

## Com-Pak Heater Owner's Guide

Information is also available on our website:

<http://www.cadetheat.com/products/wall-heaters/com-pak>

### Benefits You Can Depend On

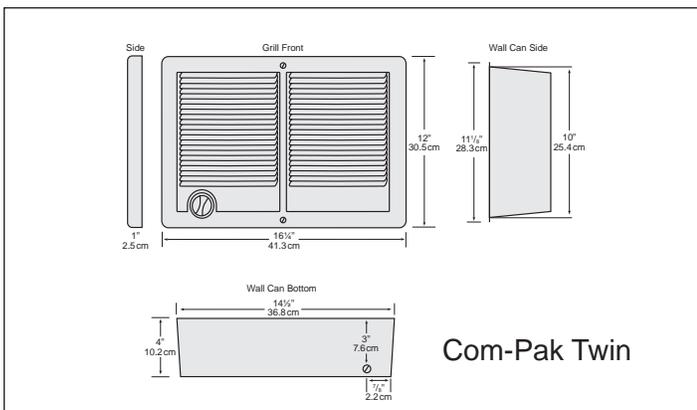
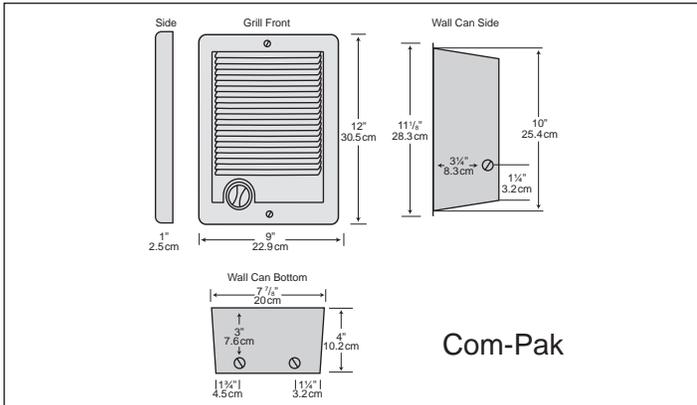
- Dual safety features
  - Primary: "power reset" thermal switch
  - Secondary: over temperature thermal fuse
- Heating element style quickly warms your room, and quickly cools when heater is not in use
- Common sense components designed with you in mind
  - No sharp edges
  - Corrosion resistant
  - Easy to install heater
  - Easy to install wall can
- Your Cadet heater has been thoroughly tested and is guaranteed with a **limited 2 year warranty**

Com-Pak Models				
Line Voltage	Model w/o Thermostat	Model w/ Thermostat (1)	Watts	Amps
120	CS051	CS051T	500	4.2
	CS101	CS101T	1000	8.3
	CS151	CS151T	1500	12.5
208	CS058	CS058T	500	2.4
	CS078	CS078T	750	3.6
	CS108	CS108T	1000	4.8
	CS118	CS118T	1100	5.3
	CS158	CS158T	1500	7.2
	CS208	CS208T	2000	9.6
240 (2)	CS052	CS052T	500	2.1
	CS072	CS072T	750	3.1
	CS102	CS102T	1000	4.2
	CS122	CS122T	1250	5.2
	CS152	CS152T	1500	6.3
	CS202	CS202T	2000	8.3

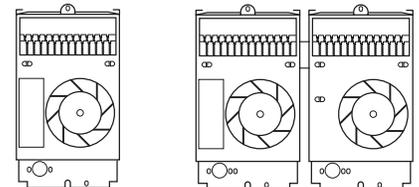
Com-Pak Twin Models				
Line Voltage	Model w/o Thermostat	Model w/ Thermostat (1)	Watts	Amps
208	CST308	CST308T	3000	14.4
	CST408	CST408T	4000	19.2
240 (2)	CST102	CST102T	1000	4.2
	CST152	CST152T	1500	6.3
	CST202	CST202T	2000	8.3
	CST302	CST302T	3000	12.5
	CST402	CST402T	4000	16.7

(1) Standard built-in thermostat is single pole and has no "OFF" position.

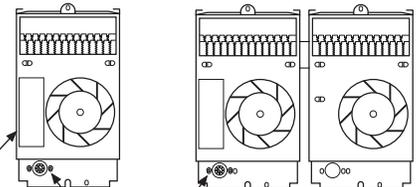
(2) 240 volt models can be used at 208 volts. Wattage equals 75% of 240v rated wattage.



