



HW2-21/65 Heatwringer® RECLAIM HEAT WATER HEATER MODULE

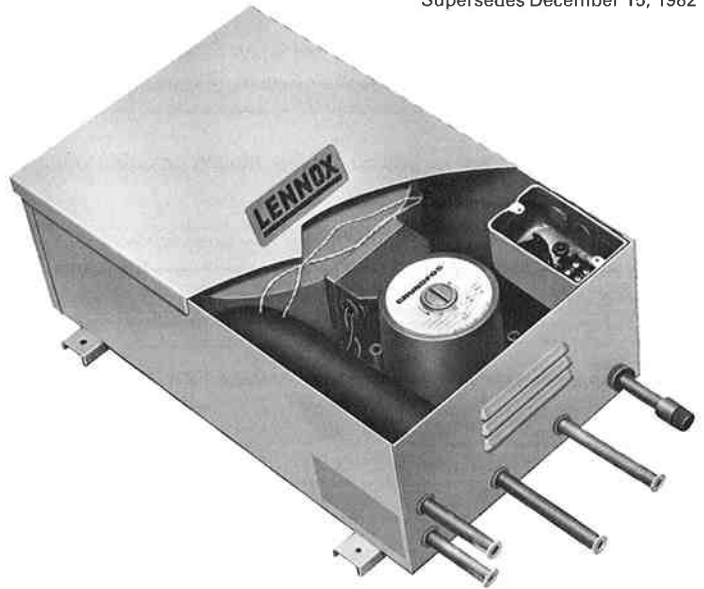
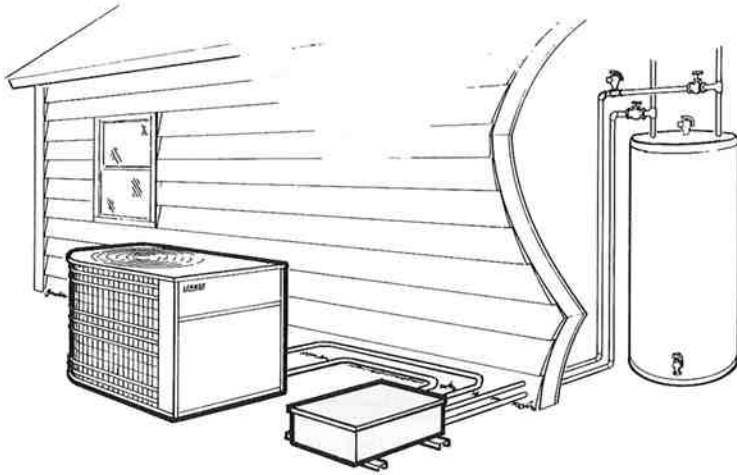
HW2

Bulletin #490028

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Supersedes December 15, 1982

Typical Application



Reclaim Heat — Water Heater Module Increases Air Conditioning Efficiency And Uses Wasted Heat To Provide Free Hot Water

The Lennox HW2-21/65 water heater module is a sophisticated heat recovery system. In conventional air conditioning systems, a considerable amount of heat is generated through normal operation. This heat is ordinarily released to the air outside the conditioned area. The water heater module utilizes a large portion of this heat to heat water for domestic use. In the process, the HW2-21/65 also reduces operating pressures and condensing temperatures minimizing the energy demand on the outdoor unit. In essence, the water heater module reduces operating costs while providing a free source for heating water. Basically, the water heater module is an in-line heat exchanger that connects between the compressor and outdoor coil. The superheated refrigerant usually up to 100°C (212°F), heats the water. The simultaneous process of water being heated by the high temperature refrigerant and the refrigerant being cooled by the low temperature water results in the dual benefit of usable hot water and higher air conditioning efficiency.

Application — The HW2-21/65 water heater module is applicable to remote or packaged air conditioning or heat pump systems with nominal cooling capacities of 5 to 18 kW (1-1/2 to 5 tons). System must be equipped with an expansion valve. The HW2-21/65 must be installed in the horizontal position within 3m (10 ft.) of the outdoor unit.

