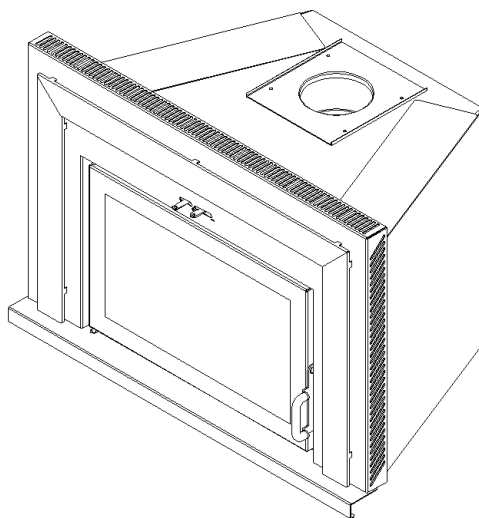




# FUSION 18

## Owner's Manual



Model Number: **18FN**

This product is proudly manufactured in North America by **SUPREME FIREPLACES INC.**

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**IMPORTANT: Keep the owner's manual for future use.**

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# 1 SAFETY

SUPREME FIREPLACES INC. congratulates you on purchasing a FUSION 18 wood burning fireplace insert. This insert complies with the ULC S628 and UL 1482 standards. In addition, this wood insert is certified to comply with Phase II particulate emission standards from the US Environmental Protection Agency.

**SAFETY NOTICE:** Carefully read this manual before installation and operation of this insert. If not properly installed, a house fire may result. To reduce the risk of a fire, follow the installation instructions. Failure to follow instructions presented in this manual can lead to property damage, bodily injury or even death. Alterations or modifications made on the unit or the installation is strictly forbidden as it may predispose the user to hazardous risks. Contact your local building or fire officials for restrictions and installation inspection requirements in your area and the need to obtain a permit.

**WARNING:** This unit is hot during operation; keep children, pets, flammable liquids, or combustible materials at a safe distance. Ensure that all clearances to combustible materials are respected. Contact with the unit during operation may cause severe harm. Install a safety screen to keep children and pets away.

## CAUTION:

- Do not connect this unit to a chimney flue serving another appliance.
- Do not connect to any air distribution duct or system.
- Never use chemicals to ignite the fire.
- Never burn waste or flammable fluids (such as gasoline, naphtha, or engine oil).
- Only burn dry natural cordwood.
- Never leave the unit unattended with the door open or unlatched.
- Only refuel this unit when the wood is reduced to embers.
- Always keep the door closed during operation.
- Do not operate this unit with a fireplace grate.
- Do not install an unvented gas log set into the firebox.
- Do not install this unit in a mobile home.
- Do not clean or service the unit while it is hot.
- Allow proper air flow by keeping the louvers/openings clear of any obstructions.

Note: Failure to respect the above cautions may cause damages to the unit, damages to personal property, bodily harm and will void the warranty. "This wood heater needs periodic inspection and repair for proper operation. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in this manual."



## WARRANTY REGISTRATION

Please register your SUPREME product online at <http://www.supremem.com/registration.php> to ensure full warranty coverage. Proof of purchase is required for all warranty claims.