Com-Pak and Com-Pak Twin Models Without Thermostat  
**Wall Thermostat Required**



Com-Pak and Com-Pak Twin Models With Thermostat  
**Wall Thermostat Not Required**



Rating Label

Built-in Thermostat

#### TOOLS REQUIRED:

- Phillips Screwdriver
- Straight Screwdriver
- Wire Strippers
- Utility Knife
- (2-4) 1 1/2" Wood Screws
- (2) Insulated Wire Connectors
- (1) Strain Relief Connector



tested to UL standards

## SAVE THESE INSTRUCTIONS

cadetheat.com Tel: 855.CADET.US PO Box 1675 Vancouver, WA 98668-1675

# IMPORTANT INSTRUCTIONS

**⚠ WARNING**

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

1. Read all instructions before installing or using this heater.

**2. ⚠ WARNING**

Risk of Fire. This heater is hot when in use. Caution—High Temperature. Risk of Fire. Keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet from the front of the heater and 6 inches above and on both sides.

**3. ⚠ WARNING**

Burn Hazard. To avoid burns, do not let bare skin touch hot surfaces. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.

**4. ⚠ WARNING ⚠**

Risk of Electrical Shock. Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a qualified electrician before reusing.

**5. ⚠ WARNING**

Do not use outdoors.

6. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel.

**7. ⚠ WARNING ⚠**

Risk of Electrical Shock. 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.

**8. ⚠ WARNING**

Risk of Fire. To prevent a possible fire, do not block air intakes or exhaust in any manner.

**9. ⚠ WARNING**

Fire or explosion may occur. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.

10. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electrical shock, or injury to persons.

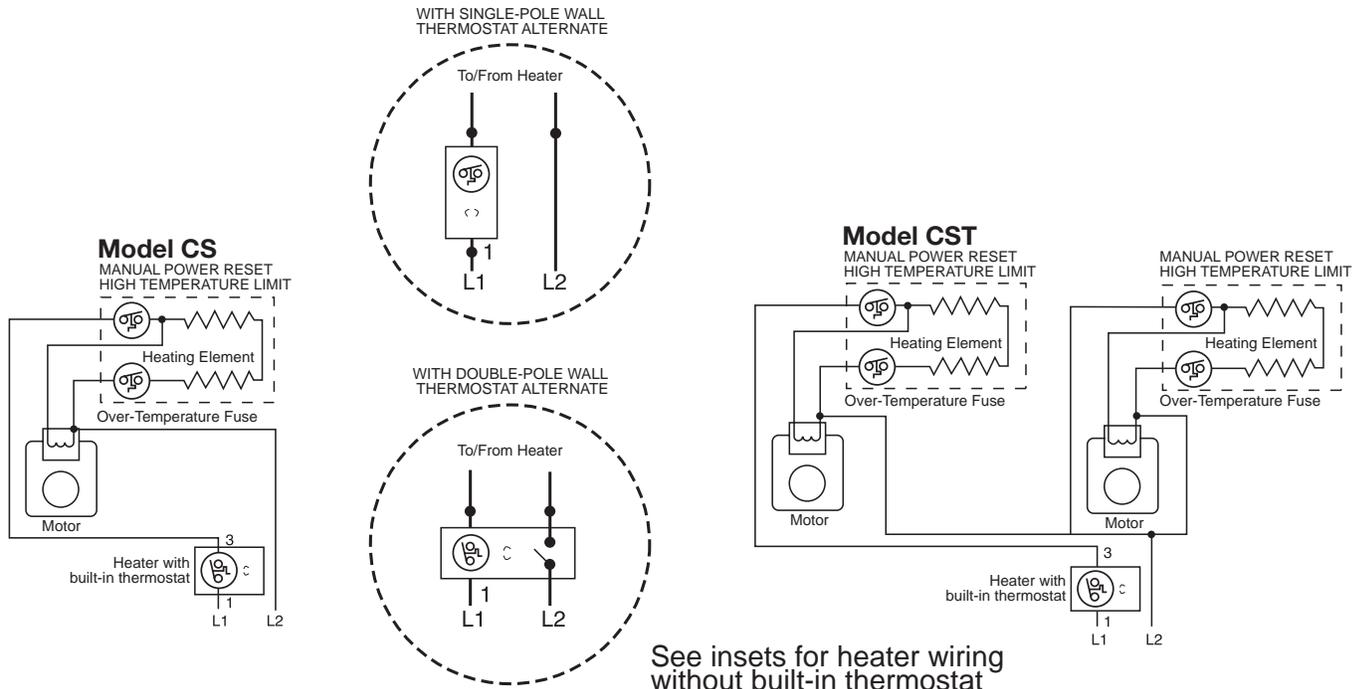
11. The heater must be properly installed before it is used.

