

**CLARK-  
COOPER DIV.,**  
MAGNATROL VALVE CORP.

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855 INDUSTRIAL HIGHWAY  
UNIT # 4  
PO BOX 238  
CINNAMINSON, NJ 08077



The following catalog contains valves available from our parent company Magnatrol Valve Corp.

This extensive product line of reliable solenoid control valves is available for quick delivery. In addition, Clark-Cooper can modify these valves to meet your exact requirements. Some typical modifications are listed below.

### A Few Examples...



- **End Connections**

- Flanges
- Union Ends
- Pipe Nipples
- Weld Ends
- Customer Specific

- **Vertical Pipe Mount**

- **Position Switches**

- Reed Type

- **Trim Material Options**

- 316 SST
- EPDM
- Customer Specific

- **Special Coated Internals**

- Teflon
- Kynar
- Hard Chrome
- Customer Specific

- **NEMA 4X Solenoid Enclosure**

If you don't see the modifications you are looking for please consult Clark-Cooper. Many unique applications and processes have been accomplished with engineered modifications to Magnatrol's reliable and proven valve design.

# VALVE CONSTRUCTION FEATURES

- 2-Way straight thru design
- Bronze body with female threads
- Full port-internal pilot operated or direct acting
- Packless construction
- Continuous duty coils for all voltages
- No differential pressure required to open

## HOUSING

of malleable iron, designed for rugged industrial use, protects the coil from accidental damage. All solenoid housings feature a self-contained terminal box with 1/2" tapped conduit connection which may be turned in various directions for convenient wiring.

## COILS

are available with class "A" or "H" insulation and are designed for continuous duty.

## BONNET

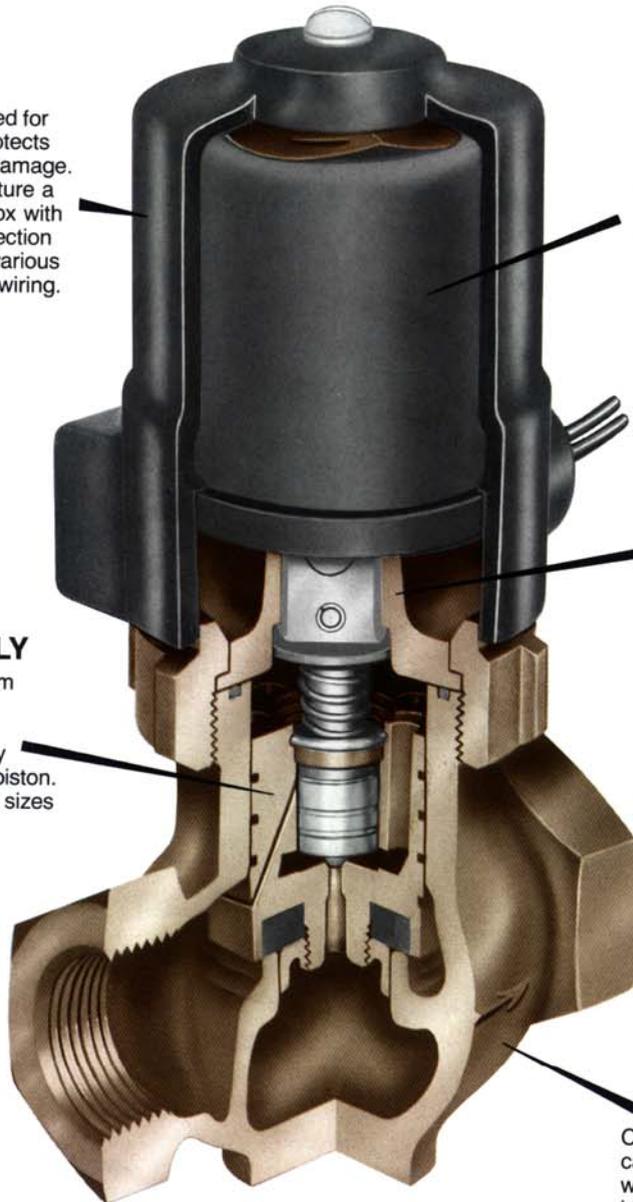
A flanged metallic tube encloses the plunger and hermetically seals the top of the valve.

## PISTON ASSEMBLY

A sturdily constructed stem assembly consisting of a laminated plunger and stainless steel pilot flexibly connected to the bronze piston. The discs are of standard sizes with material as dictated by operating conditions.

## VALVE BODY

Constructed of high pressure cast bronze in a globe pattern with screwed ends. Available in a full range of sizes.



Valve shown is typical of Type A. 1/2" thru 1 1/4".

**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.

# Solenoid 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.

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 .5 amperes on 120 volts it would draw .25 amperes on 240 volts, or .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

All coils can be energized continuously without overheating or failure. Eighteen inch leads are standard. Coils are encapsulated with the correct compound for temperature service intended, which produces a coil which has excellent resistance to shock, moisture, oil, and chemicals. Coils are available in two basic constructions depending on service.

**GENERAL SERVICE:** Class "A" coils are supplied in all valves for gases 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.

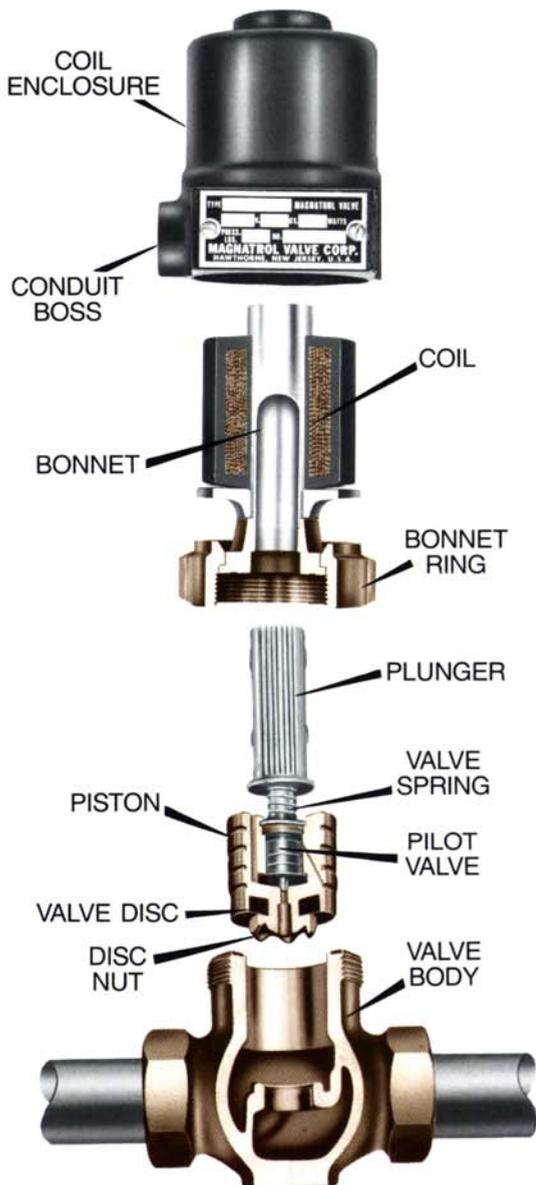
**HIGH TEMPERATURE SERVICE:** Class "H" coils are supplied in all valves for gases and liquids from 212°-400°F. and where ambient temperatures do not exceed 100°C. (212°F.).

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

## Easily Accessible

Unsurpassed ease of access is provided on all Magnatrol Valves as the entire solenoid and piston assembly can be removed without breaking flexible electrical connection and while valve body remains in pipe line. Periodic inspection, cleaning or servicing can be readily performed.



Typical for Type A 1/2" thru 1 1/4"

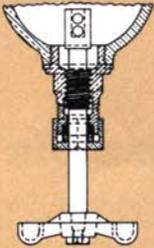


Check individual bulletin for listed valves.

# OPTIONAL FEATURES

**DEPENDABLE  
PACKLESS**

## *Solenoid Valves*

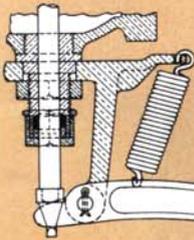
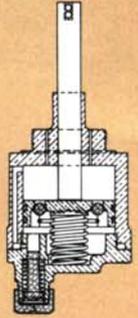


### **Manual Override**

(designated by prefix MO) provides for manual opening of solenoid valve in order to override an automatic control or in the event of a power failure.

