

**IMPORTANT:**  
THESE INSTRUCTIONS ARE TO REMAIN  
WITH THE HOMEOWNER



SERIAL #

## SAFETY NOTICE

If this stove is not properly installed, a house fire may result. For your safety, follow the installation instructions. Contact local building or fire officials about restrictions

## INSTALLATION AND OPERATING INSTRUCTIONS

**TESTED and LISTED to  
ULC S628 / UL 1482**  
Meets the U.S. Environmental Protection  
Agency's May 2015 Particulate Emission  
Standards



**Model:  
NEO 1.6 INSERT  
Series: A**

Visit [www.pacificenergy.net](http://www.pacificenergy.net) for the most up-to-date version of this manual

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## PLEASE SAVE THESE INSTRUCTIONS

**NOTE: WE STRONGLY RECOMMEND THAT SMOKE DETECTORS BE INSTALLED.**

If smoke detectors have been previously installed, you may notice that they are operating more frequently. This may be due to curing of stove paint or fumes caused by accidentally leaving the fire door open. Do not disconnect the detectors. If necessary, relocate them to reduce their sensitivity.

**SAFETY NOTICE: If this stove is not properly installed, a house fire may result. For your safety, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.**

Please read this entire manual before you install and use your new room heater. Failure to follow instructions may result in property damage, bodily injury, or even death.

### WARNING

Surfaces of this fireplace insert can be extremely hot when in operation and will cause severe burns when touched. Do not touch any part of the unit except the door handle and the primary air control located underneath the ashlip. Keep children away. Never allow children to touch the unit. Unit may still be hot even without visible flame or embers.

### WARNING



**HOT GLASS WILL  
CAUSE BURNS.**

**DO NOT TOUCH GLASS  
UNTIL COOLED.**

**NEVER ALLOW CHILDREN  
TO TOUCH GLASS.**

# Rating Label



**LISTED SOLID WOOD FUEL FIREPLACE INSERT / APPAREIL DU TYPE  
INSERTION DE COMBUSTIBLE SOLIDE DE CHEMINÉE  
CERTIFIED FOR USE IN CANADA AND U.S.A./CERTIFIÉ AU CANADA ET AUX  
ETATS-UNIS**

**403**

**TESTED TO / ÉPROUVÉ SELON:  
ULCS628-93 / IN THE USA: CONFORMS TO UL1482 (2011)**

**MODEL / MODÈLE: NEO 1.6 INSERT** **SERIES / SÉRIE: A** **INSTALL AND OPERATING INSTRUCTIONS.**

USE ONLY IN ACCORDANCE WITH PACIFIC ENERGY'S INSTALLATION AND OPERATING INSTRUCTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT CODES, RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA. INSTALL AND USE ONLY IN MASONRY OR FACTORY BUILT FIREPLACE. DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

COMPONENTS REQUIRED FOR INSTALLATION : FULL FLUE LINER CONFORMING TO CAN/ULC-S635 OR CAN/ULC-S640. IN U.S.A. FLUE LINER CONFORMING TO UL-1777 OR DIRECT FLUE CONNECTION ASSEMBLY.

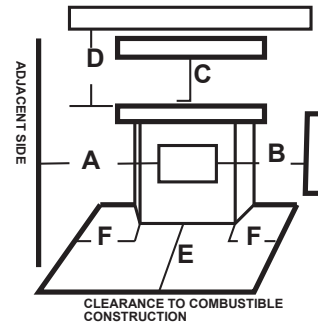
ELECTRICAL RATING 115V, 60HZ, 1 AMP. ROUTE POWER CORD AWAY FROM UNIT. DANGER: RISK OF ELECTRICAL SHOCK. DISCONNECT POWER BEFORE SERVICING UNIT.

FOR USE WITH SOLID WOOD FUEL ONLY. DO NOT USE GRATE OR ELEVATE FIRE-BUILD WOOD FIRE DIRECTLY ON HEARTH. REPLACE GLASS ONLY WITH CERAMIC GLASS. INSPECT AND CLEAN CHIMNEY FREQUENTLY-UNDER CERTAIN CONDITIONS OF USE, CREOSOTE BUILDUP MAY OCCUR RAPIDLY. OPERATE ONLY WITH FEED DOOR CLOSED. OPEN TO FEED FIRE ONLY. STOVE DESIGNED TO BURN CORDWOOD ONLY. BURNING OTHER MATERIALS MAY CAUSE DAMAGE TO STOVE OR HOME.

**MINIMUM CLEARANCE TO COMBUSTIBLES (MEASURED FROM INSERT DOOR OPENING)**

**DÉGAGEMENT MINIMUM AUX COMBUSTIBLES**

- A) ADJACENT SIDEWALL/ 381 MM / 15 IN  
PAROI LATÉRALE ADJACENTE
- B) SIDE FACING/ 286 MM / 11.25 IN  
REVÊTEMENT LATÉRAL (MEASURED FROM  
INSERT SURROUND BROW) C) TOP FACING/  
406 MM / 16 IN  
REVÊTEMENT SUPÉRIEUR
- D) MANTEL 406 MM / 16IN  
(MEASURED FROM INSERT FIREBOX FRONT) E)
- FIRING SIDE, CANADA 457 MM / 18 IN
- FIRING SIDE, U.S.A. 406 MM / 16 IN
- EPREUVE DU FEU
- F) OTHER SIDES 200 MM / 8 IN  
AUTRES CÔTÉS.



INSTALLER ET UTILISER SELON LES INTRUCTIONS D'INSTALLATION ET D'OPÉRATION DU PACIFIC ENERGY. BÂTIMENT OU POMPIERS LOCAUX DE CONTACT AU SUJET DES CODES, RESTRICTIONS ET D'INSPECTION D'INSTALLATION DANS VOTRE SECTEUR. INSTALLEZ ET EMPLOYEZ SEULEMENT EN MAÇONNERIE OU CHEMINÉE CONSTRUITE PAR USINE. NE RELIEZ PAS CETTE UNITÉ À UNE CONDUITE DE CHEMINÉE DE CHEMINÉE SERVANT UN AUTRE APPAREIL. MATERIEL REQUIS POUR L'INSTALLATION: PLEIN REVÊTEMENT DE CONDUITE DE CHEMINÉE CONFORMEMENT À CAN/ULC-S635 OR CAN/ULC-S640. ÉLECTRIQUE 115V, 60HZ, 1 AMP. ITINÉRAIRE POWERCORD À PARTIR D'UNITÉ. DANGER : RISQUE DE CHOC ÉLECTRIQUE. DÉBRANCHEZ LE POUVOIR(LA PUISSANCE) AVANT L'ENTRETIEN DE L'UNITÉ. POUR UTILISATION AVEC COMBUSTIBLE AU BOIS SEULEMENT. N'UTILISEZ PAS LA GRILLE OU N'ÉLEVEZ PAS LE FEU EN BOIS DE FIRE-BUILD DIRECTEMENT SUR LE FOYER. REMPLACES LA VITRE AVEC UNIQUEMENT DE LA VITRE CÉRAMIQUE. INSPECTEZ ET NETTOYEZ LA CHEMINÉE FRÉQUEMMENT-DANS CERTAINES CONDITIONS D'UTILISATION, L'HABILLAGE DE CRÉOSOTE PEUT SE PRODUIRE RAPIDEMENT. OPÉREZ SEULEMENT AVEC LA PORTE D'ALIMENTATION FERMÉE. OUVREZ-VOUS POUR ALIMENTER LE FEU SEULEMENT. LE FOURNEAU CONÇU POUR BRÛLER CORDWOOD SEULEMENT. LA COMBUSTION D'AUTRES MATÉRIELS(MATIÈRES) PEUT ENDOMMAGER LE FOURNEAU OU À LA MAISON.



**CAUTION**

**HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS.**



MANUFACTURED BY:  
PACIFIC ENERGY FIREPLACE PRODUCTS LTD.  
2975 ALLENBY RD., DUNCAN, BC V9L 6V8

DATE OF MANUFACTURE

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
CERTIFIED TO COMPLY WITH JULY 1990  
PARTICULATE EMISSION STANDARDS**

J	F	M	A	M	J	J	A	S	O	N	D
2013		2014		2015		2016		2017		2018	

090114

5050.750

**MADE IN CANADA**

NE16INS-1



# Safety

**READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS APPLIANCE. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.**

We strongly recommend that smoke detectors be installed. If smoke detectors have been previously installed, you may notice that they are operating more frequently. This may be due to curing of stove paint or fumes caused by accidentally leaving the fire door open. Do not disconnect the detectors. If necessary, relocate them to reduce their sensitivity.

**SAFETY NOTICE:** If this stove is not properly installed, a house fire may result. For your safety, follow the installation directions. Consult local building or fire officials about restrictions and installation inspection requirements in your area.

The services of competent installer, certified by the Wood Energy Technical program (WETT) - in Canada, Hearth Education Foundation (HEARTH) - in U.S.A. (or equivalent) are strongly recommended.

# Dimensions

## Dimensions

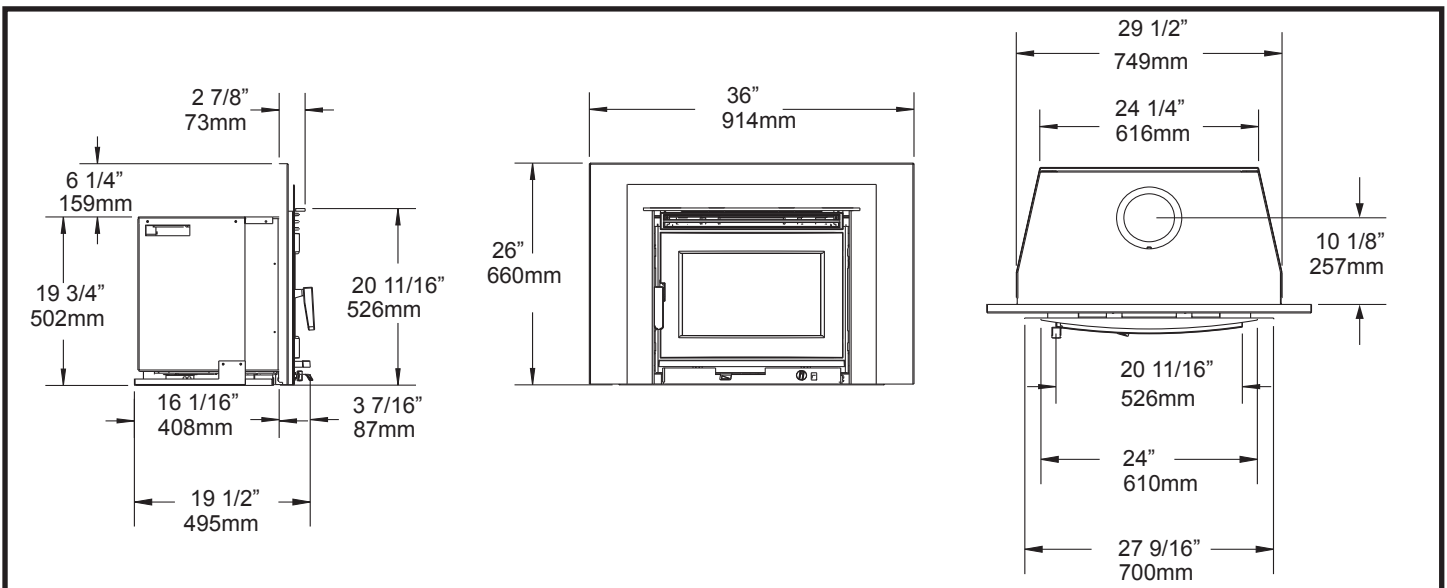


Figure 1: Dimensions.

