



C-316 SERIES Stainless Steel NAMUR Mount Solenoids

Bulletin C316NE b
NAMUR

The Versa C-316 Series stainless steel NAMUR mount actuator control valve is a high flow, bubble-tight, 5-port, solenoid valve. It is designed to mount directly to any NAMUR actuator, thus reducing actuator response time and space. Installed costs are also lower as the need for tubing, fittings, brackets and assembly labor are greatly reduced. All mounting screws and seals are included with valve.

The C-316 Series utilizes stainless steel bodies, actuator caps and internal parts making this series compatible 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 5-port design allows the C-316 NAMUR to be ordered as either a 4-way, for double acting actuators or a 3-way, for spring return actuators. When the 3-way function is utilized, the unused exhaust port becomes an actuator vent where a filter/muffler can be installed to prevent contaminants from entering either the valve or the actuator. The 5-port design allows the user to independently control actuator speed in either the open or close direction. Speed or bleed controls are optional.

Single or double solenoid 2-position models are available. Single solenoid spring return valves are typically applied on “on/off” or “fail-safe” applications. Double solenoid valves may be used in applications where a momentary signal is required or in a “fail in last shifted position” actuator application.

All solenoid actuators are solenoid/pilot type, which allows the use of the smaller solenoids resulting in lower power consumption. This design assures a positive shift when the valve is energized and reduces the chance of coil burnout. Single solenoid spring return models utilize an air assisted spring return feature assuring a positive return. Double solenoid models are equipped with a detent that maintains the valve in the last shifted position, even in high vibration applications. A complete selection of electrical connections, power requirements, area classifications, makes this the valve of choice for demanding



Flow Rate:
Cv = 1.6 (Kv = 23.5)

Port Size:
Inlet and exhaust: 1/4" NPT
Cylinder ports: 'O' ring mount per NAMUR standard

Media: Pneumatic only, Lubricator not required

Pressure:
25 to 150 psi (1.8 to 10.3 bar), Single solenoid, spring return
15 to 150 psi (1.0 to 10.3 bar), Double solenoid, detent
For applications above 125 psi (8.6 bar), exhaust flow controls or mufflers are recommended.

Temperature:
-5 to 200° F (-20 to 93° C), Media and ambient

Materials:

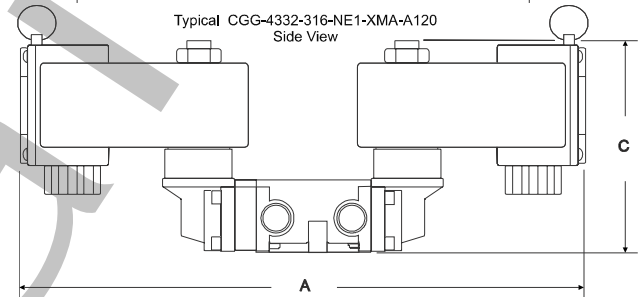
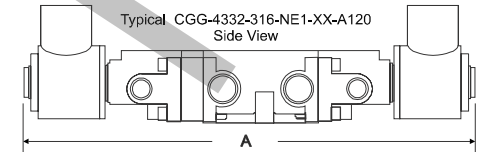
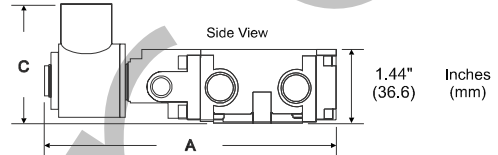
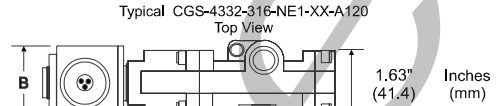
| | |
|--------------------------------|---|
| Valve body and internal parts: | 316L stainless steel |
| Actuator caps: | 316L stainless steel |
| Valve seals: | FKM (fluorocarbon) |
| Screws: | Stainless steel |
| Solenoid internal parts: | 304, 430F and 302 stainless steel |
| Coil/solenoid housing | Per solenoid option selected. See option section. |

C-316 NAMUR Ordering Information

Basic Valve Number*

| FUNCTION | SINGLE SOLENOID/SPRING RETURN, 2 POSITION | DOUBLE SOLENOID/DETENT, 2 POSITION |
|--------------|---|------------------------------------|
| 4-Way 5/2 | CGS-4332-316 NE1-†-(coil code) | CGG-4332-316 NE1-†-(coil code) |
| 3-Way 3/2 | CGS-3331-316 NE1-†-(coil code) | CGG-3331-316-NE1-†-(coil code) |

*All valves include O-ring interface seals and #10-24 mounting screws. For #10-32 screws change NE1 to NE2. For M5 screws change NE1 to NE3. † Add suffix option here, if required. See coil code below.