**12. ⚠ WARNING ⚠**

Risk of Electrical Shock and Fire. Do not operate without grill.

13. Save these instructions.

## Wiring Diagram



# SAVE THESE INSTRUCTIONS

# INSTALLATION INSTRUCTIONS

## 1. ⚠️ WARNING

Verify that the electrical supply wires are the same voltage as the heater.

2. If replacing an existing heater, check the label of the old heater.

3. 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.

4. If you need to install a new circuit or need additional wiring information, consult a qualified electrician.

5. Use copper conductors only.

## 6. ⚠️ WARNING ⚠️

Risk of Electrical Shock. DO NOT install the heater directly above bathtub or sink. DO NOT install in shower stall area (Manufacturer recommends a minimum 2 foot clearance).

7. Heater must be installed in a wall can:

Model CS Wall Can CC  
Model CST Wall Can WC1

## 8. ⚠️ WARNING

Risk of Fire. DO NOT install the heater in a floor, below a towel bar, behind a door, or anywhere the air discharge may be blocked in any manner.

## 9. ⚠️ WARNING

Fire or Explosion May Occur. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.

## 10. ⚠️ WARNING ⚠️

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

## 11. ⚠️ WARNING

Risk of Fire. This heater is hot when in use. Caution—High Temperature. Risk of Fire. Keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet from the front of the heater and 6 inches above and on both sides.

## Part One

**PLACEMENT:** Install the Com-Pak, model CS, vertically (recommended), horizontally, or in the ceiling (single units only, up to 1,500 watts maximum). For ceiling mounting, refer to instructions on page 4. The Com-Pak Twin (Model CST) must be installed with the arrows in the wall can pointing upwards.

**THERMOSTAT:** A wall thermostat is required for models without a built-in thermostat. A Cadet electronic thermostat is recommended for ultimate control and comfort.

### How do I install for new construction?

#### STEP 1 Mount The Wall Can

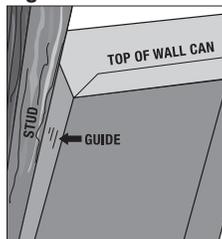
REQUIRED MINIMUM distance of 6 inches from adjacent surfaces and 4½ inches from the floor (See Figures 4 and 5). However, Cadet recommends 12 inches from adjacent surfaces and floor for longer and cleaner performance. Heaters must be spaced at least 3 feet apart.

Review the wall can label for correct direction (as noted by the UP arrows) before mounting the wall can to the stud. In the vertical mounting position the element of the heater assembly will be at the top. In the horizontal mounting position the element of the heater assembly will be to the left.

**Model CS:** Keeping front of the wall can flush with the finished wall surface (See Figure 1), secure the wall can to the stud with 2 screws (not included) through holes provided in the wall can. As an option, the rubber shim provided may be attached to the side of the wall can to square the wall can to the stud (See Figure 2).

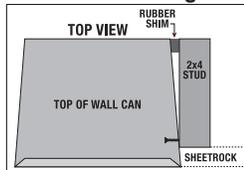
**Model CST:** Keeping front of the wall can flush with the finished wall surface (See Figure 1), secure the wall can to both wall studs with 4 screws (not included) through holes provided in the wall can.

Figure 1



Face of wall can must extend ½ inch or ⅝ inch from face of stud to allow for thickness of sheetrock.

Figure 2



Attach wall can to stud with screws. (Model CS shown)

#### STEP 2 Route Supply Wires

Route supply wire from the circuit breaker, to the thermostat, to the wall can. For models with a built-in thermostat, route supply wire from the circuit breaker to the wall can. Remove a knockout from the wall can and attach the supply wire with a strain relief connector (not included) leaving a minimum of 6 inches wire lead. Connect supply ground wire to grounding screw in wall can (See Figure 3). Proceed to Part Two.