### **Dashpot**

(designated by prefix DP) can be furnished for use with clean liquids to delay the closing slightly thereby reducing water hammer effect sometimes encountered on longer runs of pipe.

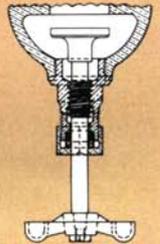


### **Lever**

(designated by prefix LV) provides for rapid manual opening of valve. Can be chain operated and is well suited for emergency use at inaccessible locations.

### **Flow Control**

(designated by prefix FC) provides a manual method of reducing or throttling the flow. Consult factory regarding application.



Note: Flow rates thru valves equipped with any of the above features will be somewhat reduced.

### **Mounting Stud**

(designated by Prefix MS) with 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")

**Position Display** (Normally Closed valves only) (designated by Prefix PD) - Provides visual indication of valve position.

**Position Switch** (Normally Closed valves only) (designated by Prefix PS) - Provides visual indication of valve position as well as closing a magnetically operated reed switch contact. For temperatures over 280° F use high temp. Teflon PS (Switch ONLY)

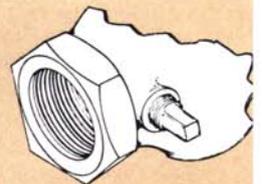
### **Drain** (Normally Closed valves only)

(designated by Prefix DR) - 1/4" NPT plug supplied in bottom of valve to facilitate draining of liquid from valve body.

**NOTE: ONLY ONE OF THE ABOVE OPTIONS CAN BE INSTALLED ON EACH VALVE.  
SEE INDIVIDUAL BULLETINS FOR AVAILABILITY AND PRICE.**

**Explosion-Proof and Watertight Solenoids** (designated by prefix F) can be furnished on valves to be installed in hazardous or wet locations (NEMA 4, 7C & D, 9E, F & G). Internal construction, pressure ratings, power consumption, and external dimensions are the same as for standard valves. See individual bulletins for availability and additional cost.

**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.



### **HOW TO INDICATE OPTIONAL FEATURES WHEN ORDERING**

Preface the type number as selected in the individual bulletins with the letter or letters that indicate the option or options required.

Example: F 18A44

Indicates an Explosion Proof type 18A44 valve.

Example: MO 18A44

Indicates Manual Override on a type 18A44 valve

Example: MOF 18A44

Indicates Manual Override on an Explosion Proof type 18A44 valve.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:  
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 Fax: (973) 427-7611  
 Web: www.magnatrol.com  
 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

## TYPE "N" — NORMALLY CLOSED

Pipe Size — 1/4" to 3/4"  
 Max. Fluid Temp. — 212° F.  
 Max. Static Press. — 300 PSI



TYPE 18N52

### 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 laminated plunger.

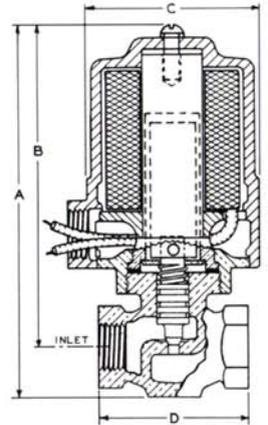
### CONSTRUCTION:

- \* Valve Body — Cast Bronze
- Coil Enclosure — Malleable Iron
- \* Plunger — 430 St. Stl.
- \* Valve Stem — 303 St. Stl.
- \* Bonnet Tube — 304 St. Stl.
- \* Spring — 302 St. Stl.
- \* Body Seal — Buna N
- Orifice Seal — Metal to Metal
- \* AC Shading Coil — Copper
- \* Stem Pin — Inconel
- Coil — Encapsulated, Class A, 18" leads (Class H available)
- \* Wetted parts in contact with fluid

### APPLICATION:

To control the flow of water, oil, air, 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.

*NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.*



### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. Press. P.S.I.	Valve Port Inches	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
									A	B	C	D
1/4	50	1/4	18N40	25	.4	1.0	18	6	5 7/8	5 1/4	2 3/4	2 1/4
	75	3/16	18N50									
	100	5/32	18N80									
	150	1/8	18N60									
	225	3/32	18N70									
	100	1/4	33N40									
150	3/16	33N50										
300	1/8	33N60										
300	1/8	33N60										
3/8	25	3/8	18N21	25	.4	1.1	18	6	6 7/8	5 3/8	2 3/4	2 1/2
	50	1/4	18N41									
	75	3/16	18N51									
	100	5/32	18N81									
	150	1/8	18N61									
	225	3/32	18N71									
1/2	50	3/8	33N21	45	.8	2.3	23	10	7	6 1/4	3 1/2	2 1/2
	75	5/16	33N31									
	100	1/4	33N41									
	150	3/16	33N51									
	300	1/8	33N61									
	25	3/8	18N22									
50	1/4	18N42										
75	3/16	18N52										
100	5/32	18N82										
150	1/8	18N62										
225	3/32	18N72										
3/4	50	3/8	33N22	45	.8	2.4	23	10	7 1/8	6 3/8	3 1/2	2 3/4
	75	5/16	33N32									
	100	1/4	33N42									
	150	3/16	33N52									
	300	1/8	33N62									
	15	1/2	18N13									
35	5/16	18N33										
30	1/2	33N13	45	.8	2.5	23	10	7 3/8	6 1/2	3 1/2	2 7/8	
75	5/16	33N33										

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:

Phone: (973) 427-4341

Fax: (973) 427-7611

Web: www.magnatrol.com

Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/4" to 3/4"  
 Max. Fluid Temp. — 212° F.  
 Max. Static Press. — 300 PSI

## TYPE "NR" — NORMALLY OPEN

### 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 laminated plunger.

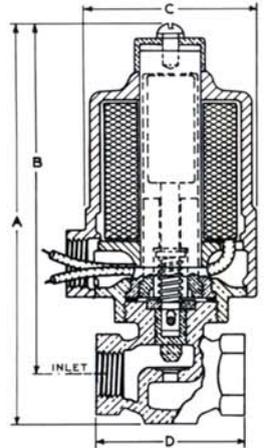
### CONSTRUCTION:

- \*Valve Body — Cast Bronze
- Coil Enclosure — Malleable Iron
- \*Plunger — 430 St. Stl.
- \*Poppet — 304 St. Stl.
- \*Stem — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*Spring — Inconel
- \*Body Seal — Buna N
- Orifice Seal — Metal to Metal
- \*AC Shading Coil — Copper
- \*Stem Pin — 304 St. Stl.
- Coil — Encapsulated Class A, 18" leads (Class H available)
- \*Wetted parts in contact with fluid

### APPLICATION:

To control the flow of water, oil, air, 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.

*NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.*



TYPE 18NR52

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. Press. P.S.I.	Valve Port Inches	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
									A	B	C	D
1/4	45	1/4	18NR40	25	.5	1.3	18	7	6 5/8	6	2 3/4	2 1/4
	70	3/16	18NR50									
	90	5/32	18NR80									
	135	1/8	18NR60									
	200	3/32	18NR70									
	90	1/4	33NR40									
135	3/16	33NR50										
270	1/8	33NR60										
23	3/8	18NR21	25	.5	1.4	18	7	6 7/8	6 1/8	2 3/4	2 1/2	
45	1/4	18NR41										
70	3/16	18NR51										
90	5/32	18NR81										
135	1/8	18NR61										
200	3/32	18NR71										
3/8	45	3/8	33NR21	45	1.0	2.6	23	10	7 3/4	7	3 1/2	2 1/2
	70	5/16	33NR31									
	90	1/4	33NR41									
	135	3/16	33NR51									
	270	1/8	33NR61									
	1/2	23	3/8									
45		1/4	18NR42									
70		3/16	18NR52									
90		5/32	18NR82									
135		1/8	18NR62									
200		3/32	18NR72									
3/4	45	3/8	33NR22	45	1.0	2.7	23	10	7 3/8	7 1/8	3 1/2	2 3/4
	70	5/16	33NR32									
	90	1/4	33NR42									
	135	3/16	33NR52									
	270	1/8	33NR62									
	3/4	13	1/2									
32		5/16	18NR33									
27		1/2	33NR13	45	1.0	2.8	23	10	8 1/8	7 1/4	3 1/2	2 7/8
70	5/16	33NR33										

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/2" to 3"  
 Max. Fluid Temp. — 212° F.  
 Max. Static Press. — 300 PSI\*

\*Except valves listed for 500 PSI diff.



