Available For Ouick Delivery



Bronze and Stainless Steel 2-Way

SOLENOID VALVES

For Control Of

WATER • OIL • STEAM
AIR • GAS • CRYOGENICS
SOLVENTS • OXYGEN
CORROSIVE FLUIDS









WELCOME TO MAGNATROL

Process Control Solenoid Valves For

Water • Oil • Air • Gas • Steam • Cryogenics • Vacuum • Solvents • Brine • Oxygen • Corrosive Fluids



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

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ADDITIONAL CATALOGS

Technical/Engineering Catalog . . 3006-ENG

Technical & Engineering Data including:

- Sandy Well Water Valves
- Gritty Coolant Valves

Universal Mount Catalog3006-UM

Valves can be mounted in any position





^{*} **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)

VALVE SELECTION CHART



Ordering Information - See Pages 26 & 27 For Optional Features - See Pages 24 & 25

VALVE SELECTION CHART

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

Max .Temperature		Up To	212°F				Up To 400	°F	
Construction				Bronze				Stainles	s Steel
Valve Type	D	G	N	Α	М	S	L	K	W
Page	18	16&17	6&7	8&9	10&11	12&13	14&15	20 & 21	22 & 23
Max. Diff. Pressure	30 PSI	50 PSI	300 PSI	500 PSI	150 PSI	180 PSI	500 PSI	500 PSI	180 PSI
Pipe Size Inches	3/8"-2"	1″-3″	1/4"-3/4"	1/2"-3"	3/8"-3/4"	1/2"-3"	1/2"-3"	1/2"-2"	1/2"-2"
Internal Port Size	Full	Full	Reduced	Full	Reduced	Full	Full	Full	Full
Air	*	•	•	*	*		•	•	
Brine			♦	•	♦		♦	♦	
Gas	*	•		*	*		•	•	
Oil	•		♦	•	•		•	♦	
Solvents	*	•	•	*	*		•	•	
Water	♦	•	•	♦	♦		•	♦	
Vacuum	*	•	*	*					
Steam					•	•			♦
Cryogenic					*		•	•	
Oxygen, Liquid					•		•	•	
Oxygen, Gaseous	♦	♦		•			•	•	
Corrosive								•	

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
- Designs for Navy and Marine Service







3-Way Trip Valve With 2 Position Indicating Switches and Manual Reset



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



SOLENOID COILS CONTINUOUS DUTY COILS

ELECTRICAL CHARACTERISTICS

Coils are stocked for the following voltages:

Voltage	6	12	24	32	48	64	120	208	240	480	575
50,60 Hertz AC			•				•	•	•	•	•
DC	•	•	•	•	•	•	*		*		

^{*} 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.



ENCAPSULATED COIL

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

Valves for A.C. sevice 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:

Coils can be continuously energized without overheating or failure. Coils supplied with 18" long, 18 gage wire leads standard**, encapsulated for temperature of intended service, providing a coil with excellent resistance to shock, moisture, oil and chemicals.

General Service: Class "B" coils supplied for gas and liquids up to 212° F and where ambient temperatures do not exceed 40° C (104° F). The Class "H" coil should be specified for higher ambient temperatures.

High Temperature Service: Class "H" coils supplied for gases and liquids from 212° - 400° F and where ambient temperatures do not exceed 100° C (212° F).

**Longer continuous leads available

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.

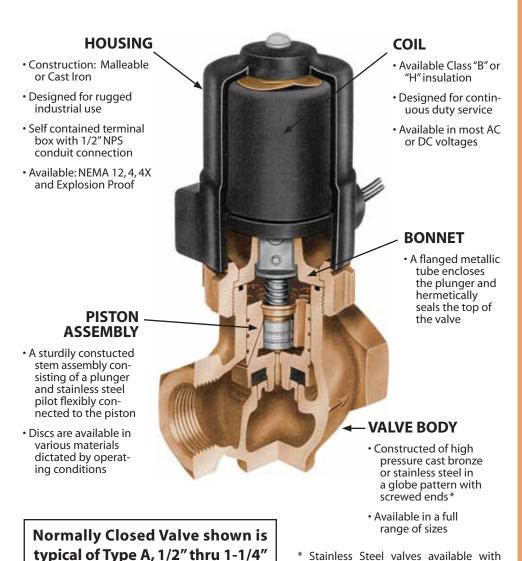
Note: Coil can be readily changed while valve is still under pressure.

VALVE CONSTRUCTION FEATURES



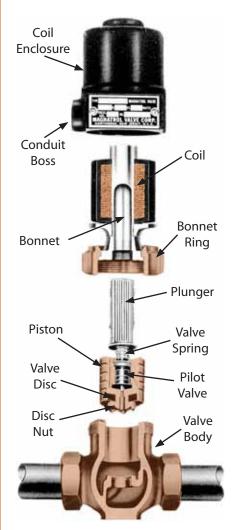
Valve Construction Features:

- · 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
- Continous 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.



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.

flanged ends. Flanged Bronze valves available through Magnatrol's **Clark-Cooper Division** (See bottom of page 3).



212° F

MAX. STATIC PRESSURE 300 PSI

FOR OPTIONS & ACCESSORIES

SEE PAGES 24 & 25

BRONZE SOLENOID VALVES

Dependable • Packless

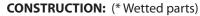
TYPE"N" - NORMALLY CLOSED 1/4" TO 3/4" PIPE SIZE

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.



*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

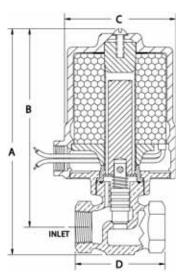
*AC Shading Coil - Copper

*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	Max. Diff.	Valve Port	Tuno No	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.		Dimension	s In Inche	s
Size Inches	PSI	Size	Type No.	AC	120-60	120-60	DC	Lbs.	Α	В	С	D
1/4	50 75 100 150 225	1/4 3/16 5/32 1/8 3/32	18N40 18N50 18N80 18N60 18N70	25	0.4	1.0	18	6	5-7/8	5-1/4	2-3/4	2-1/4
	100 150 300	1/4 3/16 1/8	33N40 33N50 33N60	45	0.8	2.2	23	10	6-7/8	6-1/4	3-1/2	2-1/4
3/8	25 50 75 100 150 225	3/8 1/4 3/16 5/32 1/8 3/32	18N21 18N41 18N51 18N81 18N61 18N71	25	0.4	1.1	18	6	6-1/8	5-3/8	2-3/4	2-1/2
3,0	50 75 100 150 300	3/8 5/16 1/4 3/16 1/8	33N21 33N31 33N41 33N51 33N61	45	0.8	2.3	23	10	7	6-1/4	3-1/2	2-1/2
1/2	25 50 75 100 150 225	3/8 1/4 3/16 5/32 1/8 3/32	18N22 18N42 18N52 18N82 18N62 18N72	25	0.4	1.2	18	6	6-1/4	5-3/8	2-3/4	2-3/4
-,-	50 75 100 150 300	3/8 5/16 1/4 3/16 1/8	33N22 33N32 33N42 33N52 33N62	45	0.8	2.4	23	10	7-1/8	6-3/8	3-1/2	2-3/4
2/4	15 35	1/2 5/16	18N13 18N33	25	0.4	1.3	18	7	6-1/2	5-5/8	2-3/4	2-7/8
3/4	30 75	1/2 5/16	33N13 33N33	45	0.8	2.5	23	10	7-3/8	6-1/2	3-1/2	2-7/8

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

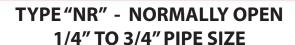
When you order please supply the following:

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

(See pages 24 & 25)

MAGNATROL VALVE CORPORATION -

Dependable • Packless

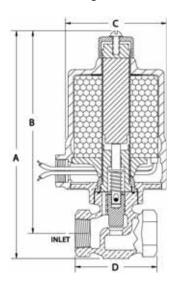


NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

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.



MAX. FLUID TEMP.

