

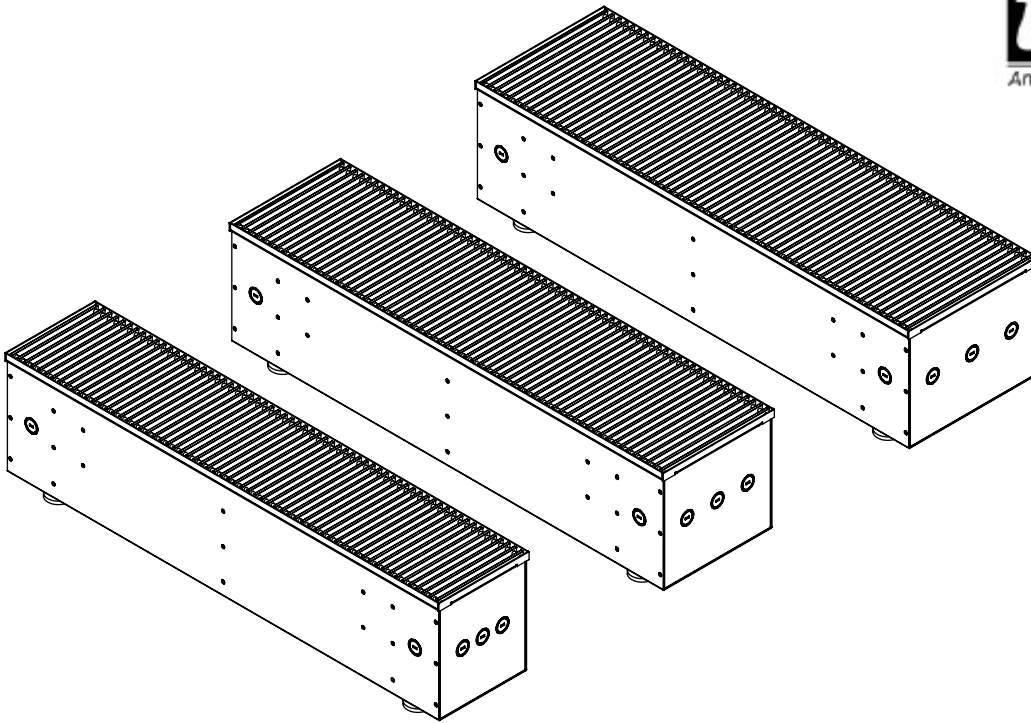
INSTALLATION AND OPERATION INSTRUCTIONS 9900 SERIES TRENCH CONVECTOR

INSTALLATION INSTRUCTIONS



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America's Comfort Conditioning Company



DESCRIPTION

The 9900 series heaters are fixed location natural convection heaters intended for commercial-industrial use only. The heaters can be fully recessed into the floor with 'zero' clearance to combustibles or surface mounted and enclosed on the sides and ends with 'zero' clearance. The heaters may be mounted end to end and with any combination of the manufacturers listed components including control sections and blank sections. All electrical components are factory assembled.

APPLICATION

The 9900 series is an ideal solution for areas with large floor to ceiling window installations. The cold air that is transferred through the windows falls into the trench. The warm air rises by natural convection and blankets the window preventing the cold air from migrating into the interior of the space.

CONTROLS

Wiring procedures and connections shall be in accordance with the national and local authority having jurisdiction. The 9900 series heaters do not have any on board controls and therefore must be used in conjunction with an applicable control center or be wired to a listed, properly rated safety switch for on/off control.

Always disconnect the power at the circuit breaker or disconnect switch before connecting power to the heater. If the breaker or disconnect switch cannot be seen from where you will be working, lock it in the open position and tag it to prevent unexpected application of power. Failure to do so could result in fatal electric shock. Do not depend on a thermostat or other switch as the sole means of turning off power to the heater.

IMPORTANT INSTRUCTIONS

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons, including the following:

1. Read all instructions before installing or using this heater.
2. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
3. Keep curtains at least 6 inches from the top of the heater.
4. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
5. Do not operate any heater after it malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
6. Do not use outdoors.
7. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch if provided).
8. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
9. To prevent a possible fire, do not block air intakes or exhaust in any manner.
10. A heater has hot and arcing or sparking parts inside. **WARNING: Do not use it in area where gasoline, paint, or flammable liquids are used or stored.**
11. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.