# Clearances

## Masonry or Factory Built Fireplace

The minimum required clearances to surrounding combustibles when installed into a masonry or factory built fireplace are listed below and shown (Figure 2).

Minimum Clearances to Combustibles	
Adjacent Sidewall .....	13 1/2 in. (343 mm)
Mantel(measured from top of brow).....	16 in. (406 mm)
Top Facing .....	16 in. (406 mm)
Side Facing .....	9 3/4 in. (248 mm)
Ceiling .....	70 in.(1.8m)

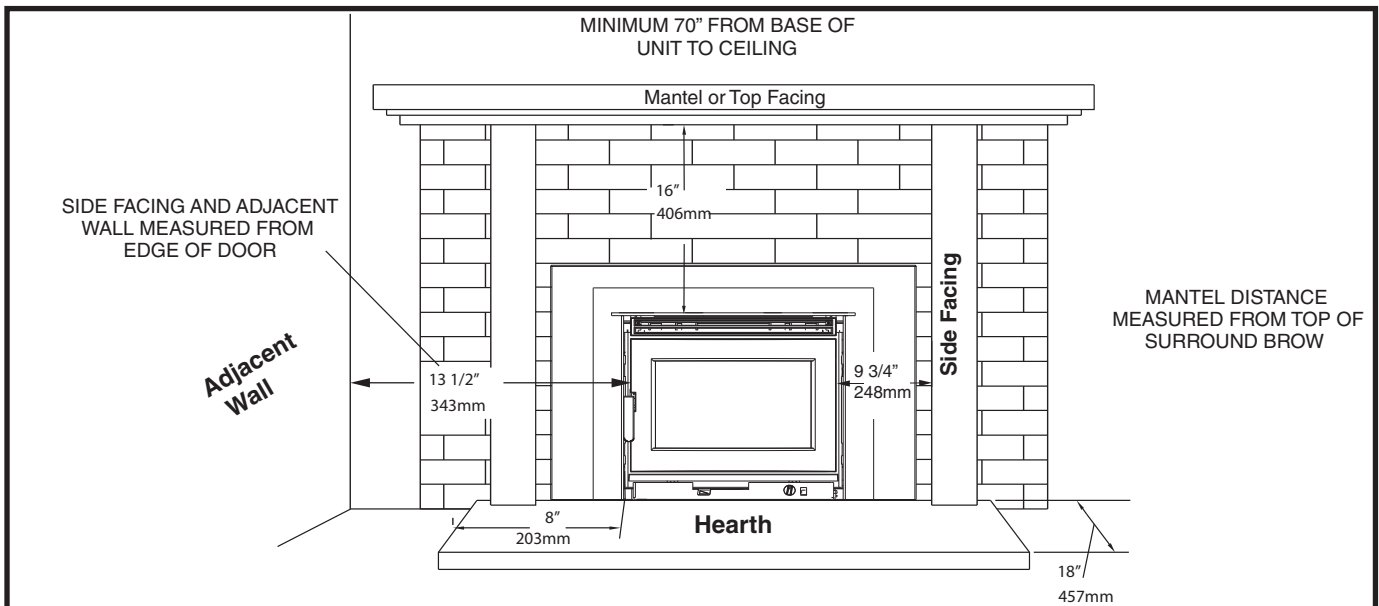


Figure 2: Clearances.

**\* Fireplace hearth requirements: (Measured without the insert)**

The hearth can be flush with an adjacent combustible floor and must extend 16" in front and 8" beyond each side of the fireplace opening.

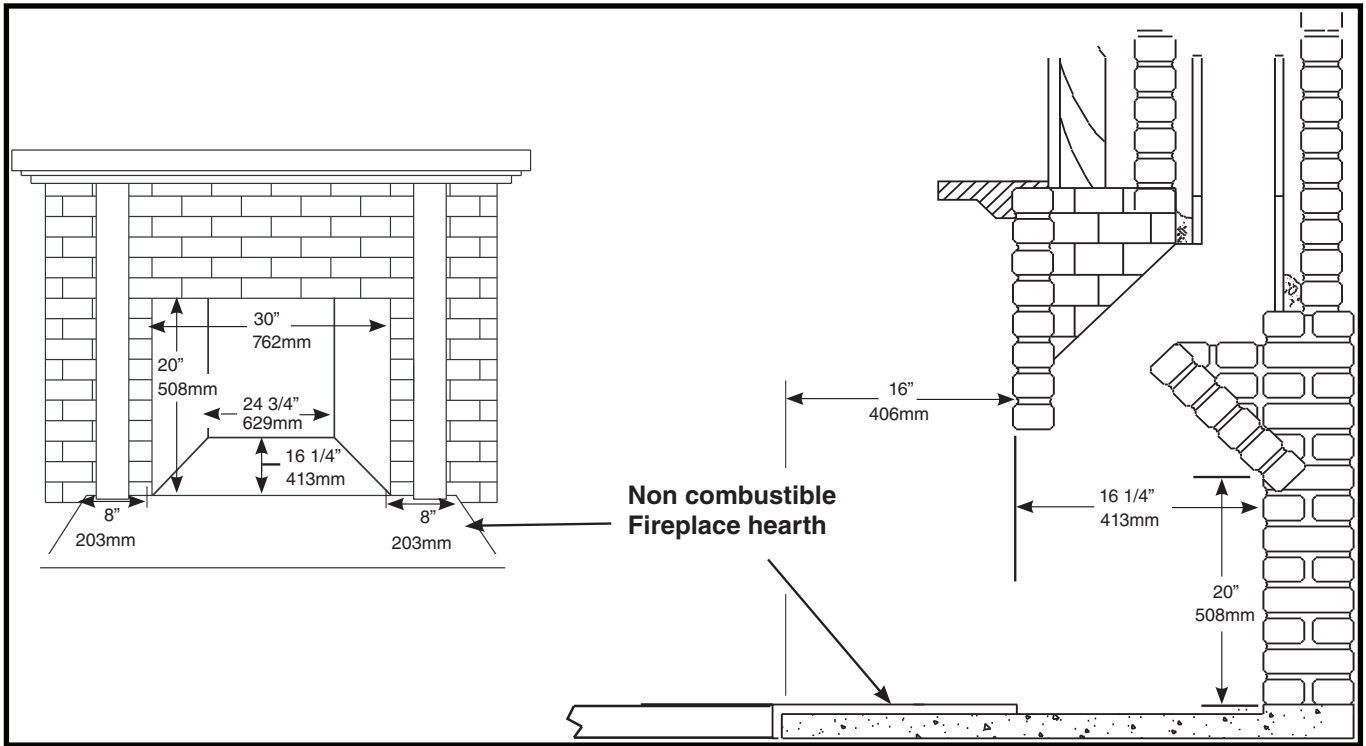


Figure 3: Minimum fireplace opening and hearth dimensions.

**Ember protection:**

**\*\*** Combustible floor in front of the fireplace insert must be protected from hot embers by non-combustible material extending 16" (USA) and 18" (CANADA) to the firing side and 8" to other sides of the unit. Consult CAN/CSA-B365 Installation Code for Solid-Fuel-Burning appliances and equipment in Canada, and N.F.P.A. 211 Standard for chimneys, fireplaces, vents and Solid-Fuel-Burning appliances in USA.

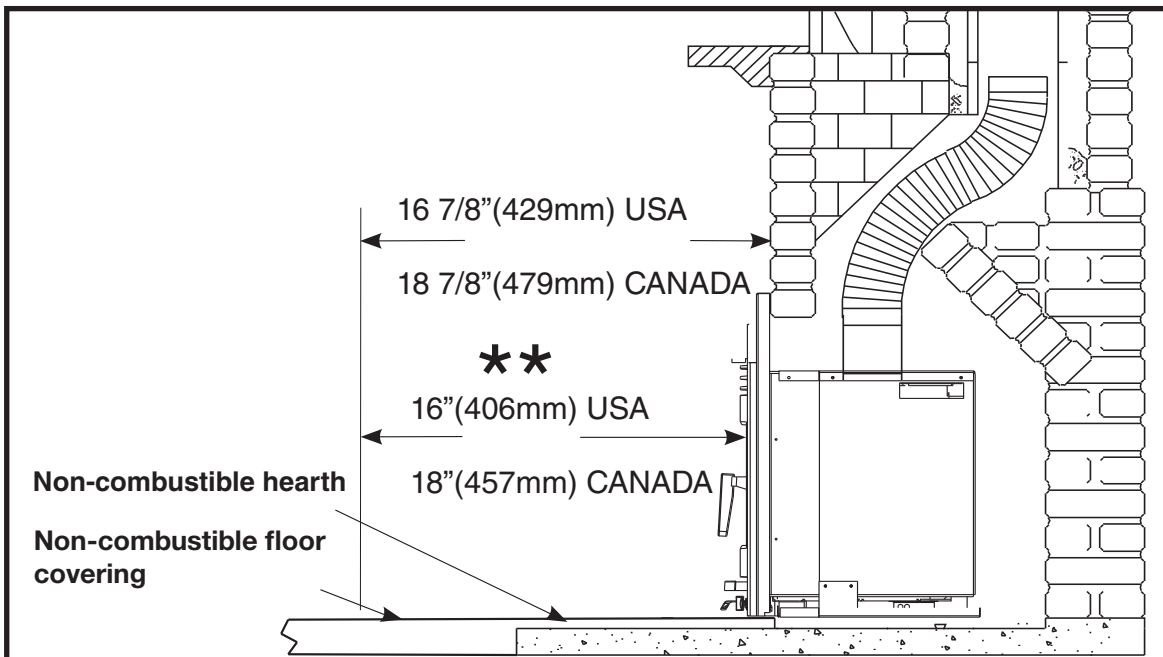


Figure 4: Minimum ember protection area.

