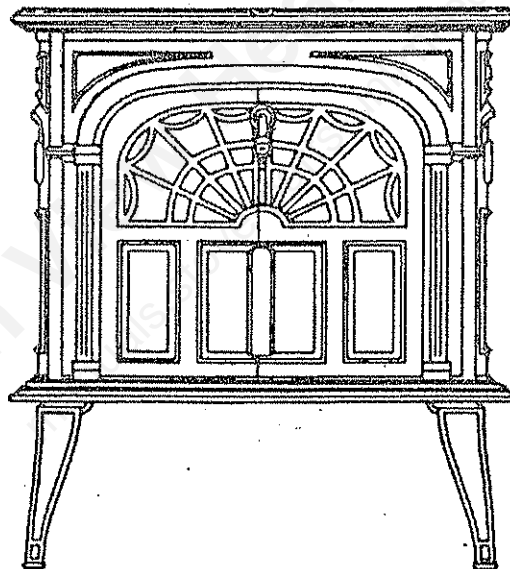


Intrepid II™

Owner's Guide

Model #2070
For use in North America



SAFETY NOTICE: IF YOUR INTREPID II IS NOT PROPERLY INSTALLED, OPERATED AND MAINTAINED, A HOUSE FIRE MAY RESULT. FOR SAFETY, FOLLOW ALL INSTALLATION, OPERATION AND MAINTENANCE DIRECTIONS. CONTACT LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

VERMONT CASTINGS, INC.

Welcome

Congratulations on your choice of a Vermont Castings Intrepid II. With this purchase, you have made a commitment to make the hearth a place of warmth, beauty and comfort in your home. At Vermont Castings, we share that joy and appreciation for the hearth, and we show it in all our cast-iron stoves and fireplaces.

As you become acquainted with your new stove, you will find that the aesthetic appeal of cast iron is matched by its superb capacity to absorb and radiate heat.

Also, Vermont Castings products are among the cleanest-burning wood stoves and fireplaces available today. And, as an owner of a Vermont Castings stove, you are making a strong statement for pollution-free energy. But clean burning depends on both the manufacturer and the operator. Please read this manual carefully to understand how to properly operate your stove.

At Vermont Castings, we are equally committed to your satisfaction as a customer and that is why we maintain an exclusive network of the finest dealers in the industry. Chosen for their expertise and dedication to customer service, our dealers are factory-trained and know each Vermont Castings product in detail. Feel free to contact your Authorized Vermont Castings Dealer anytime you have a question about your stove or its performance.

Be assured that your Vermont Castings Intrepid II has been made with the utmost care and will provide you with many years of service.

This manual contains valuable instructions on the installation and operation of your Vermont Castings stove. You will also find useful information on assembly and maintenance procedures. We urge you to read the manual thoroughly and to keep this manual as a reference.

Sincerely,

All of us at Vermont Castings

**Please record the following information
for future reference.**

Stove Serial No. _____

Dealer _____

Phone _____

Date Purchased _____

Installer _____

Phone _____

Date Installed _____

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This manual describes the installation, operation, and maintenance of the Vermont Castings Intrepid II catalytic-equipped wood burning heater. This heater meets the U.S. Environmental Protection Agency's emission limits for wood heaters sold on or after July 1, 1990. Under specific test conditions, this heater has been shown to deliver heat at rates ranging from 10,200 to 22,500 Btu/hr.

The Intrepid II Model #2070 has been tested and is listed by Warnock Hersey International of Middleton, Wisconsin. The test standards are ANSI/UL-1482 and ANSI/UL-737 for the United States, and ULC S627 and CAN/CSA-B366.2 for Canada.

The Intrepid II Model #2070 is listed for burning wood. Do not burn other fuels.

The Intrepid II is listed for installation in mobile homes only in the United States and only with use of Vermont Castings Mobile Home Kit #3248.

We recommend that you hire a professional installer certified by the Wood Heat Education and Research Foundation (WHERF) or Wood Energy Technical Training (WETT) to install your stove, or to advise you on the installation should you attempt to install it yourself.

Please read this entire manual before you install and use your new room heater. Failure to follow instructions may result in property damage, bodily injury, or even death.

Save these instructions.

Installation

Stove Installations Must Be Safe and Legal

SAFETY NOTICE: IF YOUR INTREPID II 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.

Before you begin an installation, review your plans to see that:

- Your stove and chimney connector will be far enough from combustible material to meet all clearance requirements.
- The floor protector is large enough and is constructed properly to meet all requirements.
- You have all necessary permits from local authorities.

Your local building official is the final authority for approving your installation as safe and determining that it meets local and state codes.

The metal label permanently attached to the back of every Vermont Castings' stove indicates that the stove has been tested to current UL and ULC standards, and gives the name of the testing laboratory. Clearance and installation information also is printed on the label. When the stove is installed according to the information both on the label and in this manual, local authorities in most cases will accept the label as evidence that the installation meets codes and can be approved.

However, codes vary in different areas. Before starting the installation, review your plans with the local building authority. Your local dealer can provide any additional information needed.

For any unresolved installation issues, in the U.S. refer to the National Fire Protection Association's publication *ANSI/NFPA 211 Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances*. The publication may be ordered from NFPA by calling 1-800-344-3555. For Canada, the equivalent publication is *CSA CAN-B365 Installation Code for Solid Fuel Burning Appliances and Equipment*. These standards are the bases for many national codes. They are nationally recognized and are accepted by most local authorities. Your local dealer or your local building official may have a copy of these regulations.

IMPORTANT: FAILURE TO FOLLOW THESE INSTALLATION INSTRUCTIONS MAY RESULT IN A DANGEROUS SITUATION, INCLUDING A CHIMNEY OR HOUSE FIRE. FOLLOW ALL INSTRUCTIONS EXACTLY, AND DO NOT ALLOW MAKESHIFT COMPROMISES TO ENDANGER PROPERTY AND PERSONAL SAFETY.

Outside Air

In some modern, super-insulated homes, there is inadequate air for combustion because of insufficient air infiltration into the building. Such air enters a home through unsealed cracks and openings. Exhaust fans for kitchen or bath can compete with the stove for available air and compound the problem.