12. SAVE THESE INSTRUCTIONS

CLEANING INSTRUCTIONS

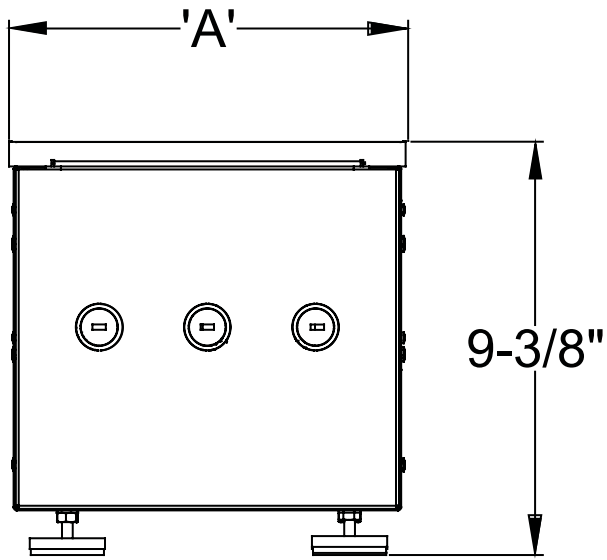
At the beginning of each heating season or as needed, it is recommended that heaters be cleaned to eliminate any accumulation of trash, dust or lint.

1. Before cleaning, make sure the power is OFF at the circuit breaker and the heating elements are cool.
2. Remove the top grate and use the narrow suction attachment of a vacuum cleaner to remove any accumulated dust, dirt, etc. from the elements and bottom of the cabinet.
3. To clean the grate use a mild detergent with a damp cloth to remove any dust, dirt or lint.
4. Replace the grate. **DO NOT OPERATE HEATER WITHOUT GRATE IN PLACE.**
5. Restore power to units.

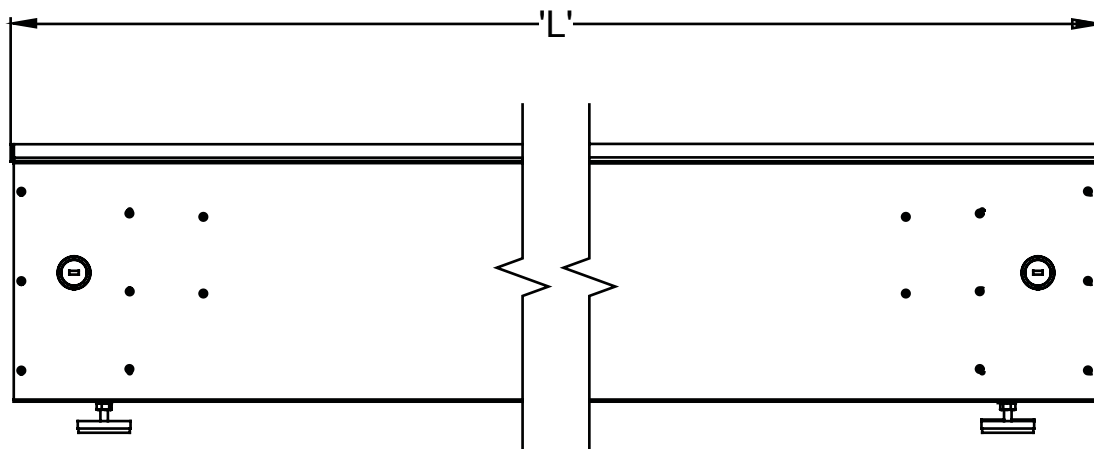
MAINTENANCE

No regular maintenance other than cleaning is required for the 9900 series draft barrier. All repairs should be performed by an authorized service representative.

DIMENSIONS

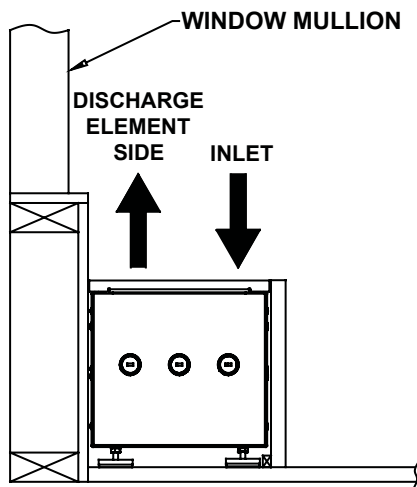


WIDTH 'A'	
99XX-01	7.52 in.
99XX-02	9.27 in.
99XX-03	10.77 in.

