



SPECIFICATION SHEET

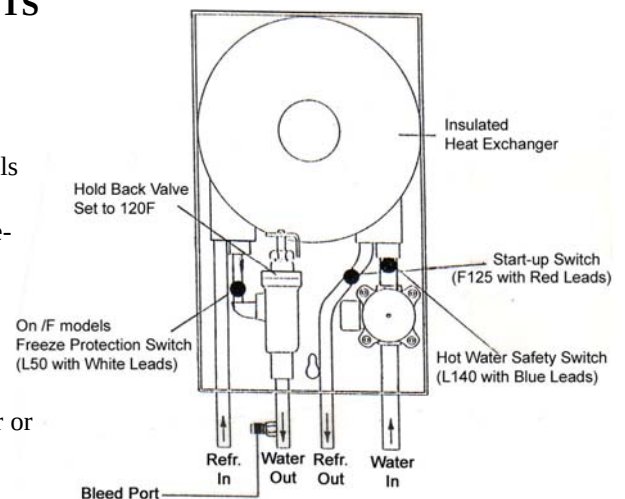
HEAT RECOVERY UNIT FOR DOMESTIC HOT WATER FROM RESIDENTIAL HVAC SYSTEMS

DESCRIPTION:

The ECU Waste Heat Water Heater is connected to a water heater and an air conditioner, heat pump, or refrigeration compressor. A small pump circulates cool water from the bottom of the water heater tank through the heat exchanger. Hot refrigerant gas from the compressor is routed through the gas side of the heat exchanger. An adjustable heat activated valve regulates the water flow rate to maintain the desired temperature at 120 or higher. The fully heated water is returned to the top of the water tank for immediate use. The ECU heat recovery unit also reduces the compressor load, which increases compressor efficiency and extends compressor life. Reclaiming waste heat from high compressor discharge temperatures is a proven principle of energy recycling that produces abundant hot water safely and economically.

FEATURED HIGHLIGHTS

- 230 volt wiring for easy connection to compressor contactor
- Factory wired and preset controls
- Fully automatic operation
- High-Efficiency Vented Double-Wall Heat Exchanger
- Water lubricated low wattage Circulator
- Grounded electrical circuit
- Sturdy Aluminum Cabinet with baked enamel finish for outdoor or indoor use
- Integral mounting bracket
- ARL listed Appliance with UL approved components
- Freeze stat option available
- Adjustable temperature control valve (from 120 -160)



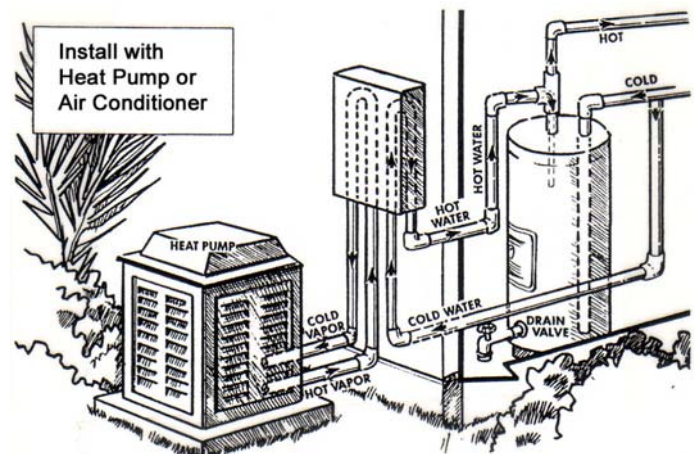
APPLICATION:

All models may be used with systems utilizing R-22, R-134A, R-500, or R-502 refrigerant.

Installation: The unit must be installed vertically with the tubes pointing down. It should be installed as close to the condenser as possible to minimize refrigerant piping runs. All water and refrigerant lines must be insulated. All wiring and piping must conform to local codes.

WARRANTY:

ECU Heat Recovery Units offer a limited Parts Warranty as follows: Heat Exchanger- 5 years; Pump- 3 years; All other components- 1 year.



SPECIFICATIONS AND INFORMATION

THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

MOUNTING/LOCATION:

ECU 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 ECU models contain a water high limit control. It is factory set to 140 F. Heat Pump equipped models also contain a refrigerant gas low limit. It is set to 125 F. Freeze-protected models 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 the event of freezing ambients. DS06 models contain a factory mounted adjustable modulating temperature control valve.

The temperature range is 120F to 160F. The function of this valve shall be to allow water to leave the heat exchanger at a temperature not less than the valve setting. Recommended setting is 120F.