212° F

MAX. STATIC PRESSURE

300 PSI



FOR OPTIONS & ACCESSORIES
SEE PAGES 24 & 25

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 24 & 25)

Pipe	Max.	Valve	Town No.	Watts	Amps	Amps	Watts	Ship		Dimension	s In Inche	s
Size Inches	Diff. PSI	Port Size	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
1/4	45 70 90 135 200	1/4 3/16 5/32 1/8 3/32	18NR40 18NR50 18NR80 18NR60 18NR70	25	0.5	1.3	18	7	6-5/8	6	2-3/4	2-1/4
	90 135 270	1/4 3/16 1/8	33NR40 33NR50 33NR60	45	1.0	2.5	23	10	7-5/8	7	3-1/2	2-1/4
3/8	23 45 70 90 135 200	3/8 1/4 3/16 5/32 1/8 3/32	18NR21 18NR41 18NR51 18NR81 18NR61 18NR71	25	0.5	1.4	18	7	6-7/8	6-1/8	2-3/4	2-1/2
3,0	45 70 90 135 270	3/8 5/16 1/4 3/16 1/8	33NR21 33NR31 33NR41 33NR51 33NR61	45	1.0	2.6	23	10	7-3/4	7	3-1/2	2-1/2
1/2	23 45 70 90 135 200	3/8 1/4 3/16 5/32 1/8 3/32	18NR22 18NR42 18NR52 18NR82 18NR62 18NR72	25	0.5	1.5	18	7	7	6-1/8	2-3/4	2-3/4
	45 70 90 135 270	3/8 5/16 1/4 3/16 1/8	33NR22 33NR32 33NR42 33NR52 33NR62	45	1.0	2.7	23	10	7-7/8	7-1/8	3-1/2	2-3/4
3/4	13 32	1/2 5/16	18NR13 18NR33	25	0.5	1.6	18	7	7-1/4	6-3/8	2-3/4	2-7/8
3/4	27 70	1/2 5/16	33NR13 33NR33	45	1.0	2.8	23	10	8-1/8	7-1/4	3-1/2	2-7/8



212° F

MAX. STATIC PRESSURE

300 PSI

Except valves listed for 500 PSI

BRONZE SOLENOID VALVES

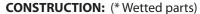
Dependable • Packless

TYPE "A" 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.



- *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 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.



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В			
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FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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 24 & 25)

†† Not available for DC operation

Pipe	Max.	Truno No	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.	[Dimension	s In Inche	s
Size Inches	Diff. PSI	Type No.	AC	120-60	120-60	DC	Lbs.	Α	В	С	D
	110	18A42					_	_			
1/2	200 300	18A32 18A52	25	0.4	1.2	18	8	7	5-7/8	2-3/4	3-1/4
	500	E33A62	45	0.8	2.4	23	16	8	6-7/8	4-1/8	3-1/4
	50	18A23	25	0.4	1.3	18	_		_		
	110 160	18A43 118A43	40	0.6	2.0	28	8	7-1/8	6	2-3/4	3-1/2
3/4	200	33A33	45	0.8	2.6	23	12	8-1/8	7	3-1/2	3-1/2
	300	33A53									
	500 50	E133A63 18A24	65	1.2	3.9	33	17	8-1/8	7	4-1/8	3-1/2
	110	18A44	25	0.4	1.5	18	10	7-7/8	6-5/8	2-3/4	4-1/8
1	160	118A44	40	0.6	2.3	28					
'	200 300	33A34 33A54	45	0.8	2.8	23	14	8-7/8	7-1/2	3-1/2	4-1/8
	500	E133A64	65	1.2	4.2	33	19	8-7/8	7-1/2	4-1/8	4-1/8
	50	18A25	25	0.4	1.6	18	4.0	0.2/0	6.2/4	2.2/4	4.4.0
	90 150	18A45 118A45	40	0.6	2.4	28	12	8-3/8	6-3/4	2-3/4	4-1/2
1-1/4	200	33A35	45	0.8	3.0	23	16	9-3/8	7-3/4	3-1/2	4-1/2
	300	33A55									
	500 50	†† 40A65 35A26	60	1.2	6.2	N/A	20	10-3/8	8-3/4	4-1/2	4-1/2
	115	35A46	45	0.8	3.2	23	20	10	8-1/8	4	4-7/8
1-1/2	160	135A46	65	1.2	4.8	33					
,-	200 300	41A36 41A56	60	1.2	6.7	35	24	11	9-1/8	4-1/2	4-7/8
	500	141A66	85	2.0	10.0	45			3 170	1 1/2	1 770
	50 100	36A27	45	0.8	3.5	23	31	11	0.2/4	F 2/0	6
	150	36A47 136A47	65	1.2	5.0	33	31	11	8-3/4	5-3/8	6
2	200	42A37	60	1.2	7.4	35					
	300 500	42A57 142A67	85	2.0	11.0	45	36	12	9-3/4	5-3/8	6
	500	43A28	63	2.0	11.0	43					
2-1/2	125	43A48	60	1.2	8.0	35	43	12-7/8	10-1/8	5-7/8	7-1/4
- '' -	200 300	43A38 143A58	85	2.0	12.0	45	75	12 //0	10-1/8] ,,,,	' ', ', -
	50	44A29	63	2.0	12.0	43					
3	100	44A49	60	1.2	8.8	35	56	56 13-3/4	-3/4 10-1/2	6-5/8	8-3/8
3	300	44A39 144A59	85	2.0	13.0	45	- 50	15 5/-1	10 1/2	0 3/0	0 3/0
	300	144/133	0.5	2.0	13.0	1 43					

MAGNATROL VALVE CORPORATION -

Dependable • Packless



TYPE "AR" 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.

FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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 24 & 25)

†† Not available for DC operation

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
- *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 - 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.



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

Except valves listed for 500 PSI



Pipe	Max.		Watts	Amps	Amps	Watts	Ship	[Dimension	s In Inche	s
Size Inches	Diff. PSI	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
1/2	110 200 300	18AR42 18AR32 18AR52	25	0.5	1.5	18	8	8-1/8	7	2-3/4	3-1/4
	500	E33AR62	45	1.0	2.7	23	16	9-3/8	8-1/4	4-1/8	3-1/4
2/4	50 110	18AR23 18AR43	25	0.5	1.6	18	9	8-1/4	7-1/8	2-3/4	3-1/2
3/4	200 300	33AR33 33AR53	45	1.0	2.9	23	13	9-1/4	8-1/8	3-1/2	3-1/2
	500	E133AR63	65	1.5	4.3	33	18	9-1/2	8-3/8	4-1/8	3-1/2
	50 110	18AR24 18AR44	25	0.5	1.8	18	11	9	7-3/4	2-3/4	4-1/8
1	200 300	33AR34 33AR54	45	1.0	3.0	23	14	10	8-5/8	3-1/2	4-1/8
	500	E133AR64	65	1.5	4.5	33	19	10-1/4	8-7/8	4-1/8	4-1/8
	50 90	18AR25 18AR45	25	0.5	1.9	18	13	9-3/4	8-1/8	2-3/4	4-1/2
1-1/4	200 300	33AR35 33AR55	45	1.0	3.2	23	17	10-3/4	9-1/8	3-1/2	4-1/2
	500	†† 40AR65	60	1.7	6.2	N/A	21	11	9-3/8	4-1/2	4-1/2
	50 115	35AR26 35AR46	45	1.0	3.8	23	21	11-3/8	9-1/2	4	4-7/8
1-1/2	200 300	41AR36 41AR56	60	1.7	6.5	35	25	11-5/8	9-3/4	4-1/2	4-7/8
	500	141AR66	85	3.5	9.7	45					
	50 100	36AR27 36AR47	45	1.0	4.2	23	31	12-3/8	10-1/8	5-3/8	6
2	200 300	42AR37 42AR57	60	1.7	7.3	35	36	12-5/8	10-3/8	5-3/8	6
	500	142AR67	85	3.5	11.0	45					
2-1/2	50 125 200	43AR28 43AR48 43AR38	60	1.7	8.0	35	45	13-1/2	10-3/4	5-7/8	7-1/4
1	300	143AR58	85	3.5	13.0	45	1				
3	50 100 200	44AR29 44AR49 44AR39	60	1.7	8.8	35	57	14-3/8	11-1/8	6-5/8	8-3/8
	300	144AR59	85	3.5	13.0	45					



400° F

MAX. STATIC PRESSURE

150 PSI

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.



