

# Commercial Products

## Water Sourced Hot Water Heat Pumps

<b>Model Number</b>	744-HCW-134
<b>Hot Water Generating Rate (L/Hr)</b>	4837
<b>Heating Capacity (kW)</b>	225.0
<b>Cooling Capacity (kW)</b>	172.8
<b>COP (Heating)</b>	3.88
<b>Power Input (kW)</b>	57.99
<b>Evaporator Pressure Drop (kPa)</b>	70
<b>Typical Operating Amps (Amp)</b>	160
<b>Max Amps (Amp)</b>	240
<b>Voltage/Hz/Phase</b>	380-420 / 50 / 3
<b>Source Water Flow Rate (LPH)</b>	29,720
<b>Hot Water Flow Rate (LPH)</b>	9,675
<b>Compressor Oil</b>	ICI EMKARATE RL 32H
<b>Refrigerant</b>	R134a
<b>Maximum Water Temperature (°C)</b>	70
<b>Connections</b>	DN50/DN 80 Copper
<b>Condenser Pressure Drop (kPa)</b>	240
<b>Sound level (dBA)</b>	65
<b>Dimension (Width x Depth x Height/mm)</b>	4300 x 1980 x 1500
<b>Weight (kg)</b>	4,120 kg

## **1. General**

Quantum 268HCW2-134 water sourced hot water heat pumps are shipped complete from the factory ready for installation and use. They are shipped complete with all factory wiring, piping, controls and refrigerant charge (R134a).

## **2. Unit Casing**

The unit casing is constructed of heavy gauge, zinc coated, galvanized steel. Exterior surface is cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit surface is tested to withstand a 500 consecutive hour salt spray durability test. Stainless steel unit casing is available on request.

## **3. Compressor**

Compressors are hermetic scroll compressors. The motor is suction gas-cooled and has a voltage utilization range of plus or minus 10 percent of nameplate voltage. Compressors also include an internal overload protection.

## **4. Condenser**

Double wall heat exchanger with air venting is employed. The heat exchanger is a tube-in-tube type and in coil shape. The outside tube is seamless steel and the inner tube is copper. The design and operational characteristics of the condenser units meet and exceed all local and international potable water regulations.

## **5. Refrigeration Components**

Refrigeration circuit components include filter drier, sight glass with moisture indicator, liquid line solenoid valve, thermal type expansion valve. The units come complete with operating charge of refrigerant R134a.

## **6. Controls**

The hot water heat pump is completely factory wired with necessary controls and terminal block for power wiring. Controls include: Microprocessor, timer, and thermistors installed to measure water temperature, evaporator temperature, and compressor discharge temperature. Control wiring is a 24-volt control circuit which includes control transformer.

## **7. Safety**

Thermistors along with all necessary components work in conjunction with the control system in order to provide the unit with the following safety measures; high discharge pressure, low suction pressure, electrical overload through the use of definite-purpose contactors, and circuit breaker, overheat, lowfluid flow, and phase balance.

## **8. Flow switch**

Required as a safety interlock to prevent operation of unit without water flow.