The Red Valve Series 5800 Electrically Actuated Control Pinch Valve is a bi-directional valve designed for tough slurry applications. The elastomer sleeve closes on entrapped solids in the line. The flexing action of the sleeve breaks up any sediment or build-up in the valve, which makes the Series 5800 a reliable, low maintenance valve.

A variety of elastomers are available to suit your specific needs. Along with the standard Red Valve sleeve, we offer Cone, Variable Orifice, Reduced Port, and Double Wall sleeves for special applications.

- Simple design
- No Packing to maintain, ever
- Cost effective
- No cavities or dead spots to bind valve operation
- Low maintenance

**RED VALVE WARRANTY**

WARRANTIES - REMEDIES - DISCLAIMERS - LIMITATION OF LIABILITY

Unless otherwise agreed to in writing signed by Red Valve, all Products supplied by Red Valve will be described in the specifications set forth on the face hereof.

The Warranties Set Forth in this Provision are Exclusive and in Lieu of All Other Warranties Whether Statutory, Express or Implied (Including All WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE).

Red Valve Products are guaranteed for a period of one year from date of shipment, against defective workmanship and material only, when properly installed, operated and serviced in accordance with Red Valve’s recommendations. Replacement for terms of Red Valve’s manufacture will be made free of charge if proved to be defective within such year, but not for transportation, labor or consequential damages shall be allowed. We shall have the option of requiring the return of the defective product to our factory, with transportation charges prepaid. To establish the claim and our liability shall be limited to the repair or replacement of the defective product. F.O.B. our factory. Red Valve will not assume costs incurred to remove or install defective products nor shall we incur backcharges or liquidated damages as a result of warranty work. Red Valve does not guarantee resistance to corrosion erosion, abrasion or other sources of failure, nor does Red Valve guarantee a minimum length of service, or that the product shall be fit for any particular service. Failure of purchaser to give prompt written notice of any alleged defect under this guarantee forthwith upon its discovery, or use, and possession thereof after an attempt has been made and completed to remedy defects therein, or failure to return product or part for replacement as herein provided, or failure to install and operate said products and parts according to instructions furnished by Red Valve, or failure to pay entire contract price when due, shall be a waiver by purchaser of all rights under these representations. All orders accepted shall be deemed accepted subject to this warranty which shall be exclusive of any other or previous warranty, and shall be the only effective warranty or warranty binding on Red Valve, anything on the contrary contained in purchaser’s order, or represented by any agent or employee of Red Valve in writing or otherwise, notwithstanding implied warranties. RED VALVE MAKES NO WARRANTY THAT THE PRODUCTS, AUXILIARIES AND PARTS ARE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. RED VALVE WARRANTY A.

600 N. Bell Avenue
Carnegie, PA 15106
(412) 279-0044
FAX (412) 279-7878
GENERAL DESCRIPTION
The Red Valve Series 5800 Electrically Operated Control Pinch Valve consists of four major components:

1. **Body**
The body acts as a housing and support for the other valve components. It is not the primary pressure containing component.

2. **Sleeve**
The sleeve is the primary pressure containing component and is the only component in contact with the process fluid.

3. **Mechanism**
Two mechanical pinch bars open and close the sleeve. The mechanism consists of a direct acting and (inner) reverse acting thread which, when rotated by the AUMA Actuator, opens and closes the sleeve on centerline.

4. **Electric Actuator**
The electric actuator rotates a direct hex nut coupling (machined to match the mechanism stem) with an electric motor via reduction gears. It also has a de-clutchable handwheel override. The actuator is equipped with torque and limit switches to prevent damage by shutting off the actuator if torque or stroke limits are exceeded. For modulating applications, the actuator accepts the standard ISA 4-20 mA input signal.

OPERATION AND ADJUSTMENT
1. **Operation**
Operate the handwheel override to close the valve approximately halfway. Energize the actuator to open the valve and observe if the valve opens or closes. If the valve is going in the wrong direction, the wiring from the power source is not connected properly. **STOP IMMEDIATELY!** See the electric actuation manual for details of corrective action.

