td>
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<td>200</td>
<td>41P36HF</td>
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<tr>
<td>300</td>
<td>41P56HF</td>
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<td></td>
</tr>
</tbody>
</table>

**FOR OPTIONS & ACCESSORIES**
See Pages 26 & 27

Strainers are recommended for use with solenoid valves
(See page 19)

**When you order please supply the following:**
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

**Explosion Proof:**
Available for DC Power Source ONLY (Valves without “HF” suffix). Use Prefix “F” (i.e. F118P44).

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For AC POWER SOURCE
Shown with "HF" Rectifier

For DC POWER SOURCE
Drop "HF" Suffix, i.e.: 118P44
“SANDY WELL WATER” FULL PORT - NORMALLY CLOSED
1/2” TO 3” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION:
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Piston - Bronze
Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Bonnet Tube - 304 Stainless Steel
*Spring - 302 Stainless Steel
*Body Seal - Buna N or Non Asbestos Gasket
*Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
*AC Shading Coil - Copper
*Stem Pin - Inconel
Coil - Encapsulated Class B, 18” leads - (Class H available)

APPLICATION:
To control the flow of “Sandy Well Water”, the valve is designed with the piston and other components “turned down”, offering additional clearance, allowing the valve to operate with fluids containing some sediment typically found in well water. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
• Pipe Size
• Valve Type
• Voltage (AC or DC)
• Hertz
• Fluid
• Fluid Temperature
• Max. Diff. Pressure
• Optional Features
(See pages 26 & 27)

†† Not available for DC operation

MAX. FLUID TEMP. 212° F
MAX. STATIC PRESSURE 300 PSI
Except valves listed for 500 PSI

Pipe Size
Inches
\[ \begin{array}{cccccc}
\text{Max Diff. Psi} & \text{Watts Ac} & \text{Watts Ac} & \text{Ship Wt. Lbs.} & \text{Dimension In Inches} \\
\hline
1/2 & 50 & 18A22-V & 25 & 18 & 8 & 7 & 5-7/8 & 2-3/4 & 3-1/4 \\
 & 80 & 118A22-V & 40 & 28 & 8 & 7 & 6 & 2-3/4 & 3-1/2 \\
 & 75 & 118A23-V & 40 & 28 & 8 & 7-1/8 & 6 & 2-3/4 & 3-1/2 \\
 & 125 & 23A23-V & 80 & 40 & 12 & 8-1/8 & 7 & 3-1/2 & 3-1/2 \\
 & 125 & 133A24-V & 65 & 33 & 14 & 8-7/8 & 7-1/2 & 2-3/4 & 4-1/8 \\
 & 110 & 133A25-V & 65 & 33 & 16 & 9-3/8 & 7-3/4 & 3-1/2 & 4-1/2 \\
1-1/2 & 50 & 14A26-V & 45 & 23 & 16 & 9-3/8 & 7-3/4 & 3-1/2 & 4-1/2 \\
 & 75 & 135A26-V & 65 & 33 & 16 & 9-3/8 & 7-3/4 & 3-1/2 & 4-1/2 \\
 & 125 & 141A26-V & 80 & 40 & 20 & 10 & 8-1/8 & 4 & 4-7/8 \\
 & 75 & 133A17-V & 65 & 33 & 31 & 11 & 8-3/4 & 5-3/8 & 6 \\
2-1/2 & 30 & 43A18-V & 35 & 23 & 43 & 12-7/8 & 10-1/8 & 5-7/8 & 7-1/4 \\
 & 50 & 143A18-V & 65 & 45 & 43 & 12-7/8 & 10-1/8 & 5-7/8 & 7-1/4 \\
 & 75 & 243A18-V & 115 & 65 & 43 & 12-7/8 & 10-1/8 & 5-7/8 & 7-1/4 \\
\end{array} \]
“GRITTY COOLANT” FULL PORT - NORMALLY CLOSED
1/2” TO 1-1/2” PIPE SIZE
NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION:
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

