



# FILIOFOCUS 1600 CENTRAL VERSION

## Design Installation & Operating Manual

Tested by OMNI-Test Laboratories, Inc. and approved to  
UL 737-2011 And ULC S627-00

US EPA exempt

Report Number: 0304WF010S

This document was packed with the appliance.  
**KEEP THESE INSTRUCTIONS FOR FUTURE USE**



# Table of contents

# Introduction

Introduction .....	2
Specifications .....	3
■ CHARACTERISTICS .....	3
■ ROOF OUTLET REQUIREMENT .....	4
■ CHIMNEY REQUIREMENT .....	4
■ CONNECTORS .....	5
■ FRESH AIR INTAKE .....	5
■ CLEARANCES TO COMBUSTIBLES .....	6
A. CLEARANCES TO FLOOR AND CEILING	
B. CLEARANCE TO WALLS	
Installation .....	8
■ INCLUDED PARTS, MATERIALS AND REQUIRED TOOLS	
FOR INSTALLATION .....	8
■ OPTIONS .....	8
■ ASSEMBLY DETAILS .....	8
A. STAINLESS STEEL CHIMNEY SYSTEM	
ANCHOR PLATE DETAIL	
B. FOCUS FLUE ATTACHMENT TO STAINLESS STEEL	
CHIMNEY SYSTEM PLATE	
C. THE ORDER TO TIGHTENING THE PLATE SCREWS	
(TO SECURE PROGRESSIVELY)	
■ GOOD TO KNOW .....	9
■ ASSEMBLY DETAILS FOR INSULATED CHIMNEY .....	9
Operating instructions .....	10
■ STORAGE / USE OF FLAMMABLE LIQUIDS .....	10
■ FIRE-DOGS .....	10
■ ASHES .....	10
■ FUEL .....	10
■ BEFORE LIGHTING YOUR FIRST FIRE .....	11
■ BUILDING, STARTING AND MAINTAINING THE FIRE .....	12
■ PROTECTIVE GLOVE .....	13
■ DAMPER OPERATION AND USE .....	13
Maintenance .....	14
■ TAKING OUT THE ASHES .....	14
■ INSPECTION, MAINTENANCE AND CLEANING	
OF THE CHIMNEY .....	14
A. REFERRING TO FOCUS STEEL FLUE	
B. REFERRING TO CHIMNEY PIPE	
■ SURFACES .....	14
■ DIRECTIONS AND REASONS FOR CLEANING GLASS .....	15
■ REPLACEMENT PARTS .....	15
WARRANTY .....	15
Annex .....	16
■ ADJUSTABLE SUSPENSION PLATE .....	16
■ HOW TO DETERMINE IF ALTERNATE FLOOR PROTECTION	
MATERIALS ARE ACCEPTABLE .....	19
A. PROCEDURE	
B. DEFINITION	

Please read this entire manual before you install and use your focus fireplace. Failure to follow instruction may result in property damage, bodily injury or even death. When this room heater is not properly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

**This fireplace is approved for use as a wood burning fireplace or for use with a vented gas log listed to ANSI Z21.60 standard having an input rate of 65,000 Btu or less.**

**KEEP THIS MANUAL HANDY FOR EASY REFERRAL.**

All **WARNING** and **CAUTION** statements will appear in bold font and upper case letters: **THEY SHOULD BE STRICTLY OBSERVED.**

Thank you for choosing focus fireplaces.

**Appliance designation:** central windowed filiofocus 1600

**Manufacturer:**

Focus - Atelier Dominique Imbert  
Le fort – 34380 Viols le fort – France.

# Specifications

## ▲ CAUTION

**DO NOT INSTALL IN A MOBILE HOME. NOT FOR EXTERIOR INSTALLATION!**

**DO NOT CONNECT TO OR USE IN CONJUNCTION WITH ANY AIR DISTRIBUTION DUCTWORK!**

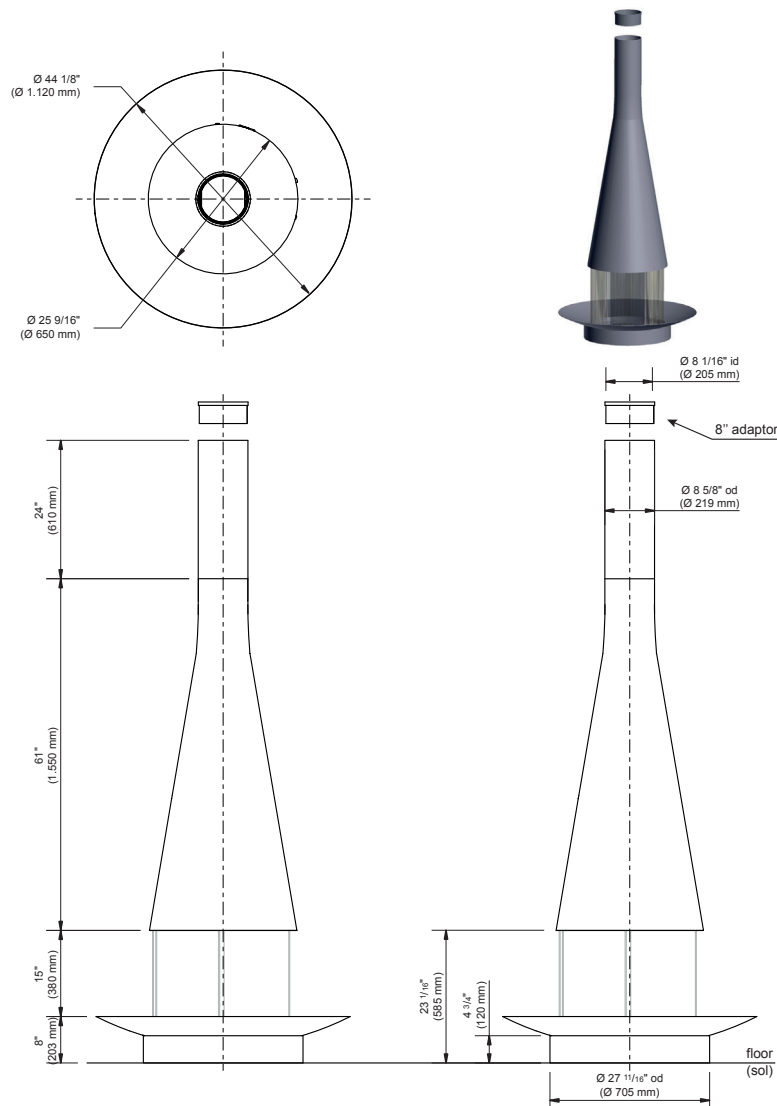
**NOT TO INSTALL WITH MASONRY CHIMNEY SYSTEM.**

**DO NOT INSTALL IN SLEEPING ROOM.**

- The authority having jurisdiction (such as municipal building department, fire department, fire prevention bureau, etc.) Should be consulted before installation to determine the need to obtain a permit.
- Using make-shift compromises during installation can cause damage . Such installation is not covered under focus limited warranty.
- When this room heater is not properly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

