

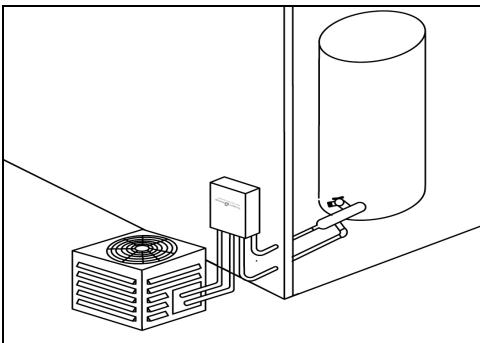
Specification Sheet

HEAT RECOVERY UNIT FOR HOT WATER FROM REFRIGERATION SYSTEMS

- Makes Free Hot Water
- Reduces Energy Costs
- Reduces Head Pressure, Extending Compressor Life
- American Made
- 5 Year Limited Warranty*

DESCRIPTION:

This Residential Heat Recovery Unit captures waste heat discharged from the refrigerant cycle of a refrigeration system (air conditioner, heat pump, walk-in cooler or freezer etc.) and transfers that heat into a water heater tank, making free hot water. Not only does the HotSpot™ system eliminate or reduce the amount of energy required to produce hot water, but it also improves the cooling efficiency of the refrigeration system. The HotSpot™ is designed to operate with refrigeration systems of 1 ½ to 5 ton cooling capacity. Larger HotSpot™ models are available.



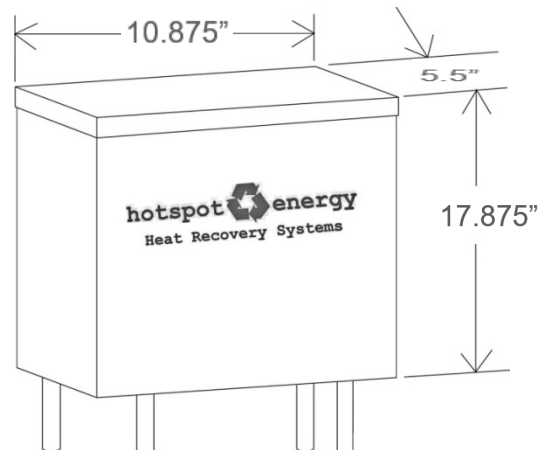
FEATURE HIGHLIGHTS

- Made In USA
- Indoor or outdoor use
- 230 Volt wiring for each connection to compressor contactor
- Factory wired and preset controls
- Fully automatic operation including Built-In Freeze Protection
- High-efficiency all-copper vented double-wall heat exchanger
- Water lubricated low wattage circulator pump with easily replaceable cartridge
- Grounded electrical circuit
- For R410, R134, R22, R500, R406-R409, R438, R32, R454
- AHR 470 (AHRI 470)
- UL, ANSI 61, NSF 63
- Limited Warranty: Heat Exchanger - 5 Years; Pump - 3 Years; All other components - 1 Year



APPLICATION:

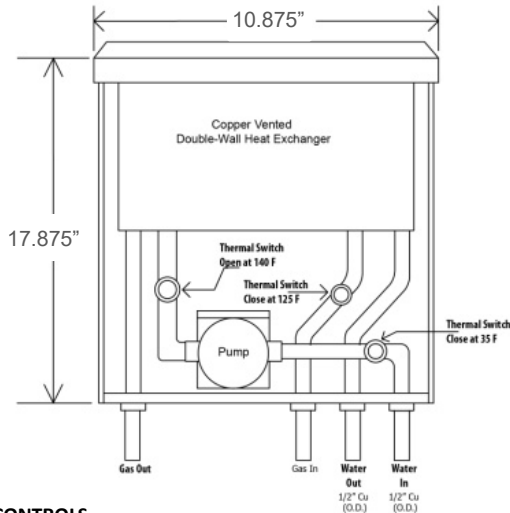
The refrigerant side of the HotSpot™ units heat exchanger is connected in series with the refrigerant hot gas line between the compressor and condenser, or between the compressor and the reversing valve, if installed on a heat pump system. The water side of the HotSpot™ heat exchanger is connected to the water heater tank to form a circulation loop. Power is drawn from the compressor contactor. Waste heat is collected when the compressor operates, and the water circulating from the water heater tank is less than 140°F. A minimum refrigerant temperature of 125 °F is also required by the controls. The freeze protection circuit is activated below 35 °F. The freeze protection function requires a working power source such as the line side of the compressor contactor.



Images are for illustrative purposes only and may not match actual product. Dimensions listed are correct.

