

STC

Manual & Actuated Process Valves



connects fluid power to industrial automation™

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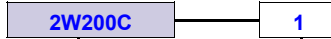
STC Process Valve Numbering System

Ordering Part No. =
eg. 2W025-1/4-1-G



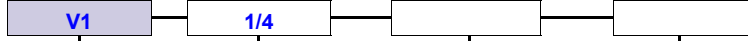
NC (Normally Closed) NO (Normally Open)	Model	BODY SIZE	PORT SIZE (NPT)	VOLTAGE	ELEC. CONNECTION
NC Brass High Pressure	2L	025	1/8	1 = 12 VDC 2 = 24 VDC 2A = 24 VAC 3 = 110 VAC 4 = 220VAC	BLANK = Standard DIN Con- nection (with Conduit Terminal) G = Grommet Terminal (Options for 2P and 2V series valves)
NC Engineered Plastic	2P	025	1/4		
NC Anodized Aluminum	2V	040	3/8		
NC 304 Stainless Steel	2S	160	3/8		
NO 304 Stainless Steel	2SO	160	1/2		
NC Brass	2W	200	3/4		
NO Brass	2WO	250	1		
NC Brass	VX	350	1 1/4		
NC Anodized Aluminum	VXF	400	1 1/2		
AIR PILOT VALVES		500	2		
NC Brass	QW				
NO Brass Air Pilot	QWO				

Ordering Part No. =
eg. 2W200C-1



COILS	MODEL	VOLTAGE
Coil for 2W & 2S 025 TO 250 series valves	2W200C	1 = 12 VDC
Coil for 2W & 2S 350 TO 500 series valves	2W300C	2 = 24 VDC
Coil for 2WO & 2SO 160 TO 500 series valves	2WO250C	2A = 24 VAC
Coil for 2P & 2V Series Valves	200C	3 = 110 VAC
		4 = 220VAC

Ordering Part No. =
eg. V1-1/4



MANUAL BALL VALVES	MODEL	PORT SIZE (NPT)	Mounting	
Reduced port 316 SS ball valve (1 Piece)	V1	1/4	Blank = No mounting Option A=Actuator Mount P= Panel Mount	
Full port 316 SS ball valve (2 Piece)	V2	3/8		
Full port 316 SS ball valve (3 Piece)	V3	1/2		
Full port 316 SS ball valve (3 Piece, Tri-Clamp)	V3C	3/4		
Full port brass ball valve (2 Piece)	T101L	1		
Reduced port chrome plated brass ball valve (FXF port)	T400	1 1/4		
Reduced port chrome plated brass ball valve (FXM port)	T400FM	1 1/2		
316 SS Needle valve	VNO1	2		
VALVE ACTUATORS	MODEL	Actuator Bore Size (mm)	Rotation	Action
ROTARY PNEUMATIC VALVE ACTUATORS	KT	45	90	S=Single Acting (Spring Return)
		63		
		83		
		105		
		140		
		160		
		210		
280	180	D=Double Acting (Air Return)		



STC Solenoid Valve List Price

To Order, Please Specify: 1. Model No. 2. Voltage

	Part No.	List Price	Port Size (NPT)	Cv	Voltage	Features	
	2P025-1/8	\$18.43	1/8	0.23	Voltage Options: 1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC	2 Way, Direct Acting, Normally Closed Operating Temp: -5 to 80 deg. C Operating Pressure: Vacuum to 115 PSI Coil: F Class, IP65, 100% ED, 12-15 watts Service: Air, Gas, Liquid Seals: NBR, (Viton Option) Body Material: 2P Series: Engineered Plastic 2S Series: 304 Stainless Steel Body 2V Series: Anodized Aluminum Body 2W Series: Brass	
	2P025-1/4	\$18.43	1/4	0.23			
	2S025-1/4	\$30.69	1/4	0.23			
	2S040-3/8	\$42.57	3/8	0.6			
	2V025-1/8	\$18.81	1/8	0.23			
	2V025-1/4	\$18.81	1/4	0.23			
	2W025-1/4	\$27.50	1/4	0.23			
	2W040-3/8	\$34.16	3/8	0.6			
	2W160-3/8	\$54.45	3/8	4.8			2 Way, Direct Acting/Lift, Normally Closed Operating Temp: -5 to 80 deg. C Operating Pressure: Vacuum to 115 PSI Coil: F Class, IP65, 100% ED, 12-15 watts Service: Air, Gas, Liquid Seals: NBR, (Viton High Temp. Option) Body Material: Brass
	2W160-1/2	\$54.45	1/2	4.8			
	2W200-3/4	\$62.87	3/4	7.6			
	2W250-1	\$76.73	1	12			
	2W350-1 1/4	\$169.29	1 1/4	24			
	2W400-1 1/2	\$188.10	1 1/2	29			
	2W500-2	\$273.24	2	48			
	2S160-3/8	\$103.46	3/8	4.8	Voltage Options: 1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC	2 Way, Direct Acting/Lift, Normally Closed Operating Temp: -5 to 80 deg. C Operating Pressure: Vacuum to 115 PSI Coil: F Class, IP65, 100% ED, 20-30 watts Service: Air, Gas, Liquid Seals: NBR, (Viton High Temp. Option) Body Material: 304 Stainless Steel	
	2S160-1/2	\$103.46	1/2	4.8			
	2S200-3/4	\$117.32	3/4	7.6			
	2S250-1	\$131.18	1	12			
	2S350-1 1/4	\$239.71	1 1/4	24			
	2S400-1 1/2	\$255.75	1 1/2	29			
	2S500-2	\$399.56	2	48			
	QW-1/2	\$123.20	1/2	4.8	Pilot Pressure: 80-150 PSI	2 Way, Direct Acting, NC Operating Temp -5 to 80 deg. C Operating Pressure: 100 PSI Service: Air, Water, Oil, Gas Seals: Teflon Body Material: Brass	
	QW-3/4	\$132.00	3/4	7.6			
	QW-1	\$162.00	1	12			
	QW-1 1/2	\$266.37	1 1/2	29			
	QW-2	\$332.97	2	48			




