Bulletin E
2015

VERSA® Valves

E FAMILY








Versa Products Company, Inc., 22 Spring Valley Rd., Paramus, NJ 07652 USA Phone: (201)-843-2400 Fax: (201)-843-2931
Versa BV, Prins Willem Alexanderlaan 1427, 7312 GB Apeldoorn, The Netherlands Phone: +31-55-368-1900 Fax: +31-55-368-1909
E-mail: sales@versa-valves.com www.versa-valves.com

QUICK INDEX

	Page 10	Page 13	Page 16	Page 18	Page 22	Page 23
Series	**EZ**	**E5**	**E4**	**E**	**E3**	**E* QE**
Description	Compact Direct Acting	Compact Direct Acting	Compact Direct Acting	Medium Flow Direct Acting	High Flow Direct Lift	High Flow
Pressure Range	vacuum to 250 psi (17 bar)	vacuum to 500 psi (34 bar)	vacuum to 500 psi (34 bar)	vacuum to 500 psi (34 bar)	0-150 psi (10.3 bar)	5-150 psi (0.3-10.3 bar)
Flow Range	.06 to 79	.022 to 23	.022 to 23	0.026 to 0.106	0.11 to 0.16	0.06- 0.106 Inlet 3.3-8.8 Exhaust
Port Size NPT	1/8" NPT	1/8" - 1/4" NPT	1/8" - 1/4" NPT	1/8" - 1/4" NPT	1/4" NPT	1/4"-1/2" NPT Inlet 3/8"- 3/4" NPT Exhaust
Nominal Power	10 AC watt 10.5 DC watt	6 - 8.5 AC watt 7-10 DC watt	0.85 - 1.8 watt	6 - 8.5 AC watt 7-10 DC watt	0.85 - 1.8 watt	0.85 - 7.2 Watt
Seals	NBR-Nitrile (Buna N) FKM (fluorocarbon) Optional		FKM (fluorocarbon)	NBR-Nitrile (Buna N)	FKM (fluorocarbon)	

Materials, General Purpose

Side Port	Aluminum	Page 10	—	—	—	—	—
	Stainless Steel	—	Page 13	—	Page 18	—	Page 23
Manifold Mount	Aluminum	Page 12	—	—	Page 20	—	—
	Stainless Steel	Consult Factory	—	—	Consult Factory	—	—

Materials, Hazardous Location

Side Port	Aluminum	—	—	—	—	—	—
	Stainless Steel	—	Page 14	Page 16	Page 18	Page 22	Page 23
Manifold Mount	Aluminum	—	—	—	Page 20	—	—
	—	—	—	—	—	—	—

The E Family

Versa's E-Series valves are 2 port, 2 position and 3 port, 2 position direct acting pneumatic and hydraulic valves consisting of two body types, side ported and manifold mounted.

E Series Side-Ported valves are individually mounted with body port sizes 1/8" NPT to 1/4" NPT.

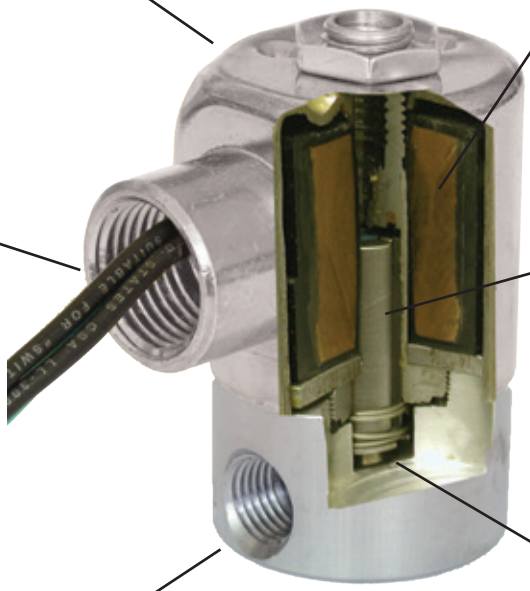
Manifold Mounting valve is direct solenoid actuated and is mounted on a manifold which can have 1 to 10 valve stations. The manifolds are provided with the threaded ports for pipe connections, which allows the valves to be easily and swiftly installed or removed without breaking any pipe connections. The manifolds also provide common ports, such as the inlet and exhaust, making only one such connection necessary per manifold.

Design for Reliability, Flexibility and Availability

Vent Options
The standard E Family valve is offered with a threaded vent port. This supports piped exhaust for gases and hydraulic applications. Other vent options are offered to keep contaminates out of the valve for long trouble, free service.

Direct Acting Solenoid Design
The E Family of solenoid valves utilize a high performance solenoid direct acting for the perfect balance of flow vs. power. Valves designed for complete pressure range including vacuum.

High Heat Epoxy Molded Coils
The E Family solenoid's are high heat rated and are all epoxy molded. A Versa standard! The epoxy molded coil yield a moisture resistance design which also dissipates heat for elevated temperature applications.



Electrical Connections
The E Family of solenoid valves offer the widest range of electrical hook connections, from ½" conduit to spade terminals and everything in between. All designed to simplify installation and serviceability. Select E Family valves are offered for hazardous location service, should application require such.

High Performance Solenoid
Near frictionless direct acting poppet deign yields positive shifting, the lowest wattage ratings and unsurpassed reliability. Life cycle ratings to 20 million cycles.

Porting Options
E Family valves are available with ⅛" or ¼" ports for ease of installation. Select Families are available in manifolded configurations for ease of installation, space savings and trouble free maintenance.

Bubble Tight Sealing
The E Family of products utilizes an elastomer sealed poppet. This design offers a bubble tight seal. Many seal materials are available to offer the greatest flexibility is application/media solutions.

Durable Materials of Construction
E Family materials are available in stainless steel or aluminum to offer the greatest flexibility in application/media solutions.

