CHEMLINE Plastics Limited

*Your Pipeline To Quality* Valves, Strainers, Flowmeters and Controls

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# INSTALLATION & MAINTENANCE INSTRUCTIONS
# For Chemline Series SR50 Pressure Reducing Valve Sizes 3/8" to 1-1/2"

## *Installation:*

1. Always mount a filter or strainer in the line immediately before the valve to avoid damage to the valve from dirt or particles.

2. To adjust pressure use either the adjustment screw (8) or a pressure gauge type 900.

3. For installation in an application where the temperature is 0? C or less. Check with Chemline Technical Engineering staff prior to installation.

4. **Size vs Working Pressure**
   3/8" - 1-1/2" set pressure 15 psi to 135 psi. Minimal backlash, should be no more than approx. 3 psi.

5. **Operating Temperature Range**
   PVC up to 50? C
   PP up to 70? C
   PVDF up to 100? C

## *Maintenance:*

Refer to **ASSEMBLY DRAWING SR501 rev 0**. And proceed as follows:

1. Loosen and remove cap (10).

2. Loosen counternut (9) and remove adjusting screw (8).

# Install. & Maint. SR Pressure Reducing Valve Sizes 3/8” – 1-1/2” Cont.

3. Remove cap (12d), nut (12c), washer O-ring (12b) and bolt (12a).

4. Lift up and remove bonnet (2).

5 Remove pressure plate (7a) and ball bearing (7b) to reach spring (3).

6. Loosen piston screw (11), remove spring plate (6) and draw piston (5a) downward and out of body (1).

7 When piston has been removed, it can be further disassembled into the component parts (5a) inner piston, (5b) hex nut and (5c) seat.