STC Solenoid Valve List Price

To Order, Please Specify: 1. Model No. 2. Voltage

	Part No.	List Price	Port Size (NPT)	Cv	Voltage	Features				
	2WO 160-3/8	\$91.58	3/8	4.8	Voltage Options: 1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC	Normally Open 2 Way, Direct Acting/Lift, Operating Temp: -5 to 80 deg. C Operating Pressure: Vacuum to 115 PSI Coil: F Class, IP65, 100% ED Service: Air, Liquid Seals: NBR (Option: Viton, EPDM)				
	2WO 160-1/2	\$91.58	1/2	4.8						
	2WO 200-3/4	\$99.88	3/4	7.6						
	2WO 250-1	\$116.55	1	12						
	2WO 350-1 1/4	\$183.10	1 1/4	24						
	2WO 400-1 1/2	\$203.42	1 1/2	29						
	2WO 500-2	\$295.50	2	48						
	2SO 160-3/8	\$119.00	3/8	4.8						
	2SO 160-1/2	\$129.84	1/2	4.8						
	2SO 200-3/4	\$151.51	3/8	7.6						
	2SO 250-1	\$238.00	1	12						
	2SO 350-1 1/4	\$335.41	1 1/4	24						
	2SO 400-1 1/2	\$372.69	1 1/2	29						
	2SO 500-2	\$541.37	2	48						
	2L170-3/8	\$87.95	3/8	4.8	Voltage Options: 1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC	Normally Closed, 2 Way, Direct Acting Brass Body, Seals: PTFE Operating Temp: -5 to 150 deg. C Operating Pressure: 215 PSI Coil: F Class, IP65, 100% ED Service: Air, Gas, Liquid, Steam Installation: Vertical Coil Position				
	2L170-1/2	\$103.46	1/2	4.8						
	2L170-3/4	\$117.32	3/4	4.8						
	2L200-1	\$131.18	1	12						
	2L300-1 1/4	\$185.52	1 1/4	20						
	2L300-1 1/2	\$216.32	1 1/2	20						
	2L500-2	\$325.22	2	48						
	2V130-3/8	\$58.80	3/8	4.8			Voltage Options: 1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC	Normally Closed, 2 Way, Direct Acting, Brass Body, Seals: VITON Operating Temp -5 to 150 deg. C Operating Pressure: 140 PSI Coil: F Class, IP65, 100% ED Service: Air, Gas, Water, Liquid		
	2V130-1/2	\$58.80	1/2	4.8						
	2V130-3/4	\$113.40	3/4	8						
	2V130-1	\$113.40	1	12						
	200U	\$78.60	Explosion Proof Coil Option for all voltages w/ 1/2" conduit							
	VXF2120-1/8		1/8						Voltage Options: 1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC	Normally Closed, 2 Way, Direct Acting, Seals: NBR (Option: VITON) Operating Temp: -5 to 150 deg. C Operating Pressure: 150 PSI Coil: F Class, IP65, 100% ED Service: Air, Liquid Body Material: Aluminum
	VXF2120-1/4		1/4							
	VXF2120-3/8		3/8							
	VXF2120-1/2		1/2							
	QWO-1/2	\$112.00	1/2	4.8	Pilot Pressure: 80-150 PSI	Normally Open 2 Way, Direct Acting, Brass Body; Seals: Viton Operating Temp -5 to 80 deg. C Operating Pressure: 100 PSI Air Pilot Pressure: 80-150 PSI Service: Air, Water, Oil, Gas				
	QWO-3/4	\$132.00	3/4	7.6						
	QWO-1	\$162.00	1	12						
	QWO-1 1/2	\$242.15	1 1/2	29						
	QWO-2	\$302.70	2	48						