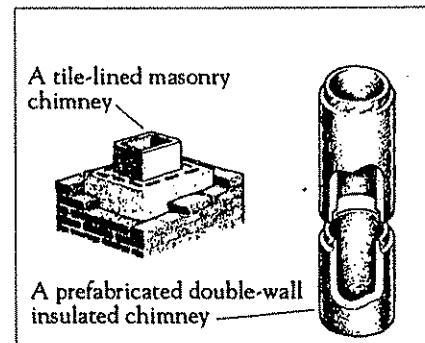
When poor draft is caused by a low infiltration rate, opening a ground floor window on the windward side of the house and in the vicinity of the stove will usually alleviate the problem.

Another solution is to install a permanent outside air supply to the stove and/or room. In some areas, in fact, bringing air for combustion from outside the home directly to the air inlet of the stove is required for new construction.

An outside air supply is not affected by pressure variations within the house, and improved stove performance often results. An Outside Air Adaptor Kit for the Intrepid II is available from your local Vermont Castings dealer.

What Kind of Chimney to Use

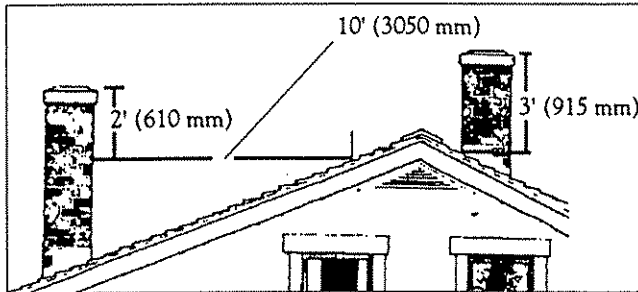
Your Intrepid II must be connected to a code-approved masonry chimney with a flue liner, to a relined masonry chimney that meets local codes, or to a prefabricated metal chimney that complies with the requirements for Type HT chimneys in the Standard for Chimneys, Factory-Built, Residential Type and Building Heating Appliance, UL 103. Whatever



kind you use, the chimney and chimney connector must be in good condition and kept clean.

If you use an existing masonry chimney, it must be inspected to ensure safe condition before the stove is installed. Your local professional chimney sweep, building inspector, or fire department official will be able to inspect the chimney or provide a referral to someone who can.

The chimney should extend at least 3' (900 mm) above the highest point where it passes through a roof, and at least 2' (600 mm) higher than any portion of a building within 10' (3m).



Observe the 2/3/10 rule for chimneys

For proper draft and good performance, any chimney used with an Intrepid II should extend at least 16 feet (5 m) above the flue collar of the stove.

Masonry Chimneys

An inspection of the chimney must confirm that it has a lining. Do not use an unlined chimney. The chimney should have no cracks, loose mortar, other signs of deterioration, and blockage. Repair any defects before the chimney is used with your stove.

Unused openings in an existing masonry chimney must be sealed with masonry to the thickness of the chimney wall, and the chimney liner should be repaired. Openings sealed with pie plates or wallpaper are a hazard and should be sealed with mortar or refractory cement. In the event of a chimney fire, flames and smoke may be forced out of these unused thimbles.

The chimney should be thoroughly cleaned before use.

A newly-built masonry chimney must conform to the standards of your local building code or, in the absence of a local code, to a recognized national code. Masonry chimneys must be lined, either with code-approved masonry or pre-cast refractory tiles, stainless steel pipe, or a code-approved, "poured-in-place" liner. The chimney's clean-out door must seal tightly.

Prefabricated Chimneys

A prefabricated metal chimney must be one tested and listed for use with solid-fuel burning appliances to the High-Temperature (H.T.) Chimney Standard UL-103-1985 (2100° F.) for the United States, and High Temperature (650 C) Standard ULC S-629 for Canada.

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

Chimney Size

An Intrepid II is approved for venting into a masonry chimney with a nominal flue size of 8" x 8" (200 x 200 mm) or 8" x 12" (200 x 300 mm), and into a round flue size of either 6" (150 mm) or 8" (200 mm).

It may be vented into larger chimneys. However, chimneys with liners larger than 8" x 12" (200 x 300 mm) may experience rapid cooling of smoke and reduction in draft, especially if they are located outside the home. Larger chimneys may need to be insulated or have their flues relined for proper stove performance.

Accessories to help make the connection between stainless steel chimney liners and your Intrepid II are available through your local dealer.

Chimney Connector Guidelines

Chimney connector is the double-wall or single-wall pipe that connects the stove to the chimney. The chimney itself is a masonry or prefabricated structure that encloses the flue. Chimney connectors are used only to make the connection from the stove to the chimney.

Double-wall chimney connectors must be tested and listed for use with solid-fuel burning appliances. Single-wall chimney connectors should be made of 24 gauge or heavier steel, and should be 6" (150 mm) in diameter. Do not use galvanized connector; it cannot withstand the high temperatures that can be reached by smoke and gases, and may release toxic fumes under high heat.

If possible, do not pass the chimney connector through a combustible wall or ceiling. If passage through a combustible wall is unavoidable, refer to the section following on Wall Pass-Throughs. Do not pass the chimney connector through an attic, a closet, or any similar concealed space. The whole connector should be exposed and accessible for inspection and cleaning.

In horizontal runs of single-wall chimney connector that do not include protective shields, maintain a clearance of not less than 26" (660 mm) from the ceiling. For information on reduced clearances using shields on single-wall chimney connector or using double-wall connectors, see the clearance chart on Page 11.

Keep the horizontal run of chimney connector as short and direct as possible, with no more than two 90 degree turns. Slope horizontal runs of connector upward 1/4" per foot (20 mm per metre) going from the stove toward the chimney. The recommended maximum length of a horizontal run is 3 feet (1 metre). The recommended total length of chimney connector is 8 feet (2.5 m).

In cathedral ceiling installations, extend the prefabricated chimney down to within 8 feet (2.5 m) of the stove.

SAFETY NOTE: Always wear gloves and protective eyewear when drilling, cutting or joining sections of chimney connector.

Double-wall Chimney Connector

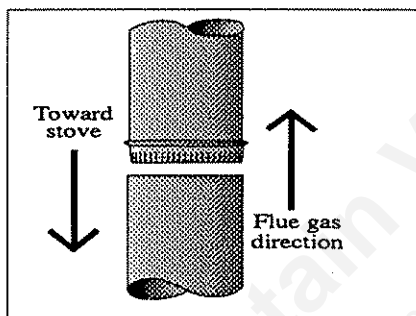
The listing for the Intrepid II for the U.S. and Canada includes use of double-wall chimney connectors that have been tested and listed for use with solid-fuel burning appliances by a recognized testing laboratory.