BASIC PART NUMBERING — OPTIONS

Every letter and digit in the product number of a valve has significant meaning. The product number shown below (E5SM-3201-34-A120) indicates the following:

E5SM	3	2	0	1	3	4	H2	A120
E5SM Series Solenoid, Spring Return	Three-Way	1/8" NPT	Side Ports	NC	Bottom	Top	Solenoid exhaust adapter	120V60 COIL
					Orifice Size			

BASIC PRODUCT NUMBER

E5SM	–	3	2	0	1

	VALVE SERIES & ACTUATION	FUNCTION: Body Style	PORT SIZE	BODY DETAILS	FLOW
E5SM	E5 Series	2 Two-Way	2 1/8"NPT	0 Side Ported	1 NC (Normally Closed)
E4SM	E4 Series	3 Three-Way	3 ¼" NPT	1 Manifold Mounted	2 NO (Normally Open)
ESM	E Series	7 Two-Outlet (3-Way-Diverter)			
E3SM	E3 Series	8 Two-Inlet (3-Way-Selector)			
EZ	EZ Series, for part number selection see page 10				
EQE	EQE Series, for part number selection see page 23				
E4QE	EQE Series, for part number selection see page 23				
E5QE	EQE Series, for part number selection see page 23				

Options

Solenoid Options	
General Purpose (see page 4)	
-243	Grommeted housing (flying leads)
-228L	Epoxy formed coil with 1/2" conduit hub, NEMA 4
-HC	DIN connecter with strain relief
-HCC	DIN connecter with 1/2" conduit hub
-HCL	DIN connecter with light
-HCCL	DIN connecter with 1/2" lighted conduit hub.
-HT	High temperature coil Class H insulation.
-P	Plug-in - A connection on manifold mounted valves that provides a plug in electrical connection
-44	Low temperature seals
-PC	Potted Coil - Ingress protection, provides NEMA 4 rating.
-Z	Exhaust vent for manifolded valves
Hazardous Service (see page 6)	
-XX	Hazardous Location solenoid, North American
-XN	Hazardous Location, coil ATEX Approvals
-LB (-XX or -XN required)	Low Watt 1.8 coil (-LX for E4SM See page 16 For E3 see page 22)
-LA (-XX or -XN required)	Low Watt 0.85 coil (-LC for E4SM See page 16 For E3 see page 22)
-HT	High temperature coil Class H insulation.
-PC	Potted Coil - Ingress protection, provides NEMA 4 rating.
-44	Low temperature seals
-ST (-XX or -XN required)	Stainless steel coil housing.
-XISC (-HC or HCC required)	Intrinsic Safe electrical operator, CSA
-XISX6 (-HC or HCC required)	Intrinsic Safe electrical operator, ATEX
-XDBS*/-XDBT*	Coil enclosure, 316 stainless steel, internal junction box with multi agency approvals (see page 16).
-XIF*	Intrinsic Safe ATEX Coil with internal junction box
-XMA*	Explosion Proof solenoid coil with integral junction box and internal bridge rectifier (see page 6)
Miscellaneous	
-14 (General purpose only)	Dust Excluder – Dust Tight; protection from contamination entering the solenoid sleeve (exhaust)
-E14	Dust Excluder – Dust Tight; protection from contamination entering the solenoid sleeve (exhaust)
-L14	Dust Excluder – Dust Tight; protection from contamination entering the solenoid sleeve (exhaust)
-D14	Dust Excluder – Water Tight; protection from "dirt or water" entering the solenoid sleeve (exhaust)
-H	1/4" npt, solenoid vent adapter (for stainless steel use -HE)
-H2	1/8" npt, solenoid vent adapter (for stainless steel use -H2E)
-WE	Mounting bracket, wall mount, attached to coil housing
-WMA	Mounting bracket, bottom mount, stainless steel,
-M	Manual override, a non-locking manual override, unguarded for solenoid actuators
-MAE	Manual override, with manual override pin that extends past the guard plate
-M5R	Manual override, an unguarded, locking, with a knurled knob, push to actuate and turn to lock.

SUFFIX DETAILS

Suffix details indicate modifications or variations to the basic valve. When specifying simply add those suffix details required in alphanumeric order.

Listed below are the suffix detail modifications found in this catalog and the page on which they are noted.

	3	4	H2	A120
	BOTTOM ORIFICE	TOP ORIFICE	SUFFIX DETAILS	VOLTAGE CODE
	0 None (2-way NO) 2 1/32” 3 3/64” 4 1/16” 6 3/32” 8 1/8” 12 3/16” 16 1/4”	0 None (2-way NC) 2 1/32” 3 3/64” 4 1/16” 6 3/32”	See Options below (Partial list)	Solenoid actuated valves require a Coil Code that indicates the specific coil current frequency and voltage. The Coil Code consists of a letter to indicate the current frequency Rating Code: A= 60Hz frequency (AC) D= Direct Current (DC) E= 50Hz frequency (AC) Examples: Voltage Code 24V60 = A024 120V60 =A120 24VDC = D024 110V50 = E110

	EZ		E5SM	E4SM	ESM		E3SM	EQE		
	Side Ported	Manifold Mounted	Side Ported	Side Ported	Side Ported	Manifold Mounted	Side Ported	E4QE	E5QE	EQE
	X	X	X		X	X			X	X
	X	X	X						X	
	X	X	X		X	X			X	X
	X	X	X		X	X			X	X
	X	X	X		X	X			X	X
	X	X	X		X	X			X	X
			X		X	X			X	X
						X				
			X		X	X				
			X		X	X			X	X
		X				X				
			X		X	X			X	X
			X						X	
			X						X	
			X						X	
			X		X	X	X		X	X
			X		X	X			X	X
			X	X	X	X				
			X						X	
			X						X	
			X						X	
				X				X		
					X	X				X
					X	X				X
					X	X				X
					X	X				X
	X	X	X	X				X	X	
	X	X	X	X	X	X		X	X	X
			X	X	X	X		X	X	X
	X	X	X	X	X	X		X	X	X
					X					
			X	X	X					
					X	X				
					X	X				
					X	X				

