# Installation and operating instructions for the MINI-CADDY WOOD FURNACE (PF01302)

Certified according to CSA B415.1-10, CSA B366.1, UL391,
CSA C22.2 NO.236, UL 1995

## FURNACE MODELS INCLUDED IN THIS MANUAL

| WOOD ONLY | COMBINATION WOOD/ELECTRIC (11.25 kW) |
|---|---|

**Read these instructions carefully before installing and operating your furnace.**

# CONGRATULATIONS!

You have purchased one of the finest wood or combination furnaces available on the market. We are confident that your furnace will provide years of comfort and safe operation.

**Please keep this document!**

Verified and tested for Canada and the United States by an accredited laboratory.



***Eco-energy at the hearth of your home***

**PSG**
250, de Copenhague,
St-Augustin-de-Desmaures (Quebec)
CANADA G3A 2H3

Printed in Canada

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# IMPORTANT NOTE

**THE INSTALLATION OF THIS CENTRAL HEATING SYSTEM MUST BE PERFORMED BY A QUALIFIED TECHNICIAN. PSG RESERVES ITSELF THE RIGHT TO VOID ITS WARRANTY OR DENY TECHNICAL ADVICE IF THE FURNACE HAS NOT BEEN SOLD OR INSTALLED BY A PROFESSIONAL.**

**REGISTER YOU WARRANTY ONLINE**

To receive full warranty coverage, you will need to show evidence of the date you purchased your furnace. Keep your sales invoice. We also recommend that you register your warranty online at http://www.Mini-Caddyfurnaces.com/en/warranty/warranty-registration
Registering your warranty online will help us track rapidly the information we need on your furnace.

## 1. INTRODUCTION

This furnace operates like an EPA wood burning stove. This applies to the lighting, the ember bed, and the minimum combustion air intake which was determined based on the use of good seasoned cordwood.

The Mini-Caddy furnace is EPA certified and tested and approved according to the CSA B415.1-10 Standard.

To optimize the efficiency of your furnace, here is some advice that you should follow when installing or operating your Mini-Caddy.

- Respect the local codes (when in doubt, consult your local dealer);
- Make sure your furnace is installed according to the instructions on the certification label;
- All controls and adjustments must be performed by a qualified technician. The blower speed must conform to the recommendations of local codes and should respect the static pressure ranges in the hot air plenum of the furnace.

We recommend that our wood burning hearth products be installed and serviced by professionals who are certified in the United States by NFI (National Fireplace Institute®) or in Canada by WETT (Wood Energy Technical Training) or in Quebec by APC (Association des Professionnels du Chauffage).

This furnace has been developed and built for residential heat source. Commercial and industrial use is prohibited and will void the warranty.

## 2. APPLIANCE PERFORMANCE(1)

| | | |
|---|---|---|
| Fuel type | Dry cordwood | |
| Recommended heating area[*] | 500 to 1,500 ft² (46 to 139 m²) | |
| Firebox volume | 2.3 ft³ (0.065 m³) | |
| Maximum burn time[*] | 13 h | |
| Maximum input capacity (dry cordwood)(2) | 198,000 BTU | |
| Overall heat output rate (min. to max.)(3) | 11,319 BTU/h to 37,053 BTU/h (3.3 kW to 10.8 kW) | |
| Average overall efficiency(4) | 75.7% (HHV)(5) | 81.1% (LHV)(6) |
| Delivered heat output rate (min. to max.)(7) | 10,849 BTU/h to 36,429 BTU/h (3.2 kW to 10.7 kW) | |
| Average delivered efficiency(8) | 70.6% (HHV)(5) | 77.2% (LHV)(6) |
| Optimum efficiency(9) | 85.1% | |
| Average particulate emissions rate(10)(11) | 0.841 lb/mmBTU (0.362 g/MJ) | |
| Average CO(12) | 15.61 lb/mmBTU (6.72 g/MJ) | |
| Average electrical power consumption (13) | 760 W | |

[*] Recommended heating area and maximum burn time may vary subject to location in home, chimney draft, heat loss factors, climate, fuel type and other variables. The recommended heating area for a given appliance is defined by the manufacturer as its capacity to maintain a minimum acceptable temperature considering that the space configuration and the presence of heat distribution systems have a significant impact in making heat circulation optimum.

(1) Values are as measured per CSA B415.1-10, except for the recommended heating area, firebox volume, maximum burn time and maximum input capacity. Performances based on a fuel load prescribed by the standard at 10 lb/ft³ and with moisture content between 18% and 28%.

(2) Input value at 10lb/ft³ fuel loading density and dry energy value of 8,600BTU/lb.

(3) Overall: Radiated and delivered heat together at10lb/ft³ fuel loading density over one total burn cycle.

(4) Efficiency based on radiated and delivered heat when allowing cycling from high to low burn to simulate thermostat demand.

(5) Higher Heating Value of the fuel.

(6) Lower Heating Value of the fuel.

(7) Delivered: Remotely provided to other rooms through ducting at 10 lb/ft³ fuel loading density over one total burn cycle.

(8) Efficiency based on delivered heat when allowing cycling from high to low burn to simulate thermostat demand.

(9) Optimum overall efficiency at a specific burn rate (LHV).

(10) Based on delivered heat output.

(11) This appliance is officially tested and certified by an independent agency.

(12) Carbon Monoxyde. Based on overall heat output at 10lb/ft³ fuel loading density.

(13) Unless stated otherwise, measures were taken directly at the main power source and include all electrical components present in the appliance.

## 3. GENERAL FEATURES

| | |
|---|---|
| Maximum log length | 20 in (508 mm) / north-south* |
| Diameter of the flue collar | 6 in (152 mm) |
| Recommended connector pipe diameter | 6 in (152 mm) (wood only or combined wood-electric) |
| Recommended chimney diameter | 6 in (152 mm) (wood only or combined wood-electric) |
| Required type of chimney | CAN/ULC S629, UL 103 HT (2100 °F) |
| Baffle material | C-Cast |
| Alcove installation | Not approved |
| Mobile home installation‡ | Not approved |
| Shipping weight (without option) | 470 lb (213 kg) |
| Blower (wood or wood/electric options only) | 1/4 HP, direct drive, 4 speeds, 1,400 CFM |
| Filter – dimensions (Width x Depth x Height) (included with optional blower assembly) | 15 in x 20 in x 1 in (381 mm x 508 mm x 25 mm) |
| Filter – quantity | 1 |
| Particulate emission standard | EPA / CSA B415.1-10 |
| USA standard (safety) | UL 391, UL 1995 |
| Canadian standard (safety) | CSA B366.1, CSA C22.2 no 236 |

*** East-west: through the door you see the longitudinal sides of the logs; north-south: through the door you see the tips of the logs.*

‡ *Mobile home (Canada) or manufactured home (USA): The US department of Housing and Urban Development describes "manufactured homes" better known as "mobile homes" as followed; buildings built on fixed wheels and those transported on temporary wheels/axles and set on a permanent foundation. In Canada, a mobile home is a dwelling for which the manufacture and assembly of each component is completed or substantially completed prior to being moved to a site for installation on a foundation and connection to service facilities and which conforms to the CAN/CSA-Z240 MH standard.*

## 4. SPECIFICATIONS

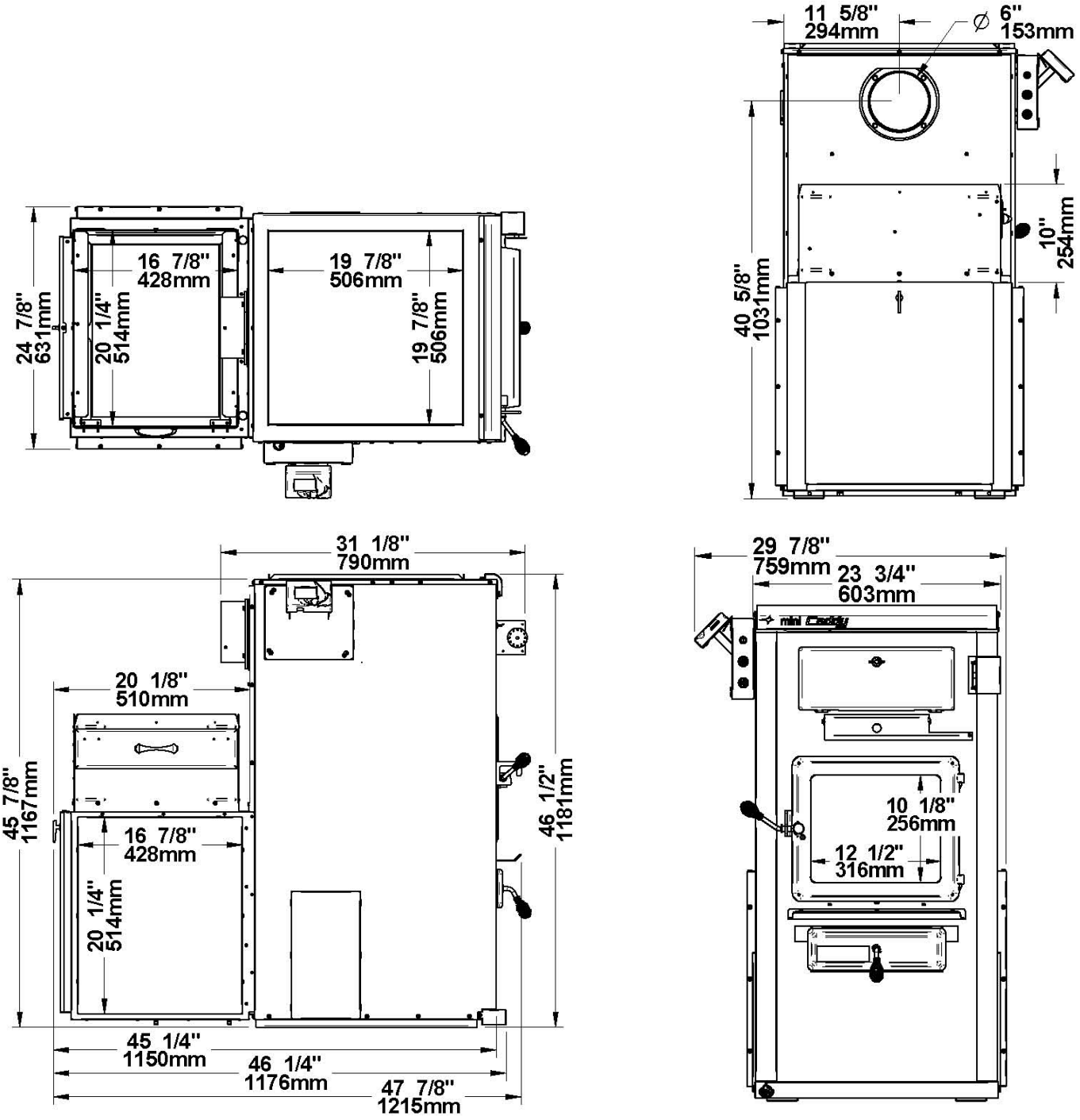
| | |
|---|---|
| Color | Grey |
| Thermostatic control | Yes |
| Door type | Single, glass with cast iron frame |
| Glass type | Ceramic glass |
| Air return plenum – dimensions (Depth or Height) | 16 7/8 in |
| Air return plenum – dimension (Width) | 20 1/4 in |
| Hot air plenum – dimensions (Depth or Height) | 20 in |
| Hot air plenum – dimension (Width) | 20 in |
| Ash pan – dimensions (Width x Depth x Height) | 11 ¾ in x 12 in x 2 5/8 in |
| Clearance – front | 48 in |
| Clearance – back wall | 24 in from the blower housing recommended service clearance |
| Clearance – side wall | 8 in without options installed |
| Clearance – opposite side wall | 24 in |
| Clearances – ducts | 3 in for the first 6 feet and 0 in after |
| Clearance – recommended for maintenance on option side | 24 in |
| Electric element – location | Left or right |
| Electric element – clearance recommended for maintenance | 24 in |
| Electric element (maximum output) | 11.25 kW |
| Top cold air plenum option – material | Galvanized steel |
| Top cold air plenum option – dimensions (Width x Depth x Height) | 20 ½ in x 16 15/16 in x 14 1/16 in |
| Top cold air plenum option – smoke pipe diameter | 6 in |
| Tested and listed as per applicable standards | By an accredited laboratory (CAN/USA) |
| Warranty | Limited lifetime |

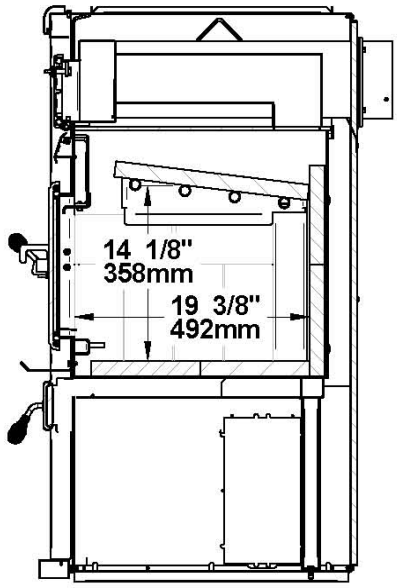
## 5. GENERAL TECHNICAL DATA

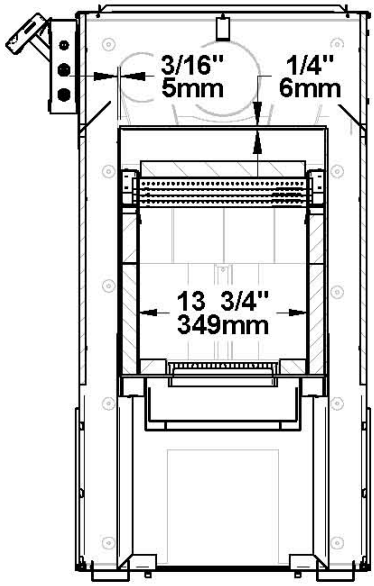
| MODEL | (DIRECT DRIVE) | | | DEBIT | TEMP VAR. | BTU/ H | STATIC PRESSURE | | FILTER |
|---|---|---|---|---|---|---|---|---|---|
| | VENT | MOT. | VIT. | (CFM) | ($^{O}$F) | (BOIS) | MIN. | MAX. | 1 |
| | | | | | | | $H_2O$ | | |
| MINI-CADDY | DCT-916-800-5 | ¼ HP | 4 | 1400 | 125 | 198,000 | 0.2 | 0.5 | 15'' x 20'' x 1'' |

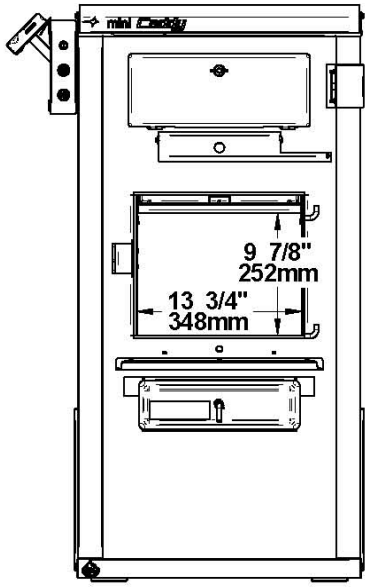
## 6. FURNACE DIMENSIONS

### 6.1. WOOD ONLY

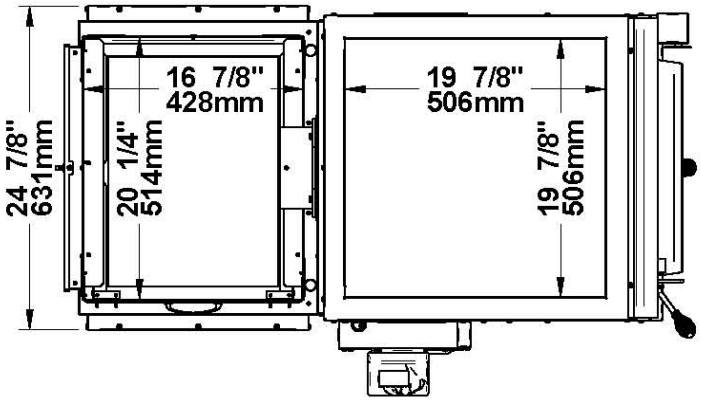


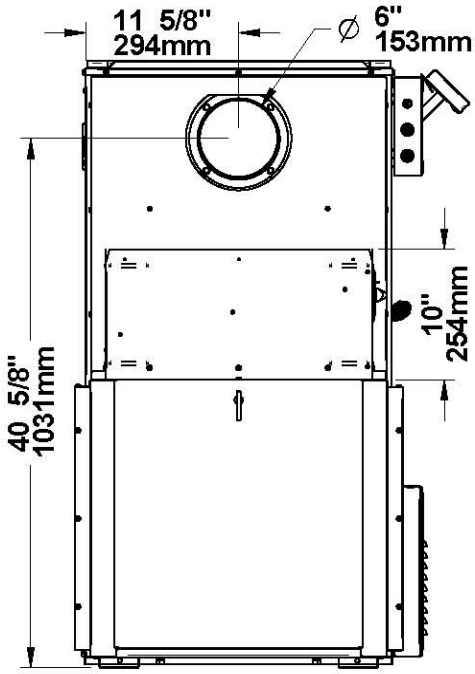


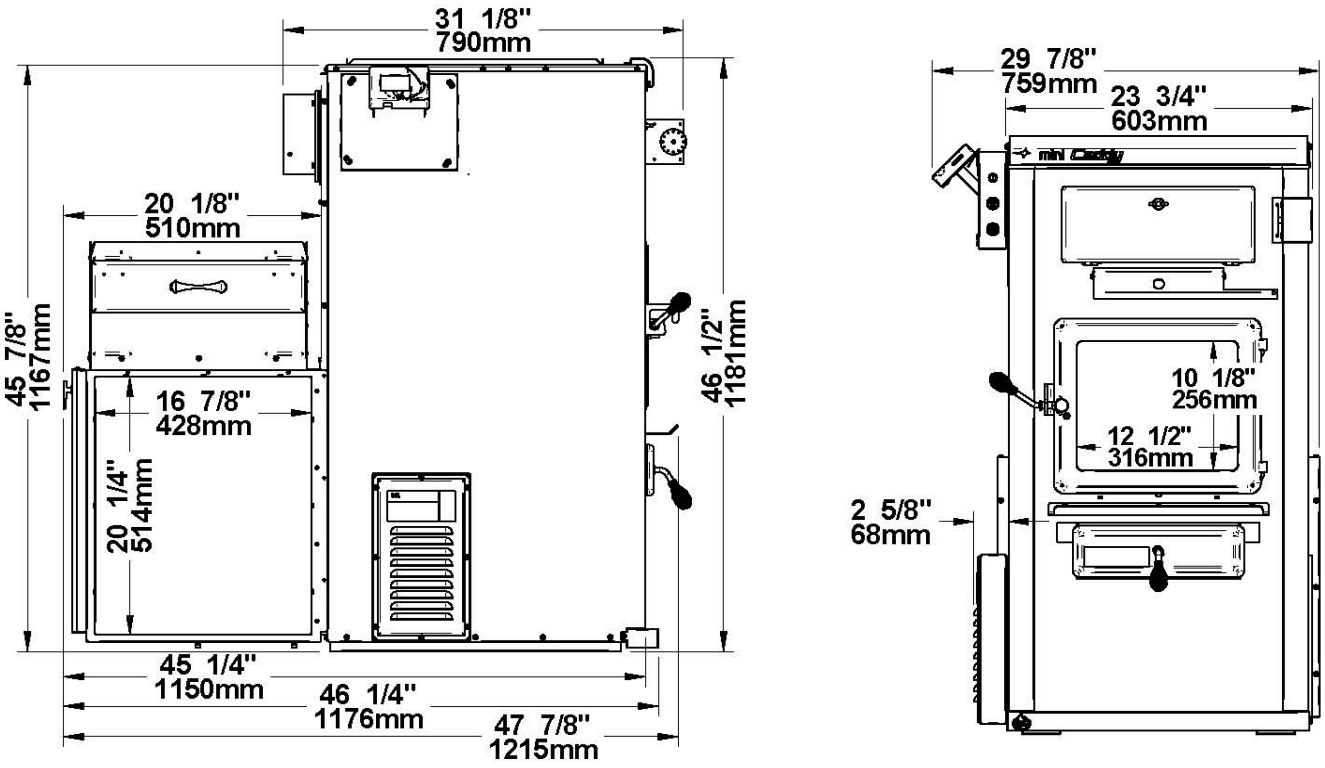




## 6.2. COMBINED WOOD-ELECTRIC






## 7. CHIMNEY AND DRAFT

This furnace must be connected to a chimney certified for use with wood burning heating appliances. A 6″ chimney and flue pipe are mandatory for the Mini-Caddy.

The unit is not to be connected to a chimney serving another appliance. If the flue pipe draft exceeds -0.06 IN.W.C., a barometric damper should be installed. Never install a manual damper. The barometric damper must be adjusted so that the maximum draft measured in the flue pipe does not exceed -0.06 IN.W.C. Please note that a draft exceeding -0.06 IN.W.C. could produce an uncontrollable fire. **On the other hand, the minimum draft required is 0.04 IN.W.C. in the flue pipe on the wood side, no matter what type of furnace (WOOD or WOOD / ELECTRIC). The air inlets should in no case be modified to increase combustion.**

## 8. SAFETY RULES

**WARNING:**

**THE INFORMATION GIVEN ON THE CERTIFICATION LABEL AFFIXED TO THE APPLIANCE ALWAYS OVERRIDES THE INFORMATION PUBLISHED, IN ANY OTHER MEDIA (OWNER'S MANUAL, CATALOGUES, FLYERS, MAGAZINES AND/OR WEB SITES).**

### 8.1. GENERAL REQUIREMENTS

**MAKE SURE THE HEAT EXCHANGERS, THE FLUE PIPES AND THE CHIMNEY ARE CLEAN AND IN GOOD CONDITION.**

**DO NOT USE CHEMICAL PRODUCTS OR LIQUIDS TO LIGHT THE FIRE.**

**DO NOT BURN WOOD COATED WITH PAINT, GLUE OR CHEMICAL PRODUCTS.**

**DO NOT BURN WASTES OR FLAMMABLE LIQUIDS SUCH AS GASOLINE, NAPHTHA, MOTOR OIL, OR OTHER UNSUITABLE MATTERS.**

**DO NOT STORE WOOD IN THE VICINITY OF THE FURNACE. RESPECT THE REQUIRED CLEARANCES BETWEEN COMBUSTIBLE MATERIALS AND THE SOURCE OF HEAT.**

**AIR DUCTS SERVING A GARAGE SHOULD NOT BE CONNECTED TO OTHER PARTS OF A HOUSE AND THE DUCTING SERVING A HOUSE SHOULD NOT BE CONNECTED TO A GARAGE.**

**WARNING**

**THE ASH DRAWER AND EXCHANGERS ACCESS PANEL GET VERY HOT. DO NOT MANIPULATE WITH BARE HANDS.**

**WARNING:** This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov/

## 8.2. ODOUR FROM THE PAINT

It is normal that smoke and odours emanate from the unit when you first light it. It is recommended to burn it at high rate and ventilate the house until the odours disappear. The smoke is not toxic. **This should be done before the ducts are connected to the furnace to prevent smoke dispersion in the house.**

## 8.3. ASH DISPOSAL

Ashes must be placed in a metal container with a tight fitting lid. The container should be stored outdoor, well away from combustible materials. This container should not contain any other type of waste. If the ashes are meant to be buried in soil, wait until all embers have thoroughly cooled before burying.

## 8.4. CREOSOTE BUILD-UP AND REMOVAL

When wood is burned slowly, it produces tar and other organic vapours which, when combined with moisture, form creosote. The creosote vapours condensate in a relatively cool flue pipe. As a result, creosote residues accumulate inside the flue pipe and the heat exchangers.

N.B.: To minimize the frequency of the chimney cleaning, buy your firewood at least one year before using it. In order to obtain the minimum moisture rate and optimize the efficiency, store it in a dry place, under a shelter. Do not store wood or combustible materials within the installation minimum clearances or the space required to reload the appliance and remove ashes.

When ignited, creosote produces an extremely hot fire inside the chimney.

In the first year of use, inspect the chimney system at regular intervals to determine a cleaning cycle. Depending on the type of wood used and its quality, a semi-annual cleaning may be required. A yearly cleaning is mandatory. **If a significant layer of creosote has accumulated, it must be removed immediately to eliminate the risk of chimney fire.**

Remember that a small, hot fire is preferable to a large smouldering one to prevent creosote build-ups. Prepare an emergency procedure in case of a chimney fire. **It is recommended to clean the heat exchangers the flue pipe and the chimney thoroughly at the end of season in order to prevent corrosion.**

## 8.5. SMOKE DETECTOR

We highly recommend the use of a smoke detector. It must be installed at least 15 feet (4,57 m) from the appliance in order to prevent undue triggering of the detector when reloading.

## 8.6. DOOR GLASS

To maintain a clean and safe installation, do not build your fire too close to the glass or allow logs to lean on the glass.

Do not operate your furnace at a too low burning regime. Keep the air inlet opened long enough during the fire start-up to prevent the fire from smouldering, which could stain the glass.

An intense fire will help keep the glass clean. However, in the event that your glass gets stained, you will have to clean it using a wet cloth and a fireplace glass cleaner. Clean the glass **ONLY** when the unit has cooled down. Do not use abrasive cleanser.

**WARNING: AVOID KNOCKING OR SCRATCHING THE GLASS. IT COULD CRACK OR BREAK.**

### 8.6.1. GLASS SPECIFICATIONS

The glass is made of 3/16" (4 mm) thick ceramic glass.

Do not operate your wood furnace with a broken glass, as this could seriously damage your furnace.

You can purchase a replacement glass from your PSG dealer.