- *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 Inconel
- *Body Seal Non Asbestos Gasket
- *Orifice Seal Metal to Metal
- *AC Shading Coil Copper
- *Stem Pin Inconel

Coil - Encapsulated Class H, 18" leads

B INLET

FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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.

Pipe	Max. Diff.	Valve	Truno Nio	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.		Dimension	s In Inche	s
Size Inches	PSI	Port Size	Type No.	AC	120-60	120-60	DC	Lbs.	Α	В	С	D
3/8	25 50 75 100 150	3/8 1/4 3/16 5/32 1/8	10M21 10M41 10M51 10M81 10M61	25	0.4	1.1	18	6	6-1/4	5-1/2	2-7/8	2-5/8
3,5	50 75 100 150	3/8 5/16 1/4 3/16	25M21 25M31 25M41 25M51	45	0.8	2.3	23	10	7-1/8	6-3/8	3-1/2	2-5/8
1/2	25 50 75 100 150	3/8 1/4 3/16 5/32 1/8	10M22 10M42 10M52 10M82 10M62	25	0.4	1.2	18	6	6-1/4	5-1/2	2-7/8	2-3/4
.,_	50 75 100 150	3/8 5/16 1/4 3/16	25M22 25M32 25M42 25M52	45	0.8	2.4	23	10	7-1/8	6-3/8	3-1/2	2-3/4
2/4	15 35	1/2 5/16	10M13 10M33	25	0.4	1.3	18	7	6-1/2	5-5/8	2-7/8	2-7/8
3/4	30 75	1/2 5/16	25M13 25M33	45	0.8	2.5	23	10	7-3/8	6-1/2	3-1/2	2-7/8

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 24 & 25)

MAGNATROL VALVE CORPORATION

Dependable • Packless



MAX. FLUID TEMP.

400° F

MAX. STATIC PRESSURE

150 PSI

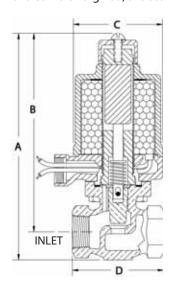
TYPE "MR" - NORMALLY OPEN 3/8" TO 3/4" PIPE SIZE

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 304 Stainless Steel

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.



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

**Cleaning:

- · Cryogenic valves are degreased and cleaned to keep them free of moisture.
- $\cdot \ \, \text{Oxygen valves are also "black light" tested.}$

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 24 & 25)

Pipe	Max.	Valve Port	Toma Na	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.		Dimension	s In Inche	s
Size Inches	Diff. PSI	Size	Type No.	AC	120-60	120-60	DC	Lbs.	Α	В	С	D
	23	3/8	† 10MR21									
	45	1/4	† 10MR41									
	70	3/16	† 10MR51	25	0.5	1.4	18	7	7	6-1/4	2-7/8	2-5/8
2/0	90	5/32	† 10MR81									
3/8	135	1/8	† 10MR61									
	45	3/8	25MR21									
	70 90	5/16 1/4	25MR31	45	1.0	2.6	23	10	7-7/8	7-1/8	3-1/2	2-5/8
	135	3/16	25MR41 25MR51									
	23	3/8	10MR22									
	45	1/4	10MR42									
	70	3/16	10MR52	25	0.5	1.5	18	7	7	6-1/4	2-7/8	2-3/4
	90	5/32	10MR82		0.5					0 ., .	2 // 0	2 37 .
1/2	135	1/8	10MR62									
-,-	45	3/8	25MR22									
	70	5/16	25MR32	45	1.0	2.7	23	10	7-7/8	7-1/8	3-1/2	2-3/4
	90	1/4	25MR42	75	1.0	2.7	23	10	/ //0	/ 1/0	3 1/2	2 3/4
	135	3/16	25MR52									
	13	1/2	10MR13	25	0.5	1.6	18	7	7-1/4	6-3/8	2-7/8	2-7/8
3/4	32	5/16	10MR33		- 10	.,,		-	, .			
-, -	27 70	1/2 5/16	25MR13	45	1.0	2.8	23	11	8-1/8	7-1/4	3-1/2	2-7/8
	70	3/10	25MR33									

† UL Listed Valves - Consult Factory



400° F

MAX. STATIC PRESSURE

200 PSI

FOR OPTIONS & ACCESSORIES

SEE PAGES 24 & 25

BRONZE SOLENOID VALVES

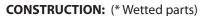
Dependable • Packless

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.



*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 - Inconel

*Body Seal - Non Asbestos Gasket

*Orifice Seal - Glass Filled Teflon

*AC Shading Coil - Copper

*Stem Pin - Inconel

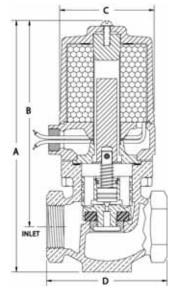
Coil - Encapsulated Class H, 18" leads





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.



Pipe	Max.	Toma Na	Watts	Amps	Amps	Watts	Ship		Dimension	s In Inche	s
Size Inches	Diff. PSI	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
1/2	90 140	† 14S22 † 114S42	25 40	0.4 0.6	1.2 1.8	18 28	8	7	5-7/8	2-7/8	3-1/4
	180	129S42	65	1.2	3.6	33	11	8	6-7/8	3-1/2	3-1/4
3/4	50 110	† 14S23 † 114S43	25 40	0.4 0.6	1.3 2.0	18 28	9	7-1/8	6	2-7/8	3-1/2
	180	129S43	65	1.2	3.9	33	12	8-1/8	7	3-1/2	3-1/2
1	25 50 90	† 16S14 † 116S24 † 116S44	25 40	0.4	1.5 2.3	18 28	11	8	6-5/8	3-1/4	4-1/8
	180	131S44	65	1.2	4.2	33	14	8-7/8	7-1/2	3-1/2	4-1/8
1-1/4	25 50	† 17S15 † 117S25	25 40	0.4 0.6	1.6 2.4	18 28	12	8-3/8	6-3/4	3-1/2	4-1/2
1-1/-	140	132S45	65	1.2	4.5	33	16	9-3/8	7-3/4	3-5/8	4-1/2
	180	†† 140S45	85	2.0	9.2	N/A	20	10-3/8	8-3/4	4-1/2	4-1/2
1-1/2	25 50	35S16 35S26	45	0.8	3.2	23	20	10	8-1/8	4	4-7/8
1-1/2	90	135S46	65	1.2	4.8	33					
	180	141S46	85	2.0	10.0	45	24	11	9-1/8	4-1/2	4-7/8
2	25 50	36S17 36S27	45	0.8	3.5	23	31	11	8-3/4	5-3/8	6
	115 180	42S47 142S47	60 85	1.2 2.0	7.4 11.0	35 45	36	12	9-3/4	5-3/8	6
2-1/2	25 50 115	43S18 43S28 43S48	60	1.2	8.0	35	43	12-7/8	10-1/8	5-7/8	7-1/4
	175	143548	85	2.0	12.0	45					
3	25 50 100	44S19 44S29 44S49	60	1.2	8.8	35	56	13-3/4	10-1/2	6-5/8	8-3/8
	150	144S49	85	2.0	13.0	45					

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 24 & 25)

† UL Listed Valves - Consult Factory

†† Not available for DC operation

MAGNATROL VALVE CORPORATION

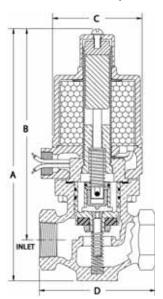
Dependable • Packless

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

*Poppet - 303 Stainless Steel

*Stem - 303 Stainless Steel

*Bonnet Tube - 304 Stainless Steel

*Springs - Inconel and 302 Stainless Steel

*Body Seal - Non Asbestos Gasket

*Orifice Seal - Glass Filled Teflon

*AC Shading Coil - Copper

*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.



