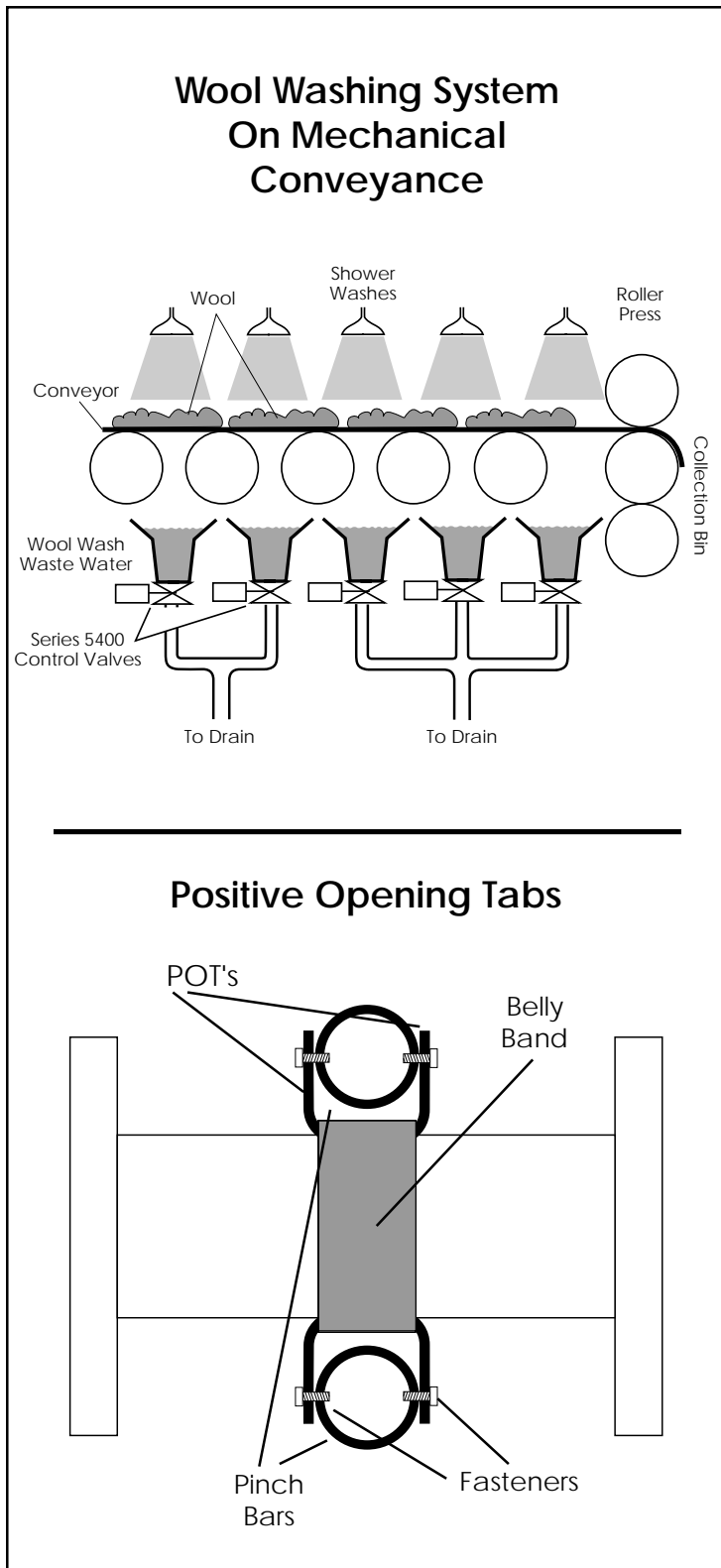


Application Data

Textiles ♦ Wool Washing ♦ Control Valves



This application in a woolen mill has caused serious clogging problems for a long time. The wool, after combing, is washed in a series of showers in the initial treatment, as shown in the schematic. The hot wash water is forced through high pressure nozzles into the wool to remove dirt, insects, sticks, hay, and other contaminants. After each shower, the wool is pressed to remove as much of the water and contaminants as possible. The waste water is collected in a series of tanks underneath the conveyor. These tanks are open, unpressurized, and have a maximum water pressure of 60cm (33 inches) of water column.

The woolen mill has tried weir type diaphragm valves without success. These valves clog because of the small open port design. All valves are automated. The mill had recognized the value of pinch valves and tried a competitor's pneumatic pinch valve. However, the sleeve fatigued in a short period of time and would not return to a round position because the waste water has a low pressure of only 60cm (30" wc).

The best solution is the Red Valve Series 5400 Control Valve with positive opening tabs. The POT's and belly band mechanically assist the sleeve to return to 100% round on every stroke. This is the important factor because the wash water is a high percentage of scrap and waste, which tends to clump in solution. With low line pressure, there is insufficient pressure to force this clump through a reduced port. As a result, the Red Valve Series 5400 dramatically reduces drainage time and improves system efficiency. This also results in substantial cost savings. It is important to note that cotton mills and fiberglass insulation manufacturers have similar applications and also require assistance from Red Valve products to improve their operations.

