

# ECO® Series

## PRESSURE RELIEF VALVE INSTRUCTIONS

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The ECO Series RV-6 is a bottom inlet, side outlet diaphragm relief valve designed to protect against dangerous overpressures in systems handling corrosive chemicals. It is not designed for hydraulic bypass service, either continuous or intermittent. The diaphragm is TFE and wetted parts below the diaphragm are either 316 stainless steel (Model RV-6A) or Hastelloy C (Model RV-6C).

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### RATINGS

Maximum Set Pressure	150 psig (1035 kPa)
Minimum Set Pressure	10 psig (70 kPa)
Maximum Flow	25 US GPM (5.68 m <sup>3</sup> /hr)
Maximum Viscosity	200 cps (1000 SSU)
Temperature Range	-40°F to 250° F (-40° C to 121° C)

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### INSTALLATION

Install valve vertically and provide both means to isolate valve from system to facilitate maintenance as well as means to read system pressures. Provide pipe support so weight of valve is not taken by pumps or other process equipment. Valve outlet should be piped back to supply source. If necessary to pipe valve outlet to suction line of pump, make connection as far away from pump suction as possible, so as to avoid heat build-up.

Keep piping to valve inlet short and of same size as inlet ( $\frac{3}{4}$ " ). A variable restriction placed in valve outlet piping, can be used to provide a controlled dynamic back pressure on valve that will "null out" valve overpressure when relieving. Consult ECO representative for details. If valve outlet system provides a constant, static back pressure, adjustment of set pressure will be necessary to compensate for this, unless the factory has been informed. Factory set pressure is stamped on valve nameplate.

Valves are furnished with a weep hole in the bonnet that is sized for a 1/8" NPT tap. This hole may be tapped and then piped to a drain. In the event of diaphragm rupture, lading fluid will then be conveyed safely from the valve.

### MAINTENANCE

**BEFORE PERFORMING MAINTENANCE ON ANY EQUIPMENT THAT CONTAINS OR MAY CONTAIN HAZARDOUS FLUID, FLUSH EQUIPMENT THOROUGHLY WITH A NEUTRAL FLUID.**

It is recommended that a spare diaphragm be kept on hand. To replace the diaphragm, remove cap, back off the spring adjusting screw and remove the six screws fastening the bonnet to the body. Carefully remove bonnet with all top works inside. Check condition of seat insert and replace if scored or pitted, or sealing edge is uneven. Check diaphragm clamping surfaces in body and bonnet and make sure they are clean. Reassemble with new diaphragm; tighten screws uniformly in a criss-cross pattern.

To readjust set pressure, put valve on test stand, or use a safe fluid in actual system. It is easiest to set valve to a higher pressure and then back off until desired cracking pressure is reached. Check operation and then tighten lock nut. Replace cap.

**CAUTION: NEVER TIGHTEN ADJUSTING SCREW TO A POINT WHERE THE SPRING CAN GO SOLID.**

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