

# HUMPHREY SELECTION GUIDE

Organized by Port Size

## SOLENOID

### 2-, 3-way

M3	C <sub>v</sub>	10-32	C <sub>v</sub>	1/8"	C <sub>v</sub>	1/4"	C <sub>v</sub>	3/8"	C <sub>v</sub>	1/2"	C <sub>v</sub>	3/4"	C <sub>v</sub>
H010E1	0.01	3E1	0.01	31E1	0.09	(V)062E1	0.12			(VA/VV)500(A)E1	2.16	(VA)590(A)E1	2.56
H041E1	0.08	M3E1	0.01	M31E1	0.06	T062E1	0.11			500E2	2.16	(VA)590(A)E2	2.56
H040 E1	0.08	M3E1-81-MTL	0.01	310	0.12	125E1	0.19			501E1	2.20		
		3E1-PCM	0.01	S310	0.15	T125E1	0.17			501E2	2.20		
		3E1-39-BOU	0.01	M310	0.12	(VA/VV)250(A)E	0.63						
		3E1-TSD	0.01	(VA)125(A)E1L	0.24	250E2	0.63						
		H(V)030E1	0.03	M125E1LW	0.17	320	1.00						
		H110E1	0.23	H181E1	0.57								
		H111E1	0.23										

### 4-way

M3	C <sub>v</sub>	10-32	C <sub>v</sub>	1/8"	C <sub>v</sub>	1/4"	C <sub>v</sub>	3/8"	C <sub>v</sub>	1/2"	C <sub>v</sub>	3/4"	C <sub>v</sub>
H040 4E1	0.08	401	0.05	41E1	0.03	42E1	0.43			501-4E1	1.80		
H040 4E2	0.08	M401	0.05	M41E1	0.03	M42E1	0.39			501-4E2	1.80		
		402	0.04	MC41E1	0.03	42E2	0.43						
		M402	0.04	410	0.14	062-4E1	0.07						
		H030-4E1	0.03	410-70	0.14	125-4E1	0.11						
		H110-4E1	0.23	S410	0.13	T062-4E1	0.07						
		H110-4E2	0.23	S410-70	0.13	T125-4E1	0.11						
		H113-4E2	0.21	M410	0.13	M42E2	0.39						
				M410-70	0.13	250-4E1	0.58						
				H180-4E1	0.57	250-4E2	0.88						
				H180-4E2	0.57	H240-4E1	0.88						
				H183-4E2	0.50	H243-4E2	0.83						
						S420	1.00						
						M420	1.00						

## AIR PILOTED

### 2-, 3-way

M3	C <sub>v</sub>	10-32	C <sub>v</sub>	1/8"	C <sub>v</sub>	1/4"	C <sub>v</sub>	3/8"	C <sub>v</sub>	1/2"	C <sub>v</sub>	3/4"	C <sub>v</sub>
		2P	0.09	31P	0.29	(VA/VV)250A	0.63			(VA)500A	2.20	(VA)590A	3.73
		3P	0.09	(VA)125A	0.22	250AA	0.85			500AB	2.20	590AB	3.73
				125AA	0.23	250AL	0.65			500AG	2.20	590AG	3.73
				125LA	0.15	250AH	0.50			501A	2.41		
				125AH	0.17					501AA	2.49		

### 4-way

M3	C <sub>v</sub>	10-32	C <sub>v</sub>	1/8"	C <sub>v</sub>	1/4"	C <sub>v</sub>	3/8"	C <sub>v</sub>	1/2"	C <sub>v</sub>	3/4"	C <sub>v</sub>
		4P	0.11	41P	0.29	42A	0.38			501-4A	1.89		
		4PP	0.11	41PP	0.28	42A2	0.35			501-4AA	1.89		
		110-4A	0.23	H180-4A	0.50	M42A2	0.32						
		110-4A2	0.23	H180-4A2	0.50	250-4A	0.49						
						250-4AA	0.75						

