

## V-316 Series

### 1 Inch 3-Way Valves

### Stainless Steel

Bulletin V316-1

Apr 2007

The stainless steel body-ported one inch valve is the newest addition to Versa's V-316 Series. It is a high flow, multipurpose, 3 port, pneumatic pilot or solenoid-pilot valve. The seal design is that of Versa's proven elastomer packed plunger producing long life bubble-tight performance. This seal design also yields the highest flow available in the smallest package.

The V-316 Series utilizes stainless steel bodies, actuating caps and internal parts making this series of valves ideal for use in the most aggressive environments. Seals are FKM (fluorocarbon). Solenoid materials are a function of area classification rating. See options for details.

The V-316 Series is available as a 3 ported valve. As the standard valve is multipurpose, it can be applied as either a 3-way normally closed or opened or a selector or diverter. All solenoid actuators are solenoid in-pilot type, which allows the use of the smallest solenoids available resulting in low power consumption. This design also assures a positive shifting force which makes certain the valve shifts when energized and reduces the chance of coil burnout. A complete selection of electrical connections, power requirements and area classifications, makes Versa's V-316 the valve of choice for demanding applications.



<b>Material * :</b>	Body:	316 Stainless Steel
	Actuators:	316 Stainless Steel
<b>Connections:</b>	Seals:	FKM/FPM (Viton)
	Solenoid:	**
	Coil:	Epoxy molded
	Main body:	1" NPT
	Pilot:	1/4" NPT
	Solenoid vent:	**
	Electrical:	**

\*All pilot valve materials are NACE compliant. Consult factory for solenoid operated valves.  
\*\*As required by solenoid selection

**Media:** Pneumatic, air/gas  
Lubricated or non-Lubricated  
40 micron filter

**Flow Rate:** Cv = 11.1 (Kv = 161.0)

**Function:** Multipurpose 3-Way, 2-position

**Actuation:** Single/double pilot  
Single/double solenoid (in-pilot)

#### Pressure, Pilot Valves

<b>Main body:</b>	0 to 200 psi	(0 to 13.8 bar)
<b>Pilot, single:</b>	50 to 200 psi	(3.5 to 13.8 bar)
<b>Pilot, double:</b>	20 to 200 psi	(1.4 to 13.8 bar)

#### Pressure†, Solenoid Valves

<b>Main body, single solenoid:</b>	50 to 175 psi	(3.5 to 12.0 bar)
<b>Main body, double solenoid:</b>	20 to 175 psi	(3.5 to 12.0 bar)
<b>Temperature:</b>	-5 to 200° F, standard (-20 to 93° C) -55 to 200° F, optional -44 (-48 to 93° C)	

† Maximum pressure maybe reduced depending on solenoid selection.

# V-316 Stainless Steel One Inch Ordering Information

## Basic Valve Number

Actuator/ Function	Pilot		Solenoid	
	Single	Double	Single	Double
3-Way, NC 3/2	VSP-3701-316	VPP-3701-316	VSG-3721-316-+-Voltage	VGG-3721-316-+-Voltage
3-Way, NO 3/2	VPS-3702-316	VPP-3701-316	VGS-3722-316-+-Voltage	VGG-3721-316-+-Voltage

+ Add suffix detail here, if required. See coil code below.

## Dimensions

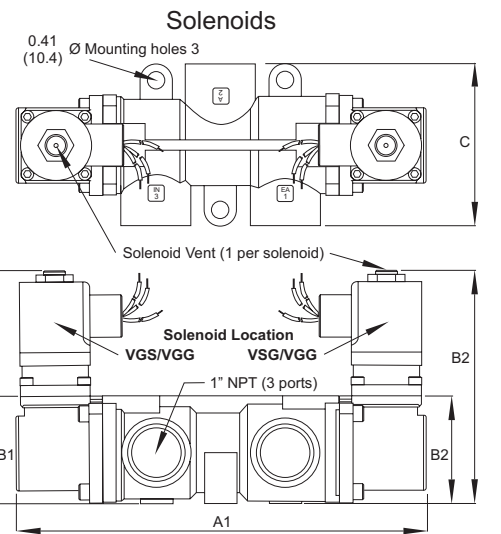
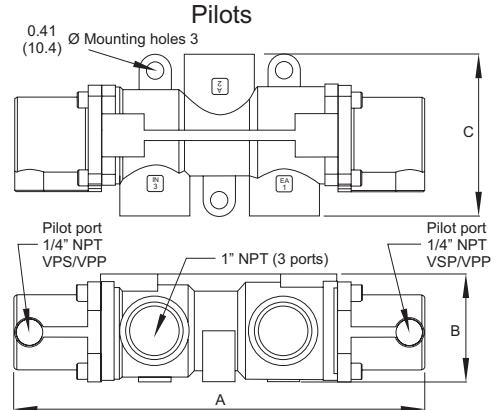
Valve Type		A	A1			B	B1			B2			C
			General Service	Type -XX/-XN	Type -XMA/-XIF		General Service	Type -XX/-XN	Type -XMA/-XIF	General Service	Type -XX/-XN	Type -XMA/-XIF	
All Pilot Valves VSP/VPS/VPP	Inches (mm)	9.52 (241.8)	N/A	N/A	N/A	2.50 (63.5)	N/A	N/A	N/A	N/A	N/A	N/A	3.75 (95.3)
Single Solenoid, NC VSG	Inches (mm)	N/A	9.52 (241.8)	9.52 (241.8)	11.57 (293.9)	N/A	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	5.42 (137.7)	5.17 (131.3)	5.31 (134.9)	3.75 (95.3)
Single Solenoid, NO VGS	Inches (mm)	N/A	9.52 (241.8)	9.52 (241.8)	11.57 (293.9)	N/A	5.42 (137.7)	5.17 (131.3)	5.31 (134.9)	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	3.75 (95.3)
Double Solenoid VGG	Inches (mm)	N/A	9.52 (241.8)	9.52 (241.8)	13.62 (346.0)	N/A	5.42 (137.7)	5.17 (131.3)	5.31 (134.9)	5.42 (137.7)	5.17 (131.3)	5.31 (134.9)	3.75 (95.3)