# Chimney Smoke and Creosote Formation

When wood is burned slowly, it produces tar and other organic vapours, which combine with expelled moisture to form creosote. The creosote vapours condense in the relatively cool chimney flue of a slow burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

1. Highest smoke densities and emissions occur when a large amount of wood is added to a bed of hot coals and the air inlet is closed. The heated wood generates smoke, but without ample air, the smoke cannot burn. Smoke-free, clean burning requires small fuel loads, two or three logs at a time or 1/4 to 1/2 of a fuel load and leaving the air inlet relatively wide open, especially during the first 10 to 30 minutes after each loading, when most of the smoke generating reactions are occurring. After 30 minutes or so, the air inlet can be turned down substantially without excessive smoke generation. Wood coals create very little creosote-producing smoke.
2. The cooler the surface over which wood smoke is passing, the more creosote will be condensed. Wet or green wood contributes significantly to creosote formation as the excess moisture that is boiled off cools the fire, making it difficult for the tars and gases to ignite, thus creating dense smoke and poor combustion. This moisture-laden smoke cools the chimney, compounding the problem by offering the smoke the ideal place to condense.

In summary, a certain amount of creosote is inevitable and must be lived with. Regular inspection and cleaning is the solution. The use of dry, seasoned wood and ample combustion air will help to minimize annoying smoke emissions and creosote buildup.

## Chimney Fires

The result of excessive creosote buildup is a chimney fire. Chimney fires are dangerous. Chimney inside temperatures can exceed 2000 degrees F. This causes much higher than normal temperatures in the chimney and on its exterior surfaces thus ignition of nearby or touching combustible material is more likely during a chimney fire. Proper clearances are critical during such a fire. Chimney fires are easy to detect; they usually involve one or more of the following:

- Flames and sparks shooting out of the top of the chimney
- A roaring sound
- Vibration of the chimney

## In Case of a Chimney Fire

1. Prepare to evacuate to ensure everyone's safety. Have a well understood plan of action for evacuation. Have a place outside where everyone is to meet.
  2. Close air inlets on stove.
  3. Call local fire department. Have a fire extinguisher handy. Contact your local fire authority for further information on how to handle a chimney fire. It is most important that you have a clearly understood plan on how to handle a chimney fire.
  4. After the chimney fire is out, the chimney must be cleaned and checked for stress and cracking before starting another fire. Also check combustibles around chimney and the roof.
- The services of a competent or certified installer, (certified by the Wood Energy Technical Training program (WETT) - in Canada, Hearth Education Foundation (HEARTH) - in U.S.A.,) are strongly recommended.

## Avoiding a Chimney Fire

There are two ways to avoid chimney fires:

1. Do not let creosote build up to a point where a big chimney fire is possible.
2. Do not have fires in the heater that may ignite chimney fires. These are hot fires, such as when burning household trash, cardboard, Christmas tree limbs, or even ordinary fuel wood; (eg. with a full load on a hot bed of coals and with the air inlet wide open).

## Wood Selection

This heater is designed to burn natural wood only. Higher efficiency and lower emissions generally result when burning air-dried seasoned hardwoods, as compared to softwoods or too green or freshly cut hardwoods.

Wood should be properly air dried (seasoned) for six months or more. Wet or undried wood will cause the fire to smolder and produce large amounts of creosote. Wet wood also produces very little heat and tends to go out often.

### DO NOT BURN:

- Salt water wood \*
- Wet or green wood
- Garbage\*
- Lawn clippings/yard waste
- Railroad ties
- Materials containing rubber, including tires
- Materials containing asbestos
- Paper products, cardboard, plywood, or particleboard.
- Waste petroleum products, paints or paint thinners, or asphalt products
- Treated wood
- Coal/charcoal
- Solvents
- Unseasoned wood
- Manure or animal remains
- Materials containing plastic
- Construction or demolition debris

**\* These materials contain chlorides which will rapidly destroy metal surfaces and void warranty.**

Burning these materials may result in the release of toxic fumes or render the heater ineffective and cause smoke.

The prohibition against burning these materials does not prohibit the use of fire starters made from paper, cardboard, saw dust, wax and similar substances for the purpose of starting a fire in an affected wood heater.

Do not burn anything but wood. Other fuel, e.g. charcoal, can produce large amounts of carbon monoxide, a tasteless, odorless gas that can kill. Under no circumstances should you attempt to barbecue in this heater.

## How to Test Your Wood

Add a large piece of wood to the stove when it has a good large bed of coals. It is dry if it is burning on more than one side within one minute. It is damp if it turns black and lights within three minutes. If it sizzles, hisses and blackens without igniting in five minutes it is soaked and should not be burnt.

**WARNING: Do not use grates or andirons to elevate the fuel. Burn directly on the firebricks. Replace broken or missing bricks. Failure to do so may create a hazardous condition.**

Your PACIFIC ENERGY heater is designed for many years of trouble free operation. Over firing the appliance will shorten the life of the product. Failure to rectify an over firing condition can be hazardous and may void the manufacturer's warranty.

## Lighting the Fire

**WARNING: Never use chemicals or any other volatile liquid to start a fire.**

1. Adjust air control to “High” position (all the way to the left) and open door.
2. Place crumpled newspaper in the center of the heater and criss-cross with several pieces of dry kindling. Add a few small pieces of dry wood on top.
3. Ignite the paper and leave the door ajar approximately 1/2”(13mm) - 1”(25mm) until the wood kindling is fully engulfed in flame.
4. After the kindling is fully engulfed add a few small logs. Close door.
5. Begin normal operation after a good coal base exists and wood has charred.

## Curing of the Paint Finish

When burning your stove for the first 2-3 times it is very important that the room be well ventilated. Open all windows and doors. Smoke and fumes caused by the curing process may cause discomfort to some individuals.

## Normal Operation

**WARNING: This wood heater has a manufacturer set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with the operating instructions in this manual.**

1. Set air control to desired setting. If smoke pours down across the glass (waterfall effect), this indicates you have shut the control down too soon or you are using too low a setting. As every home’s heating needs vary (i.e. insulation, windows, climate, etc.), the proper setting can only be found by trial and error and should be noted for future burns.
2. To refuel, adjust air control to “High” position (all the way to the left), and give the fire time to brighten. Open door slowly, this will prevent back-puffing.
3. Use wood of different shape, diameter and length (recommended 16”). Load your wood and try to place the logs so that air can flow between them. Always use dry wood.
4. Do not load fuel to a height or in such a manner that would be hazardous when opening the door.
5. For extended or overnight burns, unsplit logs are preferred. Remember to char the wood completely on “High” setting before adjusting air control for overnight burn.

**WARNING: Always keep loading door closed when burning. This heater is not designed for open door burning.**

## Restarting After Extended or Overnight Burns

1. Open door and rake hot embers towards the front of the heater. Add a couple of dry, split logs on top of embers, close door.
2. Adjust air control to “High” position (all the way to the left) and in just a few minutes, logs should begin burning.
3. After wood has charred, reset air control to desired setting.
4. When burning at a slow rate for extended periods, occasionally maintain a strong fire under supervision for a couple of hours to remove firebox and chimney of deposits as well as any of the deposits on the glass.

**WARNING: This method is not a substitute for regular chimney inspections and cleaning.**

5. To achieve maximum firing rate, set control to “High” position(all the way to the left). Do not use this setting other than for starting or preheating fresh fuel loads.

**DO NOT OVER-FIRE THIS HEATER: Attempts to achieve heat output rates that exceed heater design specifications can result in permanent damage to the heater and chimney.**

**WARNING: No alteration or modification of the combustion air control assembly is permitted. Any tampering will void warranty and could be very hazardous.**

## Over Firing

Over firing can be caused by operating the unit with the door open, damage to door gaskets allowing excess air to enter the firebox, the use of kiln dried lumber, mill ends or paper waste and prolonged or continual use on a high burn setting.

## Heat Output Calculation

Seasoned wood has approximately 7500 BTU’s per pound. The calculation is as follows:

$$\frac{\text{Amount of wood in lbs. X 7500BTU's}}{\text{Burn rate in Hrs.}} \text{ X .8(80\% Avg. Efficiency)}$$

Experience will give you the right settings for proper combustion and efficient burning. Remember the correct air inlet setting is affected by variables such as type of wood, outside temperature, chimney size and weather conditions. With practice, you will become proficient in operating your heater and will obtain the performance for which it was designed.

## Proper Draft

1. Draft is the force which moves air from the appliance up through the chimney. The amount of draft in your chimney depends on the length of the chimney, local geography, nearby obstructions and other factors.
2. Too much draft may cause excessive temperatures in the appliance. An uncontrollable burn or a glowing red stove part or chimney indicates excessive draft.
3. Inadequate draft may cause back-puffing into the room and plugging of the chimney. Smoke leaking into the room through appliance and chimney connector joints indicates inadequate draft.

## Ash Removal

Whenever ashes get 3 to 4 inches deep in your firebox, and when fire has burned down and cooled, remove excess ashes. Leave an ash bed approximately 1 inch deep on the firebox bottom to help maintain a hot charcoal bed.

## Disposal of Ashes

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Other waste should not be placed in this container!

# Maintenance

1. Burn wood only, dry and well seasoned. The denser or heavier the wood when dry, the greater its heat value. This is why hardwoods are generally preferred. Green or wet wood will cause a rapid buildup of creosote. If you feel it is necessary to burn wet or unseasoned wood, do so only with the air inlet set open enough to maintain a good strong fire and fairly high chimney temperatures. Do not attempt to burn overnight using green or wet wood. Wet wood can cause up to 25% drop in heater output, as well as contributing significantly to creosote buildup.