## 2 COMPONENTS

### 2.1 Overall Dimensions

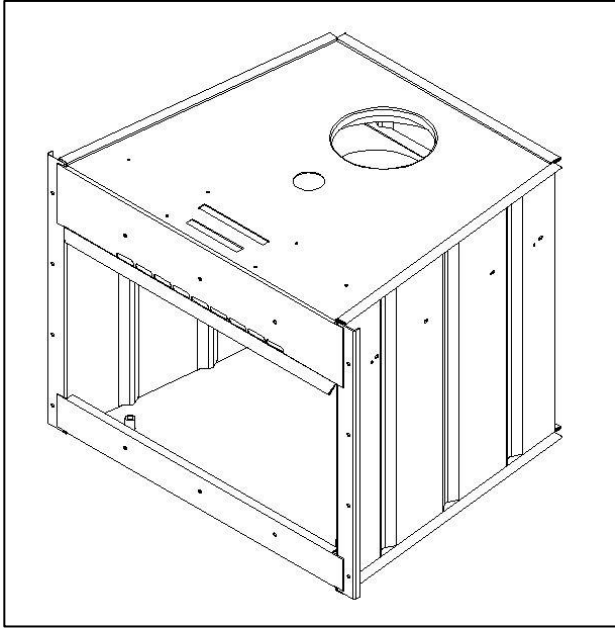


Figure 1: FUSION 18 Firebox

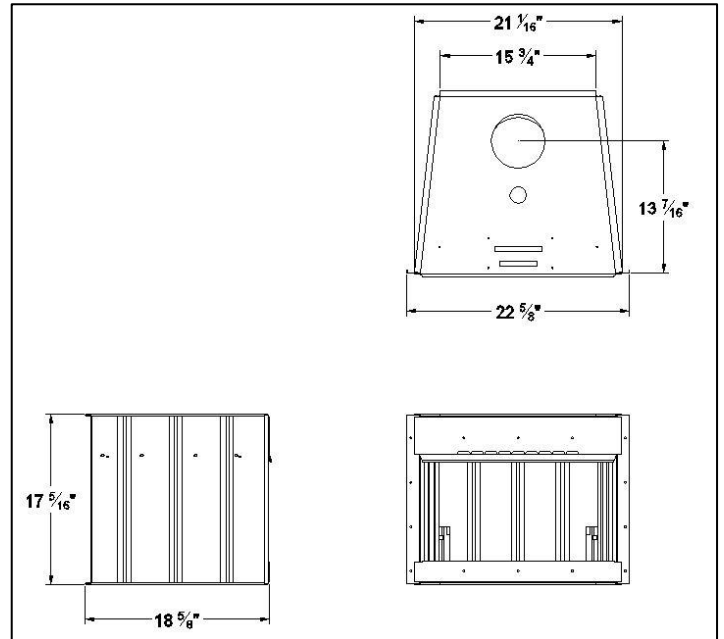


Figure 2: Dimensions of FUSION 18 Firebox

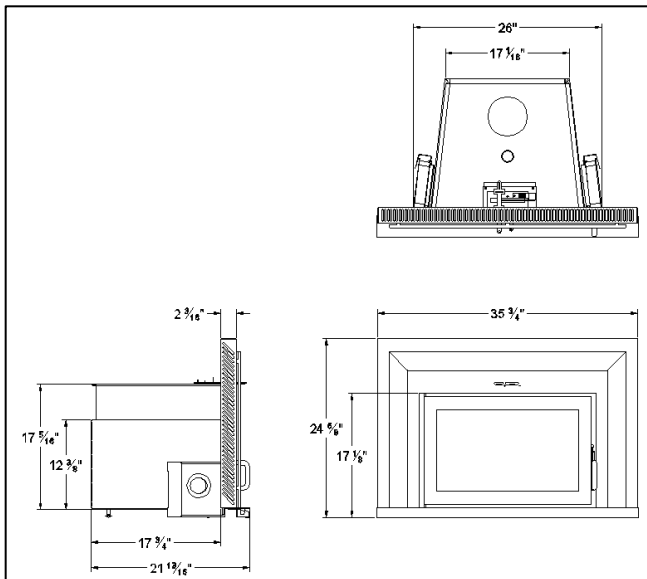


Figure 3: Dimensions of FUSION 18

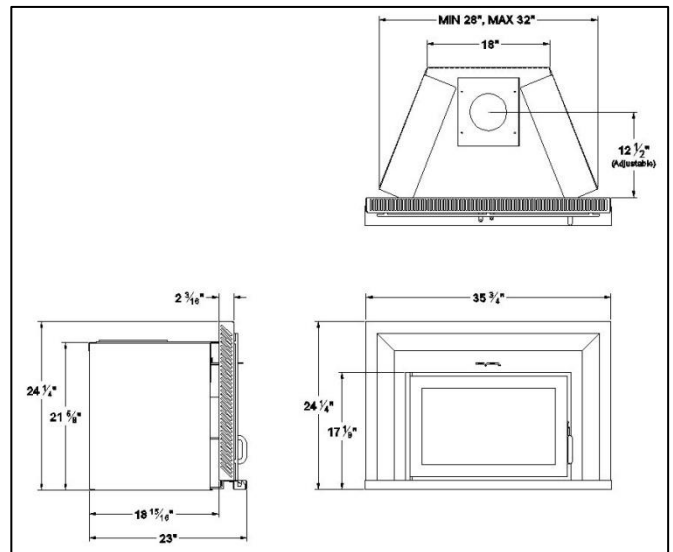


Figure 4: Dimensions of FUSION 18 with Circulating Chamber

## 2.2 Specifications

Appliance Type:	Adjustable Burn Rate Wood Heater – Non-Catalytic
Fuel Type:	Dry Cordwood
Maximum Log Length:	18 in (47 cm)
Burn Time <sup>1</sup> :	6 to 8 hrs
Firebox Volume:	1.85 ft <sup>3</sup> (0.053 m <sup>3</sup> )
Heating Area:	500 to 1,800 ft <sup>2</sup> (45 to 170 m <sup>2</sup> )
Average Particulate Emissions Rate <sup>2</sup> :	1.90 gm/hr
Average CO Emissions Rate <sup>3</sup> :	103.6 g/hr
EPA Protocol:	Method 28R, ASTM2780-10, and ASTM2515-11
Efficiency (Crib Wood):	HHV <sup>4</sup> : 66.9%   LHV <sup>5</sup> :
Heat Output (Crib Wood):	10,958 to 22,421 BTU/hr (3,211 to 6,571 W)
Optimum Efficiency:	75%
Optimum Heat Output:	60,000 BTU (17.6 kWh)
Efficiency Protocol:	CSA B415.1-10

## 2.3 Combustion Air Control

The Combustion Air Control is a patented mechanism (Patent No: US 7,325,541 B2) that regulates the air flow into the firebox based on the temperature of the unit. It is located on the top of the firebox, at the front center of the unit (see Figure 5). The combustion air control of the FUSION 18 has two components: the Activator and the Burn Rate Selector. The left combustion control lever is the Activator. When starting a fire or adding a new load of wood, the Activator must be pushed in to allow a primary source of air to enter the firebox. The Activator will retract automatically with heat. The right combustion control lever is the Burn Rate Selector. The Burn Rate Selector can slide sideways to achieve different burn rates. When the Burn Rate Selector is positioned to the left, a maximum burn rate is achieved and when it is positioned to the right, a minimum burn rate is set. For optimum efficiency, it is recommended to operate the unit with the Burn Rate Selector set at the low to medium/low position.

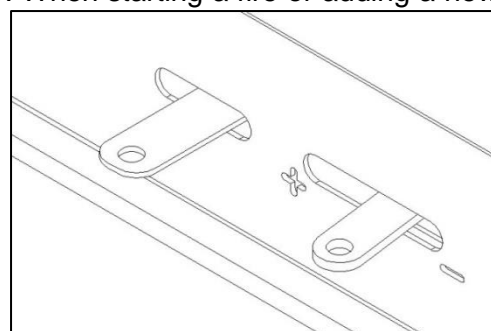


Figure 5: Combustion Air Control Levers

**WARNING: Never manipulate the Combustion Air Control with bare hands as it gets hot when the FUSION is in operation. Use the Cold Hand Key (see Section 2.4) to adjust the Combustion Air Control.**

<sup>1</sup> Depending on combustion air control setting (see Section 4.3 for further details).

<sup>2</sup> Officially tested and certified by an independent.

<sup>3</sup> Note that rate is smaller for low to medium/low burn rates.

<sup>4</sup> Higher Heating Value.

<sup>5</sup> Lower Heating Value.

## 2.4 Cold Hand Key

The Cold Hand Key (Figure 6) is an accessory that comes standard with the FUSION 18 insert. The Cold Hand Key is a tool used to manipulate the Combustion Air Control Levers when it is hot.

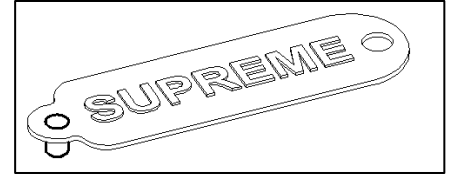


Figure 6: Cold Hand Key

## 2.5 Chimney Sweeping Cap

The chimney sweeping cap (Figure 7) found at the baffle of the FUSION 18 allows easy access for chimney sweeping without having to remove any components of the firebox.

**WARNING:** The chimney sweeping cap should be blocking the access to the chimney at all times during combustion. A chimney sweeping cap that is not blocking the baffle hole during combustion is a safety hazard, will overheat the fireplace and void the warranty.

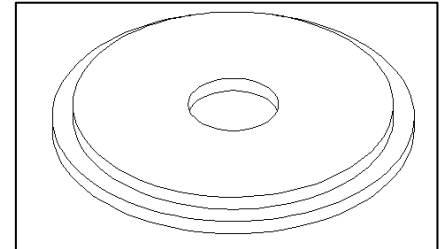


Figure 7: Chimney Sweeping Cap

## 2.6 Door

The FUSION 18 wood burning insert comes with a Pyroceramic glass panel door. Pyroceramic is the highest grade available for fireplaces and stoves and can withstand temperatures up to 1300°F. To remove the door, open the door, lift it and pull it towards the bottom until the rod exits from the hinge holes.

**NOTE:** The door of the FUSION 18 must remain closed at all times during operation.

## 2.7 Blowers

The FUSION 18 wood burning fireplace insert is equipped with two AC centrifugal compact fans on either side of the surround (**electrical rating: 115V, 60Hz, and 19W**).

**CAUTION:** Make certain that the fireplace is not in operation and the blowers are unplugged before accessing the electrical wiring.

Plug the power cord into an 115V **grounded** outlet for protection against a power surge. The blowers will turn on and turn off automatically during the operation of the unit. As the temperature of the fireplace insert increases and the heat activated sensor reaches 95°F, the fans will turn on. Note that the average time it takes for the fans to activate is between 30 to 45 minutes after starting a fire. The fans will turn off once the fireplace has cooled down and the heat activated sensor reaches 85°F. The speed of the fans can be adjusted with an optional grounded variable speed control plugged into the nearest outlet. It is safe to operate the FUSION 18 in the event of a power failure (fans not powered).

## 2.8 Surround

The FUSION 18 wood burning insert is available in three different sizes.

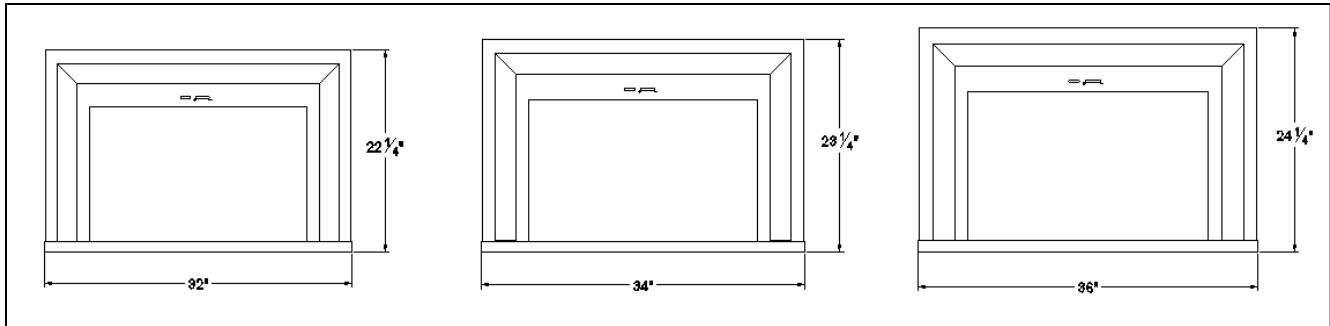


Figure 8: Surround Size Options - Small, Medium, and Large (Left to Right)

NOTE: SUPREME FIREPLACES INC. reserves the right to alter the dimensions of the surrounds without prior notice.

## 2.9 Adjustable Circulating Chamber

The adjustable circulating chamber (Patent: US 9,488,375 B2) is a standard component of the FUSION 18 insert (see Figure 9). It is designed to prevent heat escaping from the existing chimney and allows for an optimal flow and heat transfer. The width is adjustable from 28" to 32", the front height is adjustable from 21.75" to 26.75" (with the rear height fixed at the minimum 21.75"), and the hole for the stainless steel liner is adjustable by 2" (front to rear).

