



TH-500VX “Vacuflo” 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 full vacuum to 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, steel tube sheet, and fabricated steel head.

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

Furnish with a pressure safety relief valve ASME Code stamped on the shell.

Furnish with a complete inlet steam control valve assembly to control both steam pressure to a vacuum 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 electric operation with 100:1 flow control turndown and outlet noise level to 82 DBA maximum.

Furnish with a steam-operated vacuum condensate return pump, closed loop configuration with no vent to atmosphere, reservoir chamber, inlet and outlet check valves, inlet and outlet isolation valves, exhaust piping with air vent, and complete motive steam piping with drip trap. All condensate piping shall be welded complete at all points possible and shall be vacuum rated.

Furnish with a UL Listed Digital microprocessor temperature pressure controller with electronic controls. Controller shall have a dual function that shall control outlet temperature from the tube side and pressure to a vacuum on the shell side. Controller shall have a high temperature alarm and shutdown, white power on lights, red alarm light, 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.

Unit shall be Thermaflo Engineering Company model TH-500VX or equal by TACO, RECO, or Bell and Gossett.

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