**WARNING: Never use chemicals or any other volatile liquid to start a fire. Do not burn garbage, or flammable fluids such as gasoline, naphtha, or engine oil. We strongly recommend that smoke detectors be installed.**

2. Remove ashes frequently. Embers can roll out the door and create a fire hazard. Maintain a 1" minimum ash base.

3. If glass becomes darkened through slow burning or poor wood, it can readily be cleaned with any fire-place glass cleaner when stove is cold. Never scrape with an object that might scratch the glass. The type and amount of deposit on the glass is a good indication of flue pipe and chimney buildup. A light brown dusty deposit that is easily wiped off usually indicates good combustion and dry, well-seasoned wood and therefore relatively clean pipes and chimney. On the other hand, a black, greasy deposit that is difficult to remove is a result of wet and green wood and too slow a burning rate. This heavy deposit is building up at least as quickly in the chimney.

**WARNING: Only use materials supplied by the manufacturer when doing maintenance or replacements.**

4. DOOR GASKET - The gasket used by Pacific Energy (7/8" medium density fiberglass rope) requires only light pressure to seal. This will prolong seal life. It is important that the door seal be maintained in good condition. Periodically inspect seals and replace if necessary. Follow instructions included in the WODC. DG78 kit obtainable from your nearest Pacific Energy Dealer.

5. DOOR GLASS - Do not slam loading door or otherwise impact glass. When closing door, make sure that no logs protrude to impact the glass. If the glass gets cracked or broken, it must be replaced before using the stove. Replacement glass can be obtained from your Dealer. The size required is 16-1/2" x 10-1/2" x 5 mm. Only ceramic glass may be used. **Do not substitute with any other type.**

To remove broken glass, remove the door gasket and then undo the eight screws securing the gasket guide/glass retainer. Remove all particles of glass. Be careful as they are very sharp. Install new glass complete with gasket. Replace glass retainers and gasket guides then install new door gasket as per instructions provided with the door gasket kit.

**WARNING: Do not over-tighten, tighten screws very carefully.**

- Do not clean glass when hot
- Do not use abrasive cleaners on glass

6. Do not store wood within heater installation clearances, or within the space required for fuel loading and ash removal. Keep the area around the heater clean and free of all loose combustibles, furniture, newspapers, etc.

7. Establish a routine for the fuel, wood burning and firing technique. Check daily for creosote buildup until experience shows how often you need to be cleaning to be safe.
8. Be aware that the hotter the fire, the less creosote is deposited. Weekly cleaning may be necessary in mild weather, even though monthly cleaning is usually enough in the coldest months when burning rates are higher.
9. Instruct all members of your family on the safe operation of the heater. Ensure they have enough knowledge of the entire system if they are expected to operate it. Stress the section on chimney fires and the importance of following the steps outlined in "In Case of Chimney Fire".

## **Blower Maintenance**

The blower requires occasional cleaning to prevent buildup of dust and hair. More frequent cleaning may be required if conditions are dusty or pets are present. This service is best performed by a qualified service technician.

## **Baffle Removal**

The baffle may be removed from the firebox to clean and inspect the chimney liner.

**DO NOT OPERATE WITH BAFFLE OR INSULATION REMOVED.**

### **Removal**

Remove retaining pin at the back top of the firebox, just under the baffle. Lift baffle up and pull forward to disconnect from the supply tube. Tilt baffle sideways and slide to one side to drop down and remove from firebox. Reinstall baffle assembly by reversing order.

### **WARNING:**

Sweep/Clean chimney with baffle installed or be sure to plug the top of the baffle tube in the back of the firebox before sweeping or cleaning. Failure to prevent ash or soot from falling into the baffle tube will cause incorrect operation and will lead to premature burn out of the tube or baffle.

## Blower Replacement

1. Remove the surround front by lifting and pulling away from the unit. Remove the four screws securing the back surround to the brackets and set them aside carefully to avoid damage.
2. Remove the surround mounting bracket by removing the two screws securing the bracket to the side casing of the unit (Figure 5) (may require the unit to be pulled out slightly).
3. With a 3/8" wrench, loosen the two bolts (Figure 6) securing the blower mounting bracket to the unit.
4. Disconnect the two wires leading to the blower motor.
5. Pull the blower mounting bracket bottom out first and then lift the blower up and back to remove from the bolts. If replacing the right side blower, then disconnect the two wires leading to the themoswitch at this time as well.
6. Remove the three screws securing the blower to the mounting bracket and replace the blower (Figure 7).
7. Reverse all previous steps to reinstall the new blower.

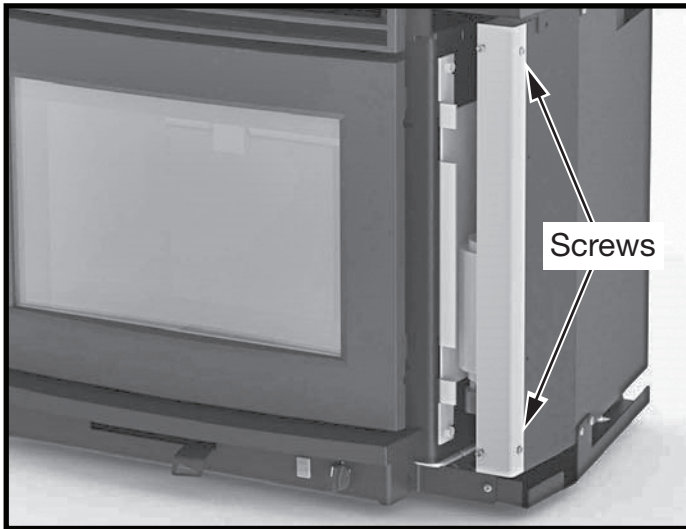


Figure 5: Surround mounting bracket screws.

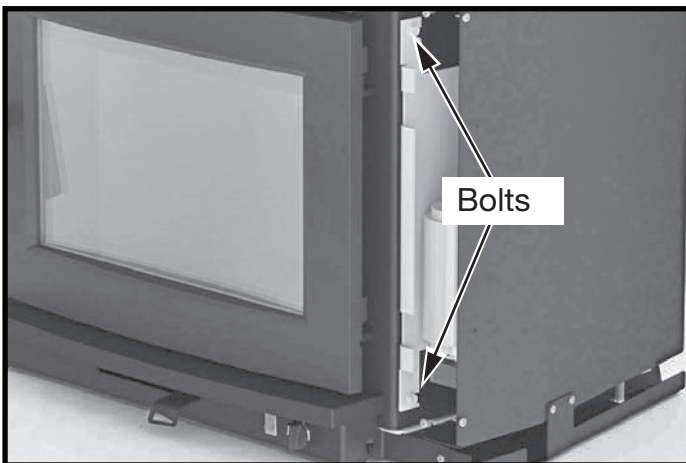


Figure 6: Blower mounting bracket.

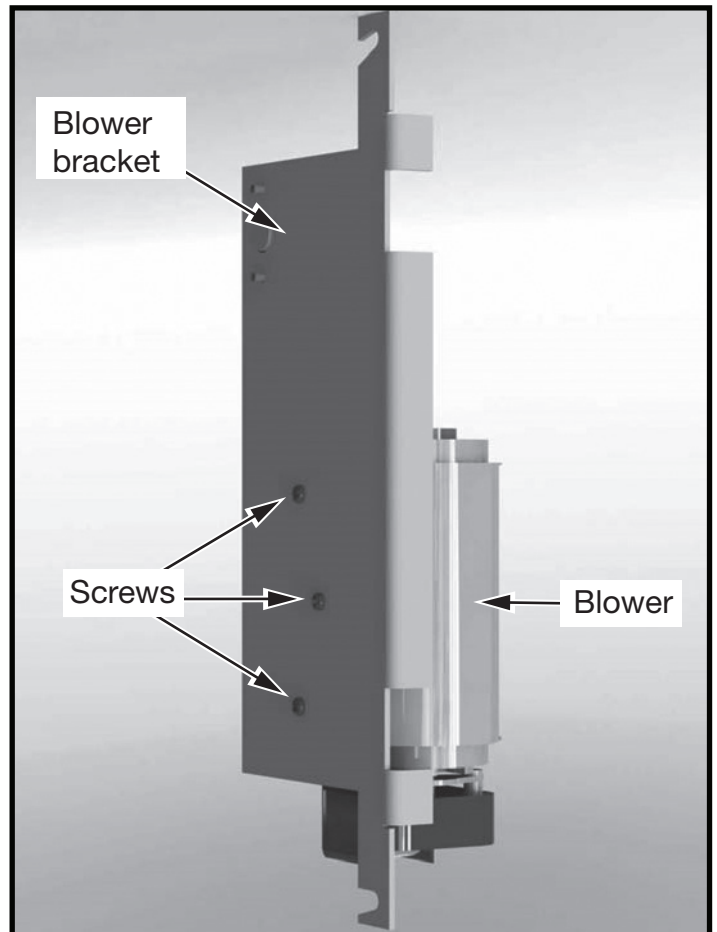


Figure 7: Blower and mounting bracket.

## Power Cord Position

The power cord for the NEO 1.6 Insert comes factory set to exit the right side of the unit. If you desire, the cord can be switched to exit to the left of the unit. The cord will lose approximately 12" of length when exiting the left side of the unit.

Follow these instructions to switch the cord direction.

1. Remove the two screws securing the control assembly to the unit and then disconnect the wires leading to the right side blower (Figure 8).
2. Remove the power cord from the slot in the right side end of the control assembly (Figure 9).
3. Remove the two screws securing the backing plate with the strain relief in it and rotate 180 degrees.
4. Engage the power cord in the slot on the left side end of the control assembly.
5. Reconnect the wires to the right side blower and reinstall the control assembly on the unit.

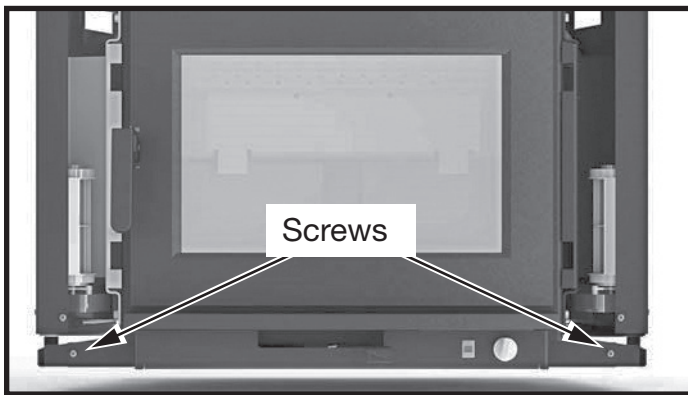


Figure 8: Control assembly screws.