Electrical Coil List Price

	Part No.	Price	Voltage Options	Electrical Connection	Power	Specifications
	2W200C	\$23.10	1 = 12 VDC 2 = 24VDC 2A=24VAC 3 = 110VAC 4 = 220VAC Insulation: F Class IP65 Duty Cycle: 100% ED	D = DIN (5/16" strain relief connector)	13 to 20W	For 2S/2W 025 to 250 series valves
	2W350C	\$35.75			25-65W	For 2/S2W 350-500 & 2L 170-500 series valves
	2WOC	\$29.70			40 W	For 2SO/2WO 160-500 series valves
	200C	\$7.92		3 to 6.5 W	For 2V & 2P025-035 & 2V1, 3V1 series valves	
				D = DIN (with LED indicator) G = Grommet (12" Lead Wire)		

Solenoid Valve Specifications

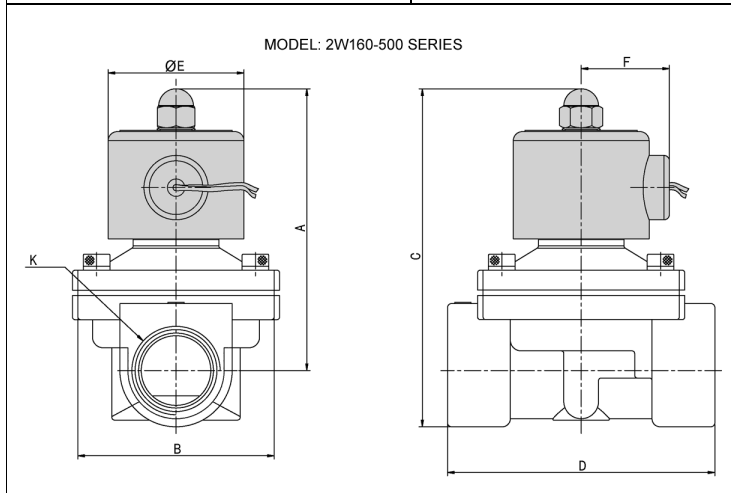
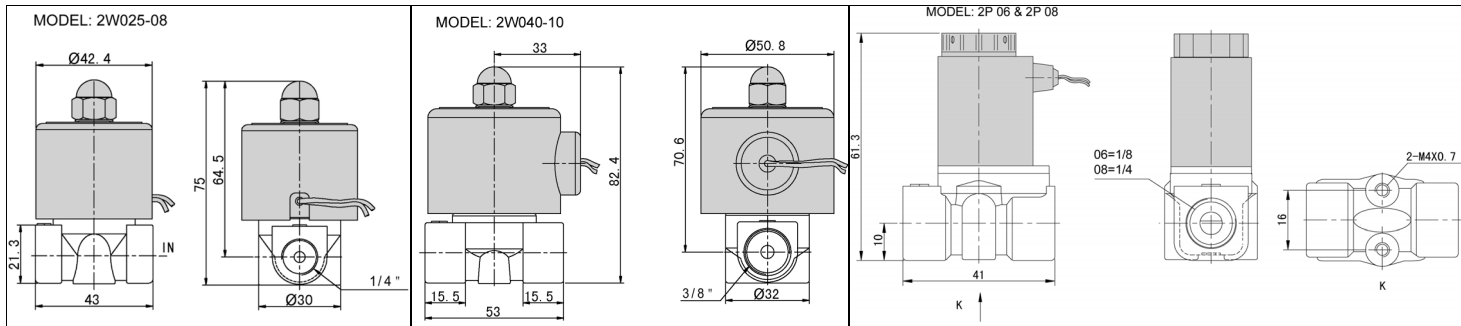
Valve Type	2P	2S/2SO	2W/2WO	2L Series	VX Series 06 to 08	VX Series 10-15	QW
Operating Pressure	-28" Hg to 150 PSI @30 Deg. C			0 to 210 PSI	0 to 145 PSI	0 to 145 PSI	0 to 85 PSI
Operating Temperature	-5 TO 80 Deg. C			-5 TO 150 Deg. C	-5 TO 150 Deg. C	-5 TO 80 Deg. C	-5 TO 100 Deg. C
Body Materials	Engineered Plastic	304 Stainless	Brass	Brass	Brass	Brass	Brass
Seal Materials	NBR			PTFE	NBR		
Coil Protection Insulation Class	F Class IP65						Air Pilot Operated
Coil Duty Cycle	100% ED						
Electrical Connections	DIN (with 3/8" Strain Relief Connection)				Two 12" Lead Wires		N/A
Service	Vacuum, Air, Liquid (Reverse flow direction for vacuum applications)			Air, Liquid, Steam Installation -Vertical		Vacuum, Air, Liquid Air, Liquid, Gas	