## 8.7. ASH DRAWER

Your furnace is equipped with an ash drawer to collect ashes produced by the combustion of wood. This drawer must not be left open during combustion as this may cause over firing and serious damages to the furnace. Moreover, the additional air created could cause the dispersion of ashes in the ventilation system. **The drawer must be cleaned regularly. Use a vacuum cleaner to remove any ashes around the drawer in order to avoid the dispersion of ashes in the ventilation system.**

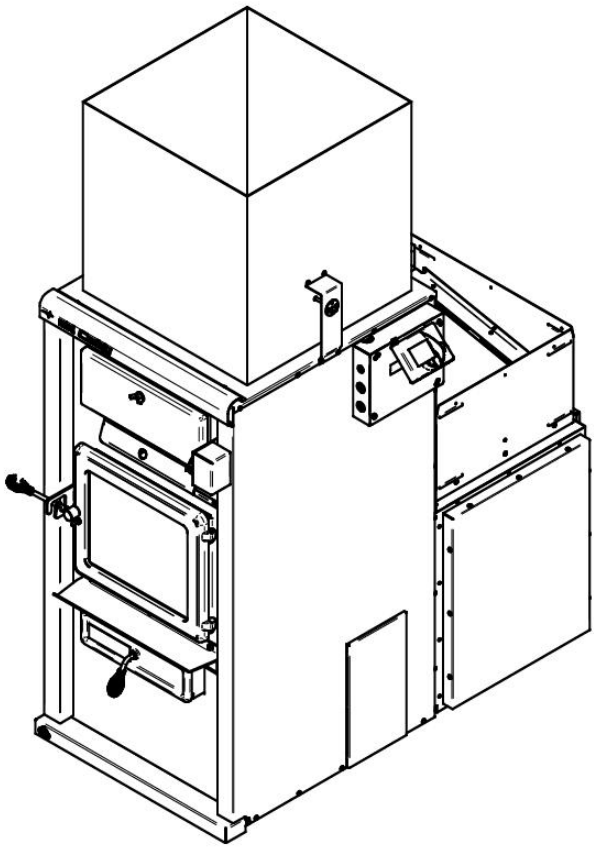
**It is important that the door and the ash drawer be kept closed while the appliance is in use. Maintain all gaskets in good condition; in case of deterioration, contact your dealer for a genuine replacement gasket.**

## 8.8. ASH GRATE

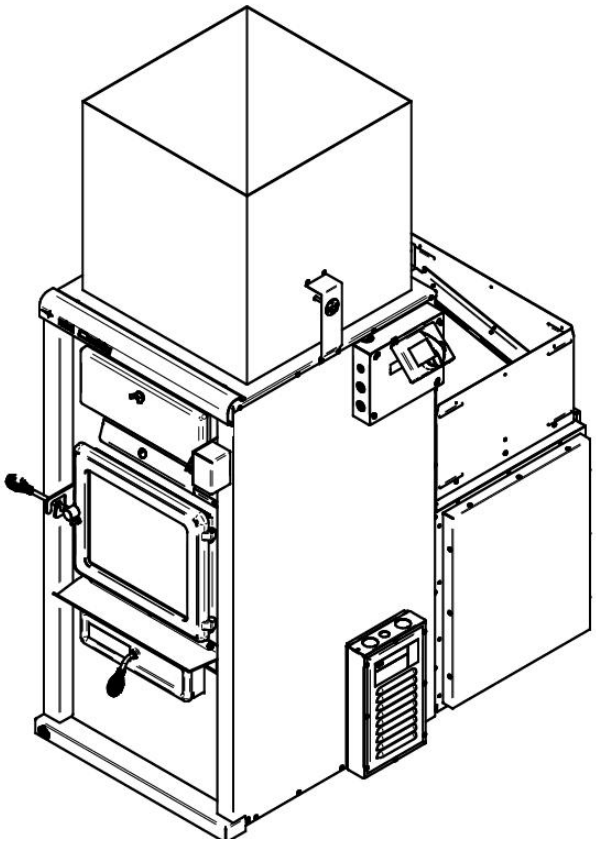
You must replace the ash grate if it is damaged. A replacement may be obtained from your dealer.

# INSTALLATION AND OPERATION INSTRUCTIONS FOR

# MINI-CADDY WOOD ONLY FURNACE OR COMBINED WOOD / ELECTRIC OR PARALLEL ADD-ON PF01302



**FOURNAISE MINI-CADDY – BOIS SEULEMENT**



**FOURNAISE MINI-CADDY – COMBINÉE BOIS / ÉLECTRIQUE**

## 9. INSTALLATION INSTRUCTIONS

Installation must be made in accordance with the CSA B.365 « Installation code for solid-fuel-burning appliances and equipment » standard in Canada and NFPA 90B « Standard for the installation of warm air heating and air conditioning system » in the United States. Moreover, for all electrical connection, the Canadian standard CSA C22.1 « Canadian electrical code » and in the United-States NFPA 70 standard « National Electrical Code » must be followed.

All controls and adjustments must be performed by a qualified technician. The blower speed must conform to the recommendations of the Warm Air Heating and Air Conditioning National Association and should respect the static pressure ranges in the warm air plenum of the furnace

We recommend that our woodburning hearth products be installed and serviced by professionals who are certified in the United States by NFI (National Fireplace Institute®) or in Canada by WETT (Wood Energy Technical Training) or in Quebec by APC (Association des Professionnels du Chauffage).

Inspect the furnace to make sure that nothing has been damaged in the shipping. Pull out the wiring kit and the instructions manual from the firebox of the furnace.

The following section contains installation instructions for the Mini-Caddy wood only, Mini-Caddy wood / electric and Mini-Caddy add-on parallel configurations.

### 9.1. BLOWER ASSEMBLY INSTALLATION (PA08521 – SOLD SEPARATLY)

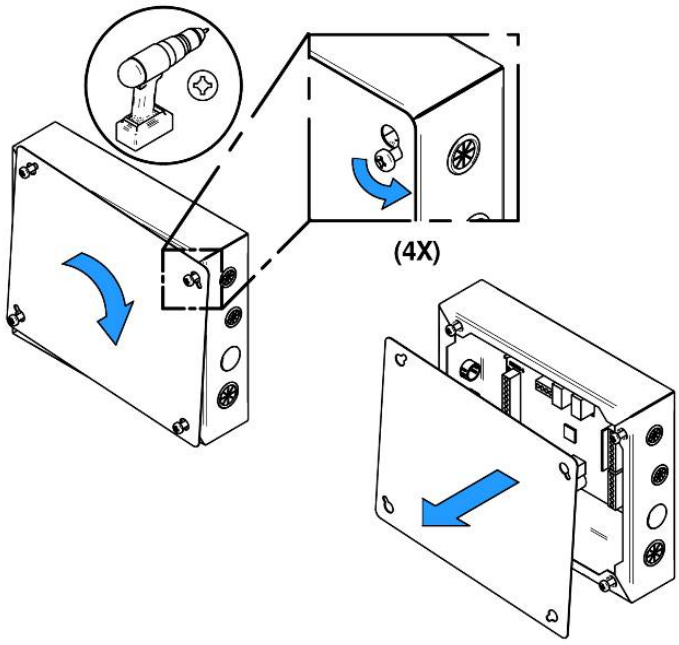
All of the Mini-Caddy configurations require the installation of the blower assembly. The blower assembly installation instructions are provided with the blower.

### 9.2. LINK BOARD INSTALLATION AND CONNECTION

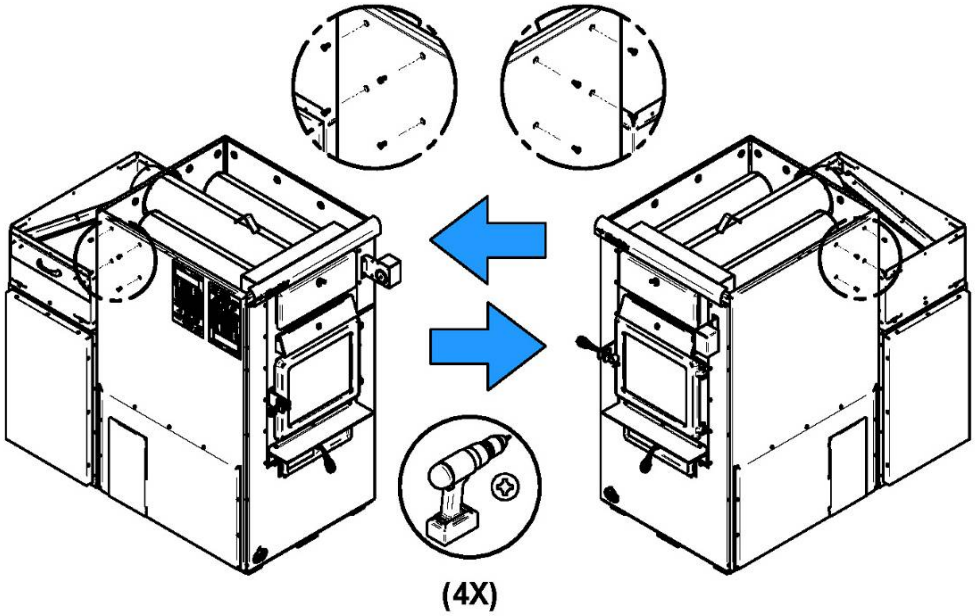
The following installation instructions are identical whether the furnace controls are located on the left or on the right of the furnace. The most accessible side is preferred to facilitate the connection of auxiliary heating sources or for servicing.

The components to be installed are in the combustion chamber of the furnace.

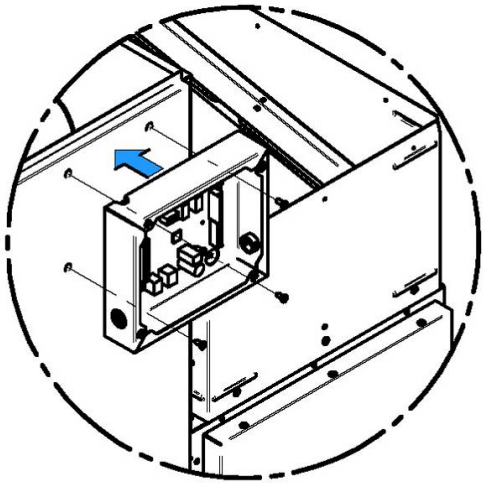
Remove the link board access panel.



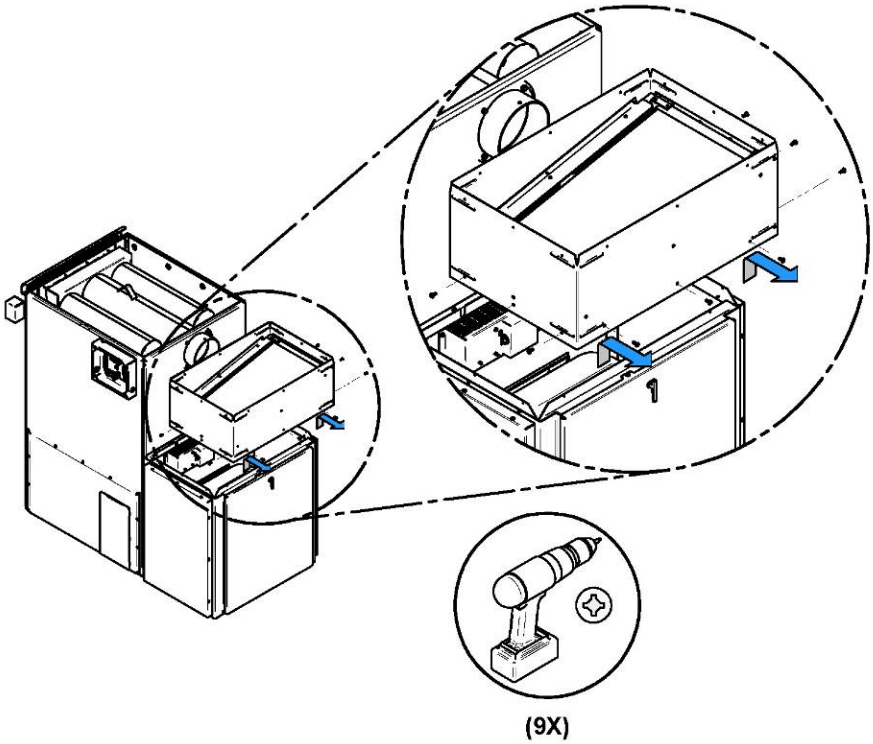
Remove the four screws on the furnace, located on the side of the desired installation. Keep the screws.



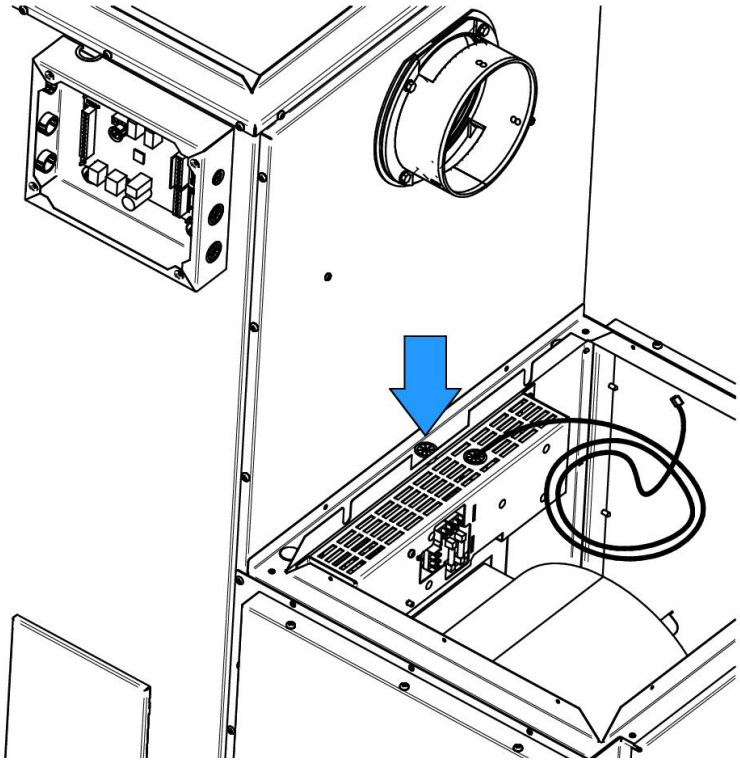

Align the holes of the link board housing with the holes on the side of the furnace. Use the screws removed in the previous step to secure the housing to the furnace.



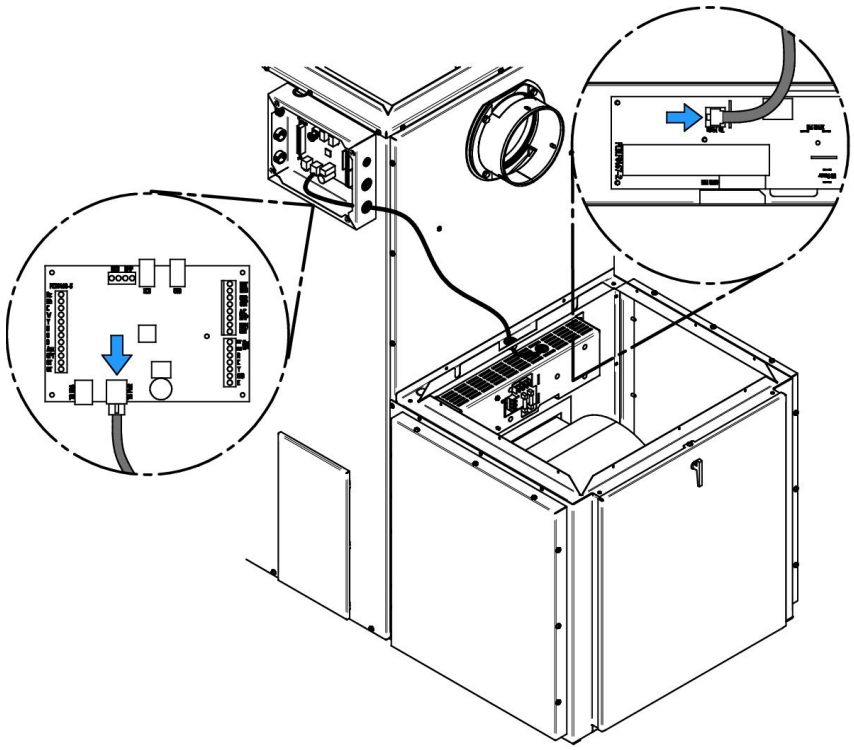
Once installed, the link board must be connected to the power board with the telecommunication wire. The wire is located in the blower box. To access it, remove the duct support.



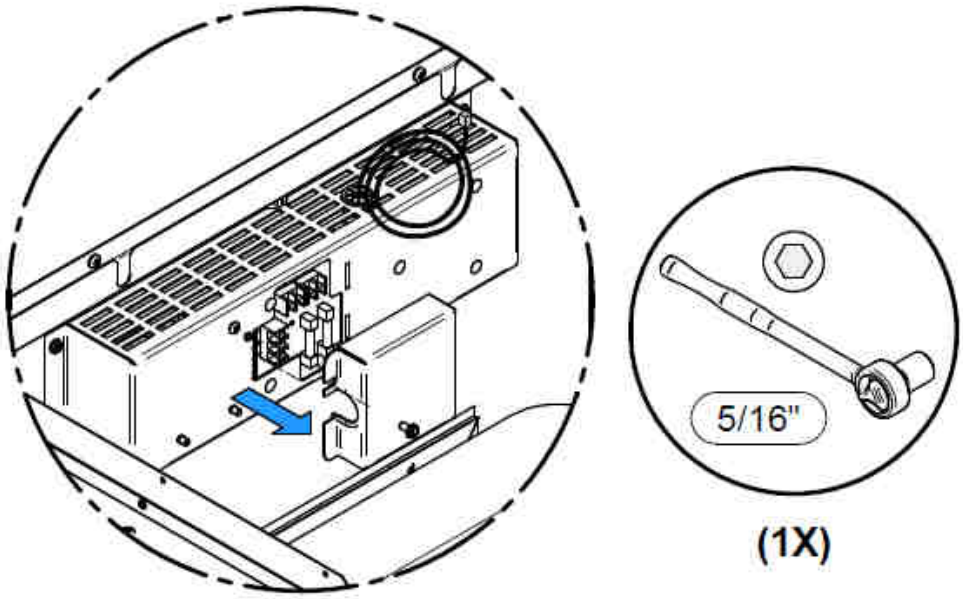
Take the telecommunication wire and pull it through the middle grommet on the blower box



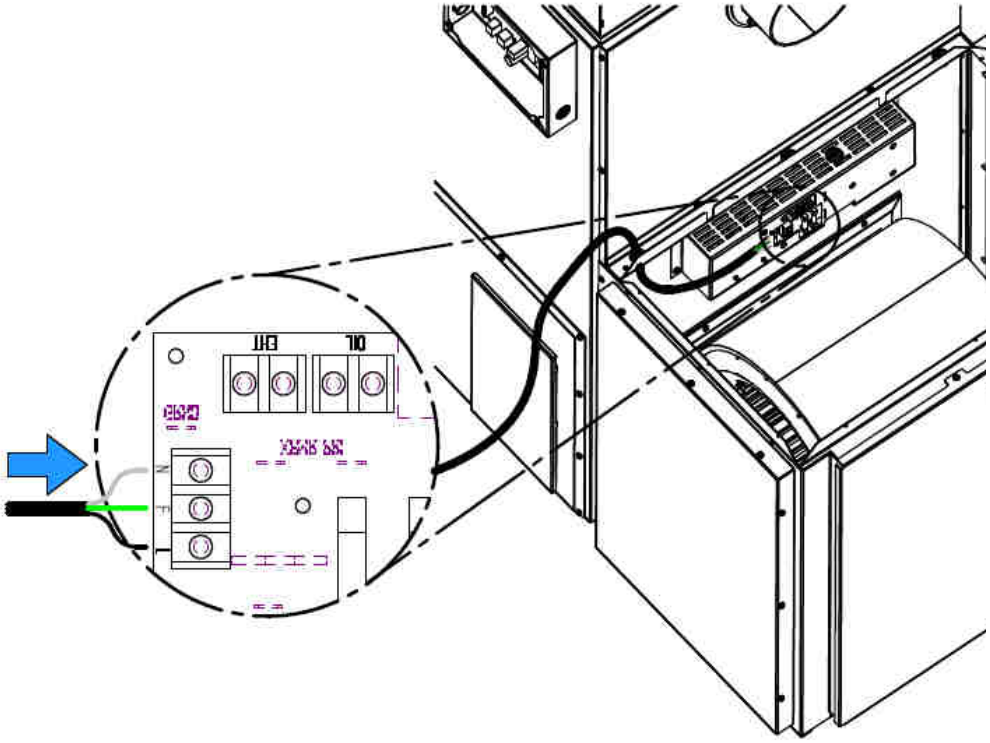
Once the telecommunication wire is out run it along the back of the furnace and pass it through the grommet at the bottom of the link board housing. Complete the connection by plugging the 8 strands telecommunication wire in the right connector, shown by the arrow.



Your furnace should also be connected to a 115V power source. To do so, open the cover of the power board housing.

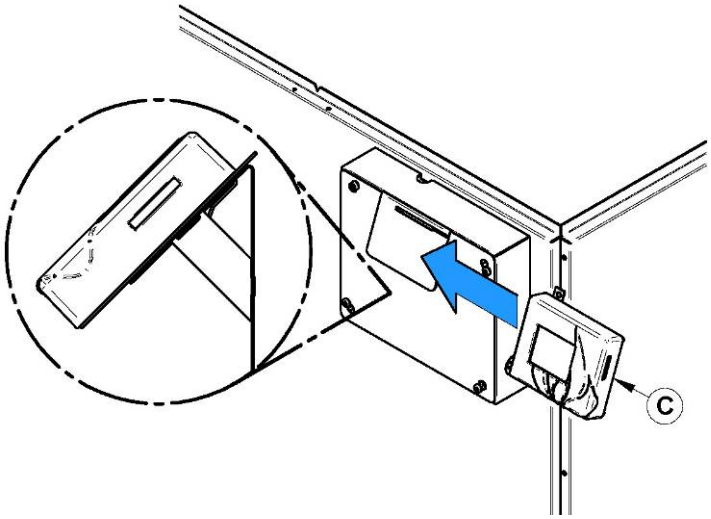



Connect the power cord to the terminals N (Neutral) F (Ground) L (Line). Refer to wiring diagram for connecting components. When done, secure the wires with a BX connector (not included) and replace the blower box cover.

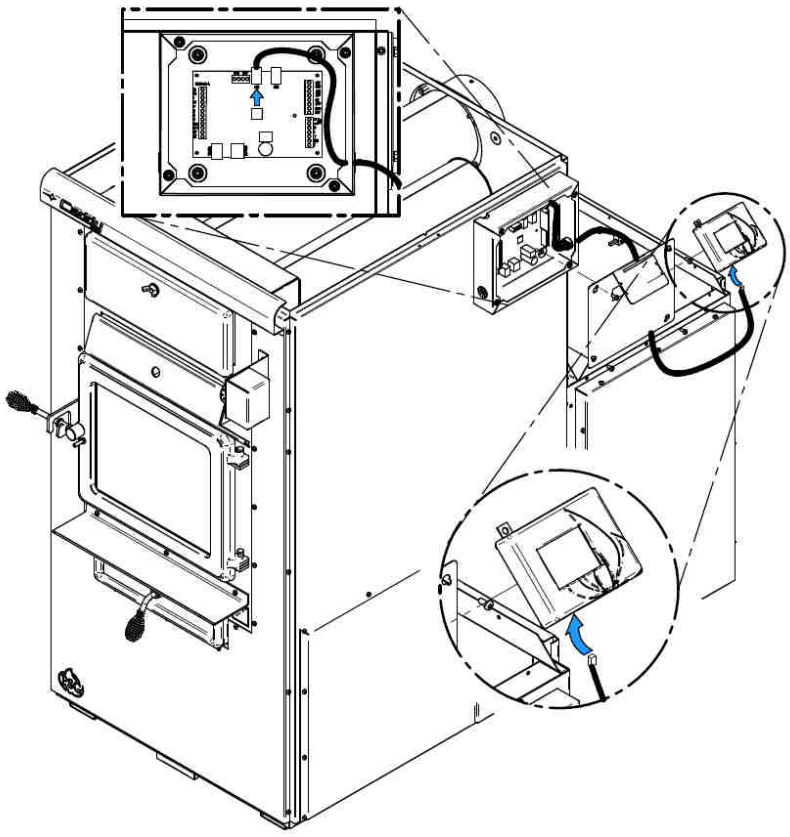


## 9.3. TOUCHSCREEN INSTALLATION AND CONNECTION

The touch screen is used to operate the system. It must be installed on the support provided at the back of the furnace, on the same side as the link board housing.




Connect link board with the touch screen using the telecommunication wire provided with the user manual. Plug the telecommunication wire in connector labeled LCD and pull it out of the board housing through the bottom grommet. Simply run the wire on the side of the furnace. Replace the access panel of the link board. Note that the touch screen is removable if access is restricted.



## 9.4. HOT AIR PLENUM TEMPERATURE PROBE INSTALLATION AND CONNECTION (RTD)

On the Mini-Caddy, a temperature probe (RTD) has to be installed on the side of the furnace using the support provided with the unit. The RTD is a sensor that reads the temperature inside the hot air plenum. It is critical to the good operation of the furnace. It is important that the RTD and the RTD support be properly fixed onto the hot air plenum.

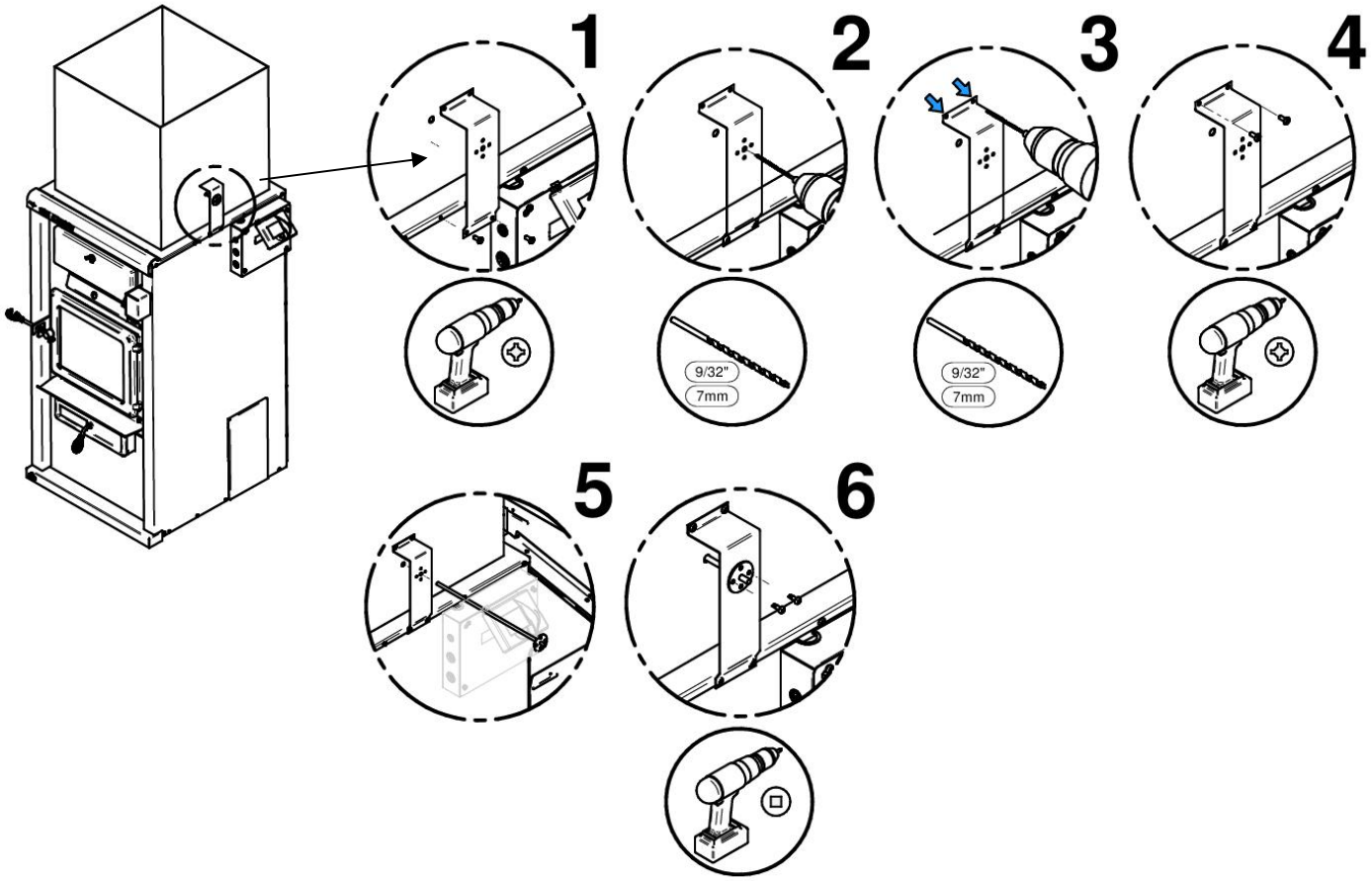
**WARNING: USE WIRING SUITABLE FOR 75 °C (not included).**

STEP 1: Remove the two screws already secured on the furnace on the side where you have chosen to install the link board. Then, secure the RTD support using the two screws you previously removed.