SOLENOID SELECTOR Hazardous Location

HAZARDOUS LOCATION SOLENOIDS

	Suffix Identification	Protection Classification	Area Classification and (Gas Grouping)	Certification- (Conformance)	Ingress Protection	Series	
	-XX	Hazardous Location NEMA 7 - 9	CLASS I, DIV. 1 (C & D) CLASS I, DIV. 2 (A & B) CLASS II, DIV. 1 (E, F & G)	CSA - UL	NEMA 4, 4X (with -PC)	ESM	
	-XX		CLASS I, DIV. 1 (C & D) CLASS I, DIV. 2 (A & B) CLASS II, DIV. 1 (E, F & G)	CSA - UL	NEMA 4, 4X (with -PC)	E5	
	-LB-XX						
	XN	(d) Flameproof	Ex d IIB+H2 T3 to T6 Gb II 2 G Ex d IIB+H2 T3 to T6	IECEx ATEX	IP65 IP66 (with -PC)		
	-LB-XN						
	-XDBS* -XDBT*	(d) Flameproof (e) Increased Safety	EX II 2 G D Ex d e IIC T* Gb EX tb IIIC T* °C Db Class I Div I Grp B, C & D Class I Div II Grp E, F & G EX d IIC DIP A21 T6 T4	ATEX ATEX - IECEx -INMETRO CSA	IP66 IP67 IP68 NEMA 4, 4X 6P	E4	
*For ordering information see "Miscellaneous" column page 7							
	-XMAA -XMAE -XMAF	(mb) Encapsulation (e) Increased Safety (tD) Tight Dust	Ex e mb II T5, T6 Gb Ex tD A21 T100°C, T85°C Db II 2 G Ex e mb II T5, T6 II 2D Ex tD A21 T100°C, T85°C	IECEx ATEX	IP66 IP67	ESM	
	-XMFA -XMFE -XMFF						
	-XIFA -XIFE -XIFF	(ia) Intrinsic Safe	Ex (ia) IIC T4...T6 Gb Ex (ia) IIIC T130°C, T80°C Db II 2 G Ex ia IIC T4...T6 II 2 D Ex ia D 21 T130°C, T80°C	IECEx ATEX	IP66 IP67	ESM	
	-XISX6		II 2 G Ex ia IIC T6	ATEX	IP65		
	-XISC	Intrinsic Safe	Class I, Groups (A, B, C & D) Class II, Groups (E, F, &G) Class III	Factory Mutual CSA		E5SM	
	XPN LC-XPS	Factory Sealed	II 2 G Ex d IIB T4…T6 Gb	ATEX	IP66 IP67	E3SM	
	-XPS LC-XPS		Class I, Div 1, Group C and D Class II, Div 1, Group E, F and G, T6 Class I, Div 2, Group C and D Class II, Div 2, Group E, F and G	CSA	NEMA 4X & 6P		

	Voltage (Power)	Electrical Characteristics	Miscellaneous
	All usual 50 Hz & 60 Hz AC (7.3W), DC (9.5W) 12V60, 24V60, 48V60, 120V60, 240V60 6VDC, 12VDC, 24VDC, 48VDC	Class F epoxy molded coil (155°C). continuous duty. 3 leads 24" (60 cm).	Plated steel coil housing with 1/2 NPT conduit entry.
	All usual 50 Hz & 60 Hz AC (6W), DC (7.2W) 12V60, 24V60, 48V60, 120V60, 240V60 6VDC, 12VDC, 24VDC, 48VDC		Plated steel coil housing with 1/2 NPT conduit entry. For stainless steel (430 type) coil housing add: (-ST)
	All usual 50 Hz & 60 Hz AC, DC (1.8W) 12V60, 24V60, 48V60, 120V60, 240V60 6VDC, 12VDC, 24VDC, 48VDC		Plated steel coil housing with 1/2 NPT conduit entry. For stainless steel (430 type) coil housing add: (-ST) Maximum pilot pressure 120 psi (8 bar) 1.8W nominal power.
	All usual 50 Hz & 60 Hz AC (6W), DC (7.2W) 12V60, 24V60, 48V60, 120V60, 240V60 6VDC, 12VDC, 24VDC, 48VDC		Plated steel coil housing with M20 x 1.5 conduit entry. Ground terminal on cover. For stainless steel (430 type) coil housing add: (-ST)
	All usual 50 Hz & 60 Hz AC, DC (1.8W) 12V60, 24V60, 48V60, 120V60, 240V60 6VDC, 12VDC, 24VDC, 48VDC		Plated steel coil housing with M20 x 1.5 conduit entry. Ground terminal on cover. For stainless steel (430 type) coil housing add: (-ST) Maximum pilot pressure 120 psi (8 bar) 1.8W nominal power.
	24VDC (D024) 120V60 (A120) 110V50 (E110) 230V50 (E230) 1.8 Watt standard, for lower watt contact factory.	Epoxy molded coils rated for continuous duty, Class H – 180°C.	Stainless steel coil housing with internal Junction Box. Internal and external ground screw. — Suffix Detail Ordering Code M 20 Connection: No Diode / Diode; ½" Connection: No Diode / Diode Standard (vent to atmosphere): XDBS1 / XDBS5 / XDBT1 / XDBT5 1/8" Adapter (-H2E): XDBS2 / XDBS6 / XDBT2 / XDBT6 1/4" Adapter (-HE): XDBS3 / XDBS7 / XDBT3 / XDBT7 Dust Nut (-L14): XDBS4 / XDBS8 / XDBT4 / XDBT8
	24VDC (4W) (Consult factory for other voltage options)	Continuous duty coil & rectifier, including surge suppression, potted within housing.	Thick wall epoxy coil housing with integral junction box. Internal ground terminal. M20 x 1.5 conduit entry: (-XMAA), (-XMFA), Cable gland for 6-12 mm ø cable: (-XMAE), (-XMFE) 1/2 NPT conduit entry with adapter: (-XMAF), (-XMFF)
	24VDC (10W inrush, 2.6W holding) (Consult factory for other voltages)	Continuous duty coil & power controller potted within housing.	
	24VDC (0.8W) (Consult factory for other voltages)	Continuous duty coil and power controller potted within housing.	Requires the use of an approved safety barrier or isolator. Thick wall epoxy coil housing and integral junction box. Internal ground terminal. M20 x 1.5 conduit entry: (-XIFA) Cable gland for 6-12 mm ø cable: (-XIFE) 1/2 NPT conduit entry with adapter: (-XIFF)
	24VDC system voltage prior to barrier (1.6 watt max.)	Class F epoxy molded coil (155°C). Continuous duty.	Requires the use of an approved barrier or isolator. Maximum operating system voltage before barrier 28VDC. Maximum pilot pressure 115 psi (8 bar). 3 spade terminals & DIN connector with PG9 cable gland: (-HC) 1/2 NPT conduit entry: (-HCC)
	1.8 watts 0.85 watt 12 or 24 DC	Class F, Continuous duty	Coil: ½" NPT, male hub with 72 inch wire leads, 3 wire. Not polarity dependent Epoxy molded/encapsulated (Factory Sealed), Inline off conduit hub. Not orientation sensitive, coil housing and body 316 stainless steel with FKM seal
	1.8 watts 0.85 watt 12 or 24 DC		

