



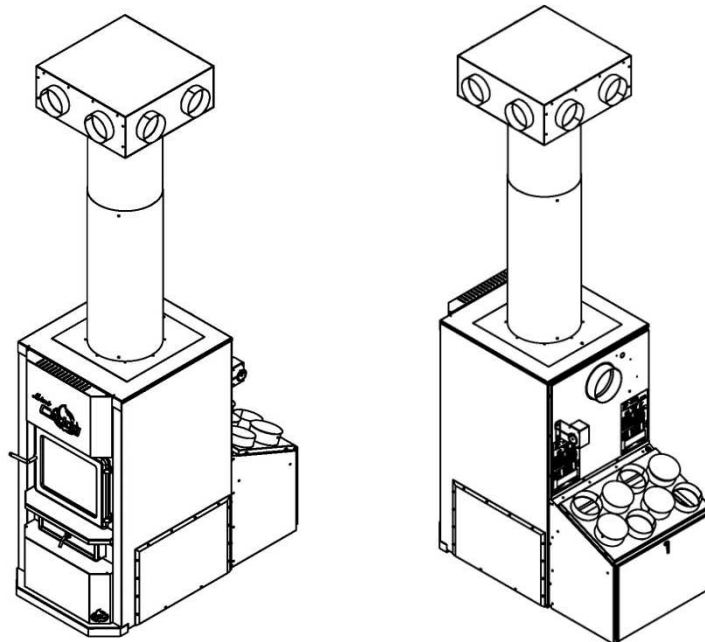
Eco-Energy
at the heart of your home

Stove Builder International Inc.
250, rue de Copenhague
Saint-Augustin-de-Desmaures
(Québec), Canada G3A 2H3

**ROUND HOT AIR PLENUM KIT
WITH 5" ROUND OUTLETS
MINI-CADDY FURNACE**

PA07400

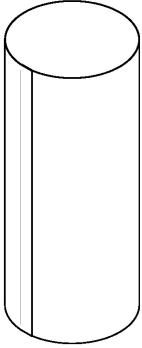
INSTALLATION INSTRUCTIONS



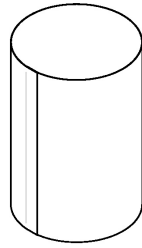
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This round hot air plenum kit with 5" outlets for the Mini-Caddy furnace includes the following components:

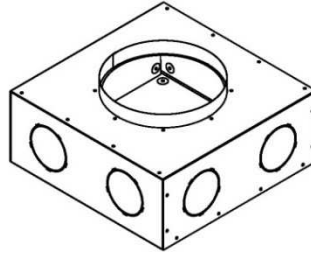
(B)
29 1/4" section
(12" Diameter)
(30653)
1x



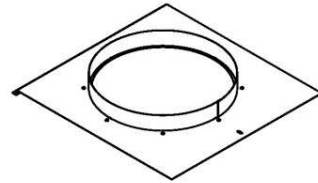
(C)
18" section
(11 15/16" Diameter)
(30655)
1x



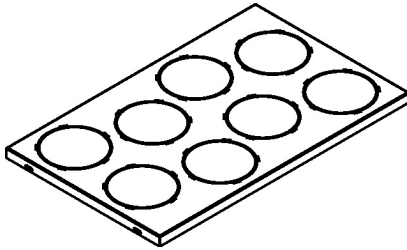
(D)
Distribution box
20" X 20" X 8"
(SE51428)
1x



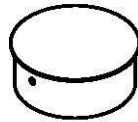
Round plenum
adaptor
(SE51427)
1x



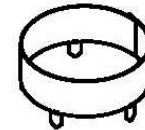
8 cold air return inlet adaptor
(PL51426)
1x



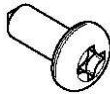
5" inlet caps
(30651)
4x



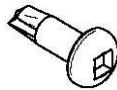
5" inlet flange
(PL51430)
16x



Screws
#10-32 x 1/2"
(30131)
4x






Self-drilling screws
#8-32 x 1/2"
(30153)
9x



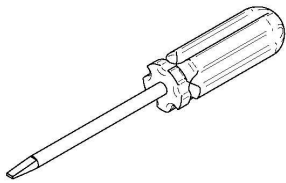
Other required components (not included):

CAUTION: All components used for air distribution must be at least 171°C (340 °F) resistant.

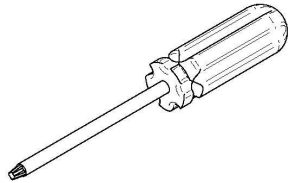
Insulated aluminum pipe (HVAC type pipe must comply with ULC S110 and/or UL 181, Class 0 or Class 1 Standards)	
Recommended universal floor outlet 4"x 10"x 5"*	
Floor registers 4" x 10"	

* Clamps and metallic tape are not included, but required to seal the ducting joints.

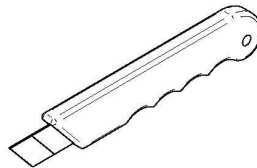
Tools required for installation:



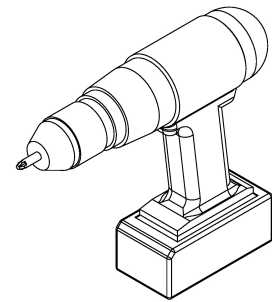
Flathead screwdriver



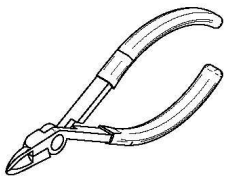
'Phillips' screwdriver



Utility knife



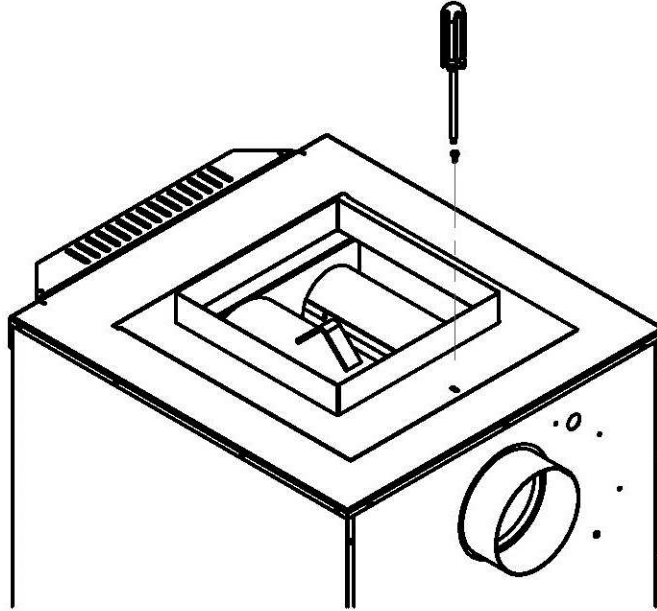
Powered driver



Cutting pliers

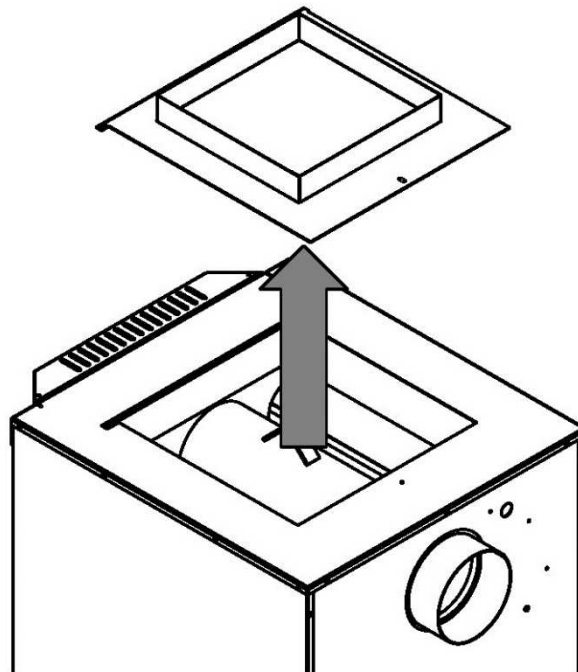
1

Remove the screw holding the square plenum adaptor on top of the furnace using a 'Phillips' screwdriver. Reserve the screw.



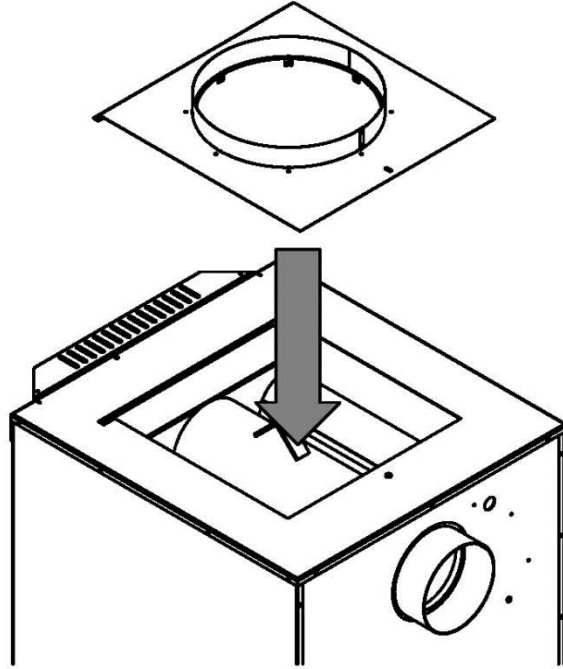
2

Remove the square plenum adaptor from the top of the furnace.



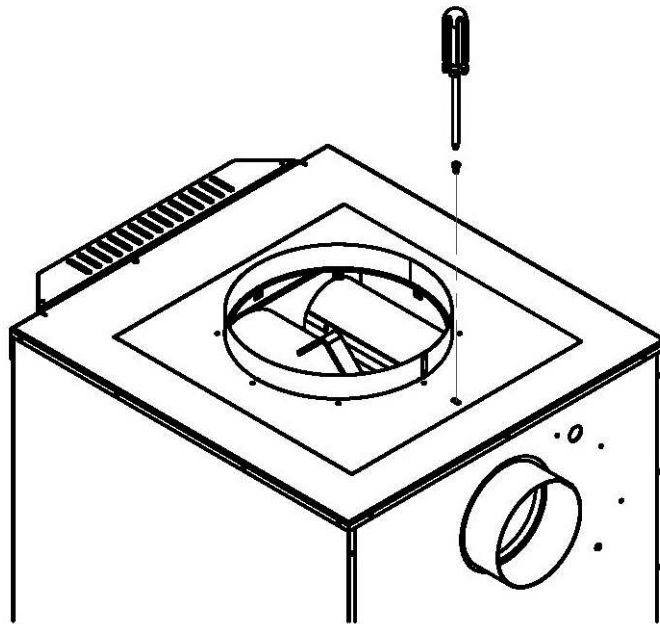
3

Place the round plenum adapter on the furnace.



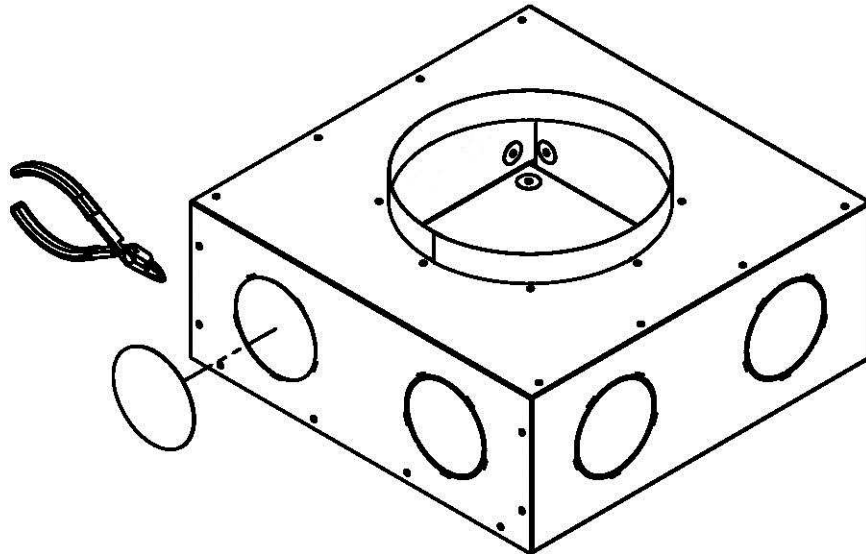
4

Use the screw removed in step 1 to secure the adapter.



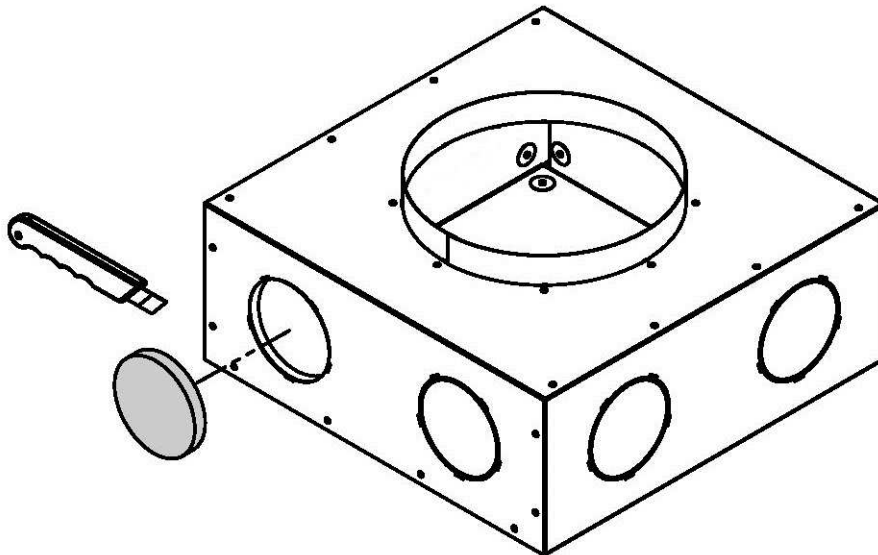
5

Depending on the number of outlets required needed for the installation, remove selected knock-outs from the distribution box with a pair of cutting pliers. Refer to “air distribution balancing” section before starting this operation.



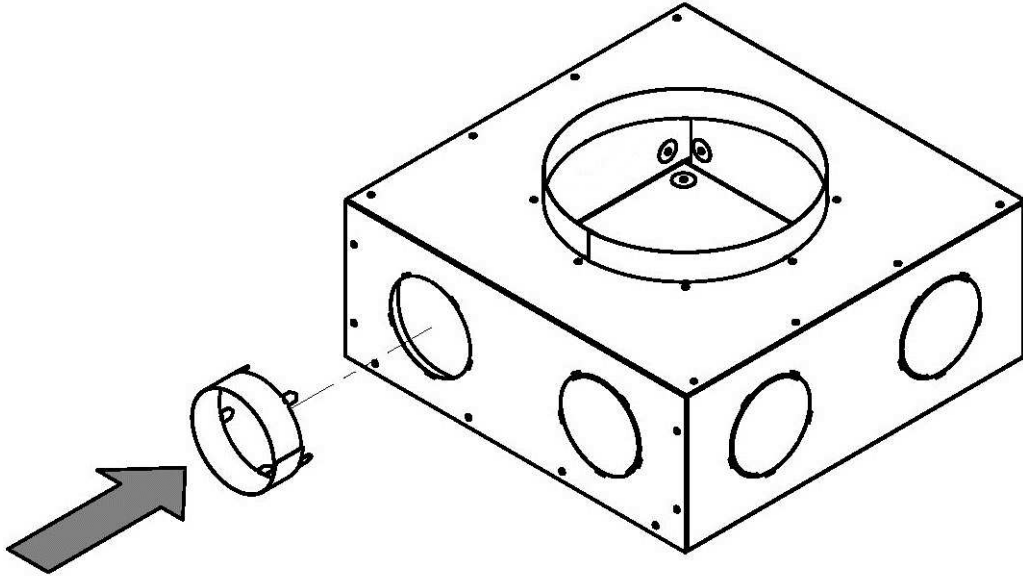
6

Using a utility knife, cut out the insulation from the selected outlets of the distribution box.



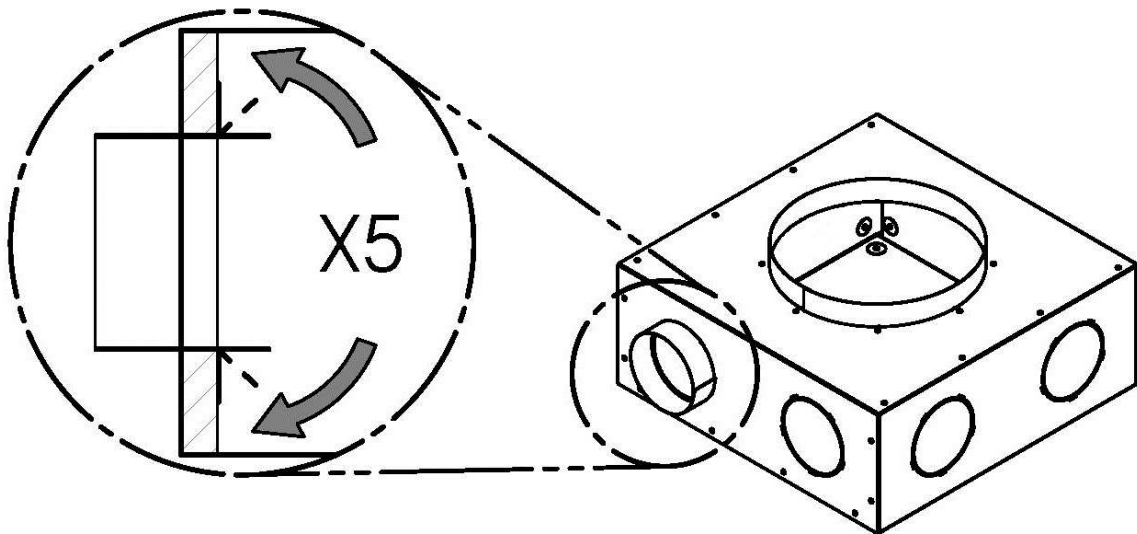
7

Assemble the 5" inlet flanges to the opened outlets by aligning the tabs with the slots located around the outputs.



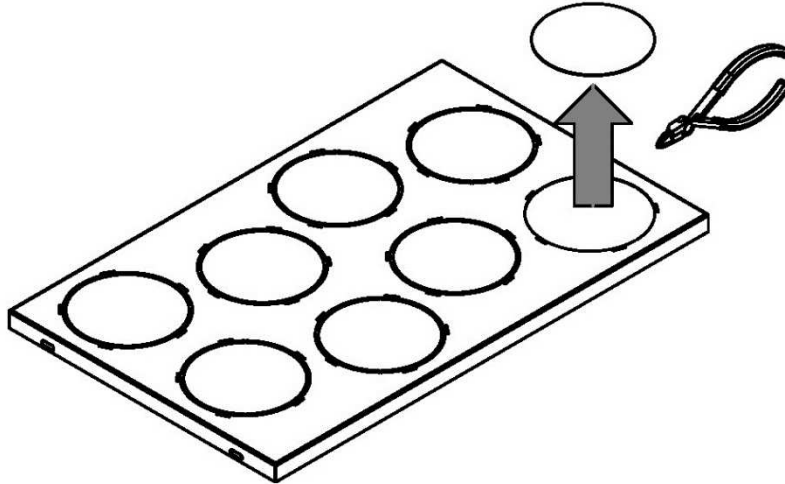
8

Push the 5" inlet rings in order to puncture the inner insulation. Using your fingers, fold back all 5 tabs to firmly secure the flange to the distribution box.



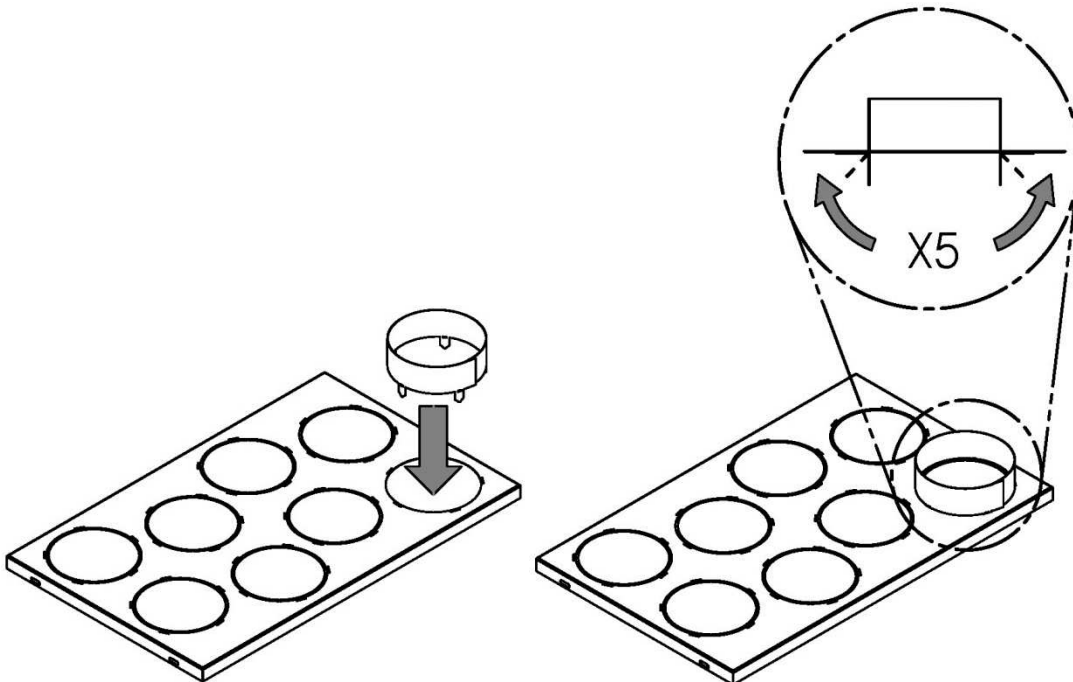
9

Depending on the number of cold air inlets required for the installation, remove selected knock-outs from the cold air return adaptor with a pair of cutting pliers. Refer to “air distribution balancing” section before starting this operation.



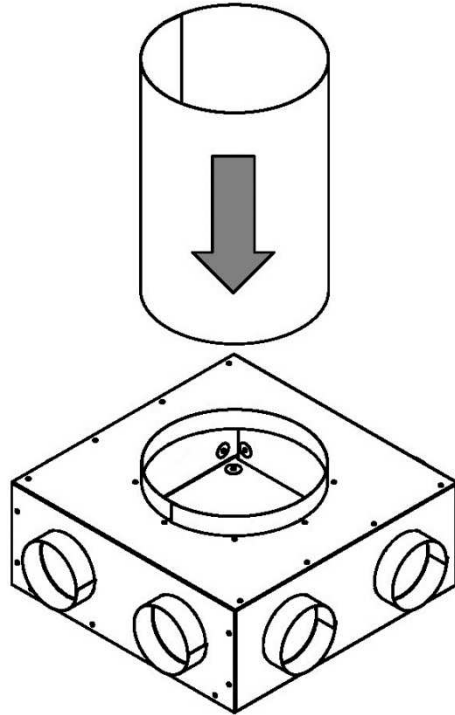
10

Assemble the 5” inlet flanges in the opened cold air inlets by aligning the tabs with the slots. Using your fingers, fold back all 5 tabs to firmly secure the inlet flanges to the cold air return adaptor.



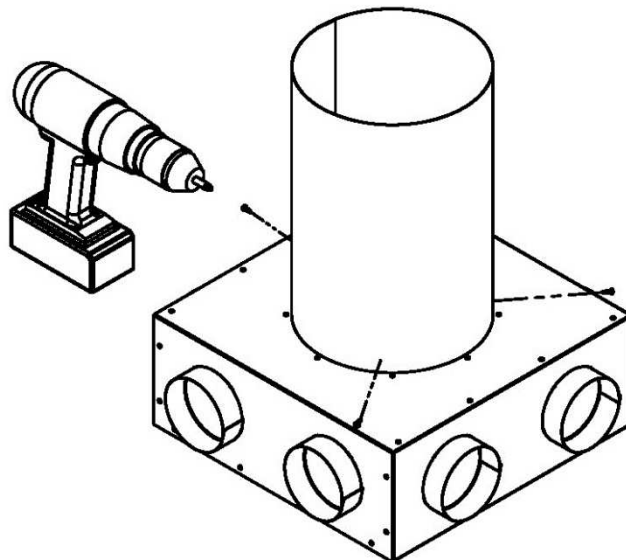
11

Once the air inlet flanges have been settled, lay the distribution box upside down and place the short section ③ on the distribution box flange.



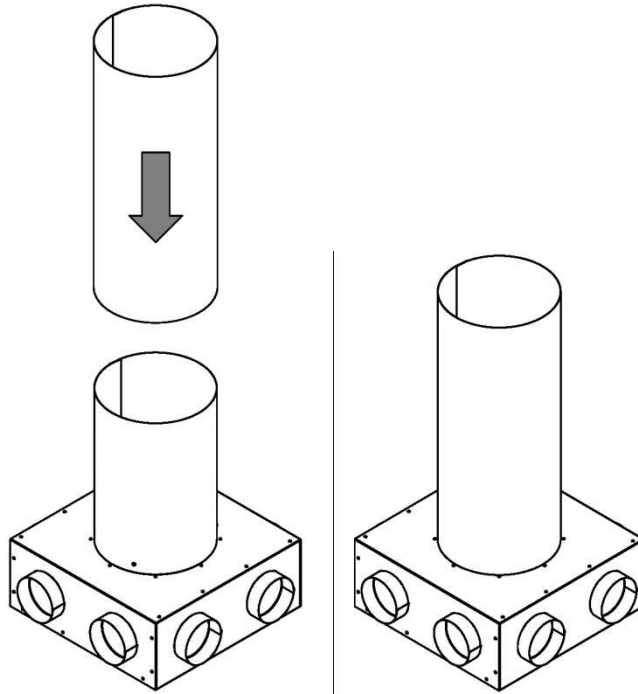
12

Using a powered driver, secure the short section ③ to the distribution box flange with 3 self-drilling screws # 8-32 x ½ " (30153) as shown.



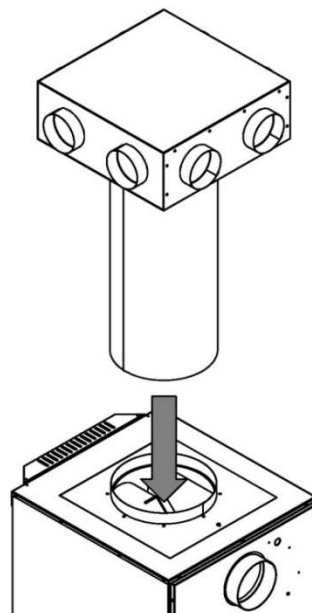
13

Slide down section **B** over section **C**, as shown.



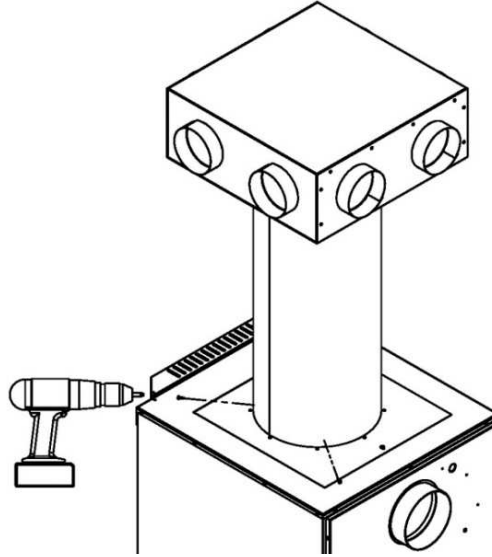
14

Turn the distribution box and assembled sections right side up holding the bottom of the assembly to keep it from sliding out. Lift it up and place it above the furnace on the round plenum adaptor.



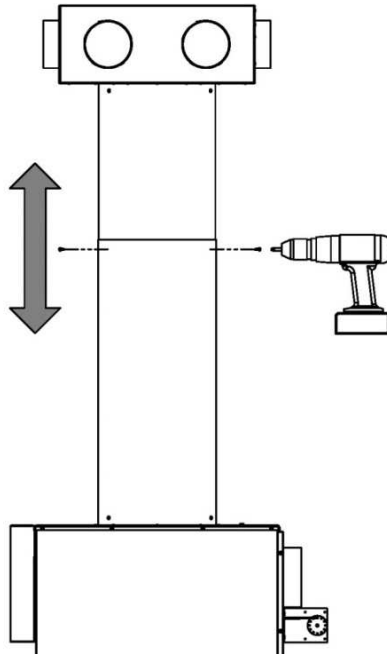
15

Using a powered driver, secure the section **(B)** to the round plenum adaptor with 3 self-drilling screws # 8-32 x ½ " (30153) as shown.



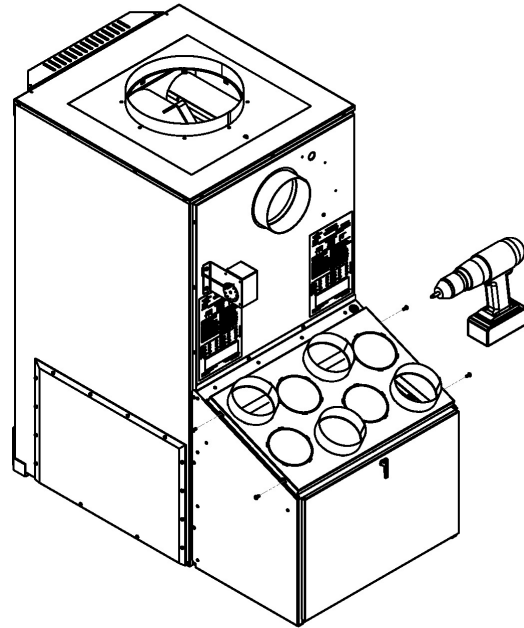
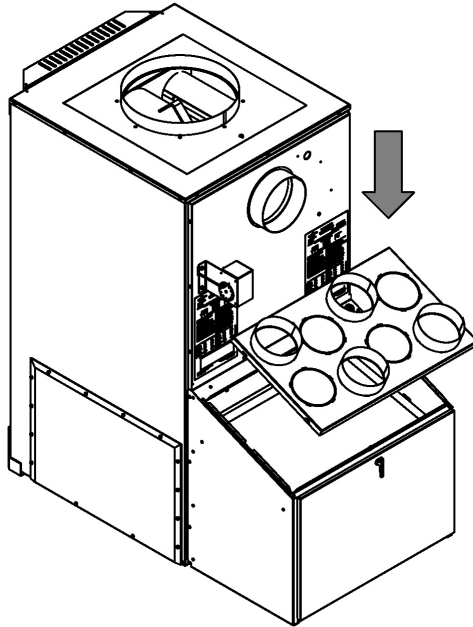
16

Adjust the height of the distribution box in accordance with the “clearances to combustibles” section. Using a powered driver, secure the overlapping liners with 3 self-drilling screws # 8-32 x ½ " (30153) so that they are equidistant.



17

Install the cold air return adaptor to the blower box located behind the furnace. Using a powered driver, secure it with the 4 screws #10-32 x 1/2" (30131) included in the kit.

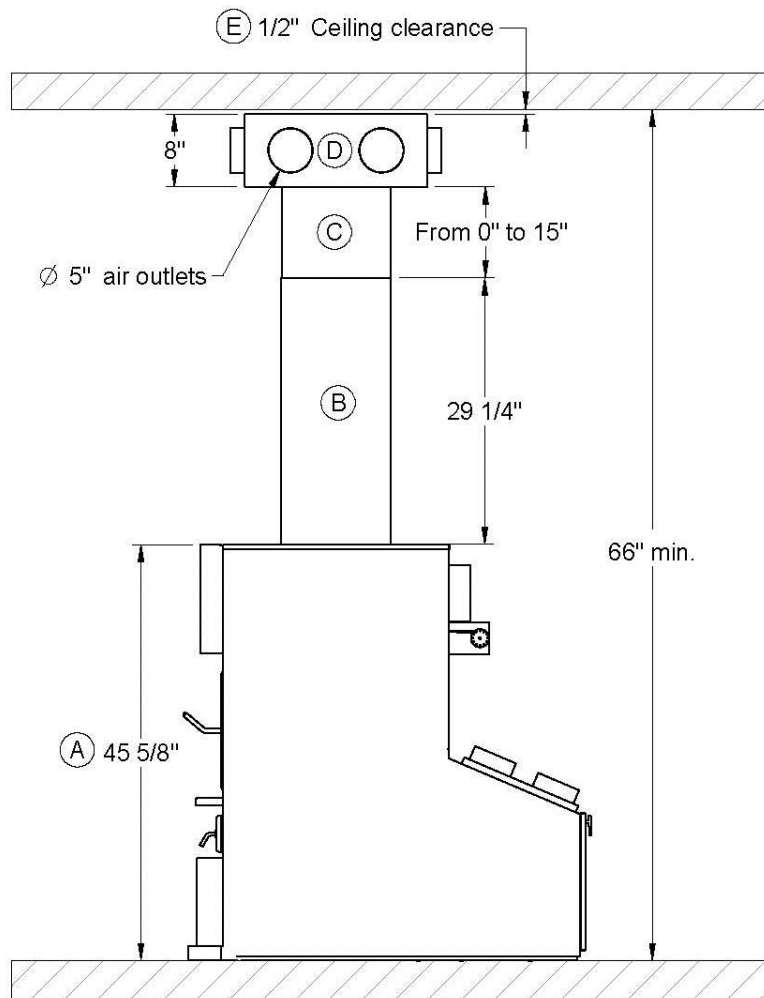


Clearances to combustibles

Adjust the plenum kit to the desired height while maintaining the clearances to combustibles. To determine the total height of the system, just add the height of each component required by your configuration:

$$\textcircled{A} + \textcircled{B} + \textcircled{C} + \textcircled{D} + \textcircled{E}$$

In any configuration, sections \textcircled{B} and \textcircled{C} can be used individually (\textcircled{B} only or \textcircled{C} only) or combined (\textcircled{B} and \textcircled{C} together). However, the total height of the system must not be less than 66".

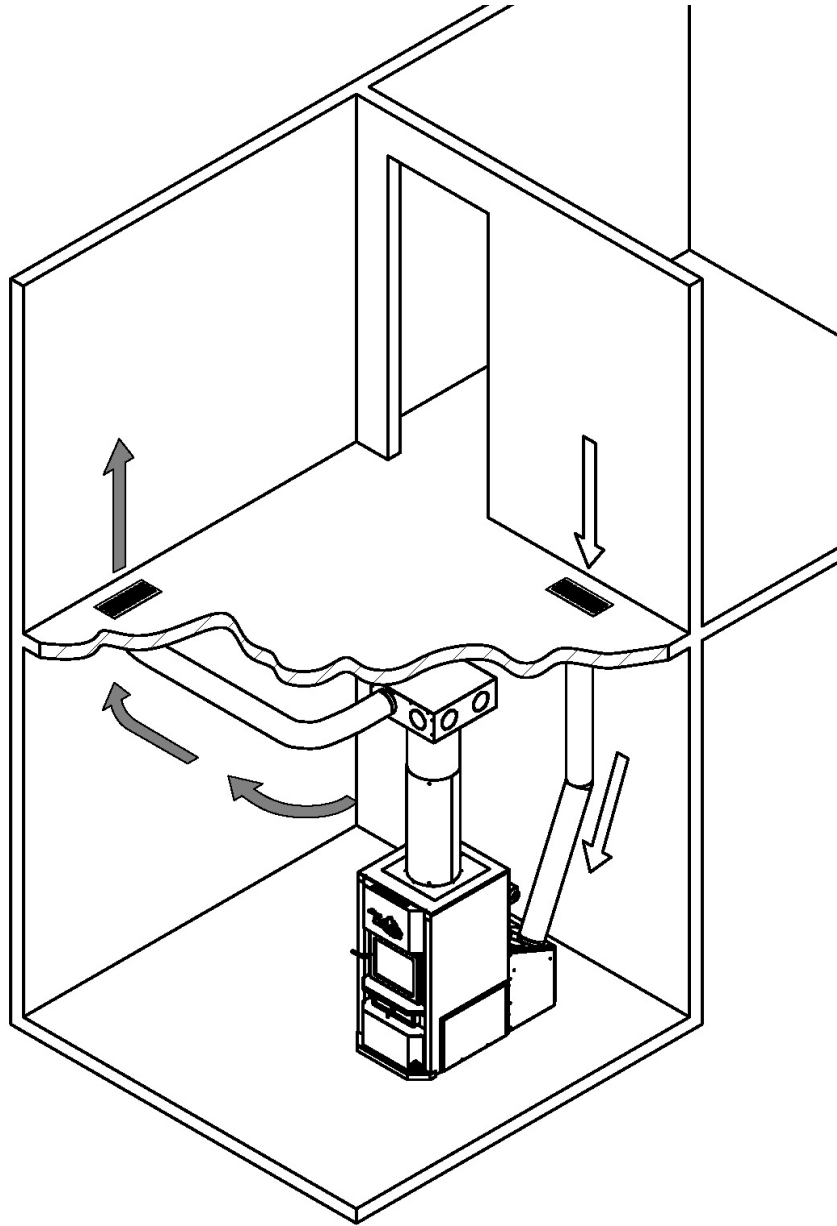


* Note: Overlap between section \textcircled{B} and \textcircled{C} must be 3" or more. This requirement is reflected in the drawing above.

The insulated aluminum pipe (HVAC type pipe must comply with ULC S110 and/or UL 181, Class 0 or Class 1 Standards) has 0" clearance to combustible material.

Air distribution balancing

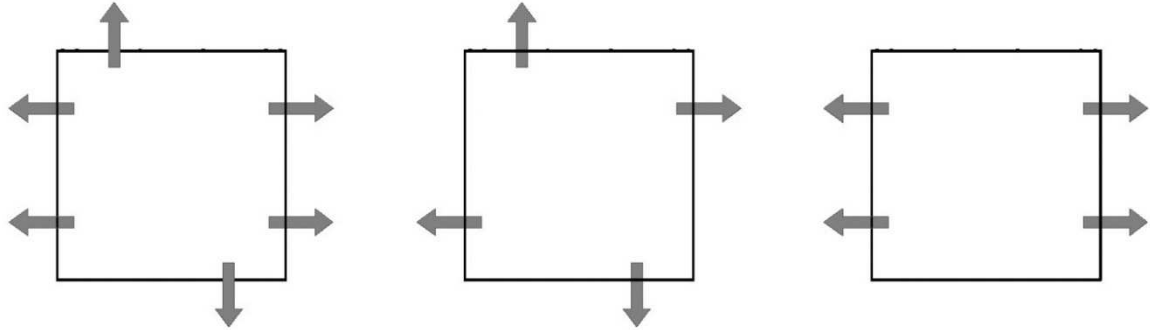
An efficient ventilation system requires that the number of cold air inlets is at least equal to the number of distribution outlets. Locate the inlets and outlets evenly on both the distribution box and the cold air return adaptor to favor balanced airflow and reduce the restriction.



- * Install the warm air floor registers along the outside wall.
- * Install the cold air return floor registers on opposite side of warm air floor registers or towards the center of the house.

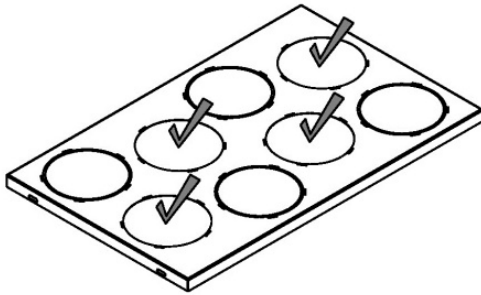
Distribution box:

Recommended patterns for distribution outlets.



Fresh air adaptor:

Recommended patterns for cold air return inlets.



Depending on the number of distribution outlets, add more cold air return inlets to favor good velocity at the floor registers.

5" inlet caps utility:

Opening more cold air return inlets than warm air outlets is permissible and could even help building up pressure in the distribution system, thus improving the heat exchange. 5" inlet caps are included should the need arise to reduce the number of cold air return inlets.

