

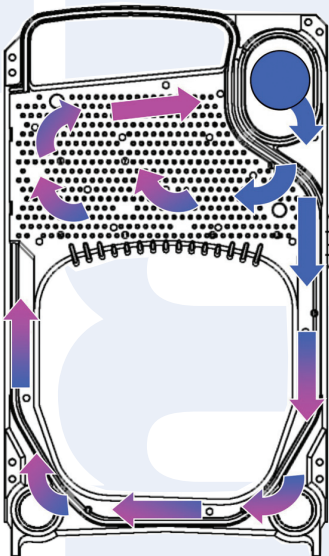


RTS Return Temperature Stabilizer

Smith
CAST IRON BOILERS

RTS FEATURES

- Improved casting flow
- Eliminates hot spots
- Integral solution
- Non-mechanical (No added pumps, valves, or controls)
- No adjustments or settings
- No increased pump head loss
- Easy to install
- No maintenance



Low Delta T

“Boiler Thermal Shock” can be loosely defined as a sudden thermal change that occurs within the boiler causing rapid and uneven expansion and contraction of a boiler’s structure. The problem of thermally induced stress has been apparent for many years, particularly in hot water heating systems. Several conditions can contribute to boiler stress and reduced life expectancy. In recent years the problem has become more common as energy saving measures have been increased. All involve introducing excessively low temperature water or cool water at high flow rates into a hot boiler. The term “shock” suggests a sudden impact type failure, which in the vast majority of cases is far from what actually happens. Most failures of this type occur over a period of time, sometimes materializing within as short a time frame as a few weeks, but often a considerably longer time period ensues before damage is detected. Boiler Thermal Shock was the challenge until now.



THE SOLUTION

RTS Return Temperature Stabilizer

Return Temperature Stabilizer is now standard equipment on all Smith 28 and 28HE (900 – 4629MBH) water boilers. Smith has developed this integral system that evenly distributes return water

throughout all the boiler sections. RTS promotes flow and temperature equalization that results in minimal temperature differentials, effectively eliminating wide temperature variations that are associated with thermal shock and decreased boiler life. RTS is an integral component with no moving parts and will not interfere with prioritized building management control systems.



Modular Slide in Installation



Correct position assured with alignment tab.



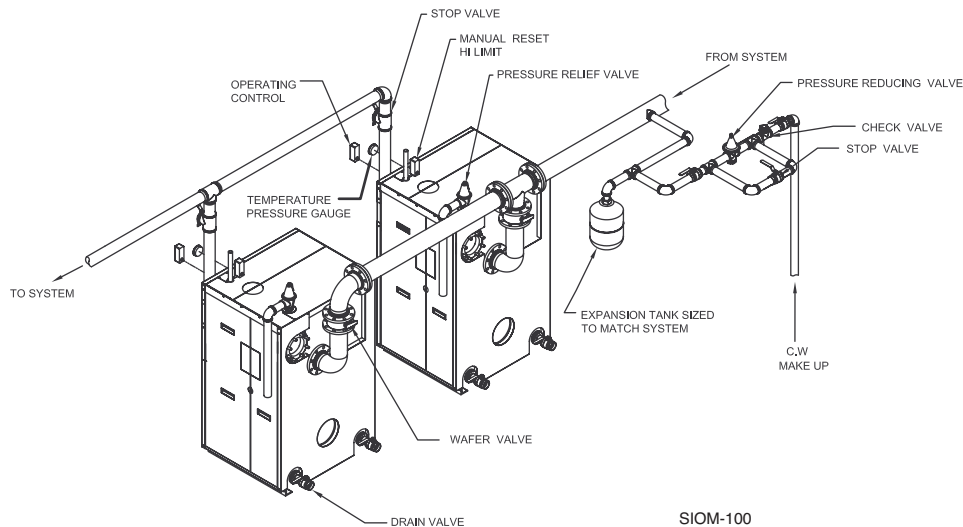
A removable elbow or section of pipe must be attached to the back section return port to allow for RTS removal should removal be required.

BASIC GUIDELINES WOULD BE:

RTS efficiently protects from thermal shock, however the boiler cannot be operated as a condensing boiler.

1. The boiler shall reach and maintain a minimum outlet water temperature of 140° F within 10 minutes of burner operation.

2. For low water temperature hydronic systems such as water source heat pumps and snow melt, the minimum outlet water temperature shall reach and maintain 160° F within 10 minutes of burner operation.



SIOM-100

Typical piping arrangement



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