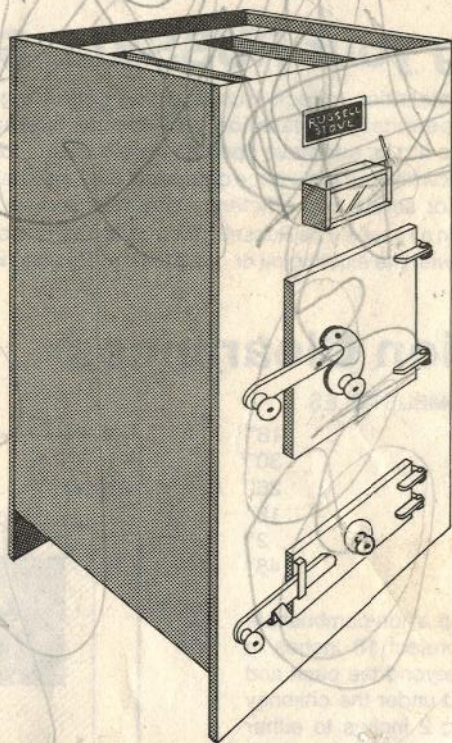


**Instructions for**  
**\*Installing**  
**\*Using**  
**\*Maintaining**  
**The Amazing**

**H<sub>2</sub>O**

# RUSSELL STOVE



Save these instructions.

## Wood & Coal

### WARNING

**READ AND UNDERSTAND THIS INSTRUCTION  
BOOKLET THOROUGHLY BEFORE INSTALLING  
AND USING YOUR NEW RUSSELL STOVE.**

The RUSSELL STOVE is listed by PFS Corporation, Madison, Wisconsin in accordance with UL 737, 727, 1482 and ICBO requirements. The RUSSELL STOVE is listed as a free standing unit and, with the addition of a factory designed plenum, as an "Add-On." When used as a free-standing room heater, heated air from the unit is expelled directly into the room in which the unit is located. When the Russell Stove is used as an "Add-On", the unit is connected in conjunction with a gas or oil furnace to ductwork which distributes the heated air to several rooms.

This instruction booklet is designed to instruct the installer and the operator of the RUSSELL STOVE in the proper methods of hook up and operation in either application. For more detailed information on the "Add-On" installation refer to the section marked Plenum and Ducts as well as the entire booklet.

NOTE: The Russell H<sub>2</sub>O is a listed unit as of 5/26/81. All installation and operating instructions for the Russell H<sub>2</sub>O Stove and the Russell Stove are the same. For information on the H<sub>2</sub>O pipe installation, refer to the leaflet marked "H<sub>2</sub>O Hook Up".

## Installing your RUSSELL STOVE

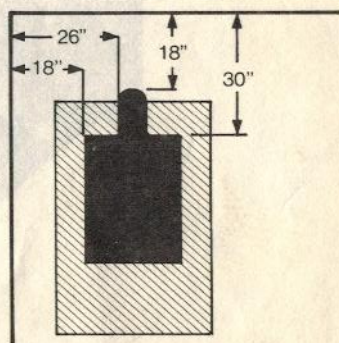
Before beginning installation, check local building codes regarding wood stoves. Some areas require permits for installation, may specify different dimensions for the clear area around the stove, and have specific requirements for exhaust stacks and chimneys. Also check with your insurance company; they may have recommendations you should follow. For safety and efficiency, you must follow the instructions and dimension minimums in all cases. The Russell Stove "Add-On" is to be installed in a parallel air flow arrangement with the existing oil or gas furnace. This unit is **NOT** approved for a series installation.

## Installation Clearances

### CLEARANCE TO COMBUSTIBLES:

Side Wall	18"
Back Wall	30"
Pipe to Side	26"
Pipe to Back	18"
Plenum to Ceiling	2"
Front	48"

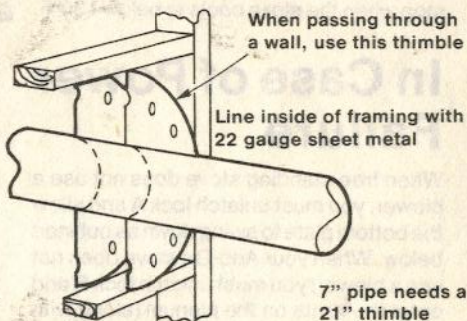
Unit to be installed on a non-combustible surface and must project 18 inches in front and 8 inches beyond the back and sides of the unit and under the chimney connector projecting 2 inches to either side.



