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INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

'ROMA' FIG 119 RATIO PRESSURE REDUCING VALVES

APPLICATION

The valves are fitted wherever system pressure requires reducing.
Suitable for liquids and gases.
Recommended for applications where the inlet pressure is constant, or the final downstream pressure is not critical.

DESCRIPTION

The Fig. 119 Ratio Pressure Reducing Valve is direct acting, single seated, piston balanced and piston regulated.

OPERATION

The upstream pressure (P1) is introduced below the valve disc, which is opposed by atmospheric pressure via a vent port above the balancing piston.

The downstream pressure (P2) is introduced above the control piston, which is sized to a fixed ratio of the area of the valve disc, and also opposed to atmospheric pressure via the vent port.

The valve will then modulate the flow to maintain a fixed relationship (eg 2:1) between P1 and P2, governed by the ratio of the respective areas of the valve disc orifice and the control piston.

INSTALLATION

The valve is self contained and requires no external connections.

- The pipeline should be flushed prior to installation - foreign particles are a common cause of initial problems with control valves.
- Ensure that the direction of flow is correct according to the arrow on the valve body.
- Preference should be given to mounting in a horizontal pipeline.
- It is recommended that the valve be protected with a fine mesh strainer.
- Isolating valves, relief valve and pressure gauges should be installed for proper maintenance, protection and operation.

COMMISSIONING

- Admit upstream pressure gradually, allowing pressures to stabilize.
- Gently crack open ball valve on piston chamber at top of valve to release any trapped air.

MAINTENANCE

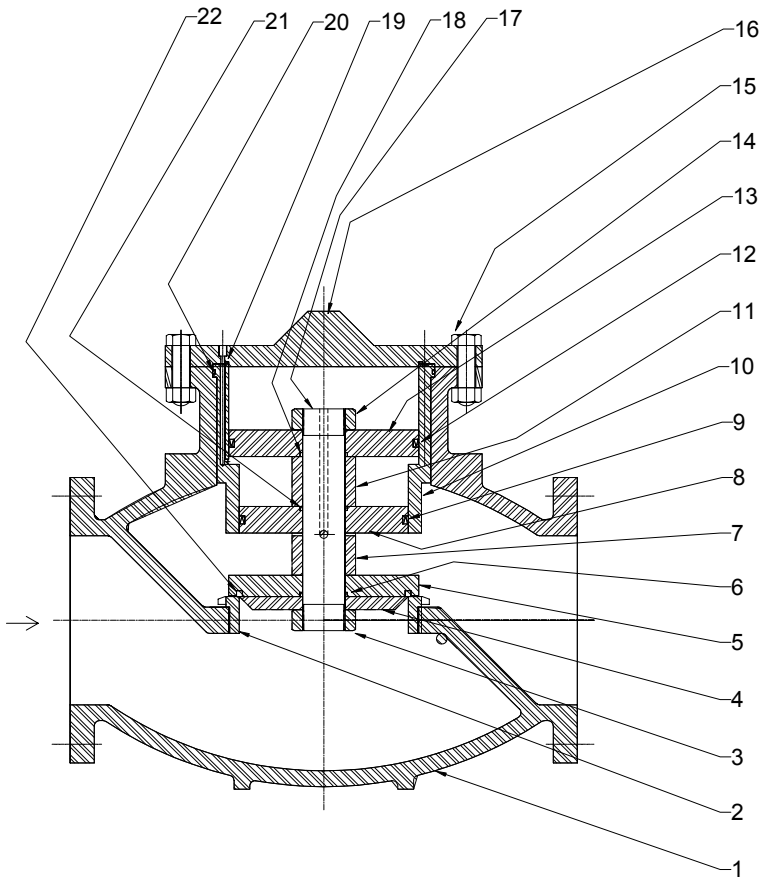
Most maintenance can be performed without removing the valve from the pipeline.
Before carrying out any maintenance, isolate the valve and release any pressure in the line.



TO OVERHAUL

- Lift off the valve cover (16) by removing the cover bolts and nuts.
- Using an eye bolt, or similar screwed into the thread in the centre of the valve spindle, lift the entire internal valve assembly clear of the valve body.
- Separate the liner (13) from the inner valve by removing one or both of the spindle nuts.
- The individual parts may now be separated.
- Examine all 'O' rings and the piston 'U' seal for damage or wear, and replace if necessary.
- Check the bores in the liner, and polish if not smooth.
- Note orientation of 'U' seals from drawing.
- Assembly is the reverse of dismantling
- Lubricate 'O' rings and moving parts with Dow Corning No 4 Compound or similar product.
- Note assembly order of all parts from Drawing.

For spare parts or information, contact your supplier or Calorex, providing valve serial number and size.



'ROMA' Fig 119 Pressure Reducing Valve

1	Body
2	Seat
3	Spindle Nut
4	Disc Retainer
5	Retaining Disc
6	Ret. Disc Seal
7	Lower Spacer
8	Balancing Piston
9	Bal. Piston U Seals
10	Liner
11	Upper Spacer
12	Cont Piston U Seal
13	Control Piston
14	Upper Spindle Nut
15	Cover Bolts & Nuts
16	Cover
17	Spindle
18	Cont. Piston Seal
19	Cover O-ring
20	Liner O-ring
21	Bal. Piston O-ring
22	Disc Seal