

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Series CRV Pressure Regulator

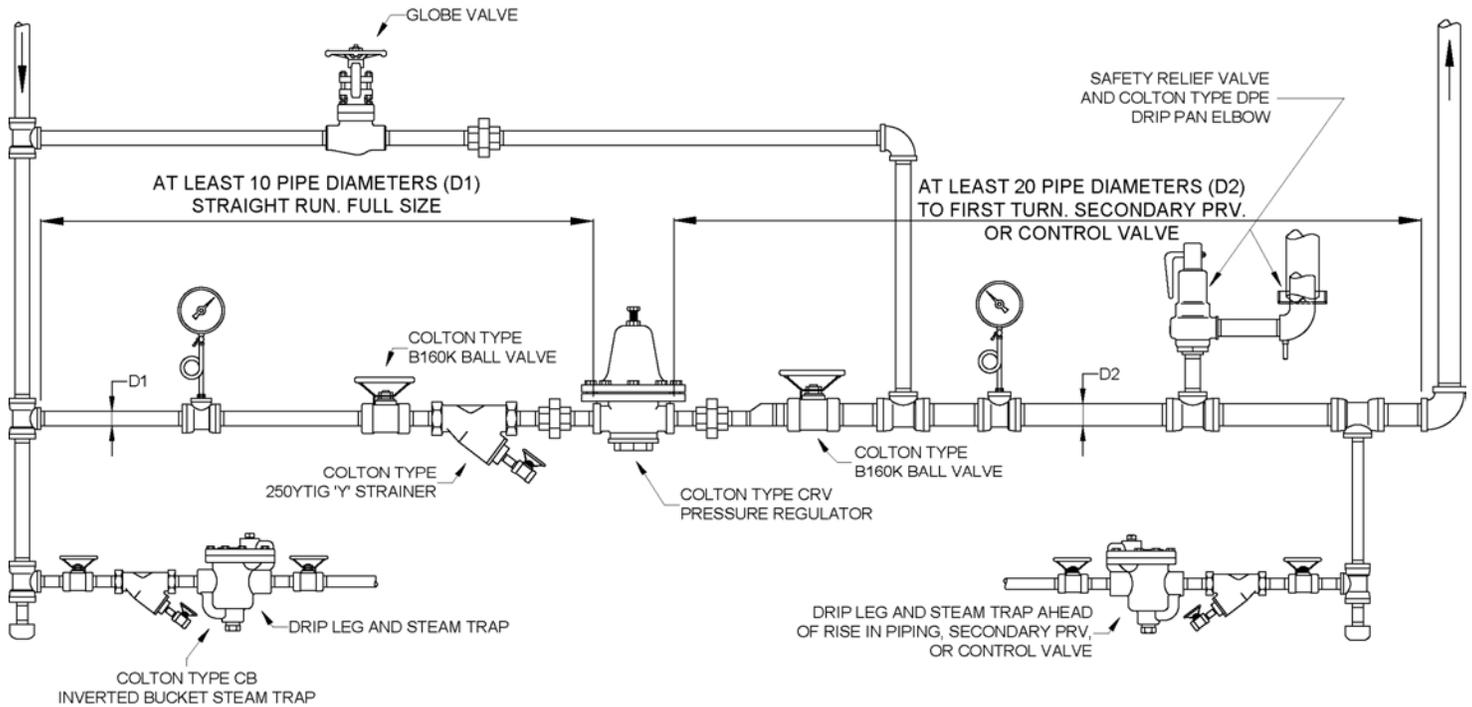


FIG. 1 – RECOMMENDED INSTALLATION OF TYPE CRV REGULATOR

A. INTENDED PURPOSE

The Colton series CRV direct acting pressure regulator is a compact moderately priced steam, water or gas regulator intended to satisfy most fundamental requirements for pressure reduction.

B. PLANNING THE INSTALLATION

1. Locate the pressure regulator in a straight run of horizontal piping. (See Fig. 1)
2. Allow access room above and below the valve for inspection and maintenance.
3. For steam service, in order to prevent water hammer and erratic operation, install properly sized steam traps to provide proper drainage of condensate before and after the pressure regulator.
4. Avoid the damaging effects of scale and dirt in pipe lines by installing a Colton 'Y' strainer as shown in Fig. 1
5. Provide a 3 valve by-pass to facilitate inspection and maintenance without interrupting service.
6. If the pressure rating of the downstream piping or connected equipment is less than the supply pressure, install a safety valve and drip pan elbow as shown in Fig. 1
7. Install supply and delivery pressure gauges to indicate performance. When long runs of piping are involved, the delivery pressure gauge should be located as close to the process or equipment as is practical.
8. To eliminate excessive noise and enhance stability with steam and other compressible fluids:
 - a. Avoid single pressure reduction in excess of 5:1 ratio
 - b. Enlarge the delivery pipe size to effect a reasonable flow velocity at the reduced pressure. An eccentric tapered transition is recommended.
 - c. Avoid sharp turns close to the regulator outlet as well as bull-headed tee connections to low pressure mains.