CONSTRUCTION: (* Wetted parts)
*Valve Body - Cast Bronze, Globe Pattern - NPT ends
*Piston - Bronze
Coil Enclosure - Malleable or Cast Iron, 1/2” NPS conduit conn.
*Plunger - 430 Stainless Steel
*Pilot Valve - 303 Stainless Steel
*Bonnet Tube - 304 Stainless Steel
*Spring - 302 Stainless Steel
*Body Seal - Buna N or Non Asbestos Gasket
*Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
*AC Shading Coil - Copper
*Stem Pin - Inconel
Coil - Encapsulated Class B, 18” leads - (Class H available)

APPLICATION:
To control the flow of “Coolant”, the valve is designed with the piston “turned down” and a larger pilot port, offering additional clearance, allowing the valve to operate with fluids containing some grit/sediment typically found in coolant. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

FOR OPTIONS & ACCESSORIES
SEE PAGES 26 & 27

Strainers are recommended for use with solenoid valves
(See page 19)

When you order please supply the following:
  • Pipe Size
  • Valve Type
  • Voltage (AC or DC)
  • Hertz
  • Fluid
  • Fluid Temperature
  • Max. Diff. Pressure
  • Optional Features
(See pages 26 & 27)

†† Not available for DC operation

Note: The addition of any bottom mounted option would replace the “MS” Mounting Stud and change the prefix to reflect the appropriate option.
**BULLETIN 3006-A**

**GRITTY COOLANT/NORMALLY OPEN**

**1/2” TO 1-1/2” PIPE SIZE**

**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN**

**OPERATION:**
Valve closes when energized and opens when de-energized. When the coil is energized the plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and sealing it. Upon de-energizing the coil, the pilot orifice is opened, relieving the pressure above the piston, allowing it to leave its seat. The bottom spring allows the valve to operate at zero pressure drop.

**CONSTRUCTION:** (*Wetted parts)*
- Valve Body - Cast Bronze, Globe Pattern - NPT ends
- Piston - Cast Bronze
- Coil Enclosure - Malleable or Cast Iron, 1/2" NPS conduit conn.
- Plunger - 430 Stainless Steel
- Poppet - 303 Stainless Steel
- Stem - 303 Stainless Steel
- Bonnet Tube - 304 Stainless Steel
- Spring - Inconel and 302 Stainless Steel
- Body Seal - Buna N or Non Asbestos Gasket
- Orifice Seal - Buna N (Viton or Glass Filled Teflon available)
- AC Shading Coil - Copper
- Stem Pin - 304 Stainless Steel
- Coil Encapsulation - Class B, 18” leads - (Class H available)

**APPLICATION:**
To control the flow of Water, Oil, Air, Gas, Solvents, Brine, Vacuum and any other fluids not reactive with construction materials and free of sediment. Valve operates from zero to maximum differential pressure indicated in table. Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.

Strainers are recommended for use with solenoid valves (See page 19)

When you order please supply the following:
- Pipe Size
- Valve Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temperature
- Max. Diff. Pressure
- Optional Features
(See pages 26 & 27)

†† Not available for DC operation

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**FOR OPTIONS & ACCESSORIES**
SEE PAGES 26 & 27

**MAX. FLUID TEMP.**
212° F

**MAX. STATIC PRESSURE**
300 PSI

Except valves listed for 500 PSI

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**FOR OPTIONS & ACCESSORIES**
SEE PAGES 26 & 27

<table>
<thead>
<tr>
<th>Pipe Size Inches</th>
<th>Max Diff. PSI</th>
<th>Type No.</th>
<th>Watts AC</th>
<th>Watts AC</th>
<th>Ship Wt. Lbs.</th>
<th>Dimension In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>200</td>
<td>MS33AR42-C</td>
<td>45</td>
<td>23</td>
<td>8</td>
<td>9-3/8</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>MS18AR23-C</td>
<td>25</td>
<td>18</td>
<td>9</td>
<td>8-1/4</td>
</tr>
<tr>
<td></td>
<td>110</td>
<td>MS23AR43-C</td>
<td>80</td>
<td>40</td>
<td>13</td>
<td>9-1/4</td>
</tr>
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<td>3/4</td>
<td>110</td>
<td>MS33AR44-C</td>
<td>45</td>
<td>23</td>
<td>14</td>
<td>10</td>
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<td>MS23AR44-C</td>
<td>80</td>
<td>40</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>