## MANUAL/MECHANICAL

### 2-, 3-way

M3	C <sub>v</sub>	10-32	C <sub>v</sub>	1/8"	C <sub>v</sub>	1/4"	C <sub>v</sub>	3/8"	C <sub>v</sub>	1/2"	C <sub>v</sub>	3/4"	C <sub>v</sub>
		2P	0.09	31P	0.29	250PL	0.83			501V	2.20	590C	3.85
		2V	0.09	31V	0.29	250P	0.84			(V)500C	2.20		
		3P	0.09	125PLG	0.22	250HO	0.83						
		3V	0.09	125P	0.22	250F	0.83						
				125HO	0.22	(V)250C	0.83						
				125B	0.23	250T	0.83						
				125MP	0.22	(V)250V	0.83						
				125MC	0.22								
				125MOC	0.22								
				125C	0.22								
				125T	0.22								
				(V)125V	0.22								

### 4-way

M3	C <sub>v</sub>	10-32	C <sub>v</sub>	1/8"	C <sub>v</sub>	1/4"	C <sub>v</sub>	3/8"	C <sub>v</sub>	1/2"	C <sub>v</sub>	3/4"	C <sub>v</sub>
		4P	0.11	41P	0.29	42P	0.39						
		4PP	0.11	41PP	0.29	42PP	0.39						
		4PPX	0.29	41PPX	0.29	M42P	0.32						
		4PP/PPX	0.29	41PP/PPX	0.29	M42PP	0.29						
		4V	0.11	41V	0.29	M42PA	0.29						
				41T	0.09	250-4F	0.75						
				41R	0.09	250-4H	0.75						

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# Humphrey General Guidelines

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## Don't take chances

Compressed air is an extremely powerful medium. Always take maximum precautions when handling any component of a compressed air system.

**Never** attempt to construct, replace, operate or service any component of a compressed air system unless you have been specifically and properly trained to do so.

**Always** disconnect the supply air and exhaust the air system before attempting to remove or service a component of that system.

Failure to heed these warnings could result in **SERIOUS, EVEN FATAL, PERSONAL INJURY.**

## Use the right valve

Humphrey valves are general purpose air valves designed for use in general industrial applications in accordance with the limitations described in this catalog for each valve. The specifications of individual products are subject to change without notice. Consult factory for specific information concerning valve/application compatibility.

Each Humphrey valve is tested before it leaves our factory to assure the valve's conformance to catalog specifications.

Any use or application which deviates from the valve's specifications will void the warranty unless Humphrey has provided specific and written authorization beforehand.

## Use the right lubrication

Except where model specifications state "No lubrication required," all Humphrey valves require appropriate lubrication. Humphrey recommends a non-detergent, 20w or 30w, mineral-based petroleum oil for most of its valves.

Some lubricants may cause swelling or deterioration of the valve's seals, therefore lubricant/seal compatibility must be confirmed. Read specifications carefully. If there is any doubt, consult factory.

## Use the right air supply

The valved medium, including the lubricants and other substances it may contain, must be compatible with the materials of which the valve is constructed. Read the specifications carefully; if there is any doubt, consult factory.

Some valve models are vulnerable to contaminated or moisture-laden compressed air. To promote proper functioning and long life in such instances, appropriate air

treatment equipment should be installed. Consult your supplier of air filters, regulators, and lubricators.

## Use proper service procedures

Never attempt to service a Humphrey valve or any system component unless you have been properly trained to do so. A properly trained person will never attempt to remove or service a component of a compressed air system unless the compressed air has been disconnected and the system thoroughly exhausted.

Some Humphrey valves can be repaired in the field. Humphrey makes available factory seal repair kits (SRKs) and individual valve components for this purpose. All repaired valves should be tested for conformance to specifications before they are returned to service. Field repairing of Humphrey valves voids their warranty.

## Design a proper system

Always strive to design systems which are safe as well as efficient. Either eliminate potential hazards completely or install safety features which neutralize them.

Give special consideration to any potential for accidental actuation of a valve. Either select a model that resists accidental actuation or mount the valve to prevent unintended actuation.

Consider the adverse consequences of individual component failure and design to prevent or minimize these consequences. Design a system that will fail safe under conditions of pressure variation, pressure loss, or other system failures.

Read the component literature carefully. If a model is not completely understood, do not apply it without first consulting the factory.