If the direction of operation is correct, cycle the valve—completely closed and completely open to verify smooth operation and complete stroking. The torque and limit switches and position indicator have been factory preset and normally do not need to be adjusted. If readjustment becomes necessary, follow the instructions in the electric actuator manual.

2. **Mounting**
For both on-off and modulating valves, be certain the valve is closed completely and not cracked open in the closed position. Operating the valve in a cracked open position can shorten sleeve life, since flow velocities are very high under these conditions. For valves 4” through 24”, if the valve cannot be closed completely, the lower pinch bar can be raised by turning the adjusting nuts on the top of the guide rails clockwise. First, loosen the jam nuts, then turn the lower adjusting nut on each side rail one to two turns in the clockwise (tightening) direction. Be sure to turn each nut an equal amount. Check for complete closure of the valve. If necessary, repeat these steps until the valve seals completely. Finally, tighten the jam nuts, being careful not to disturb the setting of the adjusting nuts.

3. **Parts Replacement**
A spare sleeve should be placed on order when this valve is placed in service.

MAINTENANCE
1. **Lubrication**
The valve mechanism and actuator were completely lubricated during final assembly and testing at the factory, and do not need to be lubricated at start up. The valve should be lubricated every thirty days thereafter using a high quality lithium grease. Grease fittings are located as follows:
   - a. On the Electric Actuator (see Electric Actuator Manual)
   - b. In sizes up to 24”, inside the top mounting bracket on the stem protector

In addition, the stem protector on top of the actuator should be removed and the grease in the lower cavity around the stem should be replenished as needed.

2. **Sleeve Replacement**
**WARNING:** Be sure to flush all hazardous material and bleed all pressure from the pipeline before proceeding.
   - a. Open the valve completely.
   - b. Remove the valve from the pipeline.
   - c. Disassemble the body by removing the body bolts and remove the lower half of the body.
   - d. Remove the old sleeve by unfastening the pinch bars, on the rubber during installation. This can cut and crack the body. Stud bolts are recommended.
   - e. Slide the new sleeve through the mechanism and repeat the above steps in reverse order. Be sure the flange bolt holes in the sleeve line up with the bolt holes in the body flange before bolting the two halves together. **Note:** For Cone and Variable Orifice Sleeves, be sure that the sleeve is seated correctly with the flange marked “Inlet” on the upstream side of the valve, to insure proper operation of the valve.

MISCELLANEOUS
**Reduced Port**
When replacing a Reduced Port sleeve in Series 5800 Valves, the pinching bars must be spaced at the original setting (Consult factory for details if this is not clear).

**Returns**
All returns must have standard Red Valve Company return goods tags. Sleeves to be inspected by Red Valve Company must have the tag firmly attached to the sleeve via the bolt holes, and must list the company, order number, address, valve serial number, your telephone number, operating temperature, pressure, closing frequency, fluid media, and total days in service.

**Important:** If the product being returned has been in contact with a hazardous chemical or material, an MSDS (Material Safety Data Sheet) must be provided with the return paperwork; otherwise, the return will not be processed.

STORAGE
If your Series 5800 Control Pinch Valve is to be stored for a period of time prior to installation, the following guidelines will help preserve the valve and assure trouble-free installation.

1. **Valve Storage**
   - a. Store valve and spare sleeves in a cool, clean, dry location.
   - b. Avoid exposure to light, electric motors, dirt, or chemicals. Resilient sleeves are subject to rapid deterioration when exposed to ozone and certain chemicals.
   - c. Grease stem liberally and store valve in the full open-position. Do not stack other items on top of the valve.
   - d. Store System Operation and Maintenance Manual with the valve so it will be readily available for installation.

**Double Wall Sleeves**
Have triple life expectancy on severe abrasion. The extra thickness requires the next larger flange size on the valve body. It is recommended that the sleeve I.D. be the same as the pipe I.D. (Fig. 1) This will require that a reducing flange be purchased, or an oversize mating flange be installed on the pipe. This is easily done by using blind flanges and boring the I.D. to suit the existing pipe. For example, on a 6” flange, 4” bore Double Wall valve, the mating flange would be a 6” blind flange bored out to slip over the 4” pipe (approximately 4 1/2” dia.). If it is not possible to match the pipe and sleeve I.D. as described above, the flanges will mate and the sleeve I.D. will protrude into the pipeline (Fig. 2). To prevent bulging and premature breaking of the sleeve I.D. on the sleeve, a steel washer must be installed as shown (Fig. 3). The steel washer should be 1 1/8” thick and be serrated on the side facing the sleeve. The washer O.D. can be just short of the bolt holes, or it can equal the flange O.D. and bolt holes can be drilled through the washer.

