

# Master Specification: Model F

JOB NAME \_\_\_\_\_

ENGINEER \_\_\_\_\_

REPRESENTATIVE \_\_\_\_\_

CONTRACTOR \_\_\_\_\_

## GENERAL

Provide a quantity of \_\_\_\_\_ instantaneous steam fired water heater(s) Model no. \_\_\_\_\_ as manufactured by HUBBELL, Stratford, CT. The water heater(s) shall be factory assembled, packaged and ready for service connections. The entire unit shall be factory supplied with the necessary structural support stand to raise the heater the proper distance off the ground to allow for immediate installation in the field. The unit must be designed and fabricated in strict conformance with the ASME code Section VIII UM, Division I and stamped, certified, and registered with the National Board of Boiler and Pressure Vessel Inspectors. The heating coil and all other water carrying components shall be rated for 150 psi (225 psi TP) working pressure. The unit shall not contain any storage capacity nor require the use of thermostatic control devices or a temperature/pressure relief valve. The heater(s) shall be capable of maintaining the set temperature within  $\pm 4^{\circ}\text{F}$  over a flow range of a few percent to 100% rated capacity.

## HEATING COIL

The water heater shall be rated to heat \_\_\_\_\_ GPM of water from \_\_\_\_\_  $^{\circ}\text{F}$  to \_\_\_\_\_  $^{\circ}\text{F}$  when supplied with \_\_\_\_\_ psig of steam to the heater. The heating coil shall be constructed of single wall ( **Optional Specification:** Double Wall) copper tubes ( **Optional Specifications:** Admiralty, 90/10 Copper-Nickel, Stainless Steel [Type 304 or 316]) spirally wound and brazed/welded into the manifold. No baffles or other supports shall be used in the shell. The coil must be capable of being removed for inspection and service without breaking any threaded steam or water connections or removing the unit from its installed position.

## HEAT EXCHANGER

The heat exchanger shall be Ductile Iron ( **Optional Specification:** Cast Steel, Cast Bronze, 90/10 Copper-Nickel, Stainless Steel (Type 304 or 316) construction and shall be factory insulated to improve efficiency and reduce heat loss. The heat exchanger shall also be encased in a heavy gauge galvanized steel shroud to protect personnel from accidental contact with the exterior of the heat exchanger.

## OPERATING CONTROLS

The water heater shall be supplied with all steam condensate controls factory assembled, piped and tested, including a drip trap, main condensate trap, and strainers. The heater(s) shall incorporate an integral safety system which automatically suppresses over-temperature conditions without the use of electrically operated devices. A steam pressure gauge (30" Hg - 30 psig) and a combination water temperature/pressure gauge (70-270 $^{\circ}\text{F}$ , 0-200 psi) are supplied and shipped loose for in-the-field installation.

A steam pressure reducing valve (shall, shall not) be provided by the factory to limit the steam supply pressure in the heat exchanger shell to a maximum of 15 psi ( **Optional Specification:** \_\_\_\_\_ psi). The pressure reducing valve shall be Cast Iron ( **Optional Specification:** Cast Steel) construction and shipped loose for in-the-field installation.

In addition, the water heater may be supplied with the following optional features:

- Option** Recirculation package including one (1) 1" 3-way diverting valve, one (1) 1" globe valve, and two (2) 1" check valves. Please specify: Diverting valve is (fixed or adjustable) temperature range type. Recirculation package components (shall or shall not) be factory piped and assembled on the water heater.
- Option** Single solenoid safety system factory assembled to open the sensing line to the blending valve and thereby closing the blending valve in the event water temperature exceeds the hi-limit set point. Please specify automatic or manual reset type. Requires 120 volt, 5 amp electrical service.
- Option** Double solenoid safety system closes the steam supply to the heat exchanger in addition to closing the blending valve. Requires manual resetting. Requires 120 volt, 5 amp electric service.
- Option** Heat exchanger coil supplied with a factory packaged Klean-Koil™ System for quick in the field removal of mineral deposits in the coil. System includes factory installed coil connections for acid cleaning, acid pump with connections, acid holding container and 1 gallon of acid cleaner.
- Option** A steam pressure relief valve rated at \_\_\_\_\_ psi.

## WARRANTY

The water heater shall be guaranteed for a period of five (5) years Non-Pro Rated from date of shipment. ( **Optional Specification:** ten (10) year Non-Pro Rated Warranty). Specifically, the coil assembly shall carry an unconditional, Non-Pro Rated five (5) year guarantee from failure due to thermal shock, mechanical failure, or erosion. Additionally, the heat exchanger shell shall be warranted against all failures for the same five (5) year period. All other components including the blending valve and components shall be warranted for a period of one (1) year against failure due to defects in materials or workmanship.



Committed to continuous improvement...

Continuing research results in product improvement; therefore specifications are subject to change without notice. For the most updated information, consult the factory directly.