TYPE 18A44

## TYPE "A" FULL PORT — NORMALLY CLOSED

### OPERATION:

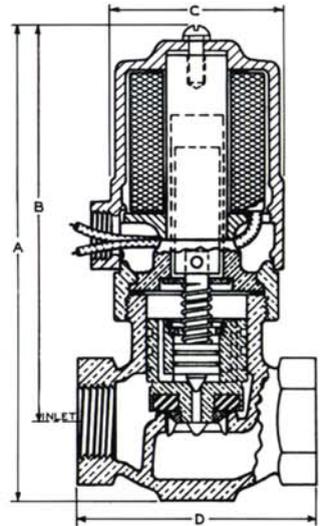
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the laminated plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to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

### CONSTRUCTION:

- \* Valve Body — Cast Bronze, Globe Pattern
- \* Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \* Plunger — 430 St. Stl.
- \* Pilot Valve — 303 St. Stl.
- \* Bonnet Tube — 304 St. Stl.
- \* Spring — 302 St. Stl.
- \* 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 A, 18" leads (Class H available)
- \* Wetted parts in contact with fluid

### 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.



### NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	110	18A42	25	.4	1.2	18	8	7	5 1/8	2 3/4	3 1/4
	200	18A32									
	300	18A52									
3/4	50	E33A62	45	.8	2.4	23	16	8	6 7/8	4 1/8	3 1/4
	110	18A23	25	.4	1.3	18	8	7 1/8	6	2 3/4	3 1/2
	160	118A43	40	.6	2.0	28					
	200	33A33	45	.8	2.6	23	12	8 1/8	7	3 1/2	3 1/2
	300	33A53									
	500	E133A63	65	1.2	3.9	33	17	8 1/8	7	4 1/8	3 1/2
1	50	18A24	25	.4	1.5	18	10	7 7/8	6 3/8	2 3/4	4 1/8
	110	18A44									
	160	118A44	40	.6	2.3	28					
	200	33A34	45	.8	2.8	23	14	8 7/8	7 1/2	3 1/2	4 1/8
	300	33A54									
	500	E133A64	65	1.2	4.2	33	19	8 7/8	7 1/2	4 1/8	4 1/8
1 1/4	50	18A25	25	.4	1.6	18	12	8 3/8	6 3/4	2 3/4	4 1/2
	90	18A45									
	150	118A45	40	.6	2.4	28					
	200	33A35	45	.8	3.0	23	16	9 3/8	7 3/4	3 1/2	4 1/2
	300	33A55									
1 1/2	50	††40A65	60	1.2	6.2	—	20	10 3/8	8 3/4	4 1/2	4 1/2
	115	35A26	45	.8	3.2	23	20	10	8 1/8	4	4 7/8
	160	35A46									
	200	135A46	65	1.2	4.8	33					
	300	41A36	60	1.2	6.7	35	24	11	9 3/8	4 1/2	4 7/8
2	50	41A56									
	100	141A66	85	2.0	10.0	45					
	50	36A27	45	.8	3.5	23	31	11	8 3/4	5 3/8	6
	100	36A47									
	150	136A47	65	1.2	5.0	33					
	200	42A37	60	1.2	7.4	35	36	12	9 3/4	5 3/8	6
2 1/2	300	42A57									
	500	142A67	85	2.0	11.0	45					
	125	43A28	60	1.2	8.0	35	43	12 7/8	10 1/8	5 3/8	7 1/4
	200	43A48									
3	50	43A38									
	100	143A58	85	2.0	12.0	45					
	50	44A29	60	1.2	8.8	35	56	13 3/4	10 1/2	6 3/8	8 3/8
	100	44A49									
200	44A39										
300	144A59	85	2.0	13.0	45						

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

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Pipe Size — 1/2" to 3"

Max. Fluid Temp. — 212° F.

Max. Static Press. — 300 PSI\*

\*Except valves listed for 500 PSI diff.



TYPE 18AR44

**WHEN YOU ORDER**

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

**TYPE "AR" FULL PORT — NORMALLY OPEN**

**OPERATION:**

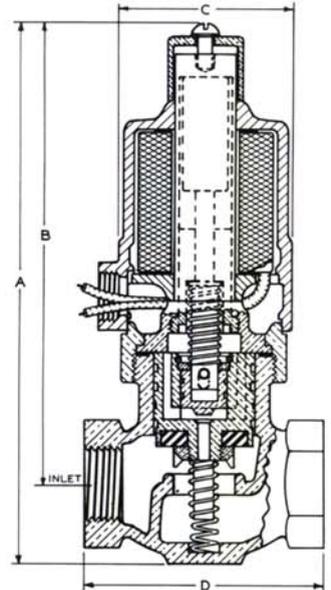
Valve closes when energized and opens when de-energized. When the coil is energized the laminated plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving 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
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Poppet — 303 St. Stl.
- \*Stem — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*Springs — Inconel and 302 St. Stl.
- \*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 St. Stl.
- Coil — Encapsulated Class A, 18" leads (Class H available)
- \*Wetted parts in contact with fluid

**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.



NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	110	18AR42	25	.5	1.5	18	8	8 1/8	7	2 3/4	3 1/4
	200	18AR32									
	300	18AR52									
3/4	50	E33AR62	45	1.0	2.7	23	16	9 3/8	8 1/4	4 1/8	3 1/4
	110	18AR23									
	200	18AR43									
	300	33AR33									
1	50	33AR53	45	1.0	2.9	23	13	9 1/4	8 1/8	3 1/2	3 1/2
	110	33AR53									
	200	E133AR63									
	300	33AR34									
	500	33AR54									
1 1/4	50	18AR24	25	.5	1.8	18	11	9 1/2	8 3/8	4 1/8	4 1/8
	110	18AR44									
	200	18AR25									
	300	18AR45									
1 1/2	50	33AR35	45	1.0	3.2	23	17	10 1/4	9 1/8	3 1/2	4 1/2
	200	33AR55									
	300	E133AR64									
2	50	18AR26	65	1.5	4.5	33	19	10 3/4	8 7/8	4 1/8	4 1/8
	115	18AR46									
	200	33AR36									
	300	33AR56									
2 1/2	50	41AR36	60	1.7	6.5	35	25	11 1/8	9 3/4	4 1/2	4 7/8
	125	41AR56									
	200	41AR36									
	300	41AR56									
3	50	141AR66	85	3.5	9.7	45	45	12 3/8	10 3/8	5 3/8	6
	100	36AR27									
	200	36AR47									
3 1/2	50	42AR37	60	1.7	7.3	35	36	12 3/8	10 3/8	5 3/8	6
	100	42AR57									
	200	42AR37									
	300	42AR57									
4	50	142AR67	85	3.5	11.0	45	45	13 1/2	10 3/4	5 7/8	7 1/4
	125	43AR28									
	200	43AR48									
	300	43AR38									
4 1/2	50	44AR29	60	1.7	8.8	35	57	14 3/8	11 1/8	6 5/8	8 3/8
	100	44AR49									
	200	44AR39									
	300	44AR59									

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:  
 Phone: (973) 427-4341  
 Fax: (973) 427-7611  
 Web: www.magnatrol.com  
 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 3/8" to 3/4"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 150 PSI



TYPE 25M52

**WHEN YOU ORDER**

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

**TYPE "M" — NORMALLY CLOSED**

**OPERATION:**

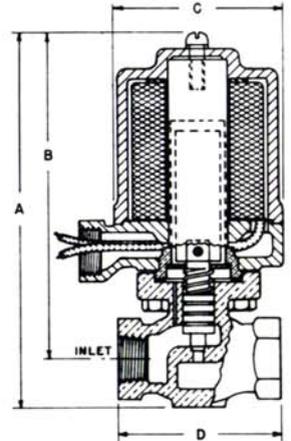
Valve opens when energized and closes when de-energized. In this direct acting valve, when the coil is energized, the stem is lifted from its conical seat by the laminated plunger.