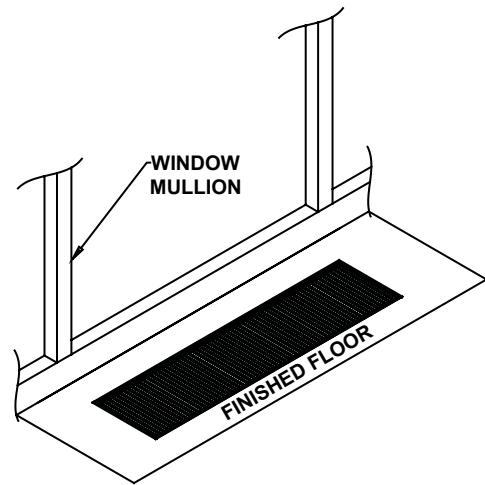


LENGTH 'L'	
9928	28.21 in.
9936	36.21 in.
9948	48.21 in.
9960	60.21 in.
9972	72.21 in.
9984	84.21 in.
9996	96.21 in.
99108	108.21 in.
99120	120.21 in.

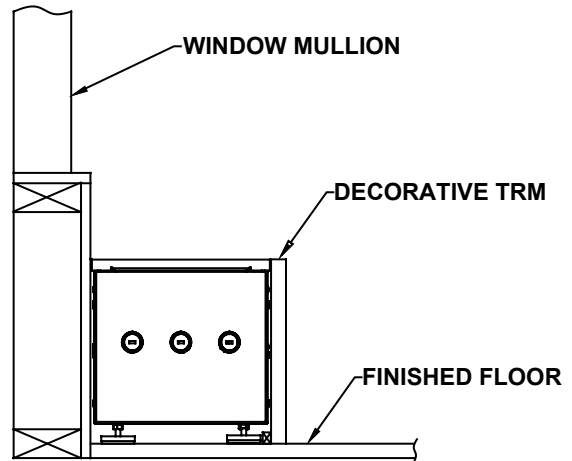
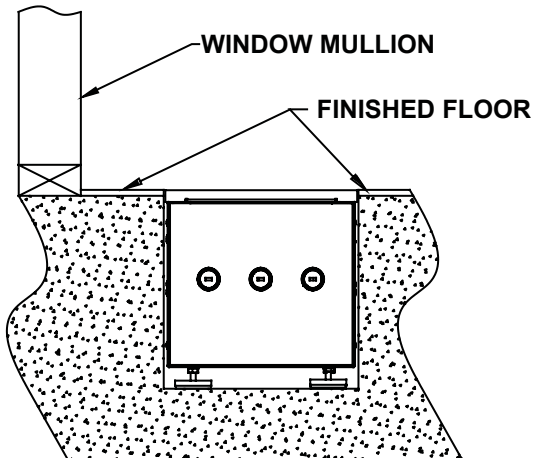
INSTALLATION



TYPICAL RECESSED INSTALLATION*



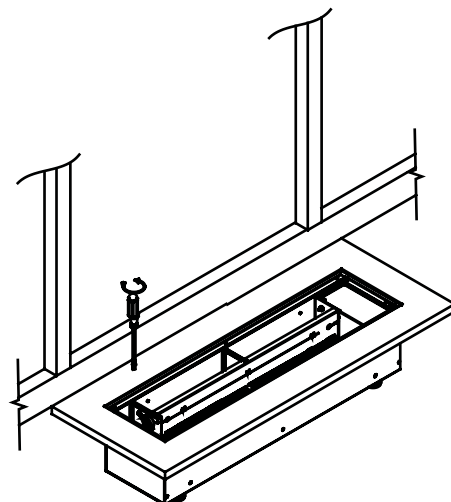
TYPICAL SURFACE MOUNT INSTALLATION*



*Note: The examples above are for reference only. With the zero clearance rating, the 9900 series installations can vary greatly depending on the application.

It is recommended that the trench be slightly deeper than the finished floor to allow for adjustment. The 9900 is supplied with floor levelers to bring the top of the heater flush with the finished floor. The levelers provide approximately 1/2 in. of adjustment.