STC Valve List Price

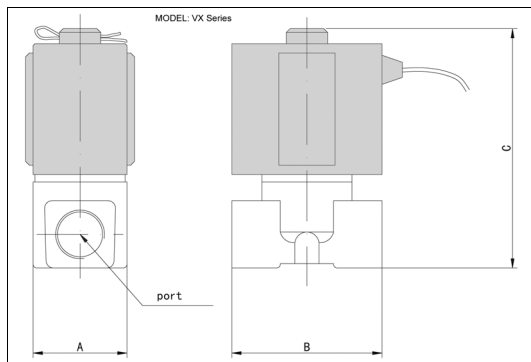
								
Reduced Port Ball Valves	Full Port Ball Valves	Full Port Ball Valves	Full Port Ball Valves	Full Port Butterfly Valves	Needle Valves			
Model	V1	V2	V3	V3C	VBS01	VN01		
Material	316 SS	316 SS	316 SS	316 SS	316 SS	316 Stainless Steel		
Port	FNPT	FNPT	FNPT	Clamp	Clamp	NPT Female		
Size 1/4"	V1-1/4	\$8.07	V2-1/4	\$12.21	V3-1/4	\$20.17		
3/8"	V1-3/8	\$8.43	V2-3/8	\$14.13	V3-3/8	\$20.17		
1/2"	V1-1/2	\$8.43	V2-1/2	\$14.13	V3-1/2	\$20.17		
3/4"	V1-3/4	\$12.27	V2-3/4	\$20.57	V3-3/4	\$29.03		
1"	V1-1	15.83	V2-1	\$28.67	V3-1	\$37.13	V3C-1	\$40.83
1 1/4"	V1-1 1/4	25.87	V2-1 1/4	\$42.37	V3-1 1/4	\$56.17		
1 1/2"	V1-1 1/2	\$31.67	V2-1 1/2	\$60.53	V3-1 1/2	\$70.53	V3C-1 1/2	\$79.20
2"	V1-2	40.23	V2-2	\$73.70	V3-2	\$100.90	V3C-2	\$111.00
3"							V3C-3	\$327.17
								
Miniature Ball Valves	Miniature Ball Valves	Full Port		ROTARY PNEUMATIC VALVE ACTUATORS		Single Acting	Double Acting	Note
Model	T400	T400FM	T101L			Rotation		Suitable for Ball Valve Size
Material	Chrome-Plated Brass	Chrome-Plated Brass	Brass	Model	Bore (mm)	90 Degree	180 Degree	
Port	F NPT	F x M NPT	F NPT			90 Degree	180 Degree	
Size 1/4"	T400-1/4	\$2.15	T400FM-1/4	\$2.15	T101L-1/4	\$2.72		1"
3/8"	T400-3/8	\$2.48	T400FM-3/8	\$2.48	T101-3/8			1 1/2"
1/2"	T400-1/2	\$2.90	T400FM-1/2	\$2.90	T101L-1/2	\$4.22		2 1/2"
3/4"					T101L-3/4	\$6.33		3"
1"					T101L-1	\$10.46		4"
1 1/2"					T101L-1 1/2	\$21.89		
2"					T101L-2	\$36.14		



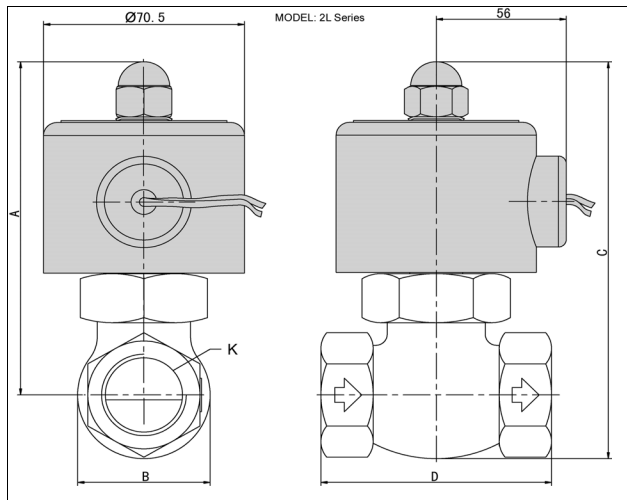
STC Valve Technical Data



MODEL: 2S & 2W Series (MM)							
		A	B	C	D	E	F
2S160-3/8	2W160-3/8	101.5	57	117	69	50	36
2S160-1/2	2W160-1/2	101.5	57	117	69	50	36
2S200-3/4	2W200-3/4	107.0	57	124	73	50	36
2S250-1	2W250-1	111.5	74	135	99	50	36
2S350-1 1/4	2W350-1 1/4	142.0	95	172	123	70.5	56
2S400-1 1/2	2W400-1 1/2	142.0	95	172	123	70.5	56
2S500-2	2W500-2	172.0	123	209	168	70.5	56