**CONSTRUCTION:**

- \* Valve Body — Cast Bronze
- \* Coil Enclosure — Malleable Iron
- \* Plunger — 430 St. Stl.
- \* Valve Stem — 303 St. Stl.
- \* Bonnet Tube — 304 St. Stl.
- \* 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
- \* Wetted parts in contact with fluid

**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). Cryogenic valves are degreased and cleaned to keep them free of moisture. Oxygen valves are "black light" tested. 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.



**NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.**

Pipe Size Inches	Max. Diff. Press. P.S.I.	Valve Port Inches	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
									A	B	C	D
3/8	25	3/8	10M21	25	.4	1.1	18	6	6 1/4	5 1/2	2 7/8	2 5/8
	50	1/4	10M41									
	75	3/16	10M51									
	100	5/32	10M81									
	150	1/8	10M61									
3/8	50	3/8	25M21	45	.8	2.3	23	10	7 1/8	6 3/8	3 1/2	2 5/8
	75	5/16	25M31									
	100	1/4	25M41									
	150	3/16	25M51									
	1/2	25	3/8									
50		1/4	10M42									
75		3/16	10M52									
100		5/32	10M82									
150		1/8	10M62									
1/2	50	3/8	25M22	45	.8	2.4	23	10	7 1/8	6 3/8	3 1/2	2 3/4
	75	5/16	25M32									
	100	1/4	25M42									
	150	3/16	25M52									
	3/4	15	1/2									
35		5/16	10M33									
30		1/2	25M13									
75		5/16	25M33									
45		.8	2.5	23	10	7 3/8	6 1/2	3 1/2	2 7/8			

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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 Phone: (973) 427-4341  
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 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 3/8" to 3/4"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 150 PSI

## TYPE "MR" — NORMALLY OPEN

### OPERATION:

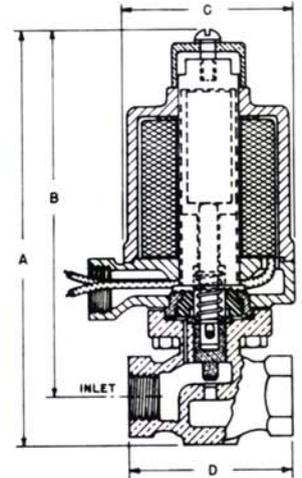
Valve closes when energized and opens when de-energized. In this direct acting valve, when the coil is energized, the stem is pressed into its conical seat by the laminated plunger.

### CONSTRUCTION:

- \*Valve Body — Cast Bronze
- Coil Enclosure — Malleable Iron
- \*Plunger — 430 St. Stl.
- \*Poppet — 304 St. Stl.
- \*Stem — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*Spring — Inconel
- \*Body Seal — Non Asbestos Gasket
- Orifice Seal — Metal to Metal
- \*AC Shading Coil — Copper
- \*Stem Pin — 304 St. Stl.
- Coil — Encapsulated Class H, 18" leads
- \*Wetted parts in contact with fluid

### 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). Cryogenic valves are degreased and cleaned to keep them free of moisture. Oxygen valves are "black light" tested. 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.



TYPE 25MR22

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. Press. P.S.I.	Valve Port Inches	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
									A	B	C	D
3/8	23	3/8	10MR21†	25	.5	1.4	18	7	7	6 1/4	2 7/8	2 5/8
	45	1/4	10MR41†									
	70	3/16	10MR51†									
	90	5/32	10MR81†									
	135	1/8	10MR61†									
1/2	45	3/8	25MR21	45	1.0	2.6	23	10	7 7/8	7 1/8	3 1/2	2 5/8
	70	5/16	25MR31									
	90	1/4	25MR41									
	135	3/16	25MR51									
	23	3/8	10MR22									
45	1/4	10MR42										
70	3/16	10MR52										
90	5/32	10MR82										
135	1/8	10MR62										
3/4	45	3/8	25MR22	45	1.0	2.7	23	10	7 7/8	7 1/8	3 1/2	2 3/4
	70	5/16	25MR32									
	90	1/4	25MR42									
	135	3/16	25MR52									
	13	1/2	10MR13									
32	5/16	10MR33										
27	1/2	25MR13										
70	5/16	25MR33										
45	1.0	2.8	23	11	8 1/8	7 1/4	3 1/2	2 7/8				

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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## TYPE "S" FULL PORT – NORMALLY CLOSED

Pipe Size — 1/2" to 3"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 200 PSI



TYPE 35S26

### OPERATION:

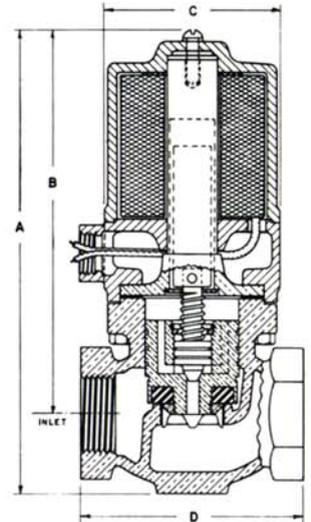
valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the laminated plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to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

### CONSTRUCTION:

- \*Valve Body — Cast Bronze, Globe Pattern
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Pilot Valve — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*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
- \*Wetted parts in contact with fluid

### 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.



NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	90	14S22†	25	.4	1.2	18	8	7	5 1/8	2 7/8	3 1/4
	140	114S42†	40	.6	1.8	28					
	180	129S42	65	1.2	3.6	33	11	8	6 7/8	3 1/2	3 1/4
3/4	50	14S23†	25	.4	1.3	18	9	7 1/8	6	2 7/8	3 1/2
	110	114S43†	40	.6	2.0	28					
	180	129S43	65	1.2	3.9	33	12	8 1/8	7	3 1/2	3 1/2
1	25	16S14†	25	.4	1.5	18					
	50	116S24†	40	.6	2.3	28	11	8	6 3/8	3 1/4	4 1/8
	90	116S44†	40	.6	2.3	28					
1 1/4	180	131S44	65	1.2	4.2	33	14	8 7/8	7 1/2	3 1/2	4 1/8
	25	17S15†	25	.4	1.6	18	12	8 3/8	6 3/4	3 1/2	4 1/2
	50	117S25†	40	.6	2.4	28					
1 1/2	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	—	20	10 3/8	8 3/4	4 1/2	4 1/2
	25	35S16	45	.8	3.2	23	20	10	8 1/8	4	4 7/8
2	50	35S26	45	.8	3.2	23					
	90	135S46	65	1.2	4.8	33	24	11	9 1/8	4 1/2	4 7/8
	180	141S46	85	2.0	10.0	45	24	11	9 1/8	4 1/2	4 7/8
2 1/2	25	36S17	45	.8	3.5	23	31	11	8 3/4	5 3/8	6
	50	36S27	45	.8	3.5	23					
	115	42S47	60	1.2	7.4	35	36	12	9 3/4	5 3/8	6
3	180	142S47	85	2.0	11.0	45					
	25	43S18	60	1.2	8.0	35	43	12 7/8	10 1/8	5 7/8	7 1/4
	50	43S28	60	1.2	8.0	35					
3	115	43S48	60	1.2	8.0	35					
	175	143S48	85	2.0	12.0	45					
	25	44S19	60	1.2	8.8	35	56	13 3/4	10 1/2	6 3/8	8 3/8
3	50	44S29	60	1.2	8.8	35					
	100	44S49	60	1.2	8.8	35					
	150	144S49	85	2.0	13.0	45					

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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 Fax: (973) 427-7611  
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 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/2" to 3"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 200 PSI