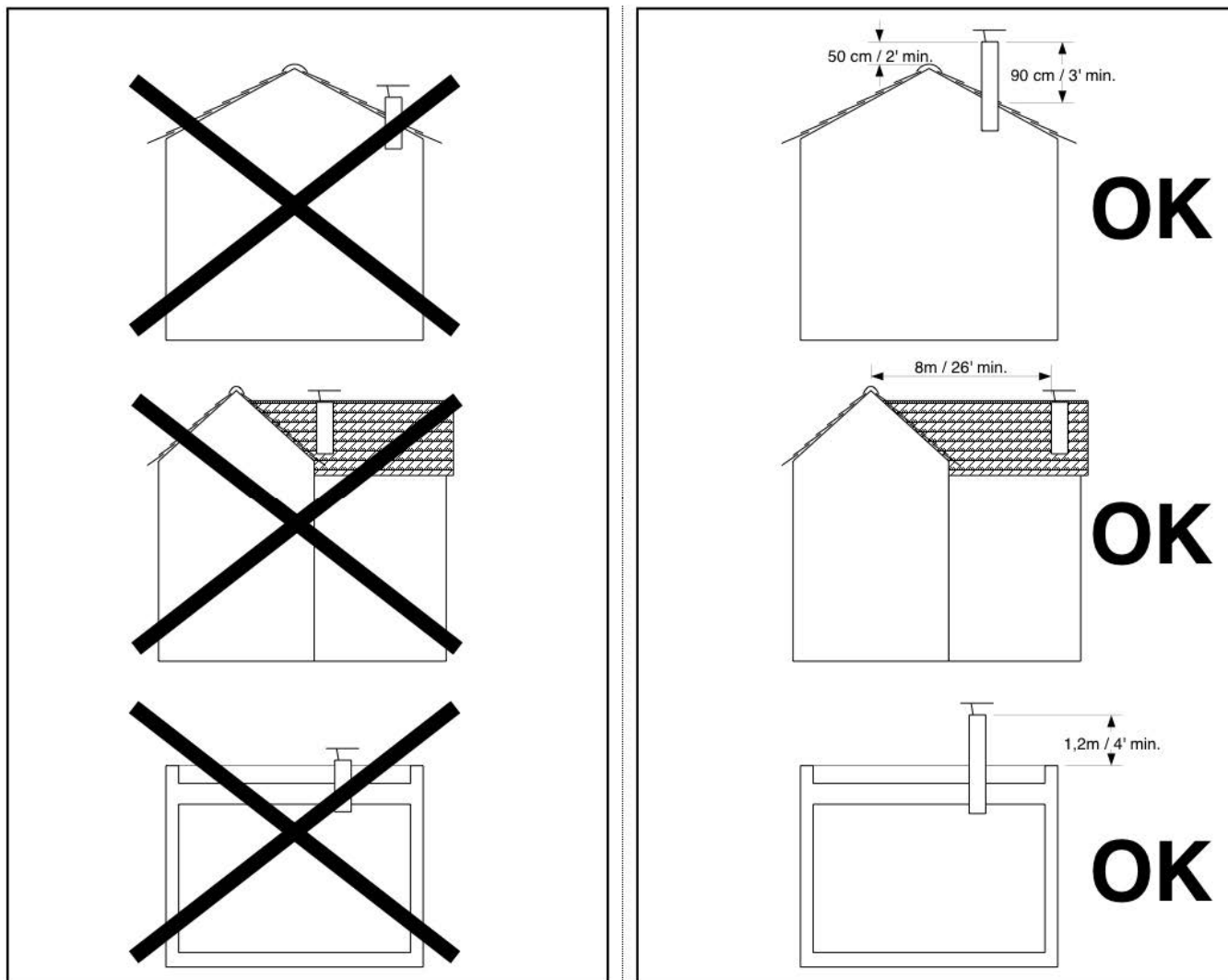
## ■ CHARACTERISTICS

- Hearth 44-1/8-inch (1.12 m) diameter; Weight: 154 lbs (70 kg)
- Hood weight: 154 lbs (70 kg)
- Flue diameter : 8-5/8-inch (219 mm) ; length custom-made
- Flue weight : 35 lbs per foot (16 kg per meter)
- Standard anchor plate weight: 55 lbs (approx. 25 kg)
- 1/8-inch (3 mm) thick steel
- High heat resistant matte paint
- Guaranteed efficiency with a minimum flue length (interior and exterior) of 10 feet (3m)



# Specifications

## ■ ROOF OUTLET REQUIREMENT



## ■ CHIMNEY REQUIREMENT

Do not connect this unit to a chimney flue serving another appliance !

Filiofocus 1600 central version requirement: the floor to top of chimney length must be 17 feet minimum (20 feet for an installation less than 3 miles from the ocean or if a 30° elbow is necessary). Elbows should not be more inclined than 30° (USA) or 45° (Canada) from vertical and with maximum number of 2. Maximum inside + outside height : 30 feet.

Windowed filiofocus can be connected to a chimney complying with the requirements for Type HT chimneys in the standard for Chimneys, Factory-built, Residential Type and Building Heating Appliance, UL 103/ULC S629. For example, a class A insulated stainless steel flue chimney system with an 8-inch minimum inside diameter.

# Specifications

## ▲ CAUTION

**THE SUPPORT OF THE ANCHOR PLATE (ROOF STRUCTURE, SLAB, ETC...) MUST BE SIZED IN CONGRUENCE WITH THE FIREPLACE STATIC AND DYNAMIC CHARGES. THE SIZE CALCULATION FOR THE SUPPORT IS NOT THE RESPONSIBILITY OF FOCUS OR ITS AFFILIATES. IT IS YOUR RESPONSIBILITY TO CONSULT WITH AN ENGINEER OR ARCHITECT FOR YOUR PROJECT.**

## ■ CONNECTORS

Connectors are all non-insulated chimney parts including focus flue, focus 8" universal adaptor and the chimney manufacturer finishing collar with adapter.

To avoid heat traps the chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor, or ceiling.

Passage through an attic, roof frame floor, or ceiling must be done using an insulated chimney respecting all chimney manufacturer clearances. For Canada the installation should conform to CAN/CSA-B365.

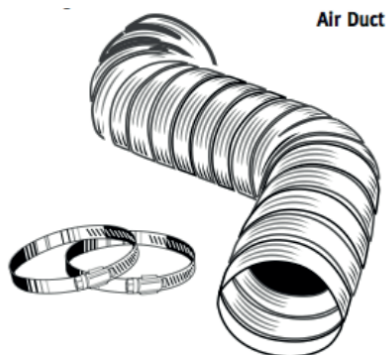
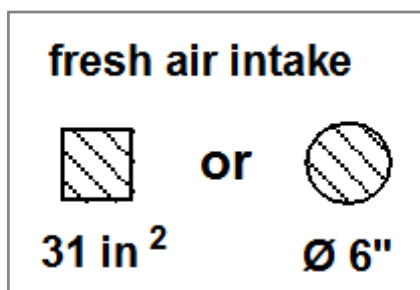
## ▲ CAUTION

**PASSAGE THROUGH A WALL OR PARTITION OF COMBUSTIBLE CONSTRUCTION IS NOT AN APPROPRIATE INSTALLATION FOR THIS FOCUS FIRE.**

## ■ FRESH AIR INTAKE

To balance room air pressure with outdoors air pressure, focus recommends a fresh air intake in the room (ideally emerging under the fire bowl). Fresh air intake shall only take combustion air from outdoors. We recommend deflect-O A0684 semi rigid aluminium duct. The appliance is supplied with a fresh air control.

