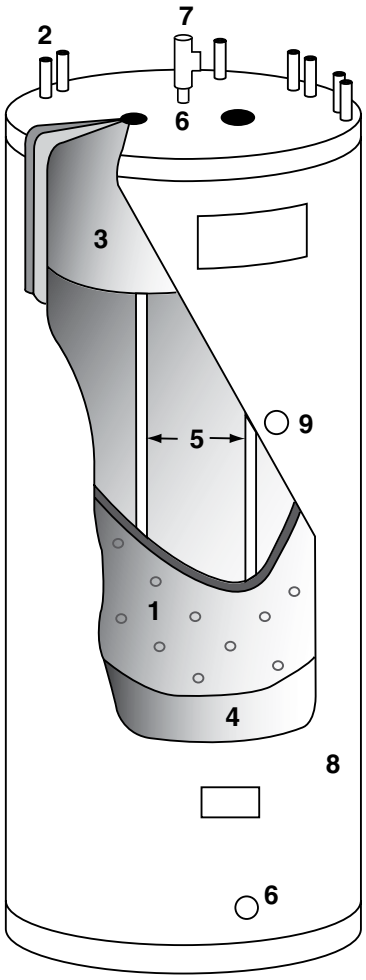
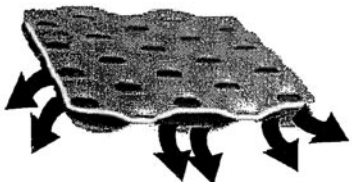
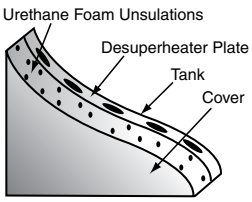
Therma-Stor II-6

Heat Recovery System Food Service Model



Therma-Stor plate design, with rapid, free-flowing paths for refrigerant gas, promotes excellent waste heat transfer throughout the tank.





Other Features and Specifications

- Diameter: 29", Height: 67", Weight: 400 lbs
- 114 gallon nominal water capacity
- Rated for 450 psi refrigerant operating pressure
- 150 psi maximum operating water pressure
- Double wall protection between refrigerant and water
- Double normal water heating tank insulation
- UL Listed
- Approved for Canada

Construction Specifications

1. Vertical six circuit desuperheater plate welded and expanded for internal refrigerant passage.
2. Refrigeration connections are 3/4" O.D. And 5/8" O.D. outlets.
3. Industrial glass lined hot water storage tank.
4. 1-3/4" foam-in-place urethane insulation.
5. Dual anode protection against corrosion for extended tank life.
6. Water inlet and high-temp. outlet are 1-1/4" male NPT.
7. 150 PSI and 210°F pressure/temperature relief valve.
8. Attractive enameled galvanized external wrapper.
9. Medium temperature water out 3/4" NPT midport.

Operation

Therma-Stor II-6 produces and stores hot water by transferring refrigeration waste heat to cold water. This cost-efficient alternative for producing hot water fits any existing refrigeration system and improves the system's efficiency at the same time. Hot water production depends on the evaporator load, run time of the compressor, and water usage.

Application Specification

Therma-Stor II-6 can accommodate evaporating loads of up to 4 tons per circuit when utilizing R-22 or R-502 and 2 tons per circuit on R-12. The individual circuits can be joined at the inlets for larger kilowatt loads. Considering the limited condensing capacity, Therma-Stor's are not intended to substitute the need for air or water cooled condensers.

Specifications subject to change without notice.

Water Temperature Control

A water bleed valve is available for controlling the Therma-Stor water temperature for connected loads of up to 15 tons capacity. Provisions for hot gas bypass controls should be made for total loads beyond the 15 ton water valve bypass limit.

Using capillary tube systems with the Therma-Stor is not normally recommended. Please contact the factory with any questions.

How Much Hot Water Do You Use?

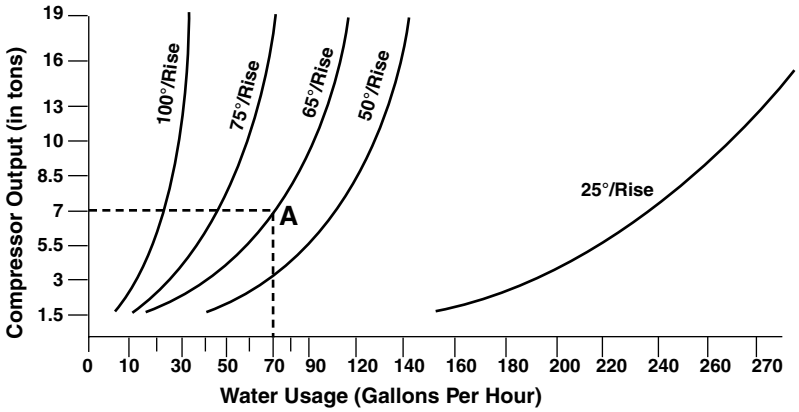
The chart on the right shows the water temperature you can expect at any of the given compressor outputs and water usages.

First, determine your hot water usage in gallons/hour.

Second, determine your compressor(s) output (in tons).

Third, extend the compressor output until it intersects the water usage line on the water heating chart.

Fourth, estimate the water temperature rise from the chart at the point of intersection.



Example:

Given:

- 7 ton compressor(s) output
- 70 gallon/hour water usage
- 65°F cold water supply temperature

Then 65°F cold water supply temp.

Adding +65°F estimated water temp. rise (refer to A on chart)

Equals 130°F total high temperature water output

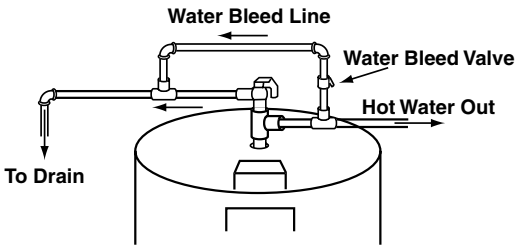
To convert to BTUs reclaimed: Multiply gallons per hour x 8.33 (the weight of one gallon of water) x _____°F rise = _____ BTUs per hour reclaimed.

Example: 70 gallons/hour x 8.33 lbs./gallon/x 65°F rise = 37,902 BTUs/hour reclaimed. Therma-Stor provides a worksheet which can assist you in assigning a dollar value to these BTU's. The form takes into account fuel source, efficiency, and fuel cost (Therma-Stor Return on Investment Calculation Form).

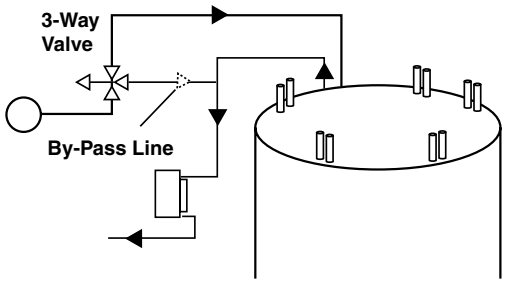
Condenser **Compressor** **See installation instructions for further details.**

Typical Water Temperature Control Piping

(Optional) Water Bleed Valve Example



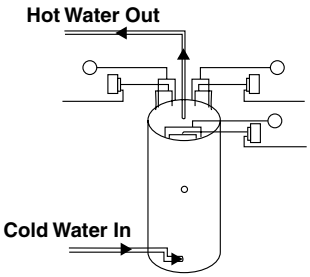
(Optional) Hot Gas By-Pass Valve Example



Basic Therma-Stor HRS Installations

Other multiple combinations up to the six compressor example can be found in the installation instructions.

3 Compressor Example



6 Compressor Example