TYPE 43SR48

## TYPE "SR" FULL PORT — NORMALLY OPEN

### OPERATION:

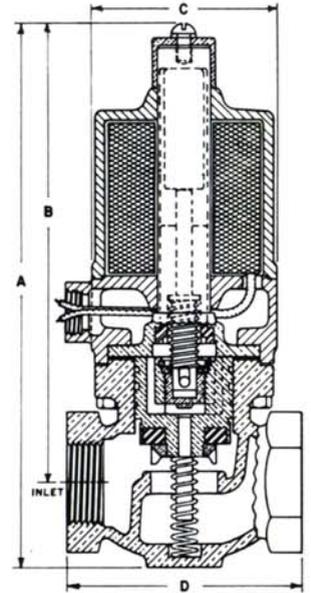
Valve closes when energized and opens when de-energized. When the coil is energized the laminated plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving 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
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Poppet — 303 St. Stl.
- \*Stem — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*Springs — Inconel and 302 St. Stl.
- \*Body Seal — Non Asbestos Gasket
- \*Orifice Seal — Glass Filled Teflon
- \*AC Shading Coil — Copper
- \*Stem Pin — 304 St. Stl.
- Coil — Encapsulated Class H, 18" leads
- \*Wetted parts in contact with fluid

### 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.



NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	90	14SR22†	25	.5	1.5	18	8	8 1/8	7	2 7/8	3 1/4
	140	114SR42†	40	.8	2.4	28	11	9 1/8	8	3 1/2	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	14SR23†	25	.5	1.6	18	9	8 1/4	7 1/8	2 7/8	3 1/2
	110	114SR43†	40	.8	2.6	28	11	9 1/4	8 1/8	3 1/2	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	16SR14†	25	.5	1.8	18	11	9 1/8	7 3/4	3 1/4	4 1/8
	50	116SR24†	40	.8	2.9	28	11	9 1/8	7 3/4	3 1/4	4 1/8
	90	116SR44†	40	.8	2.9	28	11	9 1/8	7 3/4	3 1/4	4 1/8
1 1/4	180	131SR44	65	1.5	4.5	33	15	10	8 5/8	3 1/2	4 1/8
	25	17SR15†	25	.5	1.9	18	13	9 3/4	8 1/8	3 1/2	4 1/2
	50	117SR25†	40	.8	3.0	28	13	9 3/4	8 1/8	3 1/2	4 1/2
1 1/2	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	—	20	11	9 5/8	4 1/2	4 1/2
	25	35SR16	45	1.0	3.8	23	21	11 3/8	9 1/2	4	4 7/8
2	50	35SR26	45	1.0	3.8	23	21	11 3/8	9 1/2	4	4 7/8
	90	135SR46	65	1.5	5.7	33	25	11 3/8	9 3/4	4 1/2	4 7/8
	180	141SR46	85	3.5	9.7	45	25	11 3/8	9 3/4	4 1/2	4 7/8
2 1/2	25	36SR17	45	1.0	4.2	23	31	12 3/8	10 1/8	5 3/8	6
	50	36SR27	45	1.0	4.2	23	31	12 3/8	10 1/8	5 3/8	6
	115	42SR47	60	1.7	7.3	35	36	12 3/8	10 3/8	5 3/8	6
3	180	142SR47	85	3.5	11.0	45	36	12 3/8	10 3/8	5 3/8	6
	25	43SR18	60	1.7	8.0	35	45	13 1/2	10 3/4	5 7/8	7 1/4
	50	43SR28	60	1.7	8.0	35	45	13 1/2	10 3/4	5 7/8	7 1/4
3	115	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	45	13 1/2	10 3/4	5 7/8	7 1/4
	25	44SR19	60	1.7	8.8	35	57	14 3/8	11 1/8	6 5/8	8 3/8
3	50	44SR29	60	1.7	8.8	35	57	14 3/8	11 1/8	6 5/8	8 3/8
	100	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	57	14 3/8	11 1/8	6 5/8	8 3/8

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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Pipe Size — 1/2" to 3"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 300 PSI\*

\*Except valves listed for 500 PSI diff.



TYPE 42L37

**WHEN YOU ORDER**

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

**TYPE "L" FULL PORT — NORMALLY CLOSED**

**OPERATION:**

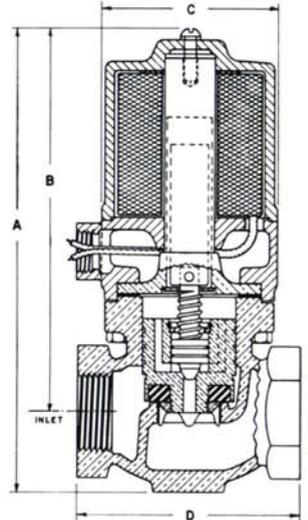
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the laminated plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to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

**CONSTRUCTION:**

- \*Valve Body — Cast Bronze, Globe Pattern
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Pilot Valve — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*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
- \*Wetted parts in contact with fluid

**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). Cryogenic valves are degreased and cleaned to keep them free of moisture. Oxygen valves are "black light" tested. 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 STEAM APPLICATION SEE 'S'

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	110	14L42	25	.4	1.2	18	8	7	5 7/8	2 7/8	3 1/4
	200	14L32									
	300	29L52	45	.8	2.4	23	11	8	6 7/8	3 1/2	3 1/4
	500	E29L62	45	.8	2.4	23	16	8	6 7/8	4	3 1/4
3/4	50	14L23	25	.4	1.3	18	9	7 1/8	6	2 7/8	3 1/2
	110	14L43									
	200	29L33	45	.8	2.6	23	12	8 1/8	7	3 1/2	3 1/2
	300	129L53	65	1.2	3.9	33					
	500	E129L63	65	1.2	3.9	33	17	8 1/8	7	4	3 1/2
1	50	16L24	25	.4	1.5	18	11	8	6 5/8	3 1/4	4 1/8
	110	16L44									
	200	31L34	45	.8	2.8	23	14	8 7/8	7 1/2	3 1/2	4 1/8
	300	131L54	65	1.2	4.2	33					
	500	E131L64	65	1.2	4.2	33	19	8 7/8	7 1/2	4	4 1/8
1 1/4	50	17L25	25	.4	1.6	18	12	8 3/8	6 3/4	3 1/2	4 1/8
	90	17L45									
	200	32L35	45	.8	3.0	23	16	9 3/8	7 3/4	3 5/8	4 1/2
	300	132L55	65	1.2	4.5	33					
1 1/2	50	†140L65	85	2.0	9.2	—	20	10 3/8	8 3/4	4 1/2	4 1/2
	115	35L26	45	.8	3.2	23	20	10	8 1/8	4	4 7/8
	200	41L36	60	1.2	6.7	35					
	300	141L56	85	2.0	10.0	45	24	11	9 1/8	4 1/2	4 7/8
2	50	36L27	45	.8	3.5	23	31	11	8 3/4	5 3/8	6
	100	36L47									
	200	42L37	60	1.2	7.4	35	36	12	9 3/4	5 3/8	6
	300	42L57									
2 1/2	50	142L67	85	2.0	11.0	45					
	125	43L28	60	1.2	8.0	35	43	12 7/8	10 1/8	5 7/8	7 1/4
	200	43L48									
3	50	44L29	60	1.2	8.8	35					
	100	44L49									
	200	44L39									
	300	144L59	85	2.0	13.0	45	56	13 3/4	10 1/2	6 3/8	8 3/8

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:

Phone: (973) 427-4341

Fax: (973) 427-7611

Web: www.magnatrol.com

Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/2" to 3"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 300 PSI\*

\*Except valves listed for 500 PSI diff.



TYPE 35LR26

**WHEN YOU ORDER**

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

**TYPE "LR" FULL PORT — NORMALLY OPEN**

**OPERATION:**

Valve closes when energized and opens when de-energized. When the coil is energized the laminated 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.

