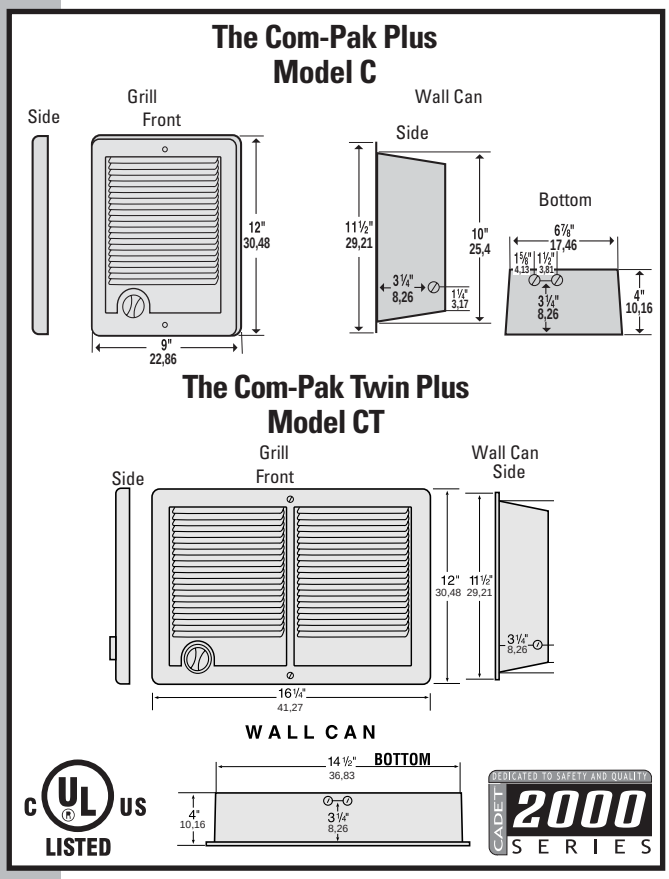
CADET®

Dedicated to Safety and Quality

Tools Required:	
Phillips Screwdriver	Utility Knife
Straight Screwdriver	4 1½" Wood Screws
Wire Strippers	3 Insulated Wire Connectors
	1 Strain Relief Connector

The Com-Pak™ Plus

OWNER'S GUIDE



Features & Benefits

- Primary and Secondary Thermal Safeguards
  - Commercial grade high temperature manual reset with 25 amp rating at 240 volt
  - Over temperature one-time thermal device
- Nichrome element wrapped around mica insulators for durability
- Powder coat paint process eliminates sharp cutting edges
- Two year extended warranty
- Wall can designed for ease of installation
- Factory tested
- Made in the U.S.A.

Models:

The Com-Pak Plus

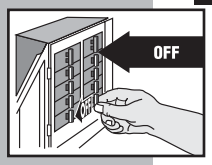
C021	***C021T**	**C152**	***C152T**
C051	***C051T**	**C202**	***C202T**
C052	***C052T**	**C208**	***C208T**
C072	***C072T**	**C101**	***C101T**
C102	***C102T**	**C151**	***C151T**
C122	***C122T**		

The Com-Pak Twin Plus

CT252	***CT252T**
CT302	***CT302T**
CT402	***CT402T**
CT408	***CT408T**

*Standard built-in thermostat is single pole and has no OFF position

General Safety Information



⚠ WARNING
Turn the electrical power off at the electrical panel board (circuit breaker or fuse box) and lock or tag the panel board door to prevent someone from turning on power while you are working on the heater. Failure to do so could result in serious electrical shock, burns, or possible death.

1. Read all information labels. **Verify that the electrical supply wires are the same voltage as the heater.**
2. All electrical work and materials must comply with the National Electric Code (NEC), the Occupational Safety and Health Act (OSHA), and all state and local codes.
3. The heater must be grounded to the grounding pigtail (copper wire) provided in the wall can.
4. If you need to install a new circuit or need additional wiring information, consult a qualified electrician.
5. Protect electrical supply from kinks, sharp objects, oil, grease, hot surfaces or chemicals.
6. **⚠ WARNING**
   DO NOT install the heater in a floor or behind doors. **Overheating or fire may occur.**
7. **⚠ WARNING**
   DO NOT install heater in any area where combustible vapors, gases, liquids, or excessive lint or dust are present. **Fire or explosion may occur.**
8. **⚠ WARNING**
   Risk of Electrical Shock. Connect grounding lead to grounding wire provided. Keep all foreign objects out of heater.
9. **⚠ WARNING**
   Risk of Fire. Heater must be kept clear of all obstructions: a minimum of 3 feet in front, 6" above and on both sides. Heaters must be kept clean of lint, dirt and debris. (See Maintenance Instructions)