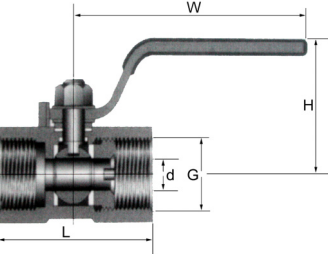

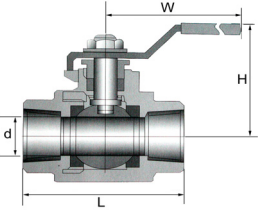

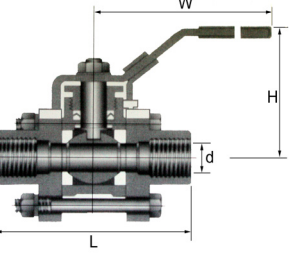


MODEL: VX Series (MM)				
	Port (NPT)	A	B	C
VX2120-1/8	1/8	25	40	64
VX2120-1/4	1/4	25	40	64
VX2120-3/8	3/8	48	68	110
VX2120-1/2	1/2	48	68	110



MODEL: 2L Series (MM)					
	A	B	C	D	K
2L170-3/8	125	42	146	82	3/8
2L170-1/2	125	42	146	82	1/2
2L170-3/4	125	42	146	82	3/4
2L200-1	136	52	162	91	1
2L300-1 1/4	148	74	185	111	1 1/4
2L300-1 1/2	148	74	185	111	1 1/2
2L500-2	176	86	223	163	2

STC Valve Technical Data

		Model: V1 SPECIFICATIONS						MAIN PARTS AND MATERIALS									
		One Piece Reduced Port 316 Stainless Steel Ball Valve						NO	PART NAME	MATERIAL	QTY						
		Maximum Operating Pressure: 1000 PSIG @ 100°F WOG*						1	SEAT	PTFE	2						
		Operating Temperature Range: -60 to 450°F*						2	BALL	SS316	1						
		End Connections: NPT Threaded with Padlocking device						3	JOINT GASKET	PTFE	1						
		DIMENSIONS (mm)						4	CAP	SS316	1						
SIZE	d	L	H	W	Wt (kg)		5	BODY	SS316/CF8M	1							
1/4"	5	39	35	64	0.07		6	STEM	SS316	1							
3/8"	7	44	37	70	0.1		7	THRUST WASHER	PTFE	1							
1/2"	9.2	56.5	43.5	90	0.16		8	STEM PACKING	PTFE	1							
3/4"	12.5	58	47	90	0.25		9	GLAND NUT	SS304	1							
1"	15	70	50	103	0.43		10	STEM WASHER	SS304	1							
1 1/4"	20	78	57	103	0.7		11	STEM NUT	SS304	1							
1 1/2"	24.5	83	69	127	0.83		12	HANDLE COVER	PLASTIC	1							
2"	32	100	74.5	127	1.5		13	HANDLE	SS304	1							
		Model: V2 SPECIFICATIONS										MAIN PARTS AND MATERIALS					
		Two Piece Full Port 316 Stainless Steel Ball Valve										NO	PART NAME	MATERIAL	QTY		
		Maximum Operating Pressure: 1/4" to 2" 1000 PSIG @ 100°F WOG* 2 1/2" to 3" 800 PSIG @ 100°F WOG*										1	SEAT	PTFE	2		
		Temperature Range: -60 to 450°F*										2	BALL	SS316	1		
		End Connections: NPT Threaded with Padlocking & panel mount device										3	JOINT GASKET	PTFE	1		
		DIMENSIONS (mm)										4	CAP	SS316	1		
SIZE	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	NO	PART NAME	MATERIAL	QTY			
d	11.6	12.7	15	20	25.4	32	38	50.8	65	76	5	BODY	SS316/CF8M	1			
L	55	55	63.5	75	88	103	110	124	167	192	6	STEM	SS316	1			
H	48	48	50	57	69	73	83	92	136	149	7	THRUST WASHER	PTFE	1			
W	103	103	103	125	145	145	190	190	250	250	8	STEM PACKING	PTFE	1			
											9	GLAND NUT	SS304	1			
											10	STEM WASHER	SS304	1			
											11	STEM NUT	SS304	1			
											12	HANDLE COVER	PLASTIC	1			
											13	HANDLE	SS304	1			
		Model: V3 SPECIFICATIONS												MAIN PARTS AND MATERIALS			
		Maximum Operating Pressure: 1/2" to 2" 1000 PSI @ 100°F WOG* 2 1/2" to 3" 800 PSI @ 100°F WOG*												NO	PART NAME	MATERIAL	QTY
		Temperature Range: -60 to 450°F*												1	SEAT	PTFE	2
		Full Port												2	BALL	SS316	1
		End Connections: FNPT												3	JOINT GASKET	PTFE	1
		Mounting Options: Padlocking device and actuator mounting bracket												4	CAP	SS316	1
		DIMENSIONS (mm)												5	BODY, BODY CONNECTOR	SS316/CF8M	1, 2
		SIZE	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6	STEM	SS316	1
d	mm	12.5	12.5	15	20	25	30	38	50	64	80	98	7	THRUST WASHER	PTFE	1	
	in	0.49	0.49	0.59	0.79	0.98	1.18	1.5	1.97	2.52	3.15	3.86	8	STEM PACKING	PTFE	1	
H	mm	57	57	68	70	80	84	93	100	142	155	172	9	GLAND NUT	SS304	1	
	in	2.24	2.24	2.68	2.76	3.15	3.31	3.66	3.94	5.59	6.1	6.77	10	STEM WASHER	SS304	1	
W	mm	96	96	124	124	142	142	202	202	250	250	300	11	STEM NUT	SS304	1	
	in	3.78	3.78	4.88	4.88	5.59	5.59	7.95	7.95	9.84	9.84	11.81	12	HANDLE COVER	PLASTIC	1	
L	mm	68	68	72	83	90	112	120	147	174	193	216	13	HANDLE	SS304	1	
	in	2.56	2.56	2.84	3.35	3.62	4.33	4.48	5.59	6.85	7.6	8.5	14	BODY CONNECTOR BOLT	SS304	4	
													15	BODY CONNECTOR NUT & WASHER	SS304	4	

