



Technical Data Sheet

Room Heating Unit

Electric Thermal Storage Heating System

Models: 2102, 2103, 2104, 2105, 2106

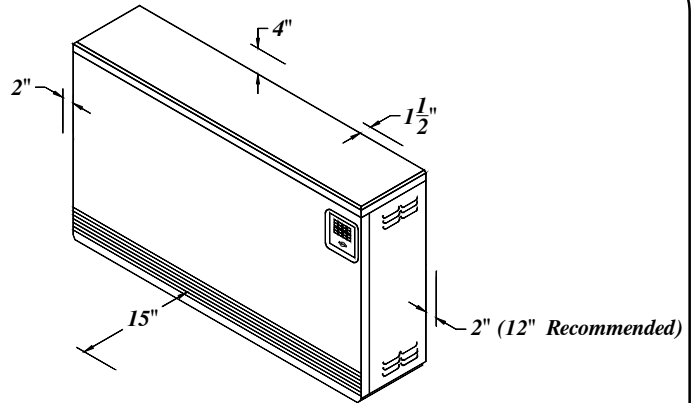


5-Year Limited Manufacturer's Warranty

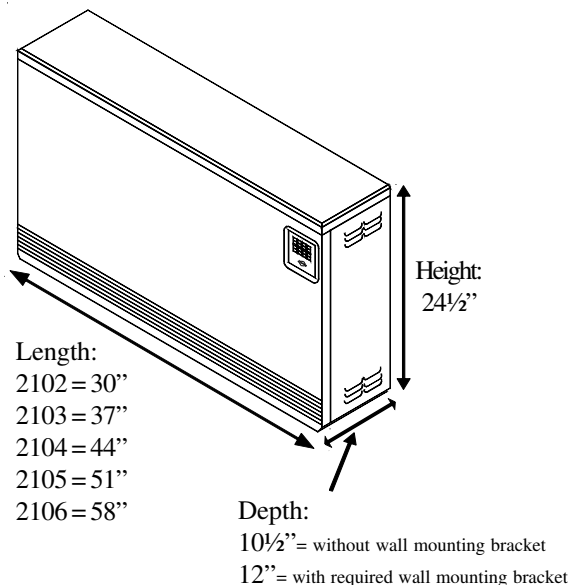


Placement and Clearances

- All heater surfaces must be kept 4" minimum from combustible material.
- A minimum of 12" clearance is recommended on the right side of heater to ensure accurate room temperature sensing and for servicing purposes. If less than 12" is available, an optional remote room temperature sensor is recommended.
- Heater may be recessed into a wall but do not enclose or obstruct access to heaters front panel and grill.
- Weight of heater must be considered when selecting placement location. Refer to specification chart for heater weights.
- Generally, the heater can be placed on any standard flooring. Depending on temperature threshold of floor covering or carpet thickness, it may be necessary to elevate unit off the floor.
- Room heating units are not recommended for applications where petroleum or chemical based contaminants such as paints, varnishes or other combustibles are present in the air. Odors such as these may be amplified. Special requirements must be considered if placing heater in a garage or other area where combustible vapors may be present.
- Avoid installing heater near an open stairwell or near external sources of heat or cold.
- Consult national, state and local building code requirements for electrical appliance to ensure proper installation.



Unit Dimensions



Field Connection and Circuit Breaker Sizing Reference Chart



This chart reflects only the code interpretation of Steffes. It is the responsibility of the installer to comply with all applicable codes and regulations.

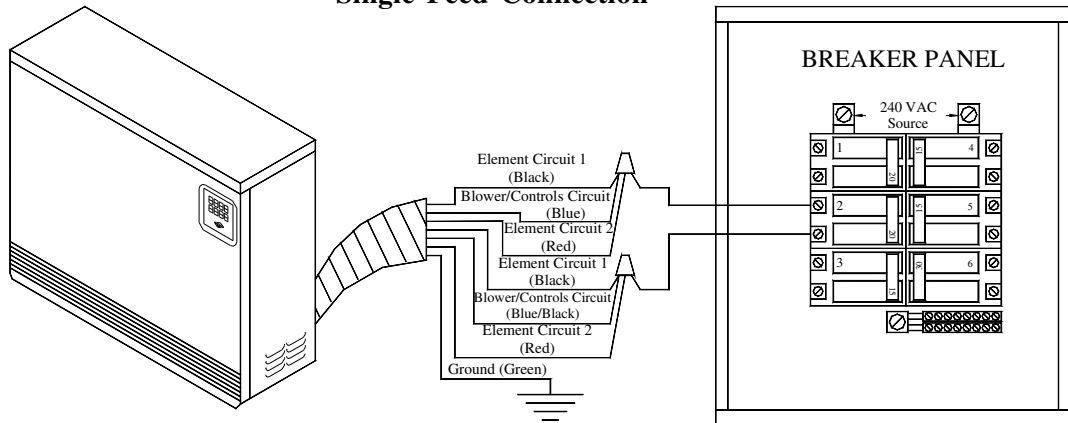
| Wire Size | MAXIMUM kW | | | Maximum Circuit Breaker Size |
|-----------|------------|--------|--------|------------------------------|
| | 240VAC | 277VAC | 208VAC | |
| #14 AWG | 2.8 | 3.3 | 2.4 | 15 |
| #12 AWG | 3.8 | 4.4 | 3.3 | 20 |
| #10 AWG | 5.7 | 6.6 | 4.9 | 30 |
| #8 AWG | 7.6 | 8.8 | 6.6 | 40 |
| #6 AWG | 11.5 | 13.2 | 9.9 | 60 |

