**Series 5200 Diaphragm Actuated**

- Precise, responsive control
- Sleeve is the only component in contact with the media, eliminating the need for expensive bodies
- Versatile choice of sleeve trim to meet exact flow requirements
- External stroke adjustment

Red Valve’s Series 5200 Diaphragm-Actuated Control Pinch Valve is available for customers who prefer diaphragm actuators. Most significant is the valve’s ability to control in small-diameter applications. A diaphragm actuator offers a more responsive relationship between travel and air pressure since there is less friction and hysteresis than with piston actuators. This results in a more accurate response to the instrument signal and tighter control of the process fluid.

The Series 5200 Diaphragm-Actuated Control Pinch Valve is designed with a heavy-duty, one-piece yoke. This permits a wide array of accessories to be mounted directly and easily to the top works. The Series 5200 Diaphragm-Actuated Control Valve is available in stroke sizes up to 3". For example, a 6" Control Valve with a 6" x 3" Cone Sleeve trim has 3" of stroke. A direct mount or short yoke design is available to reduce overall valve height. The simple construction of the diaphragm actuator makes it a highly cost-effective control valve.

**Available Options:**
- 4–20 mA 3–15 psi, 6–30 psi, 9–45 psi instrument signal to the positioner to control plant air
- Double-acting or spring return
- Fail position field reversible on spring-return actuators

**Materials of Construction**

- Ductile iron body
- Sleeves available in Pure Gum Rubber, Neoprene, Hypalon®, Chlorobutyl, Buna-N, EPDM and Viton®
- Drilled and tapped to mate with ANSI B16.5 Class 150 flanges

**Control Valve Sizing**

The illustration below is the mathematical calculation used in correctly sizing a Control Valve. All of the information necessary to calculate valve size is listed on the following pages. Designers can also submit a sizing request using the Control Valve Order Entry data sheet form on page 27 or online at www.redvalve.com. Sizing of Control Pinch Valves is now made easier by using Red Valve Company’s Kwiksize Control Valve Sizing Software. Designers may also request a copy of this software from Red Valve using the attached response card.

**Example:**

- **Line Size:** 3" diameter 125# ANSI flanged
- **Flow:** 137 gallons per minute GPM max
- **Process media is lime slurry, throttling service.**

**Dimensions Series 5200 Diaphragm-Actuated Control Valve**

<table>
<thead>
<tr>
<th>VALVE SIZE</th>
<th>LENGTH</th>
<th>HEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>7-1/4&quot;</td>
<td>2-7/16&quot;</td>
<td>23-1/2&quot;</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>8-3/4&quot;</td>
<td>2-3/4&quot;</td>
<td>28-1/4&quot;</td>
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<td>2&quot;</td>
<td>10&quot;</td>
<td>3-1/2&quot;</td>
<td>28-3/4&quot;</td>
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<tr>
<td>2-1/2&quot;</td>
<td>10-7/8&quot;</td>
<td>4&quot;</td>
<td>38-3/8&quot;</td>
</tr>
<tr>
<td>3&quot;</td>
<td>11-3/4&quot;</td>
<td>4-1/4&quot;</td>
<td>38-5/8&quot;</td>
</tr>
</tbody>
</table>

**Select the Control Pinch Valve size.**

If there is a 3" line and a 54.8 CVMAX and a 39.5 CVMIN is required for this application, review the CV Charts to determine the appropriate sleeve trim selection. This selection dictates the valve size.

**Note:** A 3" x 1-1/2" Cone Sleeve has a maximum CV of 58. This would be the best selection, as maximum valve CV equals 58. Control would be between 56% open and 80% open.

**Choose appropriate accessories, ie: limit switches, positioners, solenoids, etc.**