C. INSTALLING THE VALVE

1. Flush the piping system thoroughly to clear it of any debris.
2. Mount the valve between unions with the arrow pointing in the direction of the flow.

D. ADJUSTING THE DELIVERY PRESSURE

1. Loosen the lock nut on the adjusting screw.
2. Turn adjusting screw clockwise to increase the delivery pressure or turn the adjusting screw counter-clockwise to decrease delivery pressure.
3. Retighten the lock nut.

E. TROUBLESHOOTING

1. Failure to open or excessive delivery pressure fall-off:
 - a. Adjusting spring, Fig. 2, may have been tampered with or broken
 - b. Supply pressure may be down due to partially closed supply valve, clogged strainer or other obstruction
 - c. Valve may be too small for the application
2. Failure to close or over-riding delivery pressure:
 - a. Adjusting spring, Fig. 2, may have been tampered with or broken
 - b. By-pass valve may be leaking or open

- c. Valve diaphragms may be broken
- d. Valve may be held open by foreign matter

3. Valve chatter or noise is indicative of an oversized valve. Double check valve capacity with the service requirements.

F. MAINTENANCE

1. Under normal operating conditions, complete dismantling at regular intervals is not recommended.
2. Before inspection, cleaning or replacement of worn or broken parts, make certain that the valve has been isolated from the supply and delivery pressures. Make sure also that any internal pressure in the regulator has been relieved.
3. When disassembling the valve, first remove the compression from the adjusting spring.
4. Minor damage to the seat ring and disc may be repaired by light grinding with 400 grit or finer lapping compound.
5. Before reassembling the valve, the old gasket material and sealing compound should be removed. Metal to metal joints should be sealed with Copalite, Permatex or equal plastic gasket compound compatible with the service of the valve.
6. When ordering replacement parts, refer to the parts list (Fig. 2). Order parts by part name, valve size and include the production number from the nameplate.

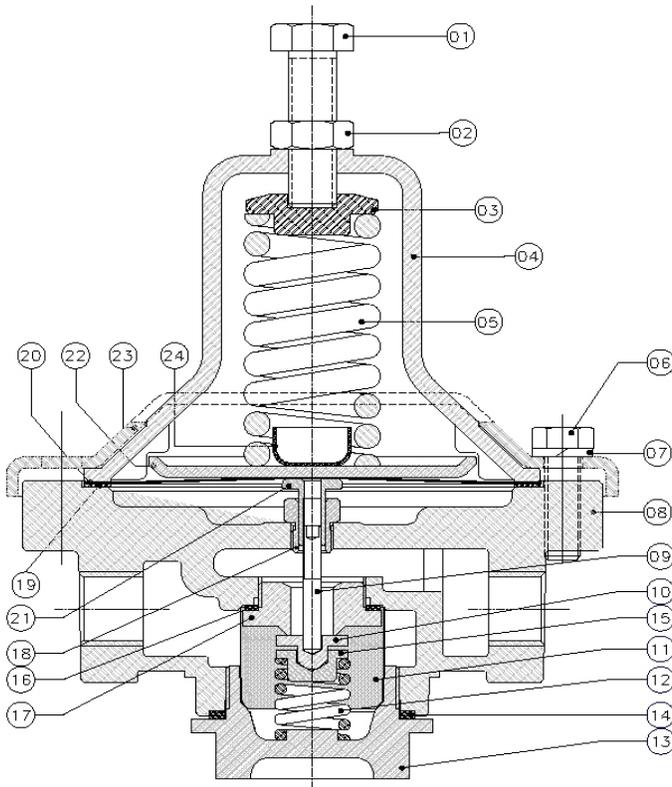


FIG. 2.

1	Adjustment Screw	Steel
2	Locking Nut	Brass
3	Spring Button	Steel
4	Spring Chamber	Iron or Stn Stl
5	Adjusting Spring	Steel
6	Bolt	Steel
7	Lock Washer	Steel
8	Body	Iron or Stn Stl
*9	Stem	Stn Stl
*10	Disc	Stn Stl
*11	Screen	Stn Stl
*12	Valve Spring	Stn Stl
13	Disc Access Plug	Brass
*14	Body Gasket	Teflon
15	Valve Spring Button	Brass
*16	Seat Gasket	Brass
*17	Seat	Stn Stl
18	Stem Guide	Stn Stl
*19	Diaphragm Gasket	Synthetic
*20	Diaphragm (3 Req'd)	Phos. Bronze
*21	Stem Pusher Plate	Stn Stl
22	Pressure Plate	Steel
23	Spring Chamber Clamp Ring	Steel
24	Pusher Plate Washer	Stn Stl

* Parts Included In Repair Kit