360-693-2505
Fax: 360-694-6939
P.O. Box 1675
Vancouver, WA
98668-1675

Keep for future reference

READ ALL INSTRUCTIONS AND SAFETY INFORMATION

IMPORTANT!

It is <u>extremely important you verify that the electrical supply wires are the same voltage as the heater</u> (i.e. 120 volt heater to 120 volt power supply and 240 volt heater to 240 volt power supply). If replacing an existing heater, check the labels of the old heater and replace using the same voltage. <u>Hooking a 240 volt heater to a 120 volt power supply will drastically reduce the heater's output.</u> <u>Hooking a 120 volt heater to a 240 volt power supply will destroy the heater.</u> Connecting your heater to an incompatible power supply will void the warranty.

Installation Instructions

Part One

PLACEMENT: Install The Com-Pak Plus (Model C) vertically (recommended) or horizontally. Model C may be installed in the ceiling (for models up to 1500W maximum). The Com-Pak Twin Plus (Model CT) must be installed vertically.

THERMOSTAT: A thermostat is required for models without a built-in thermostat. A Cadet Electronic Thermostat (T4700 or T4800) or Cadet Dual Diaphragm Thermostat (T4398) is recommended for ultimate control and comfort.

How do I install for new construction?

STEP 1 Mount The Wall Can

The C Series REQUIRES a minimum distance of 6" from adjacent surfaces and 0" from the floor and the CT Series requires a minimum distance of 4 1/2" from adjacent surfaces and 0" from the floor. However, Cadet RECOMMENDS 12" from all adjacent surfaces and 12" above the floor for longer and cleaner performance. Heaters must be spaced at least 3 feet apart.

Model C: Secure the wall can to the stud with 2 screws (See Figures 1 & 2). As an option, the rubber shim provided may be attached to side of wall can to square the wall can to the stud.

Model CT: Secure the wall can to studs on both sides with 4 screws.

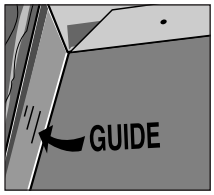


Figure 1
Face of wall can must extend 1/2" from face of stud to allow for sheetrock.

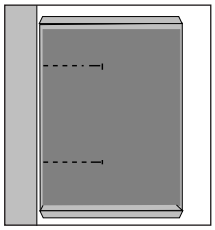


Figure 2
Attach wall can to stud with screws.
(Model C shown)

STEP 2 Connect Supply Wires

Route supply wire from circuit breaker to thermostat to heater. For models with built-in thermostat, route supply wire from circuit breaker to heater. Remove a knockout and attach the supply wire with a strain relief connector leaving 10" wire lead for later use. Connect supply ground wire to grounding pigtail in wall can (See Figure 3). Proceed to PART TWO.

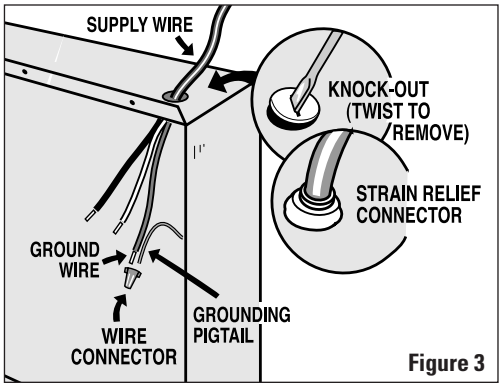


Figure 3

How do I install in an existing wall?

STEP 1 Cut Hole In Wall

Model C: Cut a hole 8" wide by 10 1/4" high next to wall stud. The C Series REQUIRES a minimum distance of 6" from adjacent surfaces and 0" from the floor. However, Cadet RECOMMENDS 12" from all adjacent surfaces and 12" from the floor (See Figure 4).

