

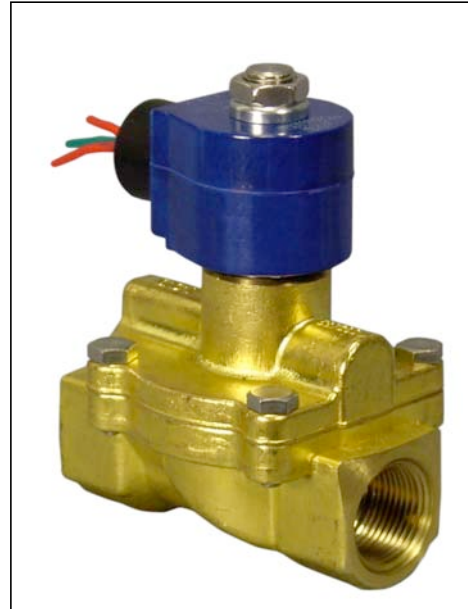
# SV321 & SV421 Series

## 2-Way Pilot Operated Diaphragm Solenoid Valves

**SV321 • Normally Closed**

**SV421 • Normally Open**

These 2-way general-purpose solenoid valves are piloted diaphragm construction and are available in normally closed and normally open operating modes. They are available in a variety of pipe connections from 3/8" to 2" NPT and are available with an extensive range of options. This series is widely used in various industrial applications. For special applications, contact your Valcor customer service representative.



### Specifications

Operating Mode	Normally Closed	Open when energized, closed when de-energized.	
	Normally Open	Closed when energized, open when de-energized.	
Pipe Size (in.)	3/8 • 1/2 • 3/4 • 1 • 1 1/4 • 1 1/2 • 2		
Orifice Size (in.)	5/8 • 3/4 • 1 • 1 1/4 • 1 1/2		
Body	Brass, Stainless Steel		
Sealing/Seat	Buna N, Ethylene Propylene, Viton, Teflon		
Housing	Standard	Watertight NEMA 4	
	Options	Explosion-proof NEMA 7, Grommet, Open frame, Junction box, Others	
Available Voltages	AC24V 60Hz	12V DC	
	AC110V 50Hz AC120V 60Hz		
	AC220V 50Hz AC240V 60Hz	24/DC	
Voltage Tolerance	+10% to -15% of applicable voltage		
Coil	Class F and H		
Lead Length	24 Inch		
Temperature Ratings	Ambient Temp. -40°F to 150°F max. with Class F Coil; 175°F max. with Class H Coil.		
	Fluid Temp. See the "HOW TO ORDER" Table.		
Mounting position	Mounts in any position (best position is with solenoid vertical and upright)		
Agency Listings	Consult factory		
Options	Manual Override, Mounting Bracket, Neon Lamp, Surge Suppressor		

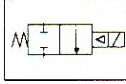
•Consult the factory for specifications other than those listed above.



# Valve Selection Sheet

Pipe Size (in.) NPT	Orifice (in.)	Cv	Operating Pressure Differential										Fluid Temp. °F Max.	Housing	Power Consumption (W)		Coil Insulation	Voltage 60 HZ	Model Code	
			Max. PSI												AC	DC			Brass	Stainless Steel
			Air/Gas		Water		Lt. Oil		Steam											
			AC	DC	AC	DC	AC	DC	AC	DC										