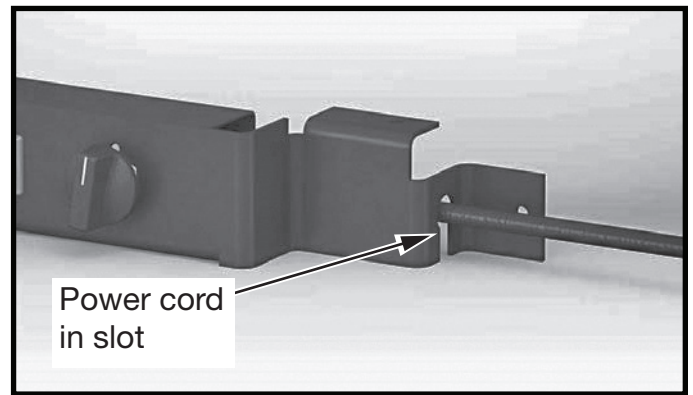


Figure 9: Control assembly.

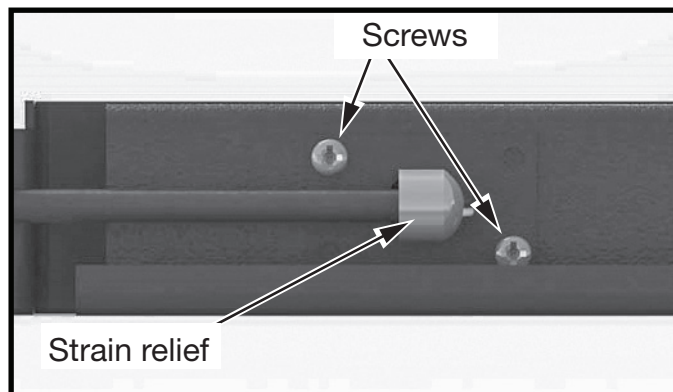


Figure 10: Cord strain relief.

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# Maintenance Checks

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Check the following parts for damage such as cracks, excessive corrosion, burned out sections and excessive warping: (See website for descriptions and more detail)

## Weekly:

- Firebrick - Visual, for cracking.
- Door Gasket - sagging, placement, damage.

## Monthly

- Rear brick rail and side brick rails.
- Air riser tube in the back of the firebox.
- Back side of airwash chamber.
- Baffle locking pin.
- Boost tube cover.

## When Cleaning the Chimney System:

- Top baffle board/blanket.
- Baffle.
- Brick Rails.
- Manifold.

## Blower:

- The blowers should be cleaned out a minimum every six months by using a vacuum on the blower intake openings to remove any dust and debris. See “Blower Replacement” section on page 13 for instructions on how to access the blowers.
- Some warping of the baffle is normal(up to 1/4” or .65cm).
- Replace if the baffle has permanent warping greater than this or has cracking or breakage.
- Please contact your Dealer if you experience any of the damage listed above. Continuing to operate your stove with broken parts may accelerate damage to other parts and may void your warranty

# Installation

Your Insert is designed to be installed into an approved masonry or factory built zero-clearance fireplace. The masonry fireplace must be built according to the requirements of the **Standard of Chimneys, Fireplaces, Vents and Solid Fuel Burning appliances, N.F.P.A. 211** (Latest Edition) or applicable National, Provincial, State or local codes. The installation shall conform to **CAN/CSA-B365, Installation Code for Solid-Fuel-Burning Appliances and Equipment**. The factory built zero-clearance fireplace and its chimney must be listed per UL 127 or ULC S610 standards.

In Canada: This fireplace insert must be installed with a continuous chimney liner of 5 1/2" (140mm) to 6" (150mm) diameter extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or, CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys.

Use a minimum .016" thick or 27GA Stainless steel liner.

**Warning:** Under no circumstances is this heater to be installed in a makeshift or "temporary" manner.

**DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.**

## Fireplace Specifications

Your fireplace is required to have the following minimum sizes:

WIDTH	30" (762 mm)
HEIGHT	20" (508 mm)
DEPTH	16 1/4" (413 mm)

Chimney height 15'(4.5m) (minimum).

**A metal tag is provided and is to be fastened to the back wall of the fireplace, if the fireplace has been modified to accommodate the insert.**

## Into a Masonry Fireplace

Inspect your fireplace for cracks, loose mortar or other physical defects. If repairs are required, they should be completed before installing your insert.

The fireplace chimney must be suitable for wood burning use. Check for creosote build up or other obstructions, especially if it has not been in use for some time.

The existing fireplace damper is to be locked open or removed completely. Have the chimney cleaned to prevent odors and possible fires.

**NOTE:** This unit is designed to be installed on a flush hearth. If you hearth material is raised above the surface of the fireplace, you will need to install and adjust the leveling bolts under the front and rear of the unit to keep it flush with your hearth material. This will ensure the weight of the unit does not rest on the control assembly beneath the ashlip.

**WARNING:** Do not remove bricks or mortar from your existing fireplace.

## **Exception:**

Masonry or steel, including the damper plate, may be removed from the smoke shelf and adjacent damper frame if necessary to accommodate a chimney liner, provided that their removal will not weaken the structure of the fireplace and chimney, and will not reduce protection for combustible materials to less than that required by the National Building Code. The Insert must be installed in accordance with local and or national building codes. The two methods of flue connection that are acceptable in most areas are:

## **Full Flue Liner:**

where a listed stainless steel rigid or flexible liner extends from the Insert flue collar to the top of the chimney.

## **Direct Flue Connection:**

Where a listed stainless steel rigid or flexible liner extends from the Insert flue collar to the first chimney flue liner. A seal must be provided in the throat. Note: A clean-out door may be required under local codes, when a direct flue connection is used. Consult local codes.

**Pacific Energy highly recommends the use of a full liner as the safest installation and providing optimum performance. When connected to a full liner, the Insert is able to draft correctly and will prevent problems such as difficult start-ups and smoking out the door.**

**Consult your local Dealer about codes and installation.**

## **Full Flue Liner - (Required in Canada)**

1. Measure the chimney height from the top of the existing flue to the floor of the hearth. This will allow extra length of liner for flashing and rain cap.
2. Feed the stainless steel liner from top of the chimney, through the damper area and into the fireplace cavity.
3. Attach a stove connector to the bottom of the liner. Attach the NEO 1.6 Insert removable flue collar to the chimney connector.

**Note:** To get access to the connector and removable flue collar through the flue outlet of the Insert, the baffle must be removed (see Baffle Removal section page 8).

4. Push the Insert into position inside the fireplace and attach the flue collar to the opening in the top of the insert firebox. Use the rear adjusting legs to level the Insert.
5. Measure, trim and shape a top flashing to fit the existing chimney flue. Plan for a 1" to 1-1/2" overlap on each side. Place flashing over top of the liner and seat firmly against the tile.
6. Screw flashing collar to liner. Caulk gap around flashing with RTV silicone.
7. Attach a rain cap to the end of the liner. A storm collar may be used if desired.

## Direct Flue Connection - (USA only)

1. Measure from the first chimney flue liner to the top of the Insert. Allow extra length of liner to insert into flue tile.
2. Feed the stainless steel liner through the damper area and into the first chimney flue tile. Seal around pipe to the chimney.

**Note:** A clean-out door may be required under local codes, when a direct flue connection is used. Consult local codes.

**Note:** It is necessary to get access to the removable collar through the flue outlet of the Insert, the baffle should be removed, see “Baffle Removal” on page 14.

3. Attach the removable flue collar to the end of the chimney liner with three stainless steel screws. Push the Insert into position inside the fireplace.
4. Reach up through the flue opening in the firebox and pull the removable flue collar down with the tool provided and center on the hole.
5. While holding in place attach the clamps and tighten finger tight to hold the collar in place. Tighten securely with a 1/2” wrench or socket. Use the rear adjusting legs to level the insert.

## Direct flue connection

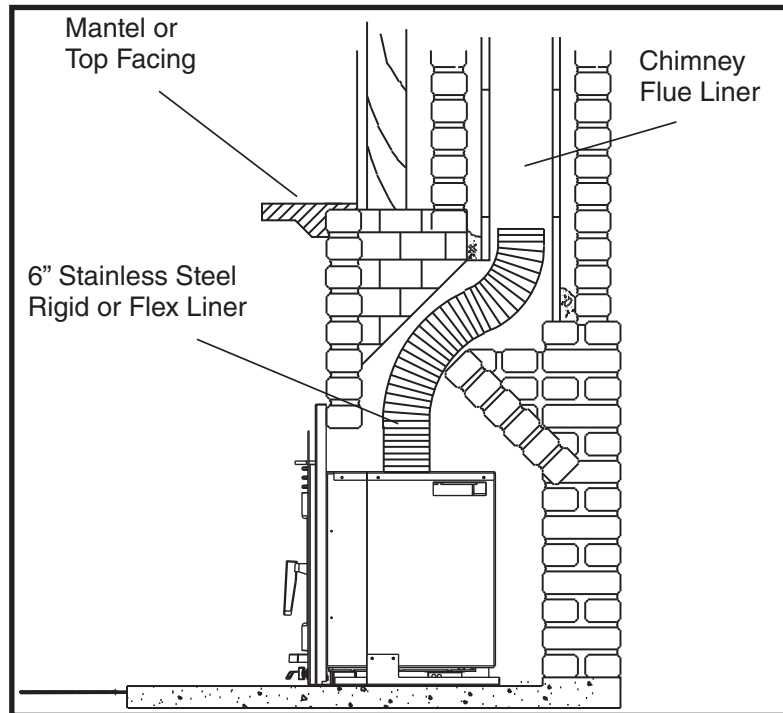


Figure 11: Direct flue connection.

## Into a Factory Built Fireplace

Your Insert may be installed into a factory built fireplace (size permitting) with the following requirements:

1. Inspect your fireplace for damage or other physical defects. The fireplace must be in good working condition. If in doubt about its condition, seek professional advice. Check for creosote build up or other obstructions inside the chimney, especially if it has not been in use for some time. Before installing, clean your chimney system thoroughly.
2. A full stainless steel rigid or flexible flue liner meeting type HT requirements (2100°F) per 1777 (U.S.) or ULC S635 (Canada) must be used for both safety and performance. The liner must be securely attached to the Insert flue collar and the chimney top.
3. The surround must be sealed to the fireplace front or the damper area around the chimney liner must be sealed to prevent room air entering the chimney cavity of the fireplace.
4. The air flow within and around the fireplace must not be altered by the installation of the Insert (i.e. no blockage of louvers or cooling air inlet or outlet ports). This includes the circulating air chambers in a steel fireplace or metal heat circulator.
5. Alteration of the fireplace in any manner is not permitted with the following exceptions:
  - a: external trim pieces which do not affect the operation of the fireplace may be removed and stored on or within the fireplace for reassembly if the Insert is removed.
  - b: the chimney damper may be removed to install the liner.