Dimensions

| VALVE TYPE | | SOLENOID OPTIONS | | | | | | | | |
|---|-------------|------------------|-------------|-------------|------------------------------|-------------|-------------|--------------------------------|-----------|--------------|
| | | GENERAL SERVICE | | | HAZARDOUS SERVICE (-XX, -XN) | | | HAZARDOUS SERVICE (-XMA, -XIF) | | |
| | | A | B | C | A | B | C | A | B | C |
| Single Solenoid, Spring Return, 3-Way or 4-Way* | Inches (mm) | 5.56 (141.3) | 1.04 (26.4) | 2.15 (54.7) | 5.66 (143.9) | 1.44 (36.6) | 2.32 (59.0) | 6.56 (166.6) | 2.56 (65) | 4.15 (104.8) |
| Double Solenoid 3-Way or 4-Way* | Inches (mm) | 8.57 (217.7) | 1.04 (26.4) | 2.15 (54.7) | 8.78 (223.1) | 1.44 (36.6) | 2.33 (59.0) | 10.58 (268.7) | 2.56 (65) | 4.15 (104.8) |

For dimensions -XDA_ consult factory

Weights (approximate)

| VALVE TYPE | GENERAL SERVICE | HAZARDOUS SERVICE (-XX, -XN, -XIS) | HAZARDOUS SERVICE (-XMA, -XIF) |
|--|----------------------|------------------------------------|--------------------------------|
| Single Solenoid/Spring Return (2-position) | 1.30 lbs (590 grams) | 1.6 lbs (725 grams) | 2.5 lbs (1130 grams) |
| Double Solenoid/Detented (2-position) | 1.9 lbs (860 grams) | 2.6 lbs (1180 grams) | 4.3 lbs (1950 grams) |

Electrical Options

| | 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 | General Purpose ½" NPT conduit, NEMA 1, 2 & 3* ½" NPT conduit, watertight, NEMA 4 & 4X* Cord grip PG9 mini-DIN type connector, NEMA 4 ½" 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 |
| | Explosion Proof ½" NPT conduit, NEMA 7 & 9, UL listed, CSA approved* For Low power, add -LB with -XX For Watertight add -PC with -XX For Stainless housing add -ST with -XX Flameproof (d) M20x1.5 conduit, II 2 G EEx d IIB + H ₂ T ₆ or T ₄ * For Low power, add -LB with -XN For Watertight add -PC with -XN For Stainless housing add -ST with -XN M20x1.5 conduit, II 2 G EEx d IIC T ₄ or T ₅ or T ₆ * ½" NPT conduit, II 2 G EEx d IIC T ₄ or T ₅ or T ₆ * Encapsulated (m), Increased Safety (e)† M20x1.5 conduit, II 2 G EEx me II T ₅ ...T ₆ ½" NPT conduit, II 2 G EEx me II T ₅ ...T ₆ Intrinsically safe (ia)** Cord grip PG 9, Class I, II & III, Div 1, Group A thru G, FM/CSA Cord grip PG 9, II 2 G EEx ia IIC T ₆ M20x1.5 conduit, II 2 G EEx ia IIC T ₄ ...T ₆ ½" NPT conduit, II 2 G EEx ia IIC T ₄ ...T ₆ | -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 | 12VDC (D012) 24VDC (D024) 48VDC (D048) 110V50 (E110) 240V60 (A240) 220V50 (E220) | 5.6/7.2 1.8/1.8 5.6/7.2 5.6/7.2 5.6/7.2 5.6/7.2 110V50 (E110) 240V60 (A240) 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 |
| MANUAL | Manual Override, un-guarded push and hold (not available with all Solenoid options) Solenoid exhaust adapter, 1/8 NPT | -ME -H2 | N/A N/A | | |

NOTES
* For high temperature coil add, -HT (included in XMA, XIF)
** 24 Volt DC only
† Contact factory for other options in this series

While due care was exercised in preparing this document, Versa Products Company, Inc. shall not be liable for any inaccuracies or omissions. Specifications Subject to change without notice.

For warranty information and/or any additional information with regards to installation, operation and service warnings, please consult factory.