Use copper wire rated at 75°C minimum only.

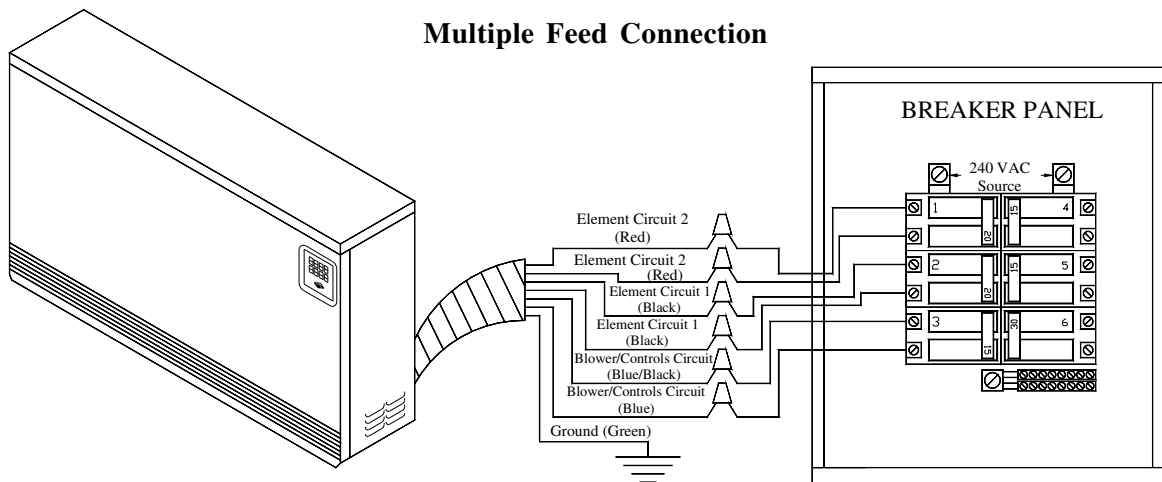
Line Voltage Connections

All 2100 series room heating units are factory configured for single or two circuit element feed connections. The fan/controls circuit can be powered from the element circuit or from a separate feed. (The heater must be wired in compliance with all applicable codes and regulations.)

Single Feed Connection



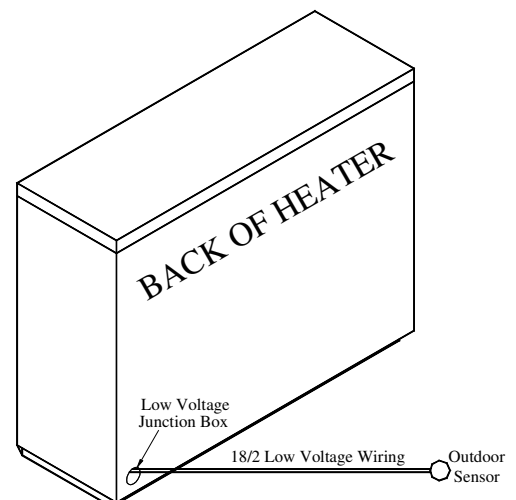
Multiple Feed Connection



NOTE: Connections shown are for systems with a 240V/208V blower/controls circuit.