## Combustion Air

Consult local building codes regarding combustion air supply. Intake or combustion air can be supplied to the Insert in one of two ways:

1. Outside air supply: Remove cover from ash clean out in existing fireplace. Place a rodent screen in place of the cover. Install the Insert as described in the “Installation” section, making sure not to cover the opening of the air inlet. When installation is complete, seal the back surround to fireplace. This will ensure combustion air is drawn from outside the house and under the unit.
2. Room air supply: The unit must have adequate air for combustion provided in the room the unit is installed in. This may involve providing make up air from outside the house.

## Surround Assembly and Installation

1. Attach the surround back to the surround mounting brackets on the unit with the four screws provided (Figure 12).
2. Push the entire appliance back until the surround assembly is in contact with the fireplace.
3. Attach the front surround by inserting the surround hooks into the slots in the front surround mounting bracket, between the blower bracket and the firebox, on both sides and sliding down to engage the hooks onto the brackets (Figure 8).

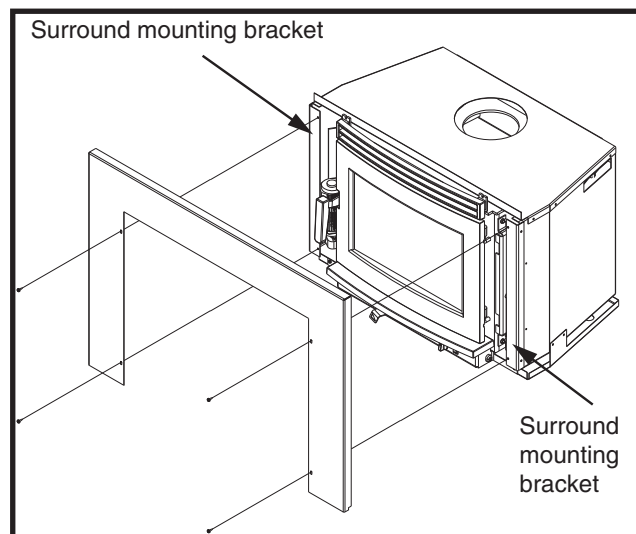


Figure 12: Surround mounting brackets.

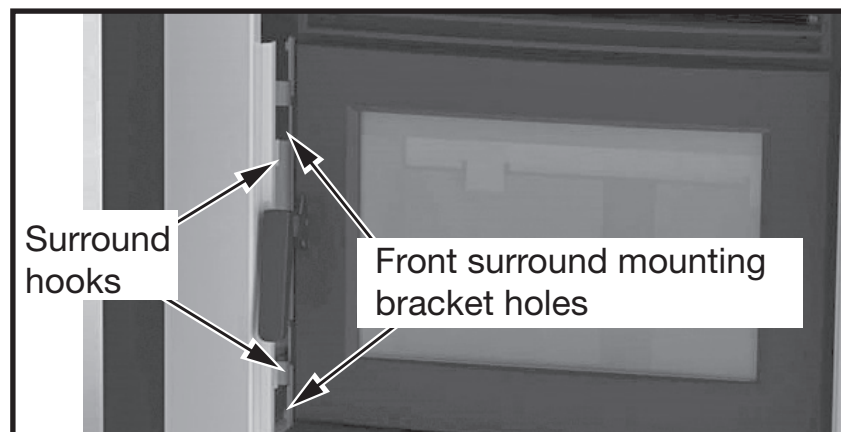


Figure 13: Mounting the surround.

# Blower

The Insert comes equipped with variable speed circulating air blowers. The blower system is thermostatically controlled for automatic operation, as well manually with a convenient bypass switch.

## Blower Operation

**Automatic:** To operate the blower automatically, push the rocker switch to the “0” or AUTO position and set the fan speed control to a desired setting. This will allow the blower to turn on automatically once the Insert has come up to operating temperature. It will also shut the blower off after the fire has gone out and the appliance cooled to below a useful heat output range. On and Off times will vary with installation and location of appliance.

**Manual:** To manually operate the blower, push the rocker switch to the “1” or MANUAL position and set the fan speed control to a desired setting. This will bypass the temperature switch and allow full control of the blower.

Suggested settings:

- Combustion air control setting of “Low”(all the way to the right), operate blower speed control on “Low”.
- Combustion air control greater than “Low”, operate blower speed control at desired setting.

## Electrical Supply

Circulating air blower electrical rating: 115V, 60 Hz.

For your protection against shock hazard, use only a properly grounded outlet that will accept a three-pronged plug. Do not cut or remove the grounding prong.

Consult local codes or in the absence of local codes, with the current CSA C22.1 Canadian Electrical Code and in the USA with the National Electrical Code, ANSI/NFPA 70 (latest edition).

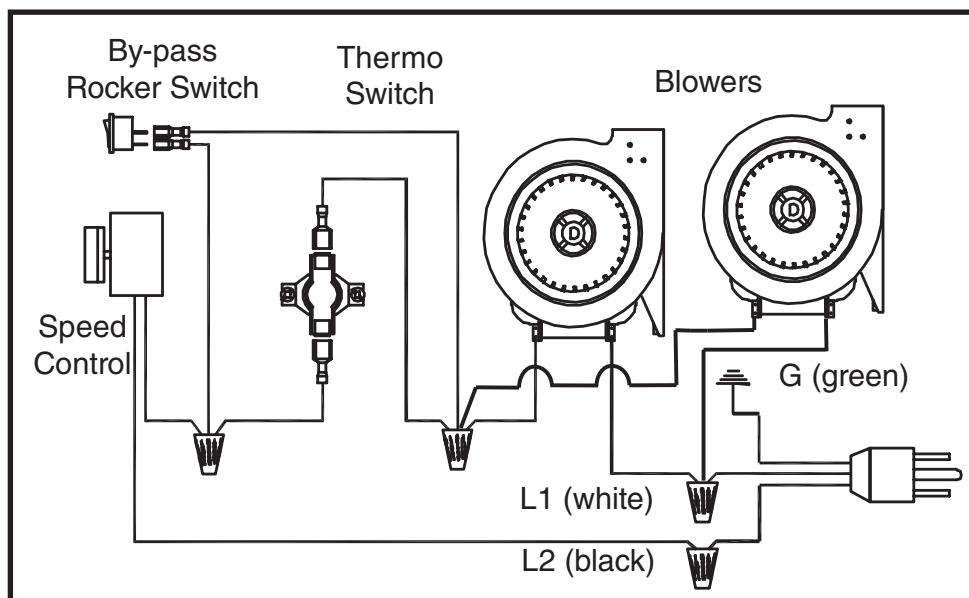


Figure 14: Blower wiring.

# Troubleshooting

<b>Problem</b>	<b>Cause</b>	<b>Cure</b>
<b>Excessive Creosote Build-up</b>	<ol style="list-style-type: none"><li>1) Wood is too wet</li><li>2) Turning down air control too soon</li><li>3) Draft too low</li></ol>	<ul style="list-style-type: none"><li>- Use dry wood(recommended moisture level &lt;20%)</li><li>- Do not turn down until:<ol style="list-style-type: none"><li>a) there is a good bed of coals</li><li>b) the wood is charred</li></ol></li><li>- Chimney plugged or restricted, check flue</li><li>- Improper chimney height and/or diameter</li><li>- Provide outside air for combustion</li><li>- Check draft in chimney and system, alter as needed.</li></ul>
<b>Glass is Dirty</b>	<ol style="list-style-type: none"><li>1) See 1, 2, and 3 above</li><li>2) Door Gasket leakage</li></ol>	<ul style="list-style-type: none"><li>- Replace gasket</li><li>- Check door latch</li></ul>
<b>Low Heat Output</b>	<ol style="list-style-type: none"><li>1) Wood may be wet</li><li>2) Fire too small</li></ol>	<ul style="list-style-type: none"><li>- Check wood and use drier wood if required.</li><li>- Build a larger fire</li><li>- Open draft control to increase burn rate.</li></ul>
<b>Won't Burn Overnight</b>	<ol style="list-style-type: none"><li>1) Air control set too high</li><li>2) Not enough wood</li></ol>	<ul style="list-style-type: none"><li>- Set control lower</li><li>- Unsplit wood is preferred for overnight burns</li></ul>
<b>Stove Won't Burn</b>	<ol style="list-style-type: none"><li>1) Combustion air supply is blocked</li><li>2) Draft too low</li></ol>	<ul style="list-style-type: none"><li>- Check outside air supply for obstructions (see Combustion Air section)</li><li>- Chimney plugged or restricted Inspect and clean</li><li>- Chimney oversized or otherwise unsuitable Consult Dealer</li></ul>

# Neo 1.6 Firebricks

This package contains 14 full-size firebricks.  
For installation instructions, see.....