Minimum fresh air intake size :



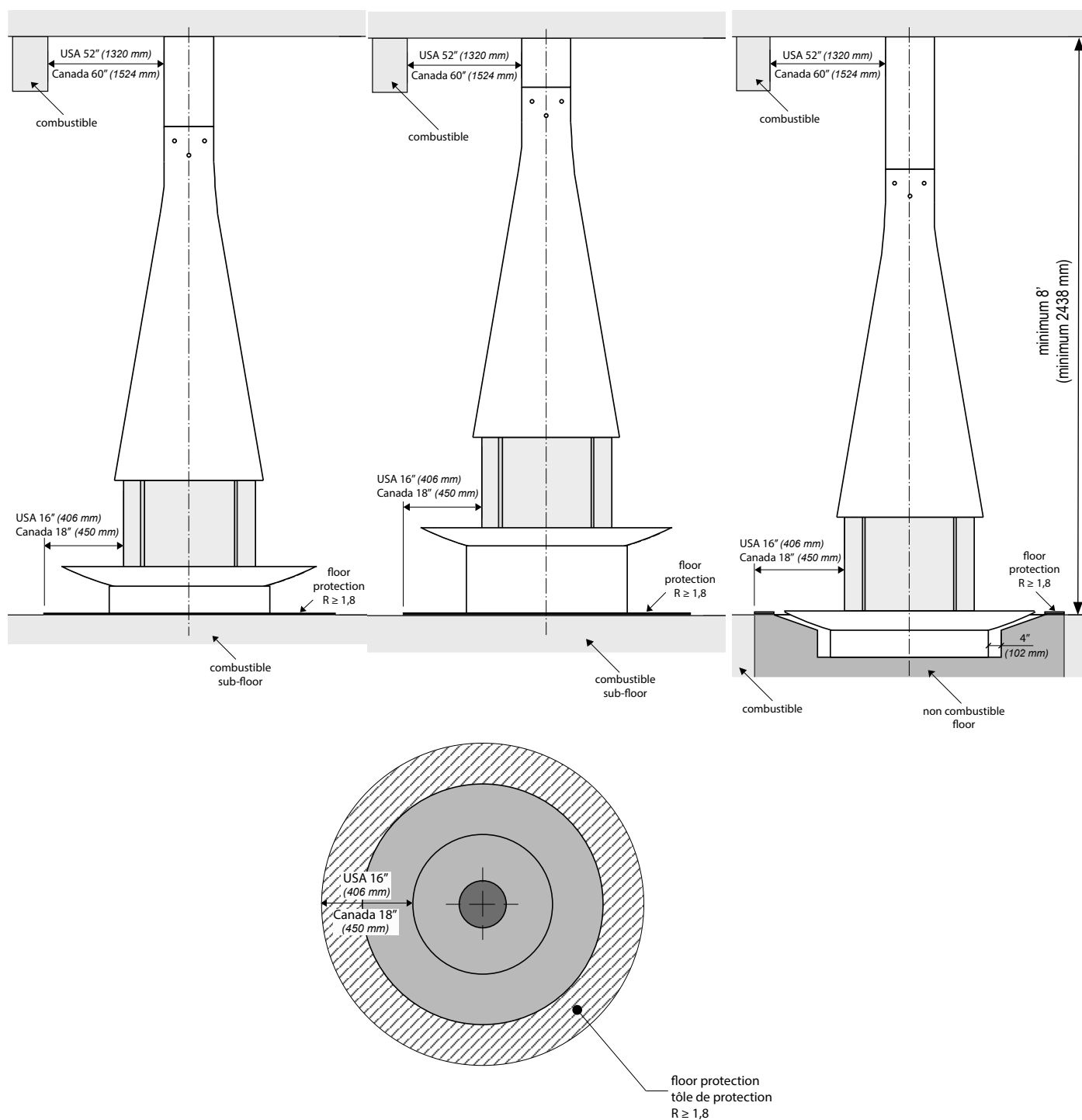
## IMPORTANT

this fresh air intake is compulsory when operating venting appliances such as kitchen hoods, permanent air extractors or any appliances creating an air depression in the habitation. A lack of air intake may alarm smoke detectors. Duct maximum length :30 feet (9 meters).

# Specifications

## ■ CLEARANCES TO COMBUSTIBLES

### A. CLEARANCES TO FLOOR AND CEILING



#### ▲ CAUTION

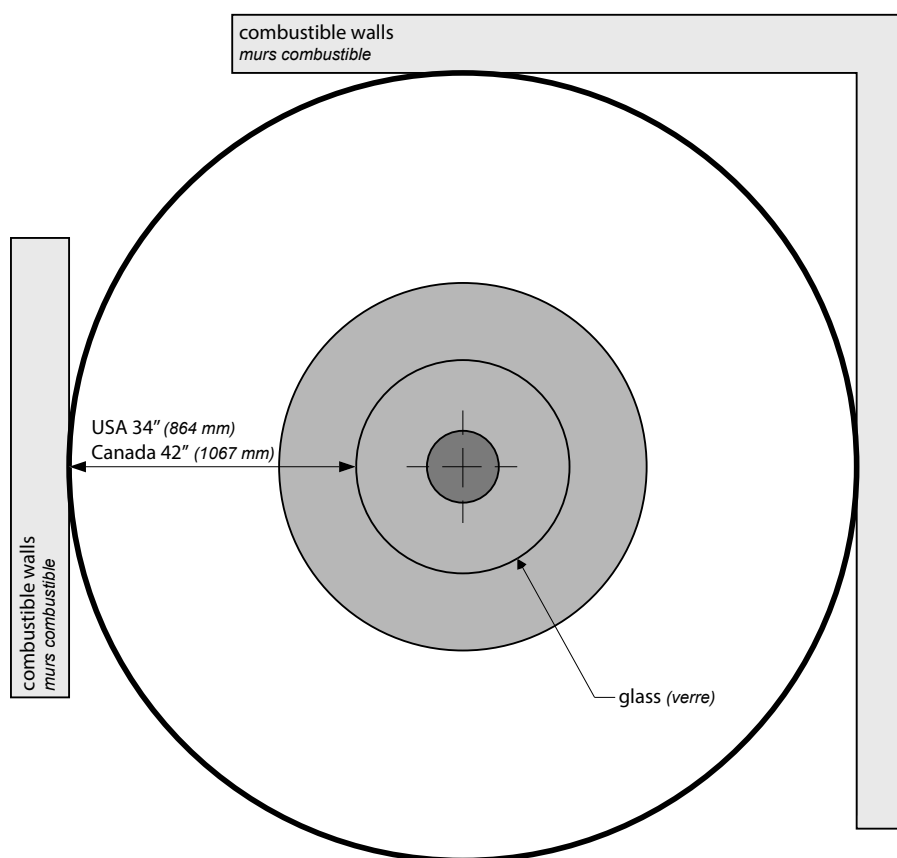
THE FLOOR PROTECTION REMAINS IDENTICAL WITH OR WITHOUT OPTIONAL STEEL BASE.

# Specifications

## B. CLEARANCE TO WALLS

### ▲ CAUTION

THE DISTANCE TO A COMBUSTIBLE WALL MUST BE MAINTAINED AT 34 INCHES FROM THE GLASSES. PROPERTY DAMAGE OR DEATH CAN OCCUR IF THIS DISTANCE IS NOT MAINTAINED. DRYWALL PRODUCTS LINED WITH PAPER SUCH AS SHEETROCK ARE COMBUSTIBLE. CLEARANCES AS INDICATED FURTHER APPLY.



