

THERMAL HEAT PUMP

Energy Concepts Company has scheduled the rollout of a new “standard design” Thermal Heat Pump for the end of May. The initial production model will have a heating capacity of 175 kW, and 70 kW chilling capacity. It will be powered by 105 kW input heat and 2 kW electricity.

Thermal Heat Pumps (THP) are powered almost entirely by heat rather than by electricity. The THP is increasingly recognized as the environmentally preferred method of heat pumping. In comparison to electric heat pumps (EHP), the THP:

- Is not a “fuel-switching” technology like the EHP, i.e. consumes more electricity to conserve gas. Instead, the THP conserves both gas and electricity.
- Does not exacerbate peak electric demand in summer and winter. Instead, the THP reduces demand peaks.
- The THP can be powered by waste heat, exhaust, or solar thermal heat, thus further magnifying the savings.

The new standard design is based upon seven prototypes and four field demonstrations in a variety of applications. It also incorporates the experience of ten additional field demonstrations of closely related products (Thermochiller and Thermocharger) over a wide range of capacities. All together, 22 years of field operating experience has shaped and proven the current design.

The Thermal Heat Pump is the most economical route to large scale reductions in the carbon footprint of water heating and space heating.