MAX. FLUID TEMP.

400° F

MAX. STATIC PRESSURE

200 PSI

FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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 24 & 25)

Pipe	Max.	Toma Na	Watts	Amps Hold	Amps	Watts	Ship Wt.		Dimension	s In Inche	s
Size Inches	Diff. PSI	Type No.	AC	120-60	Inrush 120-60	DC	Lbs.	Α	В	С	D
1/2	90 140	† 14SR22 † 114SR42	25 40	0.5 0.8	1.5 2.4	18 28	8	8-1/8	7	2-7/8	3-1/4
	180	129SR42	65	1.5	4.2	33	11	9-1/8	8	3-1/2	3-1/4
3/4	50 110	† 14SR23 † 114SR43	25 40	0.5 0.8	1.6 2.6	18 28	9	8-1/4	7-1/8	2-7/8	3-1/2
	180	129SR43	65	1.5	4.3	33	13	9-1/4	8-1/8	3-1/2	3-1/2
1	25 50 90	† 16SR14 † 116SR24 † 116SR44	25 40	0.5	1.8 2.9	18 28	11	9-1/8	7-3/4	3-1/4	4-1/8
	180	131SR44	65	1.5	4.5	33	15	10	8-5/8	3-1/2	4-1/8
1-1/4	25 50	† 17SR15 † 117SR25	25 40	0.5 0.8	1.9 3.0	18 28	13	9-3/4	8-1/8	3-1/2	4-1/2
1-1/4	140	132SR45	65	1.5	4.8	33	17	10-3/4	9-1/8	3-5/8	4-1/2
	180	†† 140SR45	85	3.5	9.0	N/A	20	11	9-3/8	4-1/2	4-1/2
1-1/2	25 50	35SR16 35SR26	45	1.0	3.8	23	21	11-3/8	9-1/2	4	4-7/8
1-1/2	90	135SR46	65	1.5	5.7	33					
	180	141SR46	85	3.5	9.7	45	25	11-5/8	9-3/4	4-1/2	4-7/8
2	25 50	36SR17 6SR27	45	1.0	4.2	23	31	12-3/8	10-1/8	5-3/8	6
_	115 180	42SR47 142SR47	60 85	1.7 3.5	7.3 11.0	35 45	36	12-5/8	10-3/8	5-3/8	6
2-1/2	25 50 115	43SR18 43SR28 43SR48	60	1.7	8.0	35	45	13-1/2	10-3/4	5-7/8	7-1/4
	175	143SR48	85	3.5	12.0	45					
3	25 50 100	44SR19 44SR29 44SR49	60	1.7	8.8	35	57	14-3/8	11-1/8	6-5/8	8-3/8
	150	144SR49	85	3.5	13.0	45					

† UL Listed Valves - Consult Factory † Not available for DC operation



400° F

MAX. STATIC PRESSURE

300 PSI

Except valves listed for 500 PSI

BRONZE SOLENOID VALVES

Dependable • Packless

TYPE "L" 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.

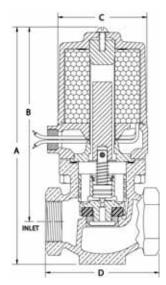


- *Valve Body Cast Bronze, Globe Pattern NPT ends
- *Piston Bronze
- Coil Enclosure Malleable or Cast Iron, 1/2" NPS conduit conn.
- *Plunger 430 Stainless Steel
- *Pilot Valve 303 Stainless Steel
- *Bonnet Tube 304 Stainless Steel
- *Spring Inconel
- *Body Seal Non Asbestos Gasket
- *Orifice Seal Glass Filled Teflon
- *AC Shading Coil Copper
- *Stem Pin Inconel

Coil - Encapsulated Class H, 18" leads

FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

FOR STEAM APPLICATIONS SEE BULLETIN 3006-S Page 12



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.

Pipe	Max.		Watts	Amps	Amps	Watts	Ship		Dimension	s In Inche	S
Size Inches	Diff. PSI	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
1/2	110 200	14L42 14L32	25	0.4	1.2	18	8	7	5-7/8	2-7/8	3-1/4
''-	300 500	29L52 E29L62	45 45	0.8	2.4	23 23	11 16	<u>8</u> 8	6-7/8 6-7/8	3-1/2 4	3-1/4 3-1/4
	50 110	14L23 14L43	25	0.4	1.3	18	9	7-1/8	6	2-7/8	3-1/2
3/4	200 300	29L33 129L53	45 65	0.8 1.2	2.6 3.9	23 33	12	8-1/8	7	3-1/2	3-1/2
	500	E129L63	65	1.2	3.9	33	17	8-1/8	7	4	3-1/2
	50 110	16L24 16L44	25	0.4	1.5	18	11	8	6-5/8	3-1/4	4-1/8
1	200 300	31L34 131L54	45 65	0.8 1.2	2.8 4.2	23 33	14	8-7/8	7-1/2	3-1/2	4-1/8
	500	E131L64	65	1.2	4.2	33	19	8-7/8	7-1/2	4	4-1/8
_	50 90	17L25 17L45	25	0.4	1.6	18	12	8-3/8	6-3/4	3-1/2	4-1/2
1-1/4	200 300	32L35 132L55	45 65	0.8	3.0 4.5	23 33	16	9-3/8	7-3/4	3-5/8	4-1/2
	500	†† 140L65	85	2.0	9.2	N/A	20	10-3/8	8-3/4	4-1/2	4-1/2
	50	35L26	45	0.8	3.2	23	20	10-3/8	8-1/8	4-1/2	4-7/8
4 4 / 2	115	35L46							, -		
1-1/2	200 300	41L36 141L56	60 85	1.2 2.0	6.7 10.0	35 45	24	11	9-1/8	4-1/2	4-7/8
	500	141L66	00	2.0	10.0	45					
	50 100	36L27 36L47	45	0.8	3.5	23	31	11	8-3/4	5-3/8	6
2	200 300	42L37 42L57	60	1.2	7.4	35	36	12	9-3/4	5-3/8	6
	500	142L67	85	2.0	11.0	45	1				
2.4/2	50 125	43L28 43L48	60	1.2	8.0	35					
2-1/2	200	43L38 143L58	85	2.0	12.0	45	43	12-7/8	10-1/8	5-7/8	7-1/4
	50	44L29	0.5	2.0	12.0	40					
3	100	44L49 44L49 44L39	60	1.2	8.8	35	56	13-3/4	10-1/2	6-5/8	8-3/8
	300	144L59	85	2.0	13.0	45	1				

†† Not available for DC operation

** 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 24 & 25)

Dependable • Packless



MAX. FLUID TEMP.

400° F

MAX. STATIC PRESSURE

300 PSI

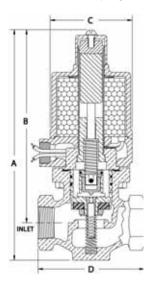
Except valves listed for 500 PSI

TYPE "LR" 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 seal 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
- *Poppet 303 Stainless Steel
- *Stem 303 Stainless Steel
- *Bonnet Tube 304 Stainless Steel
- *Springs Inconel and 302 Stainless Steel
- *Body Seal Non Asbestos Gasket
- *Orifice Seal Glass Filled Teflon
- *AC Shading Coil Copper
- *Stem Pin 304 Stainless Steel

Coil - Encapsulated Class H, 18" leads

nduit conn. FOR OPTIONS & ACCESSORIES

SEE PAGES 24 & 25

FOR STEAM APPLICATIONS SEE BULLETIN 3006-SR Page 13



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.