To adjust the height of the 9900 series, remove the roll-up grate and the wiring compartment covers. The levelers are accessible from the top of the heater and are located in the wiring compartments and the center of units six feet and longer. Using a screwdriver turn the leveler clockwise until the desired height is achieved.

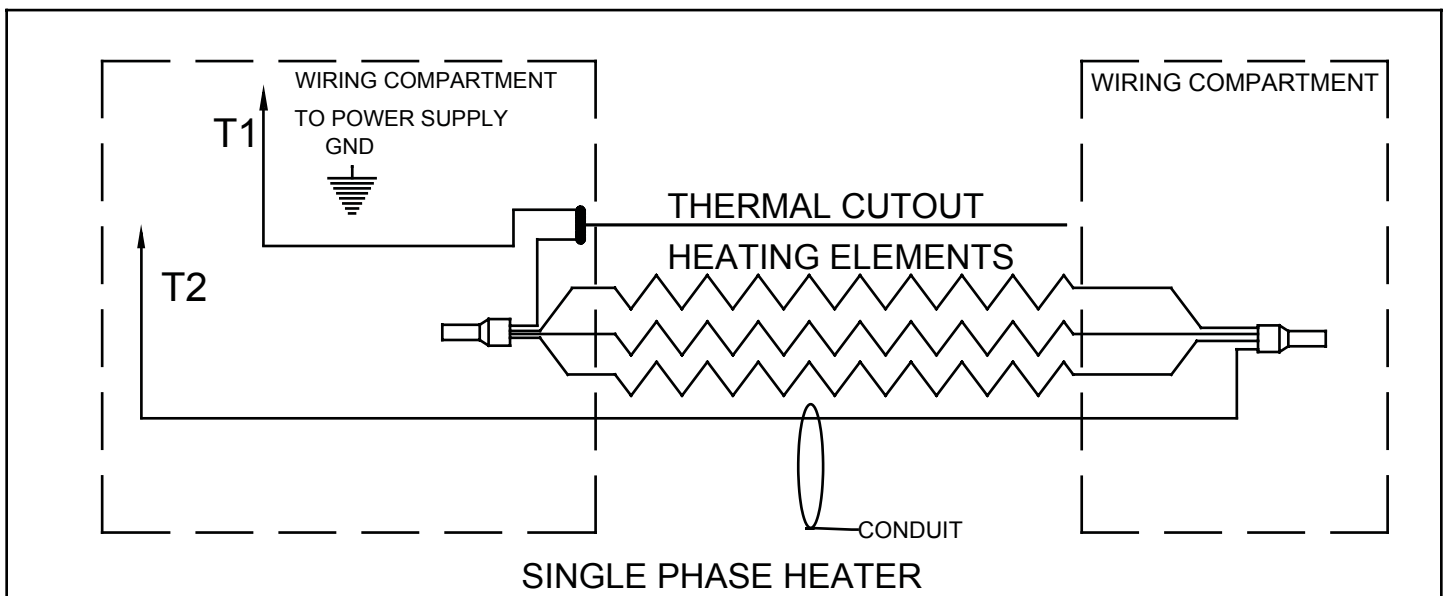
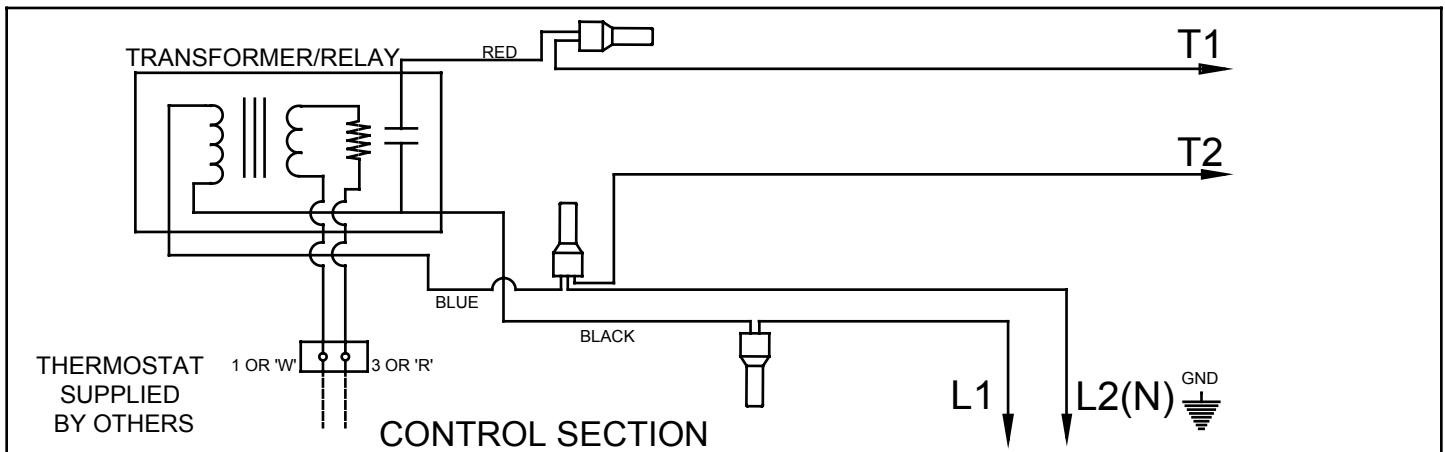


