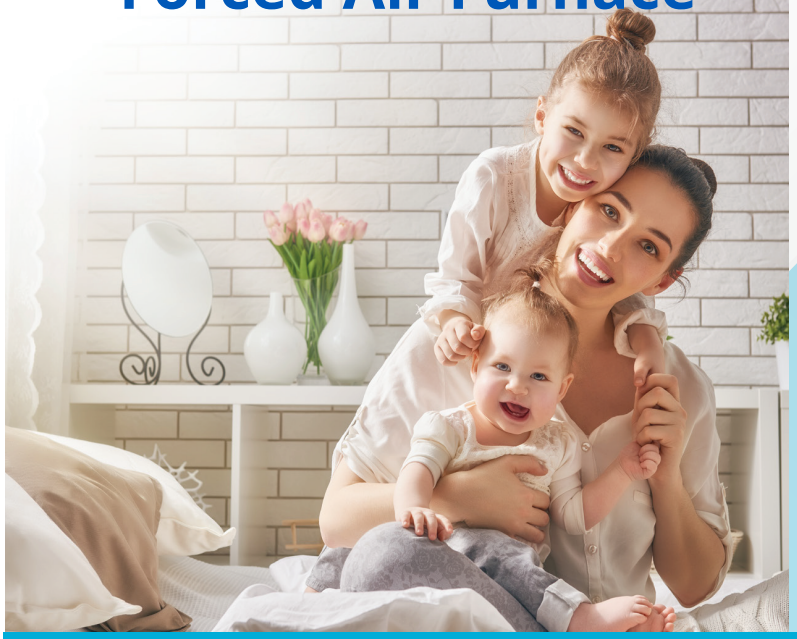
COMFORT PLUS
Forced Air Furnace



STEFFES
CUSTOMER FOCUSED. SOLUTION DRIVEN. FIELD PROVEN.

Off-Peak Heating

The Steffes Comfort Plus Forced Air furnace (4100 series) is a type of Electric Thermal Storage (ETS) system which utilizes low-cost, off-peak electricity to provide economical and comfortable heating.

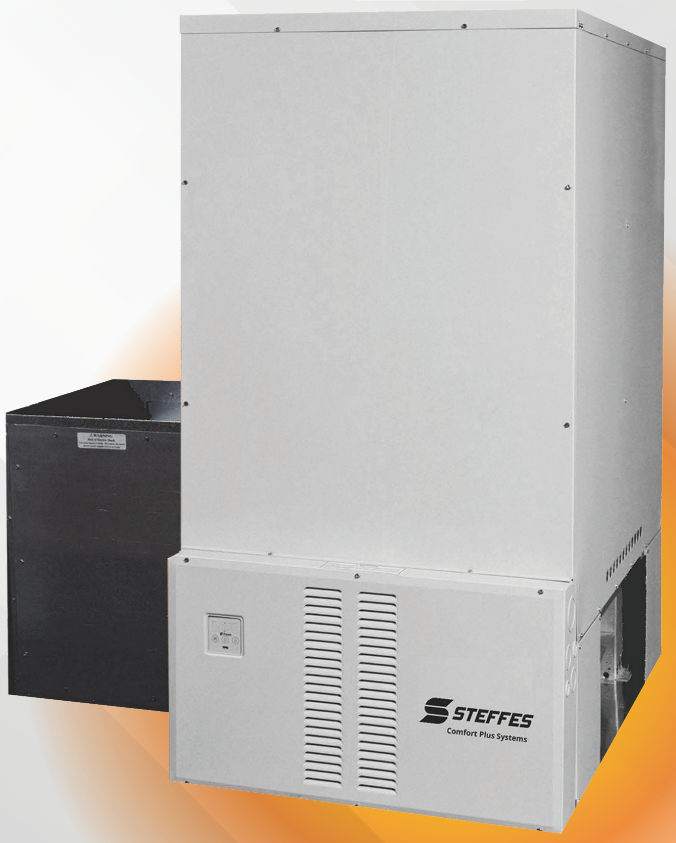
ETS systems convert electricity to heat during off-peak hours and store that heat in specially designed ceramic bricks located inside the unit. Off-peak hours are times during the day or night when the demand for electricity is lower. Because electricity is plentiful, the power company can offer substantial discounts on electricity rates allowing consumers to capture significant savings in their energy bills.