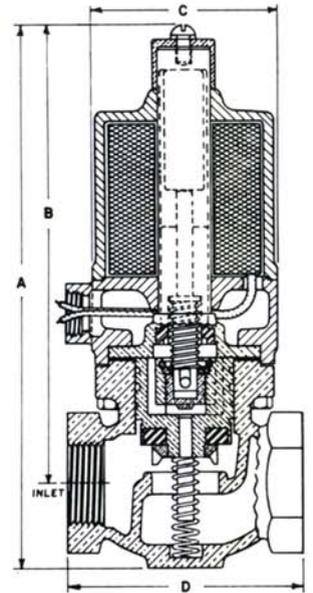
**CONSTRUCTION:**

- \*Valve Body — Cast Bronze, Globe Pattern
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Poppet — 303 St. Stl.
- \*Stem — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*Springs — Inconel and 302 St. Stl.
- \*Body Seal — Non Asbestos Gasket
- \*Orifice Seal — Glass Filled Teflon
- \*AC Shading Coil — Copper
- \*Stem Pin — 304 St. Stl.
- Coil — Encapsulated Class H, 18" leads
- \*Wetted parts in contact with fluid

**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). Cryogenic valves are degreased and cleaned to keep them free of moisture. Oxygen valves are "black light" tested. 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 STEAM APPLICATION SEE •SR•  
 NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.**



Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	110	14LR42	25	.5	1.5	18	8	8 1/8	7	2 7/8	3 1/4
	200	14LR32									
	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
3/4	50	14LR23	25	.5	1.6	18	9	8 1/4	7 1/8	2 7/8	3 1/2
	110	14LR43									
	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
1	50	16LR24	25	.5	1.8	18	11	9 1/8	7 3/4	3 1/4	4 1/8
	110	16LR44									
	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
1 1/4	50	17LR25	25	.5	1.9	18	13	9 3/4	8 1/8	3 1/2	4 1/2
	90	17LR45									
	200	32LR35	45	1.0	3.2	23	17	10 3/4	9 1/8	3 5/8	4 1/2
	300	132LR55	65	1.5	4.8	33					
	500	†140LR65	85	3.5	9.0	—	20	11	9 3/8	4 1/2	4 1/2
1 1/2	50	35LR26	45	1.0	3.8	23	21	11 3/8	9 3/8	4	4 7/8
	115	35LR46									
	200	41LR36	60	1.7	6.5	35					
	300	141LR56	85	3.5	9.7	45	25	11 3/8	9 3/4	4 1/2	4 7/8
	500	141LR66									
2	50	36LR27	45	1.0	4.2	23	31	12 3/8	10 1/8	5 3/8	6
	100	36LR47									
	200	42LR37	60	1.7	7.3	35	36	12 3/8	10 3/8	5 3/8	6
	300	42LR57									
	500	142LR67	85	3.5	11.0	45					
2 1/2	50	43LR28	60	1.7	8.0	35	45	13 1/2	10 3/4	5 7/8	7 1/4
	125	43LR48									
	200	43LR38									
	300	143LR58	85	3.5	12.0	45					
3	50	44LR29	60	1.7	8.8	35	57	14 3/8	11 1/8	6 3/8	8 3/8
	100	44LR49									
	200	44LR39									
	300	144LR59	85	3.5	13.0	45					

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1" to 3"

Max. Fluid Temp. — 212° F.

Max. Static Press. — 150 PSI



TYPE 33G27

## TYPE "G" FULL PORT — NORMALLY CLOSED

### OPERATION:

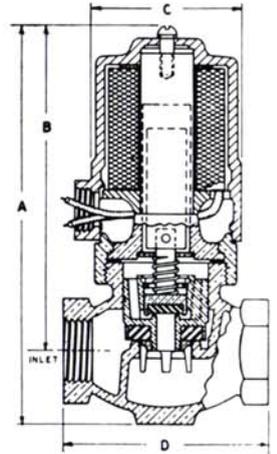
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the laminated plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to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

### CONSTRUCTION:

- \*Valve Body — Cast Bronze, Globe Pattern
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Pilot Valve Stem — 303 St. Stl.
- \*Pilot Valve Disc Holder — Brass
- \*Pilot Valve Seal — Buna N (Viton available)
- \*Bonnet Tube — 304 St. Stl.
- \*Spring — 302 St. Stl.
- \*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 A, 18" leads (Class H available)
- \*Wetted parts in contact with fluid

### 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.



### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1	20	18G24†	25	.4	1.4	18	9	7 1/2	6 1/8	2 3/4	4 1/8
	30	118G24	40	.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
1 1/4	20	18G25†	25	.4	1.5	18	10	8	6 3/8	2 7/8	4 3/8
	30	118G25	40	.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
1 1/2	15	18G26†	25	.4	1.7	18	12	8 1/8	6 1/2	3 1/8	4 3/4
	25	118G26	40	.6	2.5	28	12	8 1/8	6 1/2	3 1/8	4 3/4
	35	133G26	65	1.2	4.2	33	16	9 1/8	7 1/2	3 1/2	4 3/4
2	18	33G27	45	.8	3.4	23	20	9 7/8	7 7/8	3 3/4	5 3/4
	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
2 1/2	13	37G28	40	.8	3.6	23	33	11 1/8	8 5/8	5 7/8	7 1/8
	25	43G28	60	1.2	7.8	35	38	12 1/8	9 5/8	5 7/8	7 1/8
	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
	35	144G29	85	2.0	13.0	45	46	13	10	6 5/8	8

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

*These valves are available for quick delivery direct from Magnatrol Valve Corp.*

You can contact them at:  
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 Fax: (973) 427-7611  
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 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1" to 3"  
 Max. Fluid Temp. — 212° F.  
 Max. Static Press. — 150 PSI

## TYPE "GR" FULL PORT — NORMALLY OPEN

### OPERATION:

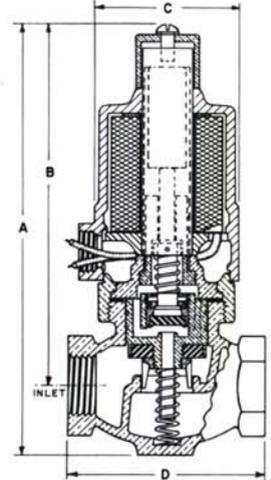
Valve closes when energized and opens when de-energized. When the coil is energized the laminated plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving 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
- \*Piston — Cast Bronze
- Coil Enclosure — Malleable or Cast Iron
- \*Plunger — 430 St. Stl.
- \*Pilot Valve Stem — 303 St. Stl.
- \*Pilot Valve Disc Holder — Brass
- \*Pilot Valve Seal — Buna N (Viton available)
- \*Bonnet Tube — 304 St. Stl.
- \*Springs — 302 St. Stl.
- \*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 St. Stl.
- Coil — Encapsulated Class A, 18" leads (Class H available)
- \*Wetted parts in contact with fluid

### 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.



TYPE 33GR27  
**WHEN  
 YOU  
 ORDER**

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

*NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.*

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

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

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 Web: www.magnatrol.com  
 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 3/8" to 2"  
 Max. Fluid Temp. — 212° F.  
 Max. Static Press. — 150 PSI



TYPE 18D13

## TYPE "D" FULL PORT — NORMALLY CLOSED

### OPERATION:

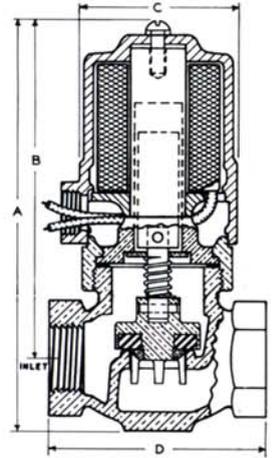
Valve opens when energized and closes when de-energized. In this direct acting valve the disc holder assembly is lifted from its seat by the laminated plunger.

### CONSTRUCTION:

- \*Valve Body — Cast Bronze, Globe Pattern
- \*Disc Holder — Brass
- Coil Enclosure — Malleable Iron
- \*Plunger — 430 St. Stl.
- \*Stem — 303 St. Stl.
- \*Bonnet Tube — 304 St. Stl.
- \*Spring — 302 St. Stl.
- \*Body Seal — Buna N
- \*Orifice Seal — Buna N (Viton or Glass Filled Teflon available)
- \*AC Shading Coil — Copper
- \*Stem Pin — Inconel
- Coil — Encapsulated, Class A, 18" leads (Class H available)
- \*Wetted parts in contact with fluid.

### 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.



NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.

