The V200 positioner incorporates the flexibility of converting from a pneumatic unit to several versions of an electropneumatic unit, and the ability to add position feedback, in a matter of minutes, all in one compact and rugged housing.

Maximum flexibility and versatility!!

With a rugged Nema 4X, IP 66, die cast aluminum housing, versatile polyester coating, and standard features like external zero and span adjustment, this unit expands the VAC offering to cover this “all in one” market for positioners. Add to this the excellent performance yet simple design, and the combination equals a real value.

A product that offers it “all”….and all in one compact, simple, housing!!
V200 Options/Features:

- Internal 4/20 mA Feedback
- Internal switches - Mechanical or Reed.
- External zero and span adjustment - without removing the positioner cover.
- Flexible mounting for rotary or linear applications.
- Internal Ip with simple loop test points.
- Five Pilot Options.
- Dome Indicator - Black/Yellow, Red/Green.

V200 Benefits:

- Compact Design
- Quality components = rugged and accurate performance
- External zero and span (complete calibration) adjustment without removing cover.
- Easily maintain all key components.
- Clear, visible indicator with arrow indicator standard-beacon optional.
- Field changeable to any available option.
The V200 Positioner

V200 E (electropneumatic) Options

V200E-Standard Nema 4X Unit

V200-EX Explosion Proof Unit

V200-FF Fail Freeze Unit

V200E-GA Gas Approved Unit

V200E-0/10 Volt Unit
V200 Dimensional Drawings

V200P, E, -IS

V200-EX, E-GA

V200-FF

V200E 0-10V

NOTE: Inches appear in parentheses
Technical Specifications:

Positioners:
- Pneumatic
  - V200P
  - V200E & -IS
  - V200-EX
  - V200-FF

Electropneumatic

<table>
<thead>
<tr>
<th>Feature</th>
<th>V200P</th>
<th>V200E &amp; -IS</th>
<th>V200-EX</th>
<th>V200-FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Signal</td>
<td>3-15 PSI</td>
<td>4-20mA</td>
<td>4-20 mA</td>
<td>4-20 mA</td>
</tr>
<tr>
<td>Supply Pressure</td>
<td>145 PSI</td>
<td>145 PSI</td>
<td>100 PSI</td>
<td>145 PSI</td>
</tr>
<tr>
<td>Linearity error</td>
<td>&lt;0.7% f.s.</td>
<td>&lt;1.0% f.s.</td>
<td>&lt;0.8% f.s.</td>
<td>&lt;1.2% f.s.</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>&lt;0.4% f.s.</td>
<td>&lt;0.6% f.s.</td>
<td>&lt;0.5% f.s.</td>
<td>&lt;0.9% f.s.</td>
</tr>
<tr>
<td>Repeatability</td>
<td>&lt;0.3% f.s.</td>
<td>&lt;0.5% f.s.</td>
<td>&lt;0.4% f.s.</td>
<td>&lt;0.8% f.s.</td>
</tr>
<tr>
<td>Weight</td>
<td>P-3.2 lbs.</td>
<td>E-3.8 lbs.</td>
<td>EX-5.3 lbs.</td>
<td>FF-5.4 lbs.</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-40 to 185 F</td>
<td>-40 to 185 F</td>
<td>-40 to 185 F</td>
<td>-20 to 158 F</td>
</tr>
<tr>
<td>Extra High Temp (EHT)</td>
<td>-40 to 325 F</td>
<td>-40 to 85 C</td>
<td>-40 to 85 C</td>
<td>-20 to 70 C</td>
</tr>
</tbody>
</table>

Air Delivery
- Low Bleed
  - @87 PSI (600 kPa): 28 scfm
  - @87 PSI (600 kPa): .2 scfm
  - Air connections: 1/4” NPT
- Standard
  - Pressure Gain: 240:1
  - @87 PSI (600 kPa): 300:1
  - Gauges: 1/8” NPT
- High Gain
  - @87 PSI (600 kPa): .53 scfm
  - Pressure Gain: 800:1
  - Cable Entry: 1/2” NPT
- Super High Gain
  - Pressure Gain: 1100:1
  - Bleed Rate: .2 scfm
  - @87 PSI (600 kPa): .35 scfm
  - @87 PSI (600 kPa): .53 scfm
  - Suppl  Pressure: 145 PSI
- Super High Gain/Flow
  - Pressure Gain: 1100:1
  - Bleed Rate: .2 scfm
  - @87 PSI (600 kPa): .35 scfm