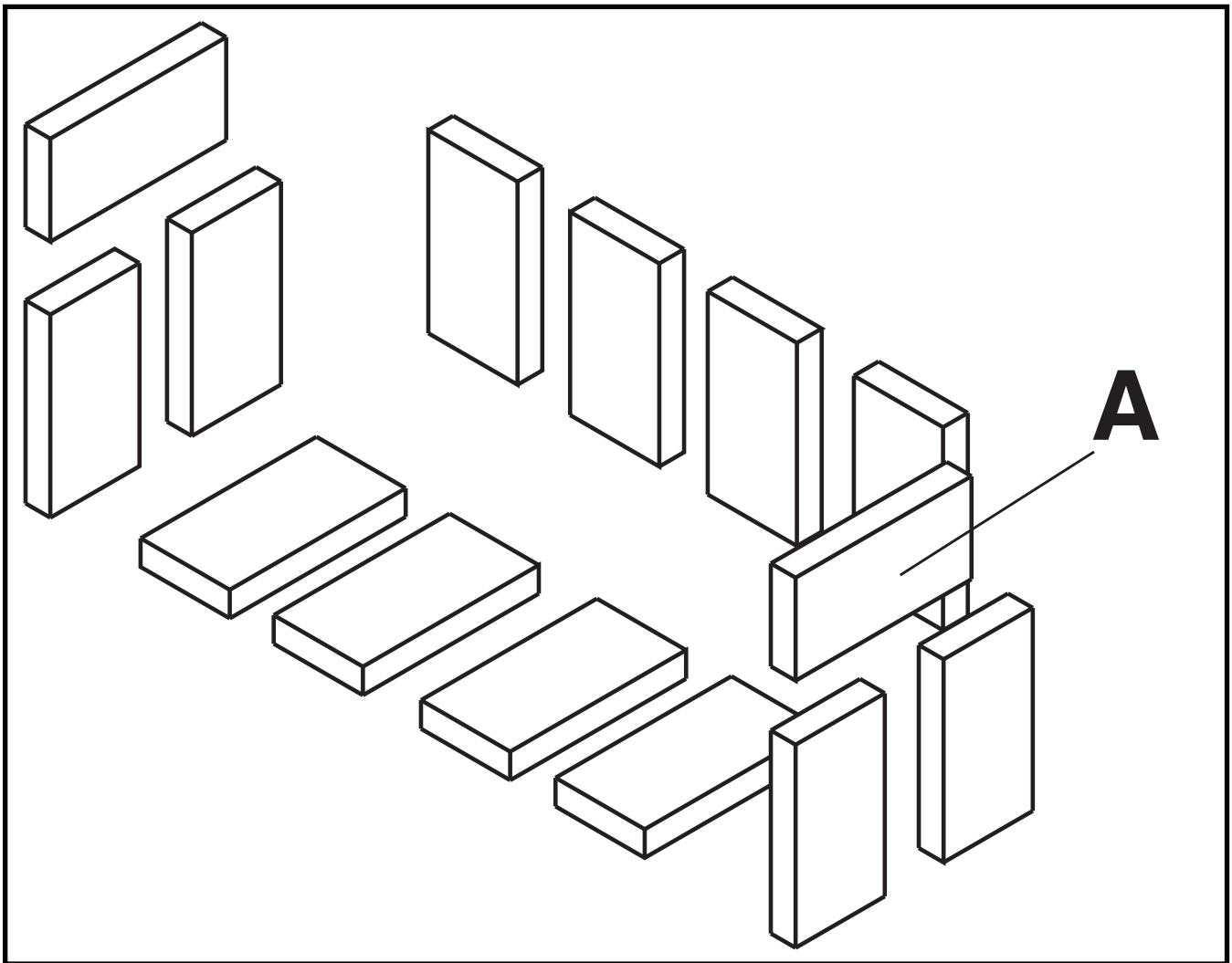


Figure 15: Neo 1.6 Insert Firebricks.

ITEM	SIZE	PART NUMBER
A	9" X 4 1/2" X 1 1/4" (230 mm x 115 mm x 32 mm)	5096.99

## Firebrick Installation Instructions



Figure 16: Empty firebox.

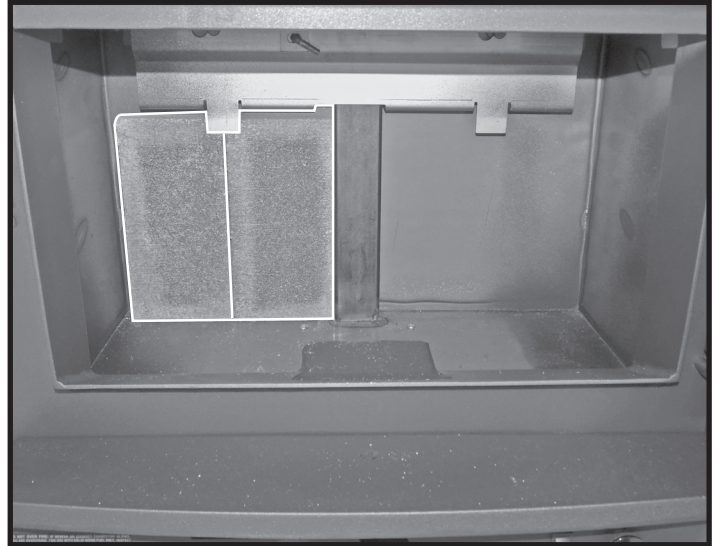


Figure 17: Insert rear bricks first.

1. With the firebox empty, insert the rear wall bricks first (Figure 17). Insert the bricks up in behind the tabs and then push the bricks toward the center post so that there is no gap showing between the bricks and the post (Figure 18).
2. For the bricks on the sides, turn one brick so that it is horizontal. Lift it up so that it makes contact with the firebox ceiling (Figure 19). Hold it in place while next installing one of the two other side bricks vertically.

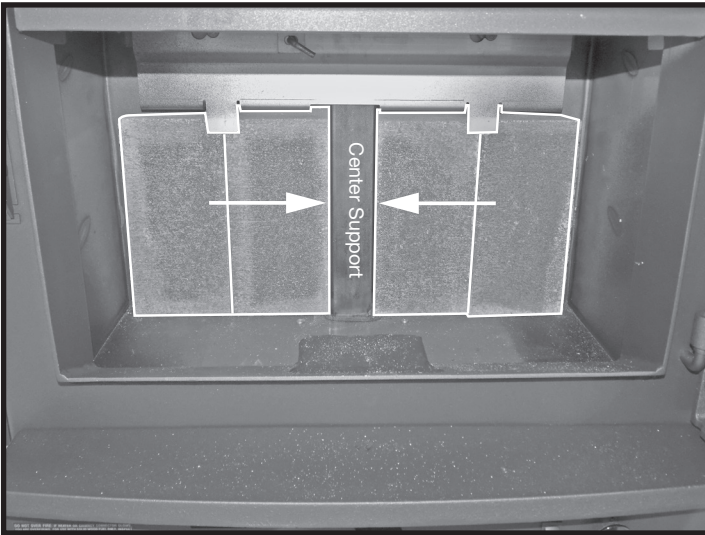


Figure 18: Rear bricks in place.

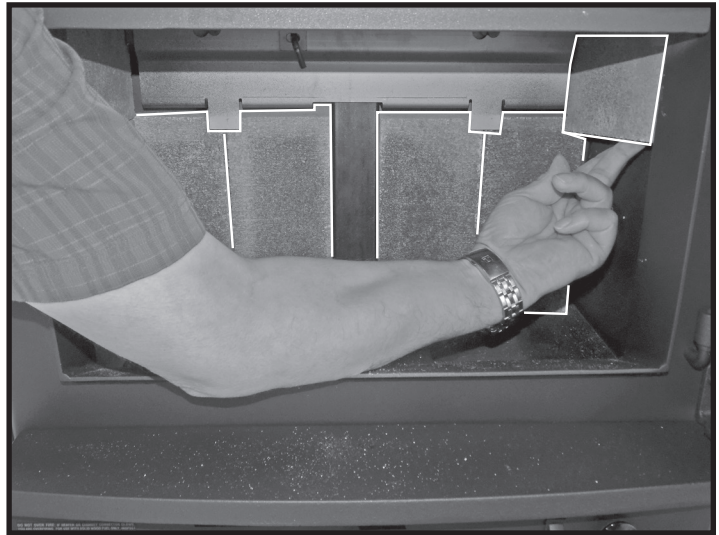


Figure 19: Upper side brick position.

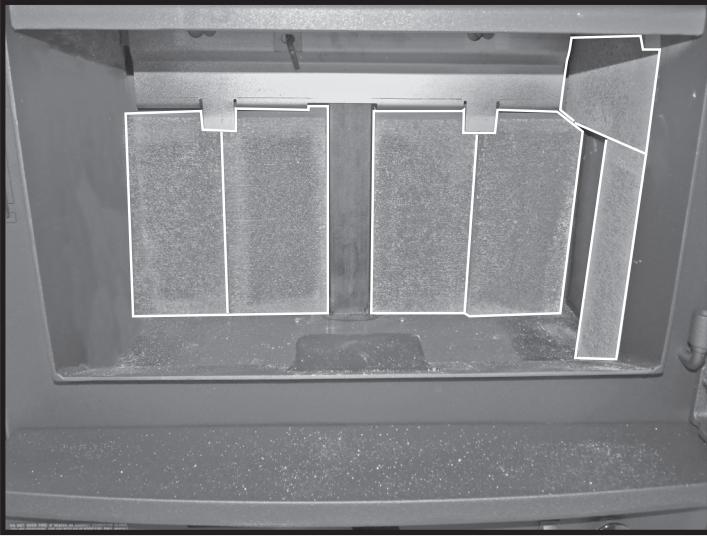


Figure 20: Lower side brick in position.

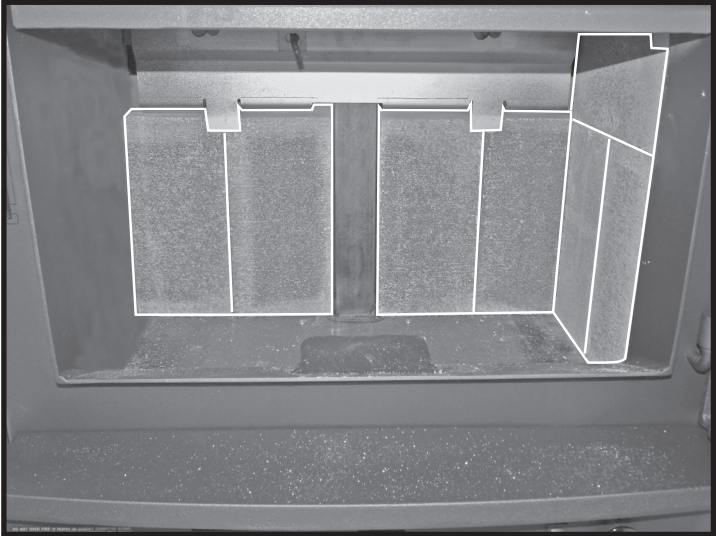


Figure 21: Side firebrick insertion complete.

3. Once the side bricks (on both sides of the firebox) are installed, push the two horizontal top bricks toward the rear wall of the firebox. This will eliminate any gaps in the corners of the firebox.
4. Lay the remaining four bricks on the floor to finish the installation.