### How do I install in an existing wall?

#### STEP 1 Cut A Hole In The Wall

REQUIRED MINIMUM distance of 6 inches from adjacent surfaces and 4½ inches from the floor (See Figures 4 and 5). However, Cadet recommends 12 inches from adjacent surfaces and floor for longer and cleaner performance. Heaters must be spaced at least 3 feet apart.

**Model CS:** Cut a hole 8 inches wide by 10¼ inches high next to a wall stud.

**Model CST:** Cut a hole 14¾ inches wide by 10¼ inches high next to a wall stud.

#### STEP 2 Route Supply Wires

Route supply wire from the circuit breaker, to the thermostat, to the wall can. For models with an in-built thermostat, route supply wire from the circuit breaker to the wall can. Remove a knockout from the wall can and attach the supply wire with a strain relief connector (not included) leaving a minimum of 6 inches wire lead. Connect supply ground wire to grounding screw in wall can (See Figure 3).

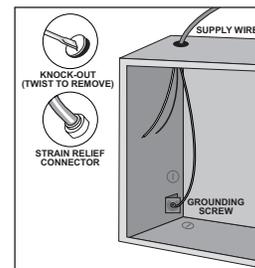


Figure 3

#### STEP 3 Mount The Wall Can

Review the wall can label for correct direction (as noted by the UP arrows) before mounting the wall can to the stud. In the vertical mounting position the element of the heater assembly will be at the top. In the horizontal mounting position the element of the heater assembly will be to the left. Insert wall can into wall opening.

**Model CS:** Keeping front of the wall can flush with the finished wall surface, secure the wall can to the stud with 2 screws (not included) through holes provided in the wall can. As an option, the rubber shim provided may be attached to the side of the wall can to square the wall can to the stud (See Figure 2).

**Model CST:** Keeping front of the wall can flush with the finished wall surface (See Figure 1), secure the wall can to both wall studs with 4 screws (not included) through holes provided in the wall can. Proceed to Part Two.

# INSTALLATION INSTRUCTIONS (continued)

## Part One

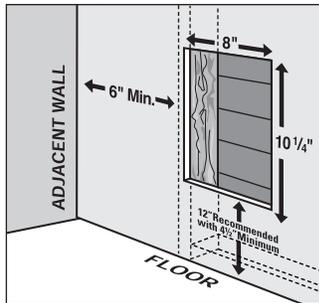


Figure 4  
Model CS

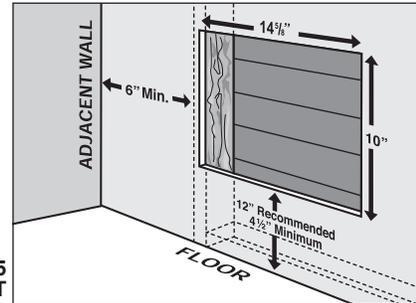


Figure 5  
Model CST

### How do I install for a ceiling mount?

#### STEP 1 Mount The Wall Can

##### Important:

1. For CS models (single units only) up to 1,500 Watts – **MAXIMUM.**
2. Do not mount the heater in low-density fiber board or false ceilings.
3. Models with a built-in thermostat are not recommended.

REQUIRED MINIMUM distance of 6 inches from adjacent surfaces (See Figure 6). However, Cadet recommends 12 inches from adjacent surfaces for longer and cleaner performance.

Secure the wall can to studs/rafters on opposite sides (See Figures 6 and 7) with 4 screws (not provided). The face of the wall can must extend  $\frac{1}{2}$  or  $\frac{3}{8}$  inch from face of rafters to allow for thickness of sheetrock.

#### STEP 2 Route Supply Wires

Important: Supply connections must use wires suitable for at least 167°F (75°C).

Route supply wire from the circuit breaker, to the thermostat, to the wall can. Remove a knockout from the wall can and attach the supply wire with a strain relief connector (not included) leaving a minimum of 6 inches wire lead. Connect supply ground wire to grounding screw in wall can (See Figure 3). Proceed to Part Two.

