



VSH Storage Water Heater Specification

General: Furnish vertical storage type domestic water heaters as a complete factory tested package ready for installation, using high temperature hot water as the heating source.

Tank shall be ASME Code constructed and stamped in accordance with Section VIII, Division 1, for unfired pressure vessels, and rated for 125 psig @375F. Shell construction shall be carbon steel with glass lined interior NSF 61 approved for potable water. All couplings and flanges shall be SA182-304 or SS304 material. Exterior shall be prime painted and insulated.

Internal tube bundle shall be ¾" 20 Gauge copper seamless tubes with 304 SS tube sheet & tube separators, and close grained cast iron or fabricated steel head. Tube side ASME rated for 150 psig @ 375F.

Insulation shall be 2" high-density fiberglass with a stucco embossed metal jacket outer covering.

Furnish with a bronze pressure-temperature relief valve set at 125 psig @ 210f, ASME Code rated for the total btu/hr capacity of the heater. Relief valve to be installed on the tank per manufactures recommendations.

Furnish with 316L Stainless Steel recirculation pump with check valve and isolation valves.

Furnish with a 4½" dial thermometer with SS well 0-250F range.

Furnish with a single-seated, BV type control valve with Stainless Steel body and trim and dead tight Class IV shutoff. Control valve to be electronic type with fail close spring return actuator rated for pressure and temperature of service.

Controls:

Unit shall be supplied with digital microprocessor PID temperature controller, with electronic output to single-seated control valve. Controller shall limit and control heating fluid flow rate to control outlet water temperature +- 4 degree F. Controller shall have an adjustable high-limit shutoff that will close inlet water to the control valve at high limit set point. Control panel shall have white power 'on' light and red 'over temperature' light. Controller shall automatically reset when normal operating temperature limit is restored. Control panel shall be UL Listed with NEMA 4 rated enclosure.

Unit shall be hydro and on-line operationally tested before shipment to the field with certified test papers furnished, as manufactured by Thermaflo Engineering Company, Charlotte, North Carolina.