

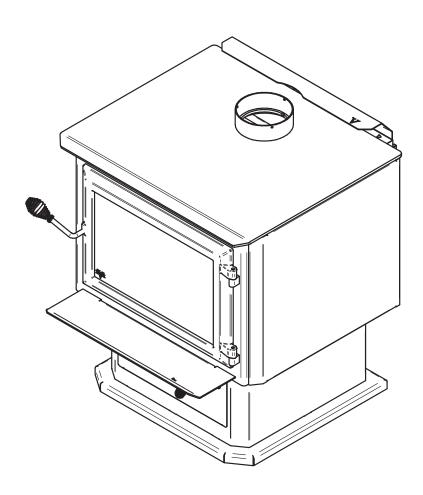
# Wood Stove Owner's Manual

Part 2 of 2

**HES350** 

INSTALLATION AND OPERATION REQUIREMENTS

(VB00020 model)



US Environmental Protection Agency phase II certified wood stove compliant with 2020 cord wood standard



Safety tested according to ULC S627, UL 1482 and UL 737 standards by an accredited laboratory.





CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN LOCAL AREA.

READ THIS ENTIRE MANUAL BEFORE INSTALLATION AND USE OF THIS WOOD STOVE. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN PROPERTY DAMAGE, BODILY INJURY OR EVEN DEATH.

### READ AND KEEP THIS MANUAL FOR REFERENCE

| Dealer:         |  |
|-----------------|--|
|                 |  |
| Installer:      |  |
| Phone Number:   |  |
| Serial Numbrer: |  |

### **ONLINE WARRANTY REGISTRATION**

If the unit requires repairs during the warranty period, proof of purchase must be provided. The purchase invoice must be kept. The date indicated on it establishes the warranty period. If it can not be provided, the warranty period will be determined by the date of manufacture of the product. It is also highly recommended to register the warranty online at

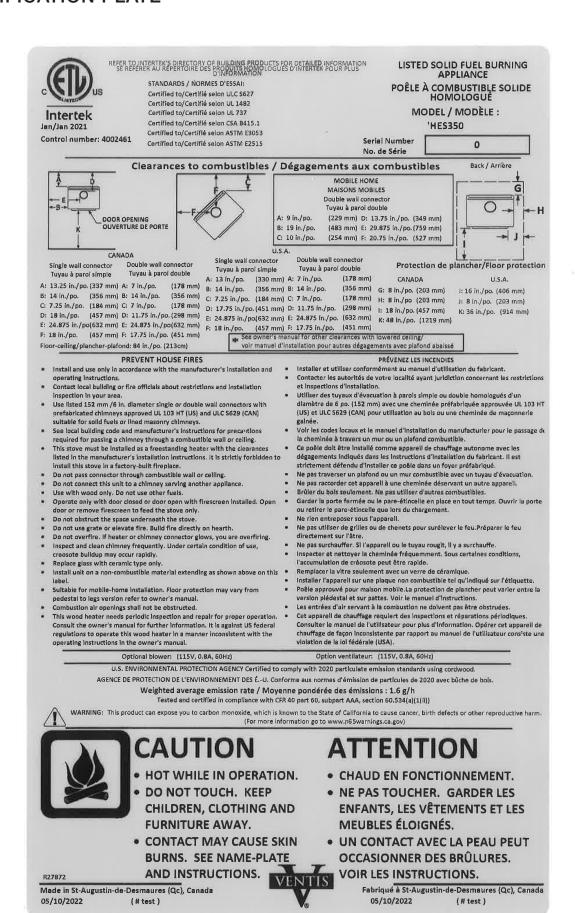
https://www.occanada.com/ca/en/warranty-registration/

Registering the warranty will help to quickly find the information needed on the unit.

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|   | CERTIFICATION PLATE  General Information |

#### 1. CERTIFICATION PLATE



### 2. General Information

#### 2.1 Performances

Values are as measured per test method, except for the recommended heating area, firebox volume, maximum burn time and maximum heat output.

| Model  | HES350 (VB00020)                                    |         |
|--|---|---------|
| Type of combustion                                     | Non-catalytic                                       |         |
| Fuel Type  | Dry Cordwood  |         |
| Recommended heating area (sq. ft.·) <sup>1</sup>       | 1,000 to 2,700 ft <sup>2</sup> (93 to 2             | 251 m²) |
| Overall firebox volume <sup>2</sup>                    | 3.5 ft <sup>3</sup> (0.099 m <sup>3</sup> )         |         |
| Loading volume EPA                                     | 2.88 ft <sup>3</sup> (0.082 m <sup>3</sup> )        |         |
| Maximum burn time <sup>1</sup>                         | 10 hours  |         |
| Maximum heat output (dry cordwood) <sup>3</sup>        | 110,000 BTU/h (32.2 kW)                             |         |
| Overall heat output rate (min. to max.) <sup>2 4</sup> | 17,200 BTU/h to 57,800 BTU/h<br>(5.0 kW to 16.9 kW) |         |
| Average overall efficiency <sup>3</sup> (Dry cordwood) | 71 % (HHV) <sup>5</sup> 76 % (LHV) <sup>6</sup>     |         |
| Optimum overall efficiency <sup>7</sup>                | 77 %  |         |
| Optimum heat transfer efficiency <sup>8</sup>          | 75 %  |         |
| Average particulate emissions rate <sup>9</sup>        | 1.6 g/h (EPA / CSA B415.1-10) <sup>10</sup>         |         |
| Average CO <sup>11</sup>                               | 73 g/h  |         |

<sup>&</sup>lt;sup>1</sup> Recommended heating area and maximum burn time may vary subject to location in home, chimney draft,heat loss factors, climate, fuel type and other variables. The recommended heated area for a given appliance is defined by the manufacturer as its capacity to maintain a minimum acceptable temperature in the designated area in case of a power failure.

<sup>&</sup>lt;sup>2</sup> The overall firebox calculation is an approximation and is not intended to be used for loading. This volume includes a buffer zone to allow an easier fuel insertion, prevent ash spillage and allow the air wash to work properly.

<sup>&</sup>lt;sup>3</sup> The maximum heat output (dry cordwood) is based on a loading density varying between 15 lb/ft<sup>3</sup> and 20 lb/ft<sup>3</sup>. Other performances are based on a fuel load prescribed by the standard. The specified loading density varies between 7 lb/ft<sup>3</sup> and 12 lb/ft<sup>3</sup>. The moisture content is between 19% and 25%.

<sup>&</sup>lt;sup>4</sup> As measured per CSA B415.1-10 stack loss method.

<sup>&</sup>lt;sup>5</sup> Higher Heating Value of the fuel.

<sup>&</sup>lt;sup>6</sup> Lower Heating Value of the fuel.

<sup>&</sup>lt;sup>7</sup> Optimum overall efficiency at a specific burn rate (LHV).

<sup>&</sup>lt;sup>8</sup> The optimum heat transfer efficiency is for the low burn rate and represents the appliance's ability to convert the energy contained in the wood logs into energy transferred to the room in the form of heat and does not take into account the chemical losses during combustion.

<sup>&</sup>lt;sup>9</sup> This appliance is officially tested and certified by an independent agency.

<sup>&</sup>lt;sup>10</sup> Tested and certified in compliance with CFR 40 part 60, subpart AAA, section 60.534(a)(1(ii) and ASTM E3053. Based on ALT-125 sent by EPA on February 28, 2018.

<sup>&</sup>lt;sup>11</sup> Carbon monoxide.

### 2.2 Specifications

| 16 in (406 mm) east-west           |
|------------------------------------|
| 10 111 (100 11111) 0001 11001      |
| 22 in (560 mm) east-west           |
| 6 in (150 mm)                      |
| 6 in (150 mm)                      |
| ULC-S629, UL 103 HT (2100 °F)      |
| 12 feet                            |
| Vermiculite                        |
| Yes                                |
| Yes                                |
| Simple, glass with cast iron frame |
| Ceramic glass                      |
| Included (up to 130 CFM)           |
| EPA / CSA B415.1-10                |
| UL 1482, UL 737                    |
| ULC-S627                           |
|                                    |

<sup>&</sup>lt;sup>1</sup> North-south: ends of the logs visible, East-west: sides of the logs visible.