### IMPORTANT

#### Manufacturer specifications :

- When placed close to a non-combustible wall leave a minimum of 4 inches (which Ø is 44 inches) for proper ventilation. To avoid premature aging of your painted walls, only use mineral or acrylic paints. With other paints, above clearances apply.
- Focus recommends the integration of the fire bowl in a 3 inches floor recess with 30-1/2" diameter.
- Fire clearance to glass (from glasses) : 3 feet.
- Fire clearance to vinyl windows: refer to window technical specifications.

Clearances may only be reduced by means approved by the regulatory authority.

# Installation

## ■ INCLUDED PARTS, MATERIALS AND REQUIRED TOOLS FOR INSTALLATION

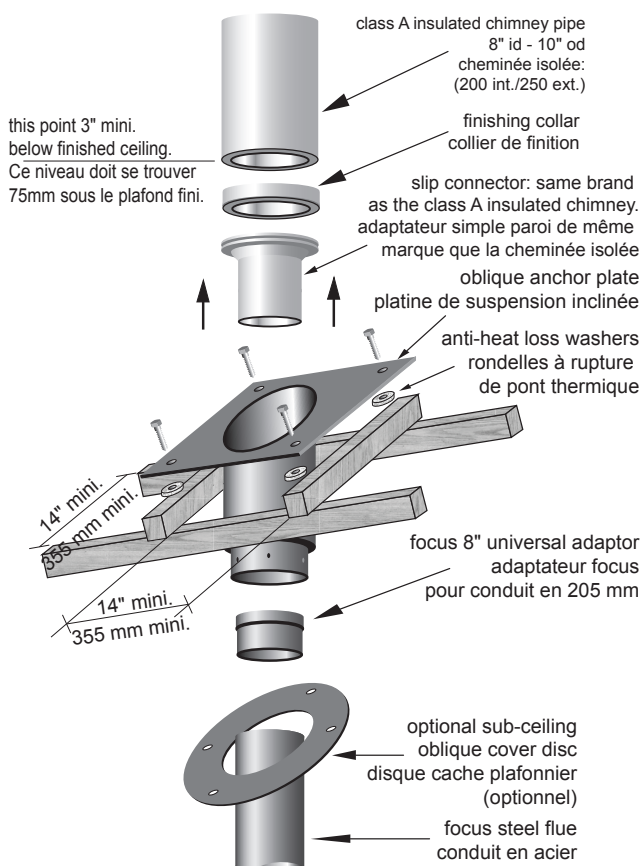
- Appliance and designated parts are the fire bowl, grate, suspended hood, black steel flue pipe, anchor plate, 4 curved pyroceramic glass screens, focus kit ( protective glove, mounting gloves, can of touch-up paint), and insulating washers.
- Required tools : drill, M8 allen key, level, screw drivers, M12 key, scaffolding, refractory compound.
- 2 persons minimum are required for installation.

## ■ OPTIONS

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Custom ceiling cover disc (steel disc) + cover-disc screw kit</li> <li>• Custom anchor steel plate (inclined...)</li> <li>• Focus steel flue extension</li> </ul> | <ul style="list-style-type: none"> <li>• Custom roof outlet in stainless or lacquered steel with insulation and cap</li> <li>• Fire bowl installation options : set above floor level, or raised on a custom base.</li> <li>• Adjustable suspension plate</li> </ul> |
|--|--|

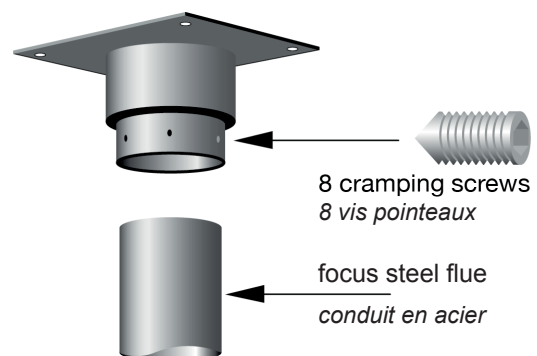
## ■ ASSEMBLY DETAILS

### A. STAINLESS STEEL CHIMNEY SYSTEM ANCHOR PLATE DETAIL

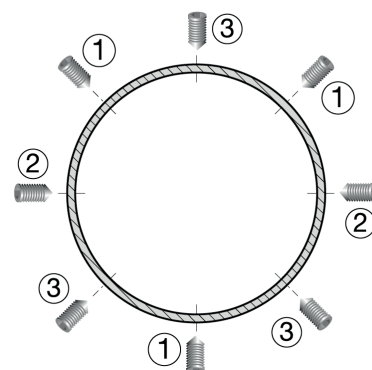


Hearth extensions must be installed only as illustrated

### B. FOCUS FLUE ATTACHMENT TO STAINLESS STEEL CHIMNEY SYSTEM PLATE



### C. THE ORDER TO TIGHTENING THE PLATE SCREWS (TO SECURE PROGRESSIVELY)



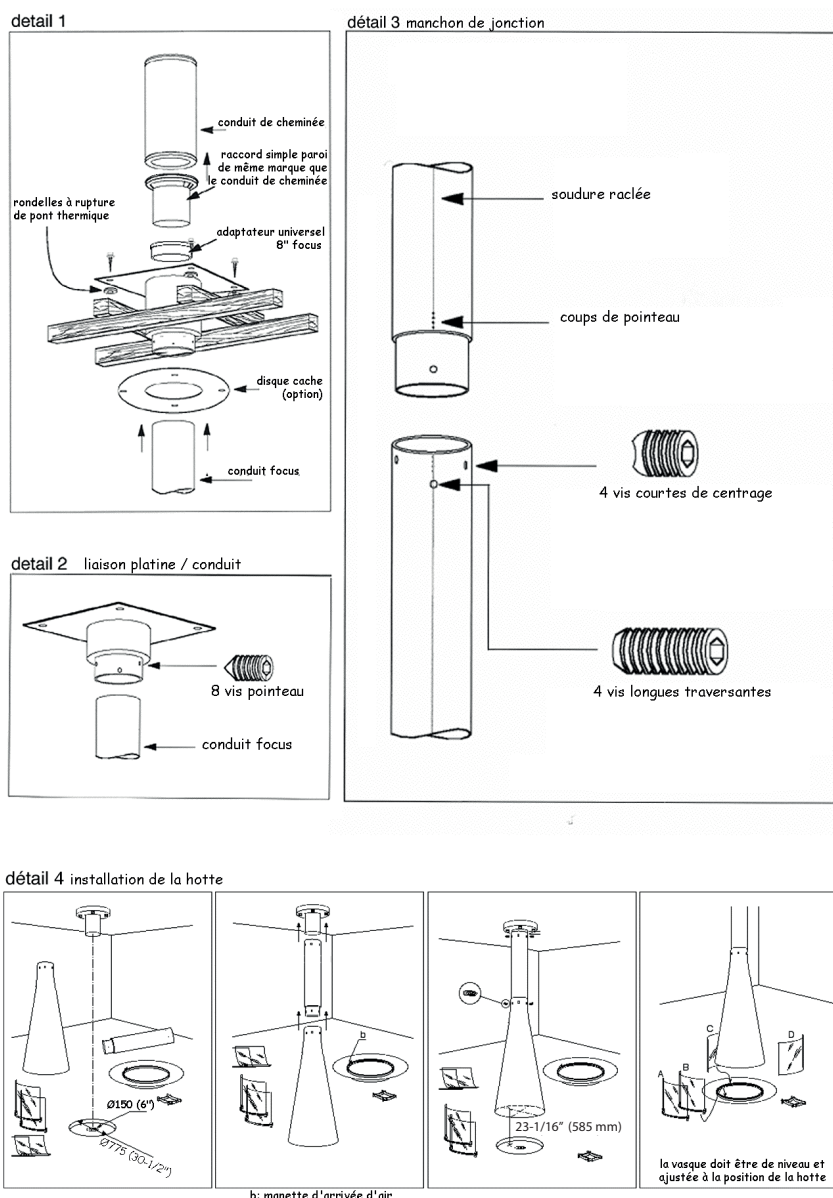
# Installation

## ■ GOOD TO KNOW

The hood and the fire bowl may not be perfectly and geometrically centered and aligned due to hood balance position. We strongly recommend to :