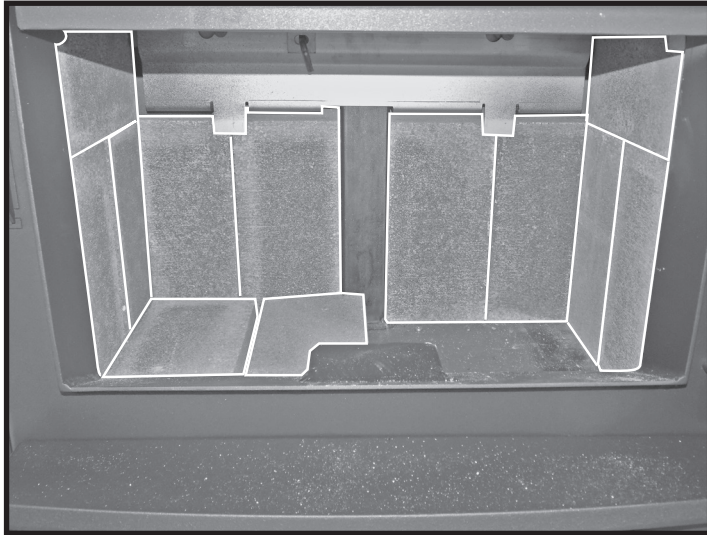


Figure 22: Floor firebrick insertion.

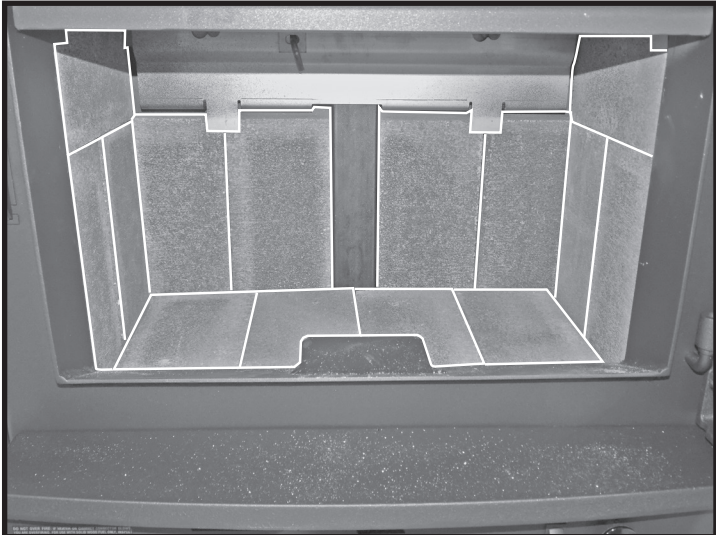


Figure 23: Firebrick installation complete.

# Replacement Parts

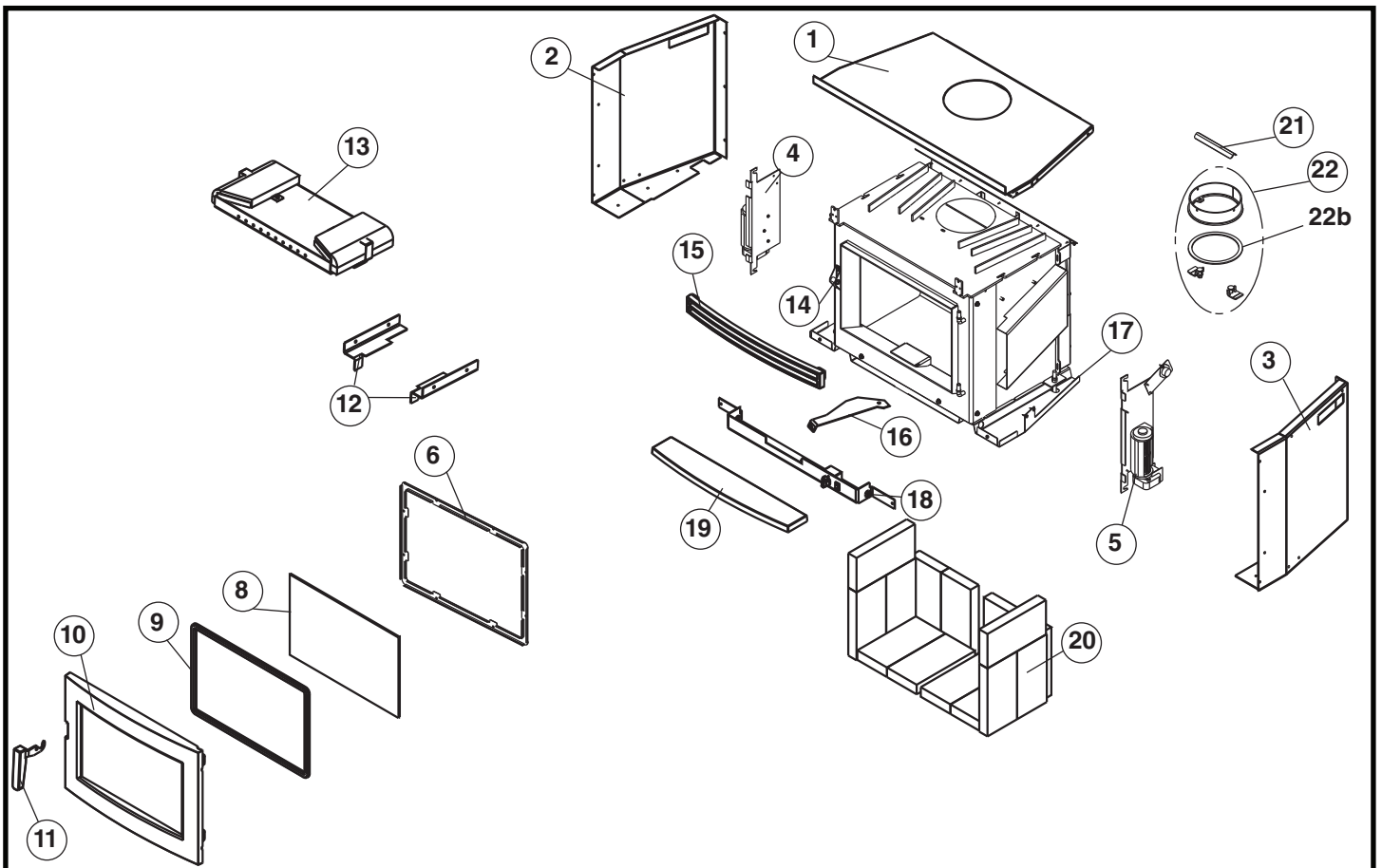
## ITEM DESCRIPTION

## PART NO.

1	Top Casing.....	7834
2	Side Casing, LHS .....	7841.2
3	Side Casing, RHS.....	7841.5
4	Blower Assembly, LHS .....	NE16.78445
5	Blower Assembly, RHS.....	NE16.7844
6	Gasket Guide/Glass Retainer .....	NE16.7818
8	Door Glass, c/w gasket .....	NE16.5034700
9	Door Gasket .....	WODC.NEODGKIT
10	Door Casting, Black .....	5037.700
11	Door Handle Assembly.....	NE16.7817
12	Brick Rail Set.....	NE16.INSRAILSET
13	Baffle .....	NE16.BAFKIT
14	Door Catch Assembly.....	NE16.7825
15	Outlet Grill.....	NE16.5037702
16	Air Shutter Assembly.....	NE16.7826
17	Casing Bottom.....	7846
18	Secondary Air Control Assembly.....	NE16.7833
19	Ashlip.....	NE16.5037701
20	Brick set.....	NE16.INSBRIC
21	Flue Collar Handle .....	NE16.78065
22	Removable Flue Collar w/clamps and gasket.....	WODC.7806
22b	Flue Collar Gasket.....	5067.750

thermoswitch 5027.171

Parts can be obtained from your local Pacific Energy dealer using these part numbers.



# Warranty Information

## Pacific Energy Limited Lifetime Warranty Wood Products

Pacific Energy extends the following warranty coverage to the original registered purchaser of the product:

### 3 Year Comprehensive

Pacific Energy will replace or repair any part found to be defective (parts and labor) for three years from the date of purchase. This coverage includes electrical components (blowers, speed controls and thermal switches).

### Conditions

**Your stove has been designed to perform in the harshest climates in North America. You can be confident that under normal use your stove will be trouble free for many years. If your stove is prematurely deteriorating this is a significant indicator of improper usage, for example; excessive draft, heating to large an area, contaminated fuel - such as high sodium content or plastics and chemicals. Please be aware, these conditions may be reasons to void your warranty.**

### For wood products

All installations must be installed according to all applicable local and national codes. It is the responsibility of the installer to ensure the unit is operating correctly at installation. Any part that shows in our judgment evidence of defect shall be repaired, replaced or refunded at Pacific Energy's option. The defective part may be required to be returned to Pacific Energy or an accredited agent, transportation prepaid.

### Porcelain

Is warranted for gloss retention. Certain colors may darken when heated and return to the original shade when cool.

### Glass

is warranted against thermal breakage.

### Plating

is warranted against tarnishing. Gold plating may attain a deeper color with use.

### Exclusions

Limited Lifetime coverage - Lifetime coverage is limited to the repair, replacement or refund of the indicated parts only. Labor charges are not covered under the lifetime warranty.

The following items are not included in the Lifetime Warranty: firebox rails and heat shields.

The following parts are not warranted: firebrick, gaskets and ceramic fiber blankets.

This warranty does not apply to any part that shows evidence of misuse, abuse, improper installation, accident, lack of maintenance, or modification.

Pacific Energy shall in no event be liable for any special, indirect or consequential damages of any nature whatsoever which are in excess of the original purchase price of the product.

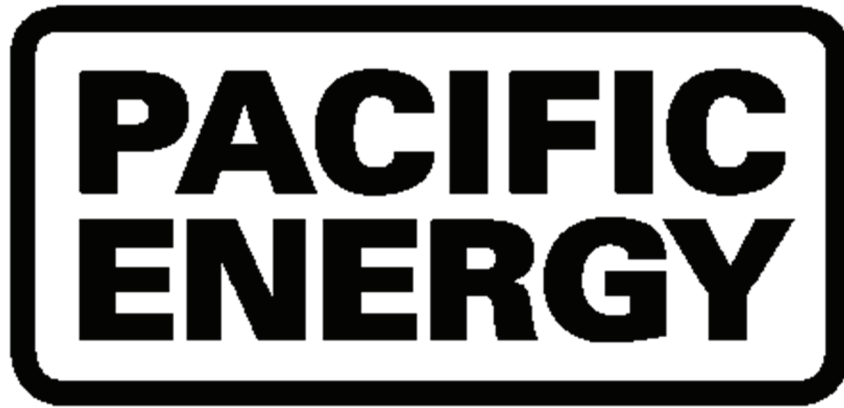
Pacific Energy is not responsible for installation, operational or environmental conditions beyond our control. (The company may, at its discretion, discharge all obligations by refunding the wholesale price of the defective part.)

**For Warranty claims, please contact your nearest Pacific Energy dealer.**





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