Information on assembling and installing double-wall connector is provided by the manufacturer of the double-wall pipe. Follow the manufacturer's instructions exactly as you assemble the connector and attach it to the stove and chimney. Using connectors and chimneys from the same manufacturer makes the assembly and installation straightforward.

NOTE: For installations using double-wall connectors, minimum clearances must conform to the listed clearances in the clearance chart on Page 11.

Single-wall Chimney Connector

- Beginning at the flue collar of the stove, assemble the chimney connector. Insert the first crimped end into the stove's flue collar, and keep each crimped end pointing toward the stove. Using the holes in the flue collar as guides, drill 1/8" (3 mm) holes in the bottom of the first section of chimney connector and secure it to the flue collar with three #10 x 1/2" sheet metal screws.



The crimped end of the chimney connector should always point towards the stove.

- Secure each joint between sections of chimney connector, including telescoping joints, with at least three sheet metal screws. The pre-drilled holes in the top of each section of chimney connector serve as guides when you drill 1/8" (3 mm) holes in the bottom of the next section.

- Secure the chimney connector to the chimney. Instructions for various installations follow.

- Be sure the installed stove and chimney connector are correct distances from nearby combustible material.

Note: Special slip pipes and thimble sleeves that form telescoping joints between sections of chimney connector are available to simplify installations. They often eliminate the need to cut individual connector sections. Consult your local dealer about these special pieces.

Securing the Single-wall Connector to a Prefabricated Chimney

For prefabricated chimneys, follow the installation instructions of the chimney manufacturer exactly as you install the chimney. The manufacturer of the chimney will supply the accessories to support the chimney, either from the roof of the house, at the ceiling of the room where the stove is installed, or from an exterior wall.

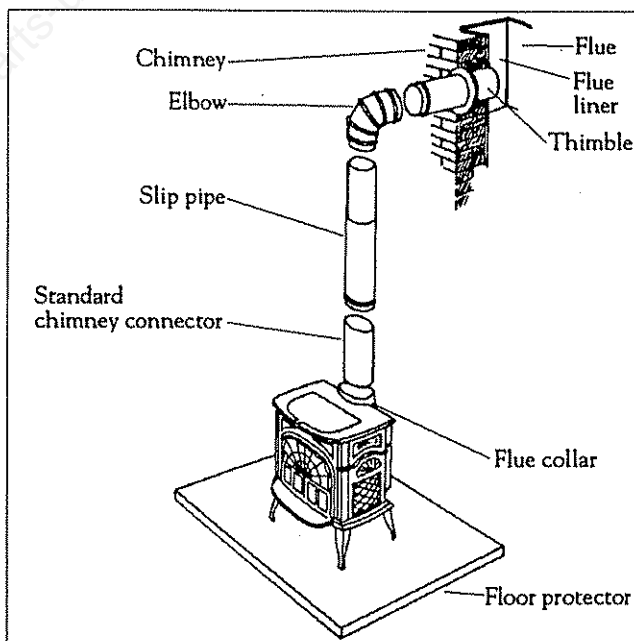
Special adaptors are available from your local dealer to make the connection between the prefabricated chimney and the chimney connector. The top of such adaptors attaches directly to the chimney or to the chimney's ceiling support package, while the bottom of the adaptor is screwed to the chimney connector.

These adaptors are designed so the top end will fit outside the inner wall of the chimney, and the bottom end will fit inside the first section of chimney connector. When assembled in this way, any soot or creosote falling from the inner walls of the chimney will stay inside the chimney connector.

Securing the Single-wall Connector to a Masonry Chimney

For masonry chimneys, both freestanding and fireplace chimneys may be used for installation of your Intrepid II.

Freestanding Chimney Installations

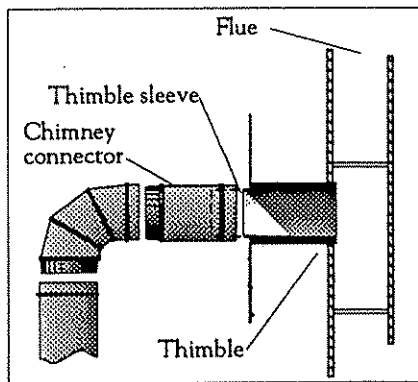


Chimney connection in a freestanding installation.

If the chimney connector must pass through a combustible wall to reach the chimney, follow the recommendations in the Wall PassThrough section that follows.

The opening through the chimney wall to the flue (the "breach") must be lined with either a ceramic or metal cylinder, called the "thimble", which is cemented firmly in place. The fit must be snug and the joint between the thimble and the chimney wall must be cemented.

A special piece called the "thimble sleeve," slightly smaller in diameter than standard connector and most thimbles, will facilitate the removal of the chimney connector system for inspection and cleaning. Thimble sleeves should be available from your local dealer.



The thimble, made of either ceramic or metal, must be cemented securely in place.

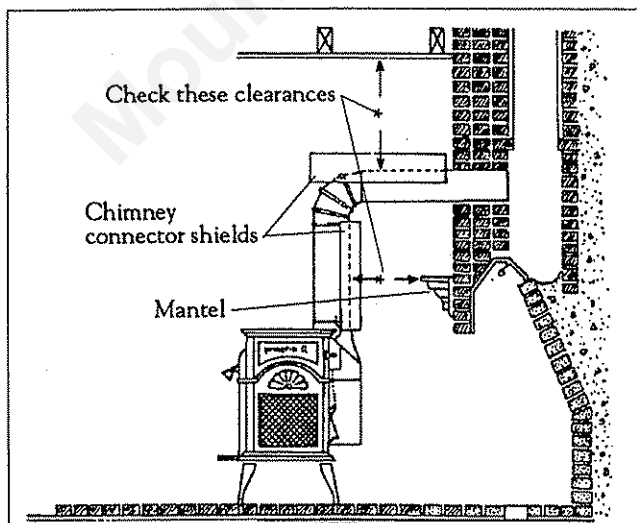
To install a thimble sleeve, slide it into the breech until it is flush with the inner flue wall. Don't extend it into the actual flue passage, as this could interfere with the draft.

The thimble sleeve should protrude 1-2" (25-50 mm) into the room. Use furnace cement and thin gasketing to seal the sleeve in place in the thimble. Secure the chimney connector to the outer end of the sleeve with sheet metal screws.