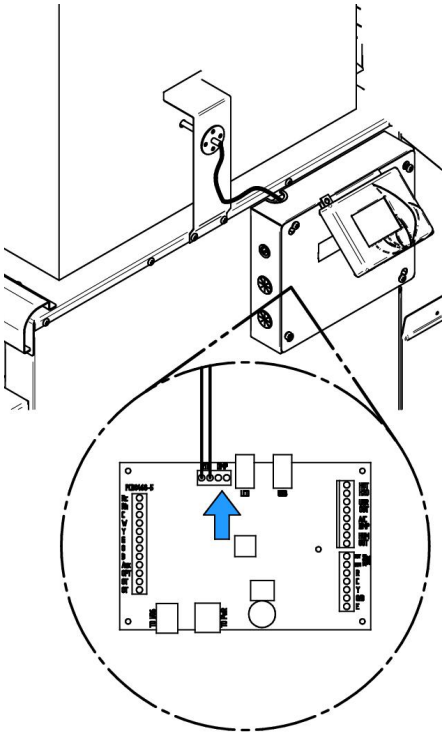
STEP 2: Using a drill and a 9/32" bit, drill a hole in the hot air plenum so that the RTD rod can pass into it.

STEP 3 AND 4 : Drill two holes in the hot air plenum to secure the RTD support to the hot air plenum and screw the support in place.

STEP 5 and 6: Secure the RTD in place on the RTD support using the two screws provided with the owner's manual.

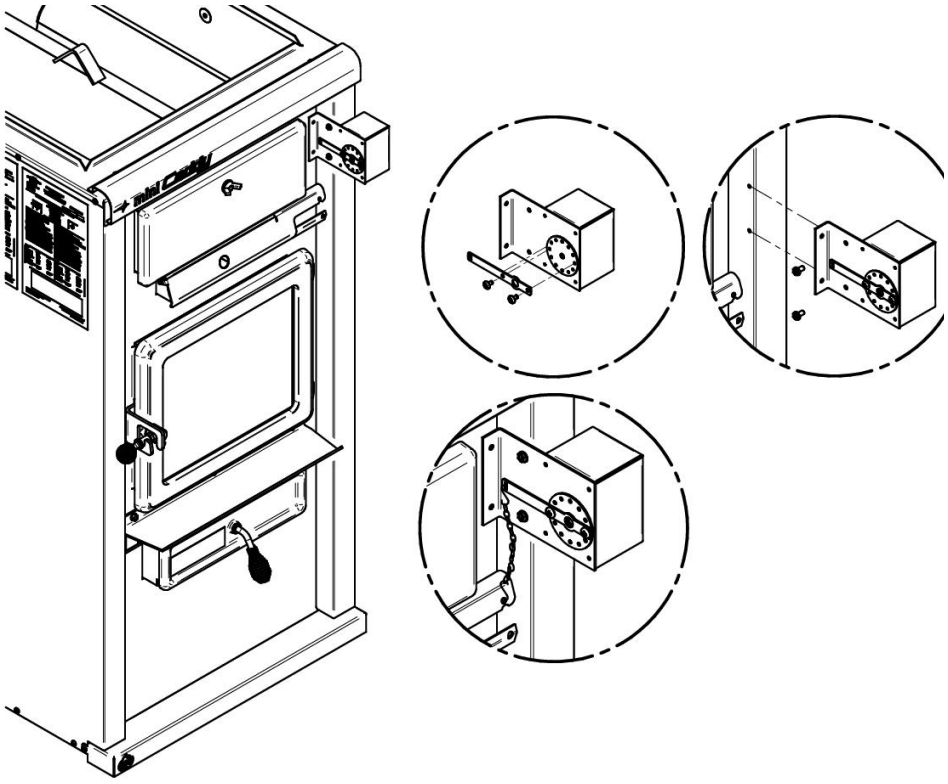


Once the RTD is installed on the support, proceed to its connection to the link board. Pass the RTD wires along the furnace and bring them close to the link board. For board connections, refer to the wiring diagram.



## 9.5. SERVOMOTOR INSTALLATION AND CONNECTION

Your Mini-Caddy furnace is equipped with a servomotor. To install it, simply screw it in place in the two pre-drilled holes on the side of the furnace using two screws as shown below.

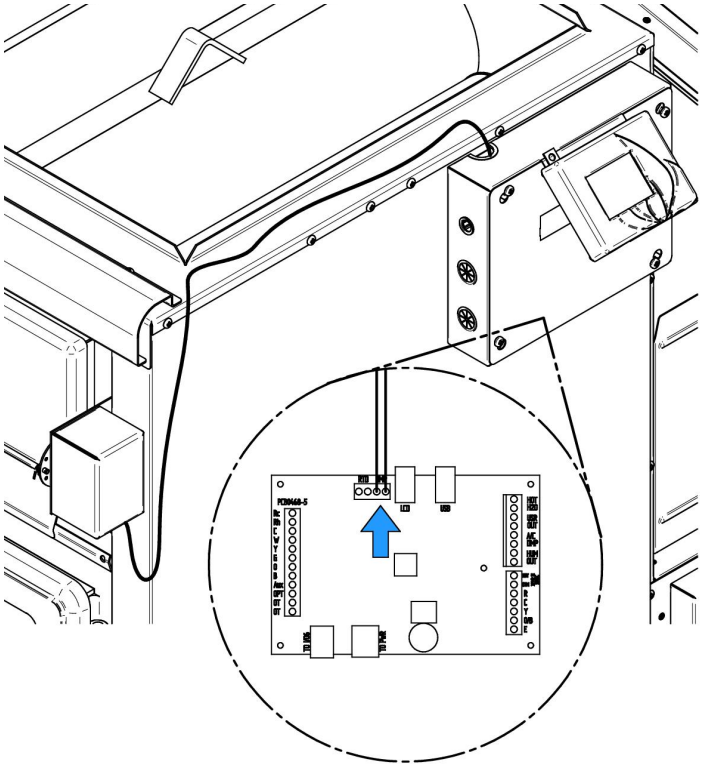


Once installed, install the chain linking the servomotor with the air control damper as shown above. The chain must have a set of 1/8". When there is no call for heat, the air control damper must be completely closed and the chain must be hooked to the servomotor at the 9:15 position.

Then, you must connect the servomotor and the link board. Take the wires out of the servomotor and Pass them along the furnace. Bring them close to the link board.

For connection, refer to wiring diagram.

**WARNING: USE WIRING SUITABLE FOR 75 °C (not included).**



## 9.6. UNIT LOCATION

For a safe and quiet operation, the furnace must be leveled in both directions and supported evenly to ensure stability.

The furnace must be installed where outside air supply will be sufficient for proper combustion. In airtight houses, it might be necessary to install an outside air inlet (See Section 9.11 - COMBUSTION AIR)

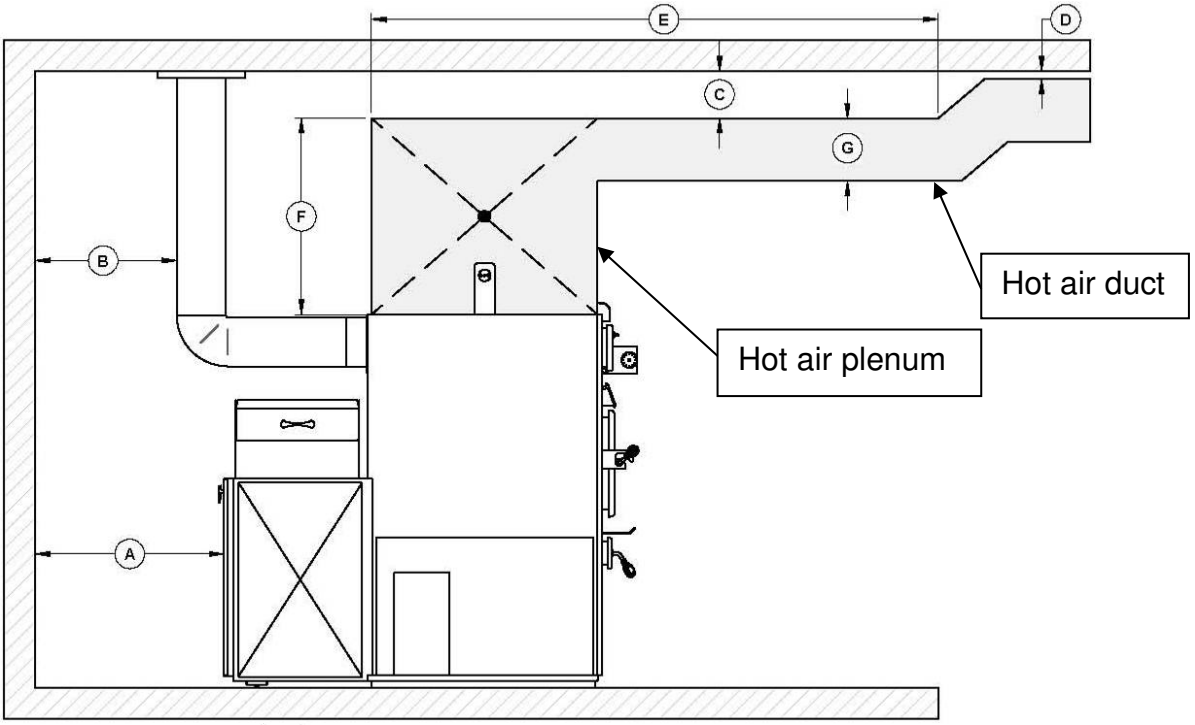
The furnace must be positioned so that the flue pipe is as short as possible. Minimize the use of 90° elbows.

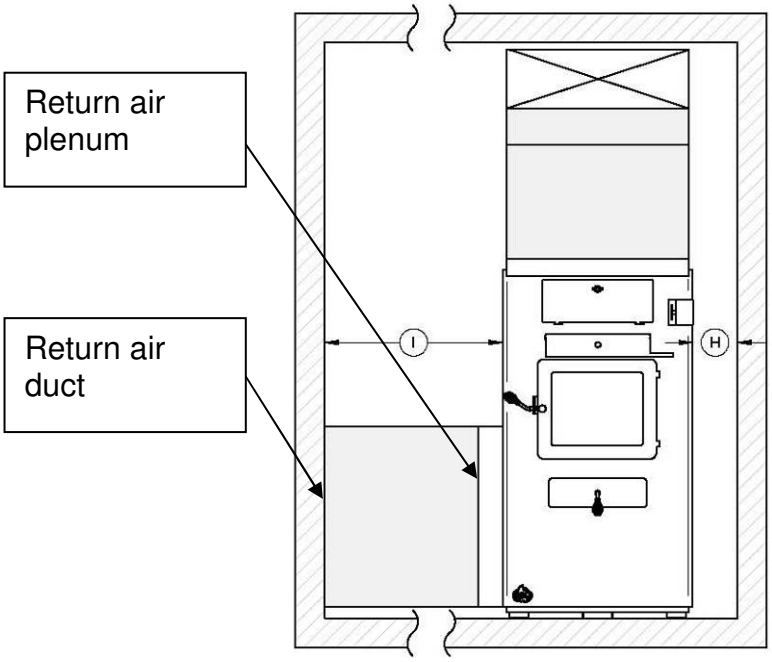
**The owner must ensure a proper installation to allow a safe operation of the appliance**.

## 9.7. MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS AND FLOOR PROTECTION

N.B.: This appliance must be installed in accordance with the instructions on the certification plate applied on the unit.

### 9.7.1. MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS




| MINIMUM CLEARANCES | | | |
|---|---|---|---|
| A | 24" (610 mm) | H | 8" (203 mm) |
| B | 18" (457 mm) | I | 24" (610 mm) |
| C | 3" (76 mm) | | |
| D | 0" (0 mm) | | |

| REQUIRED MEASUREMENTS | |
|---|---|
| E | 60" (1 524 mm) |
| F | 18" (457 mm) |
| G | 7" (178 mm) |

### 9.7.2. MINIMUM CLEARANCES TO COMBUSTIBLES MATERIALS FOR AIR RETURN DUCT

The return air duct should be at least equal in size to the air return plenum. The return air duct can be installed at zero clearance to combustibles.

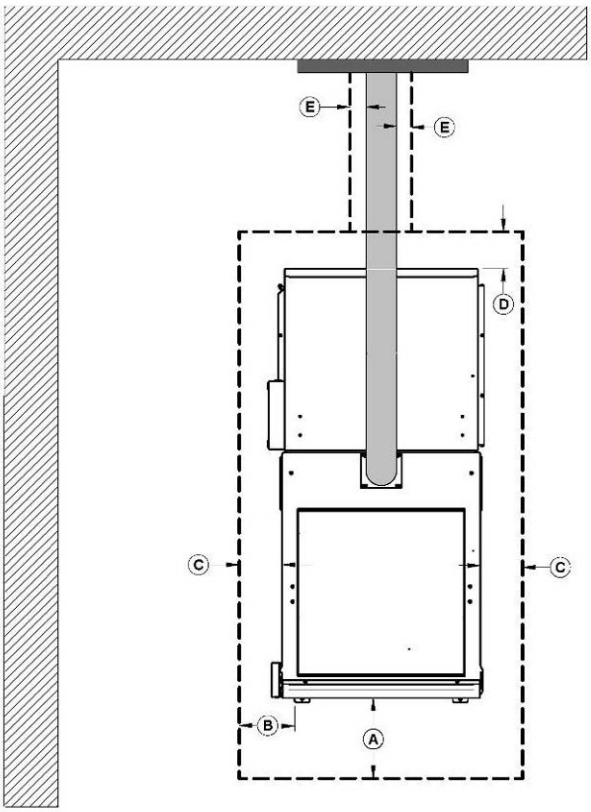
### 9.7.3. MINIMUM CLEARANCES TO COMBUSTIBLES MATERIALS FOR HOT AIR PLENUM

The hot air duct can be passed through a wall with a clearance of three (3) inches around for the first five (5) feet of duct (including the plenum). After, it can be installed at zero clearance to combustibles.

## 9.7.4. FLOOR PROTECTION

If the floor is made of non combustible material, no floor protector is required.

If the floor is made of combustible material, a non combustible material floor protector is required (see table below).




| | FLOOR PROTECTION* | |
|---|---|---|
| | **CANADA** | **USA** |
| **A** | 18" (457 mm)<br>From door opening | 16" (406 mm)<br>From door opening |
| **B** | N/A (USA only) | 8" (203 mm)<br>From door opening |
| **C** | 8" (203 mm) | N/A (Canada only) |
| **D** | 8" (203 mm) – Note 1 | N/A (Canada only) |
| **E** | N/A (USA only) | Note 2 |

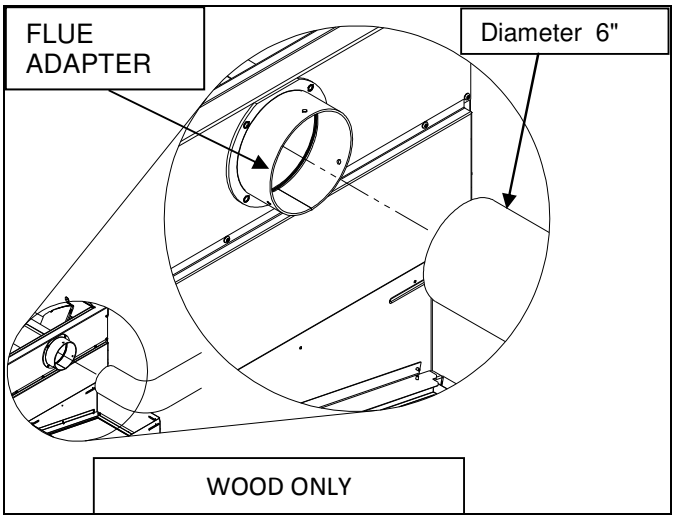
**Steel with a minimum thickness of 0.015" (0.38 mm) or ceramic tiles sealed together with grout. No protection is required if the unit is installed on a non-combustible floor (ex: concrete).*

***Note 1**: The floor protection at the back of the furnace is limited to the furnace's required clearance (A) if such clearance is smaller than 8 inches (203 mm).*

***Note 2**: Only required under the horizontal section of the flue pipe. Must exceed each side of the flue pipe by at least 2 inches (51 mm).*

## 9.8. FLUE AND BAROMETRIC DRAFT CONTROL CONNECTION

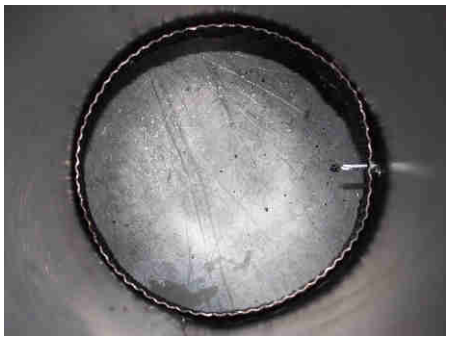
The flue outlet on the Mini-Caddy furnace is 6" in diameter and the wood only or wood/electric models may be installed with a 6" chimney approved for use with wood burning heating appliances (2100°F). If the draft exceeds -0.06 IN.W.C., a barometric damper must be installed. **Never install a manual damper.** Secure the flue collar to the flue adapter with three screws.



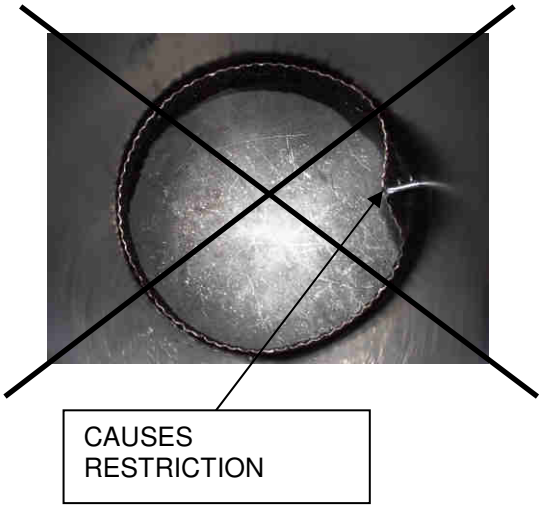

For a proper installation, follow the advice below:

- All the flue pipe joints must be secured with three screws.
- Make sure that each screw goes through the inner wall of both connectors (male and female). See pictures below showing a male-female coupling.
- A minimum rise of ¼" per horizontal foot must be respected.

PROPER INSTALLATION



IMPROPER INSTALLATION



## 9.9. ELECTRICAL CONNECTIONS

**The following instructions do not replace those of the local code.**
**Installation and verification of this appliance must be done by a qualified service man.**

All wiring from the service panel to the heating unit must comply with the electrical code in force and all local regulations. It is recommended to feed the furnace with its own electrical circuit of 15 amps at 120 volts with a breaker (see wiring diagram).

## 9.10. BAROMETRIC DAMPER

If the flue pipe draft exceeds -0.06 IN.W.C. a barometric damper must be installed. Never install a manual damper. The barometric damper must be adjusted so that the maximum draft measured in the flue pipe does not exceed -0.06 IN.W.C. Please note that a draft exceeding -0.06 IN.W.C. could produce an uncontrollable fire. **On the other hand, the minimum draft required is 0.04 IN.W.C. in the flue pipe on the wood side, no matter what type of furnace (WOOD or WOOD / ELECTRIC).**

## 9.11. COMBUSTION AIR

When the furnace and the chimney are completely cold, it may be necessary to provide fresh air by opening a door or a window for a few minutes while lighting the fire. Take note that a house constructed or renovated in order to be airtight may lack the volume of fresh air necessary for the proper combustion of a solid-fuel heating appliance.

In such a case, when starting up the fire, do not operate appliances that evacuate air outside the house, such as:

- Range hood
- Air exchanger
- Clothes dryer
- Bathroom fan
- Ventilated central vacuum system

A fresh air supply may be necessary to prevent solid fuel units from rejecting products of combustion into the house. The indications used to determine if an additional fresh air supply is necessary are not appropriate for all the situations. When in doubt, it is recommended to install a fresh air supply.

A fresh air supply may be needed if:

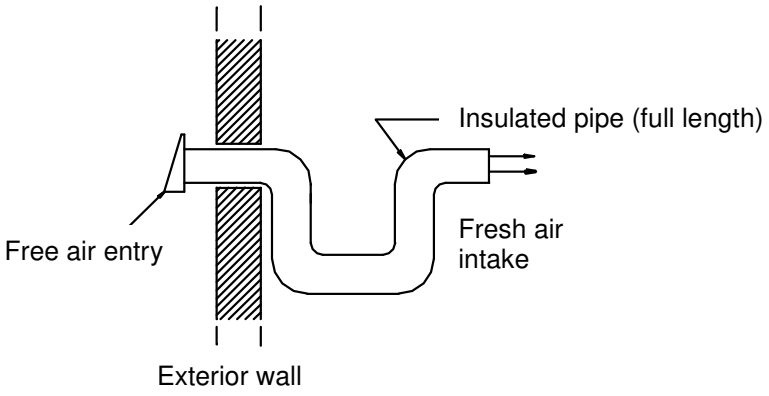
- Solid fuel units present anomalies, such as irregular draft, smoke return, bad combustion, and/or reversed draft (whether there is combustion or not);
- Existing solid fuel units such as a stove or fireplace release odours, heat badly, cause smoke returns, or reversed draft (whether there is combustion or not );
- The opening of a window, even slightly, in calm weather (windless), eliminates every problem mentioned above ;
- The house is equipped with a tight vapour barrier and adjusted windows, and/or is equipped with an interior air mechanical evacuation device ;
- There is excessive condensation on the windows in winter; and
- The house is equipped with a ventilation system.

If, according to these symptoms or other similar ones, there is insufficient combustion air, it is necessary to ensure an additional combustion air supply.

Additional combustion air can be provided with the following methods, provided that they satisfy chapter 5 of the CSA B365 standard for Canada:

- Direct connection: solid fuel units can be connected directly to a source of new combustion air only if they are certified for this kind of installation, which must respect the manufacturer's instructions. The Mini-Caddy can be installed with an optional sealed fresh air kit that has been tested with the unit. Consult your dealer.
- Indirect method: new combustion air can be brought into a pipe located within approximately 300 mm (12 inches) of the unit. If the pipe is too close to the furnace, it may interfere with its operation.
- Mechanical ventilation system: if the house is equipped with a ventilation system (air exchanger or heat recovery), the ventilation system may provide sufficient auxiliary air to the solid fuel unit. Otherwise, the owner should be informed that the ventilation system may have to be rebalanced by a ventilation technician after the installation of the solid fuel unit.

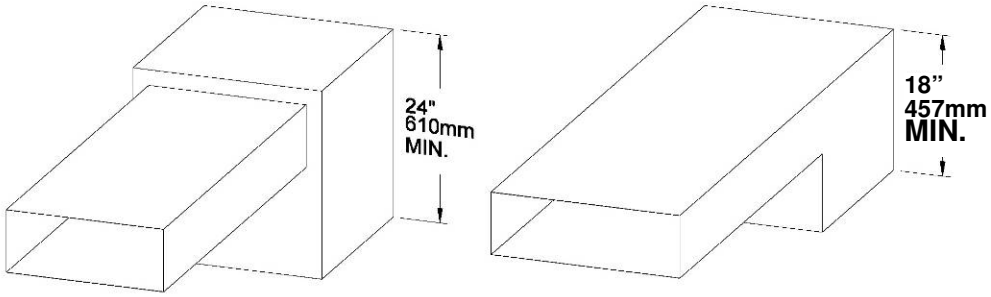
**NOTE:**
It is recommended to install an outside air inlet with a diameter of at least 4" in the room where the heating appliance is installed (see drawing below). It is preferable to choose a wall which is not exposed to dominant winds, depending on the conditions surrounding your house.




**N.B. The owner of the furnace is responsible for the room's air quality in case of negative pressure or temporary negative pressure.**

If there is a fan in the wood storage room, make sure it does not create a depression in the room where the furnace is installed.

## 9.12. HOT AIR PLENUM




Plenums installed on the furnace must be made of metal in accordance with NFPA 90B, 2-1.3.

The hot air plenum coming out of the furnace is to have a minimum height of 24" (610 mm) if the top of the first vertical section is not flush with the first horizontal section. Otherwise, the minimum height is 18" (457mm). These dimensions for all hot air furnaces are in accordance with the standards CSA B140.4 et UL 391.

**NOTE:** TO ENSURE ADEQUATE STATIC PRESSURE, THE SYSTEM SHOULD BE BUILT IN A WAY THAT THE VOLUME OF COLD AIR RETURN IS AT LEAST EQUAL OR SLIGHTLY HIGHER THAN THE VOLUME OF THE HOT AIR DISTRIBUTION.

## 9.13. PARALLEL INSTALLATION

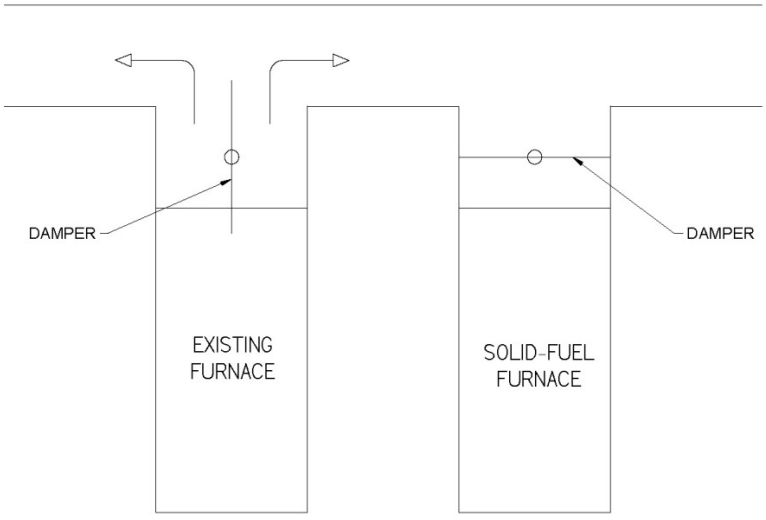
The installation of the Mini-Caddy with another furnace using the same ductwork is not allowed in Canada. **This type of installation is only allowed in the United States**. Ideally, the maximum BTU input of the existing oil, gas, or electric furnace should be equal or higher than the maximum BTU input of the wood furnace. It is mandatory to respect minimum clearances between the ductwork and combustible material as if the wood furnace was installed as a standalone unit. The ductwork and furnace should be adjusted in order to reach a static pressure of at least 0.20 IN.WC, but not more than 0.50 IN.WC. A back-flow damper should be installed in the plenum. The back-flow damper assures that when either unit is operated by itself, the hot air will flow into the home, and not back through the other furnace. Depending on your installation (see figures examples below), a back-flow damper may be required in each plenum.