SOLENOID SELECTOR General Purpose

NONHAZARDOUS LOCATION SOLENOIDS

	Series	Suffix Detail	Certification-(Conformance) AC	Certification-(Conformance) DC	Ingress Protection	Voltage (Power)	Electrical Characteristics	Miscellaneous
	E5SM	Standard -PC	CSA		NEMA 1, 2, 3 & 4	24V60, 120V60, 240V60 (8W) 24V50, 110V50, 220V50 (8W) 12VDC, 24VDC, 48VDC (7W)	Class F epoxy molded coil (155°C). Continuous duty.	Steel cover with 1/2 NPT conduit entry.
	ESM	Standard -PC	CSA UL		NEMA 4; IP65	24V60, 120V60, 240V60 (7.3W) 24V50, 110V50, 220V50 (7.3W) 12VDC, 24VDC, 48VDC (9.5W)		
	EZ E5SM	-228L			NEMA 4	24V60, 120V60, 240V60 (8.5W) 24V50, 110V50, 220V50 (8.5W) 12VDC, 24VDC, 48VDC (10.5W		Epoxy molded coil with integral 1/2" npt conduit hub
	E5SM	-243	CSA UL		NEMA 1, 2 & 3	24V60, 120V60, 240V60 (8W) 24V50, 110V50, 220V50 (8W) 12VDC, 24VDC, 48VDC (7W)		Steel cover with grommited (flying) leads. 2 leads 24" (60 cm)
	ESM		CSA UL		NEMA 1, 2 & 3	24V60, 120V60, 240V60 (7.3W) 24V50, 110V50, 220V50 (7.3W) 12VDC, 24VDC, 48VDC (9.5W)		Steel cover with grommited (flying) leads 2 leads 24" (60 cm)
	EZ		—	—	NEMA 1, 2 & 3	24V60, 120V60, 240V60 (8.5W) 24V50, 110V50, 220V50 (8.5W) 12VDC, 24VDC, 48VDC (10.5W)		flying leads. 2 leads 24" (60 cm)
	EZ E5SM	-HC	CSA UL	—	NEMA 4	24V60, 120V60, 240V60 (8.5W) 24V50, 110V50, 220V50 (8.5W) 12VDC, 24VDC, 48VDC (10.5W)		Spade terminals (3). Connector: mini DIN socket with PG9 cable gland.
	ESM		—	—	IP 65	24V60, 120V60, 240V60 (12W) 24V50, 110V50, 220V50 (12W) 12VDC, 24VDC, 48VDC (10W)		Spade terminals (3) Connector pins according to Din 43650 & ISO 4400
	EZ E5SM	-HCL	CSA UL	—	NEMA 4	24V60, 120V60, 240V60 (8.5W) 24V50, 110V50, 220V50 (8.5W) 12VDC, 24VDC, 48VDC (10.5W)		Spade terminals (3). Connector: mini DIN socket with PG9 cable gland.
	ESM		—	—	IP 65	24V60, 120V60, 240V60 (12W) 24V50, 110V50, 220V50 (12W) 12VDC, 24VDC, 48VDC (10W)		Spade terminals (3) Connector pins according to Din 43650 & ISO 4400
	EZ E5SM	-HCC	CSA UL	—	NEMA 4	24V60, 120V60, 240V60 (8.5W) 24V50, 110V50, 220V50 (8.5W) 12VDC, 24VDC, 48VDC (10.5W)		Spade terminals (3). Connector: mini DIN socket with PG9 cable gland.
	ESM		—	—	IP 65	24V60, 120V60, 240V60 (12W) 24V50, 110V50, 220V50 (12W) 12VDC, 24VDC, 48VDC (10W)		Spade terminals (3) Connector pins according to Din 43650 & ISO 4400
	EZ E5SM	-HCCL	CSA UL	—	NEMA 4	24V60, 120V60, 240V60 (8.5W) 24V50, 110V50, 220V50 (8.5W) 12VDC, 24VDC, 48VDC (10.5W)		Spade terminals (3). Connector: mini DIN socket with PG9 cable gland.
	ESM		—	—	IP65	24V60, 120V60, 240V60 (12W) 24V50, 110V50, 220V50 (12W) 12VDC, 24VDC, 48VDC (10W)		Spade terminals (3) Connector pins according to Din 43650 & ISO 4400
	ESM	-P	—	—	NEMA 4; IP65			Steel cover with electrical plug-in. A Solenoid which can be removed from subplate or manifold, without disturbing the wiring

Combination Suffix Details Cross Reference Chart (E, E4 & E5)

Suffix Reference	
Suffix	Description
-XX	North American solenoid
-XN	ATEX solenoid
-XDB	World Solenoid
-HT	Class H coil
-ST	Stainless solenoid housing
-PC	Potted coil
-LB	1.8 watt solenoid
-LA	0.85 watt solenoid
-VJBT	Add on Junction Box
-D14	Solenoid vent, water proof nut
-PS	Potted coil, male conduit
-CD	72" wire leads
-LX	1.8 watt solenoid (XDB_)
-LV	0.85 watt solenoid (XDB_)
-H2E	1/8" npt solenoid vent
-HE	¼" npt solenoid vent
-L14	solenoid vent dust nut
-303D	Integral diode

North American (-XX)	
Combination Suffix	Included Suffix
-XXA	-XX, -HT
-XXA4	-XX, -D14, -HT
-XXB	-XX, -PS
-XXB4	-XX, -D14, -PS
-XXC	-XX, -HT, -PS
-XXC4	-XX, -D14, -HT, -PS
-XXD	-XX, -ST
-XXD4	-XX, -D14, -ST
-XXE	-XX, -PC, -ST
-XXE4	-XX, -D14, -PC, -ST
-XXF	-XX, -HT, -ST
-XXF4	-XX, -D14, -HT, -ST
-XXG	-XX, -LB, -ST
-XXG4	-XX, -D14, -LB, -ST
-XXH	-XX, -HT, -PC, -ST