Without a thimble, a suitable length of chimney connector can be extended through the breech to the inner face of the flue liner, and cemented securely in place. Additional pieces of connector are then attached with sheet metal screws.

Fireplace Chimney Installations - Above a Fireplace

The Intrepid II may be connected to a chimney above a fireplace opening also. In such installations, the stove is positioned on the hearth in front of the fireplace and the chimney connector rises from the stove top and then angles ninety degrees back into the chimney.



Chimney connector enters chimney above the fireplace.

The chimney liner should extend to the point at which the chimney connector enters the chimney.

If the chimney connector from your installation enters the chimney above a fireplace, follow all the guidelines mentioned above for freestanding installations. In addition, give special consideration to the following points:

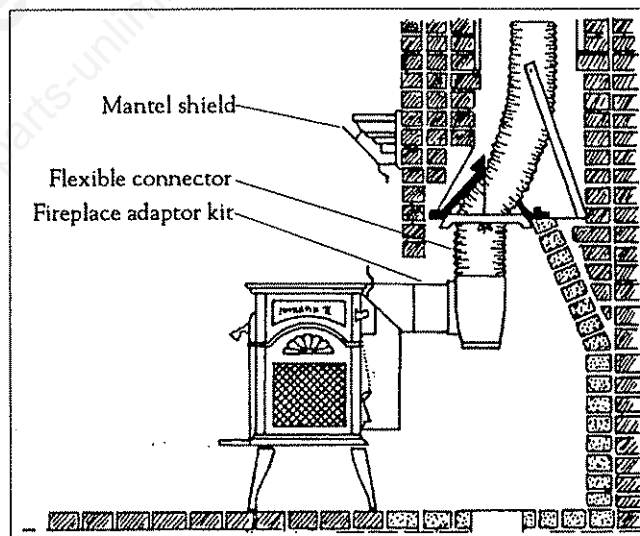
- Check the clearance between the stove and the chimney connector, and any combustible trim or the mantel. Use the necessary combination of mantel, trim, and connector heat shields to achieve the required clearances.

- Check the clearance between the chimney connector and the ceiling. If no heat shields are used, the clearance should be at least 26" (660 mm). To find out how much this clearance may be reduced with heat shields, see the clearance chart on Page 11.

- The fireplace damper must be sealed to prevent room air from escaping up the flue. However, it must be possible to re-open the damper to inspect or clean the chimney.

Fireplace Chimney Installations - Through a Fireplace

If your fireplace height is at least 25" (635 mm), you may install an Intrepid II with standard legs through the fireplace opening using a "positive connection" kit available from your local dealer. These positive connection kits ensure a tight fit between the stove flue collar and the chimney flue.



Chimney connector enters chimney through the fireplace opening.

Fireplace installations, whether connected to the flue above or through the fireplace opening, have special clearance requirements to adjacent trim and the mantel. You'll find the required clearances for the Intrepid II fireplace installations on Page 9.

Floor protection requirements also apply to fireplace installations. Floor protection information is on Page 7.

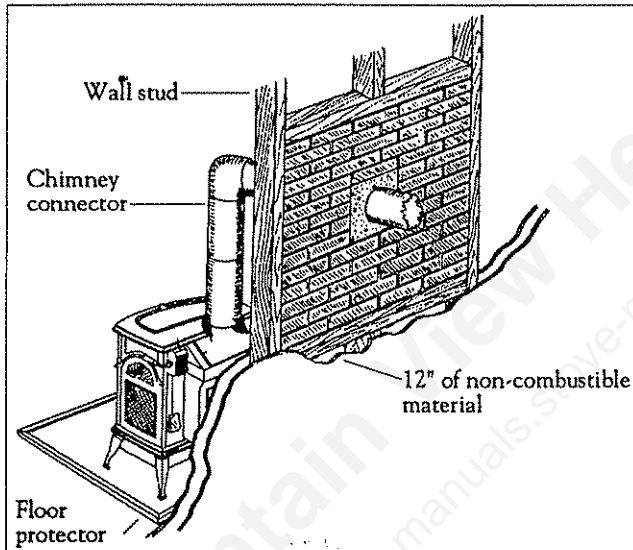
Wall Pass-Throughs

Whenever possible, design your installation so that the connector does not pass through a combustible wall. If you are considering a wall pass-through in your installation, check with your building inspector before you begin. Also, check with the chimney connector manufacturer for any specific requirements.

Accessories are available for use as wall pass-throughs. If using one of these, make sure it has been tested and listed for use as a wall pass-through.

In the United States, the National Fire Protection Association (NFPA) has established guidelines for passing chimney connectors through combustible walls. Many building code inspectors follow these guidelines when approving installations.

The following illustration shows one NFPA-recommended method. All combustible material in the wall is cut away from the single-wall connector to provide the required 12" (300 mm) clearance. Any material used to close up the opening must be non-combustible.

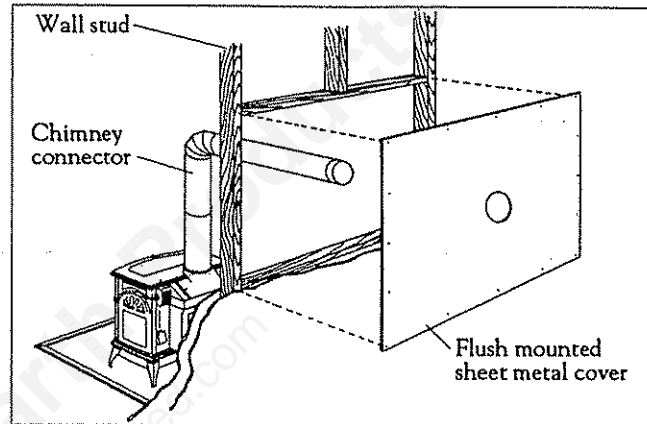


An NFPA recommended wall pass-through for the United.

Three other methods are also recommended by NFPA:

- Using a section of double-wall chimney with a 9" (230 mm) clearance to combustibles.
- Placing a section of chimney connector inside a ventilated thimble, which in turn is separated from combustibles by 6" (150 mm) of fiberglass insulating material.
- Placing a section of chimney connector inside a section of 9" (230 mm) diameter, solid-insulated, factory-built chimney, with two inches of air space between the chimney section and combustibles.