## Chimney Connector

The chimney connector is the connection between the stove's flue collar and your chimney. Be sure the chimney you will use with your stove is clean, in good condition, and meets all local codes. Proper installation of the exhaust stack is critical for efficient, safe operation of your RUSSELL STOVE. If you are not experienced with sheet metal work, we recommend that you have a heating contractor do this portion of the installation.

The RUSSELL STOVE exhausts at the top of the back surface through a 7" opening. Use 7" diameter, 24-26 gauge steel pipe, for the exhaust stack. Attach the pipe with furnace cement, and at least 3 sheet metal screws (the minimum number for any joints in the chimney connector). Connect the chimney connector directly to the masonry chimney of your home making sure the joint between the chimney is cemented for a tight fit. The RUSSELL STOVE can be connected to an independent, separate chimney. If you purchase a chimney specifically for use with your stove, make sure it is a listed low heat appliance design with double wall construction, and meets all local rules and regulations. The National Fire Prevention Association recommends that wood-burning appliances vent into a separate chimney from gas and oil furnaces.



When installing the chimney connector you must follow the following instructions:

- Do not arrange the chimney connector so that it passes through ceilings, consealed spaces, or connects with the chimney in the attic. If the chimney connector must pass through a combustible interior wall, use a 21" thimble as illustrated.
- Always use 7" diameter, 24-26 gauge steel pipe for chimney connector.
- Always run the chimney connector up, never down. Maintain at least 1/2" rise per foot.
- Do not have more than two 90 degree bends in the chimney connector.
- When fitting portions of the chimney connector together, be sure that upper sections fit inside lower sections. The first section of pipe can slide over the exhaust pipe on the stove.
- Do not install any heat recovery mechanisms in the chimney connector or chimney. This will hinder efficient combustion in the stove.
- Be sure the overall chimney height (from top of stove to top of chimney) is at least 10'. Also check code requirements for height of chimney over top of roof.

#### WARNING

**IMPROPER INSTALLATION OF CHIMNEY CONNECTOR MAY CREATE A FIRE HAZARD OR PERMIT HARMFUL FUMES TO ENTER YOUR HOME OR GARAGE.**

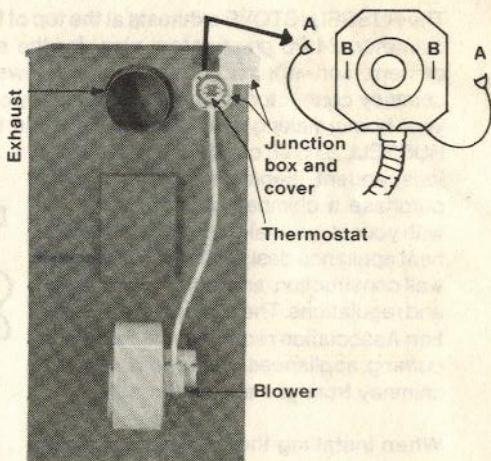
## Electric Blower

An electric blower is a standard feature on the RUSSELL STOVE. It is easily mounted by four screws at the base at the back of the stove as illustrated. The blower is thermostatically controlled. To attach the thermostat, simply screw on the offset mounting plate provided. Do not use the flat mounting plate, as this will shorten the thermostat life considerably. Slip the thermostat into position on the plate, place the junction box over the mounted thermostat and secure with two screws, and plug in the two wires from the junction box into the receptacles on the thermostat. It makes no difference which wire goes into which

receptacle. Secure the junction box cover plate with the screws. Plug the blower into any 110 volt outlet, being careful to keep the cord away from the stove. The blower will run when the stove reaches 150°F and stop when the stove cools to below 130°F.

## In Case of Power Failure

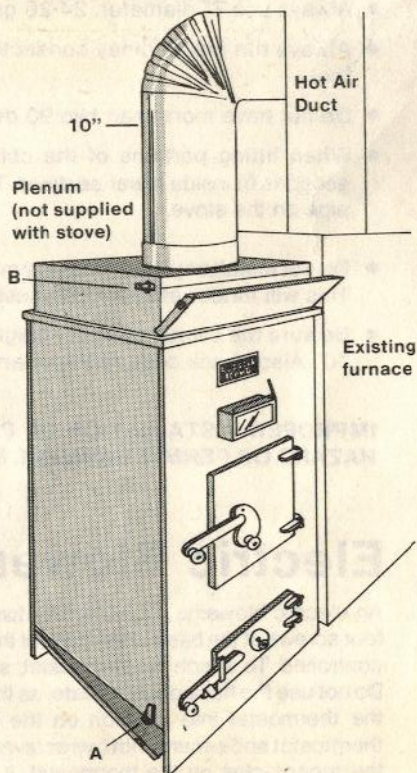
When free standing stove does not use a blower, you must unlatch lock A and allow the bottom plate to swing down as outlined below. When your Add-On stove does not use a blower, you must unlatch lock B and open the vents on the plenum (along with step A).



