# Blow Down Piping

## Series 150S, 150E and Series 93/94 Controls

Larger LWCO/Pump controller units are installed on equalizing lines. The piping must be full size and include cross connections where pipes change direction. Each control should include its own blow down piping and valves.

These controls should be blown down daily when installed on commercial/industrial boilers and weekly in residential applications. Regular blow down keeps the control free of sediment and ensures it operates properly.

When blowing down a control at pressure, the blow down valve should be opened slowly. The piping needs to be warmed up and stagnant water in the drain piping needs to be pushed out. Suddenly opening a blow down valve causes steam to condense, which creates water hammer. Crushed floats and damaged linkages can occur when water hammer occurs due to improper blow down piping.

For these reasons, McDonnell & Miller recommends a dual valve blow-down system for each control.

**Proper Blow-down Procedure:**
**(Using dual valve system)**

1. With water in the boiler at its normal level, open “Positive Shut-off Ball Valve”.
2. Open “Throttling Gate Valve” slowly until drain piping heats up and then open fully. Observe that the water level starts falling in the gauge glass.
3. Close “Throttling Gate Valve” after verifying that the pump contacts have closed and the burner contacts have opened thus shutting down the boiler.

   **Note:** If this does not happen, immediately close all valves, turn off burner and correct the problem.
4. Close “Positive Shut-off Ball Valve”.
5. Observe that the water level returns to its normal level before leaving site.

**Recommended Dual Valve Blow-Down Piping**