



TH-500ZX “ZeroFlash” Steam Fired Converter Water Heater Specification

General: Furnish horizontal type steam fired building heat converters as complete factory packages ready for installation and steam tested with the following:

Heat exchanger shall be ASME Code constructed and stamped in accordance with Section VIII Division I, for unfired pressure vessels rated for 150 psig @ 375°F tube side and 150 psig @ 375°F shell side. Shell construction shall be fabricated steel with rear steam entry to completely avoid tube impingement upon entry, 18 gauge seamless copper tubes, carbon steel tube sheet, and heavy close grain cast iron or fabricated steel head.

Heat exchanger shall be pre-insulated with 2” of high density fiberglass with a metal jacket covering.

Furnish with a pressure safety relief valve ASME Code VIII stamped on the shell set @ 15 psig.

Furnish with a complete inlet steam control valve assembly to control both steam pressure to 1psig in the shell and outlet water temperature simultaneously. The assembly shall include an inlet isolation valve, strainer, bypass with globe valve, and steam separator with steam trap. The steam control valve shall have single seated balanced trim construction with a soft steam seat for dead tight Class VI shutoff. Valve to be electronic fail safe operation with 100:1 flow control turndown and outlet noise level to 82 DBA maximum. Pneumatic air supply not required.

Furnish with a Float & Thermostatic Steam Trap rated for the capacity of the unit with outlet isolation valve.

Furnish with a UL Listed Digital microprocessor temperature pressure controller with electric controls and high temperature safety shutdown. Controller shall have a dual function that shall control outlet temperature from the tube side and pressure to a 1 psig on the shell side. Condensate discharge shall not flash under any flow condition. Controller shall have a high temperature alarm and shutdown, white power on lights, red alarm lights, and shall be mounted complete and wired to the unit. The controller shall accept a 4-20 ma input signal from a building management controller to automatically reset to outlet water temperature to outside temperature, or change to outlet water temperature set point as required within range, and shall have remote start stop function. Controller also can take up to three run permissive inputs and will have R485, or Modbus communications capability.

System will be completely mounted on a powder coated steel frame, piped, wired, and steam tested complete before shipment. Testing documentation will be furnished with U-1 ASME Code Data Sheet.

Unit shall be Thermaflo Engineering Company model TH-500ZX

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