

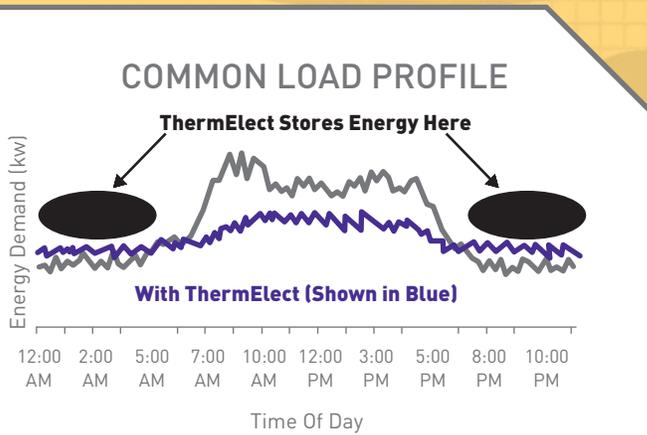
COMMERCIAL, INSTITUTIONAL & INDUSTRIAL HEATING SYSTEM

DEMAND-FREE, OFF-PEAK HEATING

The ThermElect Hydronic is a commercial, institutional, and industrial heating system that blends hydronic heating with Electric Thermal Storage (ETS) technology. During hours when energy costs are lower and/or when kW demand charges are not incurred, the ThermElect system stores electricity as heat in specially designed high density ceramic brick located inside the unit. Through the use of a heat exchanger, this stored heat is transferred from the bricks to a water or a water/glycol solution which is circulated directly to areas where heat is needed or to other various types of heat exchange devices. Schools, hospitals, churches, courthouses, and post offices are just a few examples of facilities that have been successful in reducing their peak demand, better managing their energy consumption, and improving their load factor with off-peak ETS heating systems.

OPERATION

Operation of the system is completely automatic. A sensor monitors outdoor temperature to regulate the amount of heat the system stores in its brick core. A room thermostat regulates the delivery of the demand-free, off-peak heat. Or, if interfaced to a building load management system, the facility manager can control heat storage and air temperature remotely. The built-in microprocessor-based control system allows for easy customization to meet the specific needs of any application. The ThermElect Hydronic is an environmentally friendly heating system offering great safety and reliability with minimal maintenance.



ENERGY AND DEMAND MANAGEMENT

The ThermElect can provide energy and demand management within a facility. With its built-in controls, it is capable of monitoring the total demand of a building by reading the utility meter's pulse signal. Based on the readings, the system automatically regulates its own electric usage. Or, the ThermElect can be interfaced with most other energy and demand management control systems.

FEATURES

- Selectable outlet water temperature (can automatically adjust based on outdoor weather temperature)
- Built-in energy and demand management control center can be used as a stand-alone system or can receive a 4-20mA or 1-5 Volt DC signal from an external energy management system
- Heat storage is regulated automatically or by local control based on heating need and/or power capacity of facility
- Programmable microprocessor-based control system allows for application customization and self-diagnostics
- Digital display provides operating and diagnostic information
- Super insulation package ensures low surface temperatures and minimal static heat dissipation
- Bacnet communication and control interface available
- SSR control available to provide variable input power regulation

APPLICATIONS

- The ThermElect hydronic off-peak electric heating system is extremely flexible and can handle multiple zones. Its versatility allows it to be used in, but not limited to, any of the following applications:
- Primary Space Heating
 - Pre-Heating of Fresh Air
 - Domestic Water Heating
 - Supplement to Forced Air Heating Systems
 - Supplement to or Replacement of Existing Boiler System



701-483-5400
E-Mail: offpeak@steffes.com
Web: www.steffes.com

SPECIFICATIONS

Detailed specifications available at www.steffes.com.
(three phase voltages: 277/480, 347/600, 120/240 and 120/208; single phase voltage: 120/240)

	MODEL 9150	MODEL 9180
Nominal Charging Input	53 kW	80 kW
Storage Capacity (See Note 1)	290kWh (989,480 BTU)	440kWh (1,501,280 BTU)
Approximate Installed Weight	4,670 lbs	6,530 lbs
Pipe Size – Water Inlet & Outlet	1.5"	
Output Water Temp Selection Range	50°F to 185°F (10°C to 85°C)	
Maximum Working Pressure	60 PSIG (standard); 125 PSIG (optional)	
Minimum Flow Rate (Primary Loop)	1 GPM per 10,000 BTU of required output at 20°F (-6.7°C) temperature rise (30 GPM maximum)	
Internal Pressure Drop (assuming 50% glycol mix)	.7 ft @ 15 GPM 1.2 ft @ 20 GPM	1.8 ft @ 25 GPM 2.5 ft @ 30 GPM

NOTE 1: The size and heating capability of the system required for an installation is dependent on the thermal load and the demand profile of the facility. The daily rate structure of the utility can also affect size of furnace needed in the application.



- 1. Electrical Panel
- 2. Digital Display
- 3. Heat Storage Brick
- 4. Heating Elements
- 5. Heat Exchanger
- 6. Water Outlet
- 7. Water Inlet

NOTE: There are required installation clearances.
Go to www.steffes.com for details.