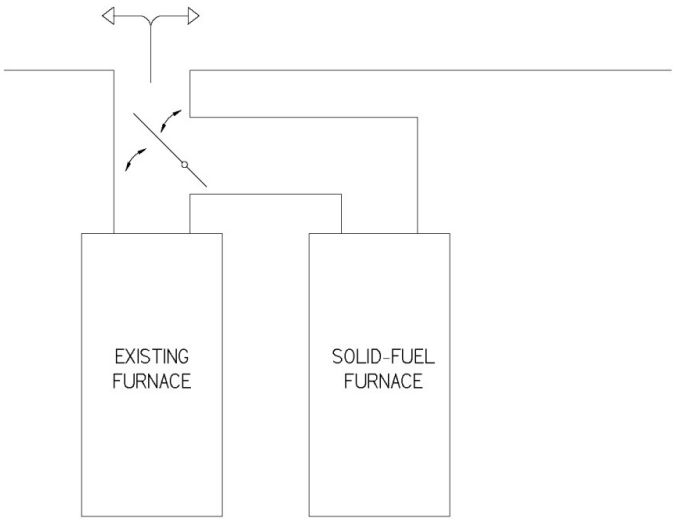
**CANADA**; The installation in parallel i.e. the Mini-Caddy furnace combined with another, using the same system of hot air ducts is not allowed in Canada.

**UNITED STATES**; The installation in parallel i.e. the Mini-Caddy furnace combined with another, using the same hot air duct system is allowed the United States.

**Conditional to;**

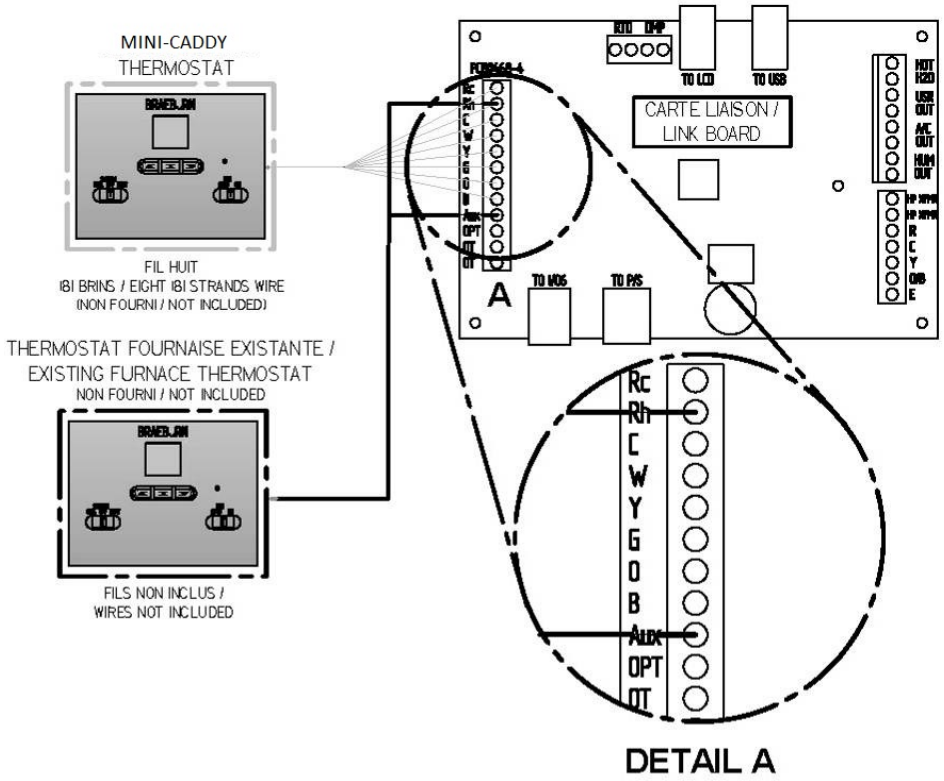
- The maximum input power of the existing gas, oil or electric furnace should be equal or lower than 120 000 Btu/h.
- The clearances required for wood furnace must be respected.
- The clearances between the hot air ducts and combustible materials must meet the highest values between the two furnaces.
- The necessary adjustments are made to the furnace or hot air ducts to maintain a static pressure of between 0.20 and 0.50 IN.W.C.
- A backflow damper must be installed to prevent air return in one or the other of the two furnaces and to ensure that hot air will flow into the house and will not return through the plenum of the other furnace. Depending on your system configuration, it is possible that more than one register is required to prevent air returns in the different hot air ducts (see examples below).



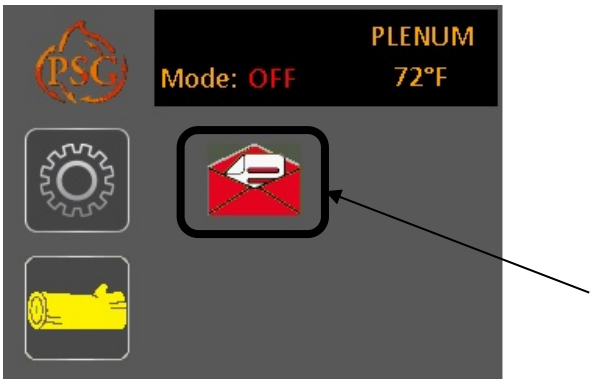



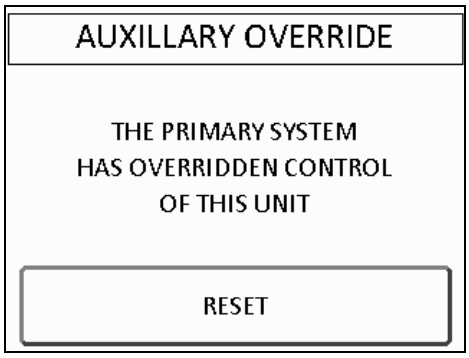
To ensure a safe installation, the two furnaces must not, at any time, run simultaneously. To do so, the thermostat controlling the existing furnace must be connected to your Mini-Caddy link board. This way, when a heating signal is sent to the existing furnace, the Mini-Caddy receives the same signal. It will tell the Mini-Caddy to either not start or, to go into a shut down cycle, if the furnace was already heating when the demand for heat was sent.

The wiring for an Add-on installation is shown below. The existing furnace's thermostat must be connected to the **Rh** and **Aux** terminals of the link board on the Mini-Caddy furnace. Those two wires must come from the **R** and **W** terminals of the existing furnace's thermostat so the link board receives the heat signal.




When a heat signal from the existing furnace's thermostat will be sent, the Mini-Caddy furnace will shut itself down and an envelope will appear on the LCD screen indicating that the existing furnace has taken over. This envelope will disappear as soon as the heat signal of the existing furnace's thermostat will stop and the Mini-Caddy furnace will resume getting orders from its own thermostat.




## 9.14. ELECTRICAL ELEMENT INSTALLATION (OPTIONAL)

### 9.14.1. INTRODUCTION

Only one 11.25kW electrical elements is available for the Mini-Caddy. This option includes all components necessary for the installation. Instructions for installing the electrical element are provided with the electrical element.

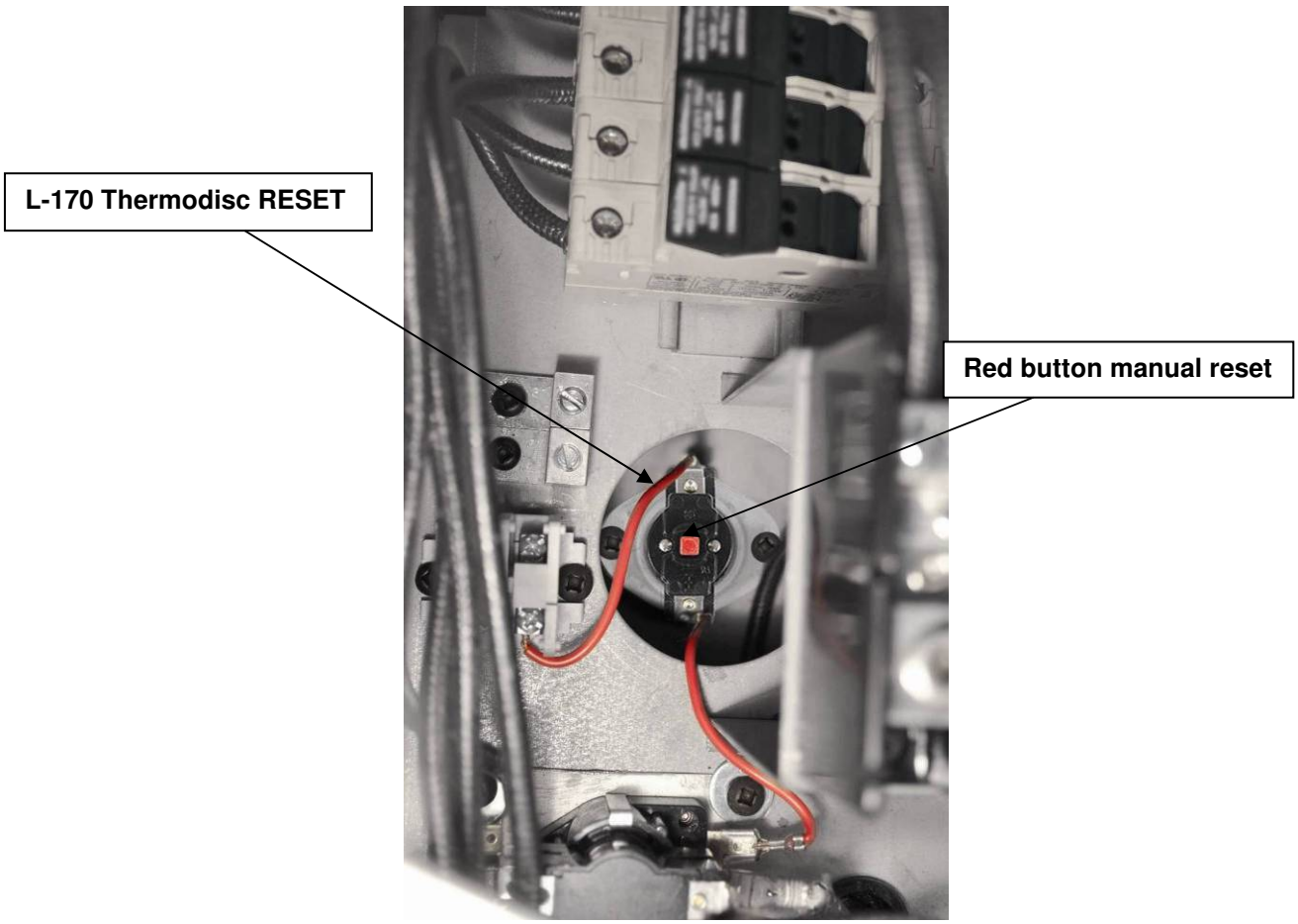
**WARNING: USE WIRING SUITABLE FOR 75 °C (NOT INCLUDED).**

## 9.14.2. CONNECTING THE ELECTRICAL ELEMENT

| MODEL | OUTPUT (CFM) | TEMP. VAR. (OF) | BTU/H | TOTAL AMPERAGE | BREAKER | ALIMENT. CALIBRE | VOLTAGE 1 PHASE | # OF ÉLÉMENTS |
|---|---|---|---|---|---|---|---|---|
| 11.25 kW | 1400 | 67 | 38 400 | 45 | 60 | 6 | 120/240 | 4 – 3.75 kW |
| WOOD | | | | 2 | 15 | 14 | 120 | |

Electrical connections must conform to the wiring diagram supplied with the option.

The electrical element must be connected to the power board (See Section 17 - ELECTRICAL DIAGRAM FOR ELECTRIC UNIT). For security reasons, the electrical element has a manual reset thermostatic sensor that is located inside the electrical unit. If the temperature of the electric unit exceeds the high limit, the thermostatic sensor will disengage the elements. After finding and fixing the problem that has caused the unit to overheat (static pressure too high, fan breakdown, etc.), reactivate by pressing the red “manual reset” button on the thermostatic sensor (L-170 thermodisc)



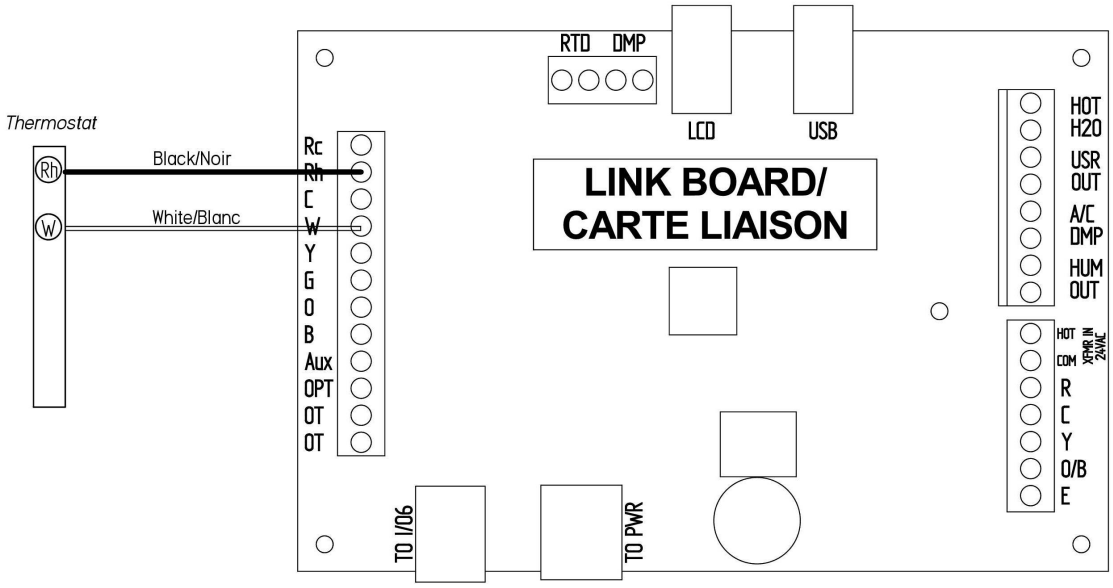
## 10. THERMOSTAT INSTALLATION

### 10.1. WOOD FURNACE ONLY

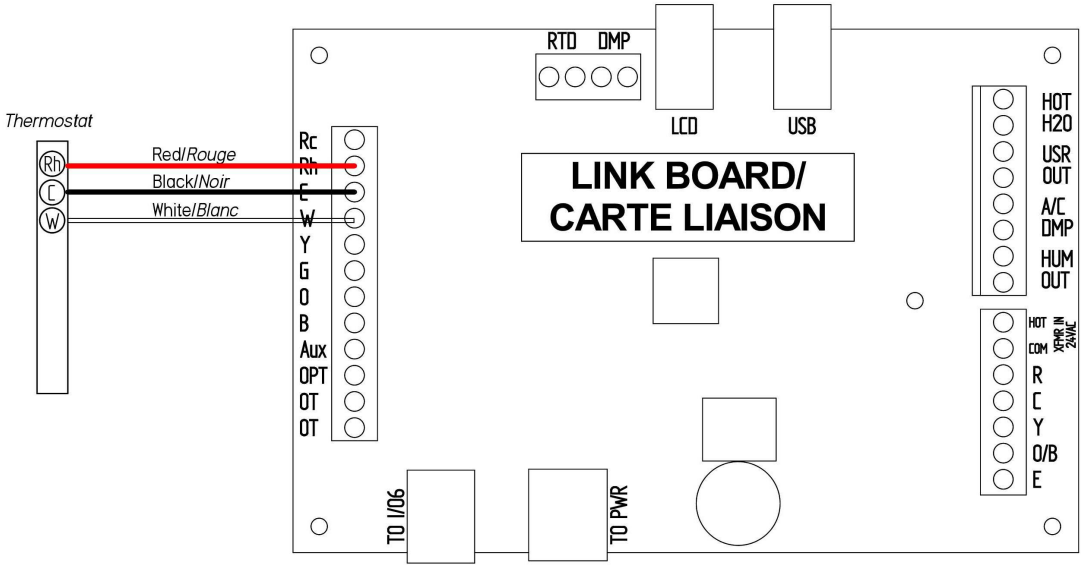
The furnace must be connected to a thermostat. You can use the one provided with the unit or use one that is already installed in your home. The thermostat must be installed on an inside wall and located where it is not likely to be affected by the draft coming from an air outlet. It must be installed at a minimum of 55 inches (140cm) above the floor.

It is recommended to connect the thermostat to the furnace with a seven or eight threads wire connecting terminals Rc, Rh C, W, Y, G, O and B.

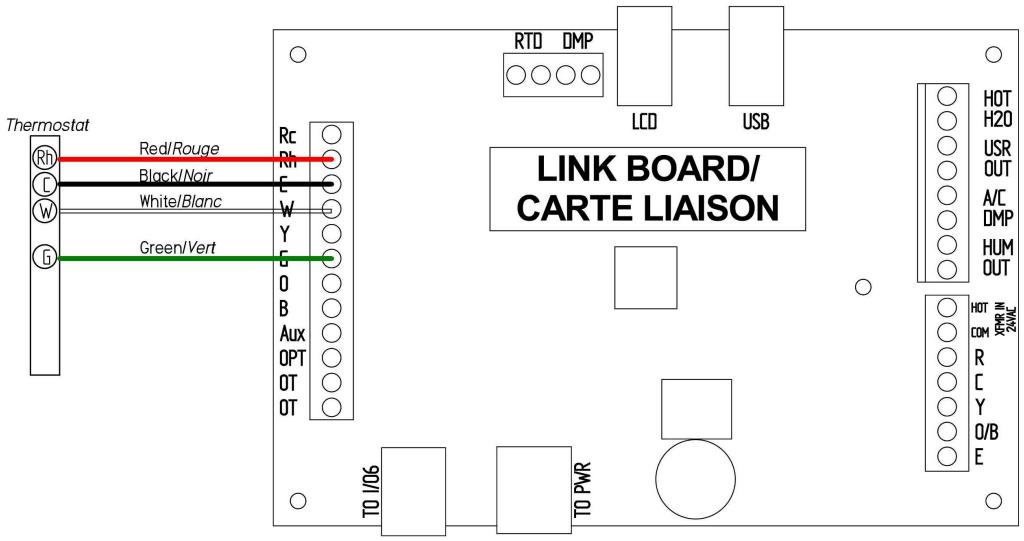
If the thermostat is using a dry contact (powered by batteries), it is not necessary to connect the C (common) terminal to the thermostat. Refer to the electrical diagram.



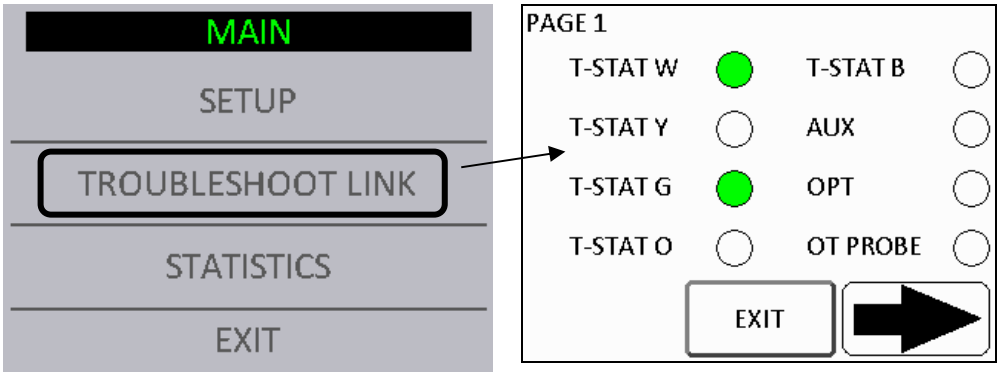

If you want to provide power to the thermostat, note that the connections may differ depending on the thermostat: Some thermostats need Rc and C while others require Rh and C (in this case, verify the need for a jumper between Rc and Rh in the thermostat user manual). No jumper is required with the thermostat supplied with the furnace as the Rc and Rh are already connected together. Also, some thermostats have only the letter R. In this case, R refers to Rh. (Connect only one of the two terminals R if there is a jumper between Rc and Rh on the thermostat). Refer to the wiring diagram.



If you want to put the furnace in circulation mode from the thermostat, use the following connection diagram:



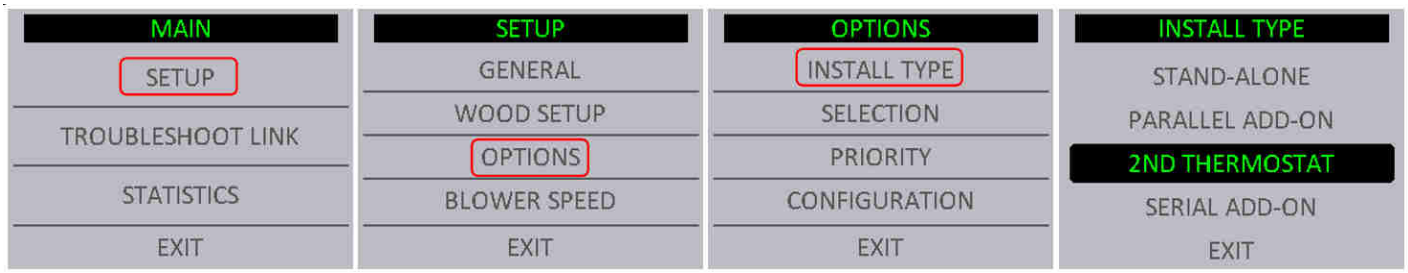

Once wired to the furnace, it is possible to verify the signals coming from the wall thermostat. Simply go on the touch screen main menu, under the "TROUBLESHOOT LINK'' menu and going to page 1 as shown below. When a signal is sent from the thermostat, the circle corresponding to the signal should appear green.



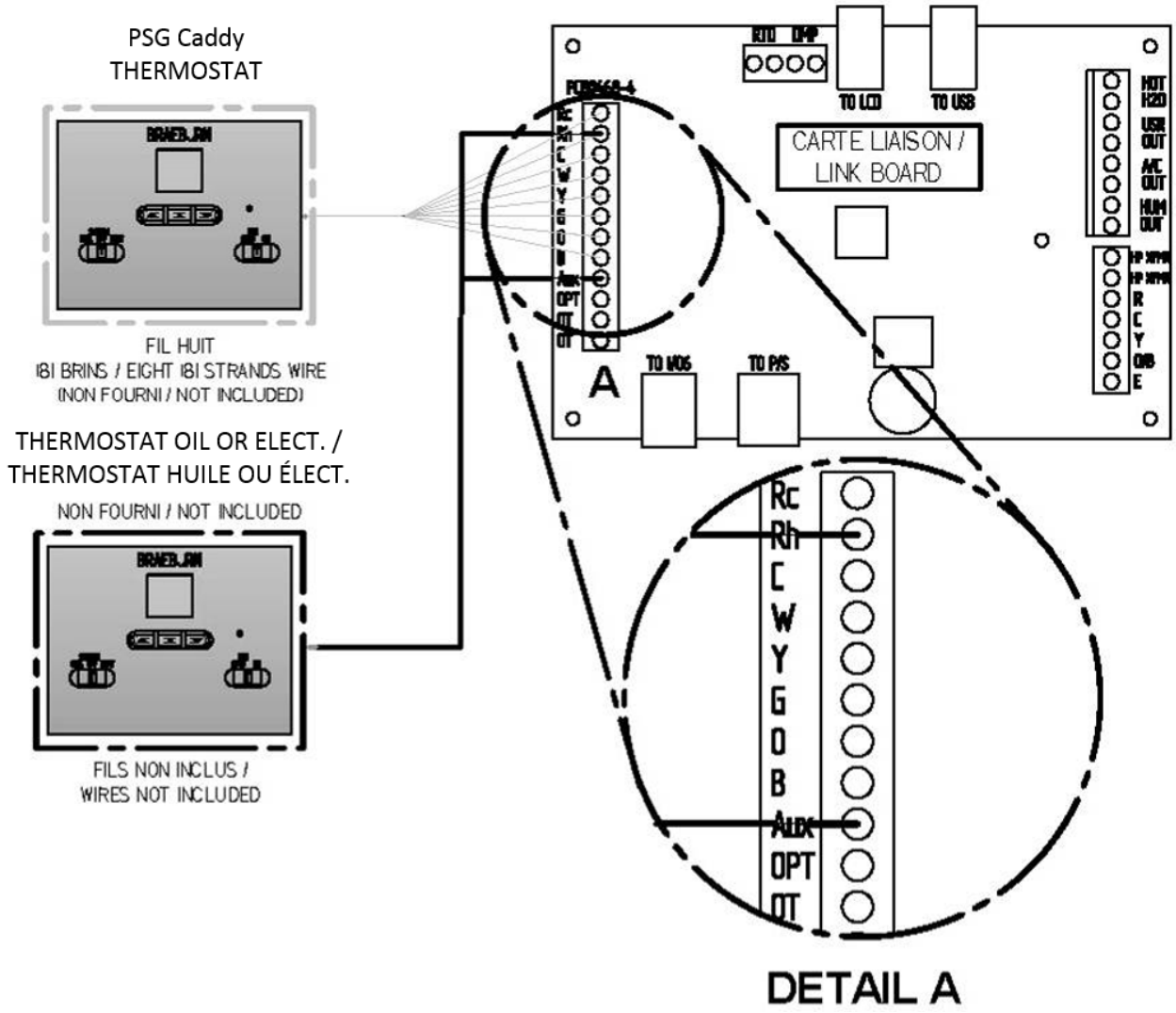

### 10.1.1. COMBINATION WOOD-ELECTRIC

Only one thermostat is necessary to control the wood furnace and any other auxiliary heating source. Installing the thermostat is done the same way as if the furnace was wood only. See Section 11.4.1 - TRANSITION TO AN AUXILIARY HEAT SOURCE to learn how to make it work.

It is also possible to use 2 thermostats (one for wood, one for alternate heat), go in parameters (gear button), then press on SETUP, OPTIONS, INSTALL TYPE, 2ND THERMOSTAT. **Note that the 2 thermostats mode will not work if the heat pump option is selected.**



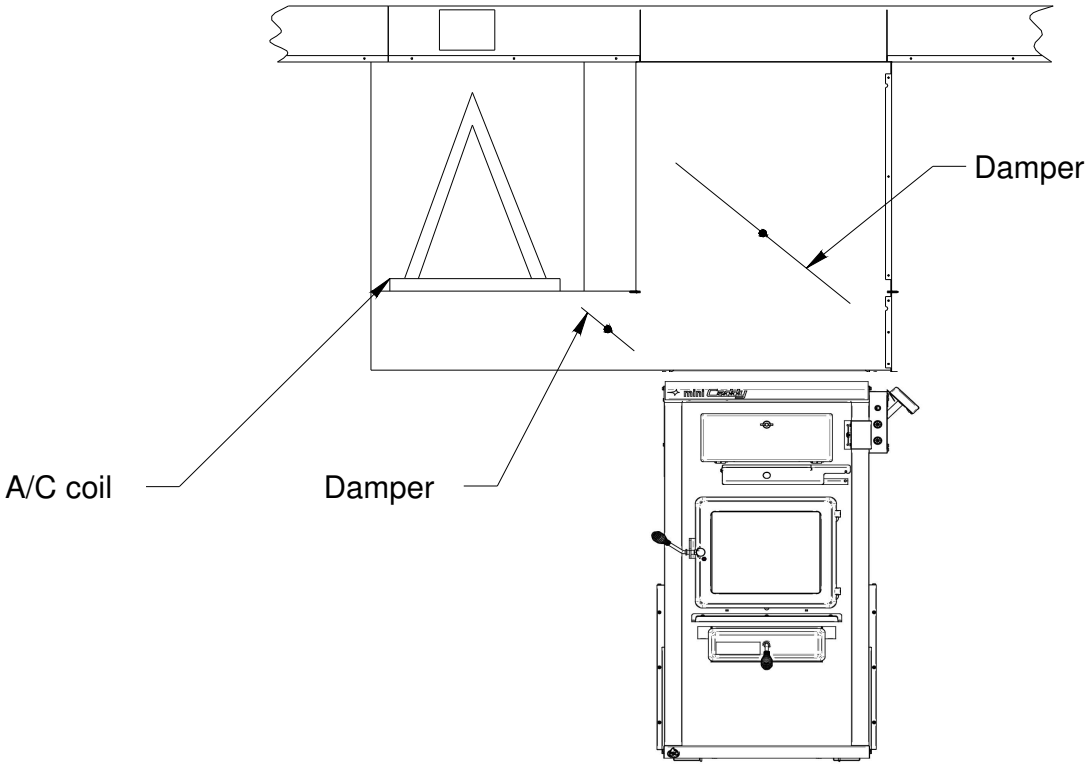
The 2nd thermostat shall be wired as per this wiring diagram:




It is recommended to have a difference of at least 4 °C (7 °F) between the two set-points of the thermostats. Ex: 21 °C (70 °F) for electric or oil unit and 25 °C (77 °F) for the wood.