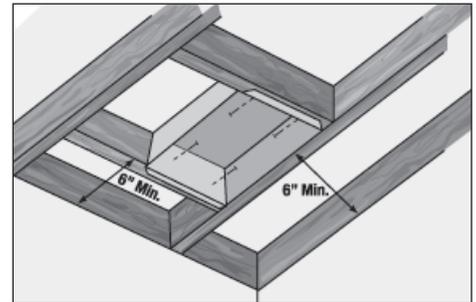


Figure 6  
(Model CS shown)

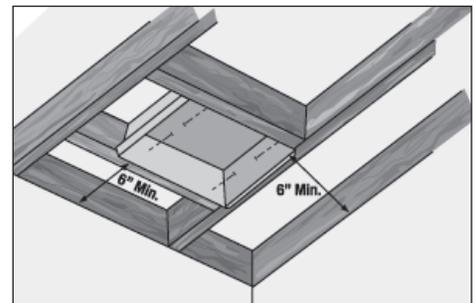


Figure 7  
(Model CS shown)

## Part Two

After you have followed all instructions in Part One you are ready to install the heater assembly.

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

#### STEP 1 Install Heater Assembly

Turn the heater face down, element facing down and the motor facing up. Connect the supply wires to the heater wires with wire connectors (not included). (See Figure 8). Rotate the heater up so that the element and fan are facing you, with the fan below the element. Insert the bottom edge of the heater assembly into the tabs in the bottom lip of the wall can (See Figure 9).

**Important:** Push wires into bottom of wall can during insertion. Be sure that supply wires are not caught between motor and wall can. Attach heater assembly at top with screw provided.

Note: Warranty is void if any material is sprayed on the element or blower. Use a paint mask to cover any exposed areas of the heater if walls are to be textured or painted.

#### 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 main disconnect panel.

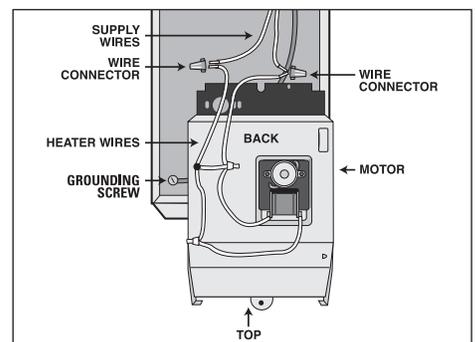


Figure 8

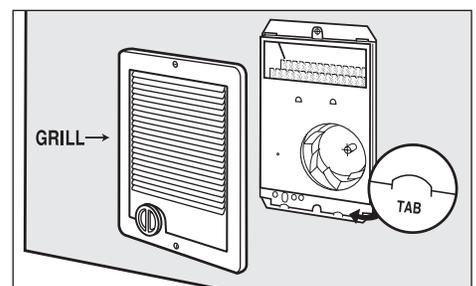


Figure 9

# OPERATING INSTRUCTIONS

**⚠ WARNING Risk of Electrical Shock and Fire.** The heater must be properly installed before it is used.

1. Do not operate without grill.
2. Keep electrical cords, drapery, furnishings and other combustibles at least 3 feet away from the front of the heater and 6 inches away from the sides.
3. Do not tamper with the over temperature limit control.
4. If the heater over temperature limits trip more than once per day, the heater must be replaced.

5. Clean heater at least every six months.
6. After allowing the heater to cool, turn power off at circuit breaker panel before removing grill.
7. Use a hair dryer or vacuum on blow cycle to blow debris through the top element (do not touch element).
8. Install the grill before turning on power.

**⚠ WARNING:** Any other service not detailed in this Owner's Guide should be performed by an authorized service representative.

## How to operate your heater

The room temperature is controlled by a line voltage thermostat located either on the wall, or at the lower left on the heater (See Page 1; Built-in Thermostat).

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.

## Over Temperature-Limiting Controls

If normal operating temperatures are exceeded (due to abnormal circumstances), the heater has two temperature-limiting controls (for Model CST, four controls are used). Both limiting controls are located on the element assembly. The first is a manual power reset limit control, designed to open the heater circuit when excessive operating temperatures are detected and stop the electrical current flow. The problem must be assessed and the limit must be reset to resume operation.

Further protection is provided by a secondary over-temperature fuse, 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 Power Reset Limit Control

If the manual power reset limit has opened the heater circuit due to excessive operating temperatures, the heater will not work until it is reset. This can be done at the thermostat or the circuit breaker controlling the heater.