In Canada, The Canadian Standards Association has established different guidelines. The illustration below shows one method, in which all combustible material in the wall is cut away to provide the required 18" (460 mm) clearance for the connector. The resulting space must remain empty. A flush-mounted sheet metal cover may be used on one side only. If covers must be used on both sides, each cover must be mounted on non-combustible spacers at least 1" (25 mm) clear of the wall.



An approved wall pass-through for Canada.

Your local dealer or your local building inspector can provide details for other approved methods of passing a chimney connector through a combustible wall in your area. In Canada, this type of installation must conform to CAN/CSA-B365, Installation Code for Solid Fuel Burning Appliances and Equipment.

NOTE: Do not vent your Intrepid II into a factory-built (zero-clearance) fireplace. These appliances and their chimneys are specifically designed as a unit for use as fireplaces. It may void the listing or be hazardous to adapt them for any other use.

DO NOT CONNECT AN INTREPID II TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.

Floor Protection

A tremendous amount of heat radiates from the bottom plate of an Intrepid II, and the floor beneath requires two kinds of special protection.

Heat protection is provided by a Vermont Castings' Bottom Heat Shield, part #0307.

Spark and ember protection is provided by a floor protector, which may be any non-combustible material.

For a new hearth, we recommend a non-combustible floor protector such as 1/4" non-asbestos mineral board or its equivalent, or 24 gauge sheet metal. If carpeting is present, it must be removed before installation of the floor protector. The floor protector may be covered with a non-combustible decorative material if desired. When using brick, tile, or stone, individual pieces must be mortared so sparks cannot fall through.

In the United States, most installations will require that the bottom heat shield be attached. Only when the stove is placed on a completely non-combustible surface, such as unpainted concrete over earth, may it be used without the bottom heat shield.

In Canada, installation of the Intrepid II is not permitted unless the bottom heat shield is attached.

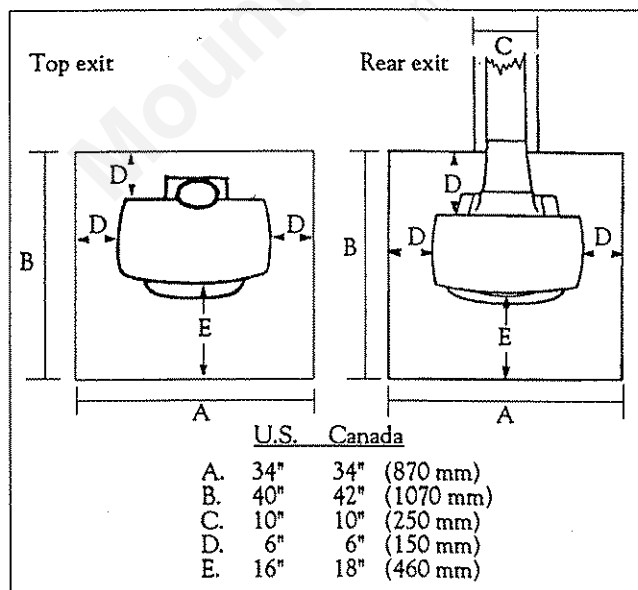
Even with the bottom heat shield installed, you must also use a floor protector in both the United States and Canada. The required dimensions for floor protectors vary slightly:

In the United States, the floor protector required under the stove must extend at least 16 inches (not including the ash lip) from the front of the stove (labeled "E" in accompanying illustration), and at least 6 inches from the sides and rear ("D" in illustration).

To meet the requirement in the United States, a floor protector must be at least 34" wide and 40" deep.

In Canada, the floor protector required under the stove must extend 18 inches (460 mm) to the front (labeled "E" in accompanying illustration), and 6 inches (150 mm) from the sides and rear ("D" in illustration).

To meet Canadian requirements, a floor protector must be at least 34" (870 mm) wide and 42" (1070 mm) deep.



Required floor protector dimensions .

For both countries, floor protection also must extend under the chimney connector and 2 inches to either side ("C" in illustration). For the 6" (150 mm) connector used with the Intrepid II, the protector must be a minimum of 10" (250 mm) wide, centered under the connector.

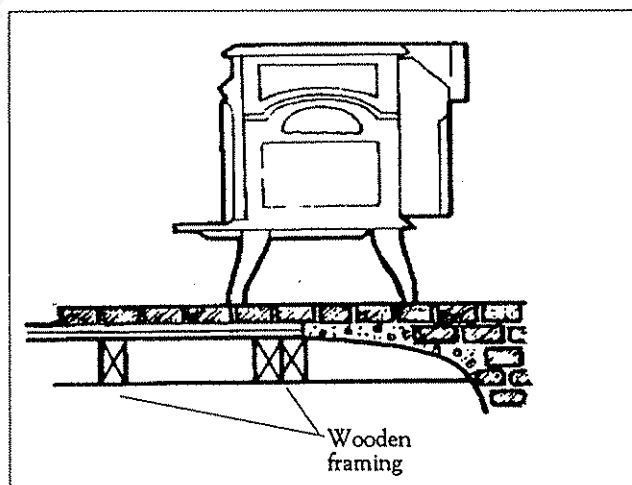
If the installation is in the United States and the floor is non-combustible (such as unpainted concrete over earth), the additional floor protection and heat shields are not required. The floor protection and heat shields are always required in Canada.

Floor Protection for Fireplace Installations

Don't assume that your fireplace hearth is completely non-combustible

Many fireplace hearths do not satisfy the "completely non-combustible" requirement because the brick or concrete in front of the fireplace opening is supported by heavy wood framing. Because heat passes through brick or concrete readily, it can easily pass through to the wood. As a result, such fireplace hearths can be a fire hazard and are considered a combustible floor.

Keep in mind that many raised hearths will extend less than the required clearance from the front of the heater when it is installed. In such cases, sufficient floor protection as described above must be added in front of the hearth to satisfy the minimum floor protector requirement from the front of the stove: 16" (410 mm) from the front in the United States and 18" (460 mm) from the front in Canada. Fireplace hearths must also offer the required protection of 6" (150 mm) on either side.



Additional floor protection may be required if combustible supporting timbers lie beneath fireplace hearths.

Optional 3" (75 mm) short legs may be used only on completely non-combustible hearths as defined previously, and only on such hearths that meet the width and depth requirements outlined previously under "floor protection."

Hearth rugs do not satisfy the requirements for floor protection.