## 10.2. INSTALLATION OF AN AIR CONDITIONING UNIT

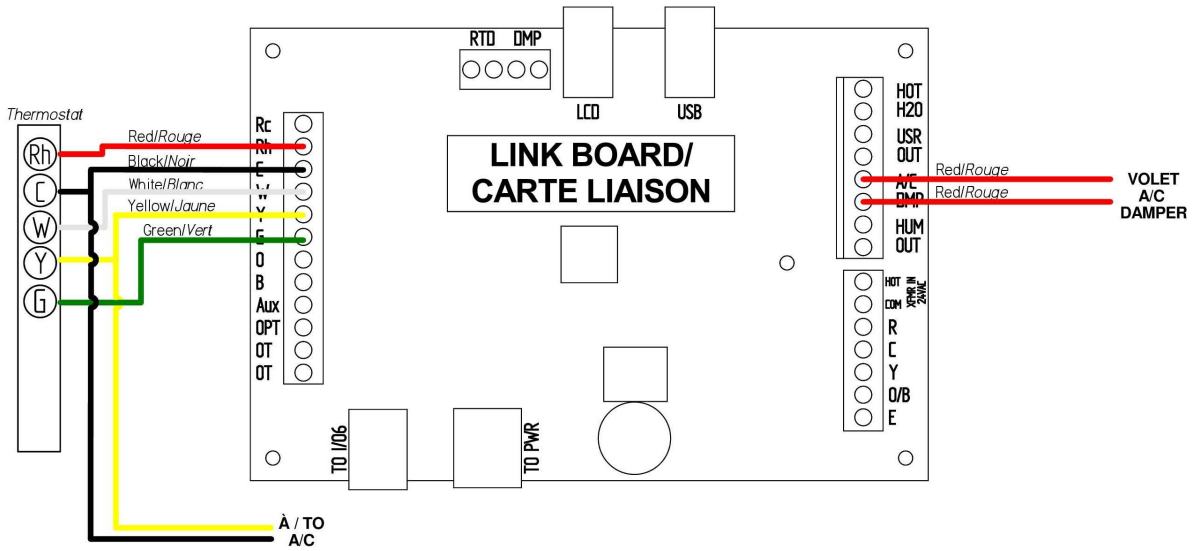
The Mini-Caddy furnace has been tested with an optional air conditioning unit. If this option is chosen, we recommend an installation as per the graphic provided below.




This installation will provide the most efficient and safe operation of the air conditioning unit using the distribution blower of the Mini-Caddy furnace during summer. In order to complete the installation of an air conditioning unit, the main thermostat must be a “heat/cool” type. Furthermore, the desired distribution blower speed must be programmed on the touch screen in the blower speed menu. (See Section 11.5 DISTRIBUTION BLOWER SPEED CONFIGURATION)

**Installing the A/C coil in the furnace fresh air return will create condensation inside the furnace and will make it rust. Therefore, this type of installation is forbidden and will void the warranty.**

It must be noted that upon thermostatic demand for cooling, the distribution blower will start immediately at the programmed speed. For the air conditioning damper wiring see Section 18 - LINK BOARD OPTIONS CONNECTIONS.

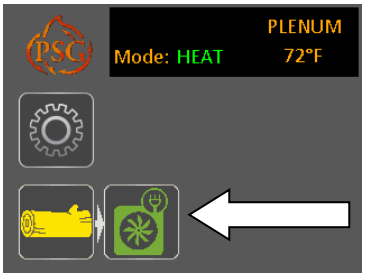


## 10.3. HEATPUMP INSTALLATION

**Note:** If a heat pump is connected to the Mini-Caddy, the electrical element must be installed to ensure an auxiliary heat source. (PA08005(11.25kW))

Heat pump mode operates in "Furnace Only" mode only.

It is possible to connect a heat pump to the Caddy furnace. With a heat pump, the heating source priority menu is inaccessible. Since the heat pump is the most efficient system to date, it becomes the priority heating source. An external temperature sensor or a switch connected to the OT input becomes necessary to stop the operation of the latter in very cold weather. When the heat pump is in defrost mode, the heat pump icon changes to indicate that the electrical element is operating at the same time as the heat pump.

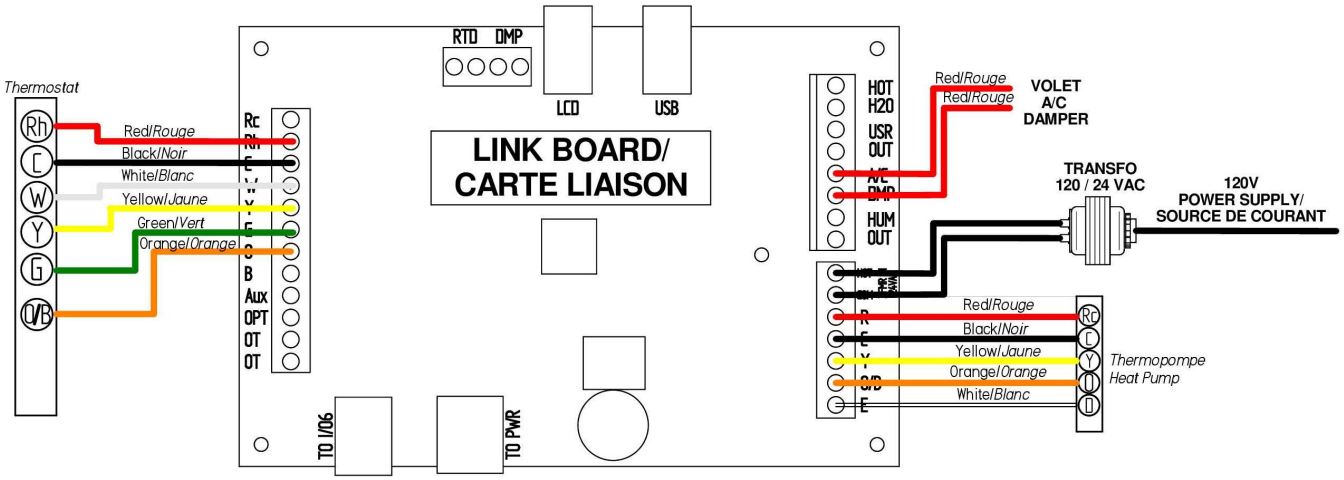



The same icon is used when a thermostat with 2 heating stages is connected and the electric unit is activated at the same time as the heat pump. A thermostat with auxiliary or emergency mode is recommended to deactivate the heat pump in cold weather without having to use a temperature sensor or switch on the furnace.

When the system is configured in heat pump mode, press the wood heating icon to switch the furnace to wood heating mode. When the heating demand can no longer be answered by the wood, the furnace will automatically return to heat pump mode.

The defrost signal must be connected to input E of the green connector so that the electrical element activates during defrost cycles.

For installation of heatpump coil, refer to Section INSTALLATION OF AN AIR CONDITIONING UNIT.




**Mandatory thermostat connexions to connect a heat pump**

Single stage thermostat:

Rh / Rc : No jumper required, already connected on the board
C: Common
Y: Activate the heat pump compressor
G: Activate the blower (In circulation mode)
O: Activate the reversing valve to cool

2nd stage connexion or Aux or E (when available)

W: Activate the electrical unit

## 11. CONFIGURATION AND OPERATING INSTRUCTIONS

### 11.1. CONTROLS SYSTEM

The Mini-Caddy has a sophisticated electronic control. This system is more versatile. All connections are made from the control panel. Terminal blocks are provided for all components and options.

Before you configure your system and learn how to operate it, make sure that your wall thermostat is wired correctly to the link board of your furnace, that the temperature probe (RTD) is well installed in the hot air plenum and connected to the link board and that your air distribution system is complete.

The furnace uses a touch screen, the latest technology in control devices. Blowers and power supplies are controlled from this screen.

It is important to note that your furnace is equipped with three main electronic components: the link board, the power board and the touch screen. The power board is already installed in the blower box of the furnace.

**The power board is used to supply current to the different electrical components, in particular:**

- Supply current to the different electronic boards;
- Supply current to the distribution fan;
- Supply current to the sequencers of the electrical unit (optional);

**The link board is used more precisely for:**

- Connecting the hot air plenum's temperature probe (RTD type);
- Connecting the wall thermostat;
- Connecting complementary equipments;
- Connecting a heat pump.

**The touch screen is used to operate the system. More precisely for:**

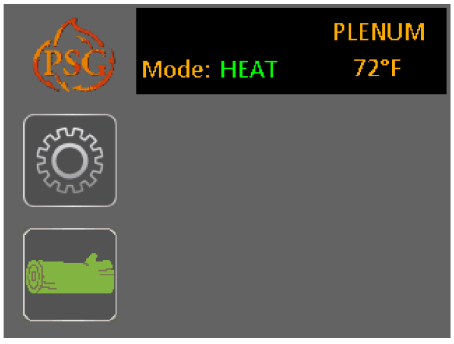
- Choosing the combustion parameters;
- Selecting the options used;
- Show the temperature in the hot air plenum;
- Selecting heating priority;
- Selecting language and units displayed;
- Viewing statistics;
- Selecting distribution fan speeds;
- Troubleshooting to detect problems with the appliance.

### 11.2. SYSTEM CONFIGURATION

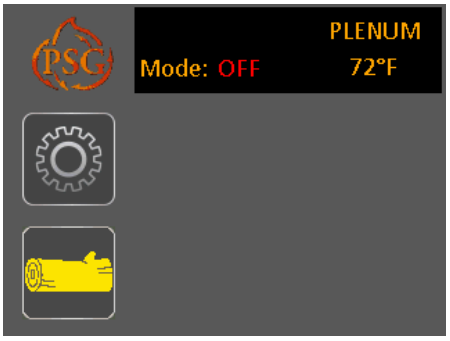
Once the installation is complete and before using the unit, the furnace should be configured to activate all applicable functions depending on options chosen. To do this, it is important to know which options are installed on your furnace.

### 11.3. TOUCH SCREEN

The LCD control is an electronic visual display as well as a touch screen that will light-up as you touch any location on the display area. The main status page will then display different icons layout depending if the furnace is on or not.




**Main menu – Furnace « ON »**



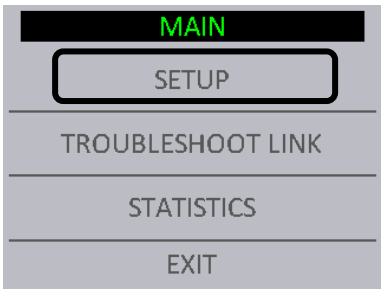

**Main menu – Furnace « OFF »**

### 11.3.1. ICONS DESCRIPTION

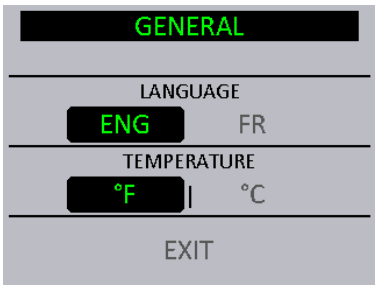
| Icons | Description | Icons | Description |
|---|---|---|---|
|  | Wood heating<br>Green : Heating mode<br>Yellow : Auxiliary heating mode |  | Electrical Element<br>Green : Unit on<br>Yellow : On hold |
|  | Heat pump<br>Green : Unit on<br>Yellow : On hold |  | Heat pump & electric element combined<br>Green : Unit on<br>Yellow : On hold |
|  | Settings |  | Distribution blower is in circulation mode. (CIRC) |
|  | Temperature in the hot air plenum | | |
|  | *Possible states of the furnace:*<br>HEAT: When the word HEAT is green, the furnace is in heating mode. If the furnace is waiting for a demand for heating, the word HEAT is written in yellow.<br>COOL: When the word COOL is green, the furnace is in cooling mode. If the furnace is waiting for a demand for cooling, the word COOL will be written in yellow.<br>OFF: The furnace is stopped. | | |

### 11.3.2. LANGUAGE SELECTION AND TEMPERATURE UNIT

To choose the language and temperature unit, press the "Settings" button. In the "MAIN" menu, choose "SETUP" and then "GENERAL". Choose the preferred language and temperature unit.



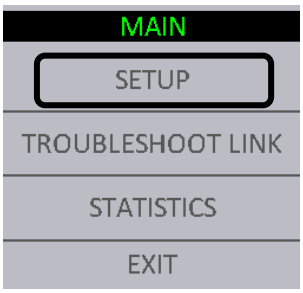




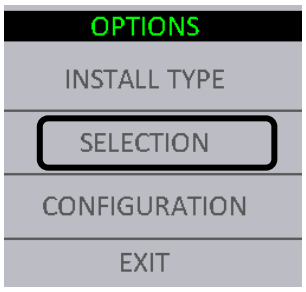

### 11.4. ACTIVATING AUXILIARY HEATING SOURCE AND SELECTION OF OPTIONS

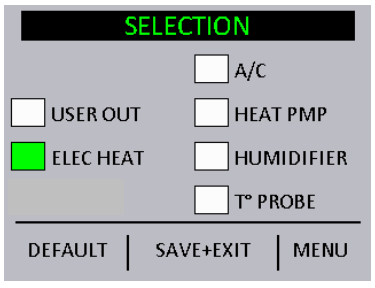
To activate an auxiliary source of heating or an option on your furnace, press the "Settings" button. On the “MAIN” page, choose “SETUP” and “OPTIONS”.

By default, no auxiliary sources of heating or options are selected. To select an option, simply press the white square to the left of the desired option. When an option is chosen, the selected square turns green.








To confirm the selection of your options, press the button " SAVE + EXIT ". This step takes you to a list of questions about your selections that are essential for their good functioning.

### 11.4.1. TRANSITION TO AN AUXILIARY HEAT SOURCE

When there is a demand for heat, the furnace checks the temperature in the plenum. If the temperature is beyond the KIP, the fan will turn on. If the temperature is below the KIP, the furnace will wait the "Rise Time" delay and check the temperature again in the plenum. If the temperature in the plenum goes up 20°F but has not reached the KIP, the furnace will wait for additional time ("KIP Time") and recheck the temperature in the plenum. If the temperature has not reached the KIP, the auxiliary heating will start. The icon "Wood" will turn yellow and the auxiliary heat icon will turn green.

For the electrical element, the fan starts as soon as the thermostat asks for heat. In other words, for safety reasons, the fan does not wait for the hot air plenum to reach a predetermined minimum temperature.

The furnace remembers what heating source was used in the last request of the thermostat. If the last heating demand was met by the auxiliary heater, the furnace automatically start this one.

To restart the furnace using the wood mode, go on the touch screen on the main page and press on the wood icon. The icon will become green and the auxiliary heating source icon will become yellow.

### 11.4.2. TRANSITION SETTINGS

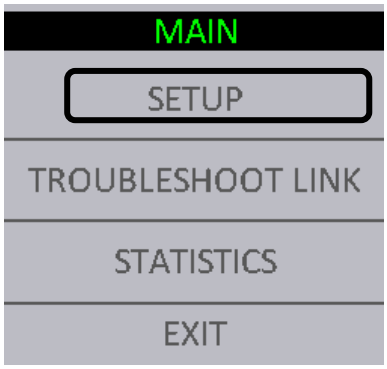
It is possible to slightly adjust the transition settings from the wood option to the auxiliary source of heating. To do this, go to the "MAIN" page on the touch screen under the "SETUP" option and choose "WOOD SETUP ". On this page, you can change the KIP, KOP, the Rise Time and KIP Time.

KIP (Kick-In point): Temperature of the plenum where the fan turns on.

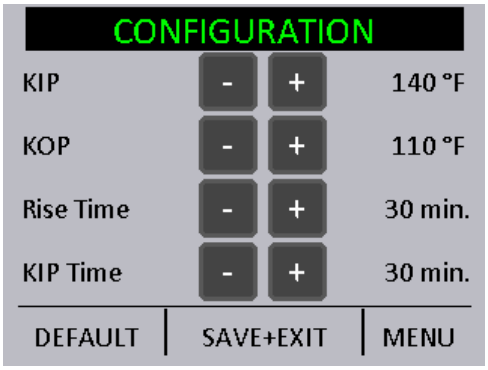
KOP (Kick-Out point): Temperature of the plenum when the fan stops.

Rise Time: Time allowed for plenum temperature to increase by 20 ° F.

KIP Time: Additional time allowed to reach the KIP when the Rise Time ended with an increase of 20°F.

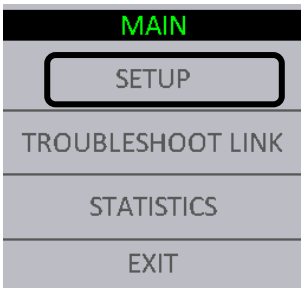


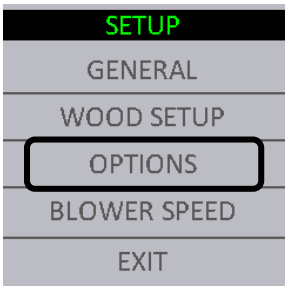


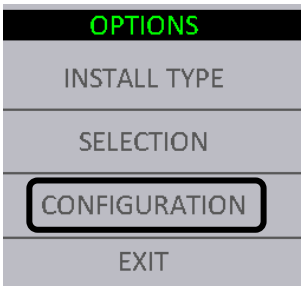


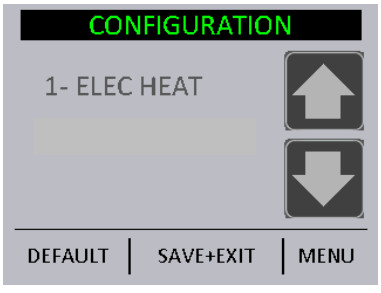

### 11.4.3. AUXILIARY HEAT SOURCE PRIORITIZATION

If you have configured one or many auxiliary heating sources (electrical element, heat pump), the priority order gets done automatically. There is no action required from your part.



### 11.4.4. EXTERNAL TEMPERATURE PROBE

It is possible to connect an external temperature probe on the Mini-Caddy. This temperature probe is used primarily to reduce electricity consumption and reduce the bill by prioritizing the transition to an auxiliary heating source when it is too cold outside or when it is the overcharging billing period (peak usage) depending on the electricity supplier.

**HEAT PUMP :** With a combination wood, electrical element and heat pump you can set your temperature probe to not use your heat pump when it is too cold and the coefficient of performance becomes too low. (Electrical element should be prioritize during the configuration of the outdoor temperature probe.)

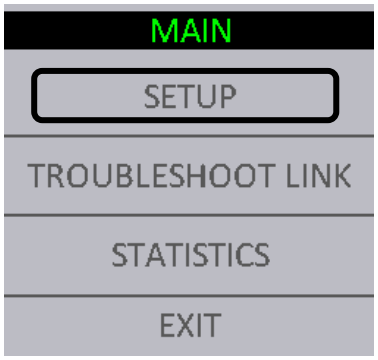
When the temperature probe is functioning, the « ECO » mode will show on the main page. 

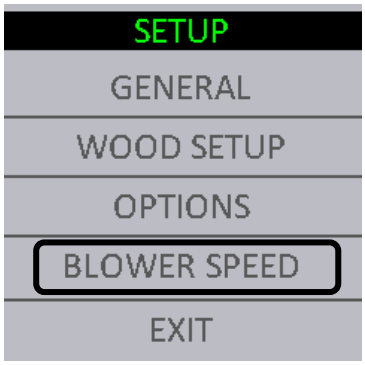

### 11.5. DISTRIBUTION BLOWER SPEED CONFIGURATION

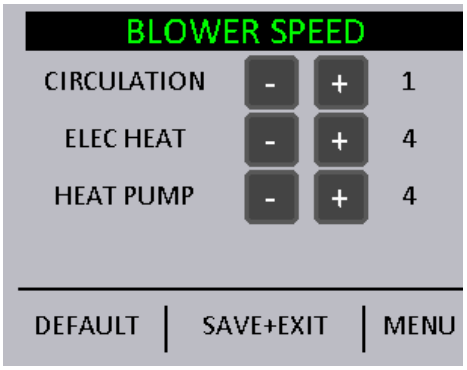
It is possible to adjust the speed of the distribution blower for circulation mode, air conditioning and any other mode of auxiliary heaters.

**NOTE:** When heating with wood, the distribution blower speeds are programmed in order to provide the best thermal exchange and cannot be changed.

It is possible to adjust the blower speed in “CIRCULATION” mode at any time by going in the main menu under “SETUP” and “BLOWER SPEED”.




The blower speed adjustments for auxiliary heating are available only if the option was activated. The selected speed in this menu will be the speeds used in the "CIRC", "COOL" and "HEAT" mode.

The adjustment of all controls must be done by a qualified technician. The controls settings and the blower speed must conform to the recommendations of the CMMTQ.

### 11.5.1. DISTRIBUTION FAN SPEEDS

Your furnace is equipped with a 4-speed blower. Using the central processing unit, we have created 6 functional speeds. Refer to the following table for the various speed configurations.

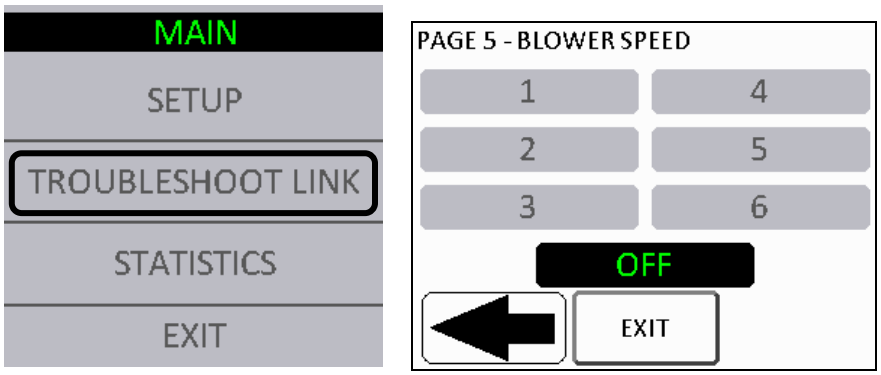
| SPEED | CORRESPONDING DATA | CFM* | STATIC PRESSURE |
|---|---|---|---|
| 1 | Blower speed #1 using 90V | 650 | 0.2’’ W.C. |
| 2 | Blower speed #1 using 115V | 725 | 0.2’’ W.C. |
| 3 | Blower speed #2 using 98V | 775 | 0.2’’ W.C. |
| 4 | Blower speed #2 using 115V | 850 | 0.2’’ W.C. |
| 5 | Blower speed #3 using 115V | 1100 | 0.2’’ W.C. |
| 6 | Blower speed #4 using 115V | 1400 | 0.2’’ W.C. |

*These results were measured at exit of plenum during laboratory tests. Results may vary depending of the configuration and installation.

## 11.6. SYSTEM BALANCING

It is important to call upon a professional installer for the installation of the furnace and the ducting system configuration. Certain check-ups must be performed and certain rules must be respected in order not to damage the blower.

When all components are installed on the furnace and the ducting system is connected to the various rooms of the house, you must balance the ducting system. In order to do so, start the distribution blower by going in the ‘’TROUBLESHOOT LINK’’ menu on Page 5 and select speed #4.




It is important to respect the velocity in the main duct, the secondary ducts, as well as the velocity at the room outlets. The static pressure of your system must be adjusted to at least 0.2 IN.W.C. and must not exceed 0.5 IN.W.C. Finally, make sure that you never exceed the maximum blower current.

## 11.7. OPERATING INSTRUCTIONS

### 11.7.1. HEAT MODE

When the temperature in your house is below the value at which your wall thermostat is programmed, a signal is sent to your furnace through the PC board, activating the motorized damper located in front of the furnace and thus allowing more oxygen to the fire. The RTD temperature probe, located inside the hot air plenum of your furnace, reads the plenum temperature continuously. When the temperature reaches the start-up value selected by the user (KIP – *Kick-in Point*), the distribution blower starts functioning at the minimum speed. Thereafter, the blower increments its speed until it reaches the best efficiency point (BEP) determined by the manufacturer. If the temperature inside the hot air plenum exceeds the limit determined by the manufacturer, the blower automatically selects the maximal speed and the motorized damper closes in order to slow down combustion. When the temperature returns to a safe level, the blower speed gradually returns to the speed required to maintain the BEP.

### 11.7.2. COOL MODE

If an air conditioning unit is installed, the PC board will have to be connected to a dual-function wall thermostat (e.g. “heat/cool”) in order to synchronize the start of the furnace blower with the start of the air conditioning condenser. Upon receiving the wall thermostat’s signal, the distribution blower will start functioning at the speed selected by the user.

### 11.7.3. CIRC MODE (air circulation)

This mode is used to circulate air during summer. Thus, you will benefit from your ducting system to circulate fresh air from your basement throughout the house. To activate the circulation mode, put the thermostat in FAN-ON mode.

## 11.8. WOOD HEATING

### 11.8.1. LIGHTING

1. Open the door
   **Note: If there is already a bed of coals in the firebox, go to pre-heating.**
2. Place one or two dry kindlings at the front of the furnace.
3. Place newspaper strips on top of the kindlings.
4. Cover the newspaper with more kindlings and small pieces of dry wood.
5. Add newspaper strips, then light the fire a low as possible and leave the door 1/2" (13 mm) opened. If you fail lighting the fire, you might experience a back draft through the air inlets.

### 11.8.2. PREHEATING

1. Once the kindling is well ignited or the coals revived, put 2 or 3 fire logs in such a way that the flames can interlace between the logs. Then, close the door. It is important to respect these loading sequences so that the wood will burn from the front to the back of the furnace.
2. Wait 15 to 20 minutes, then proceed with loading the furnace.

### 11.8.3. HEATING

1. When loading the furnace, lower the kindled pieces of wood and place them at the center of the combustion chamber before adding new logs.
2. Do not overload. Air must circulate freely in the upper part of the combustion chamber in order to obtain an efficient operation of the appliance (secondary burn). Please note that a small hot fire will produce much less residues than a large, smouldering one.

**IMPORTANT: DURING THE HEATING PROCESS, REMOVE THE ASHES AND WOOD THAT COULD OBSTRUCT THE 1/4" (6.4 mm) HOLE (PILOT) LOCATED BELOW THE DOOR FRAME, INSIDE THE FURNACE'S COMBUSTION CHAMBER.**

**PROCEDURE TO OPEN THE DOOR WHEN RELOADING**

**TO MINIMIZE THE RISK OF SMOKE SPILLAGE, OPEN THE DOOR 1"
AND WAIT ABOUT 10 SECONDS BEFORE OPENING IT COMPLETELY.
THE PURPOSE IS TO STABILIZE THE PRESSURE INSIDE THE FURNACE.**

### 11.8.4. EARLY SIGNS OF AN OVERFIRED FURNACE:

- Roaring fire.
- Flue pipe is glowing red.
- Extreme heat coming from the furnace. If this occurs, **DO NOT OPEN THE DOOR**. Remove the servomotor chain and close the air control damper completely, and wait until the glow has completely subsided.