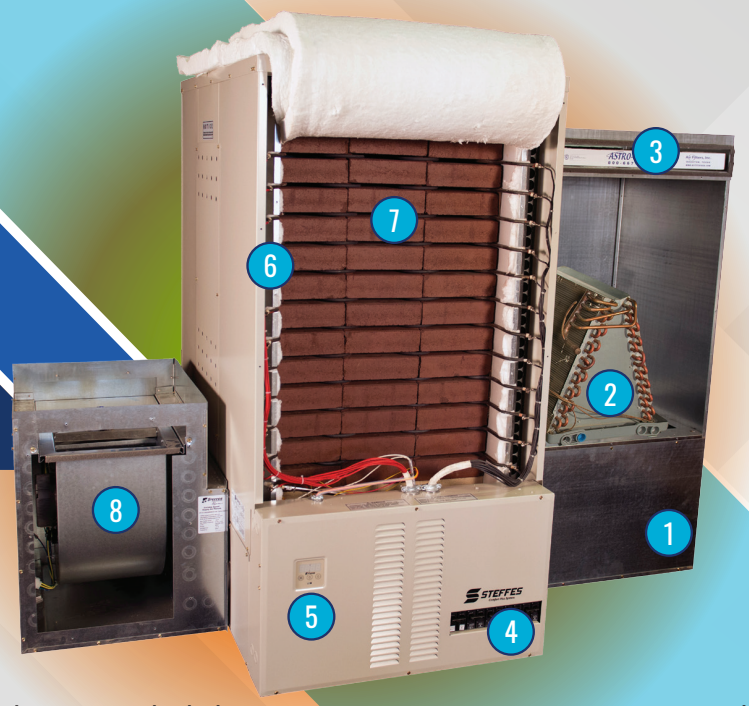
Find Out More at:
www.siea.com/ets

Applications and Operation

The Comfort Plus Forced Air furnace can be installed as a standalone furnace or as a supplement to other heating systems, such as a heat pump. While heat pumps are known for providing efficient low-cost heating and cooling, they require supplemental heat during colder temperatures. When demand for heat is greater than a heat pumps capacity, the Comfort Plus Forced Air furnace adds the precise amount of its stored off-peak heat as needed to ensure constant comfort while still allowing full optimization of the heat pumps efficiency.

Operation is completely automatic. A sensor monitors outdoor temperature to regulate the amount of heat stored in the bricks. The room thermostat is set to control heat delivery so the desired comfort level can be maintained using the safe, clean, reliable and economical stored off-peak heat.





Components

1. Return air plenum (separately ordered or installer supplied)
2. AC or heat pump coil (must be installer supplied, if applicable)
3. Air filter
4. Built-in circuit breakers for power disconnect
5. Programmable microprocessor based control panel and digital display
6. Electric heating elements
7. High density heat storage bricks
8. Supply air plenum with 1/2 HP or 3/4 HP variable speed blower

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1kW = 3412 BTU/hr 1kWh = 3412 BTU

U.S. Pat #5086493 • Canada Pat #2059158

5-year limited manufacturer's warranty

SPECIFICATIONS

For standard 240V units. 208V, 277V, and 347V configurations also available. Contact factory for technical specifications.

MODEL	4120			4130		4140	
Charging Input	14.0 kW	19.2 kW	24.8 kW	28.8 kW	37.2 kW	38.4 kW	45.6 kW
Element Current Draw	59 amps	80 amps	104 amps	120 amps	155 amps	160 amps	190 amps
Circuits Required Elements Blower/Control	1-20 amp 2-30 amp	1-30 amp 2-40 amp	1-40 amp 2-50 amp	4-40 amp	4-50 amp	4-50 amp	4-60 amp
	1-15 amp (7 amps maximum load)						
	Unit is factory-configured with multiple-line voltage, single-phase circuit connections. If single feed to the element and blowers/controls circuits is desired, an optional single-feed kit is available. Phase-balancing is recommended when making connections in 3-phase applications.						
Storage Capacity	120 kWh (409,440 BTU)			180 kWh (614,160 BTU)		240 kWh (818,880 BTU)	
	The size and heating ability of the system required for an application is dependent on the heat loss of the area and the power company's off-peak hours. Refer to the Maximum Maintainable Heat Loss for heating abilities in specific charge strategies.						
Approximate Installed Weight	2,267 lbs			3,139 lbs		3,991 lbs	
	Contact a building contractor or architect if you have structural weight concerns of the installation surface selected. Adhere to all national and local electrical and building code placement requirements for electric heating appliances.						
Unit Dimensions - W x D x H w/o Ducting w/ Factory-Built Ducting (1/2 HP) w/ Factory-Built Ducting (3/4 HP)	29.2" x 47.4" x 46.6" 77.6" x 47.4" x 46.6" 82.1" x 47.4" x 46.6"			29.2" x 47.4" x 57.6" 77.6" x 47.4" x 57.6" 82.1" x 47.4" x 57.6"		29.2" x 47.4" x 68.6" 77.6" x 47.4" x 68.6" 82.1" x 47.4" x 68.6"	
	There are required installation clearances to account for. Contact the factory for information.						
Duct Openings Supply Air Outlet (1/2 HP) Supply Air Outlet (3/4 HP) Return Air Inlet	18" x 22.6" (in factory-built plenum) 22.5" x 22.6" (in factory-built plenum) 10.5" x 22.3" (in unit) or 26.2" x 22.25" (if using a factory-built plenum)						
Maximum Coil Dimensions (W x D x H)	26" x 22" x 31"						
	The factory-built return air plenum is configured for housing an indoor coil. Dimensions listed are that of the inner coil area in this plenum. For larger coils, field provisions to the plenum are necessary or it will need to be supplied by the installer.						
Supply Air Delivery (Field Selectable) 1/2 HP Variable Speed CFM ratings 3/4 HP Variable Speed CFM ratings	1000, 1200, 1400, 1600 1200, 1400, 1600, 2000						
Heating Ability Based on Charge Time (BTU/hr) 8 Consecutive Charge Hours 12 Consecutive Charge Hours 6/4/6/8 Charge Strategy	20,414 30,621 30,621	27,996 41,994 41,994	34,175 45,566 54,242	41,994 62,991 62,991	49,212 65,615 81,363	55,992 83,988 83,988	65,615 87,487 99,735
	The size and heating ability of the system required for an application is dependent on the heat loss of the area and the power company's off-peak hours. If the unit is not installed within the heated area, heat lost statically must be taken into account. Contact a local Steffes dealer or power company for assistance in selecting an appropriately sized system for your specific charge strategy. The 6/4/6/8 strategy listed is 8 hours off-peak at night plus 4 hours off-peak mid-day. (The heating ability figures listed have a heat use allowance factored in for sizing purposes. Average BTU/hr delivery rate is the listed value multiplied by .78 heat use factor.)						

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