WIRING EXAMPLES

All 9900 series heaters are provided with a 3/4 in. conduit wiring raceway. This allows for power entry from either end and also to wire multiple heaters from one source. Knockouts are provided on the ends and sides for inter-connection of heaters. A close nipple must be used for inter-connection of heaters and control sections to prevent liquid spillage from coming in contact with wiring. **Always securely connect the green conductor from the power supply to the green conductor of the heater.**

The basic single phase heater 208V-277V can be operated with a line voltage room thermostat, 9900 series control section or a listed industrial control panel. When using a control section the heater can be controlled with a low voltage thermostat.

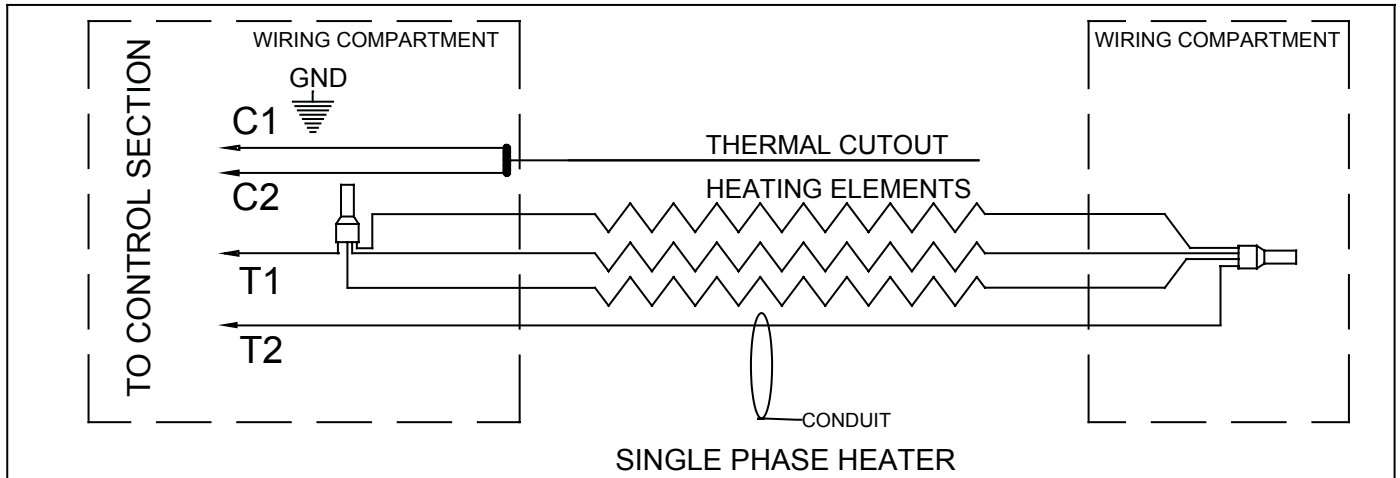
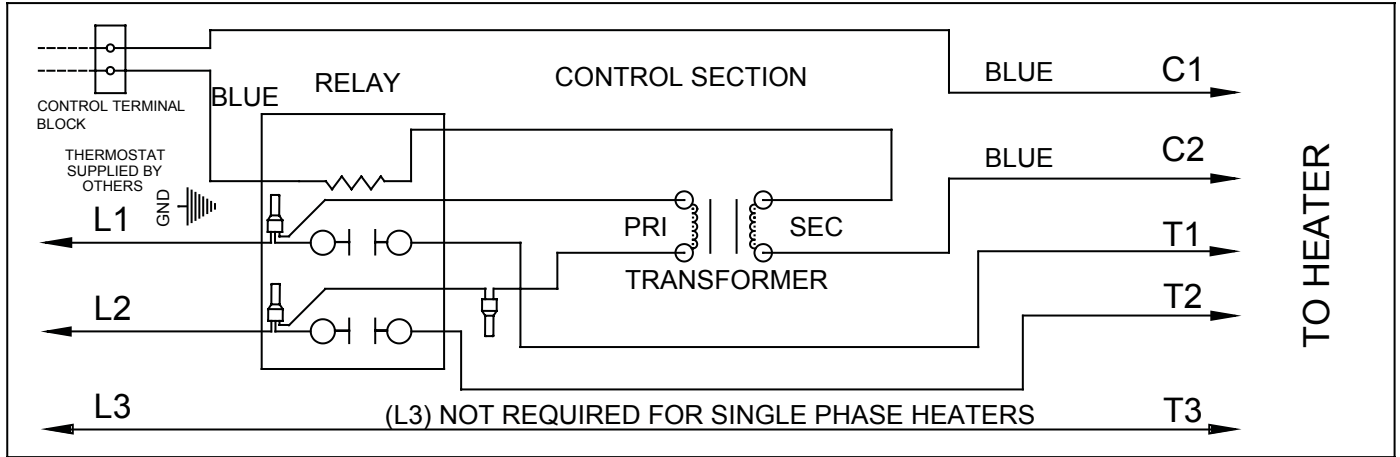
ATR CONTROL SECTION WITH SINGLE PHASE HEATER (208V-277V ONLY)



