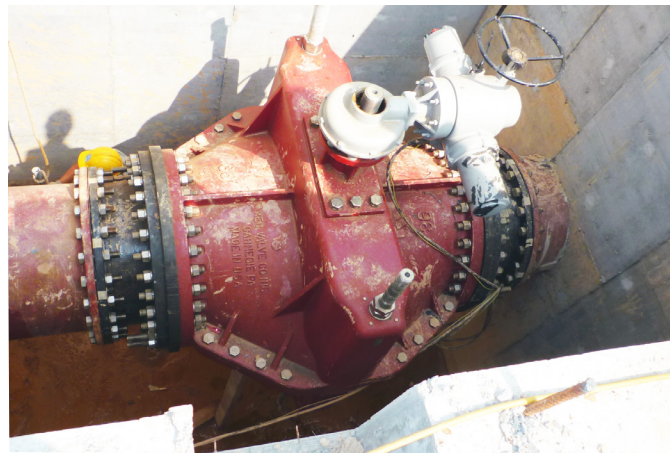




# Red Valve

## Control Pinch Valves





# Red Valve - The Best Choice for the Toughest Applications

## Meeting the Demands of the Industry

Solving demanding flow control applications has been the single, driving force behind Red Valve since the company was founded in 1953. Today we remain dedicated to responding to your needs with valve products and engineering services that set the standard for the world's toughest applications.

Our initial order was for the world's first coal slurry pipeline, where we created the only valve capable of reliable slurry control. Today, Red Valve is the world's largest manufacturer and supplier of control pinch valves and has become the preferred supplier for municipalities and industrial plants worldwide.

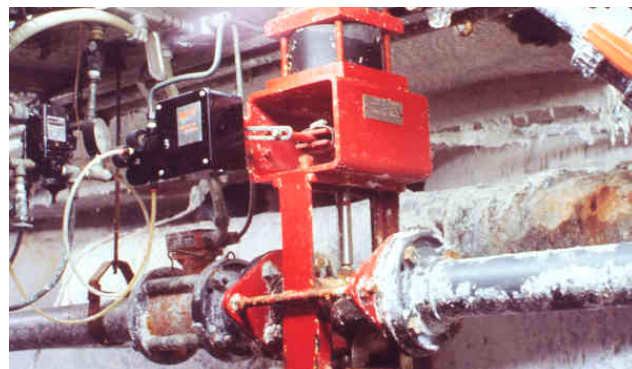
Even the toughest flow control problems can be solved with Red Valve's wide range of control valves. Our patented Cone Sleeve handles lime, ash, chemicals, mining slurry and sludge with precise, repeatable control. Wherever slurry or corrosive chemicals are present, Red Valve Control Valves eliminate downtime and maintenance due to packing leakage, seats plugging, scaling or bridging. The self-cleaning elastomer sleeve offers a 20:1 turndown ratio and a 0.89 pressure recovery factor, preventing cavitation, scaling and bridging of slurries.



## Pulp and Paper Mills

Pulp stock, coating and recycled paper lines are some of the more difficult valve applications found in pulp and paper mills. The flexible elastomer sleeves of Red Valve Control Valves are custom fabricated to withstand these abrasive services:

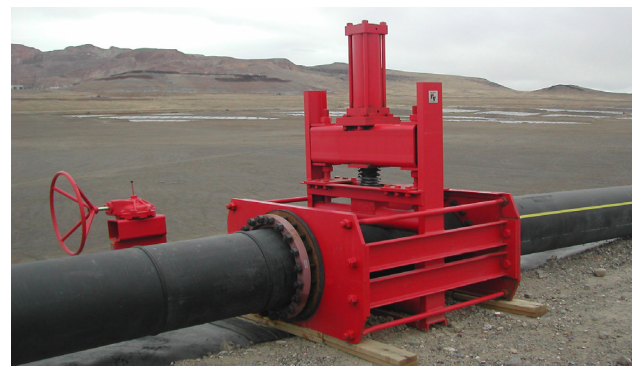
- Cyclone Discharge
- Recycled Paper
- Pulp Stock
- Coatings
- Washwater
- pH Addition
- Lime Mud
- De-inking



## Mining Industry

The rugged construction of Red Valve Control Valves has made them the valves of choice on tough, abrasive mining slurries. The simple, maintenance-free design and field accessible stroke adjustment allows the valve to operate reliably in harsh conditions:

