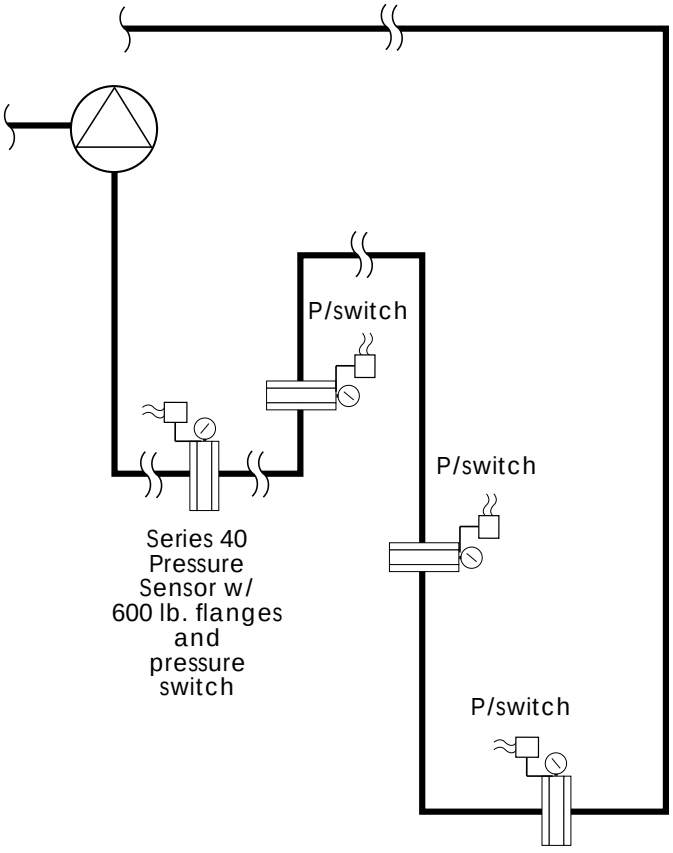
Application Data

Chemical ♦ Synthetic Polymers ♦ Pressure Sensors

Red Valve Company, Inc.

SERIES 40 PRESSURE SENSOR AS A SAFETY DEVICE AGAINST PRESSURE LOSS



This division of a European chemical company located in the southwest U.S.A. is a manufacturer of high density polyethylene using a Phillips licensed process.

The media is a feed stock that is pressure controlled to ensure continuous circulation at 525 psig from the pump outlet. In this process, the feedstock is kept in a closed loop and pumped continuously to force long length polymer molecular structures. Prolonged cycling through this system provides the opportunity and turbulence to assist in molecular combination of a continuous and repeating polymerizing plastic.

This media is always in danger of clogging a pipe solid if the circulation is retarded or slowed for any substantial period of time. The purpose of the Red Valve Series 40 Pressure Sensor is twofold. First, if the system pressure is not maintained because an outlet valve is not closed, the pressure switch will stop when the pressure falls to 75 psi and close the valve as well as trip an alarm in the control room.

Secondly, if the polymerization of the high density polyethylene clogs a pipe, reducing the flow and the downstream pressure, the pressure switch will close and set off the alarm in the plant engineers' control room.

In both instances, the pumping system shuts down completely to avoid dry pumping the pump and damaging the stator or ruining the process batch.

This factory chose the Red Valve Series 40, with stainless steel body, Viton sleeves, and ASCO tripoint pressure switch to successfully solve their pressure containment/control problems.