Normally Closed



De-energized

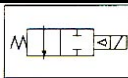


Energized



3/8	1/2	3.3	1	250	150	250	150	250	150	-	-	230	G	8	9	F	120	SV321GF02K4CG1	----
	1/2	3.3	1	-	-	-	-	-	-	100	100	338	G	8	9	H	120	SV321GH02T4CG1	----
	1/2	3.3	10	-	-	-	-	-	-	150	150	386	G	8	9	H	120	SV321GH02T2CG1	----
1/2	5/8	3.3	4	200	150	150	100	150	100	-	-	180	G	8	9	F	120	SV321GF02N5CG4	SV321GF02L7CG4
	1/2	3.3	1	250	150	250	150	250	150	-	-	230	G	8	9	F	120	SV321GF02K4DG1	----
	1/2	3.3	1	-	-	-	-	-	-	100	100	338	G	8	9	H	120	SV321GH02T4DG1	----
3/4	1 1/2	3.8	10	-	-	-	-	-	-	150	150	388	G	8	9	H	120	SV321GH02T2DG1	----
	5/8	4.1	4	200	150	150	100	150	100	-	-	180	G	8	9	F	120	SV321GF02N5DG4	SV321GF02L7DG4
	3/4	8.1	1	250	150	250	150	250	150	-	-	230	G	8	9	F	120	SV321GF02K4EG5	----
1	3/4	6.1	1	-	-	-	-	-	-	100	100	338	G	8	9	H	120	SV321GH02T4EG5	----
	3/4	7	10	-	-	-	-	-	-	150	150	386	G	8	9	H	120	SV321GH02T2EG5	----
	3/4	5.5	4	200	150	150	100	150	100	-	-	180	G	8	9	F	120	SV321GF02N5EG5	SV321GF02L7EG5
1 1/4	1	13	10	250	150	250	150	250	150	-	-	200	G	8	9	F	120	SV321GF02N1FG9	----
	1	13	10	-	-	-	-	-	-	150	150	386	G	8	9	H	120	SV321GH02T2FG9	----
	1	13	5	200	150	150	100	100	-	-	180	G	8	9	F	120	SV321GF02N5FG9	SV321GF02L7FG9	
1 1/2	1	13	5	-	-	-	-	-	-	50	50	295	G	8	9	F	120	SV321GF02C5FG9	SV321GF02E7FG9
	1 1/2	22	10	250	150	250	150	250	150	-	-	200	G	8	9	F	120	SV321GF02N1GJ5	----
	1 1/2	22	10	-	-	-	-	-	-	150	150	386	G	8	9	H	120	SV321GH02T2GJ5	----
1 1/2	1 1/4	19	5	200	150	150	150	85	85	-	-	180	G	8	9	F	120	SV321GF02N5GJ2	SV321GF02L7GJ2
	1 1/4	19	5	-	-	-	-	-	-	50	50	295	G	8	9	F	120	SV321GF02C5GJ2	SV321GF02E7GJ2
	1 1/2	28	10	250	150	250	150	250	150	-	-	200	G	8	9	F	120	SV321GF02N1HJ5	----
2	1 1/2	28	10	-	-	-	-	-	-	150	150	388	G	8	9	H	120	SV321GH02T2HJ5	----
	1 1/4	25	5	200	150	150	150	85	85	-	-	180	G	8	9	F	120	SV321GF02N5HJ2	SV321GF02L7HJ2
	1 1/4	25	5	-	-	-	-	-	-	50	50	295	G	8	9	F	120	SV321GF02C5HJ2	SV321GF02E7HJ2
2	1 1/2	29	10	250	150	250	150	250	150	-	-	200	G	8	9	F	120	SV321GF02N1JJ5	----
	1 1/2	29	10	-	-	-	-	-	-	150	150	386	G	8	9	H	120	SV321GH02T2JJ5	----
	1 1/4	28	5	200	150	150	150	85	85	-	-	180	G	8	9	F	120	SV321GF02N5JJ2	SV321GF02L7JJ2
	1 1/4	28	5	-	-	-	-	-	-	50	50	295	G	8	9	F	120	SV321GF02C5JJ2	SV321GF02E7JJ2