- First install the hood, then find the right position of the fire bowl by installing the pivoting glasses : the best position is when the glass panels are sliding smoothly throughout the entire diameter of the track.
- For ease of glass panels installation, the distance between the bottom of the hood and the finished surface that the fire bowl will sit must be 23-1/16" (585 mm).
- The stationary glasses should be installed opposite one another.

## ■ ASSEMBLY DETAILS FOR INSULATED CHIMNEY



# Operating instructions

## ▲ CAUTION

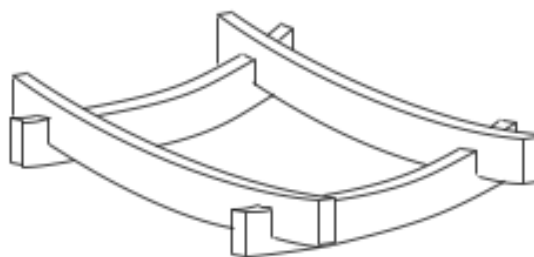
**HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.**

## ■ STORAGE / USE OF FLAMMABLE LIQUIDS

Never use chemicals or fluids, gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or « freshen up » a fire in this heater. Keep all such liquids well away from the heater while it is in use.

## ■ FIRE-DOGS

The fire-dogs item is located inside the fireplace. It must not be removed except for cleaning, once all cinders have thoroughly cooled. Fire must only be built on the fire-dogs.



## ■ ASHES

### DISPOSAL OF ASHES

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be immediately placed outdoors on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

# Operating instructions

## ■ FUEL

### ▲ CAUTION

**Do not burn garbage or flammable fluids such as gasoline, naphtha or engine oil. Do not store the fuel within the space heater installation clearances or within the space required for refueling and ash removal.**

Only burn dry, natural, untreated well-seasoned wood. Wood moisture content should not be more than 20%. We recommend using 2 year dry stored wood. For the best efficiency use a covered storage. Hazards may occur with some fuels (e.g., charcoal). Such fuels may generate dangerous gas like carbon monoxide.

### ▲ WARNING

**The windowed filiofocus has been tested for use with four glazed screens fully closed. If panels are left partly open, gas and flame may be drawn out of the fireplace opening, creating risks from both fire and smoke. To reduce the risk of fire injury, do not intend to remove glazed screens!**

## ■ BEFORE LIGHTING YOUR FIRST FIRE

For all designs it is necessary :

- To remove the stickers from the glass screens (if any).
- To clean off (with a damp sponge and/or a dry cloth) any dirt collected during transport or installation.
- Actual scratches on painted designs can be retouched solely with the expressly provided focus paint. If this is necessary, ventilate the area thoroughly before lighting your fire to disperse any fumes generated in the spraying process.

The first fire should be a modest one ; do not use packing material or pallet wood for fuel.

The paint finish we use, oven baked at 250°C for 30 minutes, is thermo-plastic. Because of the very gradual polymerisation of the components, the unit may give off a light smoke the first few times the fire is lit. The painted surfaces nearest the fire may, while hot, acquire a certain viscosity, or slight stickiness perceptible to the touch. We advise therefore :

- Not to be alarmed at possible smoking or residual odors. This is normal on the first fires and will rapidly subside.
- Not to touch, rub or try to clean the fireplace while it is still hot.

To avoid thermal shocks, we strongly advise against throwing buckets of water on a very vigorous fire to try to put it out.

# Operating instructions

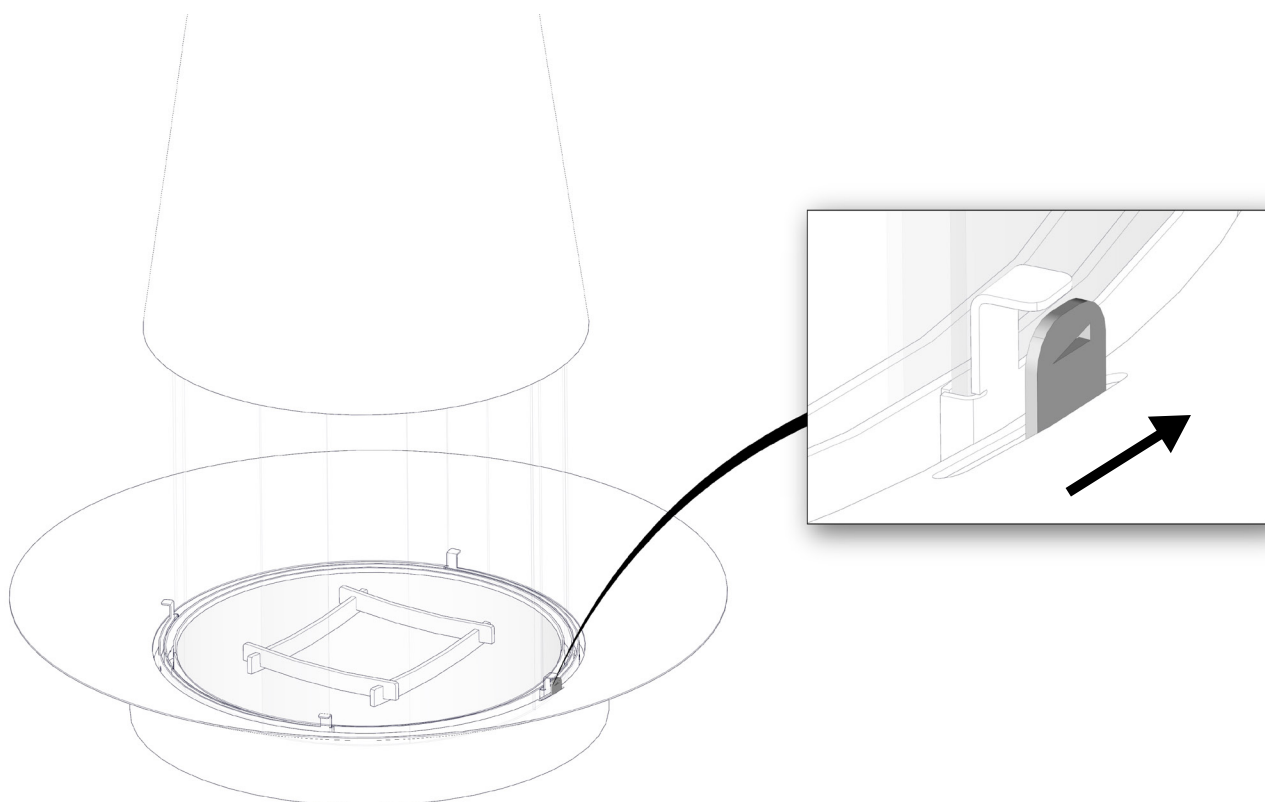
## ■ BUILDING, STARTING AND MAINTAINING THE FIRE

### ▲ CAUTION

**DO NOT LIGHT OR FUEL A FIRE USING CARDBOARD OR PLASTIC OR ANY UNSTABLE OR VOLATILE FUEL SOURCE OR WITH FIRE BRICKS REMOVED, AS THIS WILL PRODUCE OVER-FIRING OR HOUSE FIRE. DAMAGE CAUSED FROM NON-OBSERVANCE OF THIS CAUTION IS NOT COVERED UNDER FOCUS LIMITED WARRANTY.**