** 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 24 & 25)

Pipe	Max.	Town No.	Watts	Amps	Amps	Watts	Ship		Dimension	s In Inche	s
Size Inches	Diff. PSI	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
4/2	110 200	14LR42 14LR32	25	0.5	1.5	18	8	8-1/8	7	2-7/8	3-1/4
1/2	300	29LR52	45	1.0	2.7	23	11	9-1/8	8	3-1/2	3-1/4
	500	E29LR62	45	1.0	2.7	23	16	9-1/8	8	4	3-1/4
	50 110	14LR23 14LR43	25	0.5	1.6	18	9	8-1/4	7-1/8	2-7/8	3-1/2
3/4	200	29LR33	45	1.0	2.9	23	13	9-1/4	8-1/8	3-1/2	3-1/2
	300	129LR53	65	1.5	4.3	33					
	500	E129LR63	65	1.5	4.3	33	18	9-1/4	8-1/8	4	3-1/2
	50 110	16LR24 16LR44	25	0.5	1.8	18	11	9-1/8	7-3/4	3-1/4	4-1/8
1	200	31LR34	45	1.0	3.0	23	15	10	8-5/8	3-1/2	4-1/8
	300	131LR54	65	1.5	4.5	33					
	500	E131LR64	65	1.5	4.5	33	20	10	8-5/8	4	4-1/8
	50 90	17LR25 17LR45	25	0.5	1.9	18	13	9-3/4	8-1/8	3-1/2	4-1/2
1-1/4	200	32LR35	45	1.0	3.2	23	4.7	10.2/4	0.1/0	2.5/0	4.4/2
, -	300	132LR55	65	1.5	4.8	33	17	10-3/4	9-1/8	3-5/8	4-1/2
	500	††140LR65	85	3.5	9.0	N/A	20	11	9-3/8	4-1/2	4-1/2
	50 115	35LR26 35LR46	45	1.0	3.8	23	21	11-3/8	9-3/8	4	4-7/8
1-1/2	200	41LR36	60	1.7	6.5	35					
	300 500	141LR56 141LR66	85	3.5	9.7	45	25	11-5/8	9-3/4	4-1/2	4-7/8
	50 100	36LR27 36LR47	45	1.0	4.2	23	31	12-3/8	10-1/8	5-3/8	6
2	200 300	42LR37 42LR57	60	1.7	7.3	35	36	12-5/8	10-3/8	5-3/8	6
	500	142LR67	85	3.5	11.0	45				, -	
	50	43LR28									
2-1/2	125	43LR48	60	1.7	8.0	35	45	13-1/2	10-3/4	5-7/8	7-1/4
, -	200 300	43LR38 143LR58	85	3.5	12.0	45	1				
	50	44LR29	رن	٥.٥	12.0	40					
3	100	44LR49 44LR39	60	1.7	8.8	35	57	14-3/8	11-1/8	6-5/8	8-3/8
	300	144LR59	85	3.5	13.0	45					

†† Not available for DC operation



Dependable • Packless

MAX. FLUID TEMP.

212° F

MAX. STATIC PRESSURE

150 PSI



1" TO 3" PIPE SIZE

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

TYPE "G" FULL PORT - NORMALLY CLOSED

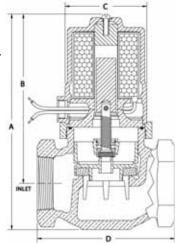
OPERATION:

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)



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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.

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

	Pipe	Max.	Toma Na	Watts	Amps	Amps	Watts	Ship	C	Dimension	s In Inche	s
	Size Inches	Diff. PSI	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
Г	_	20	† 18G24	25	0.4	1.4	18	9	7-1/2	6-1/8	2-3/4	4-1/8
	1	30	118G24	40	0.6	2.3	28	9	7-1/2	6-1/8	2-3/4	4-1/8
		50	133G24	65	1.2	4.0	33	13	8-1/2	7-1/8	3-1/2	4-1/8
		20	† 18G25	25	0.4	1.5	18	10	8	6-3/8	2-7/8	4-3/8
١ '	1-1/4	30	118G25	40	0.6	2.4	28	10	8	6-3/8	2-7/8	4-3/8
	-	50	133G25	65	1.2	4.1	33	14	8-7/8	7-3/8	3-1/2	4-3/8
		15	† 18G26	25	0.4	1.7	18	12	8-1/8	6-1/2	3-1/8	4-3/4
1'	1-1/2	25	118G26	40	0.6	2.5	28	12	8-1/8	6-1/2	3-1/8	4-3/4
L	-	35	133G26	65	1.2	4.2	33	16	9-1/8	7-1/2	3-1/2	4-3/4
		18	33G27	45	0.8	3.4	23	20	9-7/8	7-7/8	3-3/4	5-3/4
	2	30	133G27	65	1.2	4.2	33	20	9-7/8	7-7/8	3-3/4	5-3/4
		50	233G27	80	1.8	9.0	40	20	9-7/8	7-7/8	3-3/4	5-3/4
Ι.		13	37G28	40	0.8	3.6	23	33	11-1/8	8-5/8	5-7/8	7-1/8
	2-1/2	25	43G28	60	1.2	7.8	35	38	12-1/8	9-5/8	5-7/8	7-1/8
L		35	143G28	85	2.0	12.0	45	38	12-1/8	9-5/8	5-7/8	7-1/8
	3	25	44G29	60	1.2	8.6	35	46	13	10	6-5/8	8
	3	35	144G29	85	2.0	13.0	45	46	13	10	6-5/8	8

† 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 24 & 25)

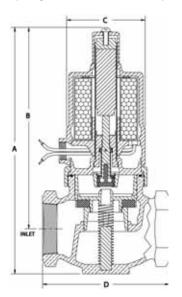
Dependable • Packless

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.



Strainers are recommended for use with solenoid valves (See page 19) **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 - 304 Stainless Steel

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.

MAX. FLUID TEMP.

212° F

MAX. STATIC PRESSURE

150 PSI



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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 24 & 25)

Pipe	Max.	Tuno No	Watts	Amps Hold	Amps	Watts	Ship Wt.	Dimensions In Inches			
Size Inches	Diff. PSI	Type No.	AC	120-60	Inrush 120-60	DC	Lbs.	A	В	C	D
1	20	† 18GR24	25	0.5	1.5	18	9	8-5/8	7-1/4	2-3/4	4-1/8
	35	33GR24	45	1.0	3.0	23	13	9-5/8	8-1/4	3-1/2	4-1/8
1-1/4	20	† 18GR25	25	0.5	1.9	18	10	9-3/8	7-3/4	2-7/8	4-3/8
	35	33GR25	45	1.0	3.2	23	14	10-1/4	8-3/4	3-1/2	4-3/8
1-1/2	15	† 18GR26	25	0.5	2.0	18	12	9-1/2	7-7/8	3-1/8	4-3/4
	25	33GR26	45	1.0	3.8	23	16	10-1/2	8-7/8	3-1/2	4-3/4
2	18	33GR27	45	1.0	4.2	23	21	11-1/4	9-1/4	3-3/4	5-3/4
	30	133GR27	65	1.5	4.5	33	21	11-1/4	9-1/4	3-3/4	5-3/4
2-1/2	13	37GR28	45	1.0	4.4	23	34	12-1/2	10	5-7/8	7-1/8
	25	43GR28	60	1.7	8.0	35	39	12-3/4	10-1/4	5-7/8	7-1/8
3	25	44GR29	60	1.7	8.8	35	47	13-5/8	10-5/8	6-5/8	8

† UL Listed Valves - Consult Factory



212° F
MAX. STATIC PRESSURE

150 PSI

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

*Spring - 302 Stainless Steel

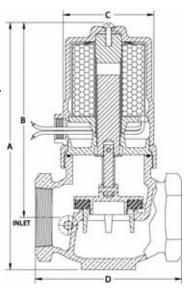
*Body Seal - Buna N

*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)



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25



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.

