

**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

⚠ DANGER: IMPROPER USE OF THIS HEATER CAN RESULT IN SERIOUS INJURY OR DEATH FROM BURNS, FIRE, EXPLOSION, ELECTRICAL SHOCK AND/OR CARBON MONOXIDE POISONING.

⚠ WARNINGS:

1. RISK OF INDOOR AIR POLLUTION!

- Use this heater only in well ventilated areas. Provide at least a three-square foot (2,800 sq. cm.) opening of fresh outside air for each 100,000 BTU/hr. of heater rating.
- People with breathing problems should consult a physician before using the heater.
- **Carbon monoxide poisoning:** Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness and/or nausea. If you have these signs, the heater may not be working properly.
Get fresh air at once! Have the heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, persons with heart or lung disease or anemia, those under the influence of alcohol, or those at high altitudes.
- Never use this heater in living or sleeping areas.

2. RISK OF BURNS/FIRE/EXPLOSION!

- NEVER use any fuel other than 1-K kerosene, #1 diesel/fuel oil in this heater.
- NEVER use fuel such as gasoline, benzene, paint thinners or other oil compounds in this heater.
(RISK OF FIRE OR EXPLOSION)
- NEVER use this heater where flammable vapors may be present.
- NEVER refill the heaters fuel tank while heater is operating or is still hot.

⚠ CAUTION : Hot while in operation. Do not touch. Keep children, clothing and combustibles away from heater.

Minimum Clearances: Outlet: 8 feet (250cm) / Sides, top and rear: 4 feet (125cm)

- NEVER block air inlet (rear) or air outlet (front) of heater.
- NEVER use duct work in front or behind of heater.
- NEVER move, handle, service a hot, operating or plugged in heater.
- NEVER transport heater with fuel in it's tank.
- When used with an optional thermostat or if equipped with a thermostat heater may start at any time.
- ALWAYS locate heater on a stable and level surface.
- ALWAYS keep children and animals away from heater.
- Bulk fuel storage should be a minimum of 25 ft. from heaters, torches, portable generators or other sources of ignition. All fuel storage should be in accordance with federal, state or local authorities having jurisdiction.

3. RISK OF ELECTRIC SHOCK!

- Use only the electrical power (voltage and frequency) specified on the model plate of the heater.
- Use only a three-prong, grounded outlet and extension cord.
- ALWAYS install the heater so that it is not directly exposed to water spray, rain, dripping water or wind.
- ALWAYS unplug the heater when not in use.

PROPOSITION 65 WARNING: Fuels used in gas, wood-burning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

MASSACHUSETTS RESIDENTS: Massachusetts state law prohibits the use of this heater in any building which is used in whole or in part for human habitation. Use of this heating device in Massachusetts requires local fire dept. permit (M.E.L.C. 148, Section 10A.)

CANADIAN RESIDENTS: Use of this heater shall be in accordance with authorities having jurisdiction and CSA Standard B139.

NEW YORK CITY RESIDENTS: For use only at construction sites in accordance with applicable NYC codes under NYC FD certificate of approval # 5034 and 5037.

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6. FUELING YOUR HEATER

NEVER FILL THE HEATER FUEL TANK IN THE LIVING SPACE : FILL THE TANK OUTDOORS. DO NOT OVERFILL YOUR HEATER AND BE SURE HEATER IS LEVELED.

IMPORTANT NOTICE REGARDING FIRST IGNITION OF HEATER :

The first time you light the heater, it should be done outdoors. This allows the oils, etc. used in manufacturing the heater to burn off outside.

⚠ WARNING!! : NEVER REFILL HEATER FUEL TANK WHEN HEATER IS OPERATING OR STILL HOT.

7. OPERATION

A.) VENTILATION

RISK OF INDOOR AIR POLLUTION/USE HEATER ONLY IN WELL VENTILATED AREAS.

Provide a fresh air opening of at least three square feet (2,800 sq. cm) for each 100,000 BTU/Hr. rating. Provide extra fresh air if more heaters are being used.

Example :

A DFA-210CV heater requires one of the following:

- a two-car garage door raised six inches (15.24 cm)
- a single-car garage door raised nine inches (22.86 cm)
- two, thirty-inch (76.20 cm) windows raised fifteen inches (38.1 cm)

B.) OPERATION

TO START HEATER

1. Fill fuel tank with kerosene or No. 1 fuel oil.
2. Attach fuel cap.
3. Plug power cord of heater into three-prong, grounded extension cord. Extension cord must be at least six feet long. Extension Cord Wire Size Requirements
 - 6 to 10 feet (1.8 to 3 meters) long, use 18 AWG conductor.
 - 11 to 100 feet (3.4 to 30.5 meters) long, use 16 AWG conductor.
 - 101 to 200 feet (30.8 to 61 meters) long, use 14 AWG conductor.
4. Turn “THERMOSTAT CONTROL Knob” to desired setting (Setting range : 40°F ~ 110°F) (DFA-75T/DFA-125C/DFA-170CV/DFA-210CV Models Only)
5. Push “BTU control Switch” to desired level “High or LOW” (DFA-170CV/DFA-210CV Models only, See Figure 8).
6. Push Power Switch to “ON” position, Power Indicator Lamp will light and heater will start.