Size valves properly. A model having a capacity insufficient to the system may cause the entire system to be inefficient. Always note the size of the valve orifice — this is often more important than the pipe connection.

The circuit drawings in this catalog are intended *only* as examples of circuits in which certain components might typically be used. They are not to be considered recommendations of specific applications. The proper, safe functioning of any system must be insured by the system's designer or user.

The following are registered trademarks of the companies indicated: Delrin, Zytel, E.I., duPont; Rylton, Phillips Petroleum.

Specifications subject to change without notice.

All port connections are available in metric sizes. Specify metric port threads by using letter E as a model number prefix. The bottom number in all drawing dimensions is shown in millimeters.

**HUMPHREY PRODUCTS****MH6681 (N)  
CSA LR41336  
KILGORE AND SPRINKLE ROADS P O BOX 2008,  
KALAMAZOO MI 49003**

The following models are UL RECOGNIZED for component use.

Models 3E1, M3E1 valves; Models DMZ1, MZ1 manifolds.

Models 31E1, 41E1, M31E1, M41E1, MC41E1 valves; Models MM-2 through -7, MMC-2 through -7 manifolds.

Models 062-4E1, 062-4E2, 062E1, 062E2, VO62E1 valves, may be prefixed by T. Models TM-1R through -12R manifolds.

Models 125-4E1, 125E1, V125E1 valves, may be prefixed by T. Models TM-1R through -12R manifolds.

Model 310 may be prefixed by E, EM, ES, ESMP, EV, EVM, EVS, EVSMP, M, S, SMP, V, VM, VS, VSMP, may be suffixed by 2, 21, 39, 50, 81, 87, LL, MOV, RC, or SA, suffixed by UR.

Model 410 may be prefixed by E, EM, ES, ESMP, M, S, SMP, may be suffixed by 21, 39, 50, 70, 81, 87, LL, MOV, RC, or SA, suffixed by UR.

Models 250E1, 250E2.

The following models are UL LISTED for General use.

Model 062-4E1 with or without suffix 21, followed by 36, with or without suffixes 61 and/or 70.

Models 062E1, VO62E1 followed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36, with or without suffix 61.

Model 125-4E1 may be prefixed by T, with or without suffix 21, followed by 36, with or without suffix 60 or 70,

Model 125E1 may be prefixed by T, suffixed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36, may be followed by 60.

Model V125E1 followed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36, may be followed by 60.

Model V125E1 followed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36.

Models 250-4E1, 250-4E2 with or without suffix 21.

Model 250E1 followed by 2 or 3, followed by 10 or 11, followed by 20 or 21, followed by 36, with or without suffix 61.

Models TM-1L thru -12L manifolds.

# Humphrey 500 Series Electric Air Valves

Humphrey 500 Series electric air valves are of double diaphragm poppet design. Because these "no-stick" valves require no lubrication, they are ideal for use with instrument air and other media which prohibit lubrication. The use of lubrication, however, will not prevent a 500 Series valve from functioning if the lubricant is varied or removed.

500 Series electric valves have no sliding seals subject to cuts or metal seals subject to scratches, so they are ideal for use with contaminated media and are unaffected by compressor varnish.

With full 0.500-inch orifices, 500 Series valves have high flow (200 scfm at 125 psig).

500 Series valves are 2-position, 2-way or 3-way, single- or double-solenoid valves. They are designed for rugged duty and rapid cycling, and can be mounted in any position with body mounting holes. All 500 Series electric valves are furnished with brass bodies.



## 500E1

500E1-3-10-36

Model 500E1 is a single-solenoid, maintained contact, spring return, 2-way or 3-way valve available either normally closed or normally open. It can be mounted in any position with body mounting holes.



Model 500AE1 is identical to the 500E1 but has an external air pilot connection for the valving of media below 30 psig. Pilot air is isolated from valved media such as water, oil, instrument air, and gases.