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

Pipe	Max.	Toma Na	Watts	Amps	Amps	Watts	Ship	ı	Dimension	s In Inche	s
Size Inches	Diff. PSI	Type No.	AC	Hold 120-60	Inrush 120-60	DC	Wt. Lbs.	Α	В	С	D
3/8	15 30	18D11 33D11	25 45	0.4 0.8	1.0 2.3	18 23	7 10	6-1/4 7-1/8	5-3/8 6-3/8	2-3/4 3-1/2	2-7/8 2-7/8
1/2	10 20	18D12 33D12	25 45	0.4 0.8	1.1 2.4	18 23	7 10	6-1/4 7-1/4	5-1/2 6-3/8	2-3/4 3-1/2	3-1/8 3-1/8
3/4	4 7.5	18D13 33D13	25 45	0.4 0.8	1.2 2.5	18 23	8 12	6-7/8 7-3/4	5-3/4 6-3/4	2-3/4 3-1/2	3-1/2 3-1/2
1	2 3.5	18D14 33D14	25 45	0.4 0.8	1.4 2.7	18 23	9 13	7-1/2 8-1/2	6-1/8 7-1/8	2-3/4 3-1/2	4-1/8 4-1/8
1-1/4	1.3 2.3	18D15 33D15	25 45	0.4 0.8	1.5 2.8	18 23	10 14	8 8-7/8	6-3/8 7-3/8	2-7/8 3-1/2	4-3/8 4-3/8
1-1/2	0.8 1.5	18D16 † 33D16	25 45	0.4 0.8	1.7 3.0	18 23	12 15	8-1/8 9-1/8	6-1/2 7-1/2	3-1/8 3-1/2	4-3/4 4-3/4
2	0.8 1.2	33D17 †133D17	45 65	0.8 1.2	3.4 4.2	23 33	19 19	9-7/8 9-7/8	7-7/8 7-7/8	3-3/4 3-3/4	5-3/4 5-3/4

† 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 24 & 25)

STRAINERSBronze • Stainless Steel



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:

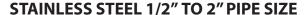
Strainer bodies have screwed ends. Screens are stainless steel with opening sizes as listed in tables below. Other sizes can be furnished upon request. Liberal straining area provides for fluid passage at minimum pressure drop. Screens are easily removed for cleaning. Strainers are furnished with NPT blowoff 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.



Pipe	Screen Size	Tyme No	Ship	Dimen	sions In In	ches
Size Inches	Screen Size	Type No.	Wt. Lbs.	Α	В	С
1/4		ST 0	3/4	2-3/4	2-1/4	1/4
3/8	60 Mesh	ST 1	3/4	2-3/4	2-1/4	1/4
1/2	0.009	ST 2	3/4	2-3/4	2-1/4	1/4
3/4	Openings	ST 3	1-1/2	3	2-9/16	3/8
1		ST 4	2-1/4	3-3/4	2-3/4	3/8
1-1/4		ST 5	3-1/4	4-7/16	3-5/8	3/4
1-1/2	0.16 Diameter	ST 6	4-1/2	4-15/16	3-7/8	3/4
2	Perforations Lined With	ST 7	7	6-1/8	5-1/16	1
2-1/2	30 Mesh	ST 8	12-1/2	8-1/4	6	1-1/4
3		ST 9	18	9	6-3/4	1-1/2



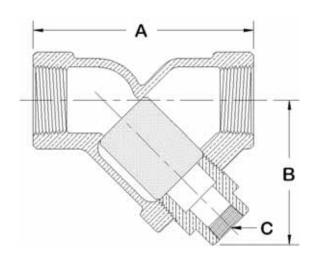
Pipe	Pipe Size Screen Size		Ship	Dimensions In Inches			
Inches	Screen Size	Type No.	Wt. Lbs.	Α	В	С	
1/2	60 Mesh	ST 2SS	1-1/2	3	2-3/8	1/4	
3/4	0.009	ST 3SS	2-1/4	3-3/4	2-13/16	3/8	
1	Openings	ST 4SS	3-1/4	4-5/8	3-1/8	3/8	
1-1/2	0.16 Diameter Perforations	ST 6SS	6-3/4	5-5/8	4-3/4	3/4	
2	Lined w/30 Mesh	ST 7SS	11-1/2	7	6	1	

PRESSURE TEMPERATURE RATINGS

MATERIAL	STEAM	LIQUIDS		
BRONZE	300 PSI @ 400°F	600 PSI @ 100°F		
STAINLESS STEEL	845 PSI @ 750°F	1,440 PSI @ 100°F		









MAX. FLUID TEMP. 400° F

300 PSI

Except valves listed for 500 PSI

STAINLESS STEEL SOLENOID VALVES

Dependable • Packless

TYPE "K" FULL PORT - NORMALLY CLOSED 1/2" TO 2" PIPE SIZE

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN

OPERATION: MAX. STATIC PRESSURE

Valve opens when energized and closes when de-energized. When the coil is energized the passageway to permit pressure to build above the piston and seat it.



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



(*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

*Pilot Valve - 303 Stainless Steel

*Bonnet Tube - 304 Stainless Steel

*Spring - Inconel

*Body Seal - Non Asbestos Gasket

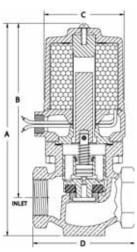
*Orifice Seal - Glass Filled Teflon

*AC Shading Coil - Silver

*Stem Pin - Inconel

Coil - Encapsulated Class H, 18" leads

FOR STEAM APPLICATIONS SEE BULLETIN 3006-W Page 22



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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.

Pipe Size	Max. Diff.	Type No.	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.		Dimension	s In Inche	S
Inches	PSI	туре но.	AC	120-60	120-60	DC	Lbs.	Α	В	С	D
1/2	110 200	14K42 14K32	25	0.4	1.2	18	7	7	5-7/8	2-7/8	3-1/4
1/2	300 500	29K52 E29K62	45	0.8	2.4	23	10 15	8	6-7/8	3-1/2 4	3-1/4
	110	14K43	25	0.4	1.3	18	8	7-1/8	6	2-7/8	
3/4	200	29K33	45	0.8	2.6	23	11			3-1/2	3-1/2
3/4	300	129K53	65	1.2	3.9	33		8-1/8	7		5 ., _
	500	E129K63					16			4	
	110	16K44	25	0.4	1.5	18	10	8	6-5/8	3-1/4	
1	200	31K34	45	0.8	2.8	23	13			3-1/2	4-1/8
	300	131K54	65	1.2	4.2	33		8-7/8	7-1/2		1 1/0
	500	E131K64		-	·		18			4	
	115	35K46	45	0.8	3.2	23	17	10	8-1/8	4	
1-1/2	200	41K36	60	1.2	6.7	35					4-7/8
1-1/2	300	141K56	85	2.0	10.0	45	21	11	9-1/8	4-1/2	1 770
	500	141K66									
	100	36K47	45	0.8	3.5	23	27	11	8-3/4		
2	200	42K37	60	1.2	7.4	35				5-3/8	6
_	300	42K57					32	12	9-3/4	5 5/6	
	500	142K67	85	2.0	11.0	45					

Face To Face Dimensions for Flanged Ends

(For complete dimensions, weights and other sizes see Engineering Catalog 3006-ENG)

	Dimension In Inches									
Pipe Size	Pipe Size 150# Flanged 300# Flanged									
1	6-1/2	7-1/2								
1-1/2	6-1/2	7-1/2								
2	8	9								

** 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 24 & 25)

MAGNATROL VALVE CORPORATION

STAINLESS STEEL SOLENOID VALVES

Dependable • Packless

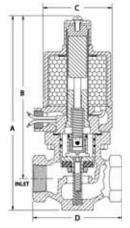


TYPE "KR" FULL PORT - NORMALLY OPEN 1/2" TO 2" PIPE SIZE

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 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 430 Stainless Steel
- *Poppet 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