Normally Open



De-energized

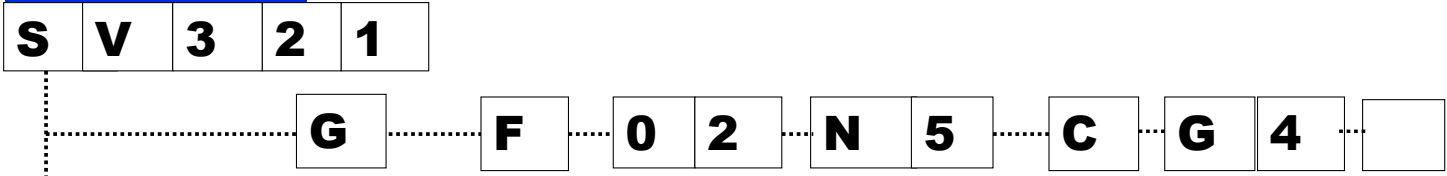


Energized



3/8	1/2	3.3	1	150	140	150	140	150	140	-	-	230	G	9	9	F	120	SV421GF02K4CG1	----
	1/2	3.3	1	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T4CG1	----
	5/8	3.3	3	150	140	200	125	200	125	-	-	180	G	11	10	F	120	SV421GF02N5CG4	SV421GF02L7CG4
1/2	1/2	3.3	1	150	140	150	140	150	140	-	-	230	G	9	9	F	120	SV421GF02K4DG1	----
	1/2	3.3	1	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T4DG1	----
	5/8	4.1	3	200	140	200	125	200	125	-	-	180	G	11	10	F	120	SV421GF02N5DG4	SV421GF02L7DG4
3/4	3/4	6.1	1	150	140	150	140	150	140	-	-	230	G	9	9	F	120	SV421GF02K4EG5	----
	3/4	8.1	1	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T4EG5	----
	3/4	5.5	3	200	140	200	125	200	125	-	-	180	G	11	10	F	120	SV421GF02N5EG5	SV421GF02L7EG5
1	1	13	10	200	140	200	140	200	140	-	-	200	G	9	9	F	120	SV421GF02N1FG9	----
	1	13	10	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T2FG9	----
	1	13	5	200	140	150	140	100	100	-	-	180	G	9	9	F	120	SV421GF02N5FG9	SV421GF02L7FG9
1 1/4	1	13	5	-	-	-	-	-	-	50	50	295	G	9	9	F	120	SV421GF02C5FG9	SV421GF02E7FG9
	1 1/2	22	10	200	140	200	140	200	140	-	-	200	G	9	9	F	120	SV421GF02N1GJ5	----
	1 1/2	22	10	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T2GJ5	----
1 1/2	1 1/4	19	5	200	140	140	140	85	85	-	-	180	G	9	9	F	120	SV421GF02N5GJ2	SV421GF02L7GJ2
	1 1/4	19	5	-	-	-	-	-	-	50	50	295	G	9	9	F	120	SV421GF02C5GJ2	SV421GF02E7GJ2
	1 1/2	28	10	200	140	200	140	200	140	-	-	200	G	9	9	F	120	SV421GF02N1HJ5	----
2	1 1/2	28	10	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T2HJ5	----
	1 1/4	25	5	200	140	140	140	85	85	-	-	180	G	9	9	F	120	SV421GF02N5HJ2	SV421GF02L7HJ2
	1 1/4	25	5	-	-	-	-	-	-	50	50	295	G	9	9	F	120	SV421GF02C5HJ2	SV421GF02E7HJ2
2	1 1/2	29	10	200	140	200	140	200	140	-	-	200	G	9	9	F	120	SV421GF02N1JJ5	----
	1 1/2	29	10	-	-	-	-	-	-	100	100	338	G	9	9	H	120	SV421GH02T2JJ5	----
	1 1/4	28	5	200	140	140	140	85	85	-	-	180	G	9	9	F	120	SV421GF02N5JJ2	SV421GF02L7JJ2
	1 1/4	28	5	-	-	-	-	-	-	50	50	295	G	9	9	F	120	SV421GF02C5JJ2	SV421GF02E7JJ2

## Model Code



1-2-3-4-5		6	7	8-9	10-11	12	13-14	15
Series	Operating Mode	Housing	Coil Insulation	Applicable Voltage	Material (Seat, Body)	Pipe Connection	Orifice Size	Option
SV321	Normally Closed	A= Conduit	F= Class F	02= 120V/60HZ 110V/50HZ	K4= Viton, Brass w/ SS trim	C= 3/8"	G1= 1/2	M= Manual Override
SV421	Normally Open	P= Open Frame	H= Class H	04= 220V/60HZ 220V/50HZ	T4= Teflon, Brass w/ SS trim	D= 1/2"	G5= 3/4	K= Mounting Bracket
		B= Grommet		01= 24V/60HZ	T2= Teflon, Brass w/ SS trim	E= 3/4"	G1= 1/2 G5= 3/4	
		X= Explosion Proof NEMA7		15= 12V DC	N=1 Buna N, Brass	G= 1 1/4"	J5= 1 1/2	
		S= Junction Box		16= 24V DC		H= 1 1/2"		J= 2"
		G= Watertight NEMA4			*N5= Buna N, Brass	C= 3/8"	G4= 5/8	
					*V5= Viton, Brass	D= 1/2"	G5= 3/4	
					*C5= EPR, Brass	E= 3/4"	G9= 1	
					*J7= Buna N, 304 SS	F= 1"	J2= 1 1/4	
					*L7= Viton, 304 SS	G= 1 1/4"		
					*E7= EPR, 304 SS	H= 1 1/2"		
					*compact version	J= 2"		