Model CT: Cut a hole 14 3/4" wide by 10 1/4" high next to wall stud. The CT Series REQUIRES a minimum distance of 4 1/2" from adjacent surfaces and 0" from the floor. However, Cadet RECOMMENDS 12" from all adjacent surfaces and 12" from the floor (See Figure 5).

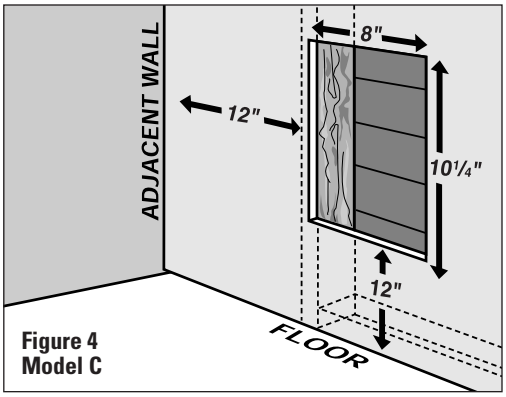


Figure 4
Model C

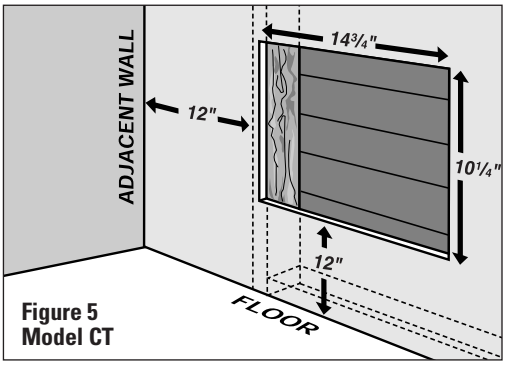


Figure 5
Model CT

STEP 2 Connect Supply Wires

Route supply wire from circuit breaker to thermostat to heater. For models with built-in thermostat, route supply wire from circuit breaker to heater. Remove a knockout and attach the supply wire with a strain relief connector leaving 10" wire lead for later use (See Figure 3). Connect supply ground wire to grounding pigtail in wall can.

STEP 3 Mount Wall Can

Insert wall can into opening. Keeping wall can flush with wall, secure model C to wall stud with 2 screws and model CT to both wall studs with 4 screws. Proceed to PART TWO.

Installation Instructions

Part Two

After you have followed all instructions in PART ONE for either new construction or an existing wall, you are ready to install the heater assembly.

How do I insert the heater assembly into the wall can?

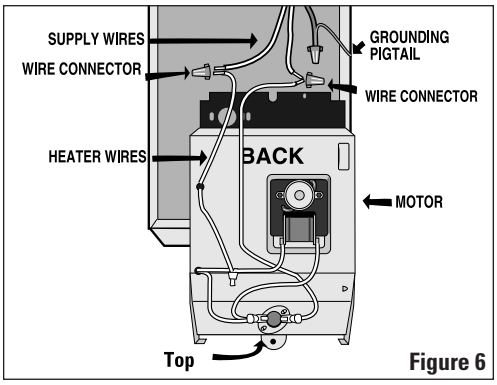


Figure 6

STEP 1 Install heater assembly

Turn heater assembly upside-down (element down) with motor facing you. Connect the supply wires to the heater wires with connectors (See Figure 6). Now rotate the heater so the element and fan are facing you (with the element 'up'). Insert the bottom edge of the heater assembly into the half round slots in the bottom lip of the wall can (See Figure 7). [IMPORTANT: Push wires into bottom of wall can during insertion. Be sure that supply wires are not caught between motor and wall can, attach assembly at top with screw provided.]

STEP 2 Install grill

Secure grill with the screws provided. If you have a built-in thermostat model, slide thermostat knob onto shaft. Turn power on at the electrical panel board.

Warranty is void if any material is sprayed on the element or blower. Use paint mask provided if walls are to be textured or painted.

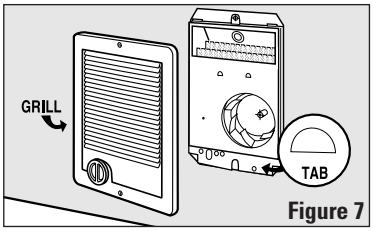


Figure 7

Operation & Maintenance

How to operate your heater

1. Once installation is complete and power has been restored, turn the thermostat knob fully clockwise.
2. When the room reaches your comfort level, turn the thermostat knob counterclockwise until the heater turns off. The heater will automatically cycle around this preset temperature.
3. To reduce the room temperature, turn the knob counterclockwise. To increase the room temperature, turn the knob clockwise.