Consult factory for -XDA dimensions.

## Weights (approximate)

Valve Type		Pilot	Solenoid		
			General Service	Type -XX/-XN	Type -XMA/-XIF
Single Actuator	Lbs (kgs)	7.3 (3.3)	8.0 (3.6)	8.3 (3.8)	8.0 (3.6)
Double Actuator	Lbs (kgs)	7.5 (3.4)	8.8 (4.0)	9.4 (4.3)	10.4 (4.7)

Consult factory for -XDA weights.



## Electrical Options

		Suffix Detail	Solenoid Housing Material	Voltages (Coil Codes) All options available in all voltages, except where noted. Consult factory for other voltages.	Nominal Coil Power AC/DC (watts)
GENERAL PURPOSE	<b>General Purpose</b> 1/2" NPT conduit, NEMA 1, 2, & 3* 1/2" NPT conduit, watertight, NEMA 4 & 4X* Cord grip PG9 mini-DIN type connector, NEMA 4 1/2" NPT conduit, mini-DIN type connector, NEMA 4	None -PC -HC -HCC	Carbon Steel, Painted Carbon Steel, Chromate Coated Engineered polymer Engineered polymer		6.0/7.0 6.0/7.0 6.5/10.5 6.5/10.5
	<b>Explosion Proof</b> 1/2" NPT conduit, NEMA 7 & 9, UL Listed, CSA approved* For Low power, add -LB with -XX (120 psi, 8.3 bar max) For Watertight, add -PC with -XX For Stainless housing, add -ST with -XX <b>Flameproof (d)</b> M20X1.5 Conduit, 1/2" 2 G EEx d IIB + H <sub>2</sub> T6 or T4* For Low power, add -LB with -XN (120 psi, 8.3 bar max) For Watertight, add -PC with -XN For Stainless housing, add -ST with -XN M20X1.5 Conduit, 1/2" 2 G EEx d IIC T4 or T5 or T6* 1/2" NPT conduit, 1/2" 2 G EEx d IIC T4 or T5 or T6* <b>Encapsulated (m), Increased Safety (e)†</b> M20X1.5 Conduit, 1/2" 2 G EEx me II T5...T6 1/2" NPT conduit, 1/2" 2 G EEx me II T5...T6 <b>Intrinsically Safe (ia)**</b> Cord grip PG9, Class I, II & III, Div 1 Group A THRU G, FM/CSA†† Cord grip PG9, 1/2" 2 G EEx ia IIC T6†† M20X1.5 Conduit, 1/2" 2 G EEx ia IIC T4...T6* 1/2" NPT conduit, 1/2" 2 G EEx ia IIC T4...T6	-XX -LB-XX -PC-XX -ST-XX  -XN -LB-XN -PC-XN -ST-XN XDAS XDAT  -XMAA -XMAF  -XISC XISX6 -XIFA† XIFF†	Carbon Steel, Chromate Coated Carbon Steel, Chromate Coated Carbon Steel, Chromate Coated Stainless Steel  Carbon Steel, Chromate Coated Carbon Steel, Chromate Coated Carbon Steel, Chromate Coated Stainless Steel Stainless Steel w/ Junction Box Stainless Steel w/ Junction Box  Engineered polymer Engineered polymer  Engineered polymer Engineered polymer Engineered polymer Engineered polymer	12VDC (D012) 24VDC (D024) 48VDC (D048) 120V60 (A120) 110V50 (E110) 220V50 (E220) 240V60 (A240)	5.6/7.2 1.8/1.8 5.6/7.2 5.6/7.2  5.6/7.2 1.8/1.8 5.6/7.2 5.6/7.2 10.0/4.0 -10.0 10.0/4.0 -10.0  NA/4.0 NA/4.0  NA/1.6 NA/1.6 NA/0.8 NA/0.8
MISC	Solenoid exhaust adapter 1/8" NPT Solenoid exhaust adapter 1/4" NPT	-H2 -H	NA		

### Notes

\* For high temperature coil add, -HT (included in XMA, XIF)

\*\* 24 Volt DC Only

† Contact factory for other options in this series

†† 115 psi, 8.0 bar max

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