



# VAUGHN HEAT PUMP WATER HEATER

## Master Specification Form

### GENERAL

Provide a quantity of \_\_\_\_\_ high efficiency heat pump electric water heater(s) Vaughn Model No. \_\_\_\_\_. The entire unit is to be complete with all operating controls and require only plumbing and electrical service connections. The tank shall be all welded steel commercial construction designed for 150 psi working pressure and contain (40, 50, 65, 80, 119) gallons of storage. The tank is to be lined with seamless Hydrastone cement to a minimum thickness of 1/2" on 100% of all interior tank surfaces and does not require any type of sacrificial anode. The tank shall be designed and fabricated with non-ferrous copper-silicon threaded tappings and non-ferrous inlet and outlet piping for maximum corrosion resistance. Steel tank tappings will not be acceptable. The entire tank is to be insulated with a minimum of 3" thick CFC free polyurethane foam insulation that exceeds the latest ASHRAE standard for stand-by heat loss. The complete heater shall be supplied with a high impact colorized composite protective jacket which cannot rust or corrode and does not require painting. The unit shall bear the cULus listing mark certifying the entire water heater.

The cold water inlet shall be 3/4" Female NPT (Optional **Specification:** 1.5" Male NPT ) and include a non-corrosive diffuser which prevents incoming cold water from mixing too rapidly with hot water in the tank. A 3/4" hose connection drain is supplied. The hot water outlet shall be 3/4" Male NPT ( **Optional Specification:** 1.5" Male NPT ) and shall include a factory installed built-in heat trap to prevent water from radiating through the piping during stand-by periods. A 1/4" tube condensate connection shall be provided for connection to suitable drain. A separate 3/4" Female NPT tapping is to be provided for relief valve installation. An ASME/CSA rated automatic reseating combination temperature and pressure safety relief valve set at 150 psi and 210°F shall be factory supplied.

### HEATING CAPABILITY

The water heater shall be factory integrated with a built in air to water heat pump module rated to provide up to 7000 BTU/Hr heating capacity. The heat pump shall be capable of operating in ambient air temperature as low as 40°F and must be installed in a 10' x 10' x 7' room (700 Ft3), or if smaller, louvers shall be provided sufficiently sized to allow 450 CFM air flow. The fan shall have two speeds in order to optimize efficiency and minimize airflow when desired. The refrigerant shall be CFC free environmentally friendly R426A. The heat exchanger shall be non-ferrous construction rated for 150psi WP. Two incoloy sheathed immersion electric resistance heating elements rated 3800 watts each at 240 volt 1 phase ( **Optional Specification:** \_\_\_\_\_ Watts, \_\_\_\_\_ Volts, \_\_\_\_\_ Phase, Hz ) shall be installed in the storage tank to provide backup heating capability. An integrated electronic controller with digital display shall provide the user interface and shall display operating and service information.

In addition, the water heater shall be equipped with the following optional features:

OPTION \_\_\_\_\_  
 OPTION \_\_\_\_\_  
 OPTION \_\_\_\_\_

### WARRANTY

The water heater manufacturer shall warranty all electrical components against defects in workmanship and material for a period of one (1) year from date of start-up, all heat pump components for six (6) years and the pressure vessel for ten (10) years from date of start-up, provided that the unit is installed and operated within the scope of the tank design and operating capability. Each water heater shall be shipped with a complete set of installation and operating instructions.