<sup>&</sup>lt;sup>2</sup> Mobile homes (Canada) or manufactured homes (USA): The US Department of Housing and Urban Development describes "manufactured homes" better known as "mobile homes" as follows; buildings built on fixed wheels and those transported on temporary wheels/axles and set on a permanent foundation. In Canada, a mobile home is a dwelling for which the manufacture and assembly of each component is completed or substantially completed prior to being moved to a site for installation on a foundation and connection to service facilities and which conforms to the CAN/CSA-Z240 MH standard.

<sup>&</sup>lt;sup>3</sup> Tested and certified in compliance with CFR 40 part 60, subpart AAA, section 60.534(a)(1(ii) and ASTM E3053. Based on ALT-125 sent by EPA on February 28, 2018.

### 2.3 Dimensions

### 2.3.1 Stove Dimensions

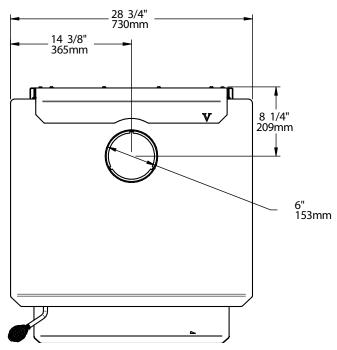


Figure 1: Top View

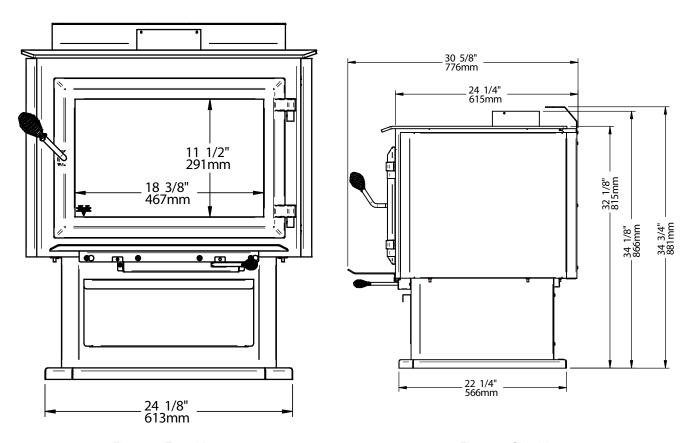


Figure 2: Front View

Figure 3: Side View

### 2.3.2 Combustion Chamber Dimensions

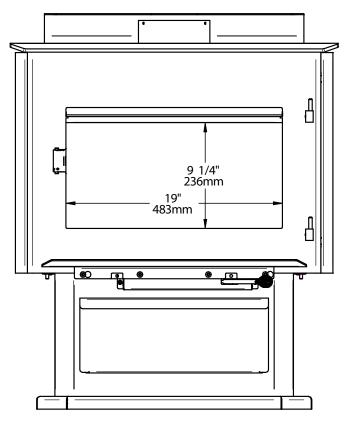


Figure 4: Door Opening

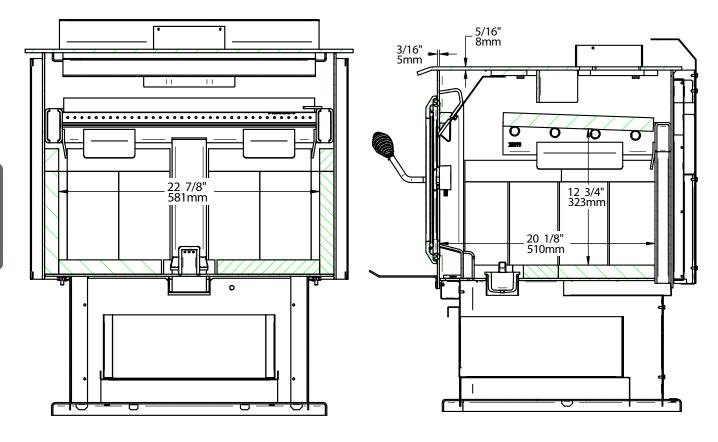


Figure 5: Front View - Combustion Chamber

Figure 6: Side View - Combustion Chamber

### 2.4 EPA Loading

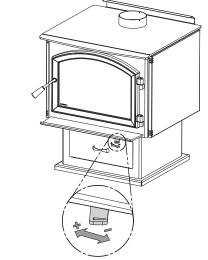
For EPA Certification testing, wood logs were 16  $\pm$  1 inches long and the specie used was beech.

### 2.4.1 Air control

The air control is located underneath the ash shelf. To open the air control, push the air control handle completely to the left (High). This will increase the burn rate. To close the air control, push the air control handle completely to the right (Low). This will decrease the burn rate.

### 2.4.2 High burn rate

Open the air control completely. Place height small pieces (2 1/2" x 2 1/2" approximately) of wood in two layers in the firebox crossing them at the greatest possible angle. Criss cross 15 to 20 kindling wood pieces (1"x1" approximately) on



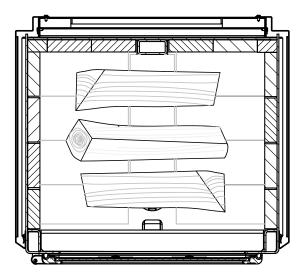
the small pieces of wood in three or four layers at the greatest possible angle. Tie knot with five sheets of paper and place them on top of the kindling wood. Light up the paper and let the door ajar at 90° until all the kindling wood is on fire. Close the door. When there is no more fire in the front of the firebox and there are only faint flames on the wood in the back of the firebox, break ashes, level the coal bed and put six logs in the firebox. Put 3 pieces centered on the coal bed, without air space between them. Leave one inch of air space between the rear firebrick and the first piece. The three other pieces should be added on top of the first 3, still in an East-West configuration. Let the door ajar at 90° for 1 minute and then close the door.

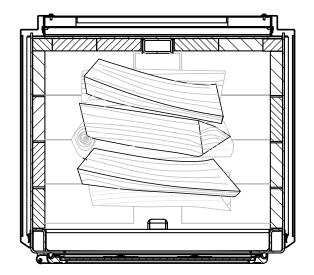
### 2.4.3 Medium and low burn rate

On a two inches thick coal bed that is still red, place three logs centered on the coal bed in an East-West orientation. There should be air space between each log and between the logs and the bricks. The three other pieces should be added on top of the first three, in an East-West orientation but slightly angled of 10° still with air space between each log and the bricks. Let the door ajar at 90° for approximately 5 min. Then, close the door with the primary air control open. Leave to burn with the primary air control open for approximately 10 more minutes and then close the primary air control completely for the low burn rate and halfway for the medium burn rate. For better results, close the air control gradually from the closing of the door to the complete closing of the air control.

# 2.4.4 Logs placement

The images below show how to place the logs in the combustion chamber as described previously.





### 3. Clearances to Combustible Material

The clearances shown in this section have been determined by tests according to procedures set out in safety standards ULC S627 (Canada), UL 1482 (U.S.A.) and UL 737 (U.S.A.). When the stove is installed so that its surfaces are at or beyond the minimum clearances specified, combustible surfaces will not overheat under normal and even abnormal operating conditions.

No part of the stove or flue pipe may be located closer to combustibles than the minimum clearance figures given.

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

The clearances to combustible walls may be slightly different in Canada and the U.S.A. and may also differ depending on whether single or double wall flue pipe is used. Make sure to choose the correct clearance for the stove location and type of flue pipe.

The clearances of the appliance and the flue pipes must be met individually, meaning the appliance cannot be installed closer to the combustible materials than the single or double wall pipe allows. For a safe way to reduce clearances refer to section"5. Reducing Wall and Ceiling Clearances Safely" of this manual.

#### 3.1 Clearances

|   | APPLIANCE CLEARANCES WITH SINGLE WALL PIPE CONNECTOR |               |
|---|--|---------------|
|   | Canada USA   |               |
| Α | 13 ¼" (337 mm)                                       | 13" (330 mm)  |
| В | 14" (356 mm)   | 14" (356 mm)  |
| С | 7 ¼" (184 mm)  | 7 ¼" (184 mm) |

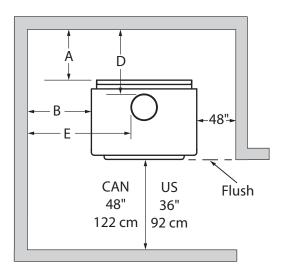
|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR |              |
|---|--|--------------|
|   | Canada USA   |              |
| A | 7" (178 mm)  | 7" (178 mm)  |
| В | 14" (356 mm)   | 14" (356 mm) |
| С | 7" (178 mm)  | 7" (178 mm)  |

If the above clearances are met, then the distances measured from the flue outlet will be:

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH SINGLE WALL PIPE CONNECTOR |                  |
|---|--|------------------|
|   | Canada USA   |                  |
| D | 18" (457 mm)   | 17 ¾" (451 mm)   |
| E | 24 1/8" (632 mm)   | 24 1/8" (632 mm) |
| F | 18" (457 mm)   | 18" (457 mm)     |

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTORE |                |
|---|---|----------------|
|   | Canada USA  |                |
| D | 11 ¾" (298 mm)  | 11 ¾" (298 mm) |
| E | 24 1/8" (632 mm)  | 24 %" (632 mm) |
| F | 17 ¾" (451 mm)  | 17 ¾" (451 mm) |

<sup>&</sup>lt;sup>1</sup> The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.



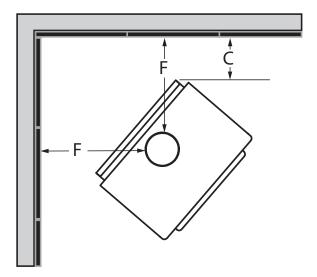


Figure 7: Clearances - Top

Figure 8: Clearances - Corner

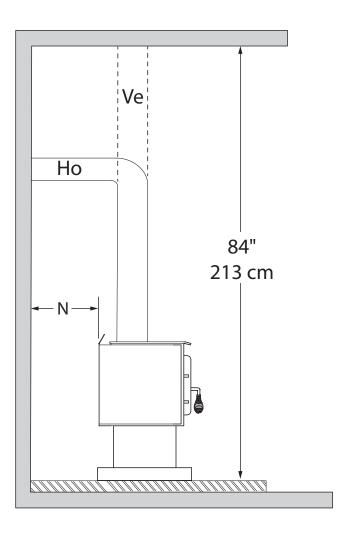


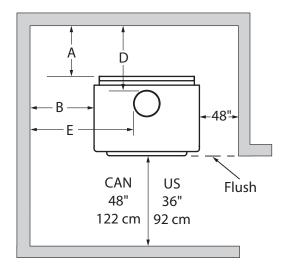
Figure 9: Clearances - Side

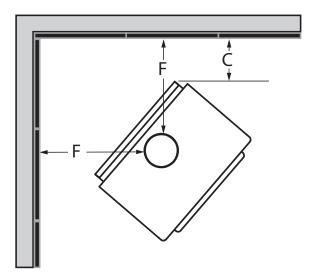
### 3.1.1 With Heat Shield AC027621

To reduce the clearances of an appliance using a single wall pipe connector, the use of a heat shield certified with the single wall pipe connector to be used as close as 6" from combustible materials must be used. Only in this case, the same clearances as a certified double wall pipe connector can be used. Refer to the booklet in the screen options to obtain the dimensions to be respected.

|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR |              |
|---|--|--------------|
|   | Canada USA   |              |
| Α | 2 ½" (64 mm)   | 2 ½" (64 mm) |
| В | 2 ½" (64 mm)   | 2 ½" (64 mm) |
| С | 2 ½" (64 mm)   | 2 ½" (64 mm) |

|   | DISTANCES <sup>2</sup> FROM DOUBLE WALL<br>PIPE CONNECTOR |                        |
|---|---|------------------------|
|   | Canada USA  |                        |
| D | 7 ¼" (184 mm)   | 7 ¼" (184 mm)          |
| E | 13 <b>%</b> " (340 mm)                                    | 13 <b>%</b> " (340 mm) |
| F | 13 ¼" (337 mm)  | 13 ¼" (337 mm)         |





If the clearance reduction is on the same side as the door handle, position the stove at a minimum of 6 inches from the side wall (clearance B), otherwise it may be located at the clearance shown in the table above.

<sup>&</sup>lt;sup>1</sup> Note that to reduce the clearances of an appliance using a single wall pipe connector, the use of a heat shield certified with the single wall pipe connector to be used as close as 6" from combustible materials must be used. Only in this case, the same clearances as a certified double wall pipe connector can be used.

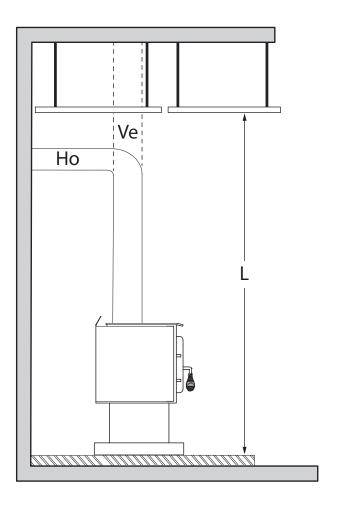
<sup>&</sup>lt;sup>2</sup> The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.

### 3.1.2 With Lowered Ceiling

|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR |                |
|---|--|----------------|
|   | Canada USA   |                |
| Α | 11" (279 mm)   | 11" (279 mm)   |
| В | 16" (406 mm)   | 16" (406 mm)   |
| С | 10" (254 mm)   | 10" (254 mm)   |
| L | 72" (1,830 mm)                                       | 72" (1,830 mm) |

If the above clearances are met, then the distances measured from the flue outlet will be:

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR |                  |
|---|--|------------------|
|   | Canada USA   |                  |
| D | 15 ¾" (400 mm)   | 15 ¾" (400 mm)   |
| E | 26 1/8" (683 mm)   | 26 1/8" (683 mm) |
| F | 20 ¾" (527 mm)   | 20 ¾" (527 mm)   |



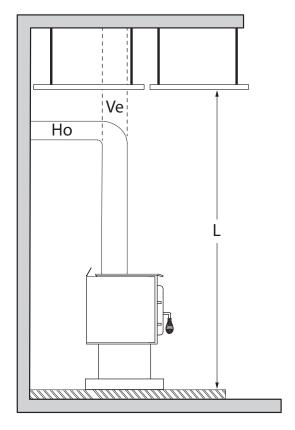
<sup>&</sup>lt;sup>1</sup> The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.

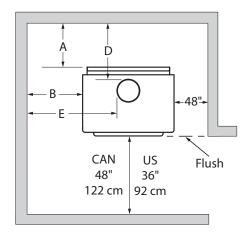
### 3.1.3 With Heat Shield AC02762 and Lowered Ceiling

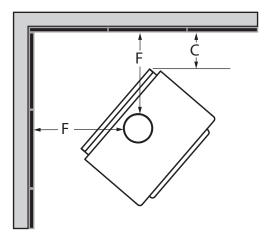
To reduce the clearances of an appliance using a single wall pipe connector, the use of a heat shield certified with the single wall pipe connector to be used as close as 6" from combustible materials must be used. Only in this case, the same clearances as a certified double wall pipe connector can be used. Refer to the booklet in the screen options to obtain the dimensions to be respected.

|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR |                |  |  |
|---|--|----------------|--|--|
|   | Canada USA   |                |  |  |
| Α | 2 ½" (64 mm)   | 2 ½" (64 mm)   |  |  |
| В | 2 ½" (64 mm)   | 2 ½" (64 mm)   |  |  |
| С | 2 ½" (64 mm)   | 2 ½" (64 mm)   |  |  |
| L | 74" (1,880 mm)                                       | 74" (1,880 mm) |  |  |

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR |                |  |  |
|---|--|----------------|--|--|
|   | Canada USA   |                |  |  |
| D | 7 ¼" (184 mm)  | 7 ¼" (184 mm)  |  |  |
| E | 13 %" (340 mm)   | 13 %" (340 mm) |  |  |
| F | 13 ¼" (337 mm) 13 ¼" (337 mm)                                  |                |  |  |







If the clearance reduction is on the same side as the door handle, position the stove at a minimum of 6 inches from the side wall (clearance B), otherwise it may be located at the clearance shown in the table above.

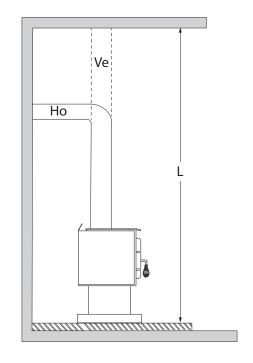
<sup>&</sup>lt;sup>1</sup> The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.

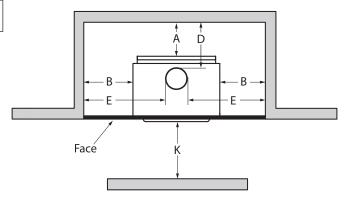
### 3.1.4 Inside a Combustible Alcove

See section 3.1 for the single wall pipe installation.

|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR    |              |  |  |
|---|---|--------------|--|--|
|   | Canada USA  |              |  |  |
| Α | 11" (279 mm)  | 11" (279 mm) |  |  |
| В | 16" (406 mm) 16" (406 mm)<br>48" (1220 mm) 36" (910 mm) |              |  |  |
| K |   |              |  |  |
| L | 74" (1,880 mm) 74" (1,880 mm)                           |              |  |  |

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR |                  |  |  |
|---|--|------------------|--|--|
|   | Canada USA   |                  |  |  |
| D | 15 ¾" (400 mm)   | 15 ¾" (400 mm)   |  |  |
| E | 26 %" (683 mm)   | 26 1/8" (683 mm) |  |  |





### 3.1.5 Mobile Home

It is strictly forbidden to install a unit with a single wall pipe in a mobile home.

|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR |              |  |  |
|---|--|--------------|--|--|
|   | Canada USA   |              |  |  |
| Α | 10" (254 mm) 10" (254 mm                             |              |  |  |
| В | 19" (483 mm)   | 19" (483 mm) |  |  |
| С | 10" (254 mm)   | 10" (254 mm) |  |  |

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR |                |  |  |  |
|---|--|----------------|--|--|--|
|   | Canada USA   |                |  |  |  |
| D | 14 ¾" (375 mm)   | 14 ¾" (375 mm) |  |  |  |
| E | 29 %" (759 mm) 29 %" (759 mm                                   |                |  |  |  |
| F | 20 ¾" (527 mm)   | 20 ¾" (527 mm) |  |  |  |

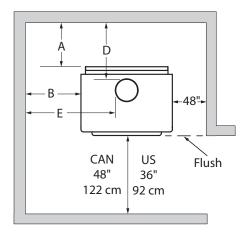
<sup>&</sup>lt;sup>1</sup> The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.

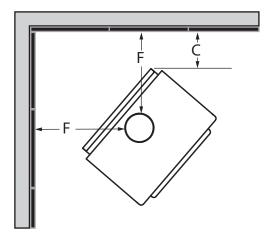
### 3.1.6 Mobile Home With Heat Shield AC02762

It is strictly forbidden to install a unit with a single wall pipe in a mobile home.

|   | APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR |             |  |  |  |
|---|--|-------------|--|--|--|
|   | Canada USA   |             |  |  |  |
| Α | 3" (76 mm)   | 3" (76 mm)  |  |  |  |
| В | 5" (127 mm)  | 5" (127 mm) |  |  |  |
| С | 3" (76 mm)   | 3" (76 mm)  |  |  |  |

|   | DISTANCES¹ FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR  |  |  |  |
|---|---|--|--|--|
|   | Canada USA  |  |  |  |
| D | D       7 ¾" (197 mm)       7 ¾" (197 mm)         E       15 ½" (403 mm)       15 ½" (403 mr)         F       13 ¾" (349 mm)       13 ¾" (349 mr) |  |  |  |
| E |   |  |  |  |
| F |   |  |  |  |





Les distances de tuyau listées dans ce tableau se réfèrent aux distances obtenues lorsque le poêle est installé en accord avec les dégagements de l'appareil mentionnés ci-dessus.

### 4. Floor Protection

This stove is designed to prevent the floor from overheating. However, it must be placed on a non-flammable surface to protect the floor from hot embers that may fall during loading.

The floor protection must be a continuous, non combustible material, such as steel with a minimum thickness of 0.015" (0.38 mm) or ceramic tiles sealed together with grout. Cement board, brick, or any other approved or listed material suited for floor protection. No R factor required.

Any type of tile will require a continuous non combustible sheet beneath to prevent the possibility of embers falling through to the combustible floor if cracks or separation should occur in the finished surface. Check local codes for approved alternatives.

No protection is required if the unit is installed on a non-combustible floor (ex: concrete).

|                | FLOOR PROTECTION                  |                                   |  |  |  |
|----------------|-----------------------------------|-----------------------------------|--|--|--|
|                | Canada <sup>1</sup> USA           |                                   |  |  |  |
| G <sup>2</sup> | 8" (203 mm)                       | N/A                               |  |  |  |
| Н              | 8" (203 mm)                       | N/A                               |  |  |  |
| I              | 18" (457 mm) from<br>door opening | 16" (406 mm)<br>from door opening |  |  |  |
| J              | N/A                               | 8" (203 mm)                       |  |  |  |
| K              | 44 ¾" (1137 mm)                   | 35" (889 mm)                      |  |  |  |
| N³             | N/A                               | See note 3                        |  |  |  |
| S              | 50 ¼" (1276 mm)                   | 40 ¼" (1022 mm)                   |  |  |  |
| Т              | 35 ½" (902 mm)                    | 28 ½" (724 mm)                    |  |  |  |
| U              | 44 ¾" (1137 mm)                   | 35" (889 mm)                      |  |  |  |
| V              | 72 5/8" (1845 mm)                 | 345 mm) 57 ¾" (1467 mm)           |  |  |  |

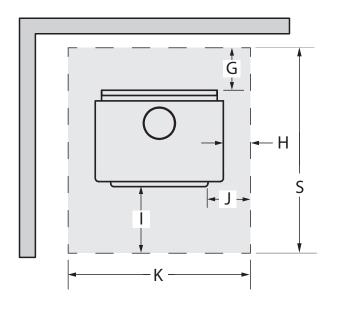
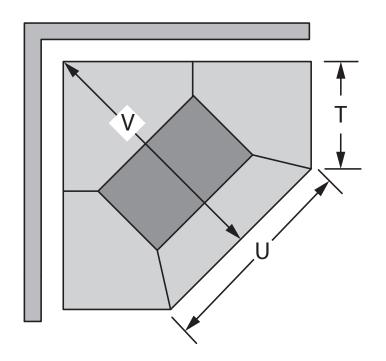


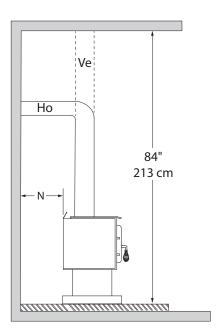
Figure 10: Floor Protection

<sup>&</sup>lt;sup>1</sup> In Canada, to comply with CSA B365, Installation Code for Solid-Fuel-Burning Appliances and Equipment, any combustible covering beneath the appliance and/or within the area extending horizontally at least 450 mm (18 in) beyond the appliance on any side equipped with a door, and at least 200 mm (8 in) beyond the appliance on other sides, shall be protected by a continuous, durable, non-combustible pad that will ember protection. The 450 mm (18 in) ember protection required on any side with a door shall extend for the full width of the appliance plus the 200 mm (8 in) required on each side of the appliance without a door. Where the appliance is installed less than 200 mm (8 in) from a wall, the ember pad need only extend to the base of the wall. An ember pad shall not be placed on top of a carpet unless the pad is structurally supported to prevent displacement and distortion.

<sup>&</sup>lt;sup>2</sup> The floor protection at the back of the stove is limited to the stove's required clearance if such clearance is smaller than 8 inches (203 mm).

<sup>&</sup>lt;sup>3</sup> Only required under the horizontal section (Ho) of the connector, Must exceed each side of the connector by at least 2 inches (51 mm).

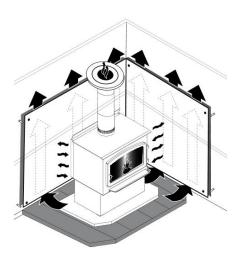




### 5. Reducing Wall and Ceiling Clearances Safely

It is often desired to use as little space as possible when installing a wood stove. To do this, it is possible to reduce the clearances safely and install the stove closer to the walls by permanently installing a heat shield between the stove and the flammable material.

The rules for heat shields are sometimes complicated. Read and apply the instructions carefully. Some regions may have different regulations. Consult the local building code or contact the fire department for restrictions, inspection and installation requirements in the area.



Warning: To reduce the clearances of an appliance using a single wall pipe connector, the use of a heat shield certified with the single wall pipe connector to be used as close as 6" from combustible materials must be used. Only in this case, the same clearances as a certified double wall pipe connector can be used. Refer to the booklet in the screen options to obtain the dimensions to be respected.

#### 5.1 Shield Construction Rules

- Adhesives used in shield construction must not ignite or lose adhesive qualities at temperatures likely to be encountered.
- Mounting hardware which extends from the shield surface into combustibles may be used only at the edges of the shield.
- Mounting hardware must allow full vertical ventilation.
- A) Minimum clearance between the appliance top and an unshielded combustible ceiling: 39 7/8" (1013 mm)
- B) Shield extension above the appliance: 20" (500 mm)
- C) Minimum space behind the shield: 1" (25 mm). In Canada 7/8" (21 mm)
- D) Clearance along the bottom of the shield: minimum 1" (25 mm) and maximum 3" (75 mm)
- E) Minimum clearance along the top of the shield: 3" (75 mm)
- F) Mounting hardware must not be located closer than 8" (200 mm) from the vertical centre line of the appliance.
- G) Edge clearance for ceiling shields to side and back walls: 3" (75 mm)
- H) Shield extension beyond each side of the appliance: 18" (450 mm)

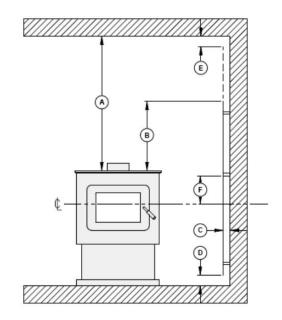


Figure 11: Heat shield clearances

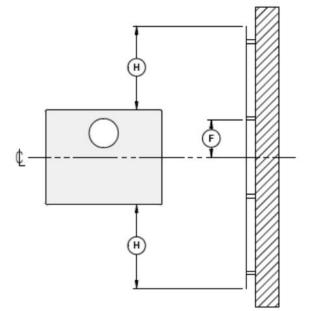


Figure 13: Heat shield clearances

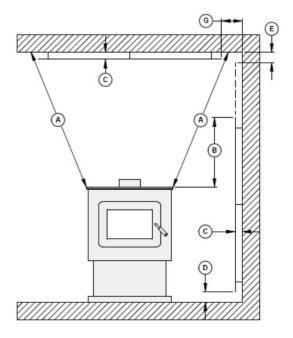


Figure 12: Heat shield clearances

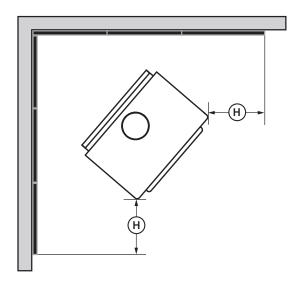


Figure 14: Heat shield clearances

|  | _                | CLEARANCES MAY BE REDUCED BY<br>THESE PERCENTAGES |                  |                 |  |
|--|------------------|---|------------------|-----------------|--|
| TYPE OF SHIELD   | SIDES AN         | ID REAR   | TOP (CE          | ILING)          |  |
|  | CAN /<br>USA (%) | USA<br>MIN.                                       | CAN /<br>USA (%) | USA<br>MIN.     |  |
| Sheet metal, a minimum of 24 gauge (0.61 mm) in thickness, spaced out at least 1" (25 mm)* by non-combustible spacers  | 67               | 12"<br>(305 mm)                                   | 50               | 18"<br>(457 mm) |  |
| Ceramic tiles, or equivalent non-combustible material, on non-combustible board spaced out at least 1" (25 mm)* by non-combustible spacers   | 50               | 18"<br>(457 mm)                                   | 33               | 24"<br>(610 mm) |  |
| Ceramic tiles, or equivalent non-combustible material, on non-combustible board, with a minimum of 24 gauge (0.61 mm) sheet metal backing spaced out at least 1" (25 mm)* by non-combustible spacers | 67               | 12"<br>(305 mm)                                   | 50               | 24"<br>(610 mm) |  |
| Brick, spaced out at least 1" (25 mm)* by non-combustible spacers  | 50               | 18"<br>(457 mm)                                   | N/A              | N/A             |  |
| Brick, with a minimum of 24 gauge (0.61 mm) sheet metal backing, spaced out at least 1" (25 mm)* by non-combustible spacers  | 67               | 12"<br>(305 mm)                                   | N/A              | N/A             |  |

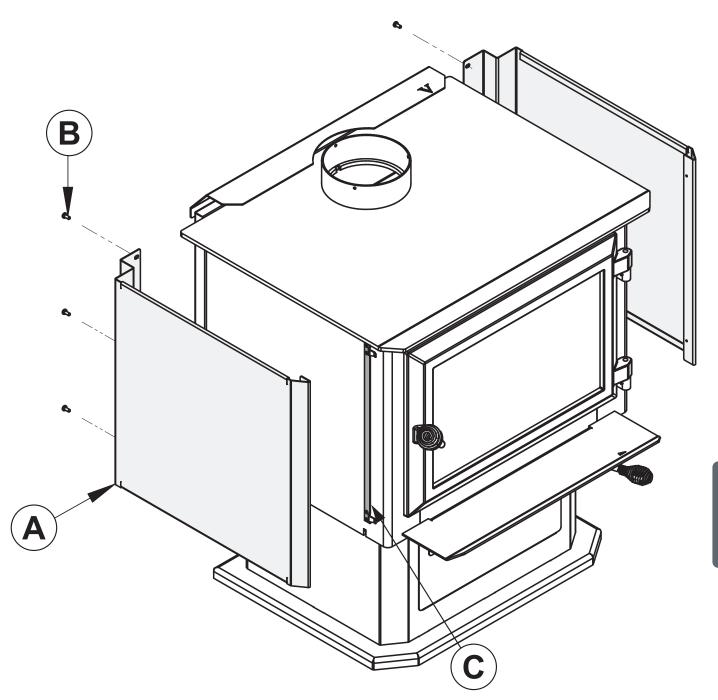
 $<sup>^{\</sup>star}$  In Canada this space can be %" (21 mm)

### 6. INSTALLATION OF OPTIONS ON YOUR PRODUCT

### 6.1 Decorative Panels

THE IMAGES SHOWN ARE FOR GUIDANCE ONLY AND MAY BE DIFFERENT FROM YOUR PRODUCT, BUT THE ASSEMBLY REMAINS THE SAME.

To remove the decorative panel (A), remove the screws (B) and push forward on the panel to unhook it from the bracket (C).

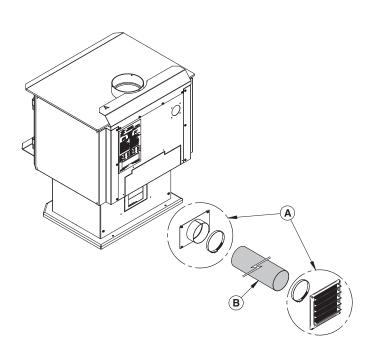


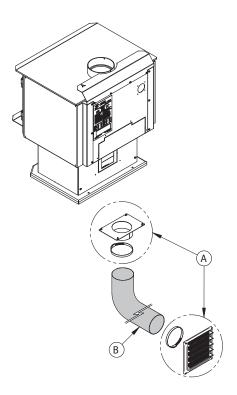
### 6.2 Optional Fresh Air Intake Kit Installation

THE IMAGES SHOWN ARE FOR GUIDANCE ONLY AND MAY BE DIFFERENT FROM YOUR PRODUCT, BUT THE ASSEMBLY REMAINS THE SAME.

This mobile home approved stove requires the installation of a fresh air intake kit **(A)** and an insulated fresh air intake pipe (HVAC type, must meet ULC S110 or UL 181 class 0 or class 1) **(B)**, sold separately. Refer to air intake kit installation instructions for more details.

### Installation with pedestal





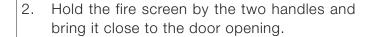
### 6.3 Optional Fire Screen Installation

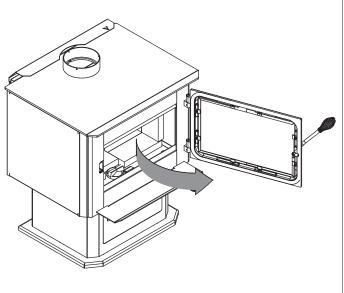
THE IMAGES SHOWN ARE FOR GUIDANCE ONLY AND MAY BE DIFFERENT FROM YOUR PRODUCT, BUT THE ASSEMBLY REMAINS THE SAME.

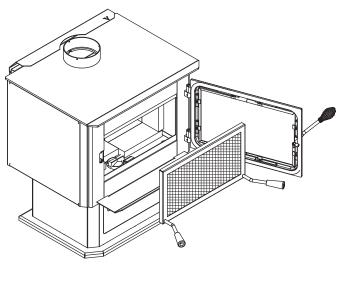
In the United States or in provinces with a particulate emission limit (eg. US EPA), the use of wood stoves with the door open with a rigid firescreen is prohibited.

It is prohibited to use this wood stove with a fire screen in a mobile home.

1. Open the door.

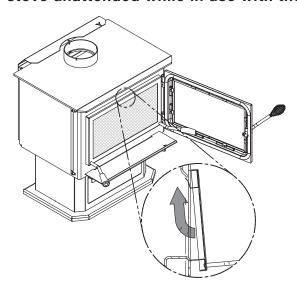






- 3. Lean the upper part of the fire screen against the top door opening making sure to position the top fire screen brackets behind the primary air deflector.
- 4. Lift the fire screen upwards and push the bottom part towards the stove then let the fire screen rest on the bottom of the door opening.

Warning: Never leave the stove unattended while in use with the fire screen.

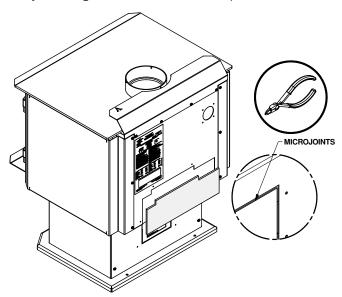


### 6.4 Optional Blower And Thermodisc Installation

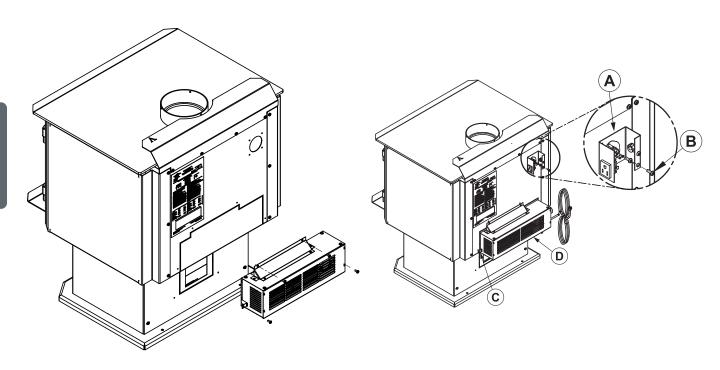
THE IMAGES SHOWN ARE FOR GUIDANCE ONLY AND MAY BE DIFFERENT FROM YOUR PRODUCT, BUT THE ASSEMBLY REMAINS THE SAME.

A blower and a thermodisc, sold separately, can be installed on the stove. The installation of the blower is identical for a stove on legs or pedestal. Thermodisc allows the blower to operate only when the stove is hot enough. See the instructions provided with the thermodisc for more details.

1. Remove the backplate by cutting the knockouts with pliers.

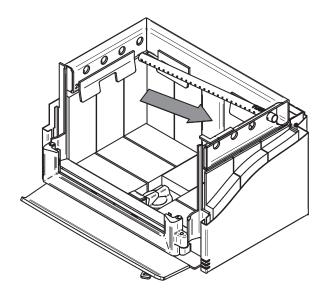


2. Screw the blower (D) in place using the screws (C) included in the installation manual. Screw the thermodisc (A) with the screws (B) supplied with the thermodisc on the back of the stove. Ensure that the blower's power cord is not in contact with any surface of the stove to prevent electrical shock or fire damage. Do not run the power cord beneath the stove.

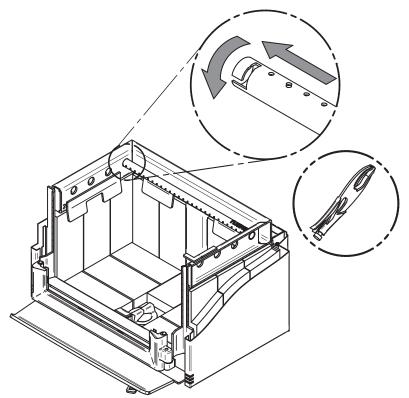


### 6.5 Air Tubes And Baffle Installation

 Starting with the rear tube, lean and insert the right end of the secondary air tube into the rear right channel hole. Then lift and insert the left end of the tube into the rear left channel.

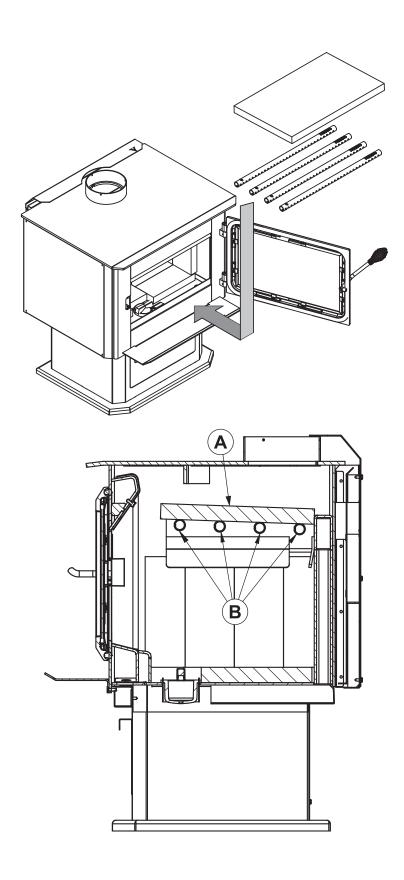


2. Align the notch in the left end of the tube with the key of the left air channel hole. Using a « Wise grip » hold the tube and lock it in place by turning the tube as shown. Make sure the notch reaches the end of the key way.



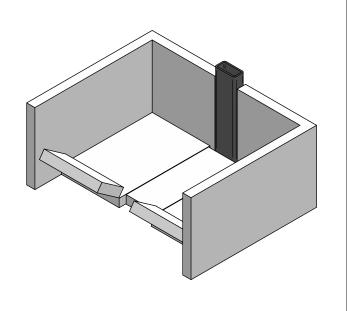
- 3. Put the baffle in place.
- 4. Repeat steps 1 and 2 for the three other tubes.
- 5. To remove the tubes use the above steps in reverse order.

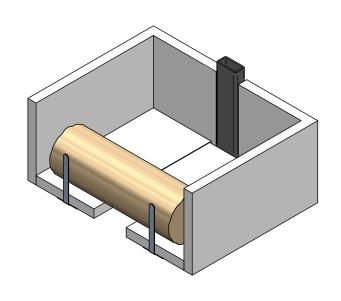
Note that secondary air tubes **(B)** can be replaced without removing the baffle board **(A)** and that all tubes are not necessarely identical (look at the part number on the tube).



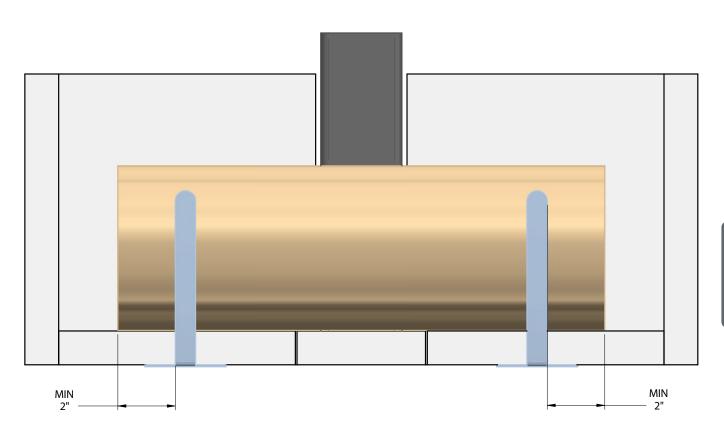
# 6.6 Log Retainers Installation

1.





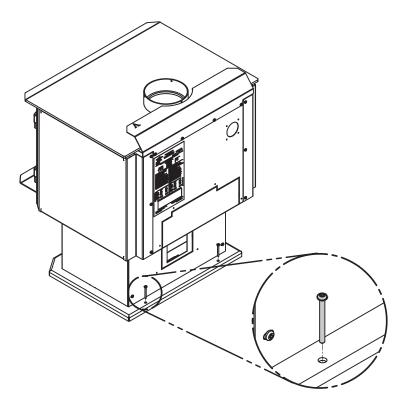
3.



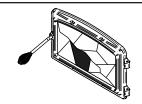
### 6.7 Mobile Home Installation

THE IMAGES SHOWN ARE FOR GUIDANCE ONLY AND MAY BE DIFFERENT FROM YOUR PRODUCT, BUT THE ASSEMBLY REMAINS THE SAME.

Screw the base on the floor with the proper hardware.



### 7. Maintenance/Parts Replacement



Do not clean the glass when the stove is hot.

Do not abuse the glass door by striking or slamming shut.

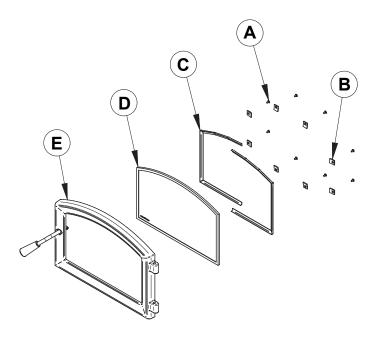
Do not use the stove if the glass is broken.

### 7.1 Replacement

The glass used is a ceramic glass, 5/32" (4 mm) thick, tested to reach temperatures up to  $1400^{\circ}$  F. The dimensions of the glass are 19 5/16" x 12 7/16". If the glass breaks, it must be replaced by a ceramic glass from SCHOTT with the same specification. Contact your dealer to obtain a genuine replacement part.

#### To remove or replace the glass (D):

THE IMAGES SHOWN ARE FOR GUIDANCE ONLY AND MAY BE DIFFERENT FROM YOUR PRODUCT, BUT THE ASSEMBLY REMAINS THE SAME.



- 1. Remove the door **(E)** from its hinges and lay it on a soft, flat surface.
- 2. Remove the eight screws (A), the eight glass retainers (B), and the metal frames (C).
- 3. Remove the glass **(D)**. If it is damaged install a new one in place. The replacement glass must have a gasket all around (see procedure below).
- 4. Reinstall the glass, being careful to centre the glass in the door and not to over-tightening the retaining screw.

The two main causes of broken door glass are uneven placement in the door and over-tightening the retaining screws.

#### 7.2 Gasket

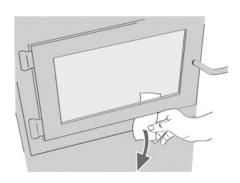
The glass gasket is flat, adhesive-backed, woven fibreglass. The gasket must be centred on the edge of the glass.

- 1. Follow the steps of the previous section to remove the glass.
- 2. Remove the old gasket and clean the glass thoroughly.
- Peel back a section of the paper covering the adhesive and place the gasket on a table with the adhesive side up.
- Stick the end of the gasket to the middle of one edge, then press
  the edge of the glass down onto the gasket, taking care that it is perfectly centred on the gasket.
- 5. Peel off more of the backing and rotate the glass. The gasket must not be stretched during installation.
- 6. Cut the gasket to the required length.
- 7. Pinch the gasket onto the glass in a U shape, all around the glass.

By following these instructions, the edge clearances are maintain.

#### 7.3 Door

In order for the stove to burn at its best efficiency, the door must provide a perfect seal with the firebox. The tightness of the door seal can be verified by closing and latching the door on a strip of paper. The test must be performed all around the door. If the paper slips out easily anywhere, either adjust the door or replace the gasket.



### 7.3.1 Adjustment

In order for the stove to burn at its best efficiency, the door must provide a perfect seal with the firebox. Therefore, the gasket should be inspected periodically to check for a good seal. The gasket seal may be improved with a simple latch mechanism adjustment:

- 1. Remove the split pin by pulling and turning it using pliers.
- 2. Turn the handle one counterclockwise turn to increase pressure.
- 3. Reinstall the split pin with a small hammer.

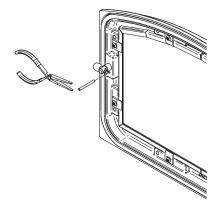


Figure 15: Removing the split pin

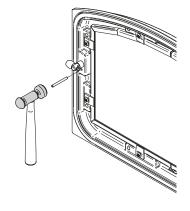
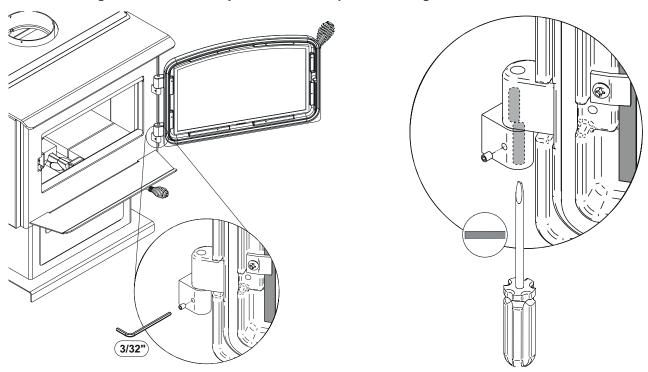


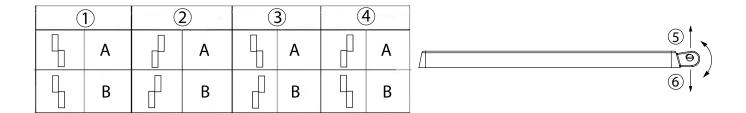
Figure 16: Installing the split pin

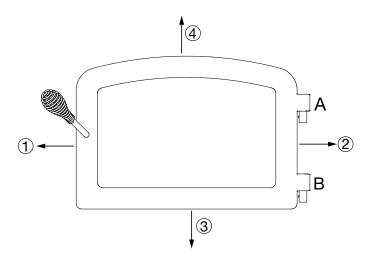
### 7.3.2 Door Alignment

To align, open the door and loosen the pressures screws located on the lower and upper hinges of the door using a 3/32" Allen key to free the adjustable hinge rods.



Using a flat screwdriver, turn the adjustable hinge rods in the direction shown to adjust the doors. Tighten all door hinge pressure screws when they are at the desired positions. Configurations 1-2-3-4-5-6, show in which direction these act on the adjustment of the door.

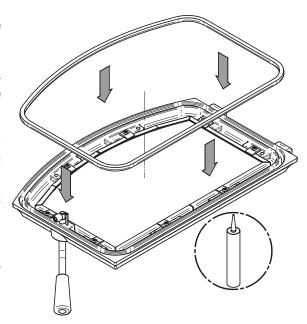




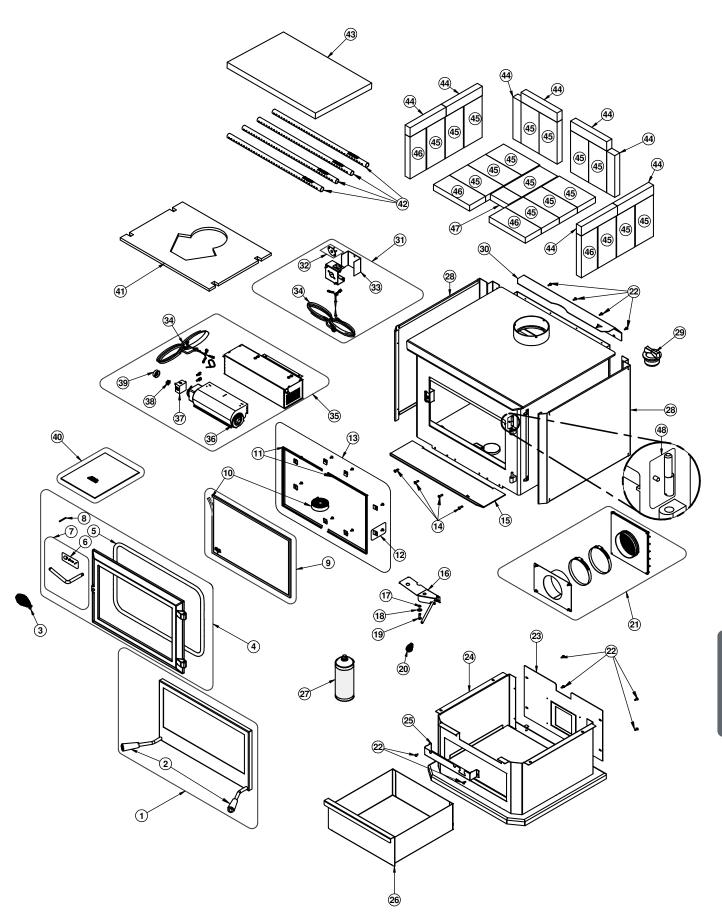
#### 7.3.3 Gasket

It is important to replace the gasket with another having the same diameter and density to maintain a good seal.

