

Item # R6K-PC, Aquefier Series Heat Recovery Units (1.5 to 5 tons)

Heat recovery unit for domestic hot water from residential hvac systems

The AQUEFIER® Heat Recovery Unit captures waste heat discharged from the refrigerant cycle in an Air Conditioning or Heat Pump system, and transfers that heat into a water heater tank, thereby creating low cost hot water for domestic use. Not only does the Heat Recovery Unit substantially reduce the amount of energy required to provide domestic hot water, but it also improves the cooling efficiency of the Air Conditioner or Heat Pump while it is operating. The Model R6K is designed to operate with systems of 18,000 to 60,000 Btu/hr (1-1/2 to 5 ton) cooling capacity.



Specifications

TR	1 1/2 to 5 tons 18,000 to 60,000 Bth/hr
Stop & Relief Valves	PC
Freeze stat	–
Options	PC, Combined Valve Kit and Relief Valve Assembly (\$90.00) L50, Freeze Control Thermostat - White (\$30.00)
Voltage	230 V
Phase	1
Suitable Systems	For Air Conditioners and Heat Pumps
Warranty	AQUEFIER® Heat Recovery Units offer a limited Parts Warranty as follows: Heat Exchanger - 5 Years; Pump - 3 Years; All other components - 1 Year.
Refrig. Conn.	1/2"
Water Conn.	1/2"
Weight	15 lbs



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Application

The refrigerant side of the Heat Recovery Unit Heat Exchanger is installed in the refrigerant hot gas line between the compressor and condenser; or between compressor and reversing valve, if installed on a Heat Pump System. The water side of the Heat Exchanger is connected to the water heater tank to form a circulation loop. Power is drawn from the compressor contactor. Waste heat may be 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 to allow Heat Recovery operation.

APPLICATION CAUTION: Installations subject to freezing ambients must make provision for freeze protection. Heat Recovery Units containing freezestats must draw power from the line side of the compressor contactor. Drainable hand valves are a more positive freeze protection approach.

Specifications and Information

THESE SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

MOUNTING/LOCATION

AQUEFIER® Heat Recovery Units may be mounted indoors or outdoors. They must be mounted vertically, at a height above the top of the condenser. While normally located outdoors near the air conditioning equipment, they can be located in any convenient place, such as the garage or laundry room; but the refrigerant run should be kept to a minimum.

CONTROLS

All AQUEFIER® models contain a water high limit control. It is factory set to 140°F. Models also contain a refrigerant gas low limit. It is factory set to 125°F. Models with optional freeze-protection are equipped with a water low limit. It is factory set to 50°F, and is designed to operate when water temperatures of 40°F or less are detected, in order to provide water circulation independent of compressor operation, in the event of freezing ambients.

HEAT EXCHANGER

AQUEFIER® Heat Recovery Units contain a corrosion resistant all-copper double wall heat exchanger of counterflow twin tube design. Continuously vented along its entire length, the Heat Exchanger meets strict IAPMO safety criteria, and exceeds UL requirements. Operating pressure, 650 psig, refrigerant, 150 psig water side (for use with R-12, 22, 410, 500 and 502.)