North American (-XX) (Cont.)	
Combination Suffix	Included Suffix
-XXH4	-XX, -D14, -HT, -PC, -ST
-XXJ	-XX, -LB, -PC, -ST
-XXJ4	-XX, -D14, -LB, -PC, -ST
-XXK	-XX, -HT, -LB, -PC, -ST
-XXK4	-XX, -D14, -HT, -LB, -PC, -ST
-XXL	-XX, -PC
-XXL4	-XX, -D14, -PC
-XXM	-XX, -HT, -PC
-XXM4	-XX, -D14, -HT, -PC
-XXN	-XX, -LB, -PC
-XXN4	-XX, -D14, -LB, -PC
-XXP	-XX, -HT, -LB, -PC
-XXP4	-XX, -D14, -HT, -LB, -PC
-XXQ	-XX, -HT, -LB
-XXQ4	-XX, -D14, -HT, -LB
-XXR	-XX, -LB
-XXR4	-XX, -D14, -LB
-XXS	-XX, -LA, -ST
-XXS4	-XX, -D14, -LA, -ST
-XXU	-XX, -HT, -LB, -ST
-XXU4	-XX, -D14, -HT, -LB, -ST
-XXV	-XX, -LA
-XXV4	-XX, -D14, -LA
-XXW	-XX, -CD, -HT, -H2, -PC, -ST
-XXW4	-XX, -D14, -CD, -HT, -PC, -ST

ATEX (XN)	
Combination Suffix	Included Suffix
-XNA	-XN, -HT
-XND	-XN, -ST
-XNE	-XN, -PC, -ST
-XNF	-XN, -HT, -ST
-XNG	-XN, -LB, -ST
-XNH	-XN-HT, -PC, -ST
-XNJ	-XN, -LB, -PC, -ST
-XNK	-XN, -HT, -LB, -PC, -ST

ATEX (XN) (Cont.)	
Combination Suffix	Included Suffix
-XNL	-XN, -PC
-XNM	-XN, -HT, -PC
-XNN	-XN, -LB, -PC
-XNP	-XN, -HT, -LB, -PC
-XNQ	-XN, -HT, -LB
-XNR	-XN, -LB
-XNS	-XN, -LA, -ST
-XNU	-XN, -HT, -LB, -ST
-XNV	-XN, -LA
-XNX	-XN, -LB, -PS
-XNWS	-XN, -VJBT, -LB, -PS
-XXK4	-XX, -D14, -HT, -LB, -PC, -ST

World Solenoid (XDB)	
Combination Suffix	Included Suffix
-XDBS1	-XDBS, -HT, -LX
-XDBS2	-XDBS, -HT, -LX, -H2E
-XDBS3	-XDBS, -HT, -LX, -HE
-XDBS4	-XDBS, -HT, -LX, -L14
-XDBS5	-XDBS, -HT, -LX, -303D
-XDBS6	-XDBS, -HT, -LX, -H2E, -303D
-XDBS7	-XDBS, -HT, -LX, -HE, -303D
-XDBS8	-XDBS, -HT, -LX, -L14, -303D
-XDBS9	-XDBS, -HT, -LX, -D14
-XDBS10	-XDBS,-HT,-LX,-D14, -303D
-XDBT1	-XDBT, -HT, -LX
-XDBT2	-XDBT, -HT, -LX, -H2E
-XDBT3	-XDBT, -HT, -LX, -HE
-XDBT4	-XDBT, -HT, -LX, -L14
-XDBT5	-XDBT, -HT, -LX, -303D
-XDBT6	-XDBT, -HT, -LX, -H2E, -303D
-XDBT7	-XDBT, -HT, -LX, -HE, -303D
-XDBT8	-XDBT, -HT, -LX, -L14, -303D
-XDBT9	-XDBT, -HT, -LX, -D14
-XDBT10	-XDBT, -HT, -LX, -D14, -303D

Recommended Hazardous Location Solenoid Option Packages

(For complete specifications please see above and page 6-8)

		Certification/Power			
		North American - CSA		ATEX - IECEx - INMETRO	
Series	Enclosure/Wire	Standard Power	Low Watt*	Standard Power	Low Watt*
E/E5	Steel, Electroless Nickel Plated, 24 Inch Leads	-XXL4	-XXN4	-XNL4	-XNN4
E5	Stainless Steel, High Performance 430 type, 24" wire leads	-XXE4	-XXJ4	-XNE4	-XNJ4
E4	Stainless Steel, 316L type, Junction Box with Terminal Strip	n/a	-XDBT9**	n/a	-XDBS9

*1.8 watt solenoid. Also available is 0.85 watt, see cross reference chart above, 1.8 & 0.85 not available on E. For 0.50 watt, consult factory.
**All the –XDBT type solenoids are "World Solenoids." Certified for North America, ATEX, IECEx and INMETRO and more

SERIES E5 *compact*

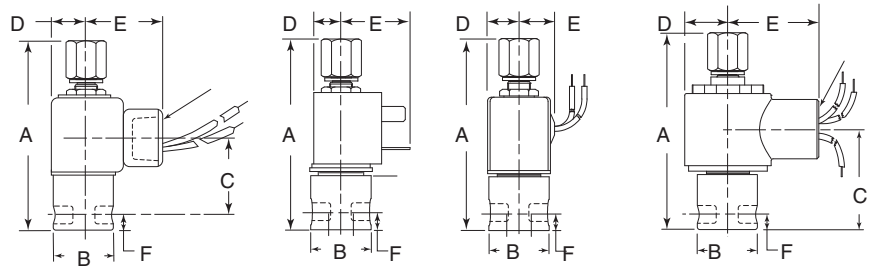
Side Ported Types

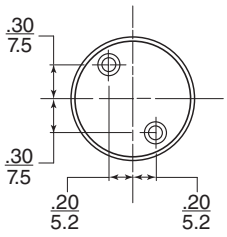
Series E5 *compact* valves are direct solenoid actuated Valves. They are physically smaller than the Series E *full-size* valves described on pages 18 through 21, but offer most of the same orifice sizes and operating pressure ranges as the larger valves. Ports are 1/8 NPT in the valve body and the valves are individually mounted.