“*A” Dimension does not include the “MS” Mounting Stud (Approx. 7/8”)”

Note: The addition of any bottom mounted option would replace the “MS” Mounting Stud and change the prefix to reflect the appropriate option.
BULLETIN 3006 - RFQ

REQUEST A QUOTE
Fill In The Information Below

If you have any questions or wish to request a quote:
Phone: 973-427-4341 • Fax: 973-427-7611
E-Mail: info@magnatrol.com

We appreciate the opportunity to quote on your requirements.
For immediate quote – Fill in the information below and CALL: 973-427-4341
For same day quote – Fill in the information below and FAX: 973-427-7611
For quote within 24 hrs – Go online to www.magnatrol.com, and go to Quick Quote

YOUR COMPANY DATA

Company Name: ________________________________ Phone: ________________________________
Contact (Your Name): __________________________ Fax: ________________________________
Your RFQ Reference (If Any): __________________________
Type of Business: □ OEM □ Re-Seller □ Consumer/End User
E-Mail: ________________________________

VALVE DATA

Desired Delivery: ________________________________
Your Reference (Optional): ________________________________
Quantity: ________________________________
Valve Construction Material: □ Bronze or □ Stainless Steel
Pipe Size: (1/4” thru 3"): ________________________________
Normally: □ Closed (Energize To Open) or □ Open (Energize To Close)
Voltage: □ AC: _______ Volts/_______ Hz or □ DC: _______ Volts
Maximum Differential Pressure: _______ PSI
Fluid: ________________________________
Maximum Fluid Temperature: _______ °F
Optional Feature: (See Optional Feature Details On Pages 26 & 27)
Choose One (1) Of The Following Per Valve: □ MO □ LV □ DP □ FC □ MS □ DR □ PD □ PS □ PL
Additional Options: □ HF □ LT □ NP □ PT □ DN □ ZP (Can be combined with one (1) of the above Optional Features)
Enclosure Options: □ General Purpose □ Explosion Proof □ NEMA 4 □ NEMA 4X
(For Solenoid Housing) (Prefix “G” - NEMA 12) (Prefix “F”) (Prefix “E”) (Prefix “E” & Suffix “ZP”)

Comments: ________________________________

Quantity Discounts: Consult Factory
Delivery: Most orders ship in 7-10 days. Small emergency orders can be shipped in 1-2 days.
MAGNATROL VALVE TYPE NUMBER DETAIL

For Additional Information On Options See Optional Features Pages 26 & 27

Prefix Letters for Options: (Choose One)
- DP - Dashpot (Consult factory for valve type availability)
- DR - Drain Plug **
- FC - Flow Control **
- LV - Lever *
- MO - Manual Override *
- MS - Mounting Stud
- PD - Position Display *
- PL - Position Switch w/LED *
- PS - Position Switch *

Prefix Letters for Solenoid Enclosures:
- G - General Purpose NEMA12
- E - NEMA 4
- E with ZP Suffix - NEMA 4X
- F - Explosion Proof & NEMA 4

End Connection Description:
- SC - Screwed, FNPT
- F1 - 150# Flange
- F3 - Flanged

Voltage Description:
- A - 120
- B - 208
- C - 240
- D - 480
- E - 575
- F - 6
- G - 12
- H - 24

Hertz Description:
- A - 50/60
- B - 50
- C - 60
- D - DC

Disc Material:
- B - Buna N
- T - Teflon
- V - Viton
- M - Metal

Fluids:
- C - Gritty Coolant
- G - Gas/Air/Oxygen
- H - Hot Liquid ††
- O - Oil/Fuel Oil
- S - Steam
- V - Sandy Well Water
- W - Cold Liquid †††
- Z - Cryogenics/Liquid O2