See the electric actuation manual for details of corrective action.
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   - Two mechanical pinch bars open and close the sleeve. The mechanism consists of a direct acting (and (inner) reverse acting thread which, when rotated by the AUMA Actuator, opens and closes the sleeve on centerline.

4. **Electric Actuator**
   - The electric actuator rotates a direct hex nut coupling (machined to match the mechanism stem) with an electric motor vua reduction gears. It also has a de-clutchable handwheel override. The actuator is equipped with torque and limit switches to prevent damage by shutting off the actuator if torque or stroke limits are exceeded. For modulating applications, the actuator accepts the standard ISA 4-20 mA input signal.

OPERATION AND ADJUSTMENT

1. **Operation**
   - Connect all electrical wiring as shown in the electric actuator manual included with these instructions.

2. **Connect and repeat the above steps in reverse order. Be sure the flange bolt holes in the sleeve line up with the bolt holes in the body flange before bolting the two halves together.**

   **Note:** For Cone and Variable Orifice Sleeves, be sure that the sleeve is seated correctly with the flange marked “Inlet” on the upstream side of the valve, to insure proper operation of the valve.

MISCELLANEOUS

**Reduced Port**

When replacing a Reduced Port sleeve in Series 5800 Valves, the pinching backs must be spaced at their original setting (Consult factory for details if this is not clear).

Returns

All returns must have standard Red Valve Company return goods tags. Sleeves to be inspected by Red Valve Company must have the tag firmly attached to the sleeve via the bolt holes, and must list the company, order number, address, valve serial number, your telephone number, operating temperature, pressure, closing frequency, fluid media, and total days in service.

Important:

If the product being returned has been in contact with a hazardous chemical or material, an MSDS (Material Safety Data Sheet) must be provided with the return paperwork; otherwise, the return will not be processed.

DOUBLE WALL SLEEVES

Have triple life expectancy on severe abrasion. The extra thickness requires the next larger flange size on the valve body. It is recommended that the sleeve I.D. be the same as the pipe I.D. (Fig. 1.) This will require that a reducing flange be purchased, or an oversize mating flange be installed on the pipe. This is easily done by using blind flanges and boring the I.D. to suit the existing pipe. For example, on a 6” flange, 4” bore Double Wall valve, the mating flange would be a 6” blind flange bored out to slip over the 4” pipe (approximately 4 1/2” dia.). If it is not possible to match the pipe and sleeve I.D. as described above, the flanges will mate and the sleeve I.D. will protrude into the pipeline (Fig. 2). To prevent bulging and premature breaking of the sleeve, the sleeve will not be field adjustable.

STORAGE

If your Series 5800 Control Pinch Valve is to be stored for a period of time prior to installation, the following guidelines will help preserve the valve and assure trouble-free installation.

1. Store valve and spare sleeves in a cool, clean, dry location.
2. Avoid exposure to light, electric motors, dirt, or chemicals. Resilient sleeves are subject to rapid deterioration when exposed to ozone and certain chemicals.
3. Grease stem liberally and store valve in the full-open position. Do not stack other items on top of the valve.
4. Store Installation Operation and Maintenance Manual with the valve so it will be readily available for installation.
The Red Valve Series 5800 Electrically Actuated Control Pinch Valve is a bi-directional valve designed for tough slurry applications. The elastomer sleeve closes on entrapped solids in the line. The flexing action of the sleeve breaks up any sediment or buildup in the valve, which makes the Series 5800 a reliable, low maintenance valve.

A variety of elastomers are available to suit your specific needs. Along with the standard Red Valve sleeve, we offer Cone, Variable Orifice, Reduced Port, and Double Wall sleeves for special applications.

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**Pipeline Flange**

Weldneck is preferred so that I.D. of the flange matches that of rubber sleeve.