**Do not overload your focus fireplace to avoid over-firing.**

Build the fire without elevating it, directly on the fire-dogs, not too close to the glasses. For starting the fire, we recommend using a small amount of fire starter with enough kindling (small logs or mill ends) to establish a primary fire. Fresh air intake must be fully open (push the handle in direction of the large side of the triangle, see hereunder illustration) :



After a few minutes, and making sure the primary fire is well started, add larger wood (between 3 and 7 pieces, depending on their size), directly on top, making sure not to smother the fire. Leave some spaces between the logs for air intake. Adapt the air intake position in order to avoid spillage of smoke.

To maintain or refuel your fire, add when needed (see note), a few larger logs.

**NOTE :** For the same weight of fuel, 10 logs will burn more intensely (and faster) than 3 logs, but you will get the same heat power at the end. The log size you buy will determine the heating and refueling time.

# Operating instructions

## ■ PROTECTIVE GLOVE

The use of the focus special protective glove supplied with our models is required upon handling the cold handle, glass panels, fresh air controls, fire-dogs, etc.

## ■ DAMPER OPERATION AND USE

Use of supplied cold handle tool or protective glove is recommended to operate the damper. Do not touch the damper handle without protection when a fire is operating.

The filiofocus 1600 central damper has four positions. The damper is in the same direction as the handle: when the handle is vertical, the damper is fully open. Handle can rotate at 30°, 60° and 90° (horizontal : closed). In closed position the damper obturates by 75% the flue section. To modify the damper position, first pull the handle, then rotate and push again the handle in order to lock on a preset position.

### ▲ CAUTION

**NEVER ADJUST THE DAMPER HANDLE ON AN INTERMEDIATE POSITION !**

The damper position must be adapted to the fire intensity : during the lighting it must be fully open. Then it must be adjusted in order to reduce the smoke flow, so the heat efficiency will be optimal. If the smoke spills out it means the damper is too obstructive : re-open the damper at the first signs of spillage.

# Maintenance

## ■ TAKING OUT THE ASHES

### ▲ CAUTION

**BE SURE THE FIRE IS OUT AND THE FIREPLACE BODY COLD BEFORE REMOVING ASHES!**

To remove ashes we recommend to remove the fire-dogs and use a brush and a shovel. Dispose of ashes in an appropriate ash container (not supplied). After cleaning, be sure to secure the fireplace properly !

### ▲ CAUTION

**Do not light a fire with firedogs removed, as this will produce over-firing or house fire. Damage caused from non-observance of this caution is not covered under focus limited warranty.**

## ■ INSPECTION, MAINTENANCE AND CLEANING OF THE CHIMNEY

### ▲ CAUTION

**CHEMICAL SWEEP NOT PERMITTED: ONLY MECHANICAL SWEEP ALLOWED !**

### A. REFERING TO FOCUS STEEL FLUE

It must absolutely be swept with a nylon brush. Never use metal brushes! Damage caused from non-observance of this caution is not covered under the focus limited warranty.

### B. REFERING TO CHIMNEY PIPE

#### **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 vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney and chimney connector should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred.

If a significant layer of creosote has accumulated (3mm or more) it should be removed to reduce the risk of a chimney fire. In that case, call a professional chimney sweeper or buy a brush at your local focus retailer and clean the chimney this way: Remove rain cap, use appropriately sized brush and sweep the entire system to remove all debris or refer to chimney manufacturer recommendations.

Communicate with the authorities (municipal, regional or provincial fire protection agency) to obtain all instructions concerning the measures to be taken when or before there is a risk of chimney fire.

Keep firing and de-ashing doors closed and maintain all seals in good condition.

## ■ SURFACES

### ▲ CAUTION

**DO NOT SCRUB !**

The outer surfaces can be wiped with a soft, dry rag (making sure the metal is cool). For continued use of the touch-up paint can, following its initial usage, invert the can (spray head down) and spray into a balled up newspaper until the can sprays clear. Clean the spray can bottom with a dry rag and store out of the reach of children.

# Maintenance

## ■ DIRECTIONS AND REASONS FOR CLEANING GLASS

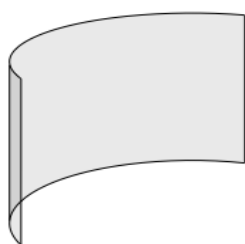
**Cracked or broken glass should be replaced. Do not clean the glass when hot. Glass doors should not be struck or banged.**

The outer surfaces can be wiped with a soft, dry rag and a standard glass cleaner product (making sure the glass is cool). The inner surfaces can be cleaned with a special insert glass product.

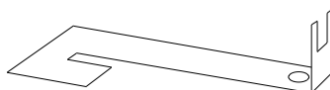
## ■ REPLACEMENT PARTS

**Do not use substitute materials.**

4 Glass Panels



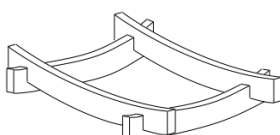
Cold handle



Touch-up can



Chenets



### 2 Stationary pyroceramic sides:

Thickness 5/32" (4 mm)  
Height : 20-7/8" - 530 mm  
Radius : 11-1/4" - 286 mm  
Developed length : 20-3/32" - 510 mm

### 2 pyroceramic glass door:

Thickness 5/32" (4 mm)  
Height : 20-7/8" - 530 mm  
Radius : 12" - 305 mm  
Developed length : 18-1/8" - 460 mm