Fireplace installations also have special clearance requirements to the side walls, side decorative trim, and fireplace mantle. Refer to the information on fireplace and mantel trim shields in this section .

Keep the Stove and Connector a Safe Distance from Surrounding Materials

Both a stove and its chimney connector radiate heat in all directions when operating, and dangerous overheating of nearby combustible materials can occur if they are too close to the heat. A safe installation requires that adequate clearance be maintained between the hot stove and its connector and nearby combustibles.

Clearance is the distance between either your stove (measured from the bottom edge of the stove's top plate) or chimney connector, and nearby walls, floors, the ceiling, and any other fixed combustible surface. Your stove has special clearance requirements that have been established after careful research and testing to UL and ULC standards. These clearance requirements must be strictly observed.

In addition, furnishings and other combustible materials must be kept away from the stove as well. In general, a distance of 48" (1220 mm) must be maintained between the stove and moveable combustible items such as drying clothes, furniture, newspapers, firewood, etc. Keeping those clearance areas empty assures that nearby surfaces and objects will not overheat.

Reducing Clearances

Stove clearances may be reduced by using heat shields attached to the stove. Chimney connector clearances may be reduced by using heat shields on single-wall connector, or by using double-wall connector. Clearances may also be reduced by using wall shields. All shielding used to reduce clearances must be listed by a recognized testing laboratory and approved by the local regulatory body.

Clearance requirements are established for many different installations. In general, the greatest clearance is required when you are placing a stove and its connector with no heat shields near a wall with no heat shield.

For example, when the Intrepid II is installed parallel to the rear wall and no shielding is used, it must be at least 30" (760 mm) from the wall behind it and at least 24" (610 mm) from walls on either side.

If the Intrepid II is installed in a corner and no shields are used, the corners of the stove must be at least 20" (510 mm) from nearby walls.

The least clearance is required when both the stove and its connector, as well as the wall, have heat shields.

When shields are attached to the stove or chimney connector, they are mounted 1" - 2" (25-50 mm) away from the stove or connector surface on non-combustible spacers. Air flowing between the stove (and/or chimney connector) and nearby shields carries away heat. Do not block the air flow by filling this empty space with any insulating material.

The shiny shield surface facing the heat source must be left unpainted, enabling it to reflect heat back towards the stove or connector and away from the wall.

Shields are never used on double-wall connectors.

Clearances may be reduced only by means approved by the regulatory authority, and in accordance with the clearances listed in this manual.

Because of their restricted air flow and heat retention characteristics, specific construction requirements and special clearances apply to installations into alcoves. Refer to the diagrams on this page, and contact your Vermont Castings' Dealer for details before beginning an alcove installation.

NOTE: ALCOVE INSTALLATION OF THE INTREPID II IS NOT PERMITTED IN CANADA.

Stove Heat Shields

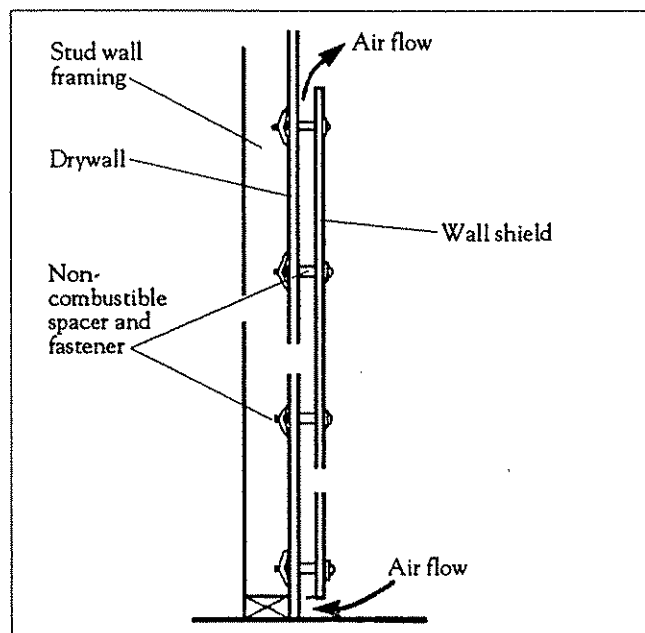
The Vermont Castings' Intrepid II Rear Heat Shield is one way to reduce the clearance to the rear wall. The rear heat shield may be installed on either rear- or top-exiting stoves. However, since the chimney connector also radiates heat toward the wall in top-exiting installations, either single-wall connector with connector heat shields, or listed and approved double-wall chimney connector should be used whenever the rear heat shield is used on top-exiting stoves.

Clearance reductions with the rear heat shield apply only to the wall to the rear in parallel installations. Neither the side clearance requirement nor the clearance requirement in corner installations may be reduced.

Wall Shields

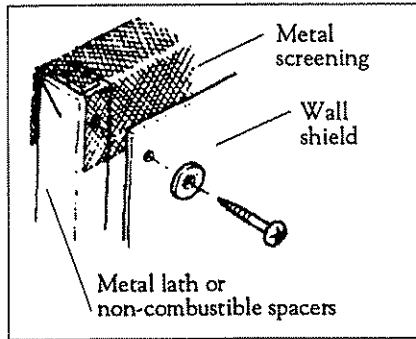
Clearances may be reduced by using a wall shield constructed of 24 gauge or heavier sheet metal, or of another non-combustible material such as 1/2" (13 mm) insulation board or common brick "laid on flat," with the 3-1/2" (90 mm) side down.

Shields must be spaced out from the combustible surface 1" (25 mm) on non-combustible spacers. The spacers should not be directly behind the stove or chimney connector.



Wall shields must be spaced out from the combustible surface 1" (25 mm) on non-combustible spacers.

The wall shield for a stove must extend 10" (250 mm) above the top of the stove, or a height of 35" (890 mm). The wall shield for the chimney connector must be 28" (710 mm) wide, centered behind the connector; for installations



Metal screening placed over the top of a wall shield will prevent small objects from falling behind it.

that use an approved prefabricated chimney to pass through the ceiling, the chimney connector shield used with single-wall connector must stop 1" (25 mm) below the ceiling.

Chimney Connector Clearance Reductions

Chimney connector clearances may be reduced by using heat shields on single-wall connector or by using double-wall connector. One of these methods should be used whenever the rear heat shield is used in top-exit installations, or in any other situation when it is necessary to protect nearby combustibles from the heat of the chimney connector. The ceiling above horizontal runs of chimney connector must be protected as well if the clearance is inadequate. Refer to the Clearance Charts.