### Options for 500 Series valves

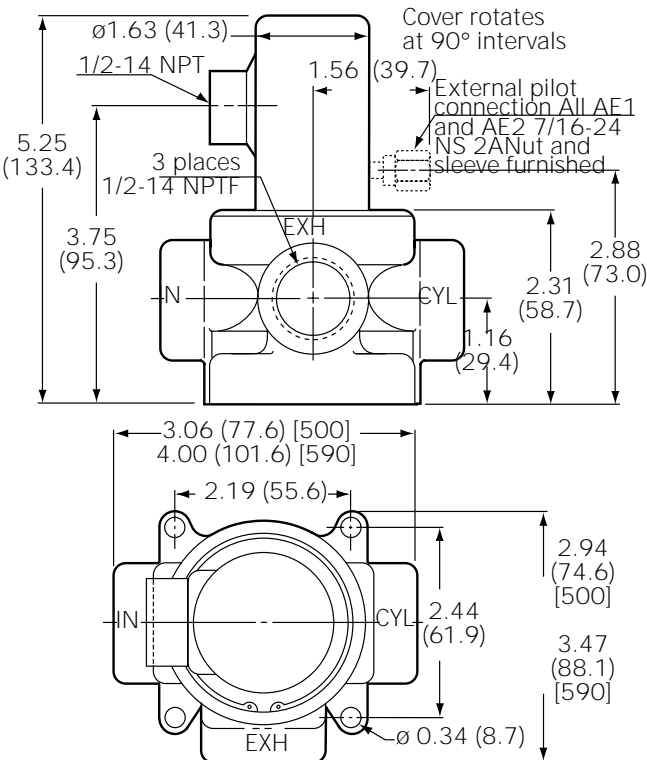
When ordering, specify desired option.

#### For all 500 valves:

- Cover seal (Code 61).
- Fluoroelastomer diaphragms for resistance to mild chemicals and for sustained temperatures to 400°F (204.4°C) and intermittent temperatures to 600°F (315.5°C).

#### For E2 models only:

- Code CD (Continuous Duty) coils for AC voltage valves to be energized longer than 30 seconds.

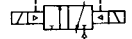
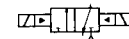


## 500E2

500E2-3

Model 500E2 is a double-solenoid, momentary-contact, maintained-position, 2-way or 3-way valve. If AC coils are to be energized longer than 30 seconds, specify Code CD (Continuous Duty) Coils. All coils for DC voltages are Code CD.

Model 500AE2 is identical to the 500E2 but has an external air-pilot connection for the valving of media below 30 psig. Pilot air is isolated from valved media such as water, oil, instrument air, and gases.



### Specifications

**MEDIA:**  
Compressed Air (Consult factory for others)

**PRESSURE RANGE:**  
E1/E2: 30 to 125 psig (2.1 to 8.6 bars)  
AE1/AE2: 0 to 125 psig (0 to 8.6 bars) (body), 30 to 125 psig (2.1 to 8.6 bars) (pilot)  
External Pilot Pressure (500AE1/AE2 only): Equal to valved pressure 30 psig (2.1 bars) Minimum

**TEMPERATURE RANGE:**  
0 to 125°F (-17.8 to 51.7°C)

**OPERATING SPEEDS:**  
To 600 CPM

**MATERIALS:**  
Cast Brass, Machined Aluminum & Brass, Stainless Steel, Zinc Plated Steel, Buna N

**LUBRICATION:** Not required  
**FILTRATION:** Not required

### Air Flow to Atmosphere

MODEL	SUPPLY PRESSURE				Weight	
	30 PSIG CFM	(2.1 BARS) LPM	120 PSIG CFM	(8.3 BARS) LPM	ACTUAL LBS	KGS
500E1/E2 500AE1/AE2	68.6	1941.4	206.0	5829.8	3.6	1.6

### Electrical Specifications

MODEL	VOLTAGE	COIL NUMBER	WATTS	AMPS	OHMS	HEAT RISE (°C)	ON TIME SECONDS	OFF TIME SECONDS
500E1	24 DC	46-8A	6.7	0.296	86	85.9	0.039	0.042
	120 AC	46-4	8.2	0.161	255	102.0	0.028	0.050
500E2	24 DC	46-8A	6.7	0.296	86	85.9	0.035	0.043
	120 AC	46-4	23.0	0.236	105	77.8	0.031	0.037

Lead Wire: # 18 AWG, 16-30 TC, 1/32, 105°C, PVC, UL & CSA.