## Plenum and Duct Work

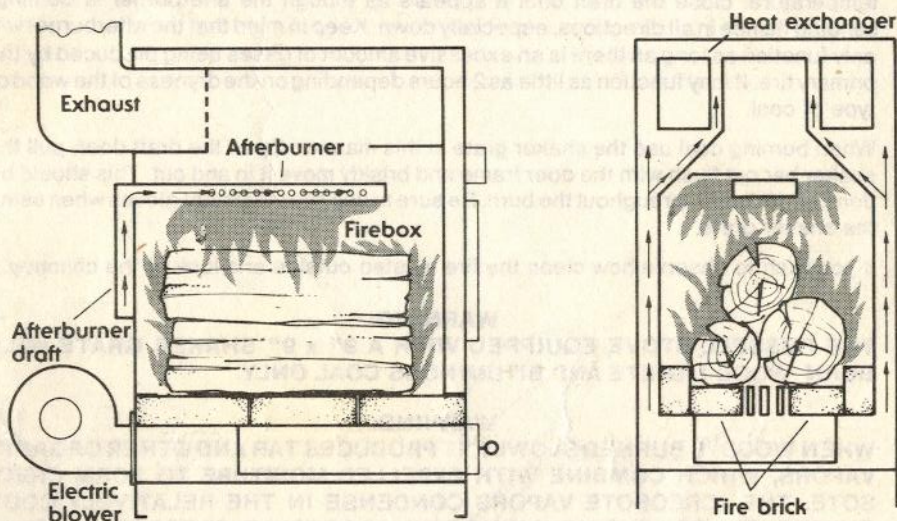
If your RUSSELL STOVE is to supplement your present home furnace, you can direct the heat into existing duct work by adding a factory designed plenum as illustrated. The plenum sits directly on the top of the unit. A back draft damper is included, this will keep the air from the existing furnace from circulating backwards through the RUSSELL STOVE. In the event of a power failure the back draft damper will insure the existing duct work from overheating.

Connect the new duct work into the highest section of the existing plenum. Again, this type of work should be performed only by someone with experience in sheet metal work. **WARNING: Do not vent RUSSELL STOVE into cold return duct work. This is an incorrect method of heat distribution for the RUSSELL STOVE and will cause considerable backup pressure and damage to your furnace and duct work. WARNING: The high heat resistant paint must cure when the unit is first fired - this will cause smoke. A grate, factory built, or built to specification, should cover the stove if it is used as a free standing heater without a plenum.**



# Using your RUSSELL STOVE

The initial fire in your stove is quite important, as it will form a bed of coals that will act as kindling for future fires. Start by opening the front draft all the way by turning it counterclockwise. **WARNING:** Never open the ash door for a front draft. This will cause serious overheating of the stove resulting in damage to the stove. Load the firebox with kindling; do not place any large logs or coal in the stove yet. Ignite the kindling with a match and secure the firebox door. Never start a fire with a flammable liquid. You can



observe the fire's progress through the window above the firebox door. **WARNING:** Do not position your face closer than 12" from the window when the stove is in operation. When the kindling and small pieces of wood have formed a live bed of coals 4" to 6" deep, which may take as long as a full day of burning depending on the type of wood used, insert larger pieces of wood or coal being careful to keep a 2" clear area all around the afterburner.

When opening the firebox door to add fuel to an existing fire, stand to the right of the door. Release the Interlock system and open it slowly, allowing outside air to enter the firebox gradually. This will equalize the pressure inside the firebox and help any smoke from coming into the room.