8. Remove diaphragm (4).

9. Remove O-ring seals (14a) and (14b) at intermediate flange (13).

10. Inspect all parts for wear and abrasion, replace O-rings, diaphragm etc. if necessary.

11. To re-assemble, follow steps 1 through 9 in reverse.

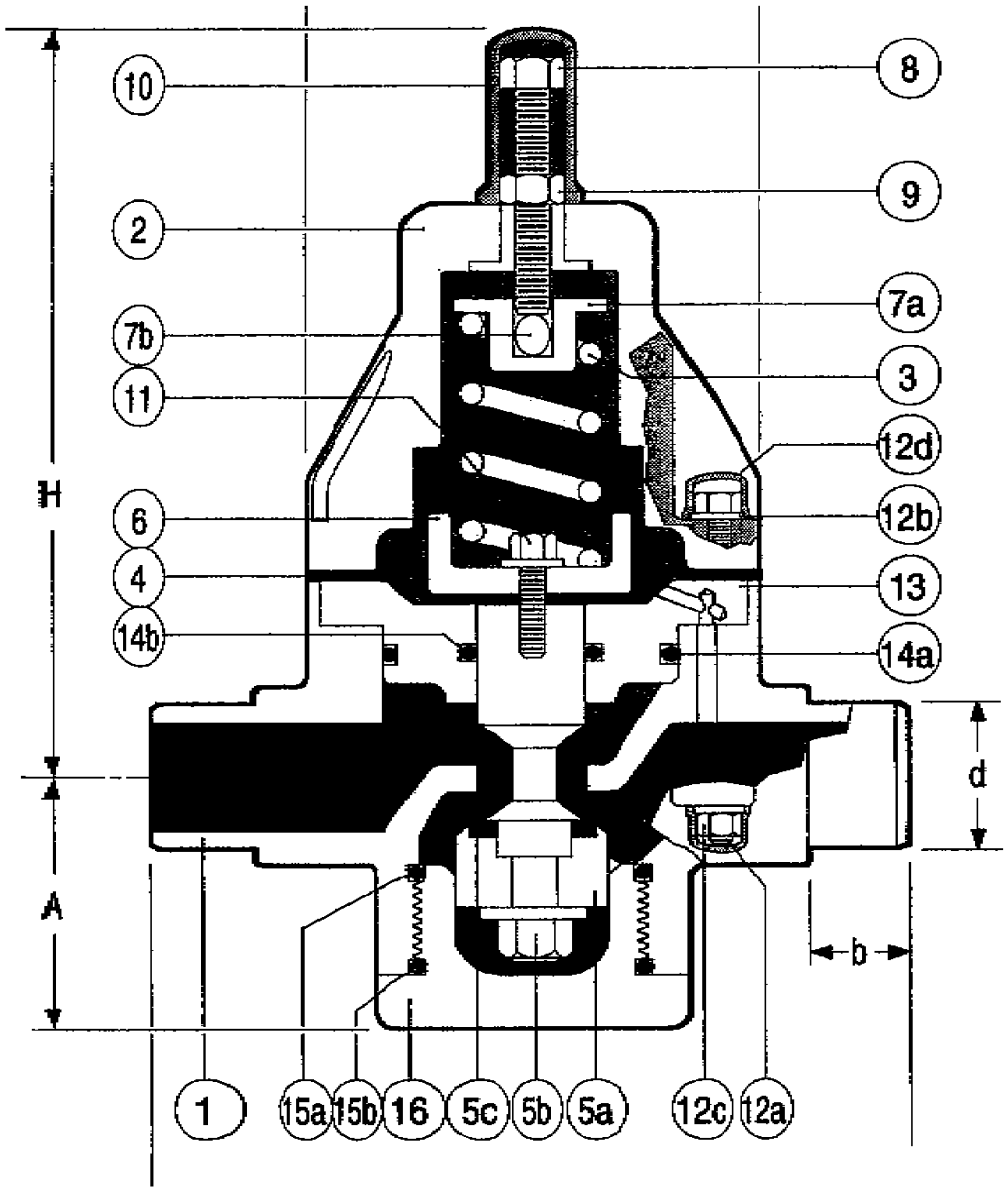
## WEIGHT & DIMENSION CHART

| SIZE | OVERALL WIDTH | WEIGHT (LBS) | | |
|---|---|---|---|---|
| | | PVC | PP | PVDF |
| 3/8” | 5.7” | 1.5 | 1.3 | 1.8 |
| 1/2” | 5.7” | 1.5 | 1.3 | 1.8 |
| 3/4” | 6.9” | 3.5 | 2.6 | 4.2 |
| 1” | 6.9” | 3.5 | 2.6 | 4.2 |
| 1-1/4” | 8.8” | 8.6 | 6.6 | 10.1 |
| 1-1/2” | 8.8” | 8.6 | 6.6 | 10.1 |

# Install. & Maint. SR Pressure Reducing Valve Sizes 3/8” – 1-1/2” Cont.

## TROUBLESHOOTING

| FAILURE | REASON | REPAIR |
|---|---|---|
| VALVE LEAKS AT DIAPHRAGM (4) | CLAMPING PRESSURE FOR DIAPHRAGM (4) TOO LOW | TIGHTEN SCREWS (12) |
| PRESSURE RISES ABOVE SET PRESSURE | [A] PISTON SEAT (5c) & SEALS ARE DEFECTIVE | CHECK SEALS (14a) (14b) OF PISTON (5) – REPLACE |
| | [B] DIAPHRAGM (4) LEAKING | REPLACE |
| | [C] PISTON (5) BORE AT BODY (1) DIRTY | DISMANTLE PISTON (5) AND CLEAN |
| VALVE CLOSED (DOES NOT OPEN) | VALVE MOUNTED IN WRONG DIRECTION | TURN VALVE IN DIRECTION OF FLOW |
| FLUIDS PENETRATE ADJUSTING SCREW (8) | DIAPHRAGM (4) DEFECTIVE | REPLACE DIAHRAGM (4) |
| LEAKING AT PLUG AT VALVE BODY | O-RING SEAL LEAKING | DISMANTLE PLUG AND REPLACE SEAL |




| PART | DESCRIPTION | PCS. |
|---|---|---|
| 1 | BODY | 1 |
| 2 | BONNET | 1 |
| 3 | SPRING | 1 |
| 4 | DIAPHRAGM | 1 |
| 5(a) | INNER PISTON | 1 |
| 5(b) | HEX NUT | 1 |
| 5(c) | SEAT | 1 |
| 6 | SPRING PLATE | 1 |
| 7(a) | PRESSURE PLATE | 1 |
| 7(b) | BALL BEARING | 1 |
| 8 | ADJUSTING SCREW | 1 |
| 9 | COUNTERNUT | 1 |
| 10 | CAP | 1 |
| 11 | SCREW | 1 |
| 12(a) | BOLT | 2 |
| 12(b) | WASHER O-RING | 2 |
| 12(c) | NUT | 2 |
| 12(d) | CAP | 2 |
| 13 | INTERMEDIATE FLANGE | 1 |
| 14(a) | O-RING SEAL | 2 |
| 14(b) | O-RING SEAL | 2 |
| 15(a) | O-RING SEAL | 2 |
| 15(b) | O-RING SEAL | 2 |
| 16 | PLUG | 1 |

| | | | | |
|---|---|---|---|---|
| TITLE: SR SERIES PRESSURE REDUCING | SCALE | | DATE | CHEMLINE PLASTICS |
| | DR. BY | | | |
| REFERENCE: VALVE SIZES 3/8"- 1"1/2" | CHKD. BY | | | DWG. NO. SR501 / REV. 0 |
| | APP. BY | | | |