NOTE: The circulating chamber requires minimal adjustments. Please refer to Section 3.4 for detailed instructions.

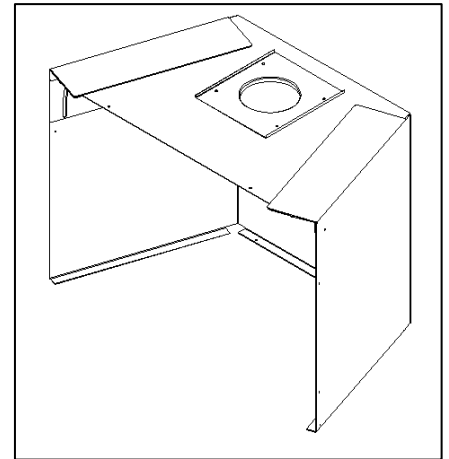


Figure 9: Circulating Chamber

## 2.10 Adjustable Legs

The FUSION 18 insert is supplied with three adjustable legs (see Figure 10) in the bottom of its firebox to allow adjustment of the height if the surround is not flushed with the wall of the masonry fireplace.

## 2.11 Liner Adaptor

The FUSION 18 Liner Adaptor is a component that comes with the FUSION 18 and is required to connect a 5" stainless steel liner to the FUSION 18 insert.

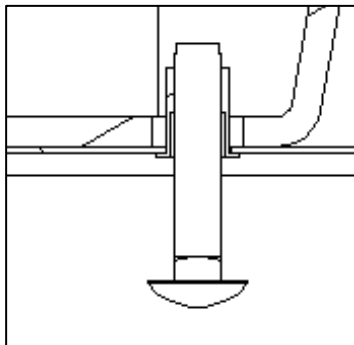


Figure 10: Adjustable Leg

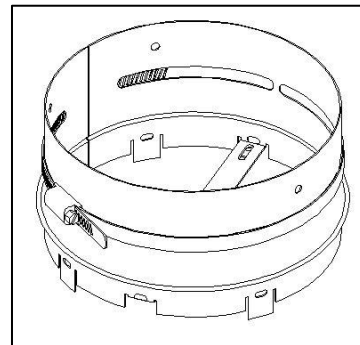


Figure 11: Liner Adaptor



## 2.12 Metal Tag

The Metal Tag is found on the front of the metal shipping crate and indicates that alterations have been made to the masonry fireplace to accommodate the FUSION 18 insert. The metal sheet having the Metal Tag is to be installed with two screws at the Bottom of the Circulating Chamber. The Bottom of the Circulating Chamber should have the side with the Metal Tag installed face up so the Metal Tag is visible if the firebox were to be removed.

The Metal Tag reads as follows:

*This fireplace has been altered to accommodate a fireplace insert and should be inspected by a qualified person prior to re-use as a conventional fireplace.*

*Ce foyer a été modifié afin d'y insérer un foyer encastrable et doit être inspecté par une personne qualifiée avant sa réutilisation comme foyer conventionnel.*

## 2.13 Serial Number

The certification label contains important information regarding the installation and operation of the FUSION 18 fireplace insert. In addition, the serial number of the unit is permanently embossed onto the top right corner. The certification label is located below the bottom right corner of the door and is accessible by swiveling the plate (Figure 12).

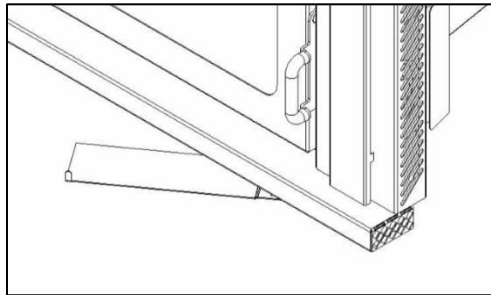


Figure 12: Location of Serial Number

### 3 INSTALLATION INSTRUCTIONS

The masonry fireplace is to be constructed in accordance to N.F.P.A. 211 (Latest Edition), Standards of Chimney, Fireplaces, Vents and Solid-Fuel-Burning Appliances and Equipment. The FUSION 18 fireplace insert is intended only for masonry fireplaces installed with a continuous chimney liner of 5 inch diameter extending from the fireplace insert to the top of the chimney. This insert must be connected to a code-approved masonry chimney or listed factory-built fireplace chimney with a direct flue connector into the first chimney liner section. The chimney size should not be less than or more than three times greater than the cross-sectional area of the flue collar. 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. Contact a local building inspector for information on additional requirements and/or codes in your area.

**CAUTION:** Read these instructions carefully before starting the installation. Failure to follow these instructions may result in property damage, bodily harm and even death. Modifications of the instructions presented in this section without written authorization from SUPREME FIREPLACES INC. will void the warranty.

Be sure that the fireplace and chimney are clean and in good condition. Seal all cracks using stove cement. Seal permanently any openings between the masonry of the fireplace and the facing masonry. Remove or keep permanently open the existing damper of the fireplace. If there is an accumulation of creosote in the chimney or flue, it must be thoroughly cleaned. When installing, operating and maintaining a solid fuel heater, respect basic standards for fire safety.

Table 1: Minimum Opening Dimensions

Width (Front)	28" (711 mm)
Width (Back)	18" (457 mm)
Height	21.75" (553 mm)
Depth	19" (483 mm)

**WARNING:** Do not remove bricks or mortar from the masonry fireplace.

Refer to Table 1, Figure 13 and Figure 14 for minimum opening dimensions of the masonry fireplace.

**NOTE:** The non-combustible hearth must extend a minimum of 20" (508mm) from the front and 8" (203mm) on each side of the masonry fireplace opening and must be a minimum of 44" long.

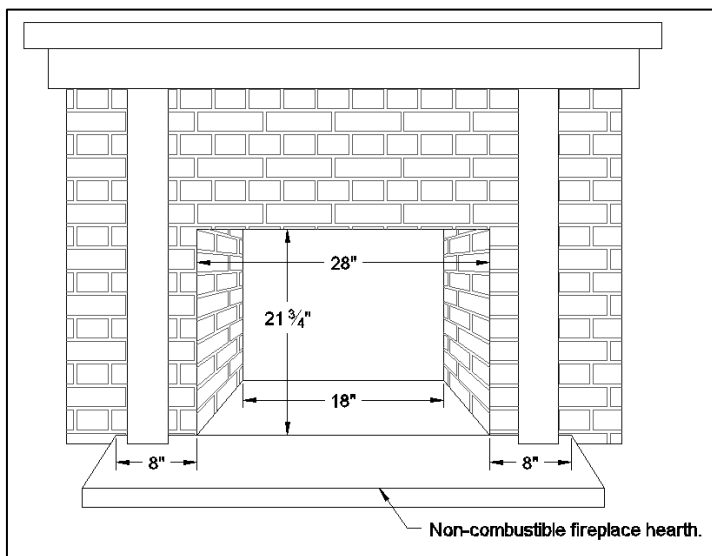


Figure 13: Minimum Opening Dimensions – Front View

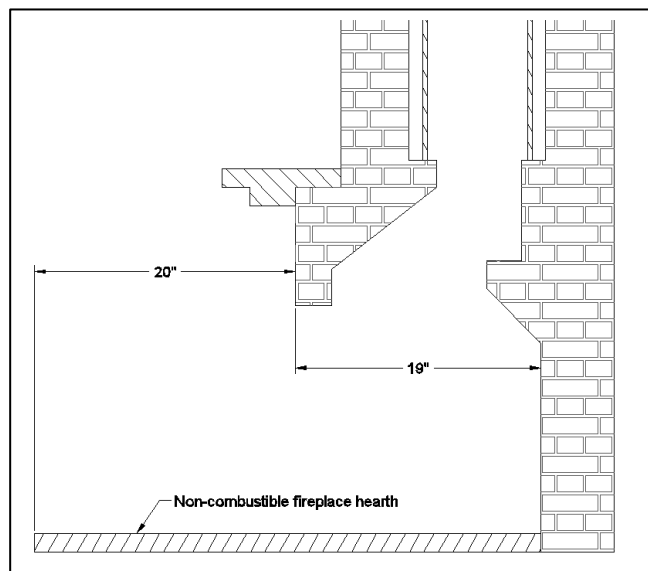


Figure 14: Minimum Opening Dimensions – Side View

## 3.1 Preparing the Firebox for Installation

- Bend the serial number plate horizontally.
- Remove the door by opening it, lifting it, and pulling it towards the bottom until the rod exits from the hinge holes.
- Install the adjustable legs (see Section 2.10). The adjustable legs must extend 1 ¼ inch from the bottom of the firebox. **NOTE: To avoid damages during shipping/handling, the adjustable legs aren't factory installed.**
- Push the chimney sweeping cap upwards and place it to the side (see Section 2.4).

## 3.2 Liner Installation

- Determine the required length of liner by measuring the bottom of the hearth to the top of the existing chimney. **NOTE:** Additional length of the liner is needed for proper installation of the flashing and chimney cap. **WARNING: The minimum and maximum height of the liner is 15' and 35' respectively.**
- Slide the stainless steel liner down the existing chimney.
- Lower the liner 24 inches from the hearth.
- Fill the space between the liner and the baffle of the existing chimney with Stone Wool insulation to prevent heat from escaping.

## 3.3 Adjustable Circulating Chamber

### 3.3.1 Assembly

- Remove the front cover of the unit and cut along the perforated lines to later use as the bottom cover within the masonry fireplace (Figure 15).
- Secure the bottom cover to the back wall of the circulating chamber and bend inwards the metal brackets at the front bottom.

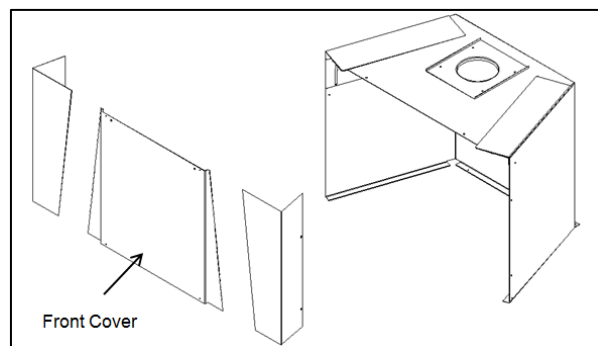


Figure 15: Circulating Chamber Front Cover

**CAUTION: Ensure that the text on the Metal Tag (Section 2.13) is facing upwards before installing the bottom cover.**

### 3.3.2 Installation

- Measure the width of the existing fireplace.
- Extend the width of the Circulating Chamber (Section 2.10) to the width of the existing fireplace and fasten with the wing nuts provided.
- Loosen the wing nuts of the adjustable liner hole.
- Position the circulating chamber into the existing masonry fireplace.
- Lower the liner through the adjustable liner hole of the circulating chamber.
- Adjust the front height of the circulating chamber to the height of the existing masonry fireplace and secure the wing nuts.
- Adjust the position of the circulating chamber in order to have a distance of 10.5 inches from the face of the liner to the face of the existing fireplace.
- Tighten the wing nuts of the adjustable liner hole.

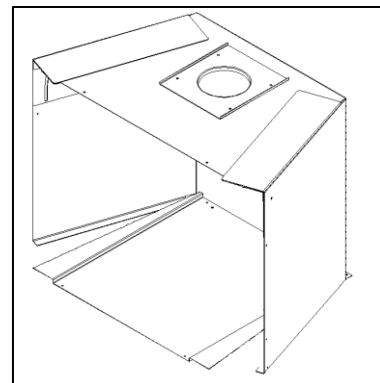


Figure 16: Circulating Chamber Assembly

**NOTE:** If the width and/or the height of the existing fireplace is/are larger than the maximal width and/or height of the adjustable circulating chamber, extend the width and/or height of the circulating chamber to the maximum and fill the space with Stone Wool.

### 3.4 Liner Adaptor Installation

Insert the 5" diameter liner adaptor (Section 2.12) at the end of the liner. The liner must be flush with the inferior rim of the adaptor.

- Tighten the clamp to secure the liner with the liner adaptor.
- Secure the liner adaptor in place with the sheet metal screw provided.

### 3.5 Firebox Installation

- Slide the FUSION 18 firebox into the circulating chamber.
- Align the liner adaptor with the flue of the insert (Figure 17).
- Insert your hand in the chimney sweeping cap opening and pull the liner down by its handle.
- Use your thumb to bend the 4 tabs of the liner adaptor outward to secure the liner in place.
- Reposition the chimney sweeping cap back in the chimney sweeping cap hole of the baffle (refer to Figure 17).

**WARNING:** The chimney sweeping cap should be blocking the access to the chimney at all times during combustion. A chimney sweeping cap that is not blocking the baffle hole during combustion is a safety hazard, will overheat the fireplace and void the warranty.

### 3.6 Power Cord Side Reversal

The blowers of the FUSION 18 insert are factory installed and the power cord is located at the left side of the surround when facing it (refer to Figure 18). However, the power cord location can be switched to the right side by following the below instructions:

- Unfold the cover that secures the power cord in place.
- Remove the insulating blanket that covers the wiring.
- Loosen the nut of the strain relief.
- Bring the power cord to the opposite side and secure the strain relief by tightening the nut.
- Place back the insulating blanket over the wiring.
- Bend the cover to its original position.

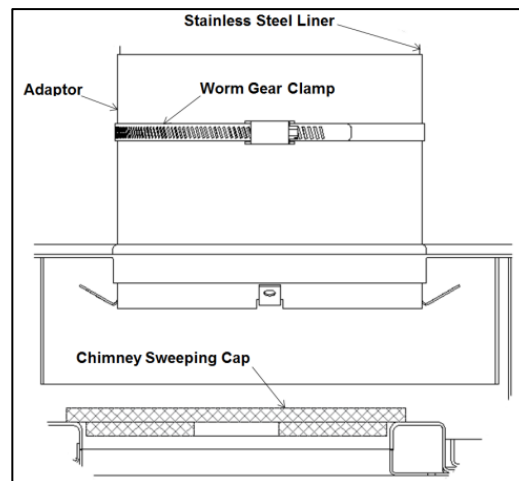


Figure 17: Liner Adaptor Installation

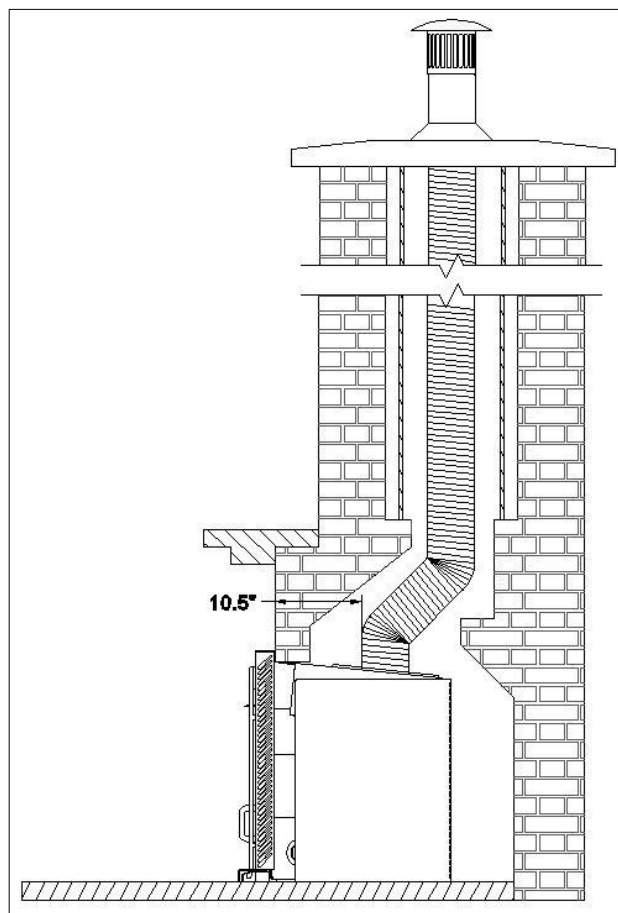


Figure 19: FUSION 18 Installation

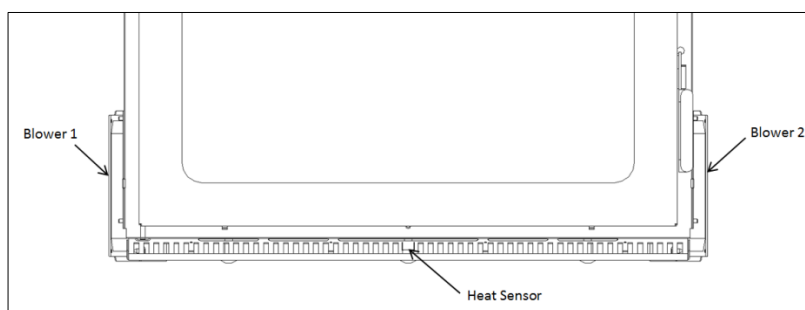


Figure 18: Location of Electric Wiring

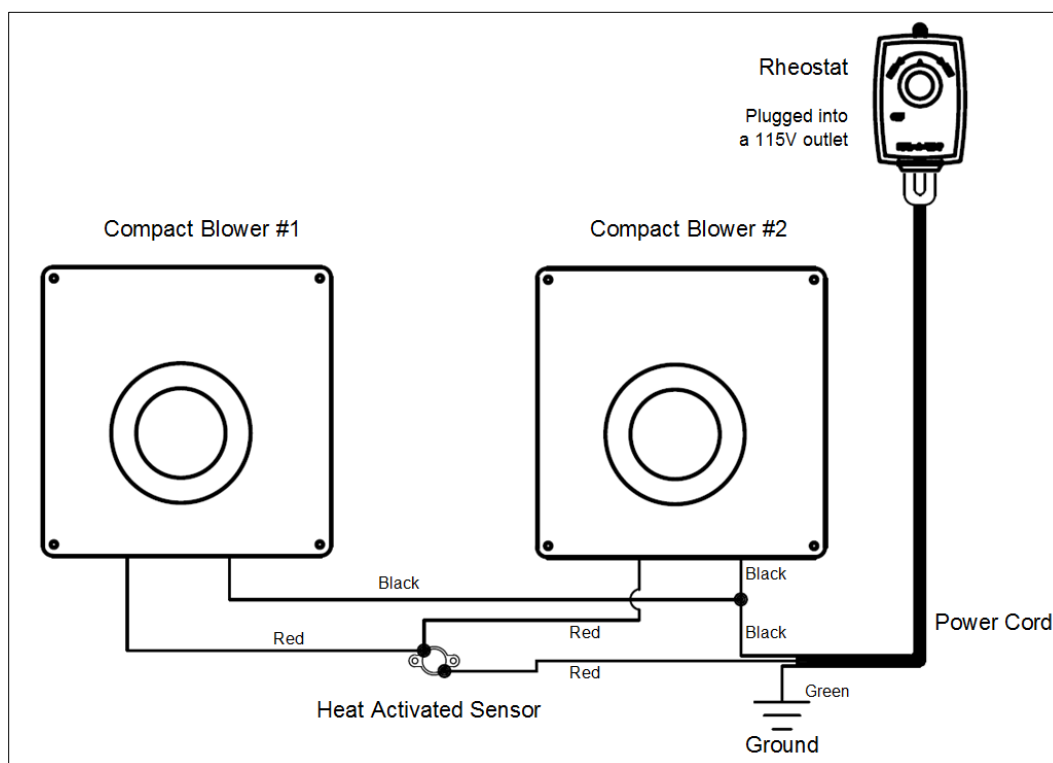


Figure 20: Electric Wiring Diagram

## 3.7 Surround Installation

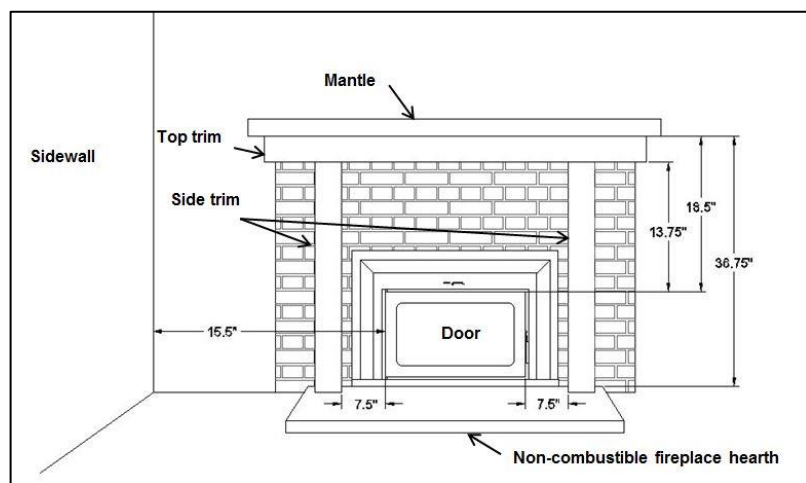
- Swivel the certificate plate outwards.
- Install the surround and secure it with four screws, two on either side.
- Install the door by inserting the upper rod into the upper hole and then lowering the lower rod into the lower hole.
- Inspect the installation. If the surround is not flush against the wall, level the firebox by using the adjustable legs.

Note: Ensure the tab on the certificate plate is accessible after the installation of the surround.

### 3.8 Clearances to Combustibles

Refer to Figure 21 and Table 2 for the minimum clearances to combustibles:

**Table 2: Clearances to Combustibles**



**Figure 21: Clearances to Combustibles**

Sidewall from outer edge of fuel door	15.5" (394mm)
Side trim from outer edge of fuel door	7.5" (190.5mm)
Top trim from top edge of fuel door	13.75" (349mm)
Protruding mantel (8") from floor	36.75" (933mm)
Protruding mantel (8") from top edge of fuel door	18.5" (470mm)

Note that the non-combustible hearth must extend a minimum of 20" (508mm) from the front and 8" (203mm) on each side of the masonry fireplace opening. **WARNING: Keep a minimum distance of 5' (152cm) from the unit to any combustible material (such as firewood, furniture, and drapes) as a fire hazard precaution.**

The depth of the mantle is measured from the face of the fireplace door. When the non-combustible wall is recessed, the depth of the mantle can be increased by the amount of the recess. **Note that a mantel cannot be installed below the minimum clearance of 36.75" (from the bottom of the mantel to the base of the unit).**

**Table 3: Depth of Mantle with Respect to Distance of Base**

Maximum Mantle Depth	Distance from the Base of the FUSION 18 to the Bottom of the Mantle
8" (203 mm)	36.75" (933.45 mm)
10" (254 mm)	41.25" (1048 mm)
12" (305 mm)	46" (1168 mm)

The depth of the mantle is measured from the face of the fireplace door. When the non-combustible wall is recessed, the depth of the mantle can be increased by the amount of the recess. **Note that a mantel cannot be installed below the minimum clearance of 36.75" (from the bottom of the mantel to the base of the unit).**

## 4 OPERATION INSTRUCTIONS

**WARNING: READ THE OWNER'S MANUAL CAREFULLY BEFORE USING YOUR FIREPLACE INSERT.** The Fusion 18 is not intended to serve as a primary source of heat. A primary source of heat must be available in the home that the Fusion 18 is installed in. Supreme is not responsible for heating costs related to other sources of heat.

### 4.1 Fuel

The FUSION 18 is designed to burn natural wood only. Higher efficiencies and lower emissions generally result when burning air dried seasoned hardwoods (moisture content below 20%), as compared to softwoods or to green or freshly cut hardwoods. The following are a few signs indicating that firewood is sufficiently dry for use: (a) cracks on the ends and surface of the logs, (b) lighter in weight, and (c) color (yellow/grey). It is recommended to use a moisture meter with pin sensors for determining accurately the moisture content of firewood (read manufacturer's instruction manual before operating). The optimum log length is 16-18 inches, preferably split in halves or quarters and left to dry under a cover or away from external elements for a minimum of one year prior to use. Use good quality dry cordwood only. DO NOT burn garbage, lawn clipping, yard waste, materials containing rubber (including tires), materials containing plastic, waste petroleum products, paints, paint thinners, asphalt products, materials containing asbestos, construction debris, demolition debris, railroad ties, pressure-treated wood, manure, animal remains, coal, salt water driftwood or other previously salt water saturated materials, unseasoned wood, paper products, cardboard, plywood, particle boards, or other foreign materials in this product. 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. Burning these materials may result in release of toxic fumes or render the heater ineffective and cause smoke. Do not over fire the FUSION 18 fireplace insert. Over firing will damage the fireplace, is hazardous and will void the warranty. NOTE: Gas logs cannot be installed in the FUSION 18 fireplace insert.

**WARNING: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this unit. Keep all such liquids well away from the fireplace insert while it is in use.**

Ecological or compressed logs containing chemical additives are not tested and approved to be used with the FUSION 18. Using them will overheat and damage the fireplace and void the warranty. Ecological or compressed logs that are 100% wood and contain no other additives can be safely used in the FUSION 18. Never use more than three of these logs at a time. Using more is not only dangerous, but will damage the fireplace and void the warranty. Follow the ecological log manufacturer's safety guidelines and recommendations and be sure that they are intended for use in fireplaces. Reload only once the previous load of wood has been consumed and only embers remain.

**WARNING: Do not keep the door open while the fireplace is in operation.**

### 4.2 First Fires

For the first 3 fires, burn a maximum of 3 logs at the medium to low burn rate (refer to Section 4.3) to allow for proper conditioning of the unit. Due to oil residues and the curing of the paint of the fireplace, it is normal to smell an odor for the first fires of the FUSION 18. Open a window or a door near the fireplace insert to ventilate the house during the first fires. Oil residues may cause light smoking.

## 4.3 Operating the Combustion Air Control

The burn rate and the heat output are related to the amount of air entering into the firebox. The combustion air control of the FUSION 18 has two components: the Activator and the Burn Rate Selector. When starting the fire or when adding a new charge of wood, the fireplace needs additional air in order to establish a good fire. When the wood starts to burn properly, the amount of air can be reduced depending on the heating requirements.

The left combustion control lever is the Activator. When starting a fire or adding a new load of wood, the Activator must be pushed in to allow maximum air to enter the firebox. The right combustion control lever is the Burn Rate Selector. The Burn Rate Selector can slide sideways to achieve different burn rates. When the Burn Rate Selector is positioned to the left, a maximum burn rate is achieved and when it is positioned to the right, a minimum burn rate is set. Keeping the Burn Rate Selector to the right will burn the wood slower. Keeping the Burn Rate Selector to the left will provide a stronger fire and keep the glass of the fireplace cleaner for longer. Adjust the burn rate according to your heating requirements and the quality of your wood. The combustion air control will automatically and gradually close the primary air source to the selected burn rate setting (right lever) with the presence of heat to maximize the burn time.

**NOTE:** The Burn Rate Selector can remain at the same setting at all times if the burn rate is satisfactory. However, the Activator must be pushed in when starting a fire or when adding a new load of wood.

**WARNING:** The combustion air openings should never be obstructed.

**WARNING:** Never manipulate the Combustion Air Control with bare hands as it gets hot when the FUSION 18 is in operation. Use the Cold Hand Key to adjust the Combustion Air Control.

**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 operating instructions in this manual.

## 4.4 Starting a Fire

The FUSION 18 has patented technologies and innovative features that make starting a fire quick and easy. Before starting a fire, assure that all the safety precautions mentioned in the owner's manual are being respected. The following instructions describe starting a fire in FUSION 18 fireplace using a "top-down" approach, which results in a cleaner, more efficient, and longer burn:

- a) Place two logs in the firebox. The logs should sit directly on the hearth. Do not use a fireplace grate.
- b) Place a third log at angle above the two logs of step a).
- c) Place a fourth log above the logs of step a) and step b) (tilted upwards), which will result in a "pocket" at the center of the firebox.
- d) Push the left combustion control lever (the Activator) inwards.
- e) Slide the right combustion control lever (the Burn Rate Selector) to the desired burn rate. Positioning the Burn Rate Selector towards the left is for maximum burn rate and towards the right is for minimum burn rate.
- f) Place and ignite a firestarter within the "pocket". Make sure that the firestarter is visible from the opening (facing the front) and directly below the logs of step b) and step c).
- g) Once the firestarter is well lit, close the door. Do not leave the door open for more than 2 minutes.



Figure 22: Non-recommended Wood Configuration



Figure 23: Recommended Wood Configuration

**CAUTION:** The wood should be placed away from the door to avoid damage to the glass.



**WARNINGS:** Over firing the unit may result in overheating and can damage the fireplace and/or result in fire hazards. The maximum firewood load must not exceed 4 medium sized logs (approximately 25 pounds). This fireplace has been designed to burn with the door closed. When the fireplace is being used, the door should remain closed at all times. Failing to do so is a safety hazard, will damage the fireplace and void the warranty.

**WARNING:** Do not use fire accelerants to rekindle the fire if the first attempt to start the fire failed. Do not open the door. Simply reactivate the Activator by pushing it inwards.

**NOTE:** Sufficient air exchange is necessary for the fireplace to operate properly. Air is required in order to maintain the combustion of the fireplace. If the house is airtight, the fireplace may not function properly. If the fireplace is deprived of air, it will be necessary to provide a source of fresh air into the dwelling. This may be done by using an air exchanger unit or simply by opening a window or a door near the fireplace partially for a few minutes. Make sure that other equipment such as the kitchen exhaust fans or oil central heating systems does not affect the fireplace functionality. Large return ducts of central heating systems located in the same room as the fireplace may affect the proper functioning of the unit and may cause smoking.

## 4.5 Adding a New Load of Wood

**WARNING:** Open the door to reload only when the wood has been reduced to embers, otherwise there is a risk of smoke infiltration into the house.

When the wood has been reduced to embers and there's no visible flame, you may add a new load.

- a) Crack the FUSION 18 door open and wait a few moments before opening the door completely.
- b) Use your fireplace tools to gather the remaining embers at the center of the firebox.
- c) Activate the Activator by pushing it in.
- d) Once the embers begin to glow red, add the new load of wood in the firebox.
- e) Keep the door of the FUSION 18 slightly unlatched until you see a flame in the firebox. Never leave the FUSION 18 door unlatched without constant supervision.
- f) Completely latch the FUSION 18 door.

Assure that a flame is maintained. Avoid wood smoldering on top of embers as this will result in a dirty glass, excessive emissions, chimney creosote buildup and poor heat output. If wood is smoldering, ensure the Activator has been activated and unlatch the door slightly with supervision until a flame has been maintained.

## 4.6 Fan Operation

A blower kit is preinstalled in the FUSION 18 fireplace insert. It includes two blowers mounted at the bottom on either side of the firebox and a heat sensory thermodisk. An optional variable speed control can be installed to adjust the speed of the fans. Do not install a substitute kit as this may result in overheating and risk of fire.

- a) Connect the optional speed control to an 115V properly grounded outlet that accepts three-pronged plugs. **WARNING: Do not remove the grounding prong from the speed control.**
- b) Plug the power cord to the optional speed control.
- c) Turn the speed control knob to the right until it clicks. The fans will start and stop automatically in the presence and absence of heat respectively.

In the case that an optional speed control has not been purchased with the unit, plug the power cord to the 115V outlet. When the fans are activated, they will run at maximum speed. To stop the fans during operation of the unit, unplug the power cord.

**NOTE:** Standard location of the power cord is on the left when facing the surround, but can be switched to the opposite side. Please see Section 3.6 for instructions on how to reverse the location of the power cord.  
**CAUTION:** Do not route the power cord under the unit, on hot surfaces, and on sharp edges.

Once the power cord has been plugged to the nearest 115V outlet, the fans will turn on and turn off automatically. When the insert gets hot and the thermodisk reaches 95°F, the fans will turn on. The average time it takes for the fans to activate is 30 to 45 minutes after starting a fire as explained in this manual (Section 4.4). The fans will turn off once the insert has cooled down and the thermodisk reaches 85°F. The speed of the fans can be adjusted with the optional variable speed control.

## 4.7 Barbecue Grill

The FUSION 18 insert comes with a removable swiveling barbecue grill. When operating the FUSION 18, the barbecue grill should be leaning against the rear wall of the firebox, in the upright position. The grill swivels to the horizontal position above the bed of embers for cooking purposes. The barbecue grill is removable by lifting the hinge and pulling forward.

### Useful Tips and Recommendations:

- Schedule cooking in the FUSION 18; approximately 4 to 6 hours is needed before an ideal bed of embers is produced from the load.
- Cook with indirect heat (convection); move the coals along the walls of the firebox.
- Keep the door closed while cooking.
- Use the left handle of the Combustion Air Control, the Activator, (Section 2.3) to regulate the temperature of the unit while cooking. To avoid flare-ups, slide the Burn Rate Selector to the right (minimum setting) and pull the activator towards you if it hasn't already been retracted.
- Cook fish on a cedar plank.
- Greasy food may cause smoking.

Do not use the FUSION 18 insert as a primary cooking appliance. This feature is designed for occasional grilling during the winter and cooking during power failures. Foods that are commonly grilled in a conventional barbecue can be cooked in the FUSION 18 insert. The intense heat from the next combustion cycle cleans the grill and the unit of any cooking residue.

**DISCLAIMER:** SUPREME FIREPLACES INC. is not responsible for the quality nor the outcome of the food cooked in the FUSION 18.

## 5 TROUBLESHOOTING

### 5.1 Backdraft / Smoking

Draft is the force created by a difference in pressure, which moves air from the appliance up through the chimney. It is important to operate the FUSION 18 with proper draft to ensure optimal performance of the unit. Draft is depended on the length of the chimney, local geography, nearby obstructions and other factors. Proper draft results in an upwards flow through chimney, which prevents smoke infiltrating into the house during operation of the unit. As the temperature of the unit and chimney rises during combustion, the draft consequently increases due to a higher difference in pressure.

In contrast, backdraft is air flow from the chimney into the house, which results in smoke infiltration from the appliance and/or the chimney joints during operation. The unit is experiencing backdraft if air is flowing out from the exhaust of the baffle system (within the firebox). Backdraft is most commonly caused by fans around the house (such as in the kitchen and bathrooms) simultaneously in operation, insufficient length of the chimney (less than 15 feet), inadequate ventilation, or a blocked chimney. Refer to the following suggestions to eliminate backdraft:

- Close any fans operating around the house (specifically for the duration of ignition).
- Clean the chimney of any obstructions (when the unit is cold).
- Open one window or one door near the FUSION 18.
- Heat the chimney by burning newspaper near the exhaust of the baffle system.

### 5.2 Over Firing

The appearance of a red glow on the exterior of the firebox (top and sides) and/or on the flue is a sign of over firing. Excess air entering the firebox, over fueling, or an abnormal strong draft causes the unit to reach drastic temperatures from an uncontrollable combustion. Over firing is a safety hazard and may result in permanent damage to the unit. In the occurrence of over firing:

- a) Make sure the FUSION 18 door is properly closed.
- b) Manually close the Combustion Air Control by pulling the Activator (left lever).
- c) Turn on the blower to the maximum speed. The red glow on the exterior of the firebox and/or the flexible liner should gradually disappear.

**WARNING: Do not touch hot surfaces with bare hands. Always wear heat protecting gloves and use fireplace tools.**

Guideline to avoid over firing:

- Always keep the door closed during operation.
- Inspect regularly the door gasket/glass and replace accordingly.
- Always operate the unit with the chimney sweeping cap in position, blocking the hole in the baffle.
- Never load more than 25 lbs of wood at a time.
- Ensure that there is no excess draft.

**WARNING: Failure to follow the above guideline will void the warranty. Over firing is a safety hazard, can cause irreversible damages to the FUSION 18 and will void the warranty.**

## 6 MAINTENANCE

### 6.1 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 on soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled. **CAUTION: Always wear heat resistant gloves when removing the ashes from the firebox.**

- a) Let the firebox cool to ambient temperature before removing the ashes. It is recommended to remove the ashes once the bed has exceeded a height of 4 inches.
- b) Slowly open the door to prevent ashes from coming into the room.
- c) Place an ash bucket (metal container) near the fireplace, onto the non-combustible hearth.
- d) Using a shovel and brush, remove the bulk of the ashes from the firebox into the ash bucket. Note that it is not necessary to keep a thin bed of ashes for the next fire.
- e) Store the ash bucket (with the tight-fitting lid) on a non-combustible surface, away from any combustible materials, pending final disposal.

### 6.2 Chimney Maintenance

**Creosote – Formation and Need for Removal:** When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapor condenses 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 burning wood or coal should be inspected at least once every two months during the heating season to determine if creosote buildup has occurred. Note that continuously operating the unit with green or wet wood will result in premature creosote buildup. **Never use chemical cleaners for your chimney.**

**WARNING: In the case of a chimney fire: 1) close the door of the fireplace; 2) set the burn rate of the Combustion Air Control to minimum (Section 4.3); 3) call the local fire department (if assistance is needed); 4) use a dry chemical fire extinguisher (baking soda or sand) to control the fire.**

**CAUTION: Never use water to extinguish a fire as it may result to dangerous steam explosions. Do not use the unit until the chimney is inspected and repaired (if needed) by a qualified technician.**

**NOTE:** Do not clean the chimney when the unit is in operation/hot. Follow the instructions below for sweeping the chimney of a FUSION 18 fireplace insert:

- a) Open the door of the unit.
- b) From within the firebox, displace the chimney sweeping cap located in the baffle by lifting and moving it to the side.
- c) Close the door of the unit.
- d) Using an appropriate sized chimney sweeping brush, clean the chimney from any creosote buildup and other residues.
- e) Remove all the fallen/loose creosote/residues from the firebox and baffle system (a shop vacuum cleaner can be used for a thorough cleaning).
- f) Place back the chimney sweeping cap.

**CAUTION: Operating the unit without the chimney sweeping cap in position will result in over firing and void the warranty.**

## 6.3 Cleaning of Glass

It is recommended to clean the glass door with a soft cloth, dampened with a non-abrasive solution, such as soap and water.

**CAUTION: Cleaning the glass with an abrasive solution will result in surface scratches, reducing glass transparency and resistance to impacts.**

The glass of the door may be cleaned with commercial products intended for fireplaces and stoves. After cleaning the glass, remove any remaining solutions with a wet cloth to avoid chemical reactions at elevated temperatures ("cloudiness" on the surface of the glass).

**CAUTION: Do not apply commercial cleaners onto any painted surfaces as discoloration/peeling may occur.**

**NOTE: Never clean the glass when the unit is in operation or hot.**

## 6.4 Replacement of Door Gasket

SUPREME FIREPLACES INC. assembles heat resistant graphite coated gaskets on the doors of all products, allowing for a proper seal of the unit at extreme temperatures (up to 1000°F). It is recommended to perform a weekly visual check on the condition of the ¾" gasket to ensure proper operation of the unit. The ¾" gasket of your door needs to be replaced when 1) the fibers of the gasket are coming loose and 2) the gasket is disintegrating. Failure to replace a gasket under the mentioned conditions can cause irreversible damage to the unit due to over firing. Refer to the following instructions for replacing the ¾" gasket:

- a) Order the replacement kit for the FUSION 18 ¾" door gasket.
- b) Remove the door from the firebox and place it face down on a soft surface. NOTE: Rotate the handle to permit proper placing.
- c) Cover all painted surfaces of the door to avoid damages.
- d) Using a wedging tool or flat head screwdriver, gently remove the old ¾" gasket (along with the old silicone) from the door framing.
- e) Apply a bead of high temperature silicone along the groove of the metal brackets.
- f) Place the new ¾" gasket around the door framing and cut any excess gasket with scissors. NOTE: It is recommended to tape the extremity of the gasket for a cleaner result.

Give significant amount of time to allow the silicone to cure before reinstalling the door onto the firebox. A slight resistance is expected when closing the door with the new ¾" gasket; the door will close normally after the gasket has taken proper shape.

## 6.5 Replacement of Glass

SUPREME FIREPLACES INC. uses a high quality 5mm thick Pyroceram III / Keralite ceramic glass that can withstand temperatures up to 1300°F. It is recommended to perform a weekly visual check for any damages or cracks on the glass.

**WARNING: Avoid striking the glass and slamming the door shut. Never operate the unit with a broken or damage glass.**

**CAUTION: Wear protective gloves when handling broken glass.** Refer to the following instructions for replacing the glass:

- a) Order the replacement kit for the FUSION 18 glass.
- b) Remove, clean, and dispose any broken glass from the door and the surroundings.
- c) Remove the door from the firebox and place it face down on a soft surface. NOTE: Rotate the handle to permit proper placing.

- d) Using a wedging tool or flat head screwdriver, gently remove the  $\frac{3}{4}$ " gasket (along with the silicone) from the door framing.
- e) Using a wrench, remove the 8 nuts fastened around the door framing.
- f) Remove the first row of metal brackets (2 small and 2 big) and thin gasket.
- g) Remove the damage glass and clean thoroughly the door framing from loose glass fragments.
- h) Place the new glass onto the second row of thin gasket, centered with the door framing.
- i) Place back the first row of metal brackets (2 small and 2 big) and thin gasket.
- j) Using a wrench, fasten the 8 nuts around the door framing (do not over-tighten).
- k) Apply a bead of high temperature silicone along the groove of the metal brackets.
- l) Place the  $\frac{3}{4}$ " gasket back into position.

Give significant amount of time to allow the silicone to cure before reinstalling the door onto the firebox.

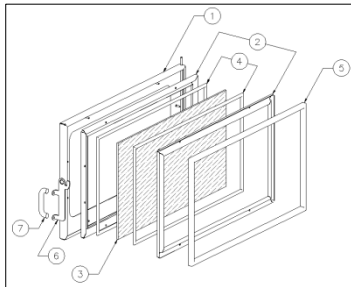


Figure 23: Exploded View of Door Assembly

Table 4: Parts List for Door Assembly

Item	Code	Description	Qty
1	DR3110	Door frame assembly	1
2	DR_21375	Horizontal metallic bracket	4
2	DR_1325	Vertical metallic bracket	4
3	PYRO_20.25X12	Pyroceram glass	1
4	GSK_19_6	Thin gasket	2
5	GSK_25_6	Thick gasket	1
6	CM0031	Door latch	1
7	POI	Wood pull handle	1

## 6.6 Door Latch Lubrication

Lightly lubricate the hook of door latch (CM0031) on a yearly basis to prevent abrasive wear.

## 6.7 Paint

Paint touch-ups can be performed on the unit using a high temperature paint (in aerosol spray can format) by Stove Bright®. Refer to your invoice to determine the precise color of your unit. Contact your local hearth shop for further information on purchasing this paint.

NOTE: Apply the paint in a well ventilated area. If applying paint to the door, properly cover/mask the glass of the door using painters tape and cardboard. Wait for paint to dry before operating the unit. Refer to the instructions on the label of the aerosol spray can for proper paint application. **WARNING: Never apply paint to the unit during operation or when it is hot.**

## 6.8 Removal of Firebox

Occasionally, a technician or an inspector may require the firebox to be temporarily removed from the masonry fireplace; therefore, refer to the following instructions for proper removal of the firebox:


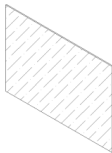


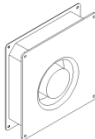

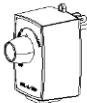
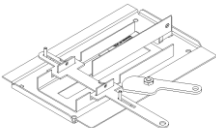

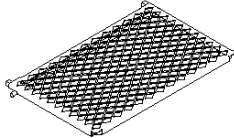
- a) Remove and dispose any ashes from within the firebox (see Section 5.1)
- b) Remove the door of the firebox and place it at a safe location to avoid any damage.
- c) Remove the surround of the unit by unscrewing the 4 screws at each corner of the door holder.
- d) From within the firebox, displace the chimney sweeping cap located in the baffle by lifting and moving it to the side.
- e) Straighten the clips of the adaptor.
- f) Use the handle to push the adaptor upwards and disconnect it from the firebox.
- g) Safely remove the firebox.

Refer to Section 2.3 for reinstalling the firebox.

**CAUTION: Never remove the firebox while still in operation (hot).**

## 6.9 Replacement Parts

Refer to the codes from the table below for any replacement parts:

Code	Description	Illustration
POI	Wood pull handle (specify color)	
PYRO_20.25X12	Pyroceram III / Keralite 5mm thick glass, 20.25" X 12"	
GSK_19_6	Graphite coated square gasket, 0.1875" thick, 6" length	
GSK_25_6	Graphite coated square gasket, 0.25" thick, 6" length	
RG 125-19/06	AC centrifugal compact fan <u>Electrical rating:</u> 115VAC, 60Hz, 19W <u>Certification:</u> VDE, CSA, UL, CE	
60T22	Thermo-disk <u>Electrical rating:</u> 120VAC, 15A <u>Certification:</u> UL/CSA	
B7059	Speed Control <u>Electrical rating:</u> 300W/3.0 Amps, 125VAC – 50/60Hz <u>Certification:</u> UL, ULC	
PA5000	Combustion Air Control (specify color)	
CM0020	Cold Hand Key	
18FN1210	Removable BARBECUE grill	

# 7 WARRANTY

SUPREME FIREPLACES INC. warrants that the factory-built fireplaces, fireplace inserts, and stoves will be free from defects in material and workmanship, under normal use and service, for a period of **twenty-five (25) years** from the date of purchase.

This warranty is only intended for the original retail purchaser, given that the product was purchased from SUPREME FIREPLACES INC. or one of its authorized dealers. This warranty is conditional upon correct installation and intended use of the products and does not cover damages caused by misuse. This warranty shall be void if the fireplace and stove is not installed by an authorized qualified technician in accordance with the installation instructions in the manual provided with this product. The installation must meet local and national building codes.

## WARRANTY LIMITATIONS:

Abuse and improper use of the unit may cause irreversible damage and will void the warranty.

- I. During the first two years of the Limited Warranty, SUPREME FIREPLACES INC. will provide replacement parts at no charge and will also pay for reasonable labor costs, except for the parts listed in the EXCLUSIONS portion of this warranty.
- II. During the third through the fifth year of the limited warranty, SUPREME FIREPLACES INC. will provide replacement parts (if available) at no charge, except for the parts mentioned in the EXCLUSIONS portion of this warranty. Supreme Fireplaces Inc. shall not be responsible for any labor costs.
- III. From the sixth through the twenty-fifth year of the limited lifetime warranty, SUPREME FIREPLACES INC. will provide replacement parts (if available) at 50% of the retail price, except for the parts listed in the EXCLUSIONS portion of this warranty. SUPREME FIREPLACES INC. shall not be responsible for any labor costs.

Transportation, packaging, and other related costs or expenses arising from the replacement or repair of defective parts will not be covered by this warranty, nor will SUPREME FIREPLACES INC. assume responsibility for them.

## EXCLUSIONS:

SUPREME FIREPLACES INC. shall not be responsible for any labor costs for the replacement or repair of any electrical components, painted/plated parts, secondary air burning system, and the combustion air control.

The following parts are guaranteed for 1 year: blowers, painted/plated parts, secondary air burning system, soapstone, and door gasket.

The following parts are guaranteed for 90 days: ceramic glass (**thermal breakage ONLY**).

This warranty applies to normal residential use only. Damages caused by acts nature or natural disasters, accidents, over firing, misuse, abuse, negligence, improper installation, alterations or substitutions of components of the fireplace insert, abrasives, chemical cleaners, and negligence are not covered by this warranty. Burning anything other than natural wood will damage your fireplace and void the warranty.

SUPREME FIREPLACES INC. will not be responsible for environmental conditions such as inadequate vents or ventilation, excessive venting configurations or negative air pressures which may or may not be caused by mechanical systems such as exhaust fans, furnaces, clothes dryers, etc.

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 the defective part(s).



The manufacturer shall in no event be responsible for any consequential damages of any nature, which are in excess of the original purchase price of the product. Any complete fireplace, or part thereof, that is replaced or serviced under this warranty will be warranted for a period not exceeding the remaining term of the original warranty.

This **Limited Lifetime Warranty** is effective on all appliances sold and supersedes any and all warranties currently in existence.

Please register your SUPREME product online at <http://www.supremem.com/registration.php> to ensure full warranty coverage. Prior to contacting SUPREME FIREPLACES INC., have the following information available for warranty claim processing:

- Customer information (name, telephone number, and address)
- Proof of purchase
- Model name and serial number (see Section 2.13)
- Detailed description of defected component
- Digital pictures (if necessary)

In the case of a return for repair or replacement, it is the responsibility of the customer to adequately package the component/unit to prevent further damage during transport. Items sent to the SUPREME FIREPLACES INC. without an open warranty claim will be returned to the sender.

Warranty claims should be addressed to:

SUPREME FIREPLACES INC.  
3594 Jarry East, Montreal, QC  
H1Z 2G4, Canada  
T: 877-593-4722, F: 514-593-4424  
Website: [www.supremem.com](http://www.supremem.com)  
E-mail: [info@supremem.com](mailto:info@supremem.com)