



Elasto-Valve Rubber Products Inc.  
1691 Pioneer Rd.  
Sudbury, Ont. Canada  
P3G-1B2

Tel 1-705-523-2026  
Fax 1-705-523-2033  
Toll Free 1-800-461-6331

**SERIES 4400**  
**1/4 TURN HIGH FLOW PINCH VALVE**

**INSTALLATION, OPERATION &  
MAINTENANCE  
INSTRUCTIONS**

## INSTALLATION OF VALVE

1. Install valve between pipe flanges with properly sized bolts.
2. Flange gaskets are NOT to be used. A molded sealing bead in each face of the DIAPHRAGM SPOOL serves as the process fluid seal.
3. Leave the bottom port open, leakage of process fluid at this port signifies failure of SPOOL.

**WARNING: DO NOT INSTALL THE VALVE IN A HYDRAULICALLY LOCKED LINE.**

This valve displaces process fluid as it closes. If the pipeline is hydraulically locked, the valve may not be able to be closed.

## OPERATION OF THE VALVE

1. For MANUAL operation, a spring – loaded lever and detent plate are provided to secure the valve at a number of discrete angle positions including the ON and OFF positions.
2. For AUTOMATED operation, an actuator package is fitted to the valve with a bracket and shaft coupling.

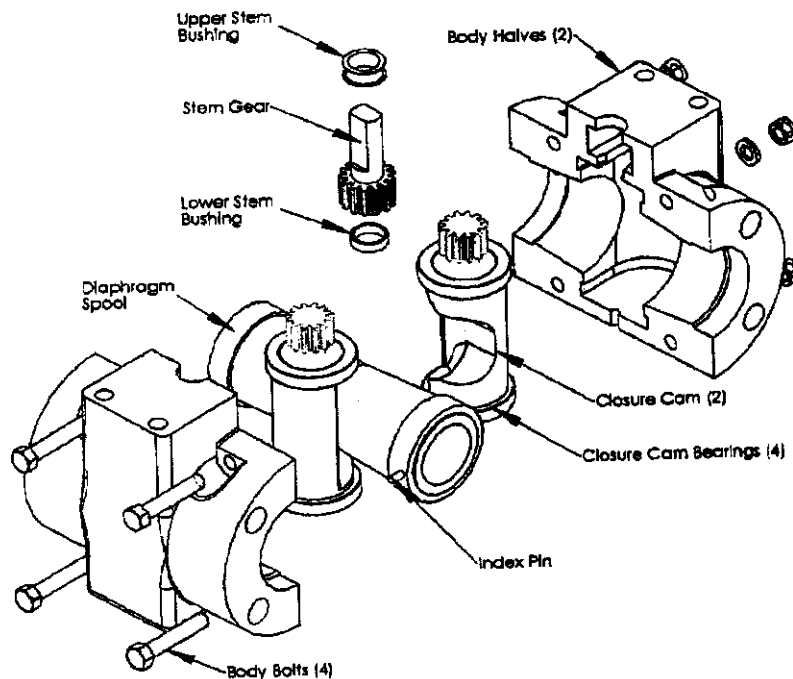


Figure 1

### **DIAPHRAGM SPOOL REMOVAL** (refer to figure 1)

1. If valve is fitted with an actuator, remove all service connections to the actuator before attempting any disassembly.
2. Unscrew the four (4) bracket bolts and lift the actuator off of the valve. Remove the shaft coupling. Remove four (4) valve body bolts and nuts. Separate the body halves and remove the DIAPHRAGM SPOOL.
3. If the valve is fitted with a spring-loaded lever, unscrew the handle retainer bolt, remove the spring retainer and compression spring. Lift off the valve handle, unscrew detent plate bolts (Qty.2) and remove handle detent plate. Remove four(4) valve body bolts and nuts, separate the body halves and remove the SPOOL.
4. Remove the stem gear assembly.

### **DIAPHRAGM SPOOL INSTALLATION** (refer to figure 1)

1. Lift out closure cams with cam bearings from the valve body halves and clean all body half, cam bearing and gear surfaces. Apply Dow 111 silicon lubricant to gears and cam surfaces. Reinstall the closure cam and bearings into each body half.
2. Place one body half / closure cam assembly onto a flat surface, with cam in open position. Install stem gear assembly into this body half.
3. Outside surface of replacement DIAPHRAGM SPOOL is coated with silicon lubricant -Dow 111- which is compatible with the DIAPHRAGM SPOOL elastomer. Place the SPOOL into the other valve body half, aligning the index pin on the SPOOL Ring with the hole in the valve body half.
4. Gripping this body half / closure cam / SPOOL assembly with two hands (holding the SPOOL against the body half at each end so that the SPOOL and cam do not fall out) turn the assembly over and place it on the other body half assembly. Install body bolts and nuts.
5. For automated valve, replace bracket, coupling and actuator. For manual valve, install handle, detent plate and spring-actuated lever assembly.