System Operation — The HW2-21/65 module contains a water circulating pump, refrigerant discharge thermostat, high temperature limit, freeze-stat, water regulating valve, insulated heat exchanger and wiring junction box. The circulating pump is actuated by the refrigerant discharge thermostat upon sensing the presence of hot discharge gas from the outdoor unit. The hot discharge gas circulates through the double-wall heat exchanger giving up its heat to the cold water. The water regulating valve monitors the leaving water temperature and restricts water flow below the temperature setting. As the inlet water (storage) temperature reaches approximately 66°C (150°F), the high temperature limit will turn off the circulating pump thereby limiting the storage tank water temperature. The freeze-stat provides freeze protection by activating the water pump anytime the water temperature reaches approximately 7°C (45°F). See Typical Piping schematic illustration.

NOTE — Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice.

Module Cabinet — Constructed of heavy gauge galvanized steel with a weather resistant paint finish of outdoor enamel. Removable cover allows complete access to interior. Electrical inlet is provided in side of cabinet. Channels raise cabinet off mounting surface.

Water Circulating Pump — Stainless steel, water cooled and lubricated, thermal overload protected, 220/240V — 50Hz — 1 phase, 0.33A, 21W (1/35 hp) output.

Heat Exchanger — Coiled tube-in-tube, double-wall copper. Entire heat exchanger is encased in polyurethane insulation.

Wiring Junction Box — Conveniently located for easy access. Equipped with terminal block for power connection.

Line Connections — Water and refrigerant lines 12.7mm (1/2 in.) outside diameter. Lines are stubbed outside of cabinet for easy field connection.

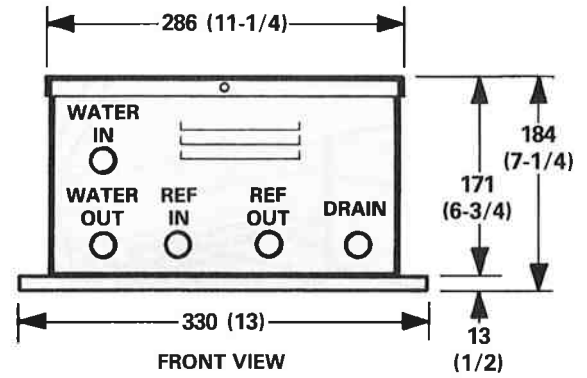
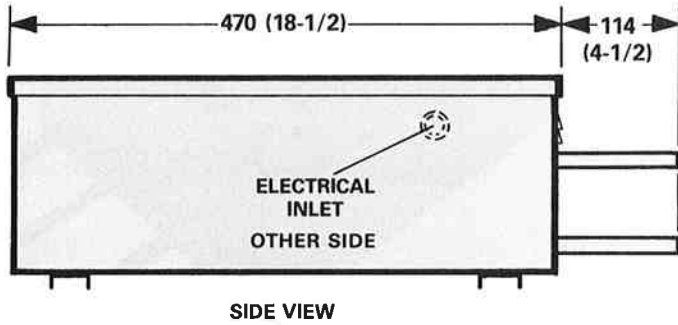
Module Shipping Weight — 12 kg (26 lbs.) — one package in shipment.

Module Performance — 5.5 to 7.5 L/hr per kW of cooling capacity (5 to 7 U.S. gal/hr per ton) of 60°C (140°F) hot water at 24°C (75°F) entering water.

Thermostat Kit (Optional) — Kit (LB-30627DA) is required for heat pump applications. Thermostat field installs in module and prevents operation below 4°C (40°F) outdoor air temperature. Must be ordered extra.

All interconnecting piping and wiring of the module components are factory completed. Installer has only to locate the module and make field piping and electrical connections to complete the job.

DIMENSIONS — mm (inches)



TYPICAL PIPING

NOTE—Insulate All System Piping.

