



Red Valve Company, Inc.®

TYPE R All Rubber Pinch Valve

Installation, Operation, and Maintenance Manual



The Red Valve Type R Air Actuated Pinch Valve is 100% full ported bidirectional valve designed for tough slurry applications. The elastomer sleeve closes on entrapped solids in the line. The flexing action of the sleeve breaks any sediment or build-up in the valve, which makes the Type R reliable low maintenance value.

The elastomer body is reinforced with high strength fabric. A variety of elastomers and reinforcing fabrics are available to suit your specific needs.

Type R valves are constructed with slip-on ends for ease of installation.

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

IMPORTANT

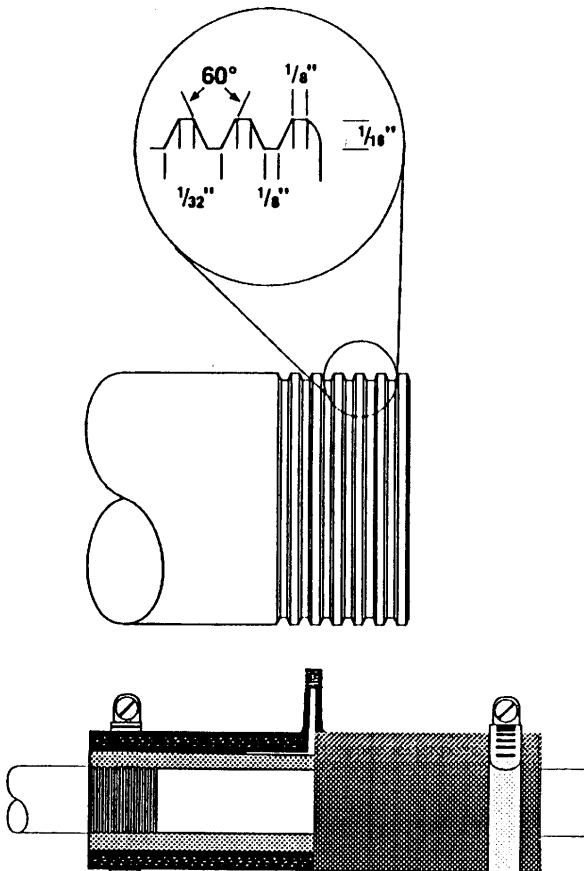
Please take a moment to **review this manual**. **Before performing any maintenance on the valve be sure that the pipeline has been depressurized.** The improper installation or use of this product may result in personal injury, product failure, or reduced product life. Red Valve Co., Inc. can accept NO liability resulting from the improper use or installation of this product. If you have any questions or problems, please call the customer service hotline at (412) 279-0044. We appreciate your comments. And thank you for choosing Red Valve.

INSTALLATION

CAUTION: DO NOT ATTEMPT TO OPERATE THE TYPE R VALVE UNLESS BOTH ENDS ARE SECURELY CLAMPED TO THE PROPER SIZE MATING PIPE. UNLESS SECURELY CLAMPED, THE LINER MAY DELAMINATE FROM THE HOUSING, CAUSING AIR LEAKAGE.

INSPECTION OF VALVES:

Check the valve visually for signs of deterioration and/or damage. DO NOT apply air pressure to the valve body prior to test operation unless the valve is securely clamped to proper size mating pipe. Operation of the valve without being clamped to proper size mating pipe may cause the liner to delaminate from the body, resulting in permanent damage. Damage caused by improper operation is not covered by the warranty.



PREPARATION OF PIPE ENDS: Pipe ends should be square, clean, free of burrs, and serrated as shown in the sketch below. Serrations are especially important when using smooth pipe such as PVC. NOTE: A threaded end such as pipe thread is NOT acceptable. It will allow line pressure to leak through the threaded spiral groove. Each groove must be a separate groove not connected to the adjacent grooves. The end of the pipe should be rounded to prevent cutting the valve.

GASKETS:

Gaskets are not required.

CAUTION: Do not use any sharp tools such as a crowbar or screwdriver on the rubber during installation. Sharp instruments can damage the rubber bore and cause possible leakage.

INSTALLATION:

Loosen the end clamps and slip the valve onto the ends of the pipe. Be sure each end of pipe goes into the valve to the insertion depth shown in the table on page 4. Tighten the end clamps.