Pipe Size Inches	Max. Diff. Press. P.S.I.	Type No.	Watts A.C.	Amps Hold. 120-60	Amps Inrush 120-60	Watts D.C.	Ship. Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
3/8	15	18D11	25	.4	1.0	18	7	6 1/4	5 3/8	2 3/4	2 7/8
	30	33D11	45	.8	2.3	23	10	7 1/8	6 3/8	3 1/2	2 7/8
1/2	10	18D12	25	.4	1.1	18	7	6 1/4	5 1/2	2 3/4	3 1/8
	20	33D12	45	.8	2.4	23	10	7 1/4	6 3/8	3 1/2	3 1/8
3/4	4	18D13	25	.4	1.2	18	8	6 7/8	5 3/4	2 3/4	3 1/2
	7.5	33D13	45	.8	2.5	23	12	7 3/4	6 3/4	3 1/2	3 1/2
1	2	18D14	25	.4	1.4	18	9	7 1/2	6 1/8	2 3/4	4 1/8
	3.5	33D14	45	.8	2.7	23	13	8 1/2	7 1/8	3 1/2	4 1/8
1 1/4	1.3	18D15	25	.4	1.5	18	10	8	6 3/8	2 7/8	4 3/8
	2.3	33D15	45	.8	2.8	23	14	8 7/8	7 3/8	3 1/2	4 3/8
1 1/2	0.8	18D16	25	.4	1.7	18	12	8 1/8	6 1/2	3 1/8	4 3/4
	1.5	†33D16	45	.8	3.0	23	15	9 1/8	7 1/2	3 1/2	4 3/4
2	0.8	33D17	45	.8	3.4	23	19	9 7/8	7 7/8	3 3/4	5 3/4
	1.2	†133D17	65	1.2	4.2	33	19	9 7/8	7 7/8	3 3/4	5 3/4

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.



See Footnotes for Listed Valves

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 Email: info@magnatrol.com

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## TYPE "K" FULL PORT — NORMALLY CLOSED

Pipe Size — 1/2", 3/4", 1", 1-1/2", 2"

Max. Fluid Temp. — 400° F.

Max. Static Press. — 300 PSI\*

\*Except valves listed for 500 PSI diff.



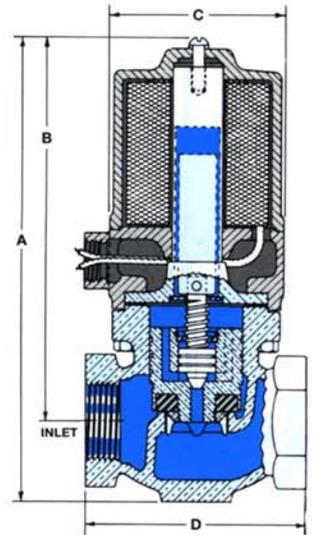
### OPERATION:

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 laminated 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:

- \* Valve Body — 304 Stainless Steel Globe Pattern
- \* Piston — 303 Stainless Steel
- Coil Enclosure — Malleable or Cast Iron
- \* 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 — All AC/DC Voltages
- \* Wetted parts — No Copper Bearing Alloys in contact with fluid

FOR STEAM APPLICATION  
SEE TYPE W



### 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). Cryogenic valves are degreased and cleaned to keep them free of moisture. Oxygen valves are "black light" tested. 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.

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

## Corrosive Fluids • Type K Stainless Steel

- WHEN YOU ORDER**
- Be sure to specify the following:
- Pipe Size
  - Type
  - Voltage (AC or DC)
  - Hertz
  - Fluid
  - Fluid Temp.
  - Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. P.S.I.	Type No.	Watts A.C.	Amps Hold 120-60	Amps Inrush 120-60	Watts D.C.	Ship Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	110	14K42	25	.4	1.2	18	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	200	14K32	25	.4	1.2	18	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	300	29K52	45	.8	2.4	23	10	8	6 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>
	500	E29K62	45	.8	2.4	23	15	8	6 <sup>7</sup> / <sub>8</sub>	4	3 <sup>1</sup> / <sub>4</sub>
3/4	110	14K43	25	.4	1.3	18	8	7 <sup>1</sup> / <sub>8</sub>	6	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>
	200	29K33	45	.8	2.6	23	11	8 <sup>1</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>
	300	129K53	65	1.2	3.9	33	11	8 <sup>1</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>
	500	E129K63	65	1.2	3.9	33	16	8 <sup>1</sup> / <sub>8</sub>	7	4	3 <sup>1</sup> / <sub>2</sub>
1	110	16K44	25	.4	1.5	18	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	200	31K34	45	.8	2.8	23	13	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>
	300	131K54	65	1.2	4.2	33	13	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>
	500	E131K64	65	1.2	4.2	33	18	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	4	4 <sup>1</sup> / <sub>8</sub>
1-1/2	115	35K46	45	.8	3.2	23	17	10	8 <sup>1</sup> / <sub>8</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	200	41K36	60	1.2	6.7	35	21	11	9 <sup>1</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
	300	141K56	85	2.0	10.0	45	21	11	9 <sup>1</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
	500	141K66	85	2.0	10.0	45	21	11	9 <sup>1</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
2	100	36K47	45	.8	3.5	23	27	11	8 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	200	42K37	60	1.2	7.4	35	32	12	9 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	300	42K57	60	1.2	7.4	35	32	12	9 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	500	142K67	85	2.0	11.0	45	32	12	9 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

Consult Factory: For Stainless Steel Strainers 1/2", 3/4", 1", 1 1/2" and 2".  
 For 150-300 PSI flanges.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:  
 Phone: (973) 427-4341  
 Fax: (973) 427-7611  
 Web: www.magnatrol.com  
 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/2", 3/4", 1", 1-1/2", 2"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 300 PSI\*

\*Except valves listed for 500 PSI diff.



## TYPE "KR" FULL PORT — NORMALLY OPEN

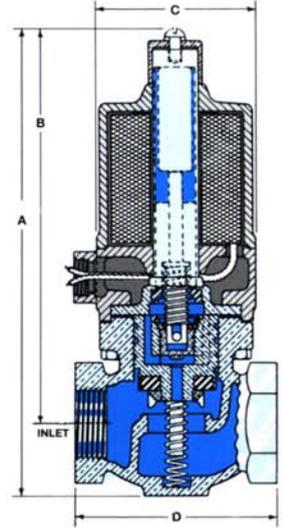
### OPERATION:

Valve closes when energized and opens when de-energized. When the coil is energized the laminated 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 — 304 Stainless Steel Globe Pattern
- \* Piston — 303 Stainless Steel
- Coil Enclosure — Malleable or Cast Iron
- \* 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 — All AC/DC Voltages
- \* Wetted parts — No Copper Bearing Alloys in contact with fluid

FOR STEAM APPLICATION  
SEE TYPE WR



### 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). Cryogenic valves are degreased and cleaned to keep them free of moisture. Oxygen valves are "black light" tested. 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.

NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

## Corrosive Fluids • Type KR Stainless Steel

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. P.S.I.	Type No.	Watts A.C.	Amps Hold 120-60	Amps Inrush 120-60	Watts D.C.	Ship Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	110	14KR42	25	.5	1.5	18	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	200	14KR32	25	.5	1.5	18	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	300	29KR52	45	1.0	2.7	23	10	8	6 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>
	500	E29KR62	45	1.0	2.7	23	15	8	6 <sup>7</sup> / <sub>8</sub>	4	3 <sup>1</sup> / <sub>4</sub>
3/4	110	14KR43	25	.5	1.6	18	8	7 <sup>1</sup> / <sub>8</sub>	6	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>
	200	29KR33	45	1.0	2.9	23	12	8 <sup>1</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>
	300	129KR53	65	1.5	4.3	33	12	8 <sup>1</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>
	500	E129KR63	65	1.5	4.3	33	17	8 <sup>1</sup> / <sub>8</sub>	7	4	3 <sup>1</sup> / <sub>2</sub>
1	110	16KR44	25	.5	1.8	18	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	200	31KR34	45	1.0	3.0	23	14	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>
	300	131KR54	65	1.5	4.5	33	14	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>
	500	E131KR64	65	1.5	4.5	33	20	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	4	4 <sup>1</sup> / <sub>8</sub>
1-1/2	115	35KR46	45	1.0	3.8	23	18	11 <sup>3</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	200	41KR36	60	1.7	6.5	35	22	11 <sup>5</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
	300	141KR56	85	3.5	9.7	45	22	11 <sup>5</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
	500	141KR66	85	3.5	9.7	45	22	11 <sup>5</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
2	100	36KR47	45	1.0	4.2	23	27	12 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	200	42KR37	85	1.7	7.3	35	32	12 <sup>5</sup> / <sub>8</sub>	10 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	300	42KR57	85	1.7	7.3	35	32	12 <sup>5</sup> / <sub>8</sub>	10 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	500	142KR67	85	3.5	11.0	45	32	12 <sup>5</sup> / <sub>8</sub>	10 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