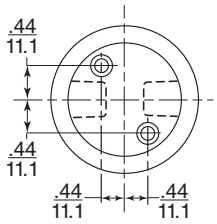
Function	2-Way NC, 2-way NO, 3-way NC, 3-Way NO, & Directional.
Media	Air / Gas / Hydraulic
Pressure:	to 500 psi (see table page 14)
Flow:	to 0.26 Cv
Temperature:	0°F to 180°F (-18°C to 82°C)
Ports, Inlet & Outlet:	⅛" or ¼" NPT
Exhaust/vent:	Vent to atmosphere, #10-32 thread (NPT port or dust protectors available)
Voltages:	AC or DC
Coil rating:	Class F, continuous duty
Power:	8.5 - 10.5 watt
Connections:	½" NPT
Ingress protection:	NEMA 1, 2,3 & 4/4X,
Ordinary Location	NEMA 1, 2,3 & 4/4X,
Hazardous Location	NEMA 7, 9, 4/4X, FM & ATEX
Materials of construction:	
Body:	430 Stainless (316 Stainless Steel optional)
Seals	NBR (Nitrile)
Coil:	Epoxy molded
Mounting:	(2) threaded holes (optional bracket -WMA)

ORDINARY LOCATION COILS (NEMA 1, 2, 3)

1/8" NPT Ports **1/4" NPT Ports**







1/8" Body Mounting Hole Dimension 1/4" Body

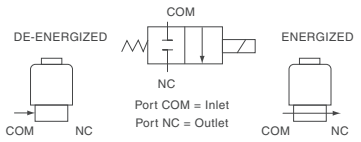
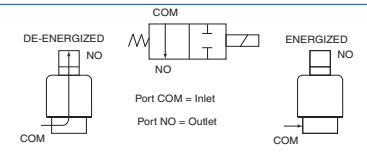
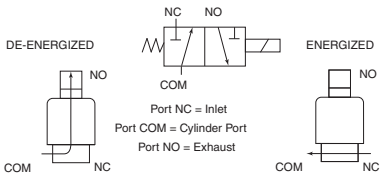
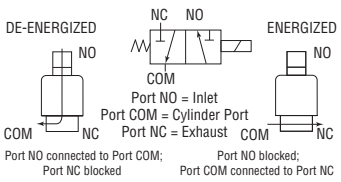
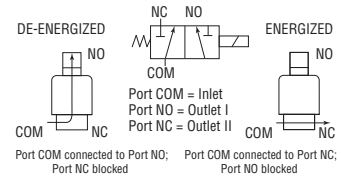
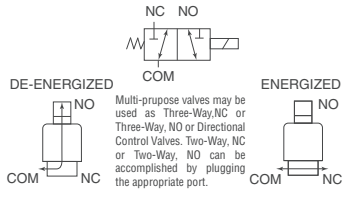
HAZARDOUS LOCATION COILS (NEMA 7 & 9)

1/8" NPT Ports

1/4" NPT Ports

		A		B		C		D		E		F	
		IN	mm	IN	mm	IN	mm	IN	mm	IN	mm	IN	mm
1/8" Ports	-HC	3	76.2	1	25.4	1.6	40.6	2.9	73.7	0.67	17	0.3	7.6
	-243	3	76.2	1	25.4	—	—	0.52	13.2	0.69	17.5	0.3	7.6
	STD	3	76.2	1	25.4	1.26	32	0.52	13.2	1.34	34	0.3	7.6
	-XX -XN	3.28	83	1	25.4	1.35	34.3	0.72	18.2	1.5	38.5	0.3	7.6
1/4" Ports	-HC	3.07	78	1.34	.34	1.4	35.6	.75	19	0.67	17	0.34	8.6
	-243	3.2	81.2	1.34	.34	—	—	0.52	13.2	0.69	17.5	0.34	8.6
	STD	3.2	81.2	1.34	.34	1.09	27.7	0.52	13.2	1.34	34.1	0.34	8.6
	XX -XN	3.3	83	1.34	.34	1.48	37.6	0.72	18.3	1.5	38.5	0.34	8.6

Side Ported Types

Type	Maximum Operating Pressure Differential psi (bar)†† AC	Maximum Operating Pressure Differential psi (bar)†† DC	ORDINARY LOCATIONS (For Coil Voltages See Page 4) Product Number 1/8" BODY PORTS	Product Number 1/4" BODY PORTS	Min. Orifice between Ports "NC"-"COM"	Min. Orifice between Ports "COM"-"NO"	Piping Arrangement and Flow Pattern
TWO-WAY 2/2 NORMALLY CLOSED Air, Oil or Water	500 (34) 400 (27) 200 (14) 100 (6.9) 75 (5.2)	250 (17) 150 (10) 100 (6.9) 45 (3.1) 25 (1.7)	**E5SM-2201-20-(*)** **E5SM-2201-30-(*)** **E5SM-2201-40-(*)** **E5SM-2201-60-(*)** **E5SM-2201-80-(*)**	**E5SM-2301-20-(*)** **E5SM-2301-30-(*)** **E5SM-2301-40-(*)** **E5SM-2301-60-(*)** **E5SM-2301-80-(*)**	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) 1/8" (3.2 mm)		
TWO-WAY 2/2 NORMALLY OPEN Air, Oil or Water	400 (27) 200 (14) 125 (8.6)	200 (14) 100 (6.9) 60 (4.1)	**E5SM-2202-03-H2.(*)** **E5SM-2202-04-H2-(*)** **E5SM-2202-06-H2-(*)**	**E5SM-2302-03-H2.(*)** **E5SM-2302-04-H2-(*)** **E5SM-2202-06-H2-(*)**		1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm)	
THREE-WAY 3/2 NORMALLY CLOSED (EXHAUST TO ATMOSPHERE) Air Only	200 (14) 150 (10) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1)	200 (14) 150 (10) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1)	**E5SM-3201-22-(*)** **E5SM-3201-33-(*)** **E5SM-3201-34-(*)** **E5SM-3201-44-(*)** **E5SM-3201-64-(*)** **E5SM-3201-84-(*)**	**E5SM-3301-22-(*)** **E5SM-3301-33-(*)** **E5SM-3301-34-(*)** **E5SM-3301-44-(*)** **E5SM-3301-64-(*)** **E5SM-3301-84-(*)**	1/32" (0.8 mm) 3/64" (1.2 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) 1/8" (3.2 mm)	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm)	
THREE-WAY 3/2 NORMALLY CLOSED (PIPED EXHAUST) Air, Oil or Water	200 (14) 150 (10) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1)	200 (14) 150 (10) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1)	**E5SM-3201-22-H2-(*)** **E5SM-3201-33-H2-(*)** **E5SM-3201-34-H2-(*)** **E5SM-3201-44-H2-(*)** **E5SM-3201-64-H2-(*)** **E5SM-3201-84-H2-(*)**	**E5SM-3301-22-H2-(*)** **E5SM-3301-33-H2-(*)** **E5SM-3301-34-H2-(*)** **E5SM-3301-44-H2-(*)** **E5SM-3301-64-H2-(*)** **E5SM-3301-84-H2-(*)**	1/32" (0.8 mm) 3/64" (1.2 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) 1/8" (3.2 mm)	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm)	
THREE-WAY 3/2 NORMALLY OPEN Air, Oil or Water	150 (10) 125 (8.6) 100 (6.9) 75 (5.2)	150 (10) 125 (8.6) 75(5.2) 45 (3.1)	**E5SM-3202-22-H2-(*)** **E5SM-3202-33-H2-(*)** **E5SM-3202-44-H2-(*)** **E5SM-3202-64-H2-(*)**	**E5SM-3302-22-H2-(*)** **E5SM-3302-33-H2-(*)** **E5SM-3302-44-H2-(*)** **E5SM-3302-64-H2-(*)**	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm)	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm)	
THREE-WAY 3/2 DIRECTIONAL CONTROL Air, Oil or Water	300 (21) 200 (14) 100 (6.9) 75 (5.2)	200 (14) 100 (6.9) 50 (3.4) 25 (1.7)	**E5SM-7202-22-H2-(*)** **E5SM-7202-33-H2-(*)** **E5SM-7202-44-H2-(*)** **E5SM-7202-64-H2-(*)**	**E5SM-7302-22-H2-(*)** **E5SM-7302-33-H2-(*)** **E5SM-7302-44-H2-(*)** **E5SM-7302-64-H2-(*)**	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm)	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm)	
THREE-WAY 3/2 MULTI-PURPOSE Air, Oil or Water	125 (8.6) 100 (6.9) 65 (4.5)	125 (8.6) 100 (6.9) 50 (3.4)	**E5SM-8202-22-H2-(*)** **E5SM-8202-33-H2-(*)** **E5SM-8202-44-H2-(*)**	**E5SM-8302-22-H2-(*)** **E5SM-8302-33-H2-(*)** **E5SM-8302-44-H2-(*)**	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm)	1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm)	