- 1. Remove the door and place it face-down on something soft like a cushion of rags or a piece of carpet.
- 2. Remove the old gasket from the door. Use a screwdriver to scrape the old gasket adhesive from the door gasket groove.
- 3. Apply a bead of approximately 3/16" (5 mm) of high temperature silicone in the door gasket groove. Starting from the middle, hinges side, press the gasket into the groove. The gasket must not be stretched during installation.
- 4. Leave about ½" long of the gasket when cutting and press the end into the groove. Tuck any loose fibers under the gasket and into the silicone.
- 5. Close the door. Do not use the stove for 24 hours.



# 8. Exploded Diagram and Parts List



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

| #  | Item       | Description  | Qty |
|----|------------|--|-----|
| 1  | AC01281    | RIGID FIRESCREEN                                     | 1   |
| 2  | SE74166    | HANDLE 30898 REPLACEMENT KIT                         | 2   |
| 3  | AC07868    | 1/2" BLACK COIL HANDLE                               | 1   |
| 4  | SE24366    | CAST IRON DOOR WITH HANDLE AND GASKET                | 1   |
| 5  | AC06500    | SILICONE AND 5/8" X 8' BLACK DOOR GASKET KIT         | 1   |
| 6  | AC09185    | DOOR LATCH KIT                                       | 1   |
| 7  | SE70697    | REPLACEMENT HANDLE WITH LATCH KIT                    | 1   |
| 8  | 30101      | SPRING TENSION PIN 5/32"Ø X 1 1/2"L                  | 1   |
| 9  | SE70978    | GLASS WITH GASKET 19 9/16" X 12 1/8"                 | 1   |
| 10 | AC06400    | 3/4" X 6' FLAT BLACK SELF-ADHESIVE GLASS GASKET      | 2   |
| 11 | PL70979    | GLASS FRAME  | 2   |
| 12 | SE53585    | GLASS RETAINER KIT WITH SCREWS (12 PER KIT)          | 1   |
| 13 | SE70988    | GLASS FRAME KIT                                      | 1   |
| 14 | 30507      | BLACK TORX SCREW WITH FLAT HEAD TYPE F 1/4-20 X 3/4" | 4   |
| 15 | PL70974    | ASH SHELF  | 1   |
| 16 | SE70904    | AIR DAMPER ASSEMBLY                                  | 1   |
| 17 | 30187      | STAINLESS WASHER ID 17/64" X OD 1/2"                 | 1   |
| 18 | 30206      | ZINC WASHER 5/16"ID X 3/4"OD                         | 1   |
| 19 | 30506      | SCREW PAN TORX TYPE F 1/4-20 X 1" BLACK              | 1   |
| 20 | AC07866    | 1/4" BLACK COIL HANDLE                               | 1   |
| 21 | AC01336    | 5"Ø FRESH AIR INTAKE KIT FOR WOOD STOVE ON PEDESTAL  | 1   |
| 22 | 30154      | BLACK SCREW #10 X 5/8" QUADREX #2 TYPE A             | 10  |
| 23 | PL70823    | PEDESTAL BACK PANEL                                  | 1   |
| 24 | SE70975    | BASE   | 1   |
| 25 | PL70774    | AIR CONTROL COVER                                    | 1   |
| 26 | PL70838    | ASH PAN  | 1   |
| 27 | AC05959    | METALLIC BLACK STOVE PAINT - 342 g (12oz) AEROSOL    | 1   |
| 28 | PL70971    | DECORATIVE PANEL                                     | 1   |
| 29 | 24096      | ROUND CAST IRON ASH PLUG                             | 1   |
| 30 | PL70977    | AIR DEFLECTOR  | 1   |
| 31 | AC02055    | QUICK CONNECT THERMODISC                             | 1   |
| 32 | 44028      | CERAMIC THERMODISC F110-20F                          | 1   |
| 33 | PL05530-02 | THERMODISC BOX (COVER)                               | 1   |
| 34 | 60013      | POWER CORD 96" X 18-3 type SJT (50 pcs per carton)   | 2   |
| 35 | SE53560    | 130 CFM BLOWER WITH VARIABLE SPEED CONTROL           | 1   |

| #  | Item    | Description  | Qty |
|----|---------|--|-----|
| 36 | 44070   | CROSSFLOW BLOWER SINGLE CAGE 130 CFM 115V-60Hz-56W | 1   |
| 37 | 44080   | RHEOSTAT WITHOUT NUT (MODEL KBMS-13BV)             | 1   |
| 38 | 44087   | RHEOSTAT NUT                                       | 1   |
| 39 | 44085   | RHEOSTAT KNOB                                      | 1   |
| 40 | SE46256 | HES350(VB00020) INSTRUCTION MANUAL KIT             | 1   |
| 41 | 21564   | C-CAST 3.5 SERIE INSULATION TOP                    | 1   |
| 42 | PL70864 | SECONDARY AIR TUBE                                 | 4   |
| 43 | 21585   | VERMICULITE BAFFLE                                 | 1   |
| 44 | PL36759 | 2" X 9" X 1 1/4" REFRACTORY BRICK                  | 8   |
| 45 | 29010   | 4 1/2" X 9" X 1 1/4" REFRACTORY BRICK              | 17  |
| 46 | 29015   | 4" X 9" X 1 1/4" REFRACTORY BRICK                  | 4   |
| 47 | PL36760 | 3 1/4" X 4 1/2" X 1 1/4" REFRACTORY BRICK          | 1   |
| 48 | SE74167 | DOOR HINGE REPLACEMENT KIT                         | 1   |

### 9. VENTIS LIMITED LIFETIME WARRANTY

The warranty of the manufacturer extends only to the original retail 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 VENTIS dealer.

This warranty applies to normal residential use only. This warranty applies to normal residential use only. This warranty is void if the unit is used to burn material other than cordwood (for which the unit is not certified by EPA) and void if not operated according to the owner's manual. Damages caused by misuse, abuse, improper installation, lack of maintenance, over firing, negligence or accident during transportation, power failures, downdrafts, venting problems or under-estimated heating area are not covered by this warranty. The recommended heated area for a given appliance is defined by the manufacturer as its capacity to maintain a minimum acceptable temperature in the designated area in case of a power failure.

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

The manufacturer may require that defective products be returned or that digital pictures be provided to support the claim. Returned products are to be shipped prepaid to the manufacturer for investigation. Transportation fees to ship the product back to the purchaser will be paid by the manufacturer. Repair work covered by the warranty, executed at the purchaser's domicile by an authorized qualified technician requires the prior approval of the manufacturer. All parts and labour costs covered by this warranty are limited according to the table below.

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

| DESCRIPTION   | WARRANTY APPLICATION |         |
|---|----------------------|---------|
|   | PARTS                | LABOUR  |
| Combustion chamber (welds only), castings and convector air-mate  | Lifetime**           | 4 years |
| Plating* (defective manufacture) - subject to limitations above Ceramic glass (thermal breakage only*)                                      | Lifetime**           | N/A     |
| Stainless steel firebox components, vermiculite, C-Cast or equivalent baffle* and secondary air tubes*, glass retainers and handle assembly | 5 years**            | 3 years |
| Surrounds and heat shields, ash drawer, steel legs, pedestal and trim (aluminum extrusions)   | 5 years              | N/A     |
| Carbon steel firebox components   | 3 years              | 2 years |
| Blowers, heat sensors, switches, rheostat, wiring and electronics   | 2 years              | 1 year  |
| Paint (peeling*), gaskets, insulations, refractory bricks (fireplace only**) and ceramic fibre blankets                                     | 1 year               | N/A     |
| All parts replaced under the warranty   | 90 days              | N/A     |

#### \*Pictures required \*\*Limited to one replacement

Labour cost and repair work to the account of the manufacturer are based on a predetermined rate schedule and must not exceed the wholesale price of the replacement part.

Shall your unit or a components be defective, contact immediately your **VENTIS** dealer. To accelerate processing of your warranty claim, make sure to have on hand the following information when calling:

- Your name, address and telephone number
- Bill of sale and dealer's name
- Installation configuration

- Serial number and model name as indicated on the nameplate fixed to the back of your unit
- Nature of the defect and any relevant information

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

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