

# Heat Recovery Package



# BOSCH

The Heat Recovery package is a factory mounted option. It consists of a forced pumped unit that employs a circulating pump to move water through a double wall/vented heat exchanger and returns the heated water to the water tank. The water is heated by superheated refrigerant discharge gas from the compressor. This waste heat of the cooling mode captured by the heat recovery increases the capacity and efficiency of the heat pump unit. If the air temperature is uncomfortable coming from the air vents in the heating mode the heat recovery may need to be turned off. In the heating mode the heat recovery captures heat that would normally be used for space heating.

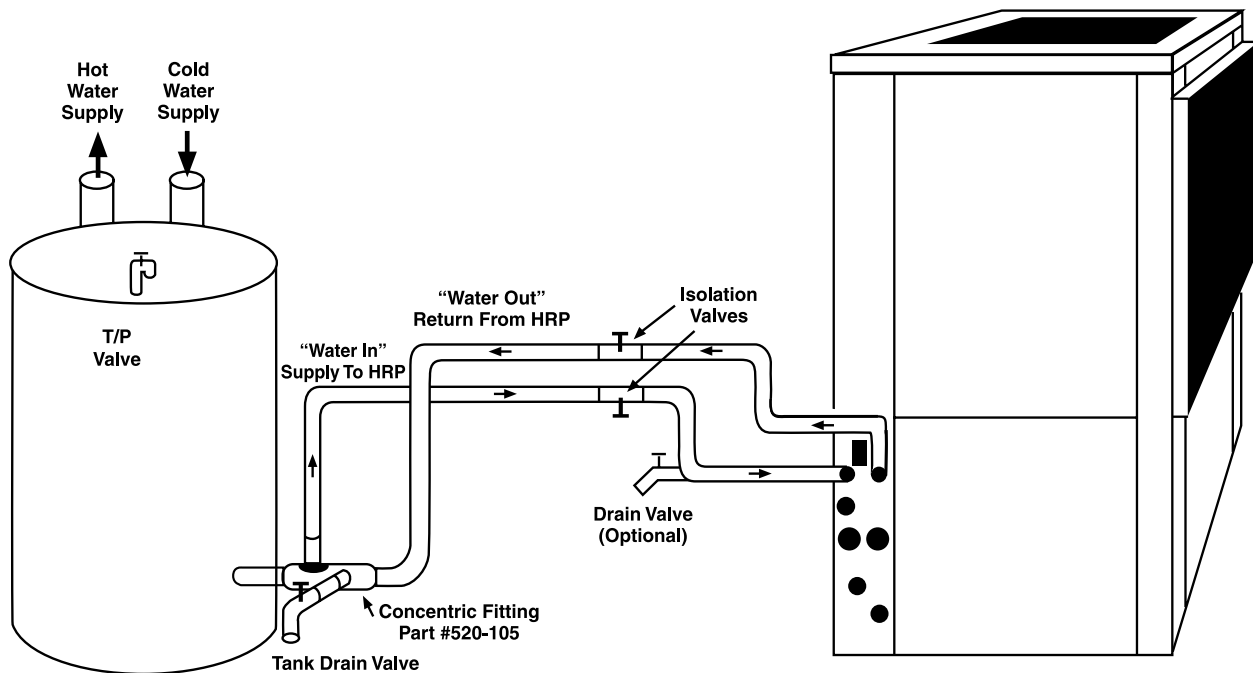


*If heat recovery unit is installed in an area where freezing may occur, the unit must be drained during winter months to prevent heat exchanger damage. Heat exchanger ruptures that occur due to freezing will void the heat recovery package warranty along with the heat pump warranty.*

## WATER TANK PREPARATION:

1. Turn off electrical or fuel supply to the water heater.
2. Attach garden hose to water tank drain connection and run other end of hose out doors or to an open drain.
3. Close cold water inlet valve to water heater tank.
4. Drain tank by opening drain valve on the bottom of the tank, then open pressure relief valve or hot water faucet.
5. Once drained the tank should be flushed with cold water until the water leaving the drain hose is clear and free of sediment.
6. Close all valves and remove the drain hose.
7. Install HR water piping.

## TYPICAL CONNECTION PIPING

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6 720 220 045

Subject to change without prior notice

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### HR WATER PIPING:

All hot water piping should be a minimum of 3/8" O.D. copper tube to a maximum distance of fifteen (15) feet. For distances beyond fifteen feet but not exceeding sixty (60) feet use 1/2" copper tube. Separately insulate all exposed surface of both connecting water lines with 3/8" wall closed cell insulation. Install isolation valves on supply and return to the heat recovery. (Figure #9)

### WATER TANK REFILL:

1. Open the cold water supply to the tank.
2. Open a hot water faucet to vent air from the system until water flows from the faucet, then close.
3. Depress the hot water tank pressure relief valve handle to ensure there is no air remaining in the tank.
4. Carefully inspect all plumbing for water leaks. Correct as required.
5. Purge all air from HR by depressing the schrader valve on the HR Unit. Allow all air to bleed out until water appears at the valve.
6. Before restoring the power or fuel supply to the water heater, adjust the temperature setting on the tank thermostat(s) to ensure maximum utilization of the heat available from the refrigeration system and conserve the most energy. On tanks with both upper and lower elements and thermostats, the lower element should be turned down to 100° F, while the upper element should be adjusted to 120° F. Depending upon the specific needs of the customer, you may need to adjust the upper element differently. On tanks with a single thermostat lower the thermostat setting to 120° F or the "LOW" position.
7. After thermostat adjustments are completed, replace access cover and restore electrical or fuel supply to water heater.

### INITIAL START-UP:

1. Make sure all valves in heat recovery water piping system are open. NEVER OPERATE HR PUMP DRY.
2. Turn on the heat pump. The HR pump should not run if the compressor is not running.
3. Turn HR switch to the "ON" position. The pump will operate if entering water temperature to HR is below 120° F.
4. The temperature difference between the water entering and leaving the heat recovery should be 5° to 15° F.
5. Allow the unit to operate for 20 to 30 minutes to ensure it is functioning properly. The pump should shut off when the water temperature entering the heat recovery reaches 120°F.