## **WARNING:**

**ONCE THE STOVE IS OPERATING, USE HEAT RESISTANT GLOVES WHEN HANDLING STOVE DOORS AND CONTROLS AND WHEN ADDING FUEL TO THE FIRE. NEVER APPROACH OR TOUCH THE STOVE WITH UNPROTECTED SKIN WHILE IT IS IN OPERATION. ALL OUTER SURFACES OF THE STOVE BECOME TOO HOT FOR UNPROTECTED SKIN.**

After the 4-6 inch bed of coals has been established and larger logs are used, fuel the RUSSELL in the following way; Open the door in the prescribed manner, put the fuel in and let the fuel burn for about 3 to 4 minutes with the draft fully open. When fresh fuel is fully ignited, close the draft to desired fire,  $\frac{1}{4}$ " to  $\frac{1}{2}$ " open. **REMEMBER COAL REQUIRES MORE AIR TO BURN PROPERLY.** Now observe the afterburner through

the window. If the fire was hot enough when the draft was closed down, and if there was a bed of live coals about 4" to 6" deep, the afterburner is functioning sending flames in all directions, especially down. This is when the stove is burning at its peak efficiency; the afterburner is igniting and burning rising pitch and gases from the firebox below before it can escape up the chimney. If the flames from the afterburner are primarily going up, however, the fire is too hot and may cause excess stress on the stove. You do not gain additional heat from overheating the stove. You will get the same amount of heat by allowing the afterburner to work properly. To reduce the fire to a safe, efficient temperature, close the draft until it appears as though the afterburner is burning, sending flames in all directions, especially down. Keep in mind that the afterburner will only function as long as there is an excessive amount of gases being produced by the primary fire. It may function as little as 2 hours depending on the dryness of the wood or type of coal.

When burning coal use the shaker grate in this manner: Open the draft door, pull the shaker bar out flush with the door frame and briskly move it in and out. This should be done periodically throughout the burn. Be sure to use heat resistant gloves when using the shaker grate.

If you wish to observe how clean the fire is, step outside and look at the chimney.

**WARNING:**

**THE RUSSELL STOVE EQUIPPED WITH A 9" x 9" SHAKER GRATE WILL BURN WOOD LIGNITE AND BITUMINOUS COAL ONLY.**

**WARNING:**

**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.**

**WARNING:**

**DO NOT EXPERIMENT WITH THE DRAFT ADJUSTMENT. THE PROCEDURES OUTLINED ABOVE HAVE BEEN FACTORY TESTED FOR EFFICIENCY AND SAFETY. OPERATING THE DRAFT ADJUSTMENT IN A MANNER CONTRARY TO THESE INSTRUCTIONS MAY CAUSE SERIOUS DAMAGE TO YOUR RUSSELL STOVE.**

**WARNING:**

**NEVER ATTEMPT TO BURN AEROSOL CANS, SCRAP METAL, BOTTLES, OR OTHER REFUSE.**

**WARNING:**

**NEVER USE 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 FURNACE WHILE IT IS IN USE.**

## **Equipment Checks**

To detect potential hazards make the checks listed below before beginning operation of your RUSSELL STOVE.

- Make sure the RUSSELL STOVE rests on a sturdy, non-combustible surface such as cement, brick, or slate at least  $\frac{3}{8}$ " thick or on a stove board or steel plate 24 gauge or thicker.
- Make sure that the RUSSELL STOVE has a minimum of 30" clear space all around the stove where walls are unprotected. Under no circumstances should the stove be placed closer than 18" from a shielded wall as outlined in the instructions above.
- Make sure that all chimney connections are installed as set forth in the instructions.
- Check and abide by all local codes regarding wood burning stoves.

## Heat Regulations

The front draft is the control for the rate of burn. If you allow the fire to get hot before closing down the draft, you will get heat over many hours. If you begin with a bed of live coals about 4" to 6" deep, properly stoke the stove, and adjust the draft, your RUSSELL STOVE should provide heat from 6 to 8 hours and hold fire up to 12 hours. To get the stove to peak temperature quickly (as when you take the chill off a room) simply open the draft up all the way and, if needed, stoke with fresh fuel. **WARNING:** Do not leave stove unattended when it has been brought up to its maximum temperature with the draft opened all the way. Stay nearby and monitor the fire's progress to insure that the stove does not exceed its maximum safe operating temperature. This can be done by observing the afterburner and primary fire through the windows and adjusting the draft accordingly as outlined previously. **NEVER** open the ash door for additional front draft. In case of a runaway fire or chimney fire, close front draft completely, then call the fire department.

## Maintaining your RUSSELL STOVE

Removal of ashes is the only routine maintenance required. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible 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. Other periodic checks you should make:

- Tighten any screws that may loosen due to heating and cooling of the stove and chimney connector.
- Be sure to tighten the afterburner bolts to insure a tight seal and reduce possible cracking.
- If your stove is equipped with a blower, check all wiring for any fraying or melting of insulation.
- To clean the Pyrex window, wait until the stove is cool, then simply slide it out and scrape it clean with a single-edge razor blade. **WARNING:** Do not operate your RUSSELL STOVE when the window is not in place or if the window is cracked or broken. Replacement windows are available through the store where you purchased your RUSSELL STOVE.
- Maintain all door gaskets and seals in good condition.