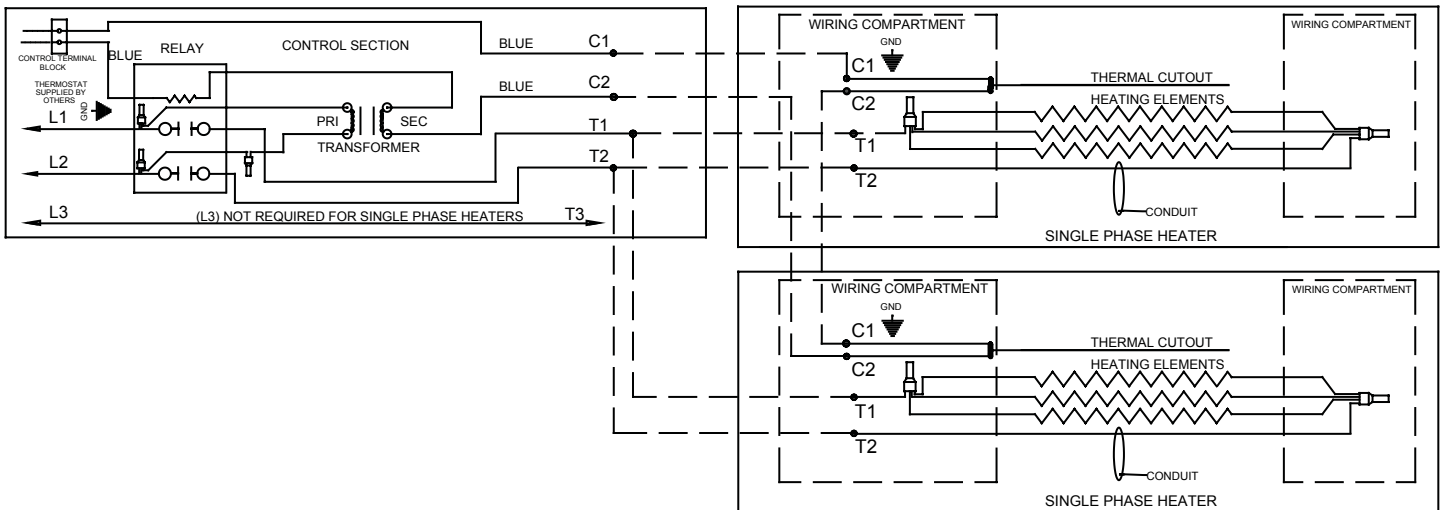
WIRING EXAMPLES (CONT.)