In top-exiting installations in which the single-wall connector extends to the ceiling and connects to a prefabricated insulated metal chimney, the connector shield must extend to within an inch of the ceiling. A ceiling heat shield must be installed that is 22" (560 mm) in diameter and, as explained above, that extends 1" (25 mm) below the ceiling. The ceiling shield must be constructed of 24 gauge or heavier sheet metal, must be centered on the chimney, and must meet any wall protector that is also a part of the installation.

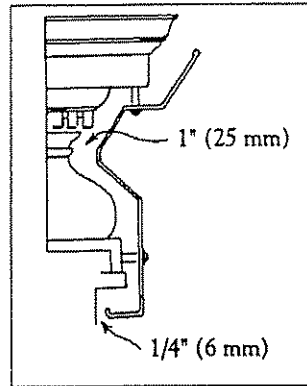
For double-wall connector the tested and listed clearances given in this manual must be used.

Fireplace and Mantel Trim Shields

A fireplace installation requires special clearance between the side of the stove and the right and left walls, between the side of the stove and the decorative side trim on the fireplace face, and between the top of the stove and the mantel.

Non-combustible shields installed 1" (25 mm) away from the combustible surface on non-combustible spacers, called ventilated shields, may be used to reduce clearances.

To protect a mantel from the heat of an Intrepid II in a



A custom-formed mantel shield.

fireplace installation, the ventilated mantel shield must be at least 48" (1220 mm) long, and it must be centered over the stove. Ventilating shields for side trim must extend the full length of the trim.

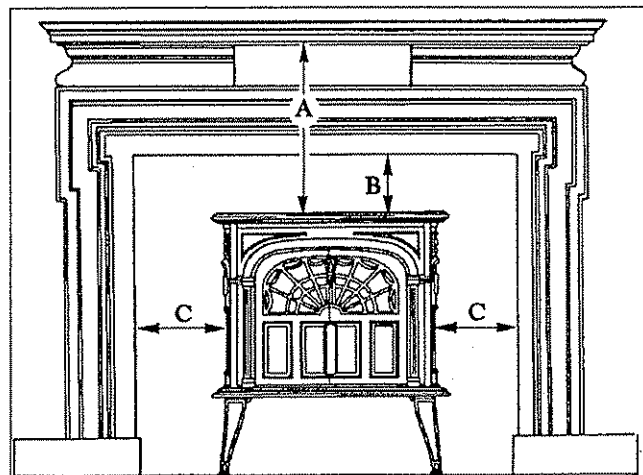
An unprotected mantel ("A" in the illustration below) cannot be more than 9" (230 mm) deep and must have a minimum clearance of 30" (760 mm), measured from the stove's top plate. With a ventilated shield, this

clearance may be reduced safely to 14" (360 mm).

Unprotected top trim (B) protruding 2" (50 mm) or less from the face of the fireplace must be a minimum of 24" (610 mm) from the stove's top surface. With a ventilated trim shield, this clearance may be reduced safely to 14" (360 mm).

Unprotected side trim (C) that protrudes 2" (50 mm) or less from the face of a fireplace must have a minimum clearance of 15" (380 mm), measured from the stove's top side edge. With a ventilated trim shield, the clearance may be reduced safely to 10" (250 mm). If the trim extends more than 2" (50 mm), wall clearance requirements apply.

The charts and sample installations that follow list the clearances required for the various installation configurations of the Intrepid II.



Fireplace Mantel and Trim Clearances
Measured from the top and sides of the stove.

	Unprotected	Protected
A. Mantel	30" (760 mm)	14" (360 mm)
B. Top trim	24" (610 mm)	14" (360 mm)
C. Side trim	15" (380 mm)	10" (250 mm)

Maintain clearances to combustible components of the mantelpiece.

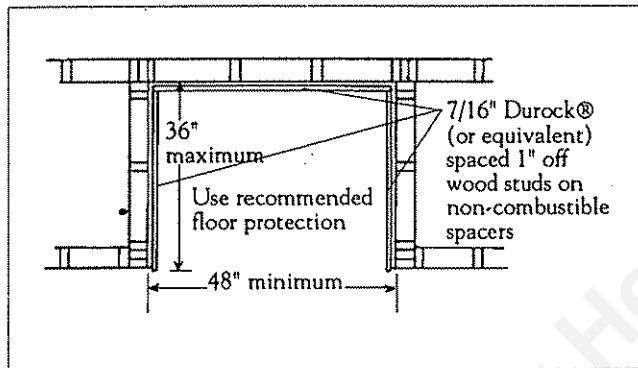
Alcove Installations

Because of their restricted air flow and heat retention characteristics, specific construction requirements and special clearances apply to installations into alcoves. No stove or chimney connector heat shields are used in alcove installations.

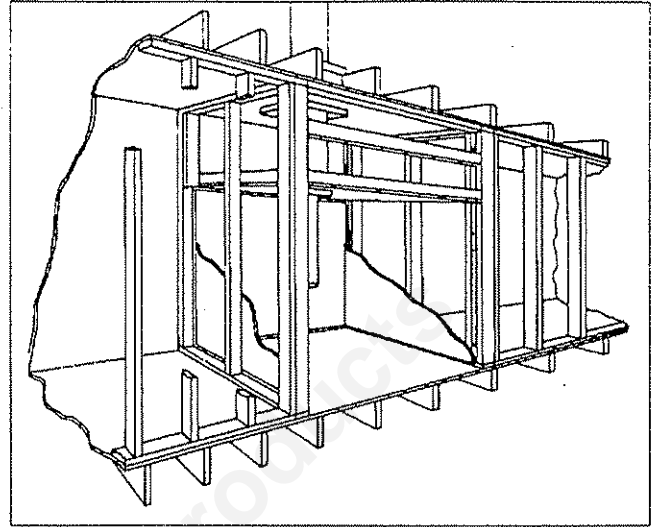
ALCOVE INSTALLATION OF THE INTREPID II IS NOT PERMITTED IN CANADA.