Consult Factory: For Stainless Steel Strainers 1/2", 3/4", 1", 1 1/2" and 2".  
 For 150-300 PSI flanges.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:  
 Phone: (973) 427-4341  
 Fax: (973) 427-7611  
 Web: www.magnatrol.com  
 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/2", 3/4", 1", 1-1/2", 2"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 200 PSI

## TYPE "W" FULL PORT — NORMALLY CLOSED

### OPERATION:

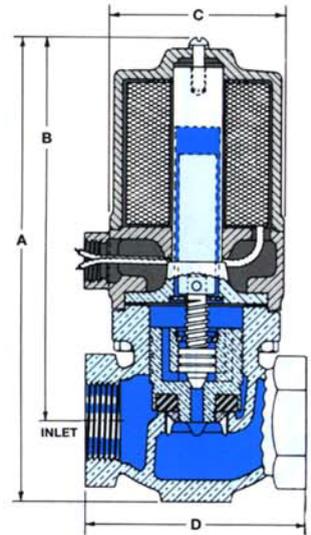
Valve opens when energized and closes when de-energized. When the coil is energized the pilot valve opens, relieving the pressure above the piston, which is then lifted from its seat by the laminated plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to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

### CONSTRUCTION:

- \* Valve Body — 304 Stainless Steel, Globe Pattern
- \* Piston — 303 Stainless Steel
- \* Coil Enclosure — Malleable or Cast Iron
- \* 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 — All AC/DC Voltages
- \* Wetted parts — No Copper Bearing Alloys in contact with fluids

### 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.



NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

## Steam • Type W Stainless Steel

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. P.S.I.	Type No.	Watts A.C.	Amps Hold 120-60	Amps Inrush 120-60	Watts D.C.	Ship Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	90	14W22	25	.4	1.2	18	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	140	114W42	40	.6	1.8	28	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	180	129W42	65	1.2	3.6	33	10	8	6 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>
3/4	50	14W23	25	.4	1.3	18	8	7 <sup>1</sup> / <sub>8</sub>	6	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>
	110	114W43	40	.6	2.0	28	8	7 <sup>1</sup> / <sub>8</sub>	6	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>
	180	129W43	65	1.2	3.9	33	11	8 <sup>1</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>
1	25	16W14	25	.4	1.5	18	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	50	116W24	40	.6	2.3	28	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	90	116W44	40	.6	2.3	28	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	180	131W44	65	1.2	4.2	33	13	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>
1-1/2	25	35W16	45	.8	3.2	23	17	10	8 <sup>1</sup> / <sub>8</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	50	35W26	45	.8	3.2	23	17	10	8 <sup>1</sup> / <sub>8</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	90	135W46	65	1.2	4.8	33	17	10	8 <sup>1</sup> / <sub>8</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	180	141W46	85	2.0	10.0	45	21	11	9 <sup>1</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
2	25	36W17	45	.8	3.5	23	27	11	8 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	50	36W27	45	.8	3.5	23	27	11	8 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	115	42W47	60	1.2	7.4	35	32	12	9 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	180	142W47	85	2.0	11.0	45	32	12	9 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	6

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

Consult Factory: For Stainless Steel Strainers 1/2", 3/4", 1", 1 1/2" and 2".  
 For 150-300 PSI flanges.

These valves are available for quick delivery direct from Magnatrol Valve Corp.

You can contact them at:  
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 Fax: (973) 427-7611  
 Web: www.magnatrol.com  
 Email: info@magnatrol.com

Clark-Cooper Div. can modify these valves to meet your specific requirements. See the "modifications" heading under General Service Valves on our web site, www.clarkcooper.com.

Pipe Size — 1/2", 3/4", 1", 1-1/2", 2"  
 Max. Fluid Temp. — 400° F.  
 Max. Static Press. — 200 PSI



## TYPE "WR" FULL PORT — NORMALLY OPEN

### OPERATION:

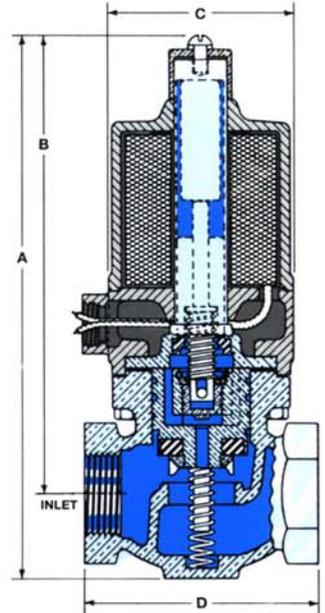
Valve closes when energized and opens when de-energized. When the coil is energized the laminated plunger presses the poppet, closing the pilot orifice, and opens a bleed passageway to permit pressure to build above the piston and seat it. Upon de-energizing the coil, the pilot orifice is opened, relieving 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 — 304 Stainless Steel Globe Pattern
- \* Piston — 303 Stainless Steel
- Coil Enclosure — Malleable or Cast Iron
- \* 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 — All AC/DC Voltages
- \* Wetted parts — No Copper Bearing Alloys in contact with fluid

### 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.



NO DIFFERENTIAL PRESSURE REQUIRED TO OPEN.

## Steam • Type WR Stainless Steel

### WHEN YOU ORDER

Be sure to specify the following:

- Pipe Size
- Type
- Voltage (AC or DC)
- Hertz
- Fluid
- Fluid Temp.
- Max. Diff. Press.



See Footnotes for Listed Valves

Pipe Size Inches	Max. Diff. P.S.I.	Type No.	Watts A.C.	Amps Hold 120-60	Amps Inrush 120-60	Watts D.C.	Ship Wt. Lbs.	Dimensions, Inches			
								A	B	C	D
1/2	90	14WR22	25	.5	1.5	18	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	140	114WR42	40	.8	2.4	28	7	7	5 <sup>7</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>
	180	129WR42	65	1.5	4.2	33	10	8	6 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>
3/4	50	14WR23	25	.5	1.6	18	8	7 <sup>1</sup> / <sub>8</sub>	6	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>
	110	114WR43	40	.8	2.6	28	8	7 <sup>1</sup> / <sub>8</sub>	6	2 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>
	180	129WR43	65	1.5	4.3	33	12	8 <sup>1</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>
1	25	16WR14	25	.5	1.8	18	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	50	116WR24	40	.8	2.9	28	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	90	116WR44	40	.8	2.9	28	10	8	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>8</sub>
	180	131WR44	65	1.5	4.5	33	14	8 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>
1-1/2	25	35WR16	45	1.0	3.8	23	18	11 <sup>3</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>2</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	50	35WR26	45	1.0	3.8	23	18	11 <sup>3</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>2</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	90	135WR46	65	1.5	5.7	33	18	11 <sup>3</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>2</sub>	4	4 <sup>7</sup> / <sub>8</sub>
	180	141WR46	85	3.5	9.7	45	22	11 <sup>5</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>
2	25	36WR17	45	1.0	4.2	23	27	12 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	50	36WR27	45	1.0	4.2	23	27	12 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	115	42WR47	65	1.7	7.3	35	32	12 <sup>5</sup> / <sub>8</sub>	10 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6
	180	142WR47	85	3.5	11.0	45	32	12 <sup>5</sup> / <sub>8</sub>	10 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6

† UL Listed Valves Consult Factory for details.  
 †† Not available for D.C. operation.

Consult Factory: For Stainless Steel Strainers 1/2", 3/4", 1", 1 1/2" and 2".  
 For 150-300 PSI flanges.