Maintenance
As needed, or every six months minimum.

1.) ⚠ **WARNING! Before removing grill, turn the electrical power off at the electrical panel board (circuit breaker or fuse box). Lock or tag the panel board door to prevent someone from accidentally turning the power on while you are working on the heater. Failure to do so could result in serious electrical shock, burns, or possible death.**
2.) Turn the heater thermostat all the way up and wait approximately 30 seconds (120 seconds for some electronic thermostats). If the heater turns on, you have turned off the wrong circuit breaker at the electrical panel board.
3.) If heater does not turn on, proceed with next step.
4.) Remove screws and take off grill.
5.) Wash grill with hot soapy water and dry immediately.
6.) While holding fan (to avoid damage or bending), use a hair dryer or vacuum on blow cycle to blow debris through the top element (Do not touch element).
7.) Vacuum fan area without touching the elements.
8.) Replace grill and secure with screws.
9.) Turn thermostat to desired setting.
10.) Turn power back on at the electrical panel board.

About the Heater Temperature-Limiting Controls
The heater is protected by two temperature-limiting controls (for Model CT, four controls are used). The first is a high temperature manual reset switch, designed to open the heater circuit when excessive operating temperatures are detected. The problem must be assessed and the limit must be reset to resume operation.
Further protection is provided by a secondary over-temperature switch, which will open the heater circuit in severe over-temperature conditions, or in the event of component failure. If this occurs, the heater must be repaired or replaced.

Resetting the Manual-Reset Limit Control
If the manual-reset limit control has opened the heater circuit due to excessive operating temperatures, the heater will not work until the limit reset button is pressed. After allowing the unit to cool for at least 10 minutes and resolving the problem causing the limit to trip, use a narrow object such as a ball-point pen to access the reset button through the lower-left section of the heater grill. Press FIRMLY, and be sure to listen and feel for a click, indicating it has been reset.

Note that resetting the manual limit control may not restore heater operation if a severe over-temperature condition has occurred. See the Troubleshooting Guide on next page for more information.

Wiring Diagrams

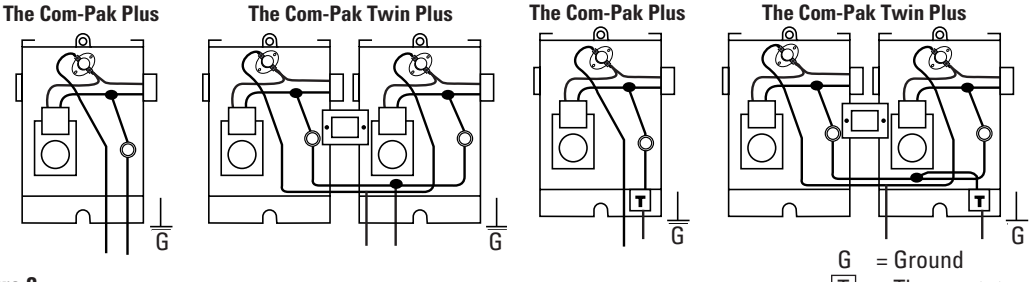


Figure 8

⚠ WARNING
Risk of Electrical Shock. Connect grounding lead to grounding wire provided. Keep all foreign objects out of heater.

⚠ WARNING
Risk of Fire. Heater must be kept clear of all obstructions: a minimum of 3 feet in front; 6 inches on both sides and above. Heaters must be kept clean of lint, dirt and debris.

⚠ WARNING
Turn the electrical power off at the electrical panel board (circuit breaker or fuse box) and lock or tag the panel board door to prevent someone from turning on power while you are working on the heater. Failure to do so could result in serious electrical shock, burns, or possible death.

Troubleshooting Chart

CONSULT LOCAL ELECTRICAL CODES TO DETERMINE WHAT WORK MUST BE PERFORMED BY QUALIFIED ELECTRICAL SERVICE PERSONNEL.