* Refer to Maximum Operating Pressure -Temperature Data on Page 8 for more information



STC Valve Technical Data

Image	Diagram	Model: VBS01 SPECIFICATIONS						MAIN PARTS AND MATERIALS			
		NO	PART NAME	MATERIAL							
		Size: 1/2" to 4"						1	BODY	SS316 or SS316L	
		Full Port									
		Connection Options: Butt weld, Clamp, or Male Thread, Female Ends (RJT, IDF, DIN, SMS)						2	STEM WASHER	SS304	
		Operating Pressure: -13 PSIG to 150 PSIG WOG*									
		Temperature Range: -10°C to 150°C with Silicone, or Viton*						3	STEM NUT	SS304	
		Disc Head Size: 9.4 mm (to fit actuator)									
		Operator Options: Lever, Actuators						4	HANDLE	304 SS/Plastic	
		Body Material Options: 316SS, or 316L SS									
		Handle: 304 SS/Plastic						5	GASKET	Silicone, EPDM, or Viton	
		Seat Options: Silicone, EPDM or Viton									
		DIMENSIONS (mm)									
		A	B	B	B	C	D	E			
		Size	Weld	Clamp	Bevel						
		1"	47.63	88.9	122.24	100	74	39	6	BODY CONNECTOR BOLT	SS304
		1 1/2"	47.63	88.9	134.94	110	47	39			
		2"	52.39	95.25	163.51	110	83.5	49.5	7	BODY CONNECTOR NUT & WASHER	SS304
		2 1/2"	53.98	96.84	174.63	110	93	58.5			
		3"	61.91	104.78	196.26	159	98	66	8	BUTTERFLY	SS316/SS316L
		4"	79.38	122.24	228.6	159	118	84.5			