**CAUTION**
**ALWAYS KEEP THE DOOR AND THE ASH DRAWER CLOSED
(EXCEPT FOR LIGHTING AND MAINTENANCE).**

### 11.8.5. WOOD AS HEATING FUEL

**WARNING**

**NEVER BURN WASTE, GAZOLINE, NAPHTA, MOTOR OIL OR ANY OTHER SIMILAR PRODUCT.**

**We recommend that you burn dry hard wood only.**

There are two important factors to be considered when choosing a type of wood: the moisture content and the wood density. Hardwood, oak and beech for example, will provide better results because of the high density and minimal tar produced during combustion. It is highly recommended to use wood that has been dried for at least six months.

**DO NOT USE COAL AS HEATING FUEL IN THIS APPLIANCE.**

Whenever a high rate of smoke is noticed in the room, you must:

1. Open doors and windows.
2. Make sure the furnace door is closed as well as the air control damper (if necessary, lower the thermostat starting point or unhook the air damper chain and close the barometric damper manually).
3. When the furnace has cooled down, inspect the flue pipe and the chimney to detect obstructions and consult a specialist to determine the cause of the smoke spillage.

### 11.8.6. PROLONGED POWER FAILURE

In case of prolonged power failure (over 10 minutes), to reduce the risk of overheating, it is recommended to heat moderately and to open the furnace filter compartment in order to facilitate air circulation by natural gravity around the firebox of the Mini-Caddy wood furnace.

### 11.8.7. CHIMNEY FIRES

This might occur when the fire gets extremely hot. Burning cardboard, branches, or small pieces of wood can ignite the creosote residue accumulated in the evacuation flue system. The usual signs are:

1. Rumbling.
2. The flue pipe gets extremely hot (red).
3. Flames or sparks are coming out of the chimney.
4. In case of a chimney fire, call your local fire department immediately and sprinkle the roof around the chimney with water.

Make sure that the furnace door is closed as well as the air control damper (if necessary, lower the thermostat starting point or unhook the air damper chain and close the barometric damper manually). Plug the secondary air inlet located on the furnace front, under the door, on each side. **CAUTION, FURNACE AND FLUE PIPE WILL BE VERY HOT. ALWAYS WEAR PROPER PROTECTION GEAR TO AVOID BURNS.**

If the fire gets uncontrollable due to an improper use or because the draft is too strong, follow the same procedure as in a chimney fire except that you will have to **OPEN** the barometric damper. **CAUTION, FURNACE AND FLUE PIPE WILL BE VERY HOT. ALWAYS WEAR PROPER PROTECTION GEAR TO AVOID BURNS.**

### 11.8.8. LOCAL FIRE DEPARTMENT

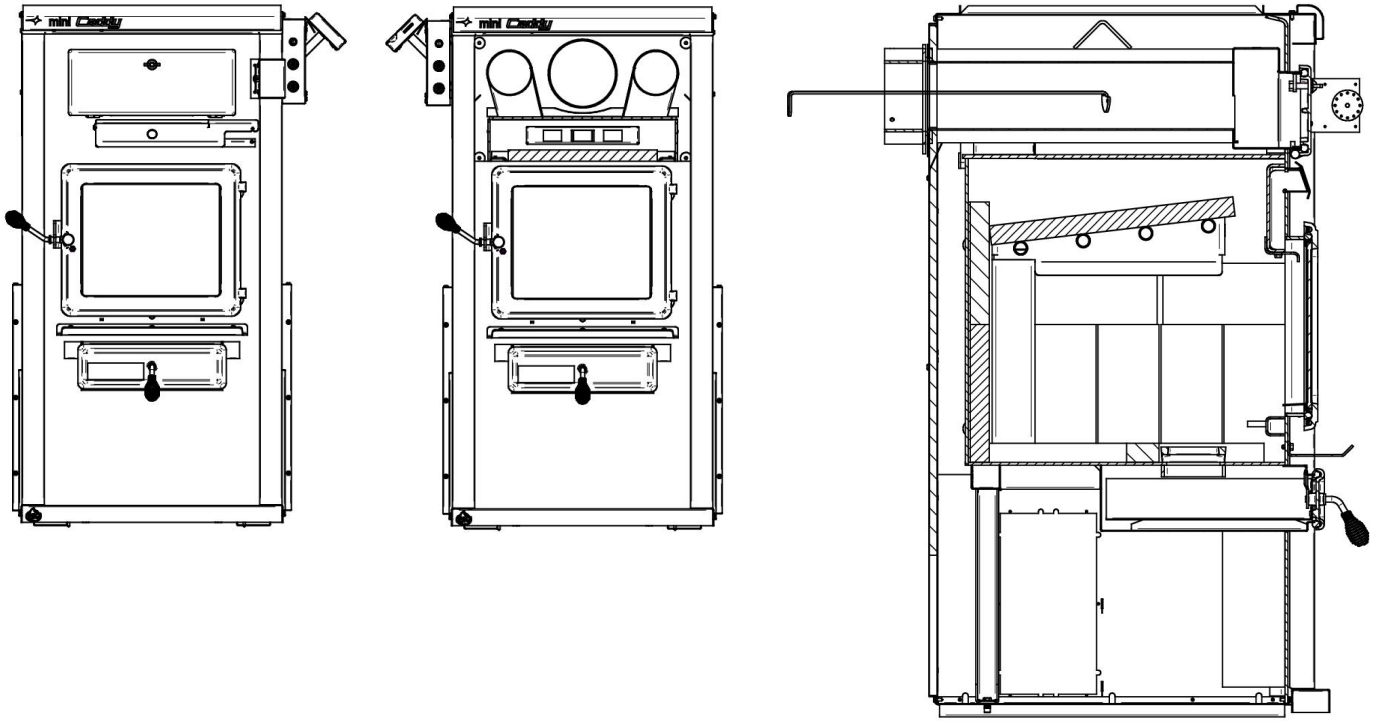
Phone number: _____

## 12. MAINTENANCE

### 12.1. MAINTENANCE OF THE EXCHANGERS

Heat exchangers must be cleaned thoroughly at the end of every heating season. During summer, the air is damper and with minimal air circulation within the furnace, it can mix with creosote and/or sooth deposits in the exchangers to form an acid that could accelerate the corrosion process and induce premature decay of the steel. Corrosion damages are not covered under warranty.

Flue pipe and heat exchangers must be inspected regularly during the heating season. Access to the exchangers is easy and does not require tools; just remove the decorative facing by just lifting it, remove the wing nut that keeps the hinged access panel closed.




Before cleaning the three exchanger pipes, pull the baffle forward as on the drawing below. Using the scraper clean all three pipes. The dirt in the lateral pipes can be pushed forward and it will fall directly into the combustion chamber while the dirt in the central pipe will have to be retrieved either from the front access panel or the rear by removing the smoke pipe. Verify that the baffle is free of deposits and do not forget to push it back to its original position. Finally, close the exchangers' access panel.

### 12.2. CHIMNEY MAINTENANCE

The most efficient way to sweep a chimney is to run a hard chimney sweeping brush. Brush from the top down so sooth and creosote deposits will detach from the chimney liner and fall down to the bottom of the chimney where it can be easily removed.

The chimney must be inspected regularly and any creosote build-up must be removed without delay. Monthly cleaning should be sufficient during cold winter months while more frequent cleaning could be required during milder periods.

## 12.3. FLUE PIPE INSPECTION

- The flue pipe must be inspected regularly during the heating season.
- The pipe must be dissembled and cleaned.
- The pipe must be examined carefully to detect any defect or damage.
- The pipe can be reassembled if no defect is detected and defective pipe must be replaced immediately.
- Burn only wood in this furnace.
- As a combustible, well seasoned hardwood in 18" logs works best

## 12.4. BLOWER MOTOR MAINTENANCE

Periodic cleaning of the blower housing as well as blower and blower blades using a vacuum cleaner is necessary in order not to affect performance and cause overheating of the latter. **DO NOT OVERLUBRICATE.**

## 12.5. FILTERS

Never use the furnace without air filters. To function as expected, controlled combustion wood burning appliance must be maintained on a regular basis. The air filter must be cleaned and replaced regularly. Use the same size and type of filter as the original.

### 12.5.1. AIR FILTER DIMENSIONS

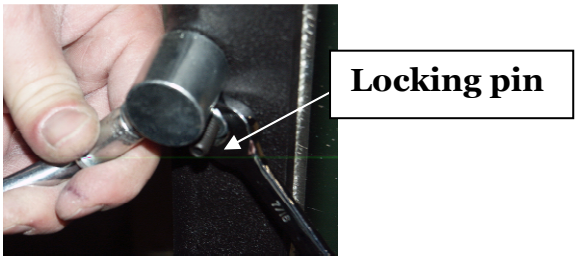
20" X 15" Filter

## 12.6. DOOR GASKET MAINTENANCE

It is important to maintain the door gasket in good condition. After a while, the gasket might sag; a door adjustment may then be required. If the door adjustment is not sufficient, replace the door gasket with a genuine one.

### 12.6.1. DOOR ADJUSTMENT PROCEDURE

1. Unscrew completely the locking pin (see picture below).




2. To increase the pressure of the door on the gasket, turn the handle counter clockwise; to decrease the pressure of the door on the gasket, turn the handle clockwise until desired pressure is attained.

3. Then, screw back the locking pin about 1/4" deep and make sure you lock it in place with the nut.

## 13. REPLACEMENT PARTS

Your PSG furnace is designed to burn clean and requires little maintenance. It is recommended to conduct a visual inspection at least once a month to uncover any damage to the unit. Any defect must be repaired without delay using genuine PSG replacement parts. You can find a complete list of replacement parts in our website at www.Caddyfurnaces.com.

## 13.1. DOOR GLASS

- Inspect the glass regularly to detect any glass failure. If you find any defect, stop using the wood furnace immediately. Never operate a wood furnace with a broken glass.
- If you have to change your door glass, you must use ceramic glass 3/16" (4 mm) thick. Use genuine parts sold by a PSG authorized dealer.
- To replace the glass, remove the screws that hold the glass retainers in place. Removed these retainers and replace the defective glass; the glass gasket should be replaced at the same time. To put back in place, reverse the procedure.
- Do not use abrasive cleanser. Special cleansers for wood fireplaces glass are available in any good hardware store or specialty hearth retailer.
- Clean glass **ONLY** when the unit has cooled down.

## 13.2. GASKET

We recommend replacing the gasket that seals the door once a year, in order to maintain a good control of the combustion for maximum efficiency and security. Also verify that the ash drawer gasket is in good condition. To replace your door gasket, remove the old gasket and adhesive. Clean the surfaces thoroughly, apply a high-temp adhesive/silicone (650 °F) sold for that particular use, and put the new gasket onto the door. Wait for at least 4 hours before lighting your furnace.

# 14. TROUBLESHOOTING

When you have issues with your furnace, your first reaction may be to call after-sale service. This section will help you save time and money by enabling you to solve simple problems by yourself. Most common problems are generally caused by the following five factors:

1. Wrong operation or lack of maintenance;
2. Bad installation;
3. Poor quality combustible;
4. Component failure;
5. Factory defect.

The furnace is equipped with a pc board that allows the furnace to diagnose itself. It is thus important not to unplug the furnace if there is an issue with it. First, because unplugging the furnace will disable all the security features of the furnace, and second, because you will not be able to see the error code given by the furnace to understand what is the problem. It is thus important to read carefully this section before calling after-sale service.

The following sections will help you test each component individually and will also give you many tips in how to solve any problems related to a specific error code.

**NOTE: IF YOU NEED TO CONTACT YOUR DEALER OR AFTER SALE SERVICE, MAKE SURE TO HAVE THE MODEL OF YOUR APPLIANCE AND THE SERIAL NUMBER ON HAND. (THEY CAN BE FOUND ON THE CERTIFICATION LABEL ON THE SIDE OF THE FURNACE).**

**WARNING: RISK OF ELECTRIC SHOCK. IF YOU NEED TO MANUALY TEST, HANDLE OR REPLACE A COMPONENT, THE FURNACE MUST BE DISCONNECTED FROM ITS POWER SUPPLY.**

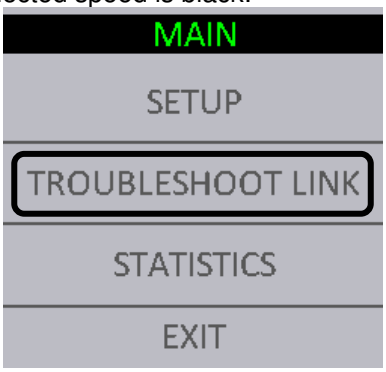
## 14.1. VALIDATING STATUS

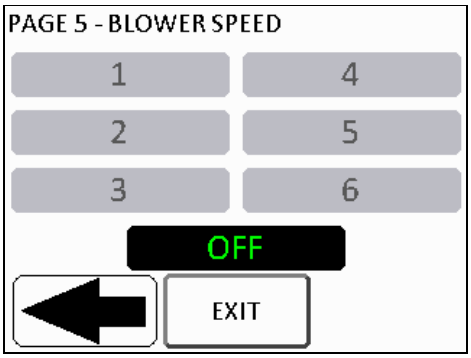
When using your furnace, you can validate at any time the status of any of the following components:

- Distribution blower
- Air control damper
- Temperature probe (RTD)

### 14.1.1. DISTRIBUTION BLOWER

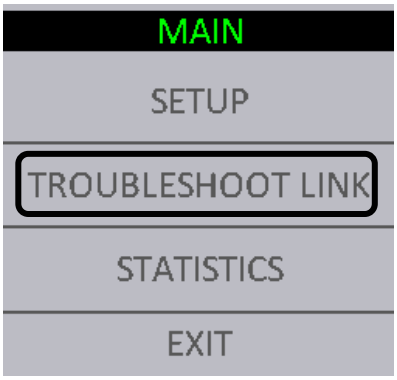
To check the status of the distribution blower, go to the main menu under “TROUBLESHOOT LINK" then go to page 5. When the fan is on, the selected speed is black.

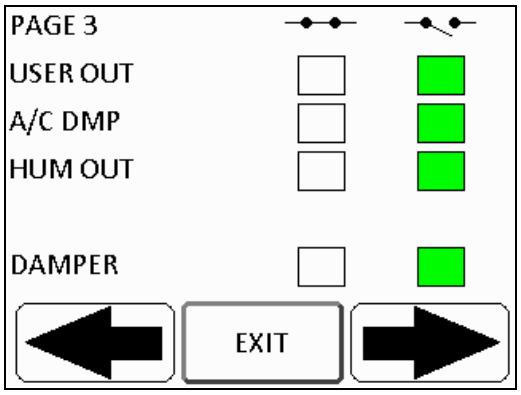



### 14.1.2. AIR CONTROL DAMPER

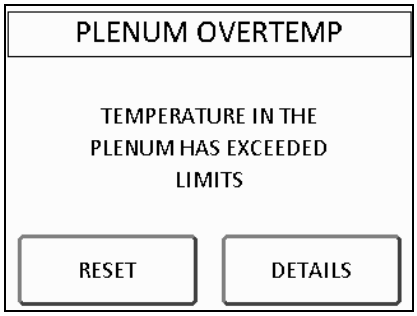
To check the status of the air damper, go to the main menu under "TROUBLESHOOT LINK" then go to page 3. When the furnace is in wood heating, the damper is open. The green square next to “DAMPER” should be on the left, (closed circuit). When another heating mode is on, the damper is closed, so the circuit is open and the green square is on the right.




### 14.1.3. TEMPERATURE PROBE (RTD)

The temperature probe continuously reads the temperature in the plenum and displays it on the main page in the upper right corner. If the probe fails, the error message "PLENUM OVERTEMP" will appear.

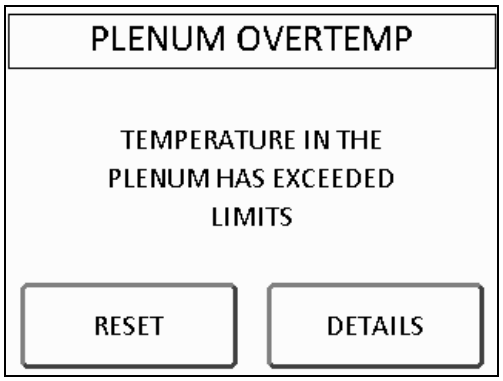

## 14.2. MAIN ERROR CODES, POSSIBLE CAUSES AND SOLUTIONS

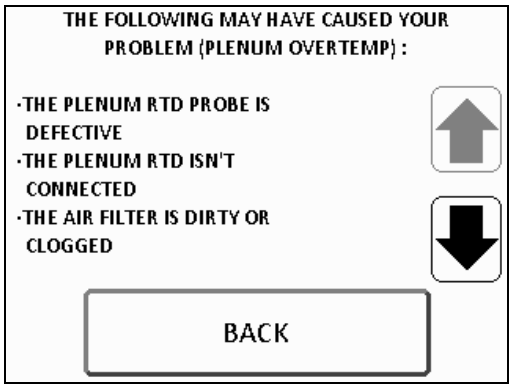
This section contains main error codes, possible causes and many suggestions to guide you in resolving them. To go back to the main menu, press the RESET button.

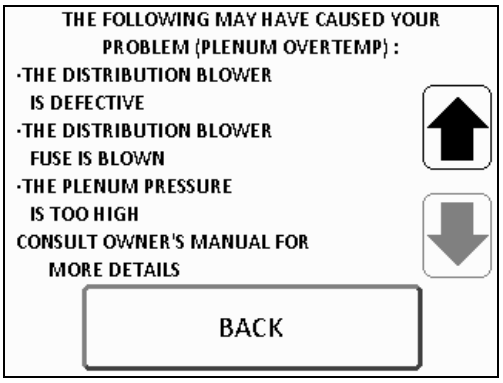
**NOTE: IF, AFTER PERFORMING ALL THE POSSIBLE SOLUTIONS MENTIONED IN THE FOLLOWING SECTION, YOU ARE STILL EXPERIENCING PROBLEMS WITH YOUR FURNACE, CALL YOUR LOCAL DEALER OR AFTER-SALE SERVICE.**

**NOTE: IF YOU NEED TO CONTACT YOUR DEALER OR AFTER-SALE SERVICE, MAKE SURE TO HAVE THE MODEL OF YOUR FURNACE AND THE SERIAL NUMBER ON HAND. (THEY CAN BE FOUND ON THE CERTIFICATION LABEL ON THE SIDE OF THE FURNACE).**

### 14.2.1. UNIT OVERHEAT




The temperature probe (RTD) is disconnected or defective: If the displayed plenum temperature on the touch screen is 0 ℉ or 1140 ℉, the temperature probe is either disconnected or defective. Check the probe connection (see Section 9.4 - HOT AIR PLENUM TEMPERATURE PROBE INSTALLATION AND CONNECTION (RTD) or replace if necessary.

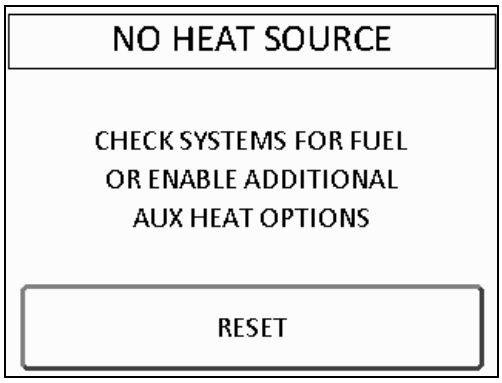
The air filter is dirty or clogged: Clean the furnace filter regularly. If the filter is damaged, replace it.

The distribution fan is faulty: Check the fan status. To do this, see Section 14.1.1 - DISTRIBUTION BLOWER. Replace it if necessary.

The fuse of the distribution fan is blown: Change the 12A fuse on the power board.

The pressure in the plenum is too high: Make sure your air distribution system is well balanced and that the filter is not dirty or clogged. Ensure that returns / side vents are not blocked.

### 14.2.2. NO HEAT

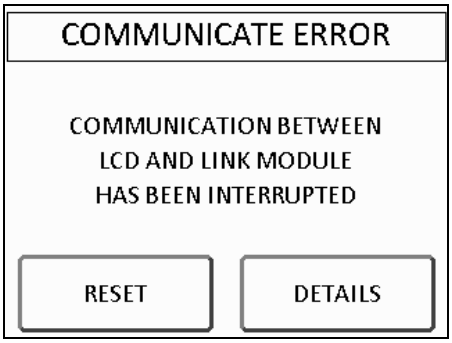


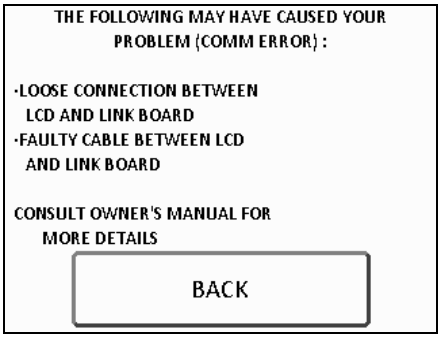

This message appears:

- When the wood furnace failed to raise the temperature in the plenum enough to reach the KIP or
- When the temperature does not reach 100 ℉ in the plenum in less than five minutes for auxiliary heat.

Make sure there is a fire in the furnace or the auxiliary heating sources are functional and well connected.

### 14.2.3. COMMUNICATION ERROR




**Communication error**: The information from the touch screen cannot be read by the link board. It is possible that the telecommunication wire is not plugged in. Make sure each end of the wire makes good contact in the connector. It is also possible that the wire is damaged. In this case, replace it.

### 14.2.4. SMOKE SMELL

- **Worn gaskets.** Gaskets may be allowing smoke spillage (doors, clean out traps, etc). Make sure that all gaskets are in good condition and replace them with original parts if necessary. Make sure all doors are well adjusted.

- **Negative pressure.** A faint wood-burning odor during ignition or shut down is normal. Although, if this increases beyond what is considered normal or if you notice an unusual soot build-up on walls or furniture, check your chimney system carefully for leaks and make sure all gaskets are in good condition.

### 14.2.5. THE TOUCH SCREEN DOES NOT LIGHTUP.

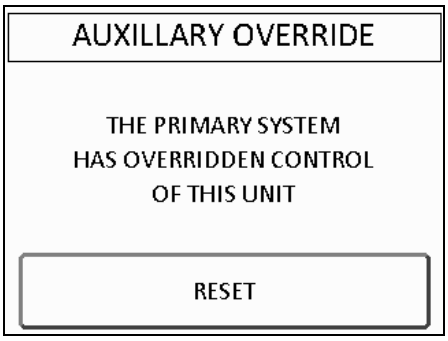
- **There is no electrical current going to the furnace.** Check if the furnace is connected and if there is current in the wall outlet. Check if the fuse is blown. Replace it if necessary.

- **Telecommunication wire is defective or not connected properly**.

- **The temperature of the screen is below zero**. When the screen is exposed to temperatures too cold, the liquid crystals may not function properly which causes a loss of communication. This situation may occur in cases where the unit has arrived from outside by a carrier or is subjected to a room temperature too low as in an unheated cottage or a very cold garage.

### 14.2.6. AUXILIARY OVERRIDE

This message appears when a heat signal from the existing furnace's thermostat is sent and the Mini-Caddy shuts itself down.