Symptom	Problem	Solution
Breaker trips immediately upon energizing heater.	1. Incorrect supply voltage. 2. Overloaded circuit. 3. A short circuit exists in the supply or heater wiring. 4. Defective circuit breaker.	1. Verify that supply voltage matches the heater rating. 2. The total amperage of all heaters on a branch circuit must not be more than 80% of the amperage rating of the circuit breaker and supply wire ratings. Use a lower wattage heater, or reduce the number of heaters on the circuit. 3. Shorted supply or heater wires may be accompanied by severe sparking. Inspect all supply and heater wiring insulation for damage. Do not reset the circuit breaker until all electrical shorts have been repaired. 4. Replace the circuit breaker.
Heater fan operates, but does not discharge warm air.	1. Insufficient element temperature. 2. Incorrect supply voltage. 3. Element has failed. 4. (Model CT only) One of the heater units must be reset.	1. Allow a few moments for element to reach operating temperature. 2. Verify that supply voltage matches the heater rating. 3. Replace element. 4. CT models have two heating units with independent over-temperature controls. One of the high-temperature reset switches may trip and cut power to one of the heating units, while the other remains running, resulting in only half output. Reset the heater unit that is not operating (see "Operation & Maintenance" section for instructions).
Heater will not shut off.	1. Heat loss from room is greater than heater capacity. 2. Defective thermostat. 3. Thermostat wired incorrectly to heater.	1. Close doors and windows. Provide additional insulation, or install a higher-wattage heater or multiple heaters if necessary. 2. Adjust thermostat to its lowest setting. If heater continues to run (allow a few moments for the thermostat to respond to the adjustment), replace thermostat. 3. Refer to thermostat documentation and correct wiring.
Heater discharges smoke or emits a burnt odor.	1. Dust, lint or other matter has accumulated inside heater.	1. Clean heater (see "Operation & Maintenance" section for instructions).
Element heats for a moment without the fan turning, then immediately stops heating.	1. Defective motor or internal connection. 2. Fan or motor jammed.	1. Heater or fan motor requires replacement. 2. Remove obstruction and press heater reset button (after allowing the unit to cool). Test heater operation--if reset button has been pressed (be sure to listen and feel for a click indicating it has been reset), but heater does not run, heater requires replacement.
Heater does not run.	1. Thermostat set too low. 2. Heater has tripped the high-temperature reset switch. 3. Heater has tripped the secondary over-temperature switch. 4. Power not on at the circuit breaker. 5. Broken or poorly connected wire(s) to heater. 6. Defective thermostat.	1. Adjust thermostat to a higher temperature until heater operates (see Problem #6 if the problem persists). 2. Press the heater reset button (see "Operation & Maintenance" section for instructions). 3. A severe over-temperature condition has occurred. Repair or replace heater. 4. Turn on the correct circuit breaker in the main panel. 5. Turn off power at circuit breaker. Check supply wire continuity and proper connection to heater wires. 6. Turn off power at circuit breaker. Jumper across thermostat terminals. Turn on main circuit breaker. If heater operates, thermostat is defective and should be replaced. Remove jumper before operating heater.

Warranty

LIMITED TWO-YEAR WARRANTY: Cadet Manufacturing Co. will repair or replace, any Cadet Com-Pak Plus (C), and/or Com-Pak Twin Plus (CT) element or motor found to be defective or malfunctioning from first date of purchase through the second year.

These warranties do not apply:
1. To conditions resulting from (a) improper installation, or (b) incorrect supply voltage.
2. To conditions resulting from improper maintenance, misuse, abuse, accident or alteration.
3. To service calls or labor involved in replacing defective part.
4. If the date of manufacture cannot be determined.
5. To freight damaged products.

Cadet shall not be liable for commercial consequential damages such as property damage and incidental expenses resulting from breach of these written warranties or any implied warranty. These warranties give you specific legal rights, and you may also have other rights which vary from state to state. Cadet neither assumes, nor authorizes anyone to assume for it, any other obligation or liability in connection with these electric heaters or any part of such heaters. If the product warranted should become defective during the warranty period, contact Cadet Manufacturing Co. for instructions on how to have the repair or replacement processed. Products returned without authorization will be refused. To prolong the life of your heater, it is necessary to follow the maintenance guidelines included with each heater. Failure to maintain your heater will result in the warranty being voided.