Image	Diagram	Model: V3C SPECIFICATIONS						MAIN PARTS AND MATERIALS						
		NO	PART NAME	MATERIAL	QTY									
		Sanitary Stainless Steel Ball Valve: These valves are made with precision machined Teflon seat for use in Sanitary applications. They are three piece design and have four bolts that permit quick and easy access to service the valve without disrupting the pipe line connections.						1	SEAT	PTFE	2			
		Maximum Operating Pressure: 1/2" to 2" 1000 PSI @ 100°F WOG* 2 1/2" to 4" 800 PSI @ 100°F WOG*												
		Temperature Range: -60 to 450°F*						2	BALL	SS316	1			
		Full Port												
		End Connections: Clamp End						3	JOINT GASKET	PTFE	1			
		Mounting Options: Padlocking device and actuator mounting bracket												
		DIMENSIONS (mm)												
		SIZE	PORT (d)	L	A	A1	H	T1	T2	W				
		1/2"	9.6	75	25	20.24	64	--	3.63	125	4	CAP	SS316	1
		3/4"	15.9	90	25	20.24	67	--	3.63	125				
		1"	22.2	100	50.4	43.6	83	2.85	4.75	140	5	BODY, BODY CONNECTOR	SS316/CF8M	1, 2
		1 1/4"	28.5	110	50.4	43.6	89	2.85	4.75	140				
		1 1/2"	34.9	125	50.4	43.6	100	2.85	--	200	6	STEM	SS316	1
		2"	47.5	150	63.9	56.3	108	2.85	--	200				
		2 1/2"	60.2	190	77.4	70.6	150	2.85	--	250	7	THRUST WASHER	PTFE	1
		3"	72.9	220	90	83.3	161	2.85	--	250				
		4"	97.4	270	118.9	110.3	180	2.85	--	250	8	STEM PACKING	PTFE	1
											9	GLAND NUT	SS304	1
											10	STEM WASHER	SS304	1
											11	STEM NUT	SS304	1
											12	HANDLE COVER	PLASTIC	1
											13	HANDLE	SS304	1
											14	CONNECTOR BOLT	SS304	4
											15	CONNECTOR NUT & WASHER	SS304	4

Image	Diagram	Model: VN01 SPECIFICATIONS						MAIN PARTS AND MATERIALS			
		NO	PART NAME	MATERIAL							
		End Connections: NPT threaded ASME b1.20.1 DIN 2999 & BS21; ISO 228/1 & ISO 7/1						1	SET SCREW	SS304	
		Max. Operating Pressure: 6000 PSIG @ 100 °F*									
		Operating Temperature Range: -60 to 450°F*						2	HANDLE	SS410	
		Fire safe design									
		DIMENSIONS (mm)									
		SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"			
		A	75	75	75	87	90	103	3	STEM	SS316
		B	25	25	25	30	32.5	40			
		C	50	50	50	60	65	80	4	GLAND NUT	SS304
		Cv	0.43	0.43	0.74	1.36	2.64	3.6			
									5	GLAND	SS304
									6	PACKING	TEFLON
									7	BONNET	SS316/CF8M
									8	BODY	SS316/CF8M

Valve Specifications			
Valve Type	T400	T400FM	T101L
Operating Pressure	200-800 PSI @ 90 °F		800 PSI @ 90 °F
Operating Temperature	-5 TO 80 Deg. C		
Body Materials	Chrome Plated Brass		Brass
Seal Materials	PTFE		
Service	Air, Liquid		

STC Process Valves

Installation and Operation Procedures

This Installation and Operation Procedures apply to the solenoid valves shown below.

Valve Type	Stainless Steel	Brass
<p>Direct Acting</p> <p>Normally Closed</p> <p>Action: Plunger Type</p>	<p>2S025-2S040 SERIES</p> 	<p>2W025-2W040 SERIES</p> 
<p>Direct Acting/Lift</p> <p>Normally Closed</p> <p>Action: Diaphragm Type</p>	<p>2S160-2S500 SERIES</p> 	<p>2W160-2W500 SERIES</p> 
<p>Direct Acting/Lift</p> <p>Normally Open</p> <p>Action: Diaphragm Type</p>	<p>2SO160-2SO500 SERIES</p> 	<p>2WO160-2WO500 SERIES</p> 
<p>Direct Acting/Lift</p> <p>Normally Closed</p> <p>Action: Plunger Type</p>	<p>2LS170-2LS500 SERIES</p> 	<p>2L170-2L500 SERIES</p> 

Electrical Connection of Solenoid Coils

To connect Grommet coil:

1. For DC Coil, connect the RED wire to Positive, and the BLACK wire to Negative.
2. For AC Coil, connect the BLACK wire to HOT wire, and the WHITE wire to Neutral wire.
3. Tighten the screw that secures the coil to the valve. If the screw nut is plastic, hand tighten only. If the screw nut is metal, hand tighten, and tighten 1/4 to 1/2 with a wrench. Do not over-tighten, it may damage the valve!