## Coil Data

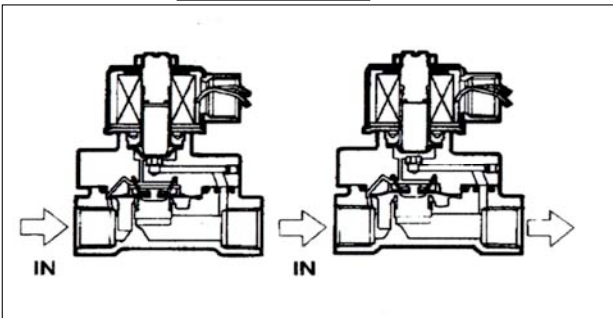
Model	SV321		SV421				
Frequency (HZ)	50	60	50	60	50	60	
Power (VA)	Inrush	26	22	35	30	56	51
	Holding	14	11	19	14	23	16
Power Consumption (W)	AC	8		9		11	
	DC	9 • 10					

Note: 1) AC power consumption at 110V/50HZ, 120V/60HZ data.

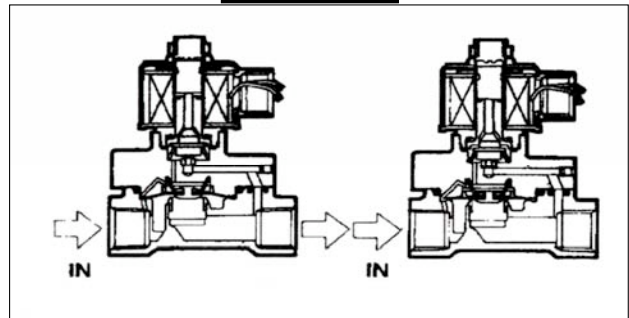
2) Regarding body codes 5 and 7 with 3/8-3/4 NPT, the inrush apparent power is 41 VA at 50 HZ and 37VA at 60 HZ respectively.

## Construction/Operation

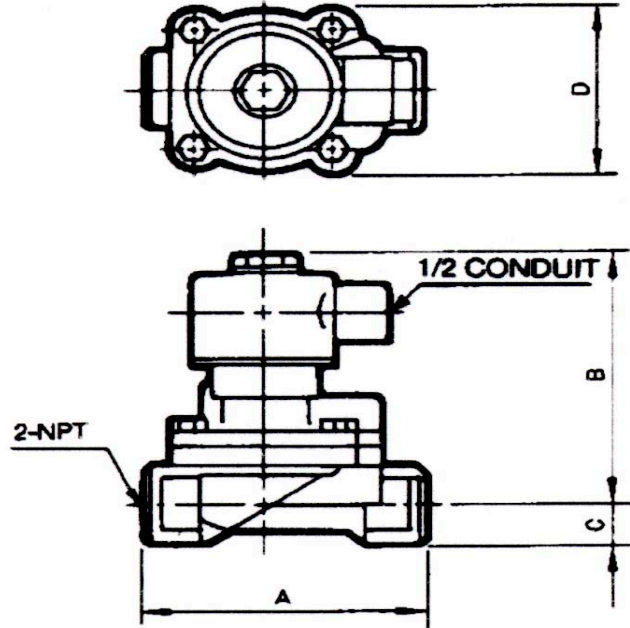
Normally Closed



Normally Open



## External Dimensions



Body Code	Pipe Connection (NPT)	A	B		C	D	Weight (LB)
			Normally Closed	Normally Open			
1, 2, 4	3/8 • 1/2	3.19	3.66	3.82	0.56	2.18	2.5
	3/4	3.82	3.92	4.08	0.69	3.82	3.3
	1	5.38	4.09	4.25	0.81	4.69	6.4
	1 1/4 • 1 1/2	6.25	4.54	4.71	1.19	5.32	10.5
	2		4.92	5.09	1.57		13.5
5, 7	3/8 • 1/2	2.76	3.03	3.78	0.55	2.2	1.8
	3/4		3.15	3.9	0.63		
	1	3.62	3.98	4.29	0.79	3.23	3.8
	1 1/4 • 1 1/2	4.33	4.33	4.65	1.06	3.62	5.8
	2	5.51	4.45	4.76	1.5		8.9

units:inch



**Valcor Scientific**

**Valcor Engineering Corporation®**

2 Lawrence Road • Springfield, New Jersey 07081

973-467-8400 • Fax: 973-467-9592

valcorscientific@valcor.com • www.valcor.com

© 2002 Valcor Engineering Corporation® Printed in USA

*Scientific Business Unit*