HEAT EXCHANGER:

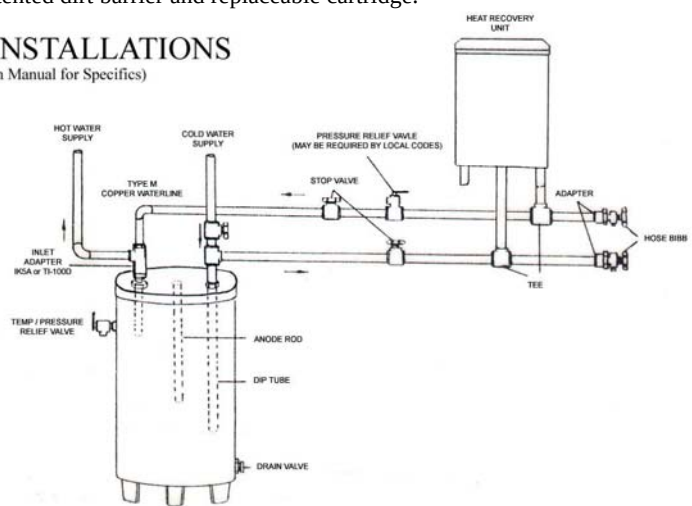
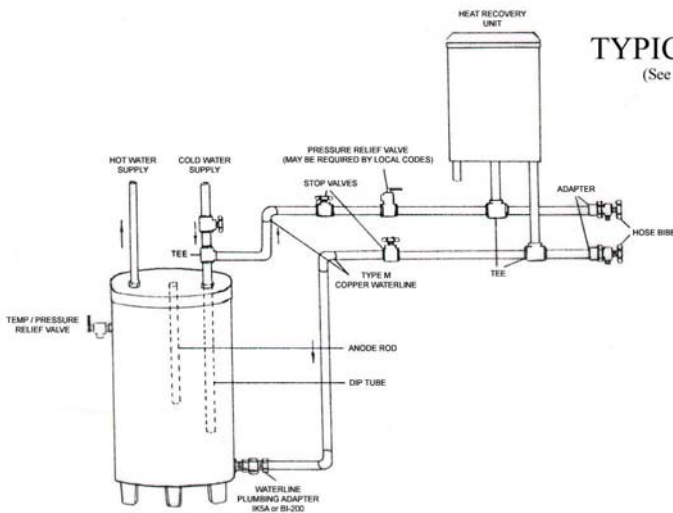
ECU Heat Recovery Units contain a corrosion resistant double wall heat exchanger of counterflow design for high thermal efficiency. Continuously vented along its entire length, the ECU Heat Exchanger meets strict IAPMO safety criteria, and exceeds UL requirements.

CIRCULATOR PUMP:

ECU Heat Recovery Units contain a low wattage direct drive single stage circulator. Standard Models use a Taco 006 series circulator. This pump is water lubricated, water cooled, 3250RPM, 1/40 HP, .38 amps, 230/60/1. UL listed impedance protected motor delivers flow to 12 GPM and head to 10 feet. Patented dirt barrier and replaceable cartridge.

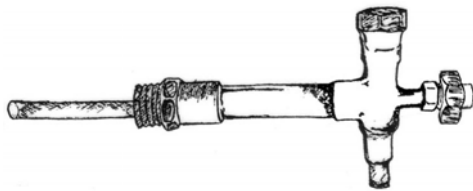
TYPICAL INSTALLATIONS

(See Installation Manual for Specifics)



INSTALLATION KIT (IK5A):

Makes water line installation of the Heat Recovery Unit simple and fast. It works with all residential units, sized 1 ½ ton to 5 ton condensers.



-Eliminates hot and cold temperature variations resulting from water sitting in the lines due to the air conditioner cycling on and off.

-Eliminates the need to cut the domestic water lines, when it is installed in the bottom of the hot water tank.

-Versatile: Can be used in either the top or bottom of the water tank.

STANDARD UNITS

Model	Feature
DS06	Heat Pump equipped
DS06/V	HP equipped with valves
DS06/V/P	HP equipped with valves and PRV
DS06/Dual	Dual circuit HP equipped
Add /F to any above model for freeze protection	

All models suitable for use in 1 ½ to 5 ton systems

REFRIGERANT LINE SIZING

Refrigerant Tube Size O.D.	R-22 Charge Addition Per 10 Ft. in 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

WATER LINE SIZING

Actual Tube Size (O.D.)	Nominal Tube Size (I.D.)	Nominal Cooling Capacity (BTU/H)			
		24,000	36,000	48,000	60,000
		Maximum One-Way Water Line Tube Length (Feet)			
1/2"	3/8"	90	60	40	25
5/8"	1/2"	-	90	70	50
3/4"	5/8"	-	-	90	90

PERFORMANCE RATING:

These units will produce 5-7 gallons per hour of hot water (heated 15 F temperature rise) per ton of compressor rating, based on 250 psi minimum high side pressure using R-22, R-134A, R-500 or R-502 refrigerant.

Example: A 5 ton compressor unit could produce 25 gallons of hot water per hour of compressor run time.

ACCESSORIES

Part No.	Description
IK5A	Universal Installation Fitting
BI-200	Adapts tank drain opening to return HRU water
TI-100D	Adapts tank drain opening to supply & return HRU water
PC kit	Drainable hand valves & PRV for field install