**For ordering replacement parts,  
please contact the focus North  
American exclusive importer :**

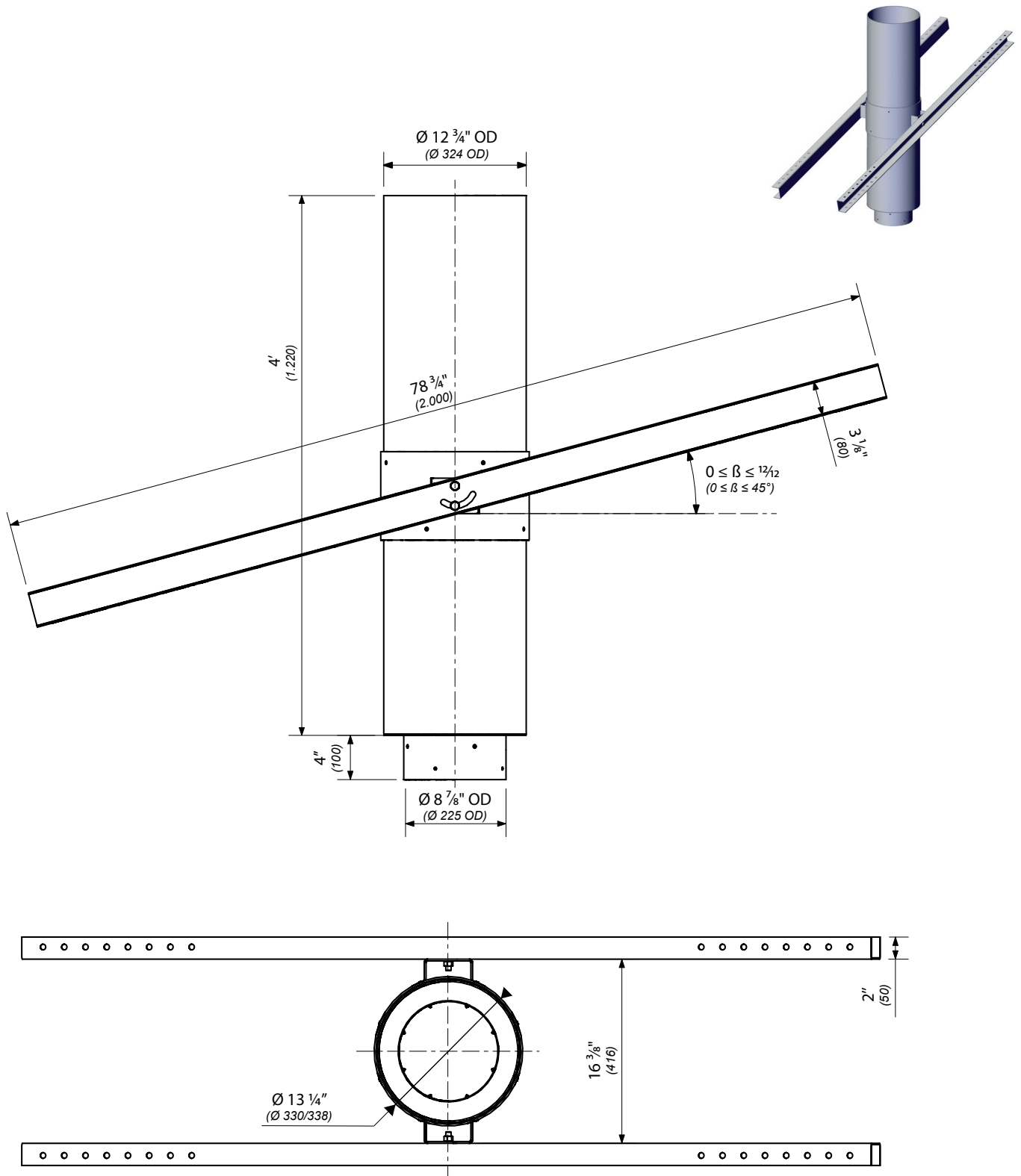


30 Log Bridge Road  
Building 300 – Suite 303  
Middleton, MA 01949  
T: 781-324-8383  
[www.europeanhome.com](http://www.europeanhome.com)

# Warranty

All of our Focus models are guaranteed against any defect in design, construction, or manufacture, and guaranteed to function properly for 5 years from date of order. Our product guarantees are applicable only when our fireplaces have been installed with respect to all local building codes and with strict attention to the technical details outlined in our Plan Study as well as our installation, maintenance, and users manuals. Our guarantee excludes accidental damages such as those occurring during transport without written notification upon receipt, damages incurred during installation, and damages resulting from improper use.

## ■ ADJUSTABLE SUSPENSION PLATE



# Annex

The Focus adjustable suspension plate is designed to be used on rafters/structures with a pitch between zero and forty-five degrees.

8" inside diameter / 10" outside diameter Class A insulated chimney flue sits inside the 12" wide portion of the drum. Keeping a 2" overall air gap between the Class A insulated chimney flue and the 12" wide portion of the drum prevents the transfer of heat to surrounding building materials.

The wide portion of the drum is 8" wide to accept the Focus single wall interior flue.

The adjustable suspension plate is for use with Gyrofocus, Ergofocus, Filiofocus Central 1600, Filiofocus Central 2000, Bathyscafocus, Meijifocus and Agorafocus 630 models only.

The adjustable suspension plate consists of:

- (x2) Mounting bars
- (x1) Support collar
- (x1) Drum
- (x8) Cramping screws M8x10

The drum is designed to be field cut as needed.

The mounting bars may be cut to length and must be attached securely to the rafter/structure using lag bolts (wood installation) or through bolts (wood or metal installation) to support the weight of the fireplace and flue.

Components :

*La plaque de suspension réglable Focus est conçue pour être utilisée sur des chevrons ou des structures ayant une inclinaison comprise entre zéro et quarante-cinq degrés.*

*Le conduit de fumée isolé de classe A et de diamètre intérieur 8" (225mm)/ diamètre extérieur 10" (254mm) s'installe dans la portion de fourreau de largeur 12" (324mm). Maintenir un espace d'air de 2" (50mm) entre le conduit de fumée isolé de classe A et la portion de fourreau de largeur 12" (324mm) afin d'éviter le transfert de chaleur aux matériaux de construction environnants.*

*La partie inférieure du fourreau est de 8" (225mm) pour accepter le conduit simple paroi Focus.*

*La plaque de suspension réglable est utilisable avec les modèles Gyrofocus, Ergofocus, Filiofocus Central 1600, Bathyscafocus, Meijifocus et Agorafocus 630.*

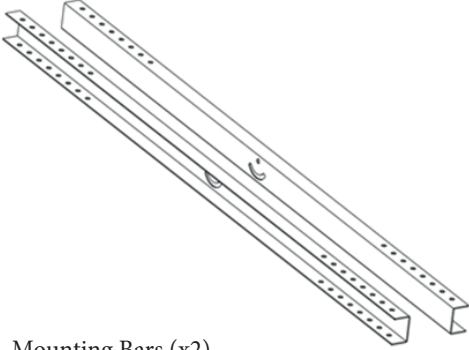

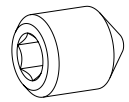

*La plaque de suspension réglable se compose de :*

- (x2) Barres de montage*
- (x1) Collier de soutien*
- (x1) Fourreau*
- (x8) Vis de serrage M8x10*

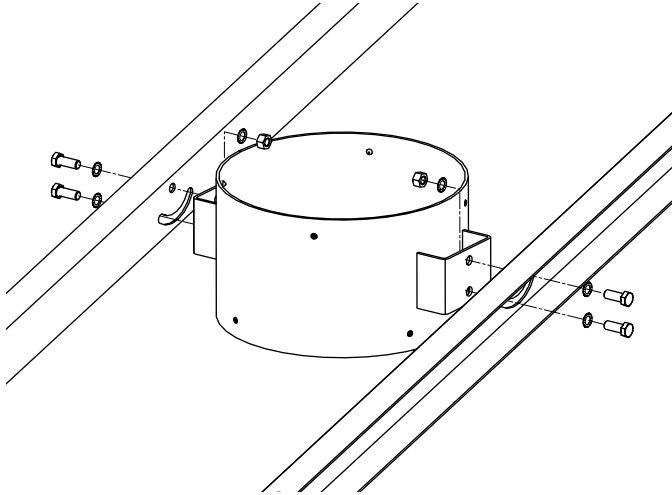
*Le fourreau est conçu pour être coupé sur le terrain au besoin.*

*Les barres de montage peuvent être coupées à la longueur et doivent être fixées solidement aux chevrons/structures en utilisant des fixations telles que des tirefonds (structures bois) ou des boulons (structures métallique) pour soutenir le poids de la cheminée et du conduit.*

*Composants :*

 <p>Mounting Bars (x2) Barres de montage</p>	 <p>Drum (x1) Fourreau</p>	<div data-bbox="1212 1668 1340 1769">  </div> <p>Cramping screws M8x10 (x8) Vis de serrage M8x10</p> <div data-bbox="1204 1881 1348 2004">  </div> <p>Support Collar (x1) Collier de soutien</p>
---	---	--

# Annex



The steps of installation and cutting of the adjustable suspension plate are as follows:

- 1 - Place support collar between the mounting bars. Tighten bolts using supplied nuts and lock washers.
- 2 - Mount this assembly in the ceiling or roof.
- 3 - Install the drum inside the support collar from below.