Suffix Letters for Options:
- CR - Clean For Freon/Refrigerant
- CY - Clean For Oxygen
- CZ - Clean For Cryogenics
- DN - Din Connector
- HF - Hum Free
- HT - High Temperature Coil
- LL - 6" Long Lead Wires
- LT - Leak Tight (Soft Seat Pilot)
- NP - Nickel Plated (.005 Thickness) Meets Mil Spec C26074
- PT - Pilot Tap ***
- RB - Reducing Bushing
- ZP - Zinc Plated Solenoid Housing

Metal Tags:
- AL - Aluminum Tag
- SS - Stainless Steel

† Refer to Individual Bulletins for Standard Orifice Seal/Disc Material.
NOTE: (For N, NR, M, MR, J & JR this field is used to show a change to the Valve Body Seal Material

†† Use fluid designation “H” for light liquids up to 400° F. and Brine applications.

††† Use fluid designation “W” for light liquids under 212° F. (i.e. Water, Jet Fuel, Kerosene, Gasoline, Naptha, Alcohol, Soluable Oil, Coolant, Freon and Refrigerant).

* Normally Closed Valves Only

** Normally Closed and NR & MR Valves/FC not available on G valve type

*** Pilot Tap: Can be used along with any other option. Available On Type D, G and GR only.

Consult Factory for Assistance with:
- Additional voltages
- End Connections not shown
- Fluid Field designations

Check individual bulletins for listed valves
TERMS & CONDITIONS OF SALE

1. **Catalog:** This catalog supersedes all previous issues.
2. **Quotations:** Quotations are made for acceptance within 60 days and are subject to change or withdrawal without notice.
3. **Prices and Discounts:** All prices and discounts are in accordance with the prices and discounts established by Magnatrol and are subject to change without notice.
4. **Terms:** Net 30 days, subject to establishment of credit.
5. **Shipments:** All shipments are F.O.B. factory, Hawthorne, New Jersey. Our responsibility ends with delivery of merchandise to the transportation company and issuance to us of formal shipping receipt.
6. **Minimum Billing:** Minimum billing charge is $50.00 net.
7. **Cancellations:** Orders are subject to cancellation only with our consent.
8. **Shipping Date:** There shall be no liability for default or delay in shipping. All orders, contracts, and agreements are made subject to delays contingent upon accidents, strikes, embargoes or other causes beyond our control.
9. **Design and Materials:** All materials and designs are subject to change without notice.
10. **Weights and Dimensions:** Weights and dimensions listed in this catalog are as close to actual as is practicable but are not guaranteed and are subject to change without notice.
11. **Errors:** All clerical errors are subject to correction.
12. **Returns for Repair:** Valves returned for repair must be shipped prepaid and accompanied by a detailed report regarding service application, installation and nature of trouble or malfunction.
13. **Returns for Credit:** Returns for credit will be accepted only with our consent. Credit will be subject to restocking charge and any additional expenses incurred in restoring valves to salable condition. Credit will be issued only to original purchaser.
14. **Taxes:** Any manufacturer’s excise tax, use tax, sales tax or tax or duty of any nature shall be paid by the buyer. In the event that the seller is required to pay any such taxes or duties, the buyer shall reimburse seller therefore. The buyer may provide seller with an exemption certificate or other documents acceptable to taxing or customs authorities at the time an order is placed.
15. **Guarantee:** MAGNATROL valves are guaranteed to be free from any defects in material and workmanship for one year or 500,000 cycles, whichever comes first. Our guarantee solely conveys the right to repair or replace free of charge, any defective valves, or parts, thereof, returned to us transportation charges prepaid, within one year after date of original shipment from factory.

This guarantee shall not apply if the valve has been:
- Improperly Installed
- Used for other than intended service
- Repaired without authorization

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