To connect DIN coil (refer to diagram shown below for more detail):

1. Remove the Philip screw from the plastic DIN housing and unplug it from the DIN coil and remove the gasket.
2. From the screw opening, use the screw to push the Terminal Block out of the plastic DIN housing.
3. Note the 1, 2 and ground markings on underside of Terminal Block.
4. For DC DIN Coil, Connect 1 to Positive, 2 to Negative.
5. For AC DIN Coil, connect 1 to HOT wire, 2 to Neutral wire, and if required, connect ground to ground wire.
6. Thread the wires through and out off the strain-relief opening of the plastic DIN housing, and re-inert the Terminal Block into the plastic DIN house in the desire orientation.
7. Re-install the gasket onto the DIN coil, plug the wired DIN enclosure into the DIN coil, and reinstall the Philip screw.
8. Tighten the screw that secure the coil to the valve. If the screw is plastic, hand tighten only. If the screw is metal, hand tighten, and tighten 1/4 to 1/2 with a wrench. Do not over-tighten!

Coils with DIN connections



[1] Remove the Philip screw from the plastic DIN housing.

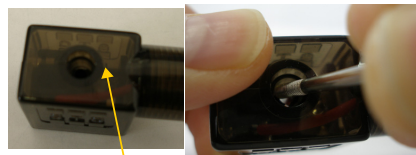
[2] Unplug the plastic DIN housing from the DIN coil.

[3] From the screw opening, use the screw to push the terminal block out of the plastic DIN housing.

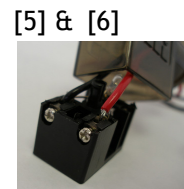
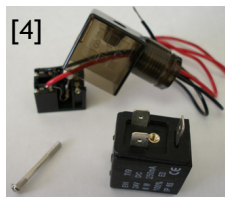
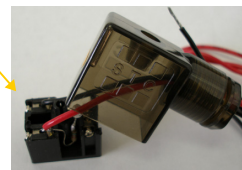
[4] Note the 1, 2, and ground markings on underside of DIN enclosure.

[5] For DC DIN coil, connect 1 to positive, 2 to negative.

[6] For AC DIN coil, connect 1 to HOT wire, 2 to neutral wire, and if required connect ground to ground wire.



[3] Top of the wiring terminal block



Installation of Solenoid Valves

Connection of Pipe to Solenoid Valve:

1. Follow the arrow mark on the solenoid valve for installation of inlet and outlet, for valve that can be used for vacuum applications and is to be connected for vacuum applications, reverse the direction inlet and outlet installation.
2. Apply the appropriate sealant to the pipe thread, screw the pipe into the solenoid valve, tighten the pipe by hand, then turn it 2 to 3 turns with a pipe-wrench until it reaches the desire torque listed.
3. For the 2L series valves, the coil/armature tube must be installed **vertically** and with flow in the **horizontal** direction.
4. The coil generate heat, install the solenoid valve in a well ventilated location and away from flammable materials.
5. Provide the solenoid valve with secure mechanical support through the piping structure.
6. Make sure the valve is installed properly and make sure there is no leak in all the connections.
7. Test the solenoid valve to make sure it operates properly before putting the solenoid valve into service.

Recommendation of Torque for Tightening Pipes		
Fitting Thread Size	Torque, lb-ft	Torque, kgf/cm
10-32, M5 –M6	1.0 -1.5	14 –21
NPT 1/8, R 1/8	5 -6.5	70 -90
NPT 1/4, R 1/4	8.5 -10	120 -140
NPT 3/8, R 3/8	16 -17.5	220 -240
NPT 1/2, R 1/2	20 -21.5	280 -300
NPT 3/4, R 3/4	Depends on user's requirements and applications	
NPT 1, R 1		
NPT 1 1/4, R 1 1/4		
NPT 1 1/2, R 1 1/2		
NPT 2, R 2		

Operation and Maintenance of Solenoid Valves

Operation:

1. Follow the current industrial safety standards when using the solenoid valve in pressurized air, gas or liquid, and when high electrical voltage is used to operate the solenoid valve.
2. Make sure the materials to be used are compatible with the solenoid valve.
3. Do not exceed the operation limits of the solenoid valve.
4. The coil generates heat, to prevent the coil from overheating, keep the solenoid valve well ventilated and away from flammable materials.
5. The opening or closing of solenoid valve is controlled by the electrical power supplied to the solenoid valve.

Maintenance:

1. Keep the valve clean, and inspect for leak after installation and on a regular interval.
2. If it is a diaphragm valve, the diaphragm needs to be replaced on a regular interval - depending on the usage and the usage conditions.

Maintenance Spare Parts:

1. Solenoid Coil
2. Diaphragm for diaphragm valve
3. Plunger and Plunger Spring
4. O-ring

Safety Precautions:

1. Follow the current industrial safety standards when using the solenoid valves in pressurized air, gas or liquid, and when high electrical voltage is used to operate the solenoid valves.
2. Make sure the materials to be used are compatible with the solenoid valve.
3. Do not exceed the operation limits of the solenoid valves.
4. The coils generate heat, install the solenoid valves in well ventilated locations and away from flammable materials.

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