### Fill/Exhaust Times (Seconds)

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	10 Cubic Inches (164cc)		100 Cubic Inches (1640cc)		10 Cubic Inches (164cc)		100 Cubic Inches (1640cc)	
	FILL	EXHAUST	FILL	EXHAUST	FILL	EXHAUST	FILL	EXHAUST
500E1/E2	0.055	0.064	0.122	0.205	0.061	0.064	0.135	0.239

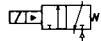
# Humphrey 501 Series Electric Air Valves

Humphrey 501 Series electric air valves feature 0.500-inch orifices for high flow (275 scfm at 125 psig) and the convenience of straight-line plumbing. They are constructed of lightweight aluminum which has been hard-coated for resistance to harsh ambient conditions.

501 Series electric air valves are 2-position, 2-way, 3-way or 4-way, single- or double-solenoid valves. They offer rapid cycling, to 600 cpm. Lubrication is recommended for optimum performance. They can be mounted in any position: in-line, with mounting base (Code 21; 3-way models only), with mounting holes, or with lugs.



**501E1** 501E1-3-10-20-36  
Model 501E1 is a single-solenoid, maintained-contact, spring-return, 2-way or 3-way valve available either normally closed or normally open.

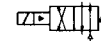


**501E2**  
Model 501E2 is a double-solenoid, momentary-contact, maintained-position, 2-way or 3-way valve. If AC coils are to be energized

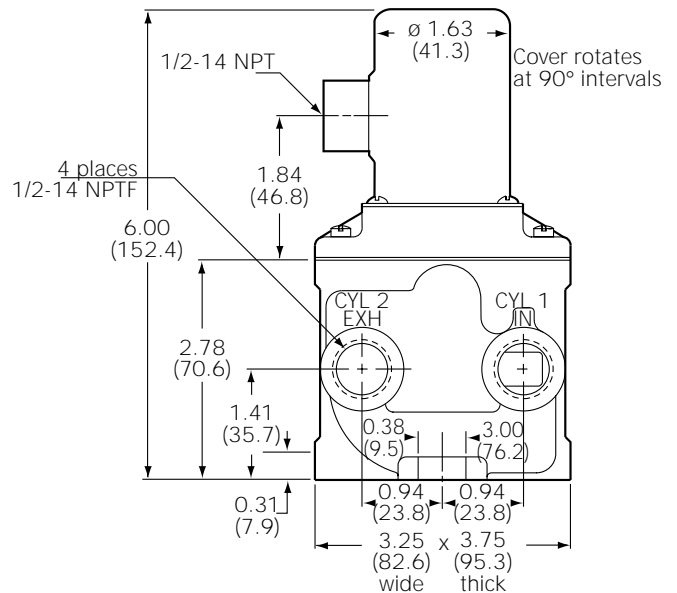
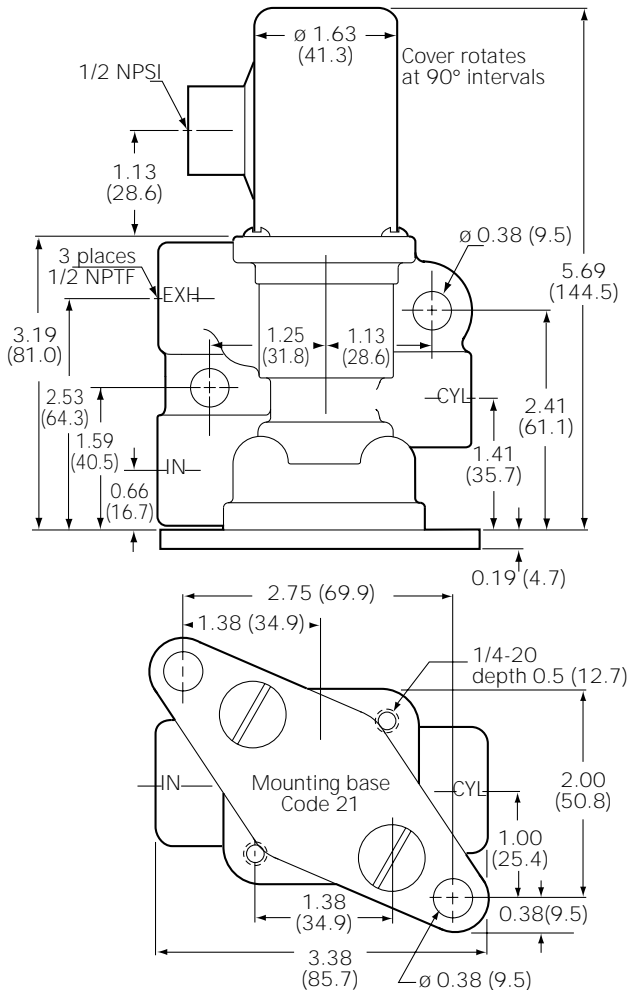
longer than 30 seconds, specify Code CD (Continuous Duty) coils. All coils for DC voltages are Code CD.