## 15. GENERAL ELECTRICAL DIAGRAM

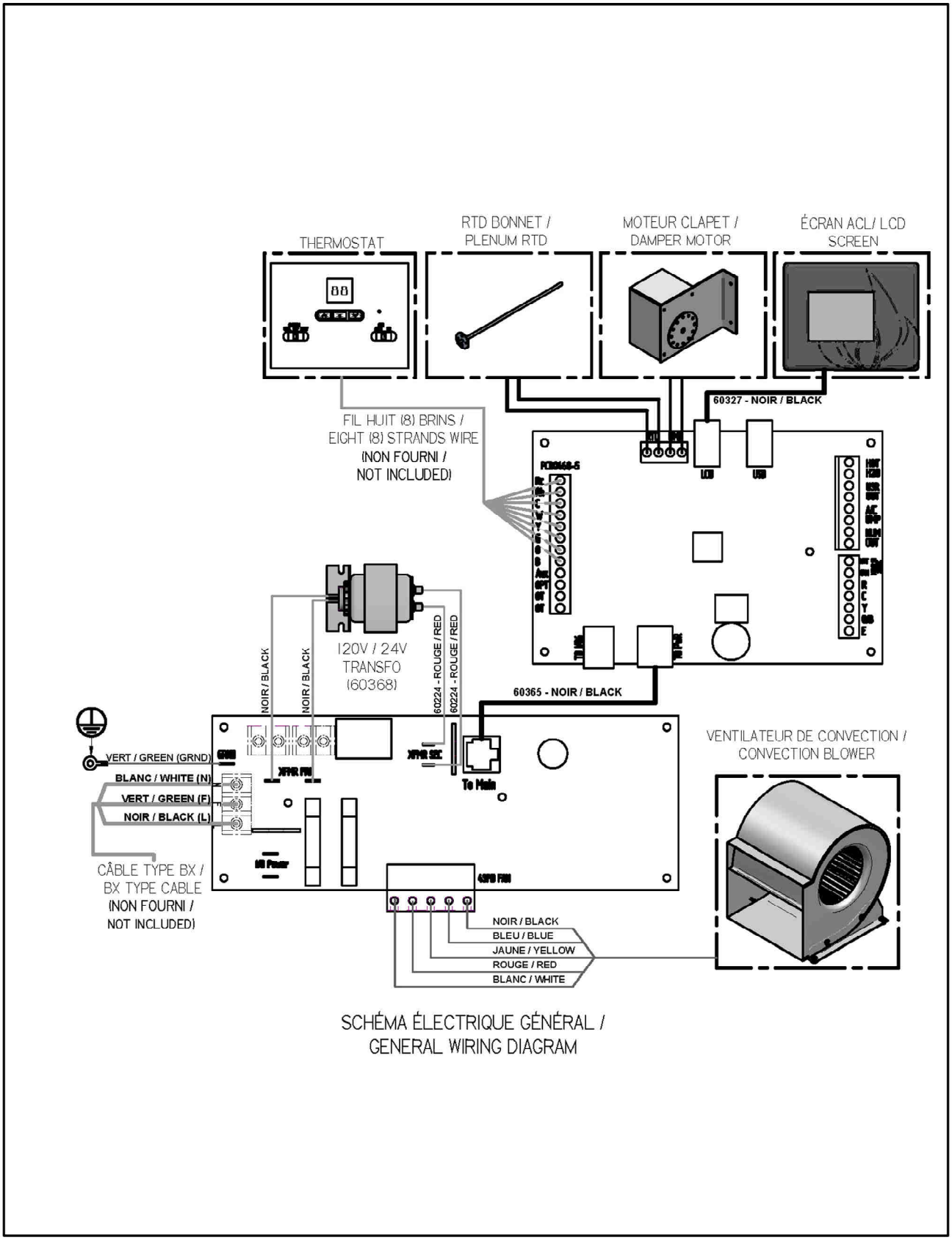
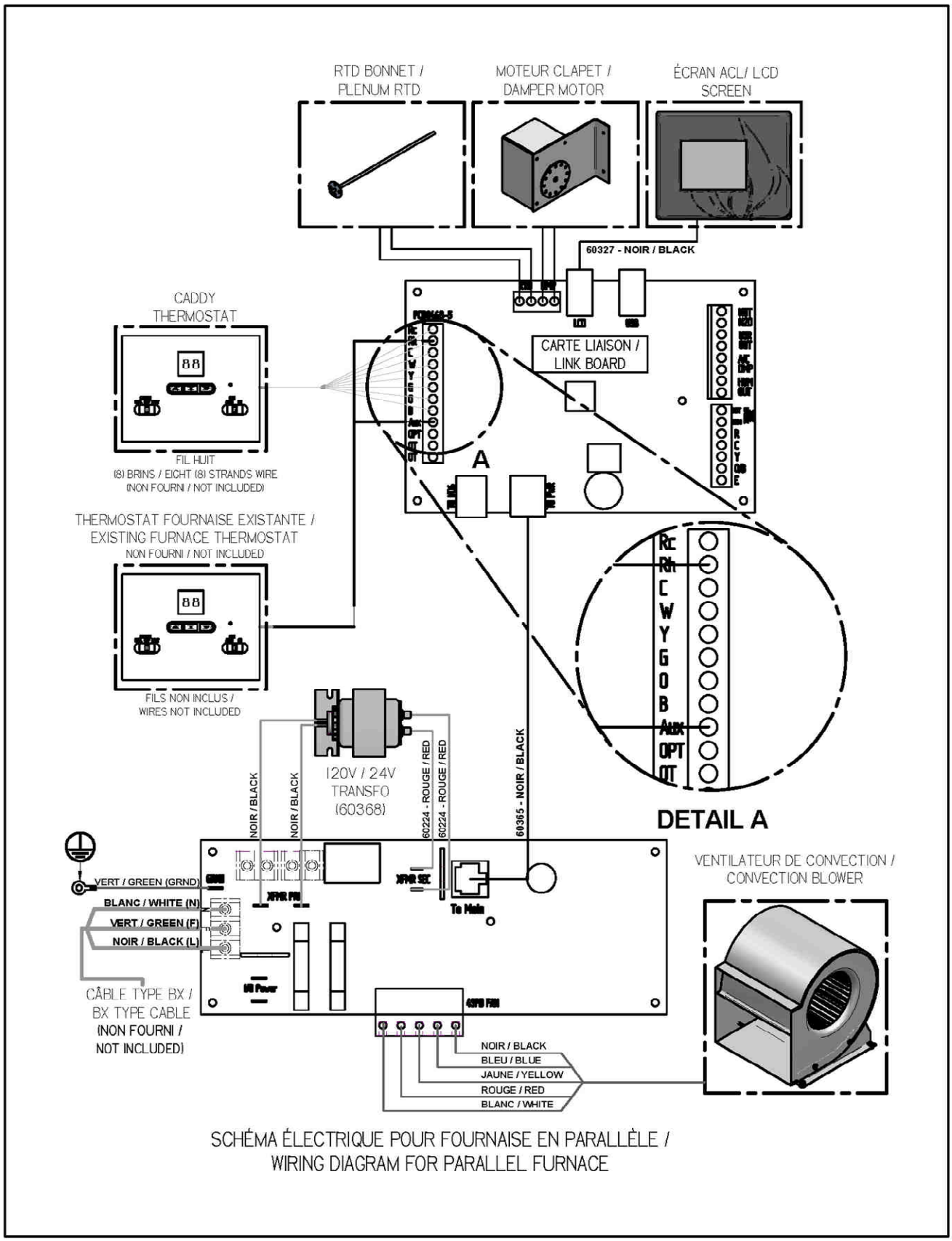
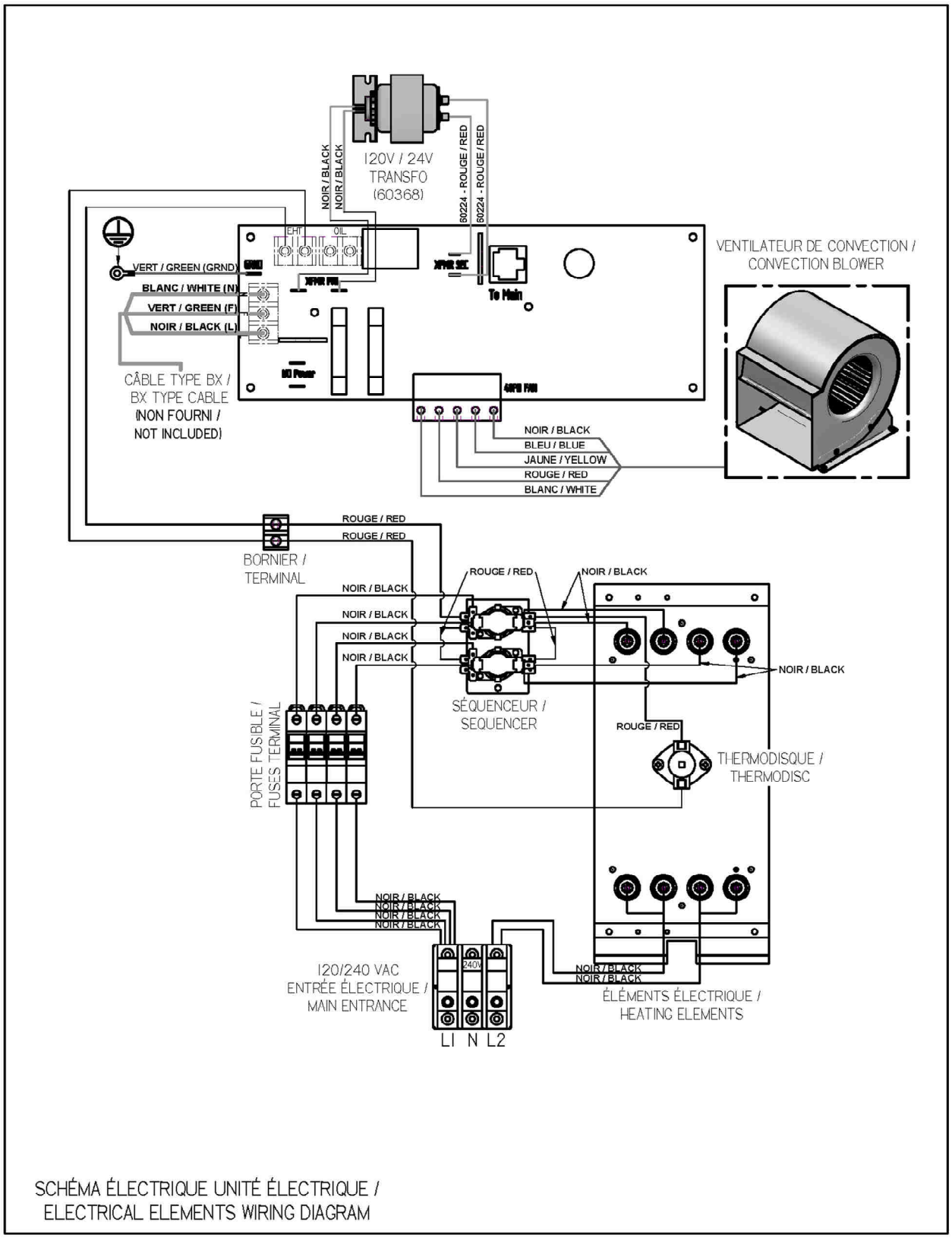



SCHÉMA ÉLECTRIQUE GÉNÉRAL / GENERAL WIRING DIAGRAM

## 16. ELECTRICAL DIAGRAM FOR PARALLEL FURNACE



## 17. ELECTRICAL DIAGRAM FOR ELECTRIC UNIT



## 18. LINK BOARD OPTIONS CONNECTIONS

### 18.1. ELECTRICAL CONSUMPTION

Your Mini-Caddy furnace is able to supply electrical 24V current to control various options. The options that can be supported are described in the table below. The maximum available 24V current is 1A (transformer 24V @ 40VA). The table below shows the approximate electrical consumption of each of the options that can be installed with your Mini-Caddy furnace. It is important to note that those consumptions were determined according to the maximum consumption of the options tested by the manufacturer. It is possible to find on the market options having higher or lower electrical consumption than those shown in the table below. In the event that the combined electrical consumption of the installed options is higher than 1A, contact our after-sale service for further information.

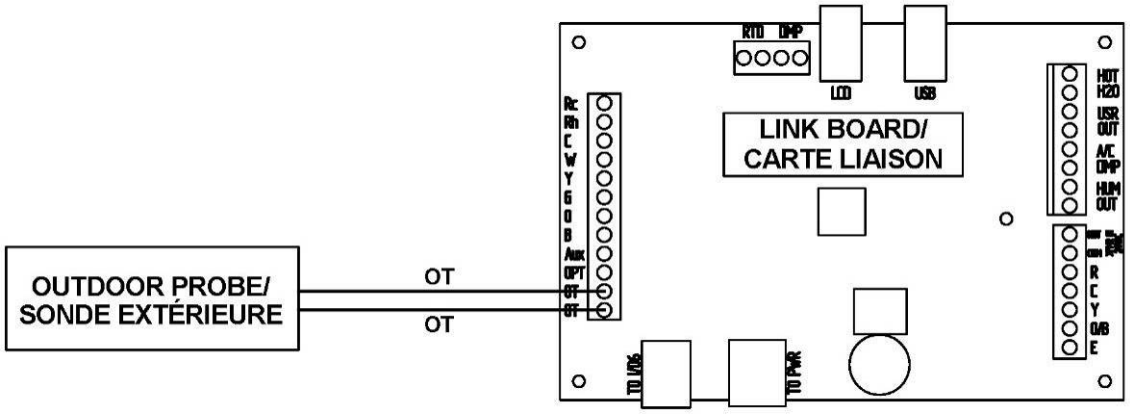
**WARNING: INCORRECT WIRING CAN DAMAGE THE LINK BOARD.**

| Option | Approximate consumption (mA) |
|---|---|
| Additional 24V equipment | 500 |
| Air conditioning damper | 500 |
| Humidifier | 500 |
| Heat pump | Current supply via additional transformer (not provided) |
| Thermostat (if not battery powered) | 500 |

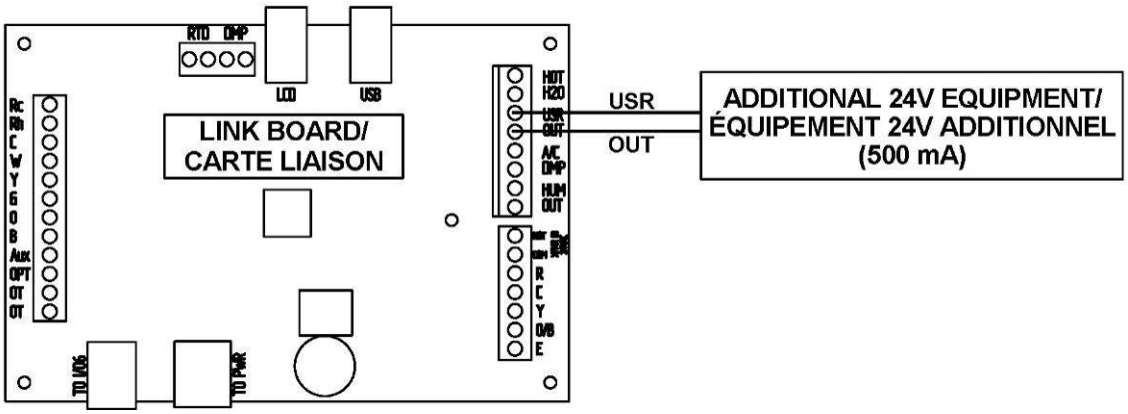
* It is important that the sum of the electrical consumption of the installed options is not higher than 1A. Note that the water valve can draw more than 200 mA as long as the total current of 1A is respected.

### 18.2. OUTDOOR PROBE

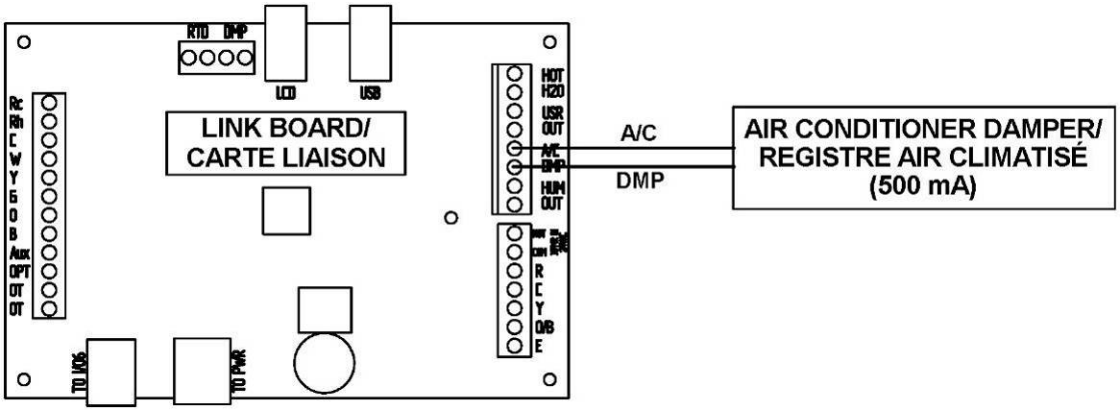
* The outdoor probe act as a switch therefore it does not consumes electrical current.