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

Except valves listed for 500 PSI



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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 24 & 25)

Pipe	Max. Diff.	Type No.	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.	Dimensions In Inches			
Size Inches	// // // // // // // // // // // //	Lbs.	Α	В	С	D					
1/2	110 200	14KR42 14KR32	25	0.5	1.5	18	7	8-1/8	7	2-7/8	3-1/4
1/2	300 500	29KR52 E29KR62	45	1.0	2.7	23	10 15	9-1/8	8	3-1/2 4	5-1/4
	110	14KR43	25	0.5	1.6	18	8	8-1/4	7-1/8	2-7/8	
3/4	200	29KR33	45	1.0	2.9	23	12	9-1/4		3-1/2 3-1/2	3-1/2
3/4	300	129KR53	65	1.5	4.3	33			8-1/8	J 1/2	3 1/2
	500	E129KR63					17			4	
1	110	16KR44	25	0.5	1.8	18	10	9-1/8	7-3/4	3-1/4	
1	200	31KR34	45	1.0	3.0	23	14		8-5/8	3-1/2	4-1/8
'	300 500	131KR54 E131KR64	65	1.5	4.5	33	20	10		4	,6
	115	35KR46	45	1.0	3.8	23	18	11-3/8	9-1/2	4	
1 1/2	200	41KR36	60	1.7	6.5	35					4-7/8
1-1/2	300 500	141KR56 141KR66	85	3.5	9.7	45	22	11-5/8	9-3/4	4-1/2	4-7/0
	100	36KR47	45	1.0	4.2	23	27	12-3/8	10-1/8		
2	200 300	42KR37 42KR57	60	1.7	7.3	35	32	12-5/8	10-3/8	5-3/8	6
	500	142KR67	85	3.5	11.0	45					

FOR

STEAM APPLICATIONS

SEE BULLETIN 3006-WR Page 23

Dimension In Inches							
Pipe Size 150# Flanged 300# Flange							
1	6-1/2	7-1/2					
1-1/2	6-1/2	7-1/2					
2	8	9					

Face To Face Dimensions for Flanged Ends

(For complete dimensions, weights and other sizes see Engineering Catalog 3006-ENG)



MAX. FLUID TEMP. 400° F

MAX. STATIC PRESSURE

200 PSI

STAINLESS STEEL SOLENOID VALVES

Dependable • Packless

TYPE "W" FULL PORT - NORMALLY CLOSED 1/2" TO 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 - No Copper Bearing Alloys in contact with fluid)

*Valve Body - 304 Stainless Steel Globe Pattern - NPT ends

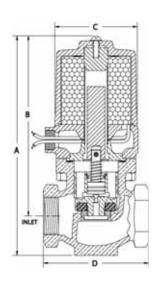
(For Flanged Ends see Options page 24)

*Piston - 303 Stainless Steel

Coil Enclosure - Malleable or Cast Iron, 1/2" NPS conduit conn.

- *Plunger 430 Stainless Steel
- *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



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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.

Pipe	Size Diff. Type No. Watts Hold Inrush Watts	Ship Wt.	Dimensions In Inches								
Inches		Lbs.	Α	В	С	D					
	90	14W22	25	0.4	1.2	18	7	7	5-7/8	2-7/8	
1/2	140	114W42	40	0.6	1.8	28		/	3-7/6	2-7/0	3-1/4
	180	129W42	65	1.2	3.6	33	10	8	6-7/8	3-1/2	
	50	14W23	25	0.4	1.3	18	8	7-1/8	6	2-7/8	
3/4	110	114W43	40	0.6	2.0	28	0	7-1/0	0	2-7/0	3-1/2
	180	129W43	65	1.2	3.9	33	11	8-1/8	7	3-1/2	
	25	16W14	25	0.4	1.5	18					
1	50	116W24	40	0.6	2.3	28	10	8	6-5/8	3-1/4	4-1/8
	90	116W44									7-1/0
	180	131W44	65	1.2	4.2	33	13	8-7/8	7-1/2	3-1/2	
	25	35W16	45	0.8	3.2	23					
1-1/2	50	35W26					17	10	8-1/8	4	4-7/8
1-1/2	90	135W46	65	1.2	4.8	33					7 7/0
	180	141W46	85	2.0	10.0	45	21	11	9-1/8	4-1/2	
	25	36W17	45	0.8	3.5	23	27	11	8-3/4		
2	50	36W27					2/	1.1	0-3/4	5-3/8	6
-	115	42W47	60	1.2	7.4	35	- 32	12	9-3/4) 5/6	
	180	142W47	85	2.0	11.0	45	52	12	3-3/4		

Face To Face Dimensions for Flanged Ends

(For complete dimensions, weights and other sizes see Engineering Catalog 3006-ENG)

Dimension In Inches							
Pipe Size	150# Flanged	300# Flanged					
1	6-1/2	7-1/2					
1-1/2	6-1/2	7-1/2					
2	8	9					

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 24 & 25)

STAINLESS STEEL SOLENOID VALVES

Dependable • Packless

Magnatrol VALVE CORP.

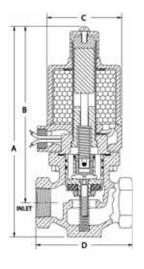
MAX. FLUID TEMP. 400° F

TYPE "WR" FULL PORT - NORMALLY OPEN 1/2" TO 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 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 430 Stainless Steel
- *Poppet 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



FOR OPTIONS & ACCESSORIES SEE PAGES 24 & 25

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 24 & 25)

Pipe	Max. Diff.	Type No.	Watts	Amps Hold	Amps Inrush	Watts	Ship Wt.		Dimension	s In Inche	s
Size Inches	PSI	туре но.	AC	120-60	120-60	DC	Lbs.	Α	В	С	D
	90	14WR22	25	0.5	1.5	18	7	8-1/8	7	2-7/8	
1/2	140	114WR42	40	0.8	2.4	28			-		3-1/4
	180	129WR42	65	1.5	4.2	33	10	9-1/8	8	3-1/2	
	50	14WR23	25	0.5	1.6	18	8	8-1/4	7-1/8	2-7/8	
3/4	110	114WR43	40	0.8	2.6	28	0		• •		3-1/2
	180	129WR43	65	1.5	4.3	33	12	9-1/4	8-1/8	3-1/2	
	25	16WR14	25	0.5	1.8	18					
1	50	116WR24	40	0.8	2.9	28	10	9-1/8	7-3/4	3-1/4	4-1/8
	90	116WR44	70		2.5						T-1/0
	180	131WR44	65	1.5	4.5	33	14	10	8-5/8	3-1/2	
	25	35WR16	45	1.0	3.8	23					
1-1/2	50	35WR26	43	1.0	- 1 -		18	11-3/8	9-1/2	4	4-7/8
1-1/2	90	135WR46	65	1.5	5.7	33					7 7/0
	180	141WR46	85	3.5	9.7	45	22	11-5/8	9-3/4	4-1/2	
	25	36WR17	45	1.0	4.2	23	27	12-3/8	10 1/0		
2	50	36WR27	45	1.0			2/	12-3/0	10-1/8	5-3/8	6
-	115	42WR47	60	1.7	7.3	35	22	12-5/8	10-3/8) 5/0	
	180	142WR47	85	3.5	11.0	45	32	12-5/6	10-3/6		

Dimension In Inches						
Pipe Size	150# Flanged	300# Flanged				
1	6-1/2	7-1/2				
1-1/2	6-1/2	7-1/2				
2	8	9				

Face To Face Dimensions for Flanged Ends

(For complete dimensions, weights and other sizes see Engineering Catalog 3006-ENG)



OPTIONAL FEATURES

For Dependable • Packless Solenoid Valves

See Individual Options For Availability For Use With Specific Valve Types

BOTTOM MOUNTED OPTIONS Note: Only One Bottom Mount Option Can Be Installed On Each Valve

MANUAL OVERRIDE



(Normally Closed valves only) (Designated by Prefix "MO") Enables manual opening of solenoid valve during power failure or to override automatic controls.