**501-4E1** 501-4E1  
Model 501-4E1 is a single-solenoid, maintained-contact, spring-return, 4-way, 4-port valve with common inlet and common exhaust. Cylinder port #1 is normally open; cylinder port #2 is normally closed.



**Consult factory for air piloted vacuum options.**



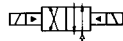


**501-4E2**

501-4E2

Model 501-4E2 is a double- solenoid, momentary-contact, maintained-position, 4-way, 4-port valve. If AC coils are to be ener-

gized longer than 30 seconds, specify Code CD (Continuous Duty) coils. All coils for DC voltages are Code CD.



**Options for 501 Series Electric Valves**

When ordering specify desired option.

- Mounting Base (Code 21; 3-way models only)
- Cover Seal (Code 61) for dirty or wet conditions.

**Specifications**

**MEDIA:**  
Compressed Air (Consult factory for others)

**PRESSURE RANGE:**  
30 to 125 psig (2.1 to 8.6 bars)

**TEMPERATURE RANGE:**  
-30 to 125°F (-34.4 to 51.7°C)

**OPERATING SPEEDS:**  
3 Ways: To 600 CPM, 4 Ways: To 360 CPM

**MATERIALS:**  
Cast Aluminum, Zinc Die Cast, Zinc Plated Steel, Stainless Steel, Buna N

LUBRICATION .....Required  
FILTRATION .....Recommended

**Air Flow to Atmosphere**

**Weight**

MODEL	AIR FLOW				WEIGHT	
	30 PSIG CFM	(2.1 BARS) LPM	120 PSIG CFM	(8.3 BARS) LPM	ACTUAL LBS	KGS
501E1/E2	71.0	2009.3	242.0	6848.6	1.5	.7
501-4E1/E2	55.0	1556.5	174.0	4924.2	2.7	1.2

**Electrical Specifications**

MODEL	VOLTAGE	COIL NUMBER	WATTS	AMPS	OHMS	HEAT RISE (°C)	ON TIME SECONDS	OFF TIME SECONDS
501E1	24 DC	46-8A	6.7	0.296	86	85.9	0.034	0.033
	120 AC	46-4	8.2	0.161	255	74.5	0.021	0.038
501E2	24 DC	46-8A	6.7	0.296	86	85.9	0.051	0.069
	120 AC	46-3	23.0	0.236	105	77.8	0.020	0.024
501-4E1	24 DC	46-8A	6.7	0.296	86	85.9	0.027	0.036
	120 AC	46-4	8.2	0.161	255	102.0	0.014	0.044
501-4E2	24 DC	46-8A	6.7	0.296	86	85.9	0.022	0.024
	120 AC	46-4	8.2	0.161	255	102.0	0.009	0.010

**Fill/Exhaust Times (Seconds)**

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	FILL	EXHAUST	FILL	EXHAUST
501E1/E2	0.041	0.040	0.106	0.123	0.046	0.047	0.119	0.146
501-4E1/E2 NC	0.069	0.075	0.158	0.171	0.068	0.058	0.169	0.201
501-4E1/E2 NO	0.059	0.104	0.147	0.205	0.069	0.110	0.169	0.231

Humphrey 590 Series electric air valves are of double diaphragm poppet design. Because these "no-stick" valves require no lubrication, they are ideal for use with instrument air and other media which prohibit lubrication. The use of lubrication, however, will not prevent a 590 Series valve from functioning if the lubricant is varied or removed.