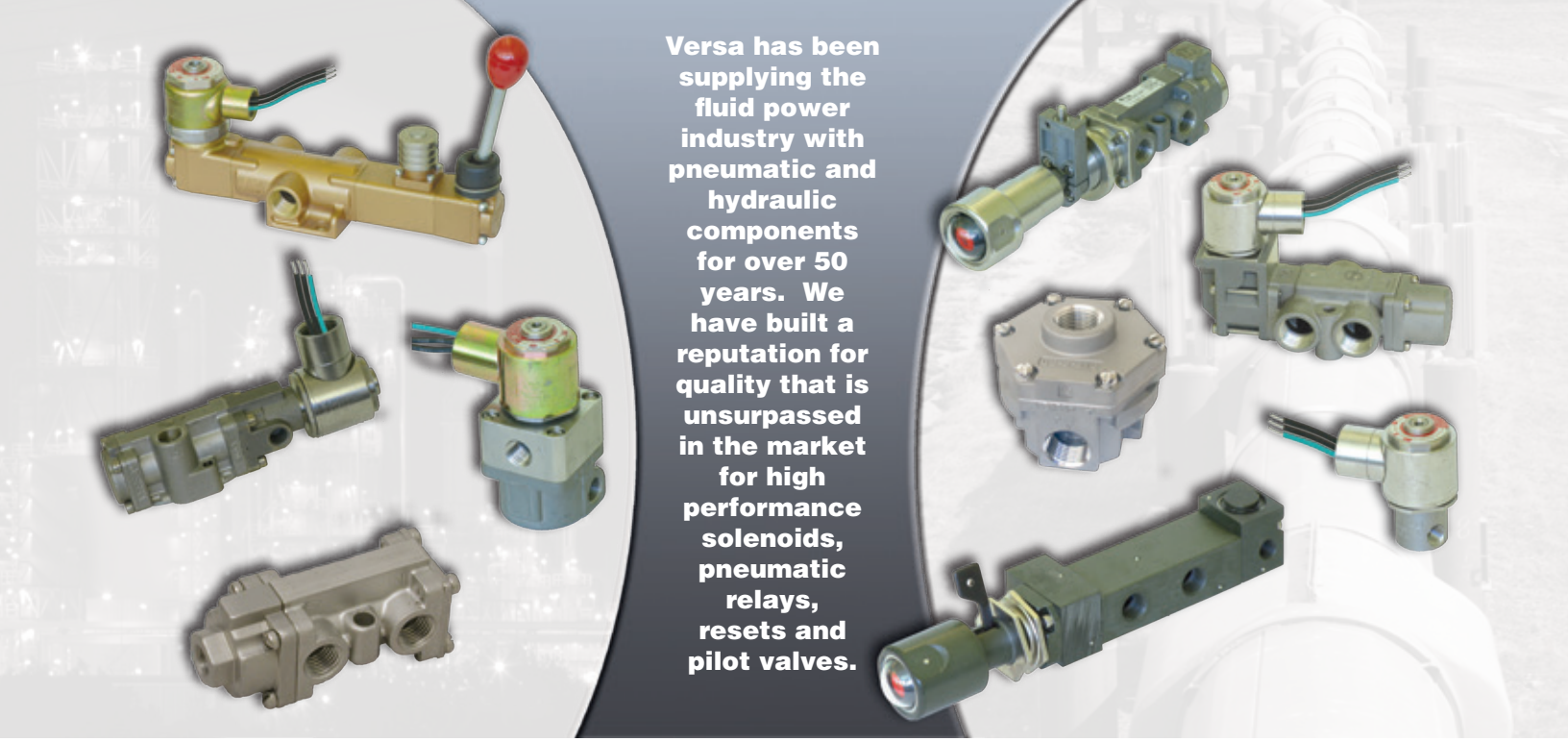
NOTES:
*Specify Voltage Code # from page 5.
†For air only.
†† MPa = $\frac{\text{bar}}{10}$

