

OPERATING INSTRUCTIONS

MODEL PRS-06 THD

PRESSURE REDUCING VALVE



PRINCIPLE OF OPERATION

Steam or other fluid passing through the valve enters through the inlet port, through the valve seat formed by main valve and seat and finally through the outlet port. Outlet pressure is sensed by the underside of the diaphragm through a vertical port, which connects with the outlet port. Pressure regulation is achieved when a force balance is maintained between the pressure acting on the underside of the diaphragm and the spring force, which is adjusted to hold a particular outlet pressure. If the outlet pressure is below the set point as preset by the adjusting spring the spring force overcomes the pressure force acting on the underside of the diaphragm, which causes the main valve to open thereby admitting higher inlet pressure fluid to raise the outlet pressure until the force balance is restored. As soon as the outlet pressure is restored, the main valve begins to close to limit the amount of higher inlet pressure fluid passing through the valve.

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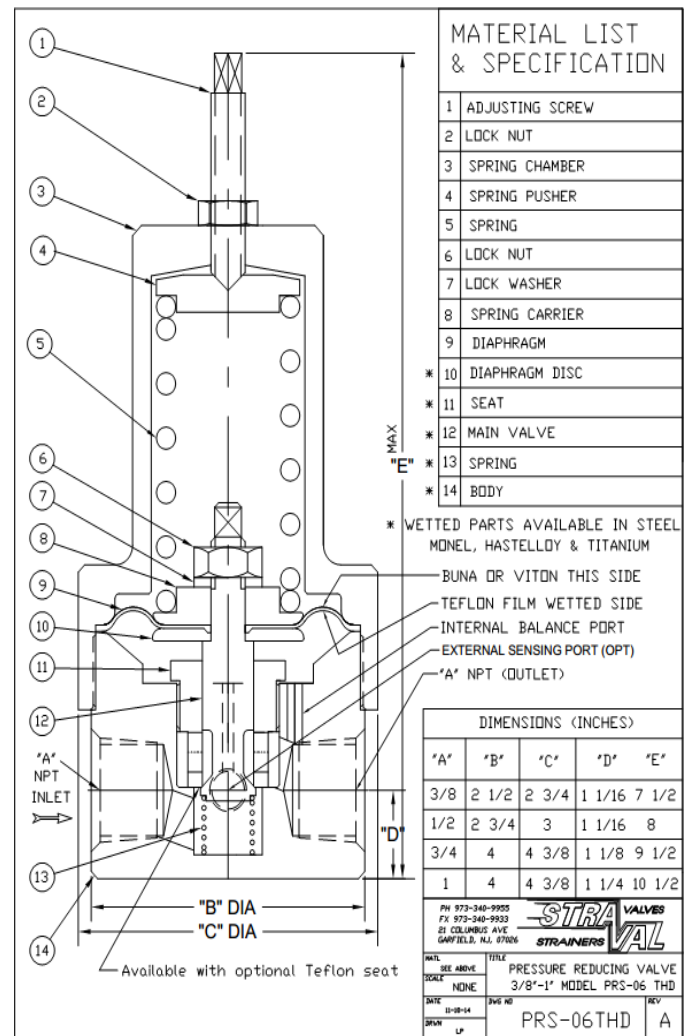
If the valve has not been ordered preset to a specific outlet pressure, simply adjust the spring compression by loosening the lock nut and turn the adjusting screw

clockwise to increase the spring compression. This will increase the outlet pressure. Similarly, turning the screw counterclockwise will reduce the spring compression and correspondingly reduce the outlet pressure.

DISASSEMBLY/ASSEMBLY INSTRUCTIONS:

If the regulator fails to maintain the proper outlet pressure, there could be a number of probable causes as follows: internal clogging of foreign objects or material, sediment, rust, etc. In the valve seat area, sensing port, diaphragm cavity and valve spring cavity which houses spring. If this condition appears frequently a strainer installed at the inlet side of the valve is recommended.

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Examine the main valve (12) and seat (15) for excessive wear particularly in the valve seat area. If excessive, replace with new parts. Replace internal valve spring (13) if broken or corroded.

Reassemble valve in the same sequence, as disassembled, making sure the seat holder (11) and diaphragm plates (8) & (10) have been tightened properly with the lock nut (6) and lock washer (7). Make sure that the diaphragm is assembled properly with the convolution facing upward, as illustrated.

Reassemble the spring chamber

After the valve is properly assembled, reset the adjusting screw (1) until the desired outlet pressure is achieved at the flow range the valve will be operating. Then tighten the adjusting screw lock nut (2).

NOTE: When the outlet pressure must be maintained at a specific value where excessive pressure may damage equipment, a relief valve must be installed on the outlet side of the regulator.