Pneumatic and Electro-Pneumatic Positioners

Valve Related Controls

V Series

VRC

MADE IN THE USA
Very best components. Count on trouble-free, economical operation from every V Series model.

Very best performance. Truly modular and truly upgradeable in the field, the beauty of the V series is summed up in one word—simplicity!

Very best reliability. Dust tight.
Water tight. Vibration resistant. Corrosion resistant. NEMA-standard composite enclosures. Whatever the application, Model V positioners pass the test with flying colors.

Very best flexibility. The V Series universal mounting adapts to practically every quarter-turn actuator. Very best precision. The V Series affords precise, accurate mechanical calibration with Click-Lock™, a VRC exclusive! The result—accuracy and ease of adjustment.

Very best I/P conversion. The V Series ensures instantaneous automatic compensation for supply pressure, atmospheric pressure and ambient temperature changes...

standard! Very best safety. VRC’s exclusive Model VI incorporates a FM-, CSA- and Cenelec-approved converter that delivers safe, non-incendive service in both hazardous and general-purpose locations.
VRC provides a complete range of models suited to a variety of applications.

The Model V Series is the most versatile line of pneumatic and electro-pneumatic positioners available. From general purpose use to extreme and hazardous locations, count on flawless performance from every model.

**General Purpose**

**Hazardous Locations**

- **MODEL VI** – Hazardous Locations Information
  - I/P Converter Type 22/06-65 (Model VI)
  - Factory Mutual Approved:
    - Intrinsically Safe, Class I, Division I, Groups A,B,C,D
    - Non-Incendive, Class I, Division 2, Groups A,B,C,D
  - CSA Approved:
    - Intrinsically Safe, Class I, Division I and 2, Groups A,B,C,D
  - CENELEC Approved EEx ia IIC T6
  - For Applications in Hazardous Locations Reference Control Documents No. 900842/900843 Available by Contacting VRC.

- **MODEL VX** – Hazardous Locations Information
  Note: For the VX model hazardous ratings apply to the I/P metal (nema 7) housing only, the positioner housing is Nema 4x only:
  - Factory Mutual Approved:
    - Class I & II, Division 1, Groups B,C,D,E,F,G
  - CSA approved:
    - Class I & II, Division 1, Groups B,C,D,E,F,G

- **General Purpose + Hazardous Locations**

**Intrinsically Safe Non-Incendive**

- **Fail-Freeze I/P**

- **Limit Switch/Transmitter Mounting Option**

**VF**

- Fail in Last Position

**VF**

- Fail in Last Position

*Shown with optional cover.*

**Options**

- **POSITION INDICATOR**
  - Flat 90
  - Dome 90
  - Flat 180 (available)

- **CHARACTERIZING CAM**
  - Linear
  - Square Root
  - Square
  - 0-60°
  - Equal Percent
  - Custom
  - Tangent
  - 0-45°
  - 0-35°

- **SPOOL VALVE**
  - Standard Flow
  - Maximum Flow
  - Extreme Service

- **PORT GAUGES**
  - Current: 4-20 MA.
  - Resistive: 1000ohm.
  - Mechanical (S1 Option)
    - (2) SPDT. UL Approved
    - 10A @ 125/250 VAC
    - 0.5A @ 125 VDC
  - Proximity (S2 Option)
    - (2) SPST. UL Approved
    - 1A @ 140 VAC
    - 1A @ 200 VDC
    - 50 Watts Maximum

- **LIMIT SWITCH**
  - Mechanical (S1 Option)
    - (2) SPDT. UL Approved
    - 10A @ 125/250 VAC
    - 0.5A @ 125 VDC
  - Proximity (S2 Option)
    - (2) SPST. UL Approved
    - 1A @ 140 VAC
    - 1A @ 200 VDC
    - 50 Watts Maximum

- **UNIVERSAL MOUNTING KIT**
  - Mounting Kit items include:
    - Bracket
    - Small Coupler
    - Large Coupler
    - Namur Coupler
    - Linear Adaptations
    - Available

  *Note: Any kit item may be purchased separately.*

Valve Related Controls, Inc. | 143 Commerce Blvd., Loveland, OH 45140 • 513-677-8724 • Fax 513-677-8731

vrc-usa.com
Reliability. Economical operation. Trouble-free performance. VRC is the industry leader in field-proven, positioner technology.

Modular.

Modularity is the cornerstone of the entire VRC line. Upgrading or modifying any unit is simple, quick and hassle-free. Switch from pneumatic to electro-pneumatic with ease. Upgrade a positioner in the field with Limit Switches and position Transmitters easily. VRC simplifies upgrades, minimizes inventory and eases servicing like no other line on the market.

Corrosion resistant.

VRC corrosion resistance is unequaled. The I/P Converter and Position Feedback Transmitter are epoxy sealed and the Proximity Switches are hermetically sealed for the ultimate environmental protection. The PPA enclosure and internals exceed NEMA standards and are specifically designed for all routine and most highly corrosive applications. The PPA enclosure is inherently waterproof and carbon graphite filled to satisfy the toughest demands in both indoor and outdoor applications.

Easy to mount.

Adaptability is a key feature of the V Series. Regardless of actuator model or design, the option V Series Universal Mounting Kit allows for customized adaptation to most current industry models, sizes and styles of quarter turn actuators. The low profile design of the V Series Universal Mounting Kit insures high performance adaption to the accessory side of the actuator.
**Specifications**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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<td>Resolution</td>
<td>0.25% Maximum</td>
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<td>0.10% Typical</td>
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<td>Repeatability</td>
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<td>99.90% Typical</td>
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<td>Hysteresis</td>
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<td>Linearity</td>
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<td>Gain @ 80 PSIG</td>
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<td>Air Consumption @ 80 PSIG</td>
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<td>Standard Flow Spool Valve</td>
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<td>Maximum Flow Spool Valve</td>
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<tr>
<td>Temperature Range</td>
<td>-40 to 150°F/-40 to 65°C</td>
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</table>

**VP**

- Pneumatic
- 3-15 PSI

**VE**

- Electro-Pneumatic
- 4-20 MA

**VI**

- Electro-Pneumatic
- General Purpose and Hazardous Locations

**VX**

- External I/P
- Explosion Proof
- Hazardous Locations

**VF**

- Fail-Freeze I/P

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**REQUIRED SELECTIONS**

<table>
<thead>
<tr>
<th>Model Type</th>
<th>Position Indicator</th>
<th>Characterizing Cam</th>
<th>Spool Valve</th>
<th>Port Gauges</th>
<th>Part Gauges</th>
<th>Position Transmitter</th>
<th>Limit Switch</th>
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<tr>
<td>VP</td>
<td>Switch Mount</td>
<td>Linear</td>
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**OPTIONAL SELECTIONS**

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<th>Limit Switch</th>
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**ORDER EXAMPLE**

A MODEL VE900-G-T1-S2 is a: (Model VE) Electro-Pneumatic Positioner with a (9) DOME Position Indicator, 2 quadrant; (0) LINEAR Cam; and (6) STANDARD FLOW SPOOL VALVE. Optional fields specify: (6) BRASS Gauges; (71) 4-20 MA Position Transmitter, and (52) SPST PROXIMITY Limit Switches.

Note: Where limit switches and/or transmitters are required in hazardous locations, the (4) Switch Mount Cover is available for mounting Nema 7-type switch boxes.