	Standard Wattage	Maximum Operating Pressure Differential psi (bar)††	HAZARDOUS LOCATION VALVES			
	Product Number (For Coil Voltages See Page 5)		Product Number			
			1/8" BODY PORTS		1/4" BODY PORTS	
		AC or DC	1.8 Watt	0.85 Watt	1.8 Watt	0.85 Watt
	E5SM-2201-20-XX-(*) E5SM-2201-30-XX-(*) E5SM-2201-40-XX-(*) E5SM-2201-60-XX-(*) E5SM-2201-80-XX-(*)	120 (8.3) 80 (5.5) 50 (3.4)	E5SM-2201-20-LB-XX-(*) E5SM-2201-30-LB-XX-(*) E5SM-2201-40-LB-XX-(*)	E5SM-2201-20-LA-XX-(*)	E5SM-2301-20-LB-XX-(*) E5SM-2301-30-LB-XX-(*) E5SM-2301-40-LB-XX-(*)	E5SM-2301-20-LA-XX-(*)
	E5SM-2202-02-H2-XX-(*) E5SM-2202-03-H2-XX-(*) E5SM-2202-04-H2-XX-(*)	120 (8.3) 80 (5.5) 50 (3.4)	E5SM-2202-02-H2-LB-XX-(*) E5SM-2202-03-H2-LB-XX-(*) E5SM-2202-04-H2-LB-XX-(*)	E5SM-2202-02-H2-LA-XX-(*)	E5SM-2302-02-H2-LB-XX-(*) E5SM-2302-03-H2-LB-XX-(*) E5SM-2302-04-H2-LB-XX-(*)	E5SM-2302-02-H2-LA-XX-(*)
	E5SM-3201-22-XX-(*) E5SM-3201-33-XX-(*) E5SM-3201-34-XX-(*) E5SM-3201-44-XX-(*) E5SM-3201-64-XX-(*) E5SM-3201-84-XX-(*)	120 (8.3) 60 (4.1) 30 (2.1)	E5SM-3201-23-LB-XX-(*) E5SM-3201-33-LB-XX-(*) E5SM-3201-44-LB-XX-(*)	E5SM-3201-22-LA-XX-(*)	E5SM-3301-23-LB-XX-(*) E5SM-3301-33-LB-XX-(*) E5SM-3301-44-LB-XX-(*)	E5SM-3301-22-LA-XX-(*)
	E5SM-3201-22-H2-XX-(*) E5SM-3201-33-H2-XX-(*) E5SM-3201-34-H2-XX-(*) E5SM-3201-44-H2-XX-(*) E5SM-3201-64-H2-XX-(*) E5SM-3201-84-H2-XX-(*)	120 (8.3) 60 (4.1) 30 (2.1)	E5SM-3201-23-H2-LB-XX-(*) E5SM-3201-33-H2-LB-XX-(*) E5SM-3201-44-H2-LB-XX-(*)	E5SM-3201-22-H2-LA-XX-(*)	E5SM-3301-23-H2-LB-XX-(*) E5SM-3301-33-H2-LB-XX-(*) E5SM-3301-44-H2-LB-XX-(*)	E5SM-3301-22-H2-LA-XX-(*)
	E5SM-3202-22-H2-XX-(*) E5SM-3202-33-H2-XX-(*) E5SM-3202-44-H2-XX-(*) E5SM-3202-64-H2-XX-(*)					
	E5SM-7202-22-H2-XX-(*) E5SM-7202-33-H2-XX-(*) E5SM-7202-44-H2-XX-(*) E5SM-7202-64-H2-XX-(*)					
	E5SM-8202-22-H2-XX-(*) E5SM-8202-33-H2-XX-(*) E5SM-8202-44-H2-XX-(*)					

1/8" Body
1/2" NPT Conduit
Connector
(-XX Type)

1/4" Body
1/2" NPT Conduit
Connector
(-XN Type)

Orifice & Cv Data			
Orifice	Cv	Orifice	Cv
1/32"	0.022	1/8"	0.26
3/64"	0.06	5/32"	0.45
1/16"	0.106	3/16"	0.56
3/32"	0.21	1/4"	0.79



Versa has been supplying the fluid power industry with pneumatic and hydraulic components for over 50 years. We have built a reputation for quality that is unsurpassed in the market for high performance solenoids, pneumatic relays, resets and pilot valves.

WARNINGS REGARDING THE DESIGN APPLICATION, INSTALLATION AND SERVICE OF VERSA PRODUCTS

The warnings below must be read and reviewed before designing a system utilizing, installing, servicing, or removing a Versa product. Improper use, installation or servicing of a Versa product could create a hazard to personnel and property.

DESIGN APPLICATION WARNINGS

Versa products are intended for use where compressed air or industrial hydraulic fluids are present. For use with media other than specified or for non-industrial applications or other applications not within published specifications, consult Versa.

Versa products are not inherently dangerous. They are only a component of a larger system. The system in which a Versa product is used must include adequate safeguards to prevent injury or damage in the event of system or product failure, whether this failure be of switches, regulators, cylinders, valves or any other system component. System designers must provide adequate warnings for each system in which a Versa product is utilized. These warnings, including those set forth herein, should be provided by the designer to those who will come in contact with the system.

Where questions exist regarding the applicability of a Versa product to a given use, inquiries should be addressed directly to the manufacturer. Confirmation should be obtained directly from the manufacturer regarding any questioned application prior to proceeding.

INSTALLATION, OPERATION AND SERVICE WARNINGS

Do not install or service any Versa product on a system or machine without first depressurizing the system and turning off any air, fluid, or electricity to the system or machine. All applicable electrical, mechanical, and safety codes, as well as applicable governmental regulations and laws must be complied with when installing or servicing a Versa product.

Versa products should only be installed or serviced by qualified, knowledgeable personnel who understand how these specific products are to be installed and operated. The individual must be familiar with the particular specifications, including specifications for temperature, pressure, lubrication, environment and filtration for the Versa product which is being installed or serviced. Specifications may be obtained upon request directly from Versa. If damages should occur to a Versa product, do not Operate the system containing the Versa product. Consult Versa for technical information.

LIMITED WARRANTY DISCLAIMER AND LIMITATION OF REMEDIES

Versa's Series products are warranted to be free from defective material and workmanship for a period of ten years from the date of manufacture, provided said products are used in accordance with Versa specifications. Versa's liability pursuant to that warranty is limited to the replacement of the Versa product proved to be defective provided the allegedly defective product is returned to Versa or its authorized distributor. Versa provides no other warranties, expressed or implied, except as stated above. There are no implied warranties of merchantability or fitness for a particular purpose. Versa's liability for breach of warranty as herein stated is the only and exclusive remedy and in no event shall Versa be responsible or liable for incidental or consequential damages.

Versa Products Company Inc.
22 Spring Valley Road
Paramus, New Jersey 07652
USA
Phone: 201-843-2400
Fax: 201-843-2931

Versa BV
Prins Willem Alexanderlaan
1429
7321 GB Apeldoorn
The Netherlands
Phone: 01131-55-368-1900
Fax: 01131-55-368-1909

VERSA® Valves
www.versa-valves.com
email: sales@versa-valves.com