- Tailings
- Flotation Column Cells
- Centrifuge Control
- Lime Feed Systems
- Coal Washing
- Solids Separation





## Wastewater Treatment Plants

Accurate, repeatable linear flow control and drop-tight, bi-directional shutoff make Red Valve Control Valves ideal for these demanding wastewater treatment applications:

- Sludge Control
- Raw Sewage Control
- Flow Equalization
- Lime Control
- Polymer Feed Systems
- Grit Systems
- Influent Control



## Chemical Industry

Red Valve Control Valves have no packing to maintain and no cavities, seats or cam action to bind valve operation. Chemical plants use Red Valve Control Valves for many corrosive chemical applications:

- Slurry/Chemicals
- Titanium Dioxide
- Catalyst Feed Systems
- Industrial Treatment
- Emulsive Chemicals
- Powders



## Power Industry

Lime and ash handling are two tough services in a power plant, and the abrasion-resistant and self-cleaning flexible elastomer sleeves of Red Valve Control Valves won't scale, bridge, plug or freeze on slurries:

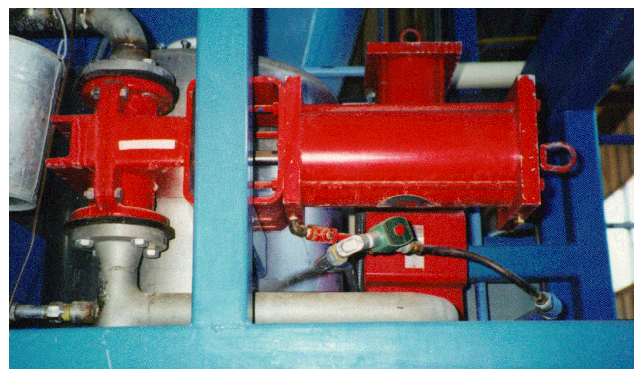
- Thickener Underflow
- Wet Lime Scrubbers
- FGD Systems
- Ash Handling
- Coal Handling
- Bottom Ash



## General Industry

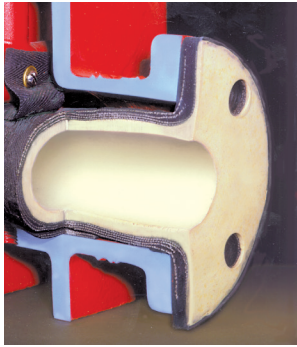
Control valves are frequently specified as original equipment by manufacturers of industrial process systems:

- Pneumatic Conveying
- Refineries
- Dye Plants
- Food / Beverage Plants
- Cement, Sand, Silica
- Scrubbing



# Pinch Valve Sleeves: Engineered to Last

## Sleeve Trim Design

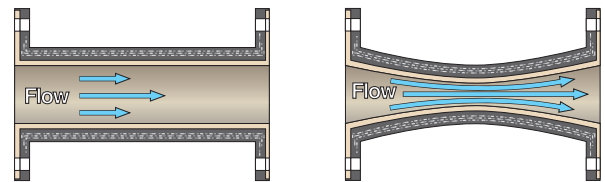


Red Valve Pinch Valve Sleeves are ply-reinforced, similar to a heavy-duty truck tire, with nylon, polyester or other fabrics as the engineered support of the sleeve. The elastomer wear surface of the pinch valve sleeve is chosen on the basis of chemical compatibility