SINGLE PHASE HEATER 208V-480V WITH TRANSFORMER/RELAY CONTROL SECTION

Note: When controlling multiple heaters with one control section, the limit control of each heater must be wired in series with 'C1' and 'C2' (see below). The total amp draw must not exceed the rating of the control section.



CONTROL SECTION WITH MULTIPLE SINGLE PHASE HEATERS

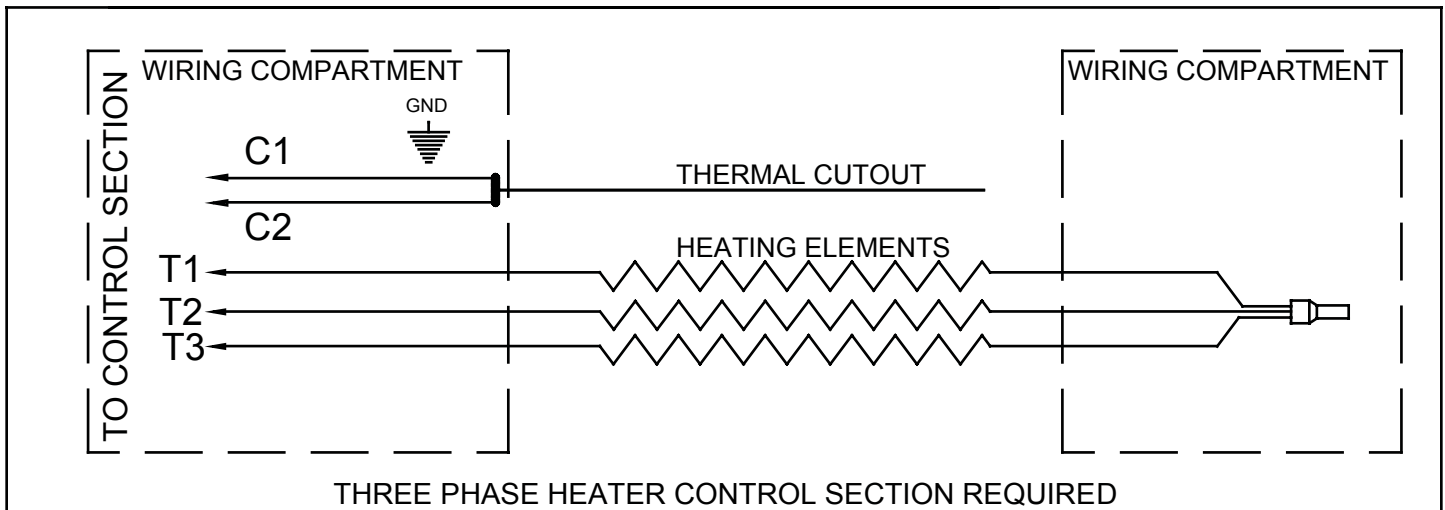
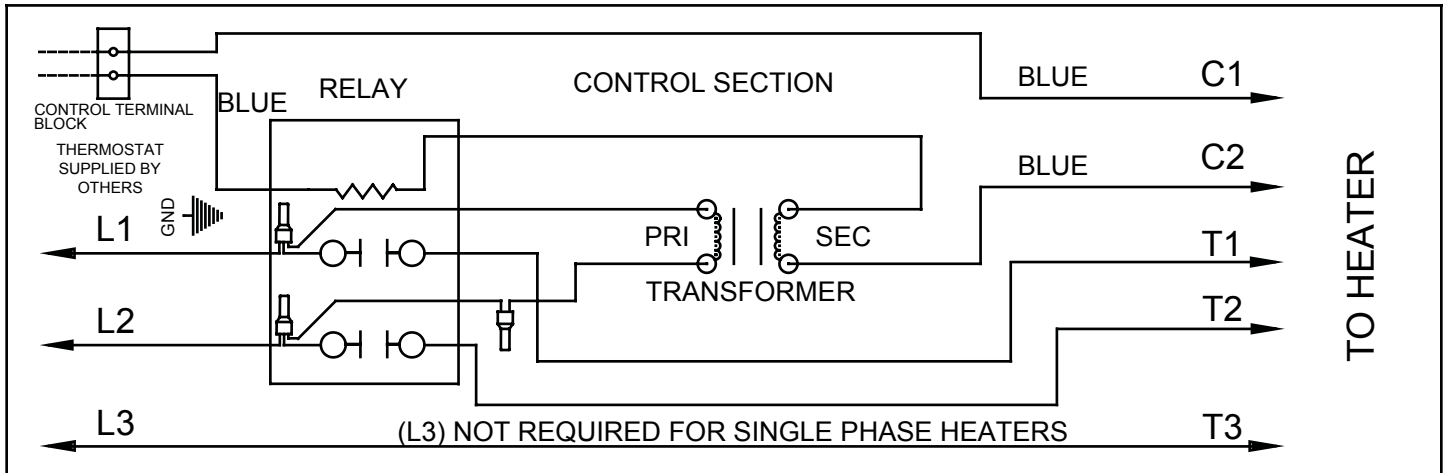


