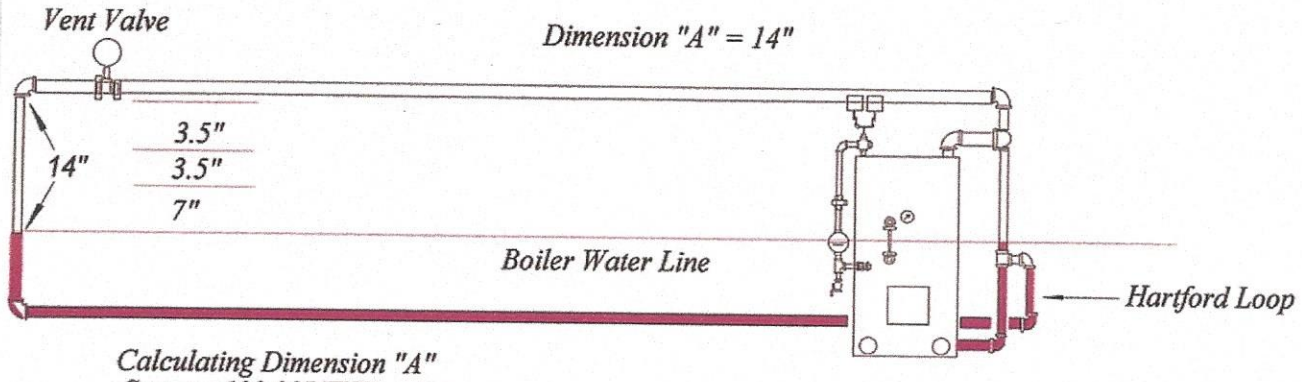
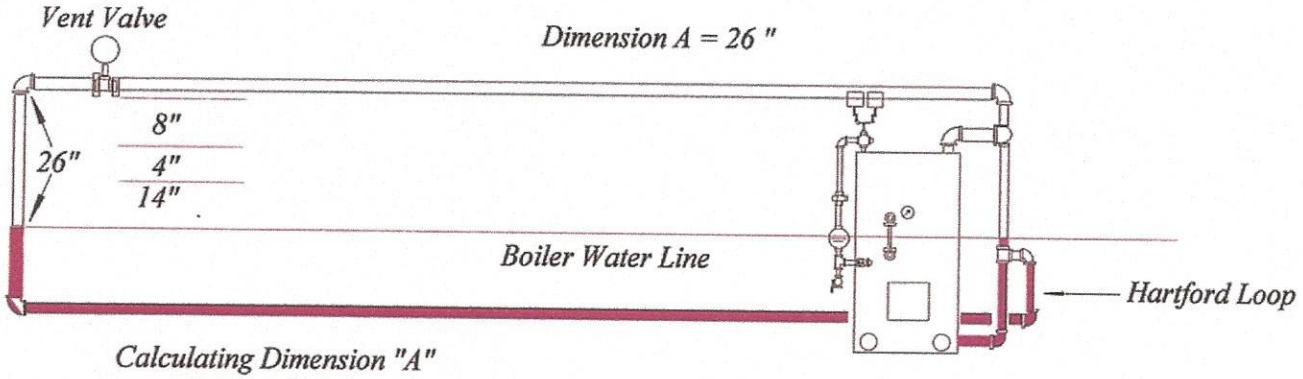
Dimension "A" Applied to a Wet Return



Calculating Dimension "A"
Systems 100,00BTUH or Less

3.5" Water = 1/8" Pressure Drop
3.5" Water = Static Head
7" Water = Saftey Factor (double the static head)

The Combination of the Three Dimensions Equals Dimension "A" 14"



Calculating Dimension "A"
Systems Above 100,000 BTUs

14" Water = 1/2 psi Pressure Drop
4" Water = Static Head
8" Water = Saftey Factor (double the static head)
The Combination of the Three Dimensions Equals Dimension "A" 26"

Drawing # 12

In the preceding drawings, the waterline is depicted in red. Note: The waterline and the boiler water level are at the same height. When the boiler becomes pressurized, water will be forced out of the boiler and rise in the vertical drop of the return.

To visualize what happens in a steam heating system, think about a closed-loop piping system with one tiny opening (a vent valve). As a boiler makes steam, pressure begins to increase; steam will flow toward the vent valve. Steam flows toward the vent valve as air leaves the steam piping system. Steam replaces the leaving air in an equal volume. *The vent valve creates a zone of lower pressure.*