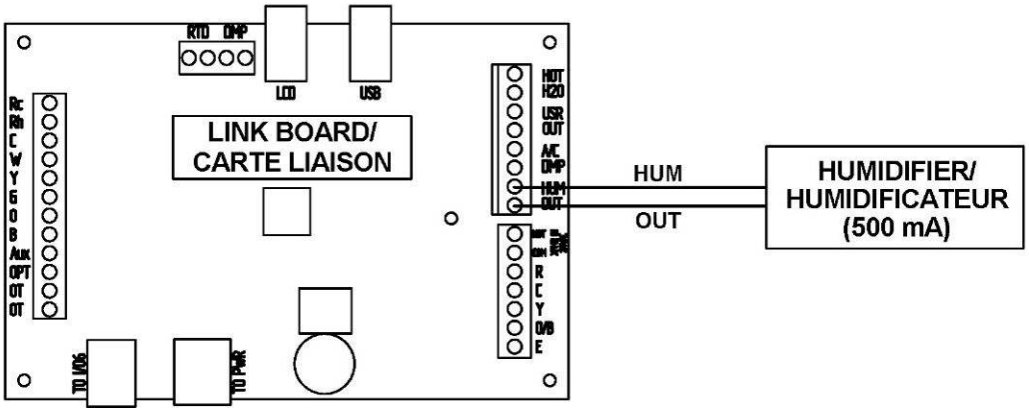

### 18.3. 24V ADDITIONNAL EQUIPMENT



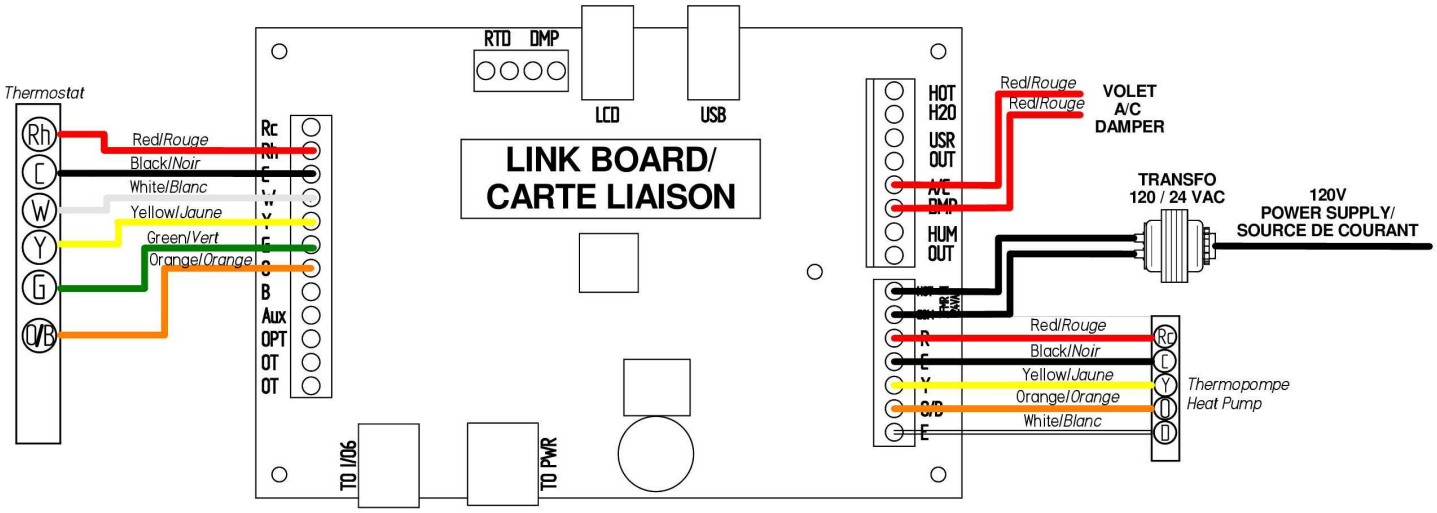
## 18.4. AIR CONDITIONNING DAMPER



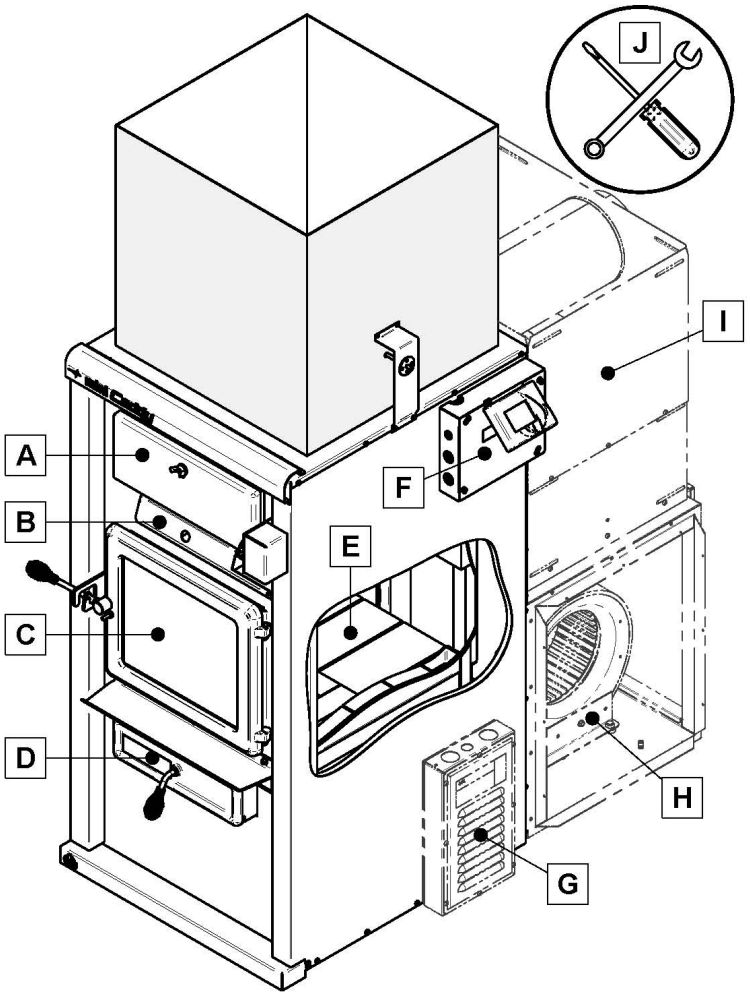

## 18.5. HUMIDIFIER

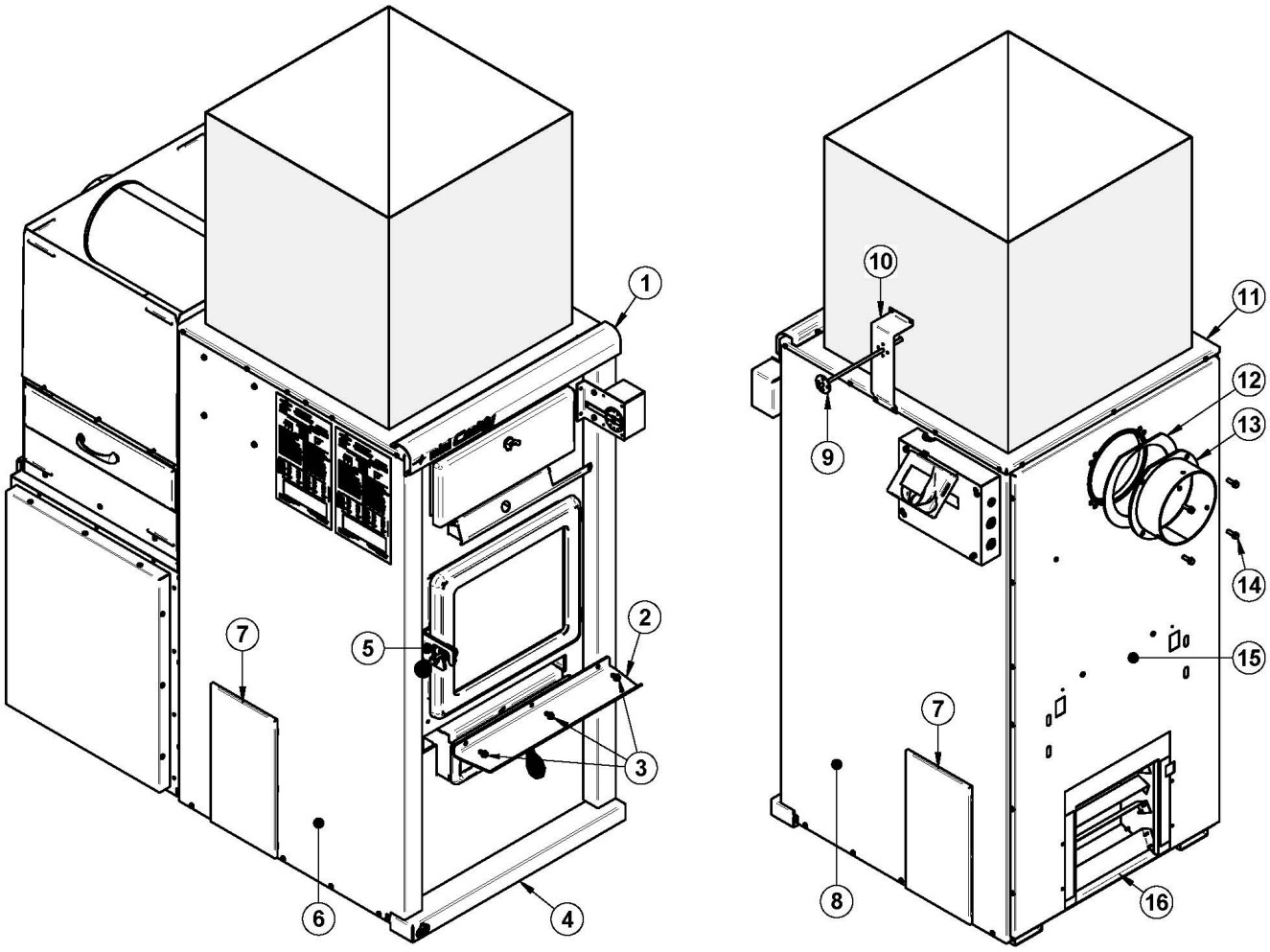



## 18.6. HEAT PUMP



## 19. EXPLODED VIEW AND PART LIST

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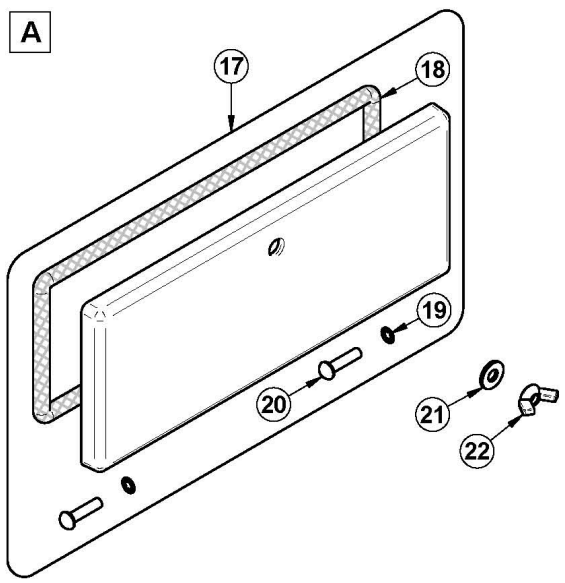
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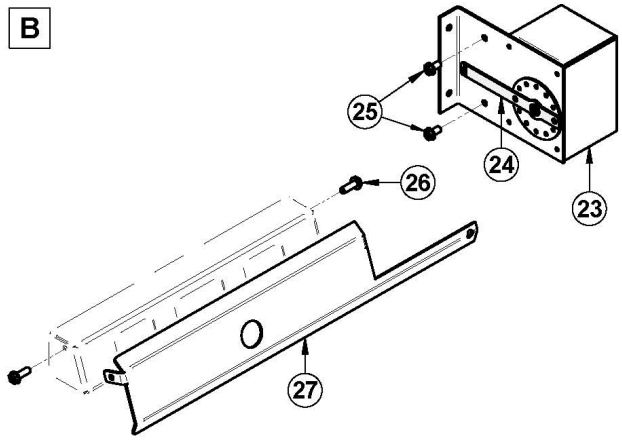
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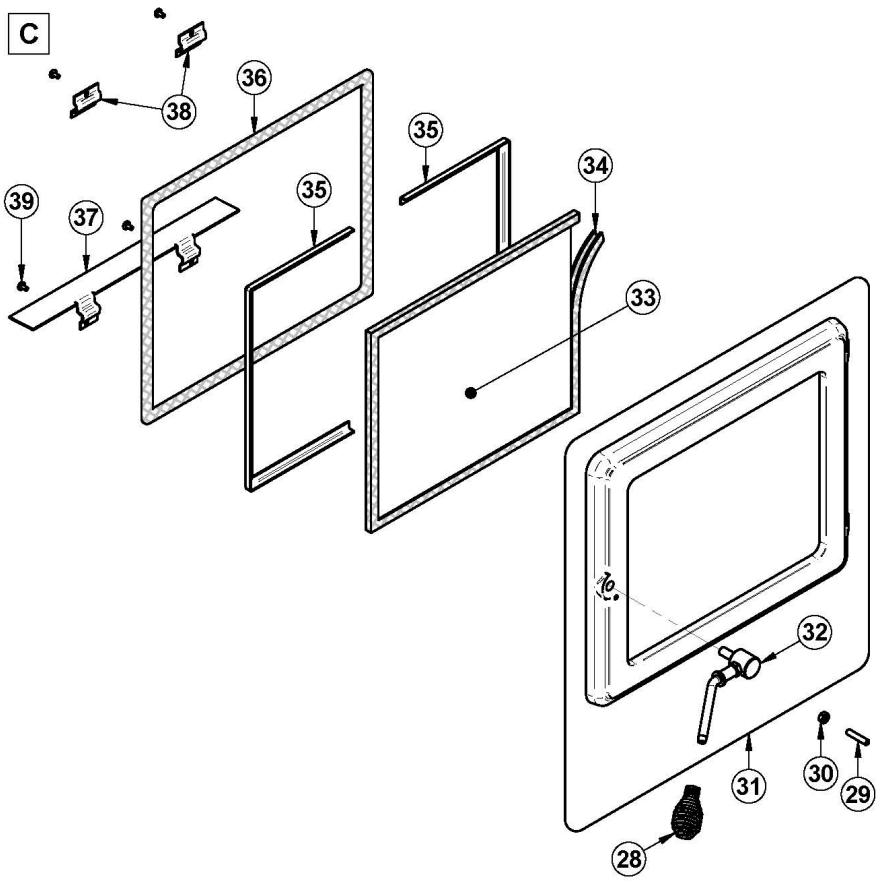
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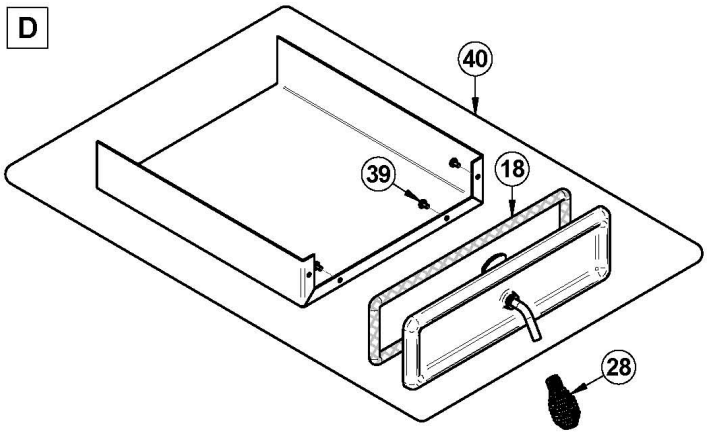
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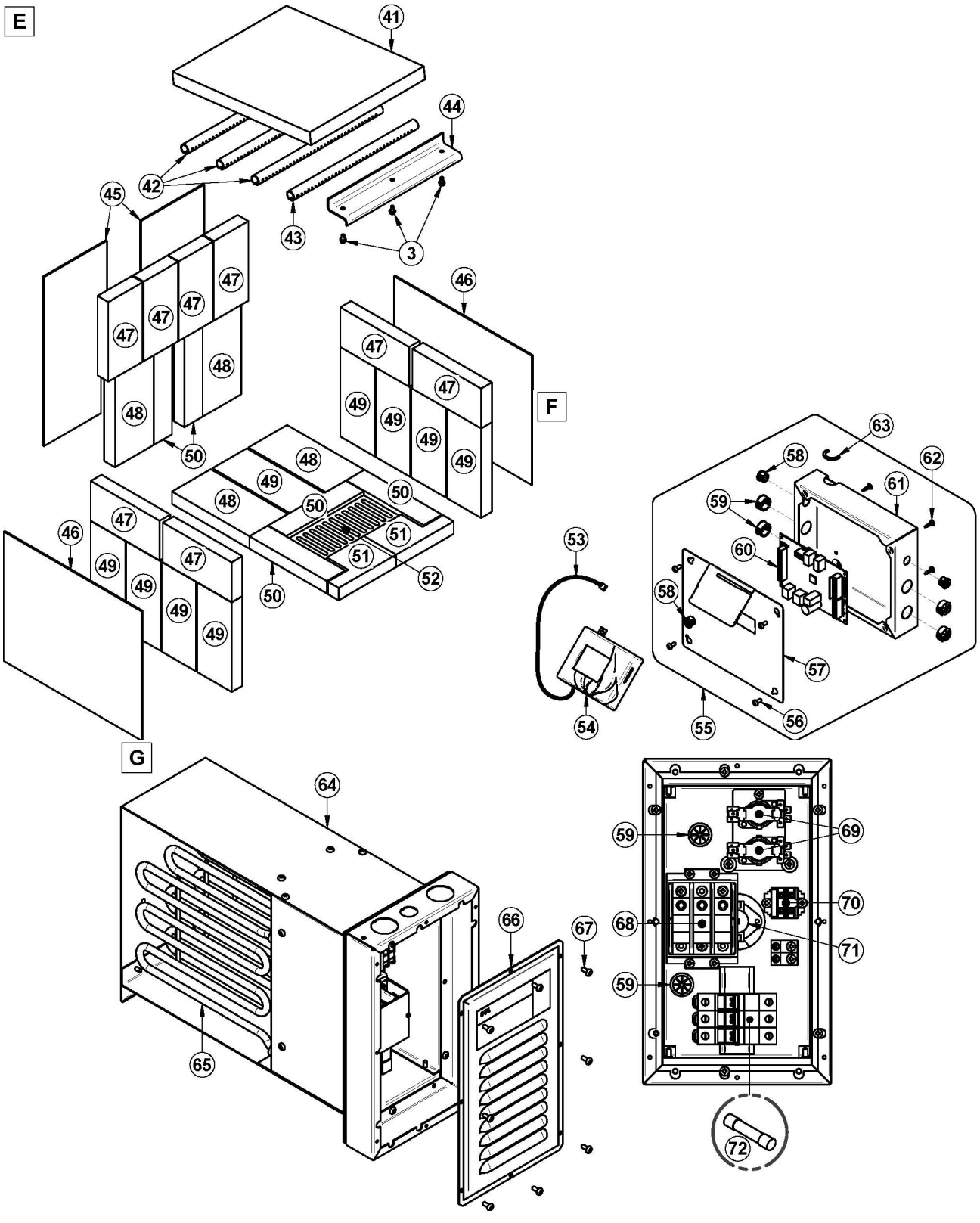
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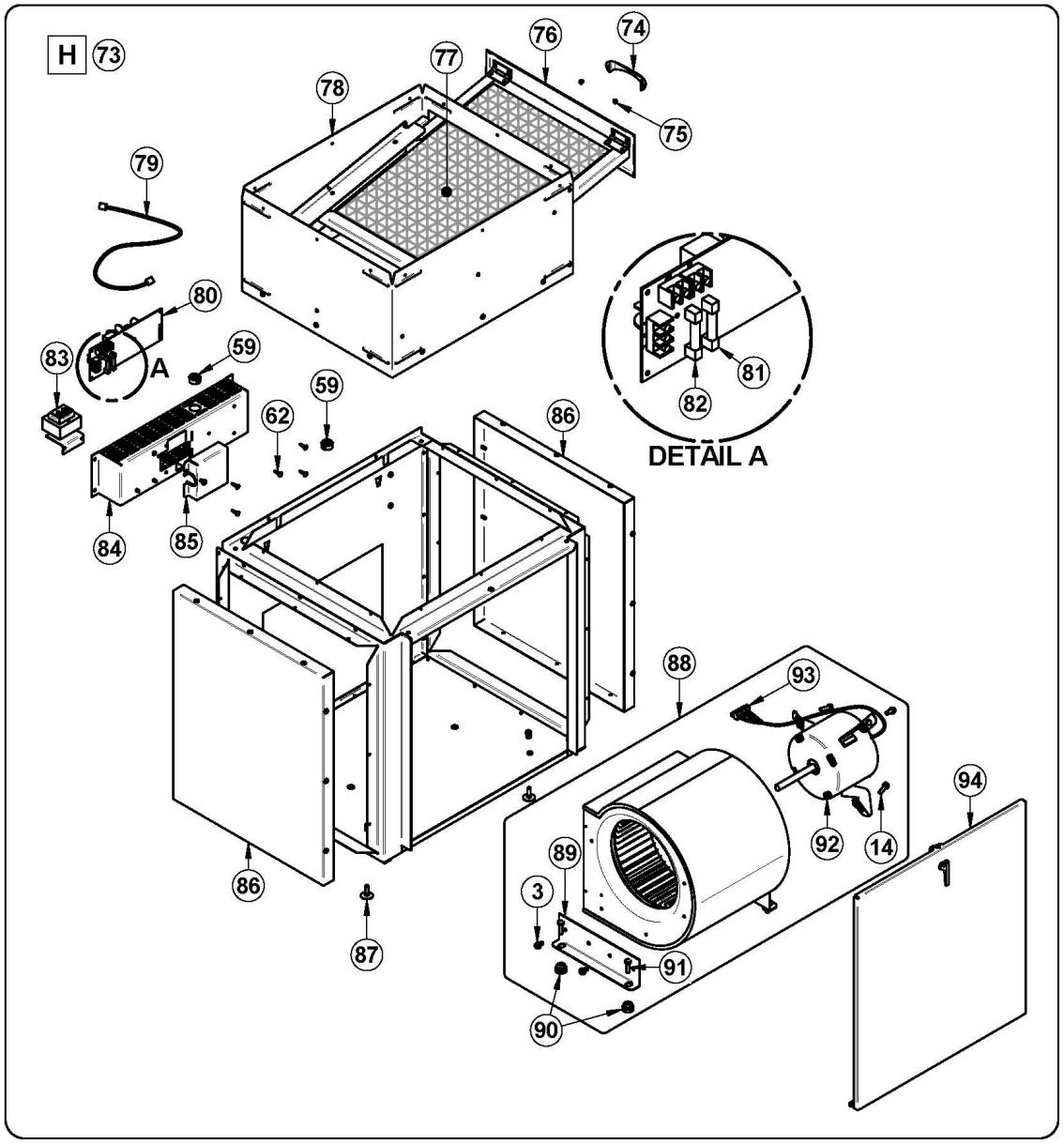
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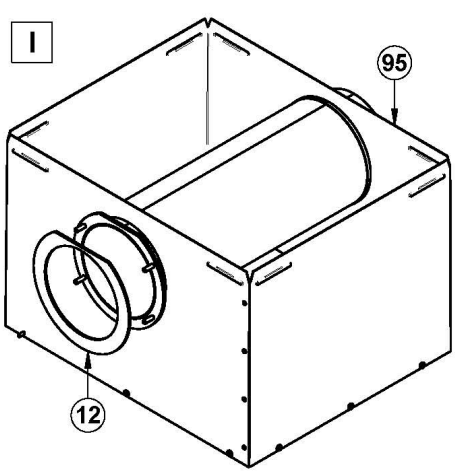
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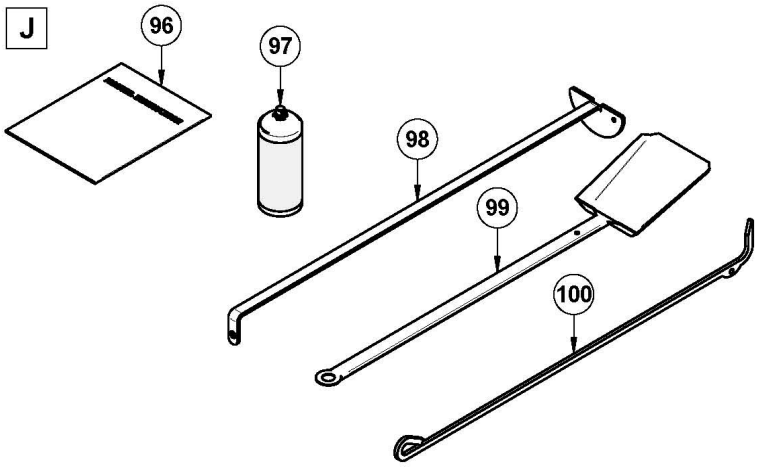
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**IMPORTANT**: THIS IS DATED INFORMATION. When requesting service or replacement parts for your stove, please provide the model number and the serial number. We reserve the right to change parts due to technology upgrade or availability. Contact an authorized dealer to obtain any of these parts. Never use substitute materials. Use of non-approved parts can result in poor performance and safety hazards.

| # | ITEM | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | SE51765 | MODEL IDENTIFICATION TRIM | 1 |
| 2 | PL51458 | ASH LIP | 1 |
| 3 | 30060 | THREAD-CUTTING SCREW 1/4-20 X 1/2" F HEX STEEL SLOT WASHER C102 ZINC | 10 |
| 4 | SE51764 | LOWER TRIM WITH LOGO | 1 |
| 5 | 99999 | BUILD TO ORDER | 1 |
| 6 | SE51769 | LEFT AIR JACKET PANEL | 1 |
| 7 | PL48223 | ELECTRICAL UNIT ACCESS PANEL | 2 |
| 8 | SE51767 | RIGHT AIR JACKET PANEL | 1 |
| 9 | 44096 | 100 OHM RTD PROBE 38" WIRE | 1 |
| 10 | PL51793 | RTD SUPPORT | 1 |
| 11 | PL51752 | AIR JACKET TOP | 1 |
| 12 | 21221 | CHIMNEY ADAPTER GASKET | 2 |
| 13 | SE56352 | FLUE COLLAR ASSEMBLY | 1 |
| 14 | 30094 | HEX SCREW WASHER HEAD 1/4-20 X 3/4" F ZINC TYPE | 7 |
| 15 | SE51772 | REAR AIR JACKET PANEL | 1 |
| 16 | SE51825 | AIR DIFFUSER ASSEMBLY | 1 |
| 17 | SE48211 | HEAT EXCHANGER ACCESS DOOR | 1 |
| 18 | AC06000 | SILICONE AND 1/2" X 8' BLACK DOOR GASKET KIT | 2 |
| 19 | 30055 | HINGE PIN RETAINING RING 5/16" ID X 0.512" OD | 2 |
| 20 | 30168 | HINGE PIN 5/16 DIA. X 1 1/4" L | 2 |
| 21 | 30210 | WASHER 29/32" OD X 3/8" ID ZINC | 1 |
| 22 | 30416 | WING NUT 3/8"-16 | 1 |
| 23 | 51000 | HONEYWELL 24V DAMPER MOTOR | 1 |
| 24 | 99999 | BUILD TO ORDER | 1 |
| 25 | 30029 | THREAD CUTTING SCREW 10-24 TYPE "F" X 3/8" HEX WASHER | 2 |
| 26 | 30026 | THREAD CUTTING SCREW 10-24 F 5/8" HEX WASHER HEAD | 2 |
| 27 | PL51753 | AIR CONTROL DAMPER | 1 |
| 28 | 30429 | 3/8" NICKEL COIL HANDLE | 2 |
| 29 | 30128 | SOCKET SET SCREW 1/4"-20 X 1 1/4" | 1 |
| 30 | 30100 | BLACK HEX NUT 1/4 - 20 | 1 |
| 31 | SE24008-01 | CAST IRON DOOR WITH HANDLE | 1 |
| 32 | AC09151 | REPLACEMENT HANDLE KIT | 1 |
| 33 | SE51352 | REPLACEMENT GLASS WITH GASKET 10 7/8" X 13 1/8" | 1 |
| 34 | AC06400 | 3/4" (FLAT) X 6' BLACK SELF-ADHESIVE GLASS GASKET | 1 |
| 35 | PL51349 | GLASS RETAINER FRAME | 2 |
| 36 | AC06725 | GLUE AND 3/4" X 7' WHITE DOOR GASKET KIT | 1 |
| 37 | PL51350 | BOTTOM AIR DEFLECTOR | 1 |
| 38 | PL51351 | GLASS RETAINER FRAME BRACKET | 2 |

| # | ITEM | DESCRIPTION | QTY |
|---|---|---|---|
| 39 | 30124 | SCREW #8 - 32 X 5/16" TRUSS QUADREX ZINC | 8 |
| 40 | SE51799 | FURNACE ASH DRAWER | 1 |
| 41 | 21443 | C-CAST BAFFLE 13 3/8" X 16 1/16" | 1 |
| 42 | PL51762 | MIDDLE REAR SECONDARY AIR TUBE | 3 |
| 43 | PL51763 | FRONT SECONDARY AIR TUBE | 1 |
| 44 | PL51761 | PRIMARY AIR DEFLECTOR | 1 |
| 45 | 21442 | REAR PANEL INSULATION | 2 |
| 46 | 21441 | SIDE PANEL INSULATION | 2 |
| 47 | 29001 | 4" X 8 1/8" X 1 1/4" REFRATORY BRICK HD | 8 |
| 48 | 29020 | 4 1/2" X 9" X 1 1/4" REFRACTORY BRICK HD | 4 |
| 49 | 29011 | 4" X 9" X 1 1/4" REFRACTORY BRICK HD | 9 |
| 50 | PL36021 | 2 1/8"  X 9" X 1 1/4" REFRACTORY BRICK | 4 |
| 51 | PL36197 | 3 3/4" X 6 11/16" X 1 1/4" X 2 3/8" REFRACTORY BRICK | 2 |
| 52 | 24089 | CAST IRON ASH GRATE 4 1/2" X 9" | 1 |
| 53 | 60363 | 8" COMMUNICATION WIRE - 4 CONDUCTOR | 1 |
| 54 | SE51791 | MINI CADDY TOUCH SCREEN BOARD (LCD) WITH  HOUSING | 1 |
| 55 | SE48250 | PC BOARD WITH HOUSING | 1 |
| 56 | 30154 | BLACK SCREW #10 X 5/8" ROBERTSON TYPE A | 4 |
| 57 | PL48251 | PC BOARD HOUSING COVER | 1 |
| 58 | 30478 | SNAP BUSHING | 3 |
| 59 | 30412 | BLACK UNIVERSAL SNAP-IN BUSHING | 8 |
| 60 | PL44181 | LIMIT MAIN CONTROL BOARD WITH PROGRAM | 1 |
| 61 | PL48250 | PC BOARD HOUSING | 1 |
| 62 | 30408 | ELECTRONIC BOARD CLIP | 9 |
| 63 | 30494 | PANDUIT POLYETHYLENE EXTRUSION | 0.333 |
| 64 | PA08005 | 11.25 kW ELECTRICAL ELEMENT | 1 |
| 65 | 60210 | 3.75 KW ELEMENT | 3 |
| 66 | PL48238 | ELECTRIC UNIT COVER | 1 |
| 67 | 30131 | BLACK METAL SCREW #10 X 1/2" TYPE "A" PAN QUADREX | 8 |
| 68 | 60206 | 3 POLES SUPPLY TERMINAL 175 A 600 V | 1 |
| 69 | 60202 | SEQUENCER 15S X 441 | 1 |
| 70 | 60204A | TERMINAL 3/8" SECTION | 1 |
| 70 | 60204B | TERMINAL BLOCK (END SECTION) | 1 |
| 70 | 60204 | RELAY SOCKET 8 PINS 300 V 10 A | 1 |
| 71 | 60237 | THERMODISC L170 MANUAL RESET FOR ELECTRICAL ELEMENT | 1 |
| 72 | 44062 | 15 AMPS FUSE KIT 2000  50-007-120 | 3 |
| 73 | PA08521 | BLOWER ASSEMBLY | 1 |
| 74 | 28062 | BLACK DRAWER HANDLE 3 25/32" | 1 |
| 75 | 30108 | MECHANICAL SCREW M4 X 4MM PAN PHILLIPS ZINC | 2 |
| 76 | SE51447 | SLIDING FILTER SUPPORT | 1 |
| 77 | 21044 | CARDBOARD FRAME AIR FILTER 20" X 15" X 1" | 1 |
| 78 | SE51444 | FILTER SUPPORT RECEPTACLE | 1 |
| 79 | 60365 | 60" COMMUNICATION WIRE - 8 CONDUCTOR | 1 |
| 80 | 44182 | TRIAC BOARD | 1 |

| # | ITEM | DESCRIPTION | QTY |
|---|---|---|---|
| 81 | 44136 | FUSE 12A / 250V / 1/4" DIA.  X 1 1/4" LONG | 1 |
| 82 | 44137 | FUSE 1A / 250V / 1/4" DIA. X 1 1/4" LONG | 1 |
| 83 | 60368 | TRANSFORMER 120V/24 V CLASS 2 - 40 VA | 1 |
| 84 | PL48243 | POWER BOARD HOUSING | 1 |
| 85 | PL48242 | POWER BOARD ACCESS PANEL | 1 |
| 86 | PL51455 | SIDE ACCESS PANEL TO BLOWER | 2 |
| 87 | 30536 | LEVELING BOLT 1/4 - 20 X 1" | 2 |
| 88 | SE66124 | BLOWER ASSEMBLY WITH 1/4 HP MOTOR, DD  4 SPEED 1075/4RPM | 1 |
| 89 | PL51375 | BLOWER SUPPORT | 2 |
| 90 | 30335 | BLOWER ANTI-VIBRATION CUSHION | 4 |
| 91 | 30109 | BOLT HEX 1/4 - 20 X 1" | 4 |
| 92 | 51009 | 1/4 HP DD-4 SPEED MOTOR 1075/4RPM | 1 |
| 93 | 44186 | 5 POSITIONS TERMINAL BLOCK | 1 |
| 94 | SE51456 | REAR ACCESS PANEL TO BLOWER | 1 |
| 95 | PA08508 | TOP AIR RETURN PLENUM KIT | 1 |
| 96 | SE45835 | MINI CADDY INSTRUCTION MANUAL KIT | 1 |
| 96 | 45853 | ELECTRICAL UNIT INSTRUCTION SHEET | 1 |
| 96 | SE45836 | BLOWER BOX INSTRUCTION MANUAL KIT | 1 |
| 96 | 45393 | TOP AIR RETURN PLENUM INSTRUCTION SHEET | 1 |
| 97 | AC05959 | METALLIC BLACK STOVE PAINT - 342 g (12oz) AEROSOL | 1 |
| 97 | AC05961 | PSG GREY 424C SPRAY PAINT | 1 |
| 98 | PL51292 | HEAT EXCHANGER SCRAPER | 1 |
| 99 | PL48171 | ASH SHOVEL | 1 |
| 100 | PL48173 | POKER | 1 |

WHY PURCHASE THROUGH AN AUTHORIZED PSG DEALER?

To make sure your PSG furnace provides comfort and energy savings in your home for many years, your choice of installer is extremely important. An authorized PSG dealer will ensure that the system is optimized and installed according to standards. Given the importance of the installation, PSG recommends that it is carried out by a professional certified in the Building Code so that the furnace delivers its full potential. This is why PSG offers an additional warranty that covers the cost of labor if your furnace has been purchased through an authorized PSG dealer.

If you want to enjoy the best service on the market and substantial savings on heating costs, there is really only one choice: an **Authorized PSG Dealer**.

# PSG LIMITED LIFETIME WARRANTY (REGULAR)

The warranty of the manufacturer extends only to the original consumer purchaser and is not transferable. This warranty covers brand new products only, which have not been altered, modified nor repaired since shipment from factory. Proof of purchase (dated bill of sale), model name and serial number must be supplied when making any warranty claim to your PSG dealer.

**This warranty applies to normal residential use only. Damages caused by misuse, abuse, improper installation, lack of maintenance, over firing, negligence or accident during transportation, power failures, downdrafts, or venting problems are not covered by this warranty.**

This warranty does not cover any scratch, corrosion, distortion, or discoloration. Any defect or damage caused by the use of unauthorized parts or others than original parts void this warranty. An authorized qualified technician must perform the installation in accordance with the instructions supplied with this product and all local and national building codes. Any service call related to an improper installation is not covered by this warranty.

The manufacturer may require that defective products be returned or that digital pictures be provided to support the claim. Returned products are to be shipped prepaid to the manufacturer for investigation. If a product is found to be defective, the manufacturer will repair or replace such defect. Transportation fees to ship the product back to the purchaser will be paid by the manufacturer. All parts costs covered by this warranty are limited according to the table below.

The manufacturer at its discretion may decide to repair or replace any part or unit after inspection and investigation of the defect. The manufacturer may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of any warranted but defective parts. The manufacturer shall in no event be responsible for any special, indirect, consequential damages of any nature, which are in excess of the original purchase price of the product. A one-time replacement limit applies to all parts benefiting from a lifetime coverage. This warranty applies to products purchased after September 1st, 2015.

| DESCRIPTION | WARRANTY APPLICATION** | |
|---|---|---|
| | PARTS | LABOUR |
| Combustion chamber (welds only*), heat exchanger (welds only*), and cast iron door framing. | Lifetime | N/A |
| Surrounds and heat shields, auger and auger tube. | 5 years | N/A |
| Ash drawer, trims (aluminum extrusions) and plating (defective manufacture*). | 5 years | N/A |
| Rotary valve, glass retainers and handle assembly. | 3 years | N/A |
| Burn pot and baffle. | 3 years | N/A |
| Blowers, auger motor, PC board, igniter, heat sensors, switches, wiring, rheostat, and other controls. | 2 years | N/A |
| Paint (peeling*), ceramic glass (thermal breakage only*), gaskets, insulation, panels, ceramic fibre blankets and other options. | 1 year | N/A |
| All parts replaced under the warranty. | 90 days | N/A |

***Pictures required** ****Subject to limitations above.***

Shall your unit or a components be defective, contact immediately your **PSG** dealer. Prior to your call make sure you have the following information necessary to your warranty claim treatment:

- Your name, address and telephone number;
- Bill of sale and dealer's name;
- Installation configuration;
- Serial number and model name as indicated on the nameplate fixed to the back of your unit;
- Nature of the defect and any relevant information.

**Before shipping your unit or defective component to our plant, you must obtain from your PSG dealer an Authorization Number. Any merchandise shipped to our plant without authorization will be refused automatically and returned to sender**

# PSG LIMITED LIFETIME WARRANTY (PRIVILEGE)

The warranty of the manufacturer extends only to the original consumer purchaser and is not transferable. This warranty covers brand new products only, which have not been altered, modified nor repaired since shipment from factory and purchased through an authorised dealer. Proof of purchase (dated bill of sale), model name and serial number must be supplied when making any warranty claim to your PSG dealer.

**This warranty applies to normal residential use only. Damages caused by misuse, abuse, improper installation, lack of maintenance, over firing, negligence, accident during transportation, power failures, downdrafts, or venting problems are not covered by this warranty.**

This warranty does not cover any scratch, corrosion, distortion, or discoloration. Any defect or damage caused by the use of unauthorized parts or others than original parts void this warranty. An authorized qualified technician must perform the installation in accordance with the instructions supplied with this product and all local and national building codes. Any service call related to an improper installation is not covered by this warranty.

The manufacturer may require that defective products be returned or that digital pictures be provided to support the claim. Returned products are to be shipped prepaid to the manufacturer for investigation. If a product is found to be defective, the manufacturer will repair or replace such defect. Transportation fees to ship the product back to the purchaser will be paid by the manufacturer. Repair work covered by the warranty, executed at the purchaser's domicile by an authorized qualified technician requires the prior approval of the manufacturer. Labour cost and repair work to the account of the manufacturer are based on predetermined rate schedule and must not exceed the wholesale price of the replacement part. All parts and labour costs covered by this warranty are limited according to the table below.

The manufacturer at its discretion may decide to repair or replace any part or unit after inspection and investigation of the defect. The manufacturer may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of any warranted but defective parts. The manufacturer shall in no event be responsible for any special, indirect, consequential damages of any nature, which are in excess of the original purchase price of the product. A one-time replacement limit applies to all parts benefiting from a lifetime coverage. This warranty applies to products purchased after September 1st, 2015.

| DESCRIPTION | WARRANTY APPLICATION** | |
|---|---|---|
| | PARTS | LABOUR |
| Combustion chamber (welds only*), heat exchanger (welds only*), and cast iron door framing. | Lifetime | 3 years |
| Surrounds and heat shields, auger and auger tube. | 5 years | 3 years |
| Ash drawer, trims (aluminum extrusions) and plating (defective manufacture*). | 5 years | N/A |
| Rotary valve, glass retainers and handle assembly. | 3 years | 1 year |
| Burn pot and baffle. | 3 years | N/A |
| Blowers, auger motor, PC board, igniter, heat sensors, switches, wiring, rheostat, and other controls. | 2 years | 1 year |
| Paint (peeling*), ceramic glass (thermal breakage only*), gaskets, insulation, panels, ceramic fibre blankets and other options. | 1 year | N/A |
| All parts replaced under the warranty. | 90 days | N/A |

***Pictures required** ****Subject to limitations above.***

Shall your unit or a components be defective, contact immediately your **PSG** dealer. Prior to your call make sure you have the following information necessary to your warranty claim treatment:

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- Installation configuration;
- Serial number and model name as indicated on the nameplate fixed to the back of your unit;
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