590 Series electric valves have no sliding seals subject to cuts or metal seals subject to scratches, so they are also ideal for use with contaminated media and are unaffected by compressor varnish. Constructed of lightweight anodized aluminum, these valves offer 0.625 inch orifices for high flow (312 scfm at 125 psig). 590 Series electric valves are two-position, 2-way or 3-way, single- or double-solenoid valves. They are designed for rugged duty and rapid cycling and can be mounted in any position with body mounting holes.



**590E1** 590E1-3-10-36  
Model 590E1 is a single-solenoid, maintained-contact, spring-return, 2-way or 3-way valve available either normally closed or normally open.



**590AE1** 590AE1-3-10-36  
Model 590AE1 is identical to the 590E1 but has an external air pilot connection for the valving of media below 30 psig. The valve isolates pilot air from valved media such as water, oil, instrument air, or gases.



**590E2** 590E2-3  
Model 590E2 is a double-solenoid, momentary-contact, maintained-position, 2-way or 3-way valve. If AC coils are to be energized longer than 30 seconds, specify Code CD (Continuous Duty) Coils. All coils for DC voltages are Code CD.

Model 590AE2 is identical to the 590E2 but has an external air pilot connection for the valving of media below 30 psig.



## Options for 590 Series Electric Valves

When ordering specify desired option.

- Cover Seal (Code 61) for dirty or wet conditions.
- Continuous Duty Coils (Code CD) for double-solenoid valves.
- Fluoroelastomer diaphragms for resistance to mild chemicals and for sustained temperatures to 400°F (204.4°C) and intermittent temperatures to 600°F (315.5°C).
- Brass Body.

## Specifications

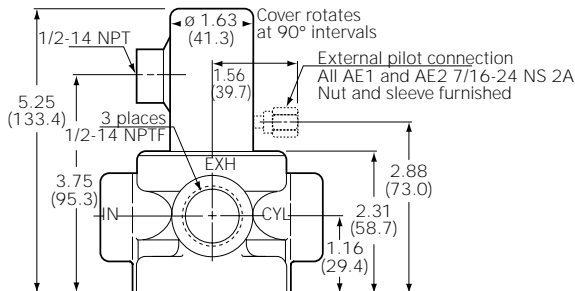
**MEDIA:**  
Compressed Air (Consult factory for others)

**PRESSURE RANGE:**  
**E1/E2:** 30 to 125 psig (2.1 to 8.6 bars)  
**AE1/AE2:** 0 to 125 psig (0 to 8.6 bars)  
**External pilot pressure (AE1/AE2):** Equal to valved pressure 30 psig (2.1 bars) Minimum.

**TEMPERATURE RANGE:**  
0 to 125°F (-17.8 to 51.7°C)  
**OPERATING SPEEDS:**  
To 600 CPM

**MATERIALS:**  
Cast Aluminum & Brass, Machined Aluminum & Brass, Stainless Steel, Zinc Plated Steel, Buna N

**LUBRICATION:** Not required  
**FILTRATION:** Not required



## Air Flow to Atmosphere

MODEL	SUPPLY PRESSURE			Weight		
	30 PSIG CFM	(2.1 BARS) LPM	120 PSIG CFM	(8.3 BARS) LPM	ACTUAL LBS	KGS
590E1/E2	95.0	2688.5	283.0	8008.9	2.1	0.9

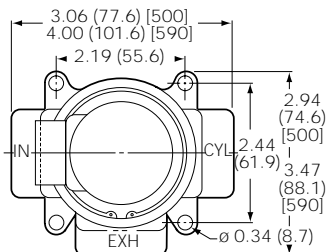
## Electrical Specifications

MODEL	VOLTAGE	COIL NUMBER	WATTS	AMPS	OHMS	HEAT RISE (°C)	ON TIME SECONDS	OFF TIME SECONDS
590E1	24 DC	46-8A	6.7	0.296	86	85.9	0.046	0.050
	120 AC	46-4	8.2	0.161	255	102.0	0.034	0.042
590E2	24 DC	46-8A	6.7	0.296	86	85.9	0.039	0.042
	120 AC	46-4	8.2	0.161	255	102.0	0.009	0.041

Lead Wire: # 18 AWG, 16-30 TC, 1/32, 105°C, PVC, UL & CSA.

