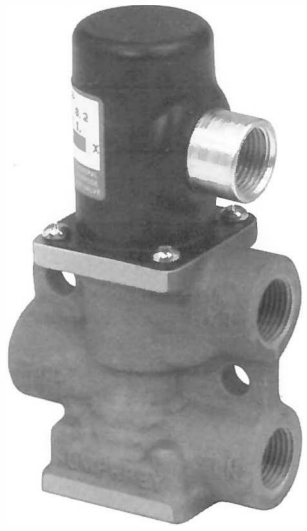
Humphrey 501 Series Electric Air Valves

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

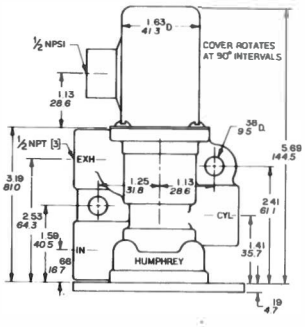
Model 501E1 is a single-solenoid, maintained-contact, spring-return, 2-way or 3-way valve available either normally closed or normally open.

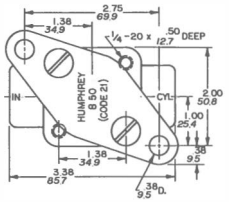
501E2 501E2-3-20

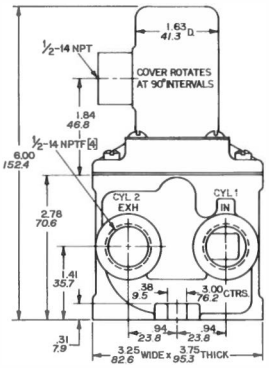
Model 501E2 is a double-solenoid, momentary-contact, maintained-position, 2-way or 3-way valve. If AC coils are to be energized longer than 30 seconds, specify Code CD (Continuous Duty) coils. All coils for DC voltages are Code CD.

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.







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 energized 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 ..... Recommended

FILTRATION ..... Recommended

Air Flow to Atmosphere

MODEL	30 PSIG CFM	(2.1 BARS) LPM	120 PSIG CFM	(8.3 BARS) LPM
501E1/E2	71.0	2009.3	242.0	6848.6
501-4E1/E2	55.0	1556.5	174.0	4924.2

Weight

ACTUAL LBS	KGS
1.5	.7
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

See Electric Air Valves Introduction, Continuous Duty Coils, for additional voltages.

Fill/Exhaust Times (Seconds)

	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)	
MODEL	FILL	EXHAUST	FILL	EXHAUST	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