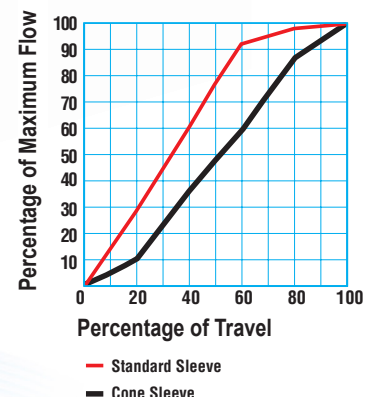
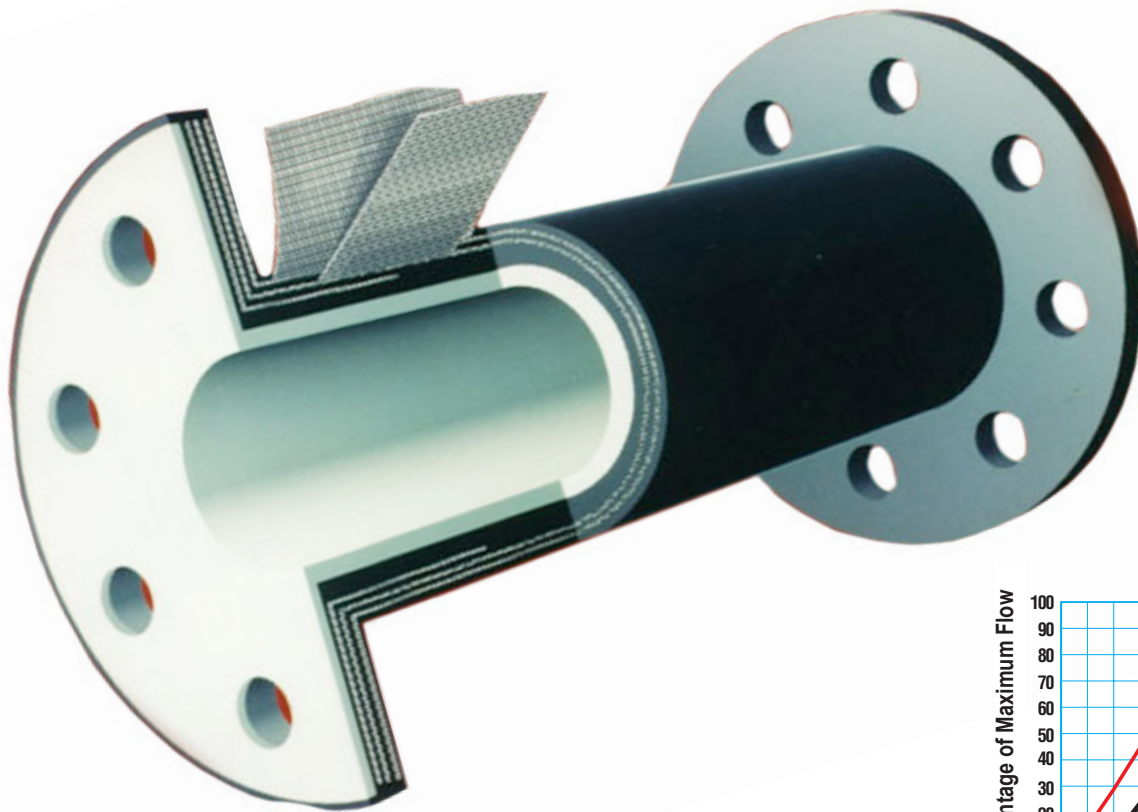
with the application. All Red Valve Sleeves feature full-face integral flanges that extend through the entire valve length and into the face of the mating flange.

In the open position, there is virtually no wear or turbulence on the Red Valve Sleeve. Unlike the flow pattern of conventional valves, which create a deflection that causes wear, the flow pattern of a Red Valve Pinch Valve is streamlined, even when throttled.

Typically, Red Valve Control Pinch Valves are furnished with Cone Sleeves for throttling applications. Cone Sleeves are designed to have inherent linear flow characteristics. These linear characteristics result in flow rates that are directly proportional to the amount of sleeve travel throughout the stroke of the valve while under constant pressure and pressure-drop conditions. Red Valve Control Valves are often specified for liquid-level control and for flow control applications requiring constant gain.



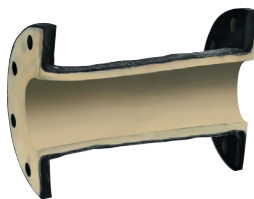
*Only a Red Valve Pinch Valve offers a laminar, non-turbulent flow pattern, due to the internal configuration of the sleeve. The flow pattern is streamlined, even when throttled.*



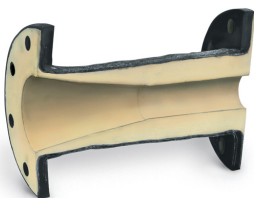


## Sleeve Trim Selection

Standard Sleeves are highly specialized components. Great care is taken to match the specific elastomer, pressure rating and temperature limits for each application, ensuring longest possible maintenance-free service life. The Standard Sleeve's Full Port provides uninterrupted flow like another piece of pipe and flow remains streamlined when throttled.



**Standard Sleeve**



**Patented Cone Sleeve**

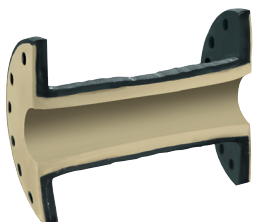
Cone Sleeves, patented by Red Valve, are designed for control applications. Extra elastomer thickness on the downstream side of the cone increases service life.