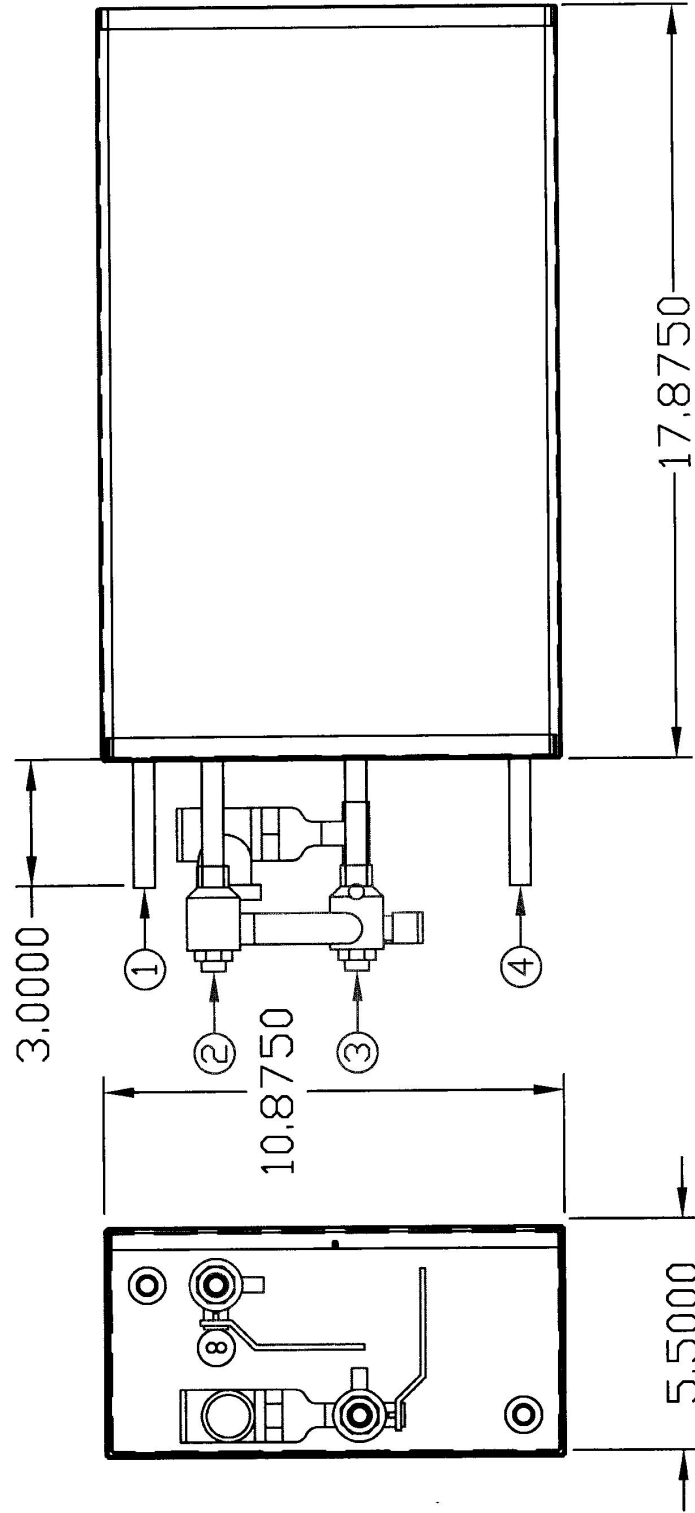
CIRCULATOR PUMP

AQUEFIER® Heat Recovery Units contain a low wattage wet rotor in-line single stage circulator. Standard Models use a Taco 006 series circulator. This water cooled pump is rated at 90 watts, 230 volts and 0.40 amps. It is designed for 125 psi working pressure and up to 220°F fluid temperature. The pump housing is bronze and the bearings are ceramic.





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DESIGN PRESSURE:
REFRIGERANT 650PSIG
WATER 150PSIG

TOLERANCES	DOUCETTE INDUSTRIES, INC.		
DECIMAL	SCALE	DRAWN BY:	RLK
± 0.1250	N/A	APP. BY:	RJR
	TITLE	R6K-PC-410	
	DATE	DRAWING	NUMBER
	10/15/14	96616	96616
	ALL DIMENSIONS INCHES, UNLESS SPECIFIED		

- CONNECTIONS:
- 1.) REFRIGERANT SUPPLY 1/2" OD COPPER SWEAT
 - 2.) WATER RETURN 1/2" LF BALL VALVE
 - 3.) WATER SUPPLY 1/2" LF BALL VALVE
 - 4.) REFRIGERANT RETURN 1/2" OD COPPER SWEAT



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