### To Reset Heater at the Thermostat

1. Lower the temperature on the thermostat below room temperature.
2. Allow the unit to cool for at least 20 minutes.
3. Resolve the problem causing the limit to trip (typically the heater is blocked or needs cleaning, see Maintenance Instructions).
4. Raise the temperature on the thermostat back above room temperature. The heater should come back on. If it does not come back on, reset heater at the main disconnect panel, using directions to the right. An additional 20 minute waiting period is required every time the power is turned off. Restoring power, even briefly, will heat the limit even though the heater does not come on.
5. The heater is now functional and the thermostat can be reset to your comfort level.

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

### To Reset Heater at the Circuit Breaker (recommended if room temperature is below 45°)

1. Trip the circuit breaker by switching it to the OFF position.
2. Allow the unit to cool for at least 20 minutes.
3. Resolve the problem causing the limit to trip (typically the heater is blocked or needs cleaning, see Maintenance Instructions).
4. Restore power to the heater by switching the circuit breaker to the ON position.
5. Raise the temperature on the thermostat above room temperature. The heater should come back on. An additional 20 minute waiting period is required every time the power is turned off. Restoring power, even briefly, will heat the limit even though the heater does not come on.
6. The heater is now functional and the thermostat can be reset to your comfort level.

## Warranty

For more effective and safer operation and to prolong the life of the heater, read the Owner's Guide and follow the maintenance instructions. Failure to properly maintain the heater will void any warranty and may cause the heater to function improperly. Warranties are non transferable and apply to original consumer only. Warranty terms are set out below.

**LIMITED TWO-YEAR WARRANTY:** Cadet will repair or replace any Com-Pak (CS), Com-Pak Twin (CST) heater found to be defective within two years after the date of purchase.

### These warranties do not apply:

1. Damage occurs to the product through improper installation or incorrect supply voltage;
2. Damage occurs to the product through improper maintenance, misuse, abuse, accident, or alteration;
3. The product is serviced by anyone other than Cadet;
4. If the date of manufacture of the product cannot be determined;
5. If the product is damaged during shipping through no fault of Cadet.
6. The use of unauthorized accessories or unauthorized components constitutes an alteration and voids all warranties. Refer to Cadet website or call customer service at 855.CADET.US for list of authorized accessories and components.
7. CADET'S WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT AS SET OUT HEREIN. CADET SHALL NOT BE LIABLE FOR DAMAGES SUCH AS PROPERTY DAMAGE OR FOR CONSEQUENTIAL DAMAGES AND/OR INCIDENTAL EXPENSES RESULTING FROM BREACH OF THESE WRITTEN WARRANTIES OR ANY EXPRESS OR IMPLIED WARRANTY.

8. IN THE EVENT CADET ELECTS TO REPLACE ANY PART OF YOUR CADET PRODUCT, THE REPLACEMENT PARTS ARE SUBJECT TO THE SAME WARRANTIES AS THE PRODUCT. THE INSTALLATION OF REPLACEMENT PARTS DOES NOT MODIFY OR EXTEND THE UNDERLYING WARRANTIES. REPLACEMENT OR REPAIR OF ANY CADET PRODUCT OR PART DOES NOT CREATE ANY NEW WARRANTIES.

9. 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 its products other than as set out herein. If you believe your Cadet product is defective, please contact Cadet Manufacturing Co. at 855.CADET.US, during the warranty period, for instructions on how to have the repair or replacement processed. Warranty claims made after the warranty period has expired will be denied. Products returned without authorization will be refused.

### Parts and Service

Visit [cadetheat.com/parts-service](http://cadetheat.com/parts-service) for information on where to obtain parts and service.

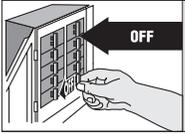


### Reduce-Reuse-Recycle

This product is made primarily of recyclable materials. You can reduce your carbon footprint by recycling this product at the end of its useful life. Contact your local recycling support center for further recycling instructions.

# MAINTAINING YOUR HEATER

Maintenance As Needed, or every six months minimum.



**⚠ WARNING!** Before removing grill, turn the electrical power off at the main disconnect panel (circuit breaker or fuse box). Lock or tag the main disconnect panel 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.

**⚠ WARNING:** Any other service not detailed in this Owner's Guide should be performed by an authorized service representative.