Double Wall Sleeves are designed for extremely abrasive slurries. The Double Wall Sleeve has triple the thickness of elastomer than Standard Sleeves. The next larger valve size is specified with Double Wall Sleeves to maintain full port due to additional sleeve thickness.



**Double Wall Sleeve**

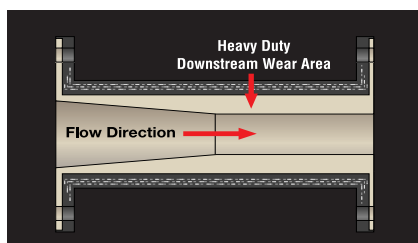
High-Pressure Sleeves are designed for high-pressure ANSI 300 applications up to 720 psi. The High-Pressure Sleeve features stronger fabric reinforcement and thicker construction than Standard Sleeves. Full-face flanges are equipped with integrated o-ring seals to ensure a tight seal under high-pressure applications.



**High-Pressure Sleeve**

## Cone Sleeve Advantages

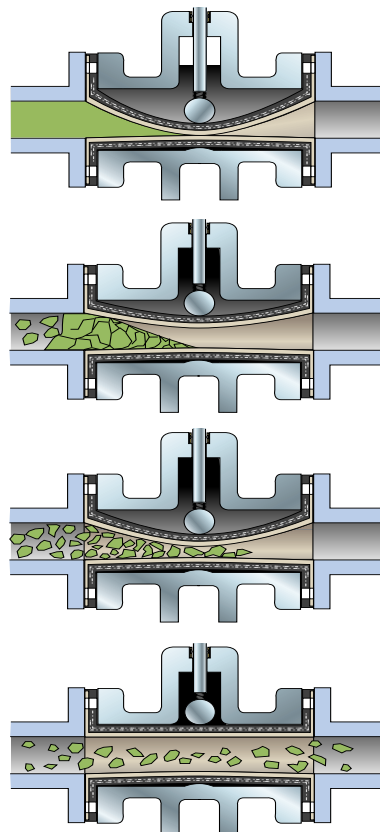
Cone Sleeves have tighter control with 20:1 turndown ratio and 0.89 recovery factor. Pressure recovery occurs downstream of sleeve, so cone sleeves handle a higher pressure drop than other sleeve designs.



Pinch Valve Comparison	3" Full Port Sleeve	3"x2" Cone Sleeve
100% $C_v$	565	152
Minimum Controllable $C_v$	74	8
$F_L$ at Minimum $C_v$	.41	.86
Rangeability	8:1	19:1

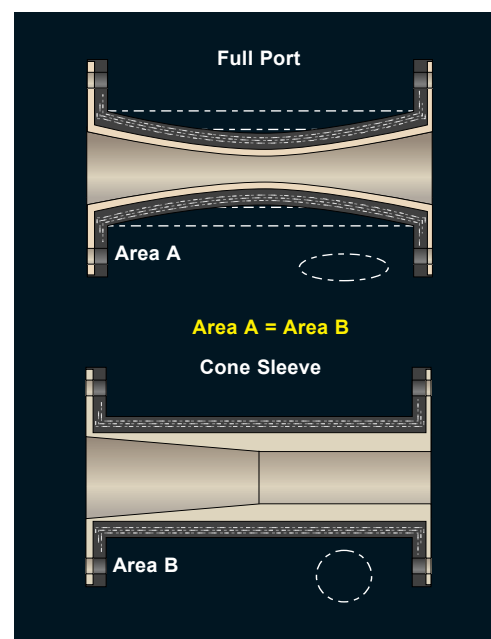
## Self Cleaning

The pinch valve sleeve's flexing action breaks away any solid or dewatered slurry buildup. The full round port sleeve has no pockets for slurry to plug or erode. The self-cleaning design even breaks up dewatered lime.



## Solids Handling

For the same open area, the configuration of the cone sleeve allows larger solids to pass.





*Red Valve offers a worldwide, world-class custom service network. With corporate offices in Pittsburgh, PA, manufacturing facilities in Gastonia, NC, and a network of sales representatives around the globe, Red Valve has the sales engineering team to help you select the best choice of valves and related products for your applications.*



**Red Valve®**  
The World Leader in Pinch and Check Valve Technology™

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