VALVE ORIENTATION:

The Type R Valve can be installed in any direction in the pipeline. The air connection can be located in any position to permit ease of installation.

CAUTION: Do not introduce full pressure, unregulated plant air to the valve. Excess air pressure can result in premature valve failure. Refer to page 4 of this manual for correct air working pressures.

TESTING:

Pressurize the line and apply appropriate air pressure to the air fitting, to cycle the valve open and closed. Inspect for leaks.

OPERATION
THE MOST CRITICAL FACTOR FOR SUCCESSFUL OPERATION OF RED VALVE'S TYPE R IS USING A MINIMUM AMOUNT OF AIR PRESSURE TO OPERATE THE VALVE!

The amount of air pressure required to close the valve depends upon the line pressure of the pipeline.

Red Valve's standard Pure Gum Rubber sleeve requires 25 to 35 psi above line pressure for closure. An increase in plant air pressure may be reacquired, depending upon the choice of elastomer.

MAINTENANCE INSPECTION:

Valves should be inspected for damage and wear on a regular basis. The inspection period should be determined by the severity of the service environment. Valves that are damaged or worn should be replaced.

CAUTION: Do not remove any valve with pressure in the line. It is easy to inspect the valve for obvious problems.

STORAGE

If your Type R Valve is to be stored for a period of time prior to installation, the following storage guidelines will help your valve trouble free installation.

1. Store valve in a clean, cool, dry location. Avoid exposure to light, electric motors, dirt or chemicals.
2. Store valve to prevent other items from contacting the valve to prevent possible damage.
3. Store this manual with valve, so that it is readily available at time of installation.

NEVER...
Use sharp tools on rubber valve.

NEVER...
Apply full pressure unregulated shop air.

DO...
Use Minimum air pressure to extend sleeve life.

DO...
Tighten clamps evenly

TROUBLE SHOOTING GUIDE

SYMPTOMS:

AIR LEAKAGE AT ENDS

- Tighten end clamps

SYMPTOMS:

SLEEVE RUPTURE (At juncture of valve end and pipe)

- Excess closing pressure.

SLEEVE RUPTURE (At mid point of valve)

- Water hammer or pressure surge.
- High velocity of abrasive media with valve slightly open.

SYMPTOMS:

VALVE WILL NOT SEAL

• At low temperatures, the rubber liner may become stiff. Actuate valve 25 to 50 times with pressure increased by 10 psi to "break in" the valve.

SYMPTOMS:

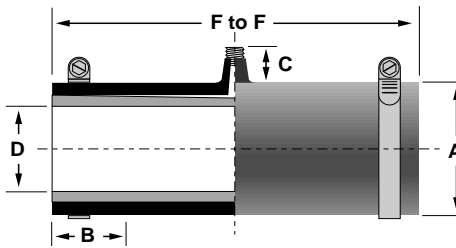
VALVE WILL NOT OPEN

- Air pressure not vented from body

TYPE R PINCH VALVE CLOSING AND WORKING PRESSURES

VALVE SIZE D	WORKING PRESSURE	INSERTION DEPTH B	NO. OF CLAMPSS EACH END	APPROXIMATE AIR CLOSING PRESSURE		
				PGR SLEEVES	SYNTHETICM SLEEVES	VITON SLEEVES
1/2"100	100	1"	1"	25	30	35
3/4"	100	1"	1"	25	30	35
1"	100	1"	1"	25	30	35
1-1/4"	100	1"	1"	24	29	34
1-1/2"	100	1-1/2"	1"	24	29	34
2"	100	2"	2"	24	29	34
2-1/2"	75	2"	2"	22	27	32
3"	75	3"	2"	22	27	32
4"	75	3"	3"	22	27	32
5"	75	3"	3"	22	27	32
6"	75	3"	3"	20	25	30
8"	50	3"	3"	20	25	30

* Air Closing Pressure should be added to the line pressure for complete closure.



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 OR 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 items of Red Valve's manufacture will be made free of charge if proved to be defective within such year; but not claim 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 guarantee 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, not withstanding implied warranties. RED VALVE MAKES NO WARRANTY THAT THE PRODUCTS, AUXILIARIES AND PARTS ARE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE.