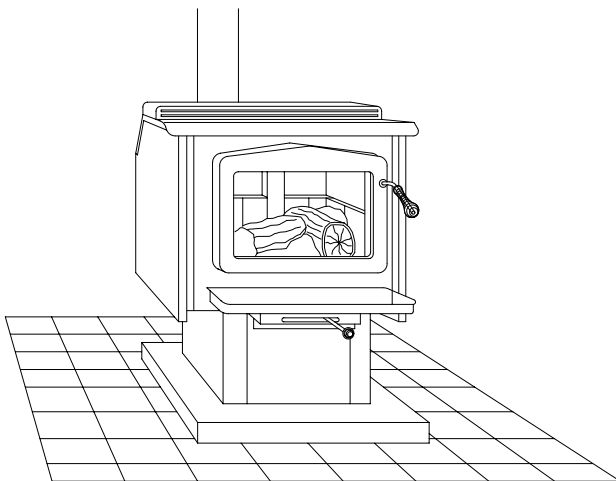




## OWNER'S MANUAL

### 1100 MODEL STOVE

US ENVIRONMENTAL PROTECTION  
AGENCY PHASE II CERTIFIED  
WOODSTOVE



Verified and tested following  
ULC S627 and UL 1482 Standards  
by:



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**READ AND KEEP THIS MANUAL FOR REFERENCE**

## **INTRODUCTION**

SBI INC., one of the most important wood stove and fireplace manufacturers in Canada, congratulates you on your purchase and wishes to help you get maximum satisfaction from your wood stove. In the pages that follow, we will give you advice on wood heating and controlled combustion as well as technical specifications regarding installation, operation and maintenance of the model you have chosen.

The instructions pertaining to the installation of your wood stove comply with ULC-S627 and UL-1482 standards.

**Read this entire manual before you install and use your new stove. If this stove is not properly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Failure to follow instructions may result in property damage, bodily injury, or even death.**

**Consult your municipal building department or fire officials about restrictions and installations requirements in your area and the need to obtain a permit.**

**Keep this instructions manual for future references.**

### **CAUTIONS:**

- HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.
- DO NOT USE CHEMICALS OR FLUIDS TO IGNITE THE FIRE.
- DO NOT LEAVE THE STOVE UNATTENDED WHEN THE DOOR IS SLIGHTLY OPENED.
- DO NOT BURN WASTES, FLAMMABLE FLUID SUCH AS GASOLINE, NAPHTHA OR MOTOR OIL.
- DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.
- ALWAYS CLOSE THE DOOR AFTER THE IGNITION.

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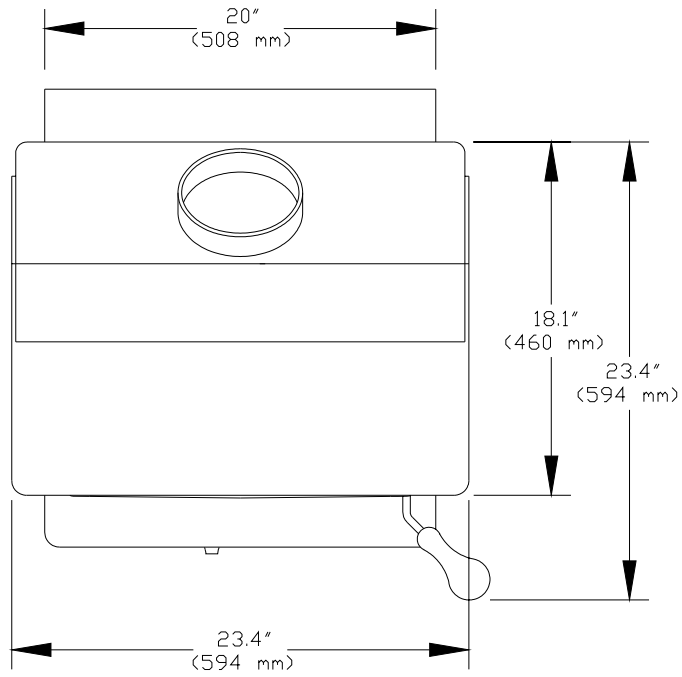
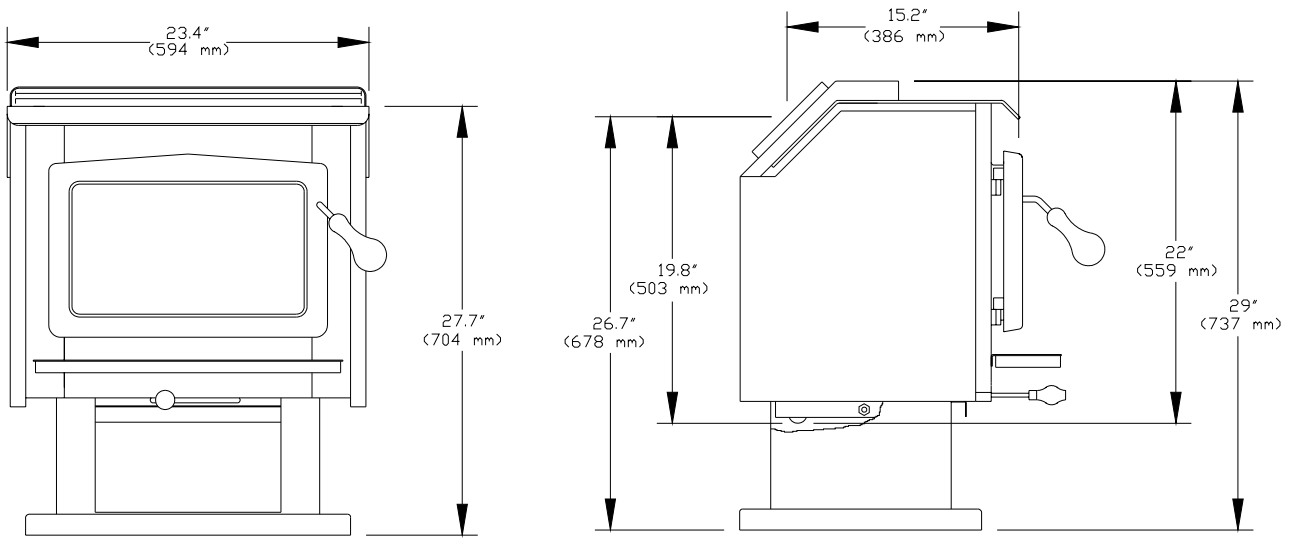


Figure 1

## **Section 1.0 – Installation Requirements**

In Canada the CSA B365 Installation Code for Solid Fuel Burning Appliances and Equipment and the CSA C22.1 Canadian National Electrical Code are to be followed in the absence of local code requirements. In the USA the ANSI NFPA 70 National Electrical Code and NFPA 211 Standard for Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances are to be followed in the absence of local code requirements.

**In addition to the national installation codes, local building and/or fire officials (or other authorities having jurisdiction) should be contacted to determine what restrictions and installation requirements might locally apply.**

When installed and operated as described in these instructions, the 1100 is intended to be used as the following:

- as a residential freestanding stove with vertical or horizontal connector.
- in a mobile home.
- in an alcove.
- as a Hearth mount stove for masonry or zero clearance fireplaces.

The 1100 is not intended for installation in a sleeping room.

### **1.1 Masonry & Zero Clearance Requirements**

The masonry fireplace must meet the minimum code requirements, or NFPA 211 or the equivalent for a safe installation. Contact your local Building Inspector for requirements in your area. An inspection of the fireplace should include the following:

**1) CONDITION OF THE FIREPLACE AND CHIMNEY:** Examine the masonry fireplace and chimney prior to installation to determine that they are free from cracks, loose mortar, creosote deposits, blockage, or other signs of deterioration. If evidence of deterioration is noted, the fireplace or chimney should be upgraded prior to installation. The insert must be tested and meet the requirements of UL 1482 (U.S.) and or ULC S628 (Canada) when tested in a masonry fireplace built per ULC S628. The factory-built fireplace must be listed per UL 127 or ULCS610. Clearances obtained from the masonry fireplace tests are also relevant for installation in factory-built fireplaces. Installation must include a full height listed chimney liner meeting type HT requirements (2100 degree F.) per UL 1777 (U.S.) or ULC S635 (Canada). The liner must be securely attached to the insert flue collar and to the chimney top

#### **2) INSTALLING SOLID FUEL INSERTS IN FACTORY-BUILT FIREPLACES :**

Means must be provided to prevent room air passage to the chimney cavity of the fireplace. This may be accomplished by sealing the damper area around the chimney liner, or sealing the fireplace front. The airflow within and around the fireplace shall not be altered by the installation of the insert (i.e. no louvers or cooling air or outlet ports are blocked), unless specifically tested as such for each factory-built fireplace manufacturer and model line. (Note – using a louvered face plate {surround} complies with this requirement).

**Note:** A custom made surround may be required or a modified Osburn surround may be used.

Alteration of the fireplace in any manner is not permitted with the following exceptions;

- i) i. external trim pieces which do not affect the operation of the fireplace may be removed providing they can be stored on or within the fireplace for re-assembly if the insert is removed.
- ii) the chimney damper may be removed to install the chimney liner.

Circulating air chambers (i.e. in a steel fireplace liner or metal heat circulator) shall not be blocked. Means must be provided for removal of the insert to clean the chimney flue. Inserts that project in front of the fireplace must be supplied with appropriate supporting means. A permanent metal warning label must be attached to the back of the fireplace stating that the fireplace must be restored to its original condition for safe use without the insert.

3. **CHIMNEY CAPS:** Mesh type chimney caps must have provision for regular cleaning, or the mesh should be removed to eliminate the potential of plugging.
4. **LINER:** The chimney must have an acceptable masonry liner suitable for solid fuel, otherwise a continuous stainless steel liner must be installed.
5. **ADJACENT COMBUSTIBLES:** The fireplace should be inspected to make sure that there is adequate clearance to combustibles, both exposed combustibles to the top, side, and front as well as concealed combustibles, in the chimney and mantel area. Your local inspector should have information on whether older fireplaces are of adequate construction.
6. **OPENING SIZE:** Refer to “*Suitable Fireplace Dimensions*” for suitable size fireplace openings.  
***NOTE: A METAL TAG IS TO BE FASTENED TO THE BACK WALL OF THE FIREPLACE, IF THE FIREPLACE HAS BEEN MODIFIED TO ACCOMMODATE THE INSERT.***

## **1.2 Venting requirements**

The flue is a critical component to a satisfactory installation. Your Osburn will attain its best performance if installed with a chimney that generates its own draft. The minimum requirement of a flue will be the installation of a flue connector (the liner must conform to UL1777 chimney liners) from the insert into the first flue tile of the chimney (USA), or a continuous stainless steel liner (the liner must conform to the Class 3 requirements of CAN/ULC-S635) directly connected to the flue outlet (Canada). A continuous 6" (152mm) stainless steel liner from the top of the chimney is the optimum system and will provide the best performance, as well as compensate for poor draft situations caused by large cross-sectional chimneys. The insert will not work without a positive seal in the chimney.

Chimneys constructed outside of the home, on an exterior wall, should be avoided if possible, especially in colder climates. Outside chimneys may not draw as well and may downdraft due to the difficulty in heating them up to operating temperature. Cooler chimneys will result in increased creosoteing, less draft, and poorer performance. Draft is proportional to overall chimney height as well as to stack temperature. Draft can be increased by increasing chimney height, and by reducing heat loss from the chimney through an insulated liner. Ensure that all joints in the flue systems are tightly sealed, since any leaks will result in reduced performance as well as a possible safety hazard.

## **1.3 Residential Installation Instructions**

Choose a location for the unit which meets the minimum clearances to combustibles (see Table 1.1). For other

than masonry chimneys determine if the factory built chimney will pass between the ceiling joists; if not, choose a new location so that it will, while still maintaining the minimum clearances.

Mark the location for the floor protection† (if required) as noted in Figure 1.2.

**Note:** If outside air for combustion is to be used it should be provided for at this time. This requires that the Osburn *Fresh Air Kit Wood* (#OA10500) be installed (refer to the installation instructions which are provided in the outside air kit. Install the unit.

#### **Floor Protection Requirements (for combustible floors)**

If the stove is to be installed on top of a combustible floor it must be guarded by a non-combustible material extending beneath the heater and to the front and sides as indicated in Figure 1.2, or to the nearest permitted combustible material. Floor protection must extend beneath, and 2" (51 mm) to the sides of a horizontal connector if one has been used.

Please note that floor protection is required under the pedestal models for spark and ash shielding, but not for limiting floor temperatures from the radiant heat of the stove. The stove was designed and safety tested so that without any protection the floor would not overheat even under over firing conditions. Please refer to local codes for suitable floor protection materials.

#### **1.4 Manufactured (Mobile) Home Installations – Additional Requirements**

1. The stove must be bolted to the floor (secure the unit by prying out the two plastic plugs in the pedestal, and installing the two 3/8" x 3-1/2" (9.8mm x 88.9mm) lag bolts through the holes provided).
2. The unit ***must*** be provided with outside combustion air.
3. Clearance from the top of stove to an unprotected ceiling should be a minimum of 52" (1321mm).
4. The stove must be used connected to the chimney with listed double wall connector of 6" (152 mm) diameter.
5. The chimney system must be a minimum of 12' (3658 mm) in height from the hearth pad to the top of the chimney assembly.

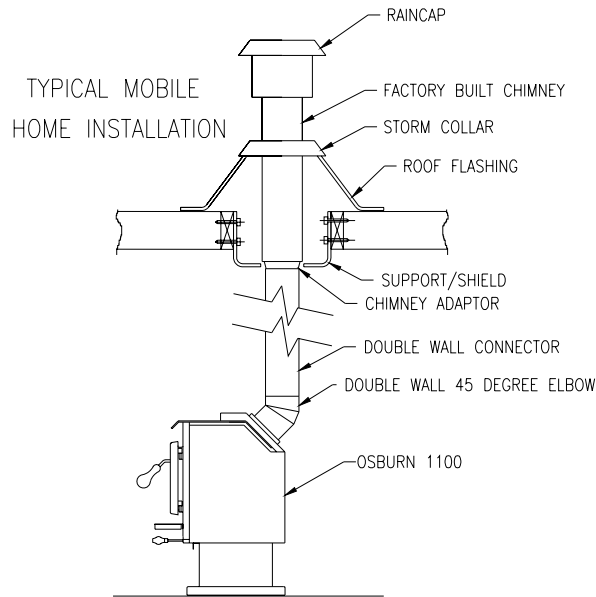


Figure 1.1 Necessary installation components.

Note: For manufactured home installations in the USA, the stove must be grounded to the frame of the home using a # 8 ground wire with approved terminations and star lock washers.

**CAUTION: THE STRUCTURAL INTEGRITY OF THE MANUFACTURED HOME FLOOR, WALL, CEILING / ROOF MUST BE MAINTAINED.**

**CAUTION: DO NOT INSTALL IN A SLEEPING ROOM.**

## **1.5 INSTALLATION**

Installation and operation must follow the information given in this manual.

### **1.5.1 Installation safety**

1. Wherever possible try to have a certified Wood Heating Education & Research Foundation (WHERF USA) or Wood Energy Technology Transfer (WETT Canada) technician do the installation.
2. It is important to follow these installation and operation instructions. An improperly installed or operated stove could result in a fire or other safety hazard or damage to the unit which would not be covered by the warranty.

Contact local building or fire officials about restrictions and installation requirements in your area. You should be familiar with the installation and be sure that the work is done in accordance with this manual. In Canada follow the CSA B365 and the CSA C22.1 installation codes. In the US follow the ANSI NFPA 70, and 211 installation codes.



3. Proper ventilation is required. If an occupant has respiratory problems, mechanically filtered ventilation or heat recovery ventilation is recommended.
4. Where lesser clearances are desired, consult your local authority as regulations may vary regarding the use of clearance reducing devices. Listed wall and floor shields are available to reduce clearances, and most building codes provide information on materials which may be used to reduce clearances.
5. Maintain at least the minimum clearances to combustible material as specified in this manual. Clearances are measured to the nearest part of the stove.
6. Do not connect this unit to any air distribution duct.
7. In any home, we recommend installation of a commonly available listed smoke detector or alarm. Normal operation of the stove will have no effect on the alarm.
8. Connect the stove only to a lined masonry chimney conforming to building codes for use with solid fuel or to a listed factory built chimney suitable for use with solid fuel.
9. **CAUTION:** Do not fill the framed space around the factory-built chimney with insulation or any other material. Insulation placed in this area could cause adjacent combustibles to overheat.
10. Minimum chimney size is 6" (152 mm) diameter. Maintain a 12' (3658 mm) minimum overall height measured from the base of the appliance. Masonry and metal chimneys should be inspected to check deterioration and to determine if they meet the minimum requirements, and should be upgraded if necessary. The chimney must extend at least 3' (914 mm) above the roof and at least 2' (610 mm) above the highest point within an area of 10' (3048 mm) of the chimney. The Hearth mount unit is to be connected only to a lined masonry chimney and masonry fireplace, or zero clearance fireplace and chimney conforming to building codes for use with solid fuel. Do not remove bricks or mortar from the existing fireplace when installing the Hearth mount unit.

## 1.5.2 Clearances to combustibles

Clearances to any combustibles when measured directly out from the front and up from the top of the stove, must be a minimum of 48" (1219 mm). The stove should be placed to maintain the minimum clearances to combustible walls specified for the connector used.

Table 1.1

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS						
		VERTICAL & HORIZONTAL	ALCOVE WITH DOUBLE WALL CONNECTOR	HEARTH MOUNT	GSW, SELKIRK, SIMPSON DURA-VENT, AMERI-TEC., SECURITY, DOUBLE WALL	INDUSTRIAL CHIMNEY COMPANY
		SINGLE WALL CONNECTOR	MIN. WIDTH: 49.5" (1260mm) MAX. DEPTH: 48" (1220mm)			DOUBLE WALL HALF OR FULL SHIELD
<b>To Unit:</b>						
Sidewall	A	16" (406 mm)	13" (330 mm)	13" (330 mm)	16.5" (419 mm)	16.5" (419 mm)
Backwall	B	20" (508 mm)	12.5" (318 mm)		12" (305 mm)	8.5" (216 mm)
Corner	C	14" (356 mm)			6" (152 mm)	6" (152 mm)
<b>To Connector:</b>						
Sidewall	D	25" (635 mm)	21.5" (546 mm)	22" (559 mm)	25" (635 mm)	25" (635 mm)
Backwall	E	17.5" (445 mm)	10" (254 mm)		9.5" (241 mm)	6" (152 mm)
Corner	F	19" (483 mm)			12" (305 mm)	12" (305 mm)
<b>To Unit:</b>						
Side Facing	G			9" (230 mm)		
Mantle	H			27" (686 mm)		
Hearth	J			5" (127 mm)		
<b>From Hearth:</b>						
Ceiling Height		84" (2134 mm)	84" (2134 mm)	74" (1880 mm)	84" (2134 mm)	84" (2134 mm)
<b>Fireplace Opening:</b>						
Height	K			23" (584 mm)*		
Width	L			23.4" (594 mm)		
Depth	M			8" (203 mm)		

\*Minimum fireplace opening height includes the use of the "Low Profile Elbow". Standard elbows require 24" (610 mm) or more clearance height. Minimum fireplace width and depth are to accommodate a flue liner. The ICC chimney support must protrude into the room by 3" (75 mm). The other chimney brand supports must protrude into the room by 2.5" (65 mm) as shown in Figure 4. For horizontal installations, single wall connector must not be less than 18" (455 mm) from the ceiling.

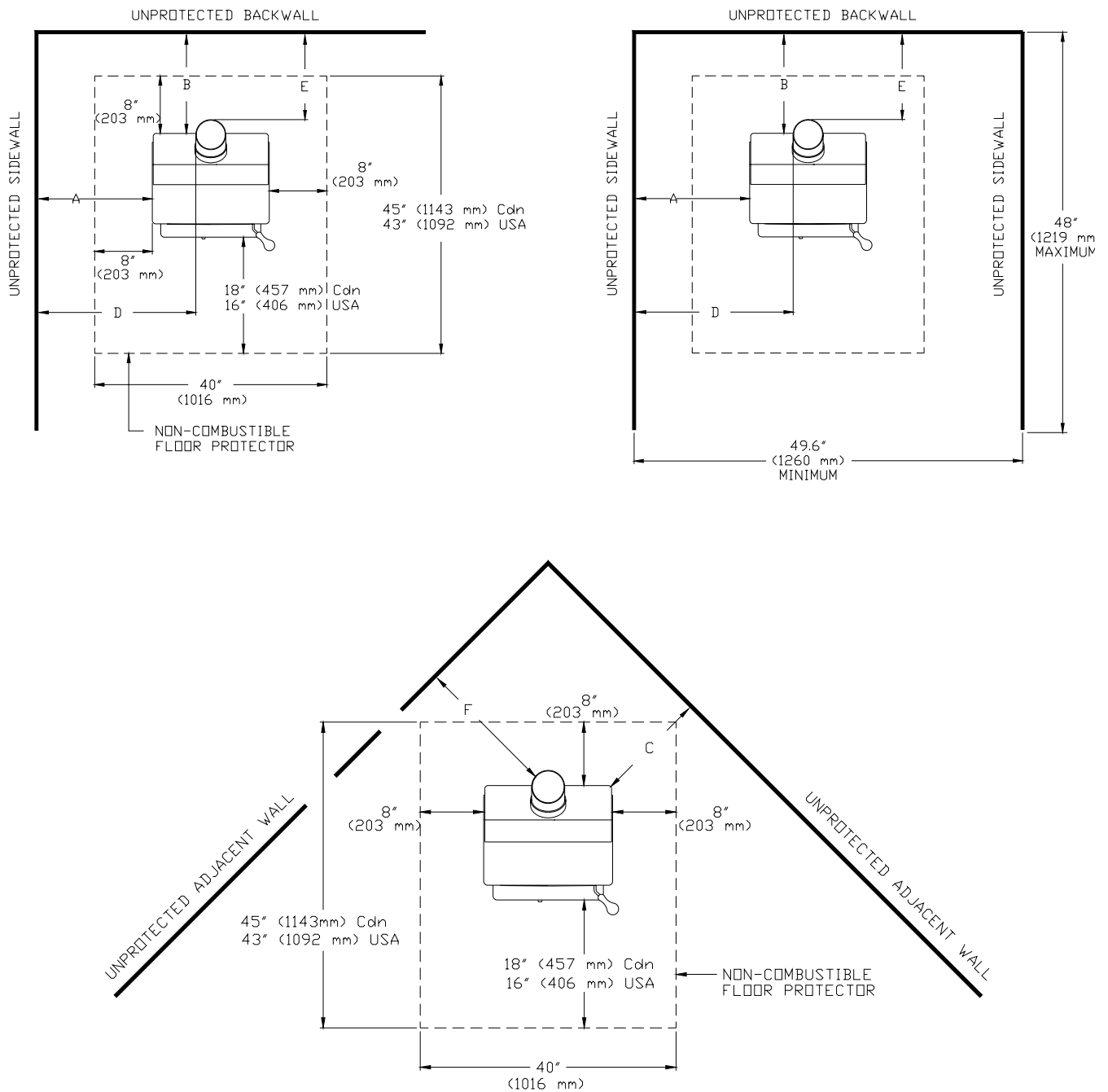


Figure 1.2

## Australia

When using a Benja Mark II flue kit with a 1200 mm long, double skinned, 1801 circumference, polished reflector fitted to the pipe, the clearances are:

- A. 150 mm      B. 350 mm      C. 150 mm

### **1.5.3 Suitable fireplace dimensions**

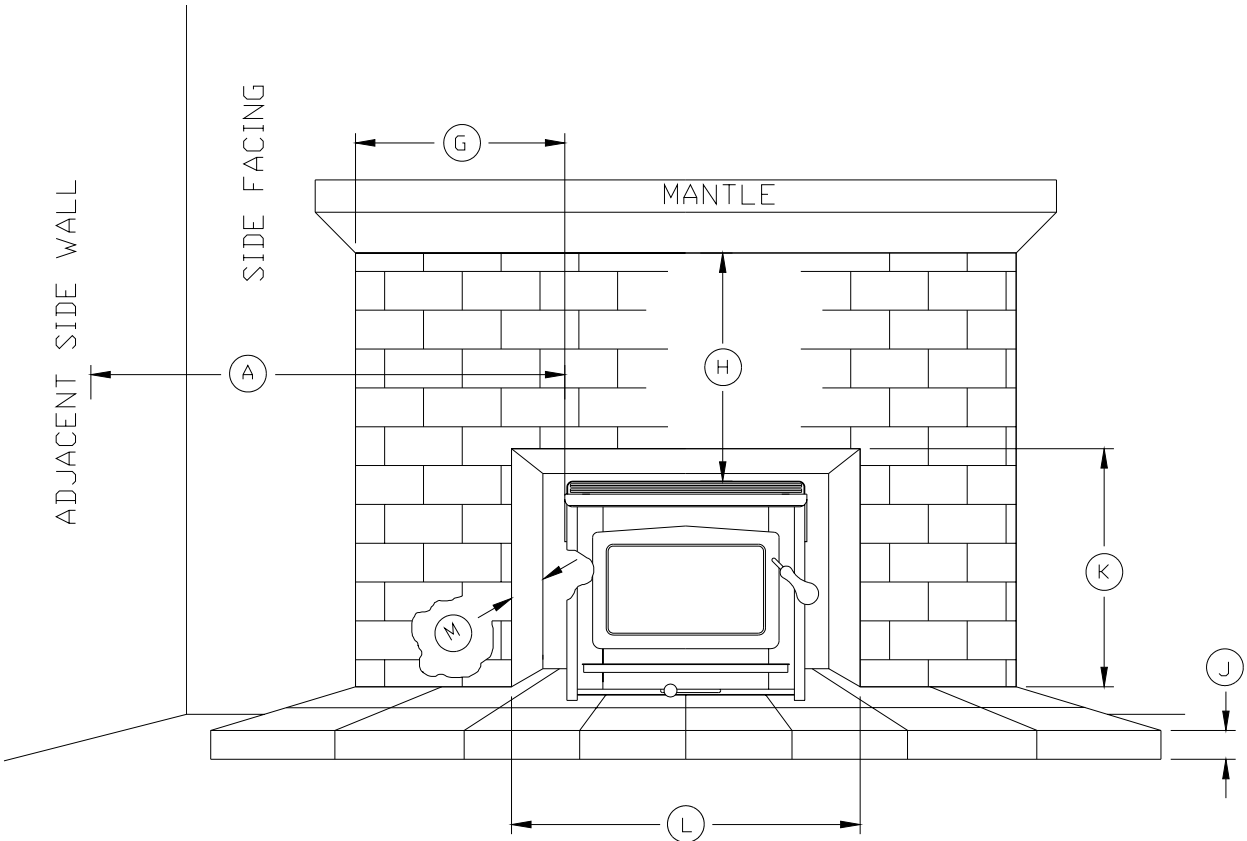


Figure 1.3

#### **1.5.3.1 Installation instructions**

1. Inspect the fireplace according to the safety information and fireplace requirements and have it cleaned and/or upgraded as necessary.
2. If the installation of the unit renders the existing damper control inaccessible, it will be necessary to either secure the damper wide open, or remove it entirely. An inaccessible damper which may fall shut later could cause smoke to enter the room. This would be a nuisance as well as a potential health hazard. Figure 1.4 illustrates a typical fireplace installation.
3. Install the liner in the chimney.
4. Seal the space between the liner and the chimney.

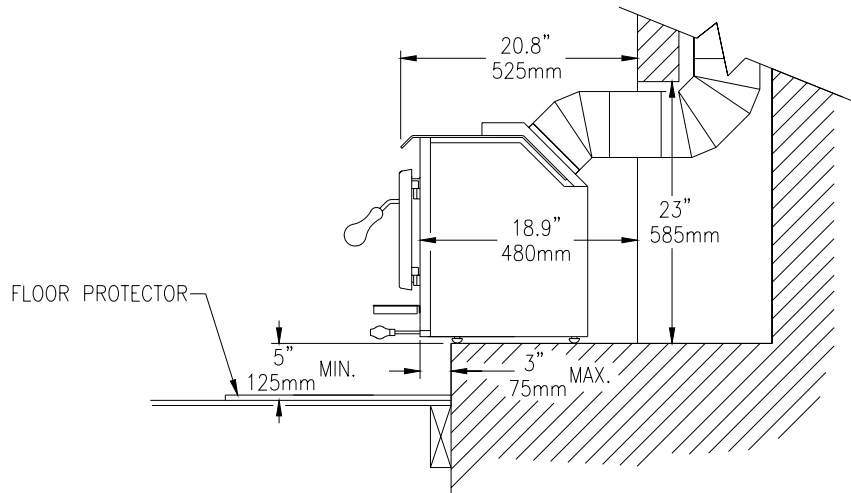


Figure 1.4

## **1.6 Chimney System**

### **1.6.1 Definitions**

For clarity, the following definitions should be used with respect to these instructions:

A *chimney system* consists of the *connector* off the top of the stove, and a *chimney*, which joins to the connector and terminates outside the building envelope.

A *chimney* can be a *masonry chimney* (of masonry construction with an inside liner), or a *factory built chimney*.

A *factory built chimney* can be a *double walled chimney* (two concentric pipes with insulation sometimes referred to as an insulated *solid pack*, or an *air cooled chimney* (three concentric pipes, with insulation between the first and second pipes, and air between the second and third pipes).

A *single walled* connector is a single pipe.

A *double walled* connector has two concentric pipes, no insulation, and is an *air cooled* connector.

### **1.6.2 Components**

***NOTE:*** All connector and manufactured chimney components must be ***LISTED COMPONENTS***. Masonry Chimneys must be ***Code Complying***, and have a ***listed*** solid fuel burning liner (of stainless steel or clay refractory construction).

### **1.6.2.1 Factory Built Chimney System**

The following are the generic components required for a factory built chimney system for residential installations:

Chimney – in the USA use a 6” diameter (152 mm) listed UL 103 HT chimney system and components

Chimney – in Canada use 6” diameter (152 mm) listed ULC S629 chimney system and components

MANUFACTURED (MOBILE) HOME CHIMNEY SYSTEM

In addition to the requirements of section 1.6.2 the following components are required for manufactured (mobile) home installations:

A spark arrestor must be employed with the rain cap

Double walled connectors must be used instead of single walled connectors

For manufactured (mobile) home installations in the *USA only* and where the chimney system has employed a *solid pack chimney*, a *vented roof flashing* must also be used.

### **1.6.2.2 Residential Close Clearances Chimney System**

In addition to the requirements of section 1.6.2.1 the following components are required for residential close clearances installations:

Double walled connectors must be used instead of single walled connectors

### **1.6.3 General Installation Requirements**

***CAUTION: DO NOT FILL ANY FRAMED SPACE AROUND THE FACTORY-BUILT CHIMNEY WITH INSULATION OR ANY OTHER MATERIAL. INSULATION PLACED IN THIS AREA COULD CAUSE ADJACENT COMBUSTIBLES TO OVERHEAT.***

***DO NOT USE MAKESHIFT COMPROMISES DURING INSTALLATION AS THEY MAY BE SAFETY HAZARDS, AND A FIRE COULD RESULT.***

***DO NOT CONNECT THIS UNIT TO A CHIMNEY SYSTEM SERVING ANOTHER APPLIANCE.***

***DO NOT CUT RAFTERS OR CEILING JOISTS WITHOUT FIRST CONSULTING A BUILDING OFFICIAL TO ENSURE STRUCTURAL INTEGRITY IS NOT COMPROMISED.***

### **1.6.3.1 Connectors**

The minimum connector diameter is 6" (152 mm). A minimum connector length of 4 ft (1.22 m) is recommended for best results. Restrictions to stack gas flow (such as using more than two 90° elbows) should be avoided and any horizontal runs should be kept to a minimum length, especially with short chimneys. The connector pipe, which joins the unit to the chimney, may be of either single or double walled construction. Connector pipe should be a minimum of 24-gauge steel.

The connector pipe itself must not pass through any combustibles, nor may it pass through non-combustibles and into a concealed space (such as an attic, roof space, or closet). If passing through a wall, ceiling, or into a masonry chimney, use either chimney components listed for that specific use, or means acceptable to local authorities having jurisdiction over the installation.

Install sections of single wall or double wall connector between the stove and the chimney. Secure all connector pipe joints with a minimum of three sheet metal screws. All connector and factory built chimney pipes must be installed with the male or crimped end down to prevent creosote dripping outside the joints. If non-telescopic sections are to be used, they must be cut to length, allowing for overlap. Use three (3) screws to attach the connector section to the flue collar of the stove. Listed double walled connectors should be installed in accordance with the vent manufacturer's installation instructions.

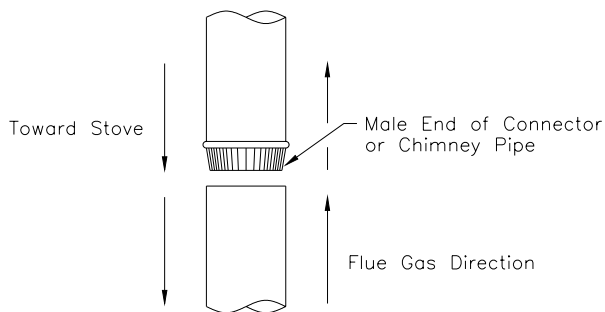


Figure 1.5 - Joints in Chimney System

### **1.6.3.2 Chimney Systems**

The minimum chimney size is 6" (152 mm) in diameter. The minimum overall height of the chimney system, measured from the base of the appliance is 12' (3.66m). Existing masonry and metal chimneys should be inspected to check for deterioration and to determine if they meet the minimum installation requirements; they should be upgraded if necessary. In Canada, masonry chimneys must have or use a ULC S635 listed Class III liner in chimney systems that are not ULC S629 listed. Similarly in the USA a UL 1777 listed refractory or metallic liner must be used. At the point of penetration through the roof to the

outside of the building envelope, the chimney must extend at least 3' (914 mm) above the roof and at least 2' (610 mm) above the highest point within an area of 10' (3 m) of the chimney (see Figure 1.6).

Follow CSA Standard B365-M91 for methods and precautions to be employed when connecting the stove to a masonry chimney, and for installing thimbles (wall penetration assemblies) when the connection from the stove to the masonry chimney is made through a combustible wall.

When connecting to a factory built chimney, ensure that it is installed according to the manufacturer's listed instructions. If using an existing chimney, inspect and clean the chimney if required (this should be done by a licensed chimney sweep or a qualified professional).

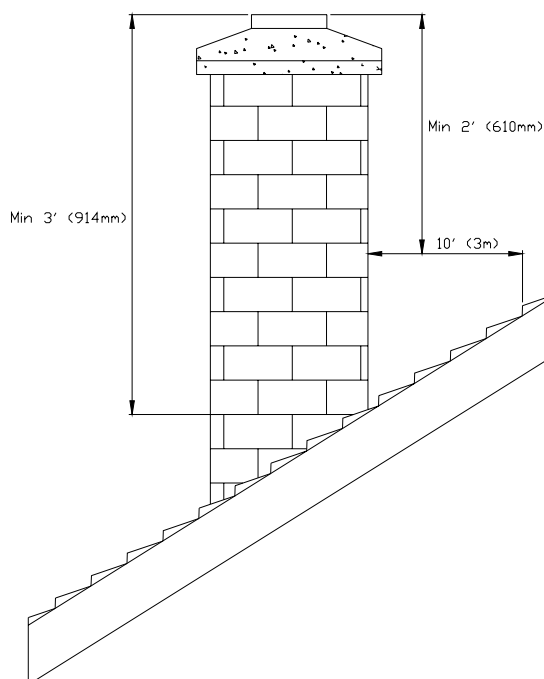


Figure 1.6 – Chimney height

### 1.6.3.3 Exterior Chimney

Chimneys constructed outside of the home on an exterior wall should be avoided if possible, especially in colder climates. Exterior chimneys may not draft well and in fact may down draft (reverse flow) due to the difficulty in heating them up to operating temperature while trying to evacuate the stack gases. All else being equal, cooler chimneys will have less draft than hotter ones; this may lead to creosoting and poor performance. If an exterior chimney is used to remove the stack gases the best results will be obtained by using a connector vertically off the unit to the highest possible point before elbowing off horizontally to the chimney. For efficiency and safety reasons the stove ***must not*** be installed with an insulated chimney connected directly to the appliance.



### **1.6.3.4 Draft**

Your Osburn stove will attain its best performance if installed with a chimney system that has proper draft. (Draft is the force that moves air from the appliance up through the chimney and is predominantly affected by the height and diameter of the chimney, and the stack temperatures of the stove). If you test the draft using a pressure gauge, the reading should be between .05 - .07 inches of water column (w.c.) at a medium high fire. Drafts of less than .03" w.c. will cause operation difficulty while too much draft (greater than .10" w.c.) will result in over-firing of the stove. This can result in excessive operating temperatures. If this is the case, a manual damper may be installed in the vertical connector pipe to help reduce excessive draft.

### **1.6.4 Typical Types of Chimney Systems**

There are basically two types of chimney systems; one employs an existing masonry chimney, while the other employs a manufactured or factory built chimney. In either system the chimney may be of an interior or an exterior type. The following illustrations are provided to demonstrate the basic components required for a proper and safe installation. The components identified may not appear exactly as those purchased – the manufacturers’ installation instructions and specified clearance distances should always be followed in accordance with local and national installation codes. In Canada the [CSA B365](#) and the [CSA C22.1](#) installation codes are to be followed. In the USA the [ANSI NFPA 70](#) and [ANSI NFPA 211](#) installation codes are to be followed.

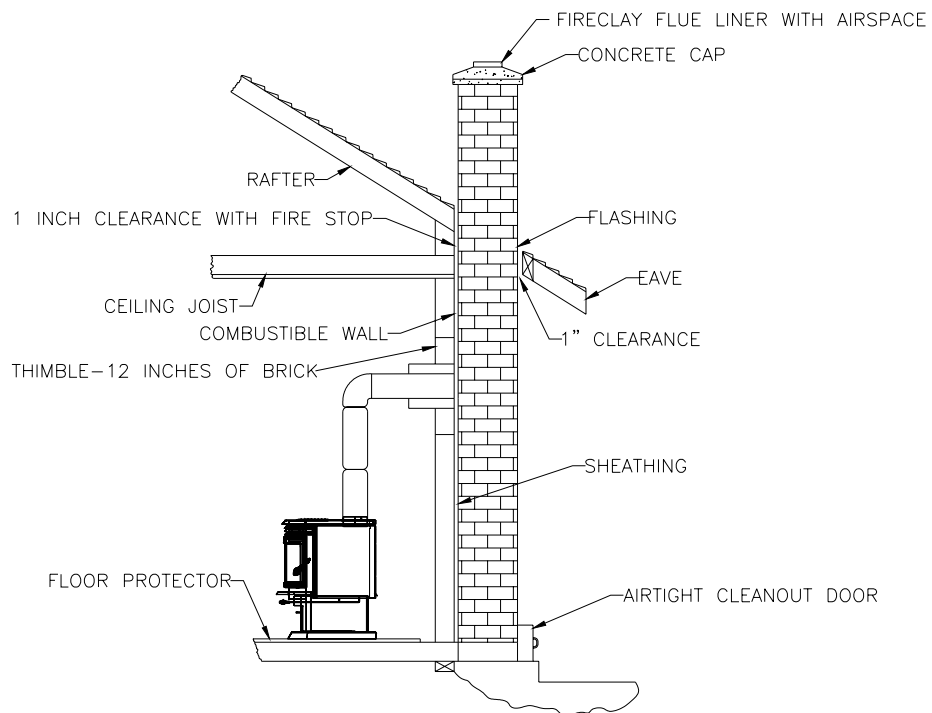


Figure 1.7 Connection to a Masonry Chimney (Exterior Shown)

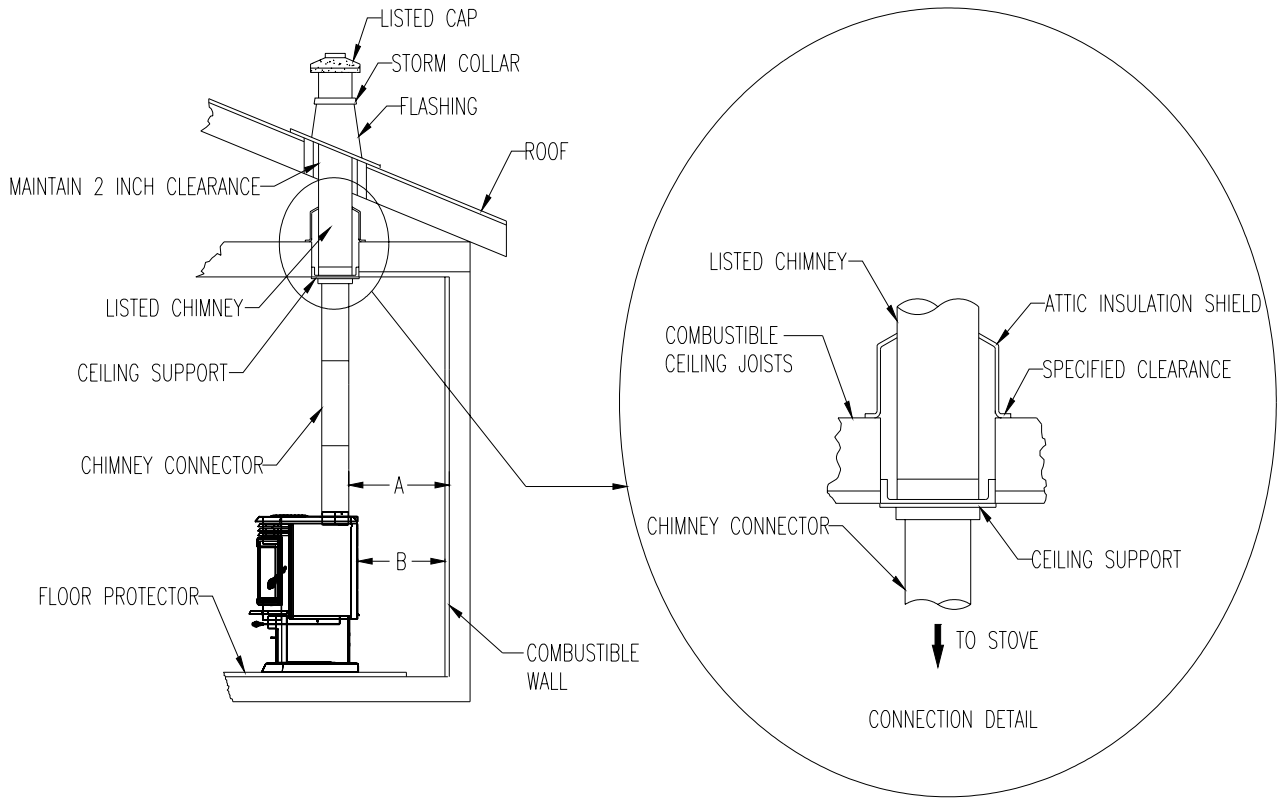


Figure 1.8 Connections to a Factory Built Chimney (Interior Shown)

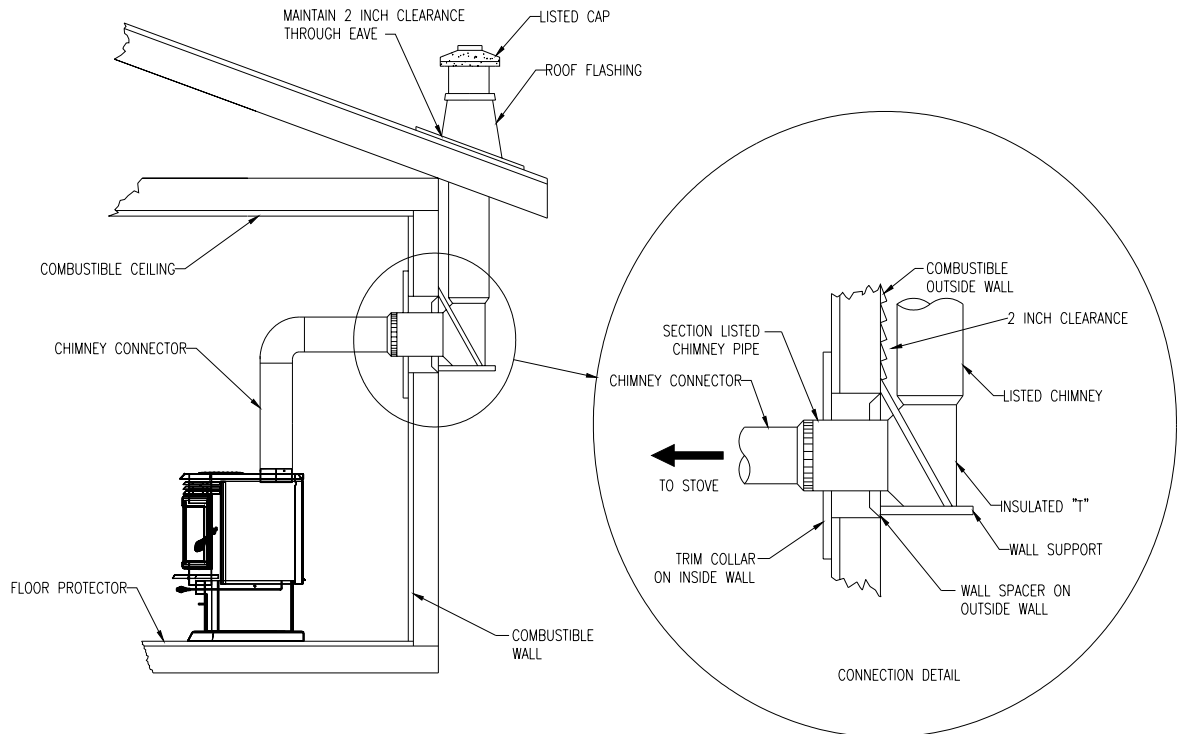


Figure 1.9 Connection to a Factory Built Chimney (Exterior Shown)

## 2.0 - Operation

### 2.1 Safety Information

1. This stove is designed for safe operation **WHEN BURNING CORDWOOD ONLY**. Altering or modifying the unit or installation without proper authorisation will void the certification, warranty, and safety listing, and may result in a safety hazard.
2. For safety reasons, never leave the unit unattended with the door open or ajar. An open door, and especially a door partially open or cracked, if left for longer than required for good ignition can potentially result in unsafe chimney temperatures, and if left unattended in hot embers or ignited fuel falling out of the unit. Prolonged door open operation is not necessary provided the unit has been properly installed and dry kindling is used to start the fire.
3. Do not abuse the unit, either by over firing or by using wood or combustibles with salt content, or harmful chemicals. Misuse is not covered by warranty.
4. Even though your Osburn has been specifically designed and tested to prevent smoke spillage, always open the door slowly as this will minimise the likelihood of smoke spillage or a back draft of flame or smoke into the room.
5. Never use gasoline type lantern fuel, kerosene, solvents, charcoal lighter fluid, or inflammable liquids to start or "freshen" a fire in the stove. Keep all such liquids well away from the stove while it is in use.
6. All stove surfaces become very hot during operation. Care is needed, especially with children, to avoid contacting these surfaces.
7. Do not elevate the fire by means of grates.
8. **CAUTION: DO NOT OVER FIRE THIS HEATER.** Do not burn fuel in the stove at a rate higher than that which will cause the ember bed level to exceed half the door opening height. If burning hot fires regularly, purchase a stovetop thermometer, and do not exceed 840° F (450° C) as measured on the Cook top. If the door handle of the stove becomes excessively hot to the touch, consider this to be an indication of over firing. Over firing can result in a safety hazard and can permanently damage the stove and chimney. This damage is not covered by the warranty.
9. Although the ceramic glass is extremely durable under any normal use, a few precautions are required. Do not attempt to push logs further into the fire by using the door, as the glass may break if any solid object heavily contacts it.

10. Never operate the stove with the door open, or cracked slightly open, except briefly during the lighting operation, and during refuelling. Leaving the door open continuously could seriously overheat the chimney and adjacent combustibles. Do not operate the stove if there is an abnormal air leakage into the stove, such as through deteriorated gaskets or cracked or broken glass. Do not operate the stove without a door gasket. Leakage can result in overheating, or in very airtight homes, could possibly cause smoking into the room. Smoke may contain carbon monoxide, which is poisonous, and in sufficient quantities is a health hazard.

## **2.2 Fuel**

1. Fuel for the stove must not be stored closer than the required clearances to combustibles and not in the space required for charging and ash removal.
2. Your Osburn stove is designed to burn *CORDWOOD FUEL ONLY*. Do not burn coal, charcoal, or trash in the unit. Highly flammable items such as trash may ignite creosote in the chimney, resulting in a chimney fire. Never burn salt wood, beach wood, chemically treated wood, or wood removed from salt water, since the deposits left will deteriorate the firebox. Damage caused by chemicals or salt is not covered under warranty.
3. Seasoned dense wood is recommended. Wood should be air dried in a covered ventilated area for six months to a year or more. This reduces the moisture content of the wood, resulting in better stove performance. Wood species with moisture content of 20% or less are ideal. Dry seasoned wood can be distinguished from green wood by the checks or cracks in the ends.
4. Wet or green wood will tend to cause the fire to smoulder, producing large amounts of creosote. Creosote buildup could result in a chimney fire. This wood will also prove difficult to keep burning properly, and fires will tend to go out. Green wood produces very little heat, and sometimes causes customers to think that the stove does not work. If you must burn wet wood, use only small amounts mixed with dry wood.
5. Decayed wood or low-density wood has very little energy content or heating value, and will not burn satisfactorily for long periods of time.

An example of the energy values of some common wood fuels is given in Table 2.1  
For recommended wood sizes, refer to the specifications.

Table 2.1 Common Heating Values of Cordwood

Hardwoods	Million Btu/Cord	Softwoods	Million Btu/Cord
Birch	23.6	Douglas Fir	20.6
White Oak	28.3	Hemlock	17.1
Alder	17.6	Jack Pine	18.4

### **2.2.1 Simple Wood Moisture Test**

Add one large piece of wood to the top of an established fire. If it starts to burn on three sides. Within one minute, it is dry and seasoned and right for burning. If it turns black and starts to burn.

In three minutes, it is damp. If it turns black and does not start burning until after five minutes, it is green and wet. If it hisses at any time the wood is soaked and will not burn until excess moisture is boiled away.

### **2.3 Notes About First Firing**

Before firing ensure that the room is well ventilated. Curing the paint is recommended to preserve the best quality finish. Heating the stove up too intensely on the first fire will dull and lighten the colour on overheated areas, and cause smoke and odour to be emitted into the room. To cure the paint, the first two fires should be burned for only about twenty minutes each.

Allow the stove to get warm only but not hot, i.e. 250° F (120° C) as measured by a stovetop thermometer, and allow the stove to cool down. Light a third fire and burn it for about forty minutes to 450° F (230° C) or less. Once again cool the stove to room temperature, then operate it according to the following instructions. This extra care will result in a more durable, and uniform finish.

### **2.4 Lighting A Fire**

1. Place enough crumpled balls of newspaper or other paper into the stove to cover the bottom of the firebox.
2. Place small dry kindling on the crumpled paper.
3. Place larger dry kindling on top of the small kindling.
4. Open the draft control fully to the right (located on the front of the stove, Figure 2.1)
5. Light a fire at the bottom of the crumpled paper and close the door. If the fire tends to go out, momentarily hold the door slightly ajar to fan the fire. As soon as the fire catches hold, close the door.

6. Ideally the large kindling should be burned until a thick bed of red embers is obtained. At that point, add cordwood fuel and continue to operate the draft control wide open until the fire is well established. Once the firebox is hot, the draft control can be partially closed by moving the handle to the left to adjust the intensity of the fire.

Open the draft control (located on the front of the stove) fully by moving it from the left to the right, as shown in Figure 2.1 and as indicated on the ash shelf trim.

Use the following table to adjust the draft control to the desired burn rate:

BURN RATE	DRAFT SETTING
Low & Medium Low	Move Control against the L.H. side.
Medium	Move Control towards the right by 2" (51mm) from closed position.
Medium High	Move Control towards the right by 5.25" (133 mm) from closed position
High	Move Control against the R.H. side

Table 2.2

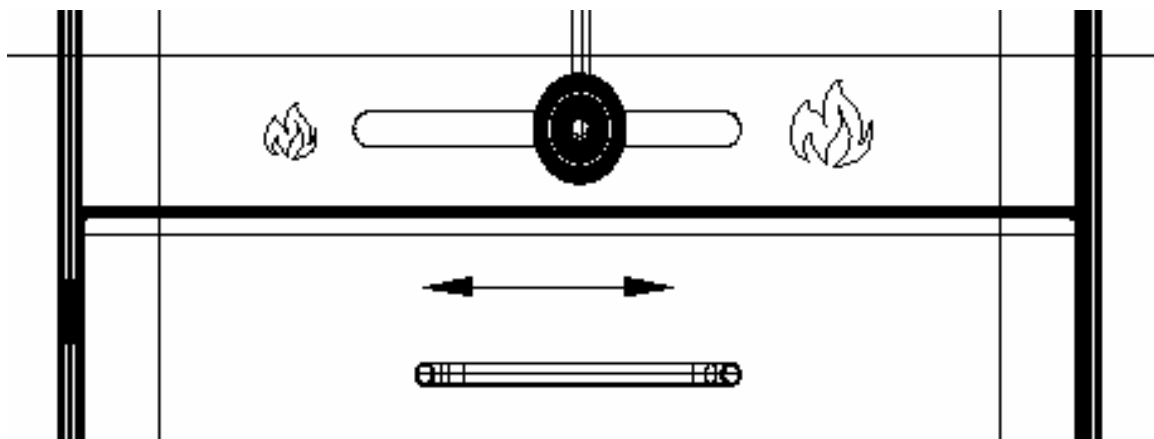


Figure 2.1

Moving the control handle to the right will increase the amount of air flowing down the front across the glass door and into the lower front of the firebox.

Closing the draft control down too soon will hurt combustion efficiency, and result in creosote build-up in the chimney (which could lead to a future chimney fire).Figure 2.1 Draft control

## **2.5 Maintaining The Fire**

Your Osburn stove will work best if a thick bed of hot embers is maintained in the bottom of the firebox, and a minimum of two large pieces of seasoned fuel are added. Combustion efficiency is largely related to establishing a hot ember bed, and hot firebox temperatures. The quicker the stove and fuel get up to operating temperature, the better. A small intense fire is preferred to a large smouldering fire, both to improve combustion efficiency and to reduce the amount of creosote emitted. The best performance will be obtained by adding relatively small amounts of fuel to a well established ember bed, and then operating with the air inlet control open long enough to achieve a hot fire. Cordwood should be placed with air in between individual pieces. Use a poker to make an air channel in the embers below the wood, this will allow air to flow under the wood for a more efficient burn.

Extended burn times can be accomplished by first operating the stove on a full load with the air inlet controls wide open. Once the fire is well established, and the moisture has been driven out of the wood, reduce the air control to a low setting. The unit should then burn cleanly without smoldering. If the fire smolders without flame, re-establish a hotter fire before moving the air control to the low setting. A yellow flame burning in the top of the firebox is a good indication of a clean efficiently burning fire.

Refuelling technique is important for good performance. The best efficiency and performance from your stove can be achieved by adding partial loads of fuel and allowing them to get up to operating temperature before adding additional fuel. Adding a large amount of fuel at one time will increase the time required to get the fuel up to its ignition temperature, and an extended time to reach optimal performance. When refueling, open the air control or hold the door partially open 1" (25 mm) or less long enough (less than 5 minutes) so that the fire has well established flames. When refuelling, care is required to ensure that fuel or embers do not fall out of the door opening. The unit will burn at about 2.0 to 2.5 lb/hr (.9 to 1.1kg/hr) at its minimum setting; approximately 20 to 25 lbs (9 to 11.3kg) of wood are required for an extended burn.

## **2.6 (Optional) Fan Installation and Operation**

1. Allow the stove to reach operating temperature (approximately one hour), before turning on the fan, since increased airflow from the fan will remove heat and affect the start-up combustion efficiency.

***NOTE: ENSURE THE FAN CORD IS NOT IN CONTACT WITH ANY SURFACE OF THE STOVE TO PREVENT ELECTRICAL SHOCK OR FIRE DAMAGE. DO NOT RUN CORD BENEATH THE STOVE.***

2. Turn the fan on or off with the two speed switch located on the fan housing. The switch settings are High, Off, and Low.
3. Follow the installation instructions that are with the fan kit #OA10510.

## **3.0 - Maintenance**

### **3.1 Care And Cleaning**

Clean the stove frequently so that soot, ash and creosote do not accumulate. Do not attempt to clean the stove, glass or door when the unit is hot. Special care must be taken with Gold surfaces in order to maintain the finish at its original brilliance. Do not use an abrasive glass cleaner which will scratch the glass or gold finish. Use only a soft clean damp cloth on the door, since some cleaners may remove the plating or paint.

#### **3.1.1 Glass Cleaning**

Under normal operation the glass is designed to stay clean. Glass cleaning may be required when burning damp wood and/or when burning slow fires. In general if the glass is not staying clean then the unit is being under fired. Dirty glass may be self cleaned by burning a hot fire (i.e. dry wood and opened draft controls) for a couple of hours. Good burning techniques will result in clean glass.

Hand clean the glass only when the fire is out and the stove is cold. A light film can usually be cleaned with paper towel and water. If heavy cleaning is required, a ceramic glass cleaner or polish is recommended, and should be rinsed off with water for best results.

#### **3.2 Ash Removal Using Ash Drawer**

***CAUTION: ASHES CAN START FIRES, EVEN AFTER SEVERAL DAYS OF INACTIVITY. NEVER DISPOSE OF ASHES IN A COMBUSTIBLE CONTAINER. REMOVE ASHES ONLY. WHEN STOVE AND ASHES ARE COLD***

Whenever the ashes get 3 – 4” (76 – 102 mm) deep in the firebox, they should be emptied into the Ash Drawer, using the following instructions:

1. Make sure the fire is out, and the stove is cold.
2. Lift the ash dump plug at the left rear of the firebox by hooking the poker through the loop on the cover and lifting up.
3. Push the ashes through the hole and leave some ashes to cover the ash dump plug once it is replaced. Leave an ash bed of approximately 1” deep on the firebox bottom to help maintain a hot ember bed.
4. Clear the ashes from the area where the plug normally sits so that it will properly seat against the opening edges; tap it down with your poker to ensure proper seating.



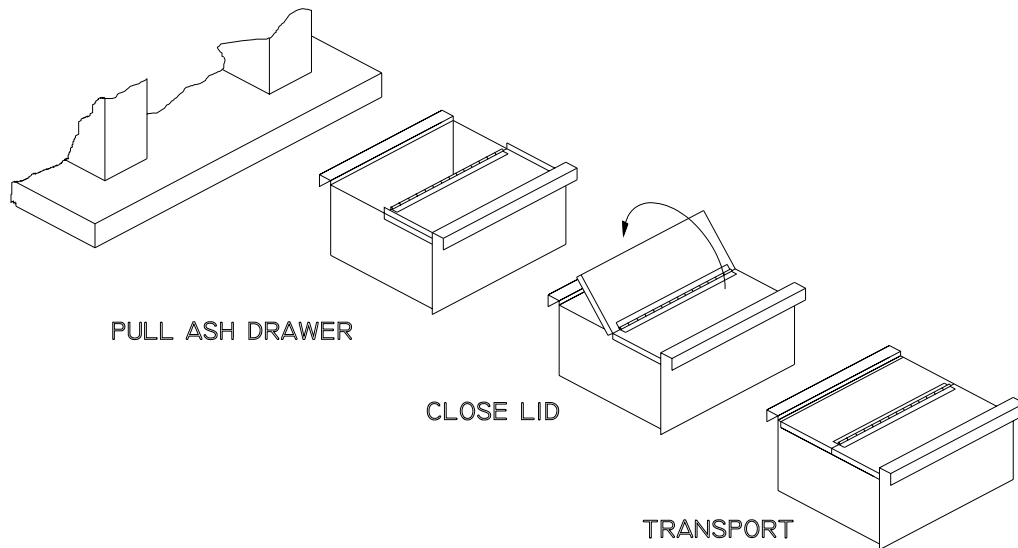


Figure 3.1 Ash removal

5. Cover the plug with the remaining ashes and continue operation of your stove as usual. The Ash Drawer is shown in Figure 3.1 and can be removed by pulling it out toward you. Lift the Ash Drawer slightly or the pedestal base may get scratched. Close the rear half of the Ash Drawer lid to prevent spillage. Ashes should be placed in a metal container with a tightly fitting lid. This closed container should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. Ensure the rear half of the lid is open before replacing the Ash Drawer.

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. Do not place other waste materials in the metal ash container. If bright embers are glowing above the ash dump port during a low or medium low fire, air may be leaking past the ash plug. If this is happening, a possible over fire hazard exists. The stove should be shut down and allowed to cool. Properly seal the ash dump plug to the stove.

### **3.3 Chimney Cleaning**

Regular chimney maintenance, as well as good burning practices, are required to prevent chimney fires. The chimney and the chimney connector pipe must be maintained in good condition and be kept clean in order to be safe. This means that the chimney should be checked regularly for creosote build-up. Inspection and cleaning of the chimney is facilitated by a removable baffle.

***CAUTION: OPERATION OF YOUR OSBURN 1800 WITHOUT THE BAFFLE MAY CAUSE UNSAFE AND HAZARDOUS TEMPERATURE CONDITIONS AND WILL VOID THE WARRANTY.***

Contact your local, municipal, state, or provincial fire authority for information on how to handle a chimney fire before there is any chance that it may happen.

When wood (especially green wood) is burned without adequate heat or air supply, it produces tar and other organic vapours (*smoke*), 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 which could be hazardous. Check frequently for creosote build-up. In the event of a stove or chimney component failure, replace only with equipment that is equivalent to the original, available from your Osburn dealer.

Your Osburn stove has been designed to reduce the amount of creosote produced. Even so, the chimney connector pipe and chimney should be inspected at least once every two months during the heating season to determine if a creosote build-up has occurred. If creosote has accumulated, it should be removed to reduce the risk of chimney fire. Call a professional chimney sweep, or go to your local Osburn dealer, purchase a chimney brush, and have the chimney cleaned.

### **3.4 Baffle Installation and Brick Notes**

Follow these instructions to remove the baffle:

1. Lift the front bricks over the front of baffle support and out
2. Raise the front baffle support up to right and move the left end down and out the door.
3. Remove the rear secondary air tube, see section 4.6.
4. Pull the rear baffle support forward off the rear bricks, lift the right end up and to the right, move the left end down and out the door. Remove the rear baffle bricks.
5. When replacing the baffle, reverse these directions. Ensure that the rear bricks are located on the back duct and on the side baffle supports. All baffle bricks must be centred with the middle gap closed for proper operation.

Have any damaged firebricks replaced. Check the firebrick for damage annually and replace the broken or damaged ones. A baffle layout diagram is shown in Figure 3.2.

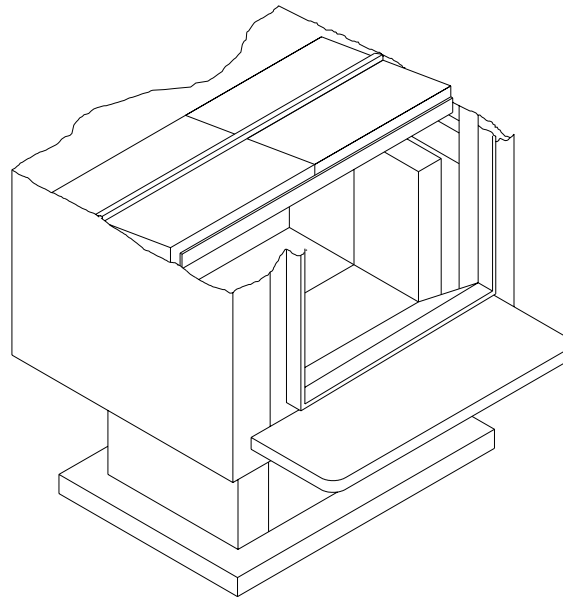


Figure 3.2

**BRICK LAYOUT**

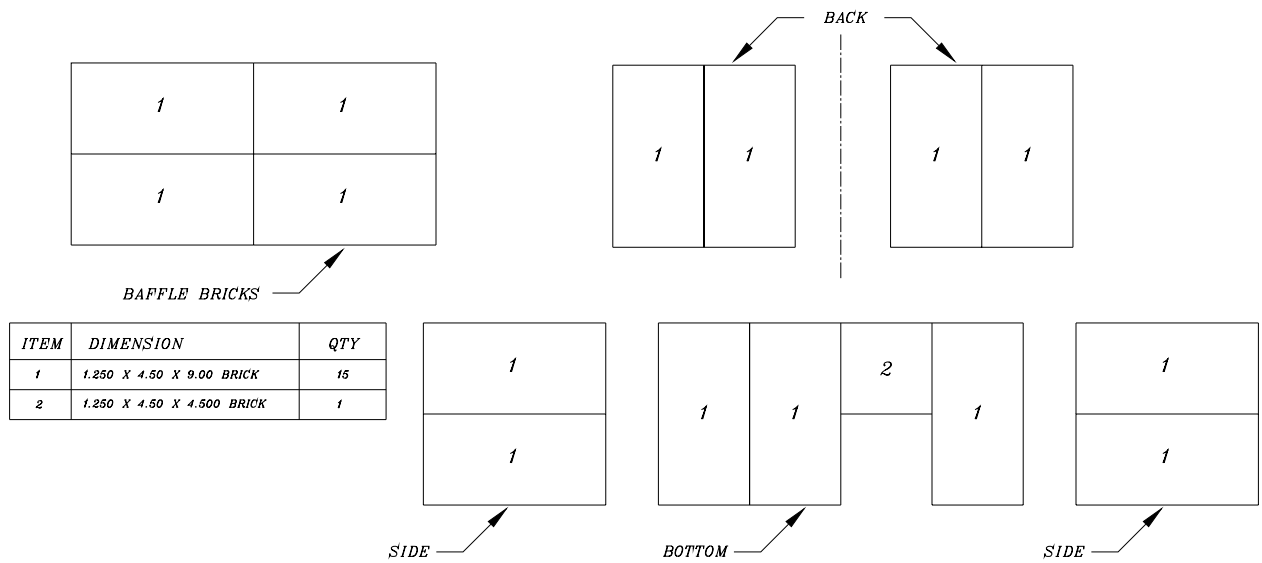


Figure 3.3

### **3.5 Secondary Air Tube Replacement**

(See Figure 3.4)

1. Remove cotter pin at LH end of tube.
2. Slide tube to right and lower tube end below LH plenum.
3. Slide tube to left to remove.
4. Reassemble in reverse order using a new cotter pin. The cotter pin is a hammerlock style and locks into place by hitting the head sharply with a hammer.
5. Note that any tube can be replaced without disturbing the baffle.

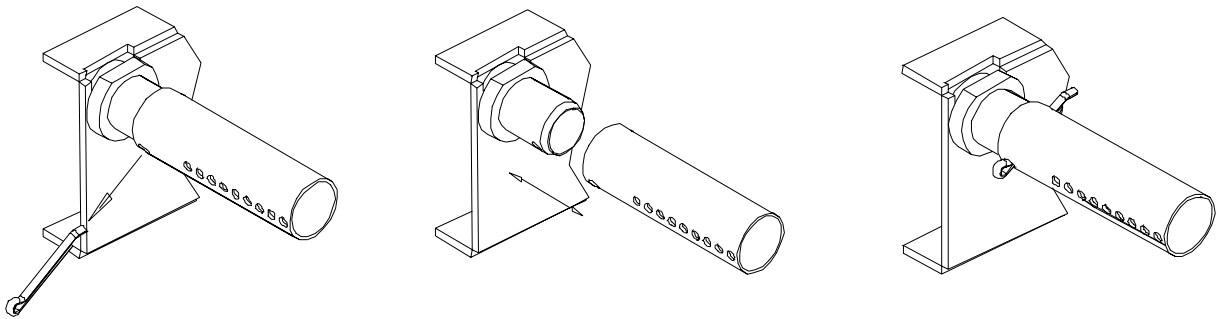


Figure 3.4 – Secondary Air Tube replacement

## 4- Troubleshooting

Symptom	Possible Cause	Corrective Action
<b>I Smoke in room</b>	<ol style="list-style-type: none"><li>1. Down draft</li><li>2. Chimney blocked</li><li>3. Chimney damper shut</li><li>4. Baffle out of position</li><li>5. New paint is curing</li></ol>	<ol style="list-style-type: none"><li>1. Upgrade chimney</li><li>2. Clean chimney</li><li>3. Open or remove damper</li><li>4. Correctly position baffle</li><li>5. Refer to instructions</li></ol>
<b>II Wood burns poorly or is slow to start or no heat</b>	<ol style="list-style-type: none"><li>1. Low draw</li><li>2. Wet or decayed wood</li><li>3. Blocked intake air</li></ol>	<ol style="list-style-type: none"><li>1. Upgrade chimney</li><li>2. Use proper fuel</li><li>3. Check intake air supply by removing ash drawer from pedestal and opening a window</li></ol>
<b>III Dirty glass</b>	<ol style="list-style-type: none"><li>1. Stove is being under fired</li></ol>	<ol style="list-style-type: none"><li>1. Refer to instructions</li></ol>
<b>IV Wood burns too fast</b>	<ol style="list-style-type: none"><li>1. Too much draft in chimney</li></ol>	<ol style="list-style-type: none"><li>1. Consult a qualified technician</li></ol>

## 5 – Specifications

FUEL TYPE	Cordwood
TEST STANDARDS	<ol style="list-style-type: none"><li>1. ULC S627 (CSA B366.2) &amp; UL 1482 residential and mobile home.</li><li>2. ULC S628 &amp; UL 907 fireplace inserts.</li><li>3. U.S. Environmental Protection Agency. Passed July 1990 emissions standards. EPA Emissions rate: 5.7 g/hr average</li><li>4. AS 4013/NZS 7403 AS 2918</li></ol>
HEAT OUTPUT RANGE	11000-35000 BTU/Hr (at 63% default efficiency). BTU/Hr output will vary with usage depending on the type and condition of cord wood.
SHIPPING WEIGHT	250 lbs (114 Kg)
HEARTH/FLOOR PROTECTOR	40" wide x 44" deep (1016 mm wide x 1143 mm deep) minimum non-combustible size  <b>Australia:</b> Hearth to be 6mm thick fibre cement sheet base with thermal conductivity of 0.25 w/m degrees K extended 300mm in front and 200mm to the sides of the firebox door opening.
FIREBOX VOLUME	1.5 cu.ft. (0.0425 cu. m.)
FIREBOX FLOOR AREA	18" wide x 12.6" deep (457 mm wide x 320 mm deep)
DOOR OPENING SIZE	15.6" wide x 8.3" high (396 mm wide x 211 mm high)
RECOMMENDED LOG SIZE	16" x 6" Dia. (406 mm x 152 mm)
FLUE OUTLET	6"(152 mm) diameter (vertical or horizontal)
Optional Components	<ul style="list-style-type: none"><li>- Fan Kit OA10505</li><li>- Fresh Air Kit OA10500</li><li>- Benja Mark II flue kit (Australia) with double skinned flue shield.</li></ul>



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### LIMITED LIFETIME WARRANTY

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

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

This warranty does not cover any scratch, corrosion or discoloration caused by over firing, abrasives or chemical cleaners. Any defect or damage caused by the use of unauthorized parts or others than original parts void this warranty.

An authorized qualified technician must perform the installation in accordance with the Instructions supplied with this product and all local and national building codes. Any service call related to an improper installation is not covered by this warranty.

Returned products are to be shipped prepaid to the manufacturer for investigation. If a product is found to be defective, the manufacturer will repair or replace such defect and reasonable transportation fees will be refund. Repair work covered by the warranty, executed at the purchaser domicile by an authorized qualified technician requires the prior approval of the manufacturer. Labour cost and repair work to the account of the manufacturer are based on predetermined rate schedule and must not exceed the wholesale price of the replacement part.

The manufacturer at its discretion may decide to repair or replace any part or unit after inspection and investigation of the defect. The manufacturer may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of any warranted but defective parts

The manufacturer shall in no event be responsible for any special, indirect, consequential damages of any nature, which are in excess of the original purchase price of the product.

DESCRIPTION	WARRANTY APPLICATION	
	PARTS	LABOUR
Combustion chamber (weldings only)	Lifetime	5 years
Stainless baffle	5 years	1 year
Carbon steel baffle and secondary air tubes	2 years	1 year
Handle assembly	5 years	n/a
Ash drawer	Lifetime	1 year
Cast iron parts	5 years	1 year
Ceramic glass (thermal breakage only)	1 year	n/a
Paint, refractory bricks, gasket, blower, thermal switch (thermodisc) and rheostat	1 year	n/a
Gold plating (tarnishing) / Brass plating not covered	1 year	n/a

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

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

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