## Fill/Exhaust Times (Seconds)

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	FILL	EXHAUST	FILL	EXHAUST	FILL	EXHAUST	FILL	EXHAUST
590E1/E2	0.063	0.069	0.100	0.185	0.063	0.070	0.118	0.225



### 500/501/590 Series

1/4-, 1/2-, and 3/4-inch ports, 2-way, 3-way, 4-way

#### VALVES

Option Code	2 Way	3 Way	Norm. Closed	Norm. Open	w/Out Mount. Base	With Mount. Base	Grommet Leads (18")	Conduit Leads (18")	DIN Connector	Grom./Conduit Leads (72")	Cover Seal	FKM* Seals	Brass Body	Bottom Inlet (NC Only)	Specify Voltage with option code				12VDC 24VDC
															120V 50/60, 240/50/60 (ID not available on E1)	24V 50/60 w/"Flywheel" Rectifiers for CD		Spec. Volt.	
500AE1	SP	N/C	N/C	N/C	NA	STD	NA	STD	SP	SP	NA	SP	STD	NA	STD	NA	SP	NA	N/C
500E2	SP	N/C	NA	NA	NA	STD	NA	STD	SP	SP	SP	SP	STD	NA	SP	STD	SP	SP	N/C
500AE2	SP	N/C	NA	NA	NA	STD	NA	STD	SP	SP	NA	SP	STD	NA	SP	STD	SP	SP	N/C
590E1	SP	N/C	N/C	N/C	NA	STD	N/C	N/C	SP	SP	SP	SP	SP	NA	STD	NA	SP	NA	N/C
590AE1	SP	N/C	N/C	N/C	NA	STD	NA	STD	SP	SP	NA	SP	SP	NA	STD	NA	SP	NA	N/C
590E2	SP	N/C	NA	NA	NA	STD	NA	STD	SP	SP	SP	SP	SP	NA	SP	STD	SP	SP	N/C
590AE2	SP	N/C	NA	NA	NA	STD	NA	STD	SP	SP	NA	SP	SP	NA	SP	STD	SP	SP	N/C
501E1	SP	N/C	N/C	N/C	N/C	SP	N/C	N/C	SP	SP	SP	SP	NA	NA	STD	NA	SP	NA	N/C
501E2	SP	N/C	NA	NA	N/C	SP	NA	STD	SP	SP	SP	SP	NA	NA	SP	STD	SP	SP	N/C
501-4E1	NA	NA	NA	NA	NA	STD	N/C	N/C	SP	SP	SP	SP	NA	NA	STD	NA	SP	NA	N/C
501-4E2	NA	NA	NA	NA	NA	STD	NA	STD	SP	SP	SP	SP	NA	NA	SP	STD	SP	SP	N/C

CD=Continuous Duty; ID=Intermittent Duty.

Note: Code 39 not available on E2 models with continuous duty coils (Code CD).

\*Fluoroelastomer

#### ACCESSORIES

Model	Description
HS4	DIN Connector for use with Code 39 Valves.
JB	— Add "JB" to model number of any solenoid valve with conduit Connection (Code 36).

#### HOW TO ORDER

Starting with Model Number specify options in order from left to right.

Example: To Order Model 500E1-3-10-36 12VDC

3-Way Operation, Single Solenoid (500E1-3)  
 Normally Closed (500E1-3-10)  
 Conduit Leads (18") (500E1-3-10-36)  
 Voltage 12VDC (500E1-3-10-36) 12VDC

Remember: Option Codes marked STD and NA are not used as part of the Model Number when ordering. N/C indicates no charge but Option Code must be included in the Model Number. OS indicates that Option must be ordered separately and is not used as part of the Model Number.

N/C=No charge  
 NA =Not available  
 OS =Order separately, additional charge for this option

STD=Standard  
 SP=Specify, additional charge for this option