WIRING EXAMPLES (CONT.)

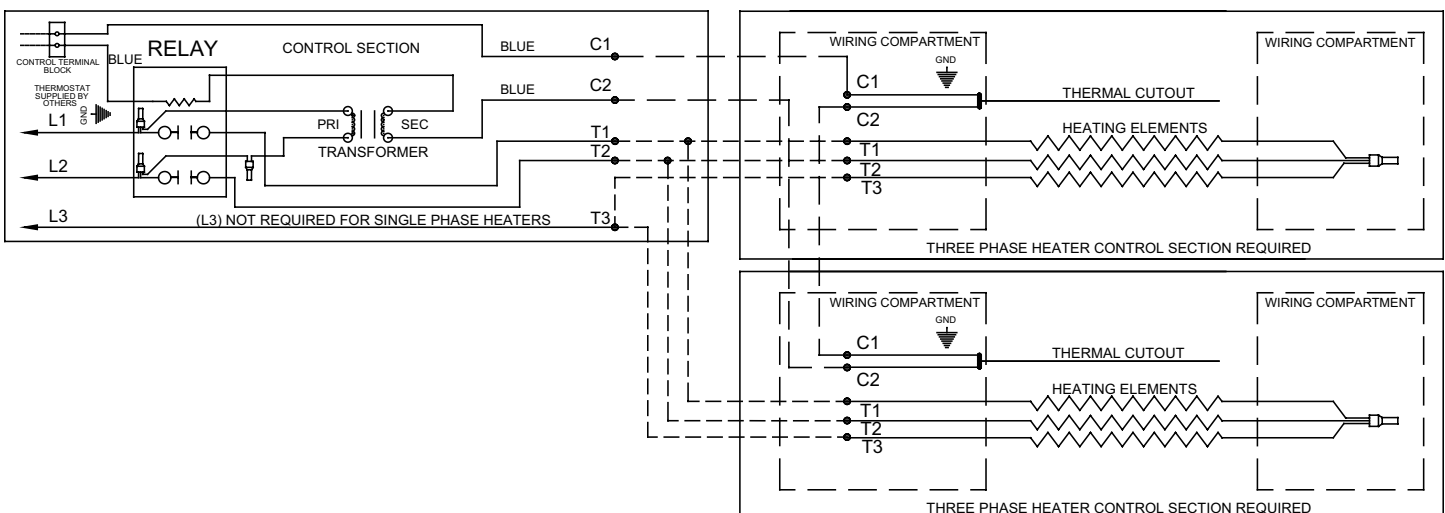
THREE PHASE HEATER 208V-480V WITH TRANSFORMER/RELAY CONTROL SECTION

Note: Control sections required for all three phase heaters.

Note: When controlling multiple heaters with one control section, the limit control of each heater must be wired in series with 'C1' and 'C2' (see below). The total amp draw must not exceed the rating of the control section.



CONTROL SECTION WITH MULTIPLE THREE PHASE HEATERS



GRATE SECUREMENT

The parts kit contains clips and self drilling screw to secure the grate for a tamper-proof installation.

1. Center the grate on top of the grate frame.
2. Place the clips over the grate spacer on all four corners of the grate.
3. Using a drill with 1/4" driver, install the four self-drilling screws