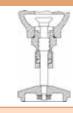
(Normally Closed valves only) (Designated by Prefix "LV") Enables rapid opening of solenoid valve. Can be chain operated for use at inaccessible locations.

DASHPOT



(Designated by Prefix "DP") Furnished for clean liquids to reduce water hammer effect sometimes encountered in long pipe runs by slowing valve closing.

FLOW CONTROL



(Normally Closed, NR & MR valves, only) (Designated by Prefix "FC") Provides a manual method of reducing or throttling the flow.

MOUNTING STUD



(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")

DRAIN

LEVER



(Normally Closed, NR & MR valves, only) (Designated by Prefix "DR") - 1/4" NPT plug supplied in bottom of valve to facilitate draining of liquid from valve body.

OTHER OPTIONS

PILOT TAP



(Designated by Prefix "PT") Type D, G & GR Valves can be furnished with 1/8" tapped hole for pilot connection or pressure gauge.

DIN CONNECTOR



(Designated by Suffix "DN") Provides 3 prong connector for easy power connect / disconnect.

"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 Prefix "LT") - The Leak / Dead Tight Option is used to satisfy a Class VI tight shutoff requirement. This option offers 'soft' resilient seating or 'gapless' seal. Consult Factory for Max. Diff. Pressure and Valve Type availability.

Flanged Ends for SS Valves:

(Designated by Suffix "F1" for 150 lb or "F3" for 300 lb Flanges) Available on stainless steel valves. (Flanged ends for bronze valves available through our Clark-Cooper Division, see bottom of page 3).

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)

MAGNATROL VALVE CORPORATION —

POSITION INDICATORS

For Normally Closed Solenoid Valves



FEATURES:

- Packless non-wetted enclosed operation
- Colored magnet shows valve-open position
- Clear high-strength polycarbonate housings
- Heavy-duty Normally Open Reed Switch (PS)
- Wide operating temperature range
- Teflon Housing for temperatures up to 400°F & Cryogenics **
- Explosion-Proof Housing available for hazardous areas **

"PD" (POSITION DISPLAY) - VISUAL INDICATION ONLY 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.

"PS" (POSITION SWITCH) - VISUAL INDICATION WITH SWITCH** CONSTRUCTION:

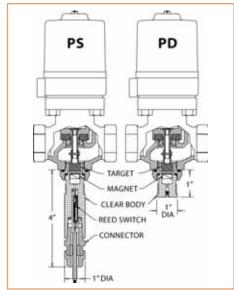
• Housing: Clear High-Strength Polycarbonate**

APPLICATION:

- Visual Indication that valve is Open/Closed and Contact Closure (Switch)**
- **(See alternate housing(s) below for High Temperature, Cryogenic and Explosion-Proof applications)

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. (The reed switch is in its normally open contact position). When the valve is energized, (open position), the magnet drops down to a visible position and closes the magnetically operated reed switch contacts. The reed switch is capable of switching both AC and DC, permitting direct control over a wide range, from low-level load to electromagnetic power load. It has a rated operational current 240 VAC 0.5 A, 115 VDC 0.3A and a minimum operational power of 24V 1mA. The switch is wired with 22 AWG conductors exiting through a liquid tight strain relief connector.



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*

To indicate Option when Ordering:

Use Prefix "PD" for Position Display Use Prefix "PS" for Position Switch

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

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

** ENCLOSURES & TEMPERATURE RATINGS

In direct on House in mo	01	Appl	ication	Fluid Town overwee	Visual
Indicator Housings	Option	Expl. Proof	NEMA 4 & 4X	Fluid Temperatures	Indication
Clear High-Strength	PD	Yes	Yes	-40°F To 280°F (137°C)	Yes
Polycarbonate	PS	No	163	-40 1 10 200 1 (137 C)	
Teflon Housing	PS	No	Yes	Up To 400°F (204°C) and Cryogenics	No
Explosion Proof Housing	PS	Yes	Yes	Up To 400°F (204°C) and Cryogenics	No



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.

	_
Company Name:	
Contact (Your Name): Your RFQ Reference (If Any):	
Type of Business:	
E-Mail:	
VALVE DATA	
Desired Delivery:	
Your Reference (Optional):	
Quantity:	
Valve Construction Material: Bronze or S	tainless Steel
Pipe Size: (1/4" thru 3"):	
Normally: Closed (Energize To Open) or O	pen (Energize To Close)
Voltage: AC: Volts/ Hz or	DC:Volts
Maximum Differential Pressure: P	
Maximum Fluid Temperature:° F	
Optional Feature: (See Optional Feature Details On Pages 24 &	
Choose One (1) Of The Following Per Valve: MO LV Additional Options: HF LT NP PT (Can b	
Enclosure Options: General Purpose Expl (For Solenoid Housing) (Standard - NEMA 12)	
Comments:	

ORDERING GUIDELINES

Magnatrol Solenoid Valves



If you have any questions or wish to request a quote:

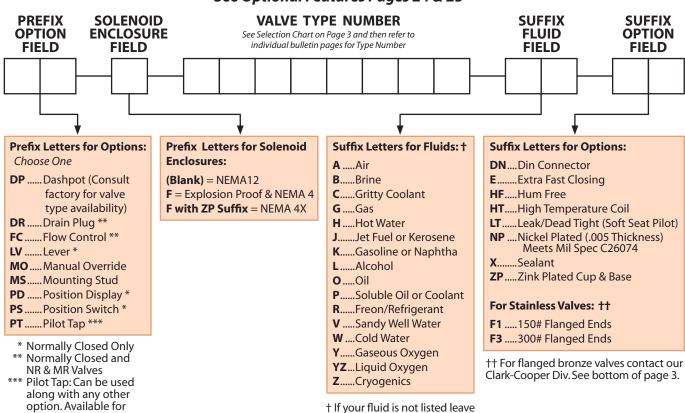
Phone: 973-427-4341 • Fax: 973-427-7611

E-Mail: info@magnatrol.com

For Help In Choosing The Correct Valve For Your Application: REFER TO THE VALVE SELECTION CHART ON PAGE 3

MAGNATROL VALVE TYPE NUMBERS PREFIX AND SUFFIX BREAKDOWN

For Additional Information On Options See Optional Features Pages 24 & 25



blank & advise Magnatrol of fluid

VALVE DISC AND GASKET CHANGES:

Type D, G and GR only.

Valve Disc and Gasket are sometimes changed/substituted for better performance with a given fluid. The change is represented by the insertion of a letter after the Valve Type letter(s). The inserted letter represents the substituted Disc/Gasket material. See examples below:

Examples:

- V Viton Disc (i.e. Type 18A44 with Viton Seals becomes 18AV44)
- T Teflon Disc (i.e. Type 18A44 with Teflon Seals becomes 18AT44)
- B Buna-N Disc (i.e. Type 16L44 with Buna-N Seals becomes 16LB44)

NOTE: Refer to individual bulletins for Valve Type's standard Disc and Gasket materials.

– NOTE —

Magnatrol Valve Type Numbers
DO NOT include Voltage
information.

VOLTAGE (AC Volts and Hz or DC Volts) MUST BE SPECIFIED when requesting a quote or placing and order.



TERMS & CONDITIONS OF SALE CONTACT INFORMATION

Solenoid valve questions can be answered quickly and accurately over the phone:

Phone: 973-427-4341 • Fax: 973-427-7611

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.
- 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 practical 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 retuned 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 saleable 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









MAGNATROL CONTACT INFORMATION

Sales/Service: Phone: 973-427-4341

Fax: 973-427-7611

Email: info@magnatrol.com

Mailing Address: PO Box 17

Hawthorne, NJ 07507

Shipping Address: 21 Horton Avenue

Hawthorne, NJ 07506

Administrative: 67 Fifth Avenue

Hawthorne, NJ 07506