1. It is important that you verify power has been turned off and the heating element is cool before proceeding. Circuit breakers are often not marked correctly and turning the wrong breaker off could mean electricity is flowing to the heater, even if the heater does not appear to be working. If you are uncomfortable working with electrical appliances, unable to follow these guidelines, or do not have the necessary equipment, consult a qualified electrician.
2. Once you verify the power has been turned off correctly, proceed to the next step.
3. Remove thermostat knob (if any), screws and take off grill.
4. Wash grill with hot soapy water and dry.
5. 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).
6. Vacuum fan area without touching the elements.
7. Do not lubricate motor.
8. Replace grill and secure with screws. Replace thermostat knob.
9. Turn thermostat to desired setting.
10. Turn power back on at the main disconnect panel.

## 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.	<ol style="list-style-type: none"> <li>1. Incorrect supply voltage.*</li> <li>2. Overloaded circuit.*</li> <li>3. A short circuit exists in the supply or heater wiring.*</li> <li>4. Defective circuit breaker.*</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify that supply voltage matches the heater rating.</li> <li>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.</li> <li>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.</li> <li>4. Replace the circuit breaker.</li> </ol>
Heater fan operates, but does not discharge warm air.	<ol style="list-style-type: none"> <li>1. Insufficient element temperature.</li> <li>2. Incorrect supply voltage.*</li> <li>3. Element has failed.*</li> <li>4. (Model CST only) One of the heater units over temperature controls must be reset.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow a few moments for element to reach operating temperature.</li> <li>2. Verify that supply voltage matches the heater rating.</li> <li>3. Replace element.</li> <li>4. CST models have two heating units with independent over-temperature controls. One of the high-temperature manual power reset controls 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 (see "OPERATING INSTRUCTIONS" section for "Resetting the Manual Power Reset Limit Control").</li> </ol>
Heater will not shut off.	<ol style="list-style-type: none"> <li>1. Heat loss from room is greater than heater capacity.*</li> <li>2. Defective thermostat.</li> <li>3. Thermostat wired incorrectly to heater.*</li> </ol>	<ol style="list-style-type: none"> <li>1. Close doors and windows. Provide additional insulation, or install a higher wattage heater or multiple heaters if necessary. (If your circuit is rated for more capacity.)</li> <li>2. Adjust thermostat to its lowest setting. If heater continues to run (allow two minutes for the thermostat to respond), and room temperature is greater than 50°; replace the thermostat.</li> <li>3. Refer to thermostat documentation and correct wiring.</li> </ol>
Heater discharges smoke or emits a burnt odor.	<ol style="list-style-type: none"> <li>1. Dust, lint or other matter has accumulated inside heater.</li> <li>2. Poor or loose electrical connections.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean heater (see "MAINTAINING YOUR HEATER" section above for instructions).</li> <li>2. Turn off power at circuit breaker. Inspect all supply and heater wire connections to make sure nothing is loose or poorly connected. Secure or reconnect all loose connections. Do not reset circuit breaker until all connections have been checked and repaired.</li> </ol>
Element heats for a moment without the fan turning, then immediately stops heating.	<ol style="list-style-type: none"> <li>1. Defective motor or internal connection.*</li> <li>2. Fan or motor jammed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Heater or fan motor requires replacement.</li> <li>2. Remove obstruction and follow instructions in the "OPERATING INSTRUCTIONS" section for "Resetting the Manual Power Reset Limit Control." Test heater operation. If heater does not run, heater requires repair or replacement.</li> </ol>
Heater does not run.	<ol style="list-style-type: none"> <li>1. Thermostat set too low.</li> <li>2. Heater has tripped the power reset high-temperature control.</li> <li>3. Heater has tripped the secondary over-temperature fuse.</li> <li>4. Power not on at the main disconnect panel.</li> <li>5. Broken or poorly connected wire(s) to heater.</li> <li>6. Defective thermostat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust thermostat to a higher temperature until heater operates (see Problem #6 if the problem persists).</li> <li>2. Follow instructions in the "OPERATING INSTRUCTIONS" section for "Resetting the Manual Power Reset Limit Control." If room temperature is below 45°, see "Reset Heater at the Circuit Breaker" instructions.</li> <li>3. A severe over-temperature condition has occurred. Repair or replace heater.</li> <li>4. Turn on the correct circuit breaker in the main disconnect panel.</li> <li>5. Turn off power at main disconnect panel. Check supply wire continuity and proper connection to heater wires.</li> <li>6. The entire heater, or any of its components may be checked for continuity to determine the cause of any problems. Repair or replace the heater or thermostat.</li> </ol>