Ingress & corrosion protection: NEMA 4X and IP66

Standard coating: Polyester

Feedback
- NEMA 4 Rated

General:
- Plug-in components directly into V200 series positioner housing
- Can combine switches and 4/20 feedback
- Conduit connections 1/2” NPT
- Enclosure Nema 4X/IP 66
- Operating temp: -40 to +185° F (-40 to +85° C)

Mechanical Switches:
- 2-Type: SPDT, V3
- Max Load:
  - Resistive (Inductive) Voltage
  - 15 A (3) A 125/250 VAC
  - 0.25 A (0.1) A 220 VDC
  - 0.5 A (0.2) A 110 VDC
  - 8 A (7) A 24 VDC

Reed Switches:
- 2-Type: SPDT-CO, Form C
- Contact rating: max 3W
- Voltage:
  - Switching: max 100 VDC
  - Breakdown: min 200 VDC
- Current:
  - Switching: max 0.20 A
  - Carry: max 1.3 A
- Contact resistance: 0.2 ohms
- Contact capacitance: 0.3 pF

4/20 mA Position Feedback:
- Voltage supply: 7-30 VDC
- Output: 4-20 mA, 2 wire
- Loop Impedance: max 850 ohms @ 24 VDC
- Linearity error: <1.2%
- Hysteresis: <0.2%
- Temp. Sensitivity: < 0.1%/10°F (5.5°C)

Approvals
Ratings for hazardous locations:

V200-EX
- Positioner enclosure is Nema 4X (IP 65)
- ATEX-explosion protection
  - 1487X, intrinsically safe EEx ia IIC T4/T5/T6
  - E121X, flameproof EEx d IIC T4/T5/T6
- FM and CSA
  - Explosion Proof CL I, II Div 1 Grp B-G

Intrinsically Safe
- FM
  - CL I-II-III Div 1 Grp A B C D
  - CL 1 Div2 Grp A-C
  - Temperature Class Short circuit Current-max Ambient Temp max
  - T6 50 mA 140F (60C)
  - T5 60 mA 158F (70C)
  - T4 60 mA 185F (85C)
- CSA
  - EX ia CL1 Grp A B C D
  - EX ia CL 1 Div2 Grp A B C D

Others Options:
- Potentiometer-Namur Sensors - Third party EX mounting
Marketed by VAC (Valve Accessories & Controls), the V200 positioner line is supported by a knowledgeable and professional staff. Customer service is a key component to the VAC package. Local inventories and technical assistance are just a phone call away.

The V200 package includes a diverse mix of positioners and feedback options for mounting to various actuator applications, all in one compact Nema 4X housing. Quality design, manufacturing, and product performance are coupled with competitive pricing and excellent service, providing all process industries a cost effective alternative to accurate positioner control and position feedback.

### Ordering Codes:

- **Pneumatic**
- **Electro-pneumatic**
- **Explosion Proof**
- **Intrinsically Safe**
- **Fail Freeze**

<table>
<thead>
<tr>
<th>Spindle</th>
<th>Front Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 degree rotation</td>
<td>90</td>
</tr>
<tr>
<td>60 degree rotation</td>
<td>60</td>
</tr>
<tr>
<td>45 degree rotation</td>
<td>45</td>
</tr>
<tr>
<td>30 degree rotation</td>
<td>30</td>
</tr>
<tr>
<td>Blank scale</td>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Arrow</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beacon (standard) 90°</td>
<td></td>
<td>B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cam</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>45/90°</td>
<td>C1</td>
</tr>
<tr>
<td>30/60°</td>
<td>C2</td>
</tr>
<tr>
<td>60/120°</td>
<td>C3</td>
</tr>
<tr>
<td>(others available)</td>
<td>C4</td>
</tr>
</tbody>
</table>

**Spool Valve Options** (shipped with standard spool)

- Low Bleed
- High Gain
- Super High Gain
- Super High Gain/Flow

**Feedback Options**

- 2 SPDT Mechanical Switches
- 2 SPDT Reed Switches
- 4-20 mA Transmitter
- Mech Switches w/transmitter
- Reed Switches w/transmitter
- 1 K potentiometer
- 10 K potentiometer
- Extra High Temp (Pneumatic only)
- 0/10 Volt I/P (V200E only)
- Gas Approved

**Option**

- FB
- M
- R
- mA
- MmA
- RmA
- 1K
- 10K
- EHT
- 0/10V
- GA

**Example:**

V200E-D1-90-B-C1-FB-MmA

Electropneumatic with namur spindle, 90 degree cover, raised indicator, 90 degree cam, feedback with mechanical switches and 4/20 mA transmitter.

3M 10/10