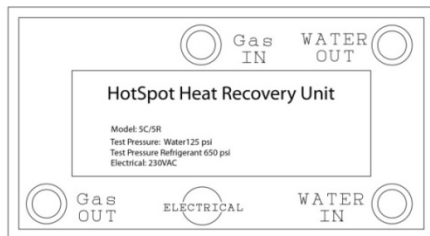
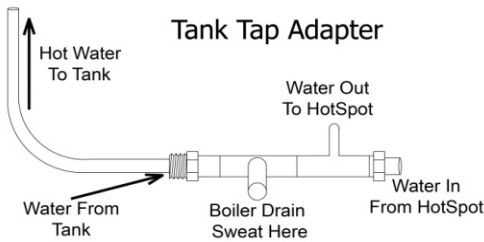
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THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



CONTROLS

All HotSpot™ models contain a high water limit control which is factory set at 140° F, a refrigerant gas low limit factory set at 125° F and an ambient low limit which will cycle the unit to circulate water independent of compressor operation to prevent freezing when outside temperature is below 35° F. The controls are sealed, bi-metal thermal switches. They are simple and accurate with no moving parts or electronic components to fail. Switching operation is controlled by two strips of different metals which expand and contract at different rates as they gain or lose temperature. Each switch uses metals engineered for its specific control temperatures. UL 873, UL 60730.



Distributed By:

MOUNTING LOCATION

HotSpot™ Heat Recovery Units may be mounted indoors or outdoors. They must be mounted vertically, at a height above the top of the condenser unit. While normally located outdoors near the compressor equipment, they can be located in any convenient place, such as a utility area or storage room but the refrigerant run should be kept to a minimum.

HEAT EXCHANGER

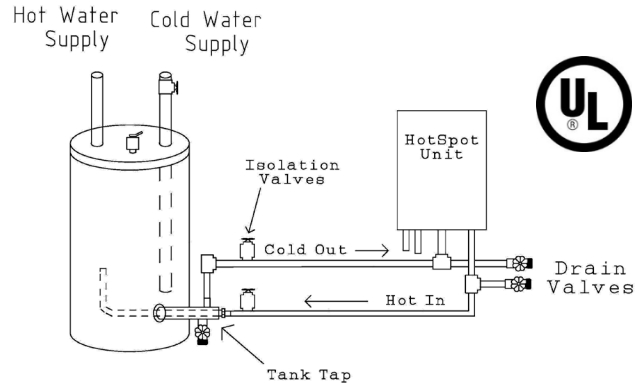
HotSpot™ heat recovery units contain an ANSI 61 (NSF) compliant corrosion resistant all-copper vented double wall heat exchanger. Its special counter-flow twin tube construction is specially designed for refrigerant-to-water heat exchange. Continuously vented along its entire length, the Heat exchanger also meets strict IAPMO safety criteria.

CIRCULATION PUMP

HotSpot™ heat recovery units contain a low wattage wet rotor in-line single stage circulator with a replaceable cartridge that contains all of the moving parts so it can be serviced easily instead of replacing the entire unit. The pump is bronze/stainless steel with ceramic bearings, it is self-lubricating, with no mechanical seal. Pressure rating: 125 psi. Electrical: 230v, 90 watts. UL Listed, ANSI 61/NSF 63 compliant.

WARRANTY

The Heat Recovery unit carries a 5 Year Limited Warranty from the manufacturer, except for the pump and its replaceable cartridge, which carries a three-year warranty.



WATER LINE SIZING

Actual Size O.D.	Nominal Size	NOMINAL COOLING CAPACITY (BTU/H)									
				24,000		36,000		48,000		60,000	
		Maximum One-Way Water Tube Length (Feet)									
1/2	3/8			150		80			40		24
5/8	1/2			----		150			100		50
3/4	5/8			----		----			150		100

REFRIGERANT LINE SIZING

Refrigerant Tube Size O.D.	R-22 Charge Addition Per 10 Feet oz.	NOMINAL COOLING CAPACITY (BTU/H)							
				24,000		36,000		48,000	60,000
		Maximum One-Way Refrigerant Tube Length (Feet)							
1/2	1.0			16		9		5	----
5/8	2.0			30		25		13	9
3/4	3.0			----		30		30	25

THERMAL PERFORMANCE (ARI 470-2001)

Water Side	Refrigerant Side	Nominal 5 ton Cooling Capacity
EWT: 95° F	Entering: 178 F	Heat Transferred: 11,145 Btu/h
LWT: 106° F	Leaving 114 F	Testing Performed by:
Flow Rate 2.0 gpm	Flow Rate 730 lb/hr	Applied Research Labs Miami, FL, Sept 2007