NOTE : Room Temperature display explanations are as follows: (DFA-125C/DFA-170CV/210CV Models only)

When the room temperature is less 0°F, the LED display will show “Lo”

When room temp is between 0°F and 99°F, the number shown on the display is the current room temperature.

When room temperature is greater than 99°F, the LED display will show “Hi”

If heater does not start, the thermostat setting may be too low, turn “thermostat Control Knob” to higher position to start heater. If heater still does not start, turn power switch to “OFF” and then to “ON” position. If heater still does not start, see Troubleshooting Guide on page 15.

NOTE : User can Select to operate the heater on two different BTU levels(High or Low). The BTU level can be selected before turning the unit on, or while it is in operation by pushing the BTU control switch.

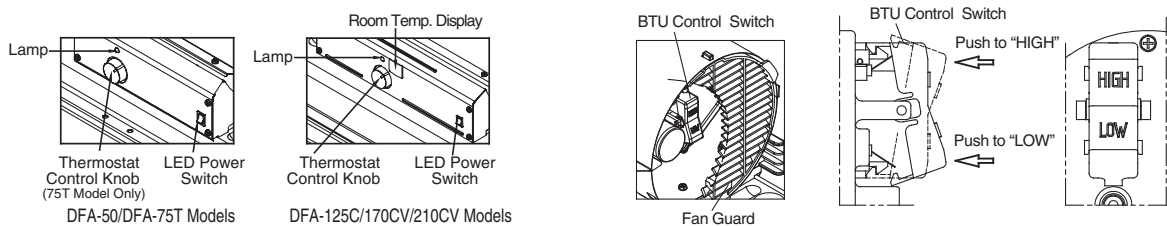


Figure 8. Controls for All Models

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NOTICE : The major electrical components of this heater are protected by a safety fuse mounted to the PCB board.

If your heater fails to start, check this fuse first and replace as necessary. You should also check your power source to insure that proper voltage and frequency are being supplied to the heater.

TO STOP HEATER

1. Turn switch to “OFF” and unplug power cord.

TO RESTART HEATER

1. Wait 10 seconds after stopping heater.
2. Repeat steps under to start heater.

EXTRA ELECTRIC OUTLET & PIGGYBACK POWER CORD

⚠ WARNING : SHOCK HAZARD!

- Always cover electric outlet when not in use.
- Don't plug and use a appliance more than 120V/60Hz 5A current in this outlet

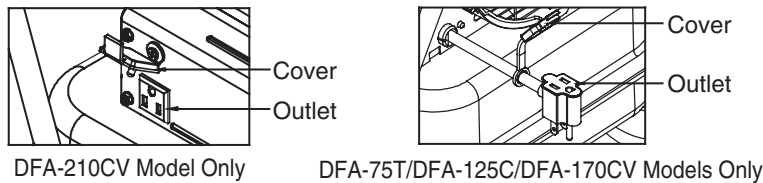


Figure 9. Electric Outlet

8. LONG TERM STORAGE OF YOUR HEATER

FUEL TANK DRAIN

1. Drain fuel tank through fuel cap opening.
(For DFA-50/DFA-75T Models Only)
2. Remove fuel drain bolt from rear bottom side of fuel tank using 3/4” socket or adjustable wrench and drain.
(For DFA-125C/DFA-170CV/DFA-210CV Models Only. See Figure 10)
3. Using a small amount of kerosene, swirl and rinse the inside of the tank.
NEVER mix water with the kerosene as it will cause rust inside the tank.
Pour the kerosene out making sure that you remove it all.

IMPORTANT : Do not store kerosene over summer months for use during next heating season.
Using old fuel could damage heater.

4. Reinstall fuel cap. Properly dispose of old and dirty fuel. (For DFA-50/DFA-75T Models Only)
5. Reinstall Fuel Drain Bolt to Fuel tank and tighten firmly using 3/4” socket or adjustable wrench.
(For DFA-125C/DFA-170CV/DFA-210CV Models Only. See Figure 10)

IMPORTANT : Before reinstalling the fuel drain bolt, make sure the seal is on the bolt. If the seal is not used the bolt cannot be installed correctly and the fuel tank will leak.

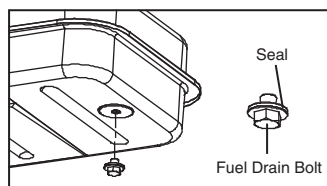


Figure 10. Drain Bolt

6. Store heater in dry well ventilated area. Make sure storage place is free of dust and corrosive fumes.
7. Store the heater in the original box with the original packing material and keep the USER'S MANUAL with the heater.