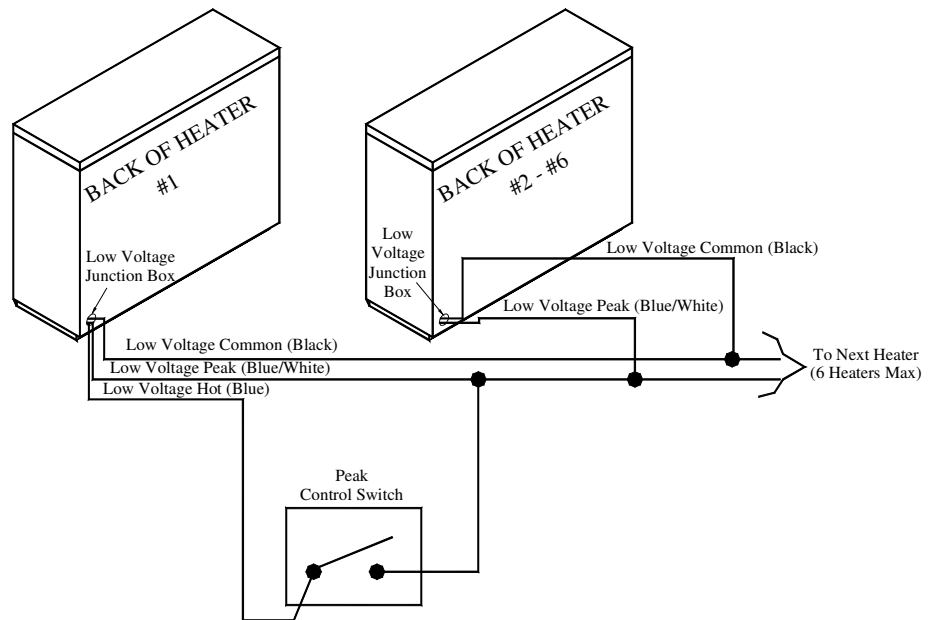
Automatic Charge Control

- An outdoor sensor is an optional device used to provide outdoor temperatures for automatic charge control (regulation of stored heat).
- One sensor per heater is required and connected to the heater via low voltage wiring.
- If using the optional Steffes Power Line Carrier Transmitter for peak control, the outdoor sensor is not needed as the transmitter will also communicate outdoor temperature information to the heater(s) for automatic charge regulation.



Peak Control Options

- Low Voltage Control (See Diagram)
- Power Line Carrier (PLC) Control
 - Recommended for multiple heater installations
 - Requires the Steffes PLC transmitting device to be installed in the application to interface with each heater built-in receiving system.
 - Refer to the Transmitter's Owner's and Installer's manual for more information on the operation and installation of the PLC control system.
- Time Clock Control
 - Requires the Steffes time clock module be installed in each heater to enable the heater's built-in time clock feature.
 - Refer to the time clock module's instruction sheet for information on the operation and installation of this device.
- Line Voltage Control
 - Requires an external switching device such as a relay panel to directly control the element circuits.
 - Blower/controls circuit must be powered with an uninterrupted circuit.



Specifications (For Standard 240VAC Systems)

| Model | 2102 (Plug-in) | 2102 | | | 2103 | | | 2104 | | | 2105 | | | 2106 | | |
|-------------------------------------|-------------------|----------------|-----|-----|--------|-----|-----|--------|-----|-----|---------|-----|-----|---------|-----|------|
| Charging Inputs (kW) -See Note 1 | 1.32 | 2.4 | 3.0 | 3.6 | 3.6 | 4.5 | 5.4 | 4.8 | 6.0 | 7.2 | 6.0 | 7.5 | 9.0 | 7.2 | 9.0 | 10.8 |
| Approximate Installed Weight (lbs) | 281 | 267 | | | 376 | | | 478 | | | 585 | | | 692 | | |
| Storage Capacity -See Note 1 | | | | | | | | | | | | | | | | |
| kWh | | 13.5 | | | 20.25 | | | 27 | | | 33.75 | | | 40 | | |
| BTU | | 46,062 | | | 69,093 | | | 92,124 | | | 115,155 | | | 136,480 | | |
| Element Voltage - See Note 2 | 120 | 240 (Standard) | | | | | | | | | | | | | | |
| Blower/Controls Voltage -See Note 3 | 120 | 240 (Standard) | | | | | | | | | | | | | | |
| Blower Wattage -See Note 4 | | | | | | | | | | | | | | | | |
| Minimum | | 30 | | | | | | | | | | | | | | |
| Maximum | | 120 | | | | | | | | | | | | | | |

Note 1: The heating ability of each system is dependent upon the power company's available off-peak hours. Please contact Steffes Corporation for assistance in selecting the appropriate size and kW input of system required to satisfy a specific heat loss.

Note 2: 208 and 277 charging input voltage are also available as a special factory order. Standard 240V units can be connected to 208V; however, the heater will operate at 75% of its 240V rated input wattage.

Note 3: 240V is standard blower/controls voltage. 120 and 208 blower/controls voltage are also available as a special factory order.

Note 4: The blowers are variable speed.