*Les étapes d'installations et de coupe de la platine de suspension ajustable sont les suivantes:*

- 1 - Placer le collier de soutien entre les barres de montage. Serrer les boulons à l'aide des écrous et des rondelles frein fournis.
- 2 - Monter l'ensemble sur/sous le plafond ou toit.
- 3 - Installer le fourreau dans le collier de soutien par dessous.

4 - Adjust drum to desired length. The large portion of the drum must be a minimum 3" below ceiling finish.

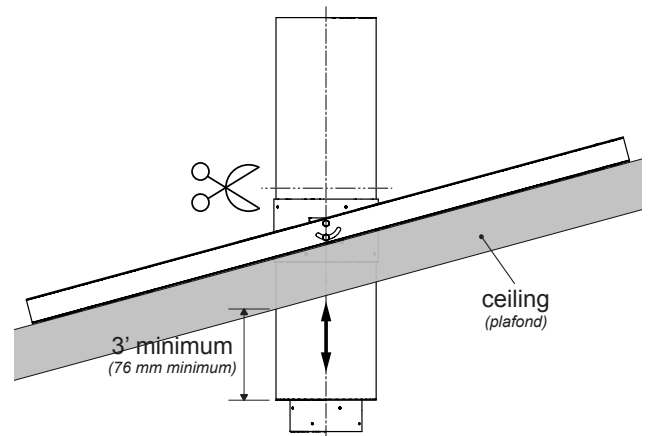
5 - If drum is to be cut, mark the drum above the support collar with a pencil using the support collar as a guide.

6 - Remove the drum from the support collar and apply tape around pencil marks. Use as cutting guide.

*4 - Ajuster le fourreau à la longueur désirée, minimum de 3" (76mm). Mesure à prendre depuis la base du fourreau.*

*5 - Si le fourreau doit être coupé, marquer le fourreau au-dessus du collier de soutien avec un crayon en utilisant le collier de soutien comme guide.*

*6 - Retirez le fourreau du collier de soutien et appliquez du ruban adhésif autour des marques de crayon. Utiliser comme guide de coupe.*



7 - Cut the drum with an angle grinder outfitted with cutting wheel following the tape.

8 - Install the drum again into the support collar. Using a level, confirm and tighten firmly cramping screws following the pattern below.

Screw 1 – Install first x 3

Screw 2 – Install next x 2

Screw 3 – Install last x 3

Note: Screws are not designed to sit flush with support collar.

*7 - Couper le fourreau à l'aide d'une meuleuse d'angle munie d'un disque de coupe suivant le ruban.*

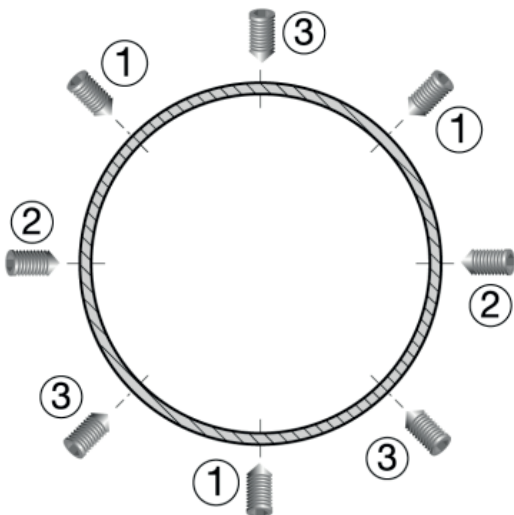
*8 - Remonter le fourreau dans le collier de soutien. À l'aide d'un niveau, confirmez et serrez fermement les vis de serrage en suivant le modèle ci-dessous.*

*Vis 1 - A installer en premier x 3*

*Vis 2 - A installer ensuite x 2*

*Vis 3 - A installer en dernier x 3*

*Remarque : Les vis ne sont pas prévues pour être à fleur du collier de soutien.*



## ■ HOW TO DETERMINE IF ALTERNATE FLOOR PROTECTION MATERIALS ARE ACCEPTABLE

All floor protection must be non-combustible (i.e., metals, brick, stone, mineral fiber boards, etc.). Any organic materials (i.e., plastics, wood paper products, etc.) are combustible and must not be used. The floor protection specified includes some form of thermal designation such as R-value (thermal resistance) or k-factor (thermal conductivity).

### A. PROCEDURE

#### 1. Convert specification to R-value:

I. R-value given - no conversion needed.

II. k-factor is given with a required thickness (T) in inches:

$$R = \frac{1}{k} \times T$$

III. K-factor is given with a required thickness (T) in inches

$$R = \frac{1}{K \times 12} \times T$$

IV. r-factor is given with a required thickness (T) in inches:

$$R = r \times T$$

#### 2. Determine the R-value of the proposed alternate floor protector.

I. Use the formula in step (1) to convert values not expressed as "R".

II. For multiple layers, add R-values of each layer to determine overall R-value.

3. If the overall R-value of the system is greater than the R-value of the specified floor protector, the alternate is acceptable.

EXAMPLE: The specified floor protector should be 3/4-inch thick material with a k-factor of 0.84. The proposed alternate is 4" brick with an r-factor of 0.2 over 1/8" mineral board with a k-factor of 0.29.

Step (a): Use formula above to convert specification to R-value.

$$R = \frac{1}{k} \times T = \frac{1}{0.84} \times 0.75$$

Step (b): Calculate R of proposed system.

4" brick of r = 0.2, therefore:

$$R_{\text{brick}} = 0.2 \times 4 = 0.431$$

1/8" mineral board of k = 0.29, therefore

$$R_{\text{mineral board}} = \frac{1}{0.29} \times 0.125 = 0.431$$

$$R_{\text{total}} = R_{\text{brick}} + R_{\text{mineral board}} = 0.8 + 0.431 = 1.231$$

Step (c): Compare proposed system R<sub>total</sub> of 1.231 to specified R of 0.893. Since proposed system R<sub>total</sub> is greater than required, the system is acceptable.

### B. DEFINITIONS

$$R = \frac{(\text{ft}^2)(\text{hr})(^\circ\text{F})}{\text{Btu}}$$

$$k = \frac{(\text{Btu})(\text{in})}{(\text{ft}^2)(\text{hr})(^\circ\text{F})} = K \times 12$$

$$K = \frac{(\text{Btu})(\text{ft})}{(\text{ft}^2)(\text{hr})(^\circ\text{F})}$$

$$r = \frac{(\text{ft}^2)(\text{hr})(^\circ\text{F})}{(\text{Btu})(\text{in})} = \frac{1}{k}$$