# Safety

## WARNING

Never use flammable liquids to start the fire in your RUSSELL STOVE.

## WARNING

When operating stove, use heat resistant gloves and wear protective clothing.

## WARNING

While stove is operating do not get closer than 12" to the RUSSELL STOVE or window when looking through the window.

## WARNING

Never open the ash door for front draft.

## WARNING

Do not burn stove with any portion of gasket missing. This will be considered abuse and will void the warranty.

## WARNING

Do not burn aerosol cans, scrap metal, bottles, or other unsafe noncombustible refuse.

## WARNING

Do not leave stove unattended when stove is burning with draft fully open.

## WARNING

Do not operate stove with cracked, damaged or missing window.

As in all things, common sense must prevail when using your RUSSELL STOVE. Read and be familiar with all the instructions in this booklet. Use your stove within these limitations and you will have an incredibly efficient and safe heat source that will provide warmth for years to come. Try to exceed the limits outlined in this booklet, and you will shorten the life of the stove and jeopardize your safety.

For further information on using your heater safely, obtain a copy of the National Fire Protection Association publication "Using Coal and Wood Stoves Safely," NFPA No. HS-8-1974. The address of the NFPA is:

470 Atlanta Avenue  
Boston, Mass. 02210

Be sure to fill out and return the warranty card included with your RUSSELL STOVE. The limited warranty is void if your card is not on file at the factory.

*Decton Iron Works, Inc., the proud builders of the RUSSELL STOVE reserve the right to improve and change specifications without notice as the need arises.*

*Your RUSSELL STOVE Dealer is:*

**Decton Iron Works, Inc.**  
**21385 W. Good Hope Road**  
**Lannon, WI 53046**

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Printed in U.S.A.



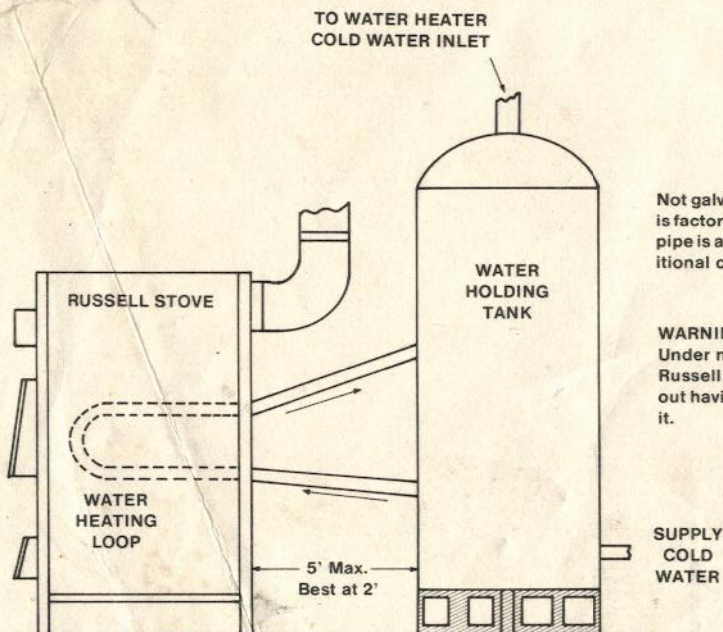
# H<sub>2</sub>O Hook-Up

The function of the H<sub>2</sub>O pipe is to supplement domestic hot water. The principle of the circulation within the tank and pipe is natural convection-gravity feed - (hot water rises and cold water settles).

With this information the following rules must be followed.

1. The holding tank must be elevated in such a way that the hot water side of the loop in the stove (A) has a 1" rise per foot to the tank (B).
2. The tank must be placed within 5 feet of the stove, but no closer than 18". Past 5 feet a circulating pump must be installed and made to run continuously.
3. A 30 lbs. pressure relief valve must be located in the line labeled "to the water heater cold water inlet."
4. A check valve is to be installed in the cold water line so that preheated water will not bypass the existing water heater.

NOTE: The local codes should be consulted regarding the type of pipe used in the Russell H<sub>2</sub>O. The choice is galvanized or not galvanized. Not galvanized is standard and is factory installed. Galvanized pipe is available at a small additional charge.



Not galvanized is standard and is factory installed. Galvanized pipe is available at a small additional charge.

**WARNING:**  
Under no circumstances is a Russell H<sub>2</sub>O to be burned without having water circulation in it.