



Instantaneous Double Wall Water Heater Package Specification Steam to Water Type

I. Product Specifications

A. General Designs

1. The instantaneous water heater shall operate on water differential using the feedforward principal. A feedback temperature control device with capillary system shall not be acceptable.
2. The water controlling valve of the unit shall be mounted integral to the heat exchanger without the use of connecting piping.
3. The instantaneous water heater shall not use copper lined storage tanks.
4. The controlling valve of the instantaneous water heater shall fail in the closed position to prevent overheating and scalding.
5. The instantaneous water heater shall be of the horizontal shell and tube design avoiding vertical removal of coils. No overhead clearance shall be required for servicing.
6. The instantaneous water heater shall have easy access to the individual tubes without moving the heater from its installed position.
7. The tube bundle shall be fixed on one end and free-floating on the other end for easy removal.
8. There shall be open vents to atmosphere between tube sheets to detect tube failure.
9. The instantaneous water heater shall be pre-piped with only steam, water and condensate hook-ups necessary.
10. The instantaneous water heater shall be mounted on an angle iron frame.
11. The package shall be pre-piped with all the necessary pipe, valve fittings and gauges.
12. The frame must be able to be mounted to the floor and wall.
13. If the package consists of multiple instantaneous water heaters, the instantaneous water heaters must be pre-piped such that each unit could be run separately or together.

B. General Performance

1. The maximum water pressure drop shall not exceed 10 psig.
2. Outlet water temperature shall be controlled to within plus or minus 4°F.
3. Operational steam pressure shall be 2 to 15 psig.
4. Operational water pressure shall be 20 to 150 psig.

C. Materials of Construction

1. The shell of the heat exchanger shall be of carbon steel and designed for a maximum allowable pressure of 150 psig.
2. The inner tubes shall be 5/8" 18 BWG copper tube expanded into brass tube sheet. The outer tubes shall be 3/4" straight finned copper tubes expanded into steel tube sheet and designed for a maximum allowable pressure of 200 psig.
3. The water controlling valve body shall be bronze with brass and/or stainless steel internals.
4. The stand shall be fabricated of 2" carbon steel angle iron.
5. The water pipe shall be Type L copper.

II. General Specifications

A. Instructions

1. Maintenance data, operating instructions and adjustment procedures shall be included.

B. Warranty

1. The instantaneous hot water heater package shall have a two-year guarantee against defective material or faulty workmanship.
2. The tube bundle shall have an unconditional 10 year guarantee against failure caused by thermal shock or mechanical failure, but not against gasket failure or damage caused by corrosion, improper cleaning or lack of proper cleaning.