Construction Requirements

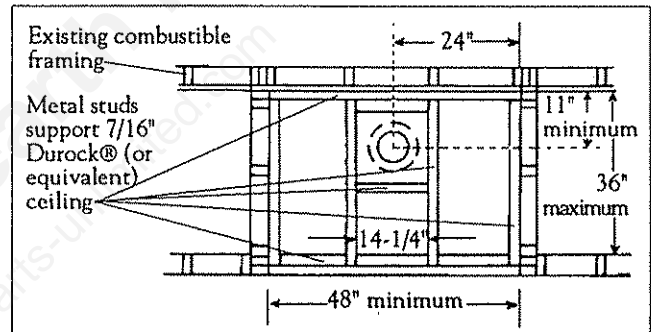
The following illustrations show non-combustible ceiling framing and maximum and minimum permitted dimensions for alcove construction.



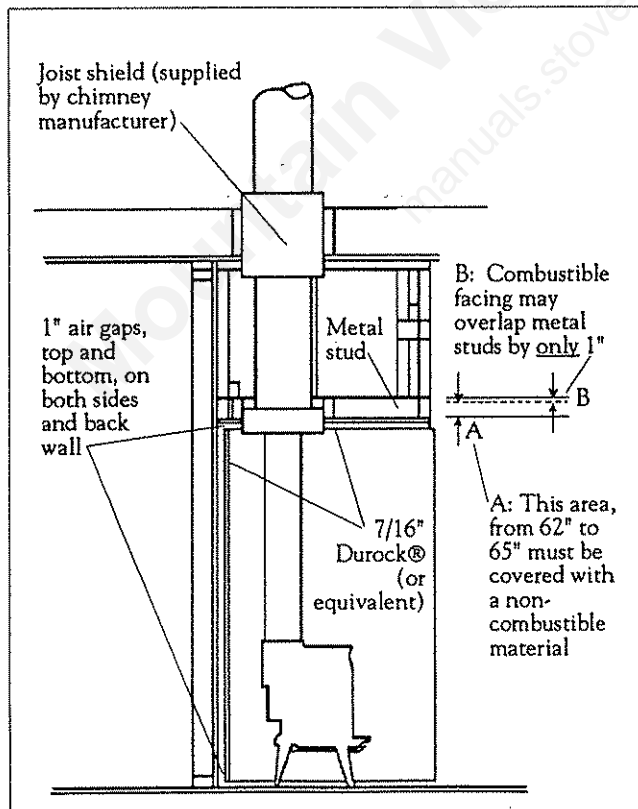
Floor plan. Sheetrock on front face butts to Durock® (or equivalent) alcove lining.



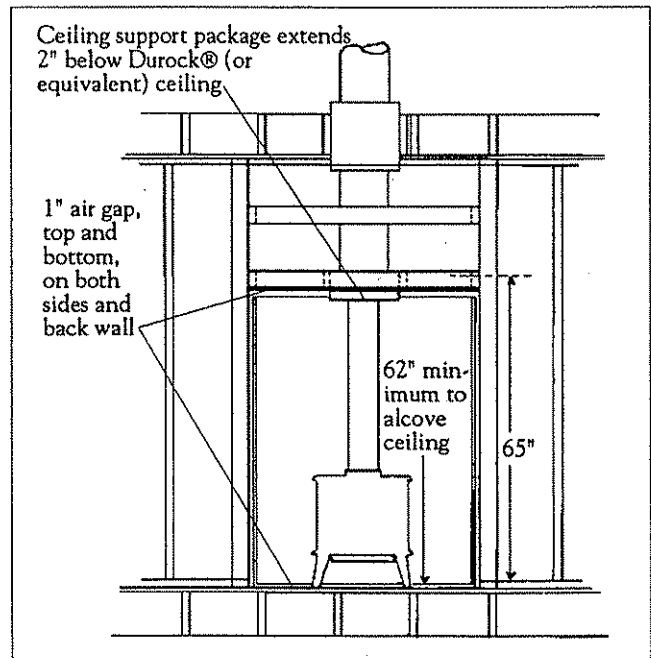
Cutaway perspective of alcove installation.



Reflected ceiling plan.



Side section.



Front section: 65" minimum clearance to combustibles on front face. Combustible facing may overlap metal studs by only 1". It should not extend below the height of the non-combustible ceiling

Intrepid II Clearance Chart / See Pages 12 and 13 for diagrammatical representations of these clearances.

	<i>Unprotected Surfaces</i>			<i>Protected Surfaces</i>		
	Stove Clearance					
	Stove Installed Parallel to Wall		Stove in Corner	Stove Installed Parallel to Wall		Stove in Corner
	Side	Rear	Corners	Side	Rear	Corners
<i>No stove heat shields</i>	(A) 24" (610 mm)	(B) 30" (760 mm)	(C) 20" (510 mm)	(D) 12" (300 mm)	(E) 16" (410 mm)	(F) 10" (250 mm)
<i>Top exit, rear stove h.s., single-wall chimney connector with connector heat shields¹²</i>	(G) 24" (610 mm)	(H) 16" (410 mm)	(I) 12" (300 mm)	(J) 12" (300 mm)	(K) 9" (230 mm)	(L) 10" (250 mm)
<i>Rear exit, rear stove heat shield only³</i>	(M) 24" (610 mm)	(N) 14" (360 mm)	(NA)	(P) 12" (300 mm)	(Q) 9" (230 mm)	(NA)
<i>Top exit, rear stove h.s., double-wall chimney connector⁵</i>	(G) 24" (610 mm)	(H) 16" (410 mm)	(I) 12" (300 mm)		*	
Chimney Connector Clearance						
<i>Single-wall chimney connector, no connector heat shields</i>	26" (660 mm)			12" (300 mm)		
<i>Single-wall chimney connector, with connector heat shields</i>	10" (250 mm)			5" (130 mm) ⁴		
<i>Double-wall connector⁵</i>	12" (300 mm)			*		
Front Clearance to Combustibles						
<i>All Installations</i> 48" (1220 mm)						

* Clearances with double-wall connectors and protected surfaces have not been tested for the Intrepid II.

¹Shielding for a top exit stove must include the stove rear heat shield insert to protect the area behind the flue collar.

²Chimney connector heat shields, in an installation that goes through a combustible ceiling, must extend to 1" (25 mm) below the ceiling heat shield, which is 22" (560 mm) in diameter. The ceiling heat shield should be 24 gauge or heavier sheet metal, centered on the chimney connector, and mounted on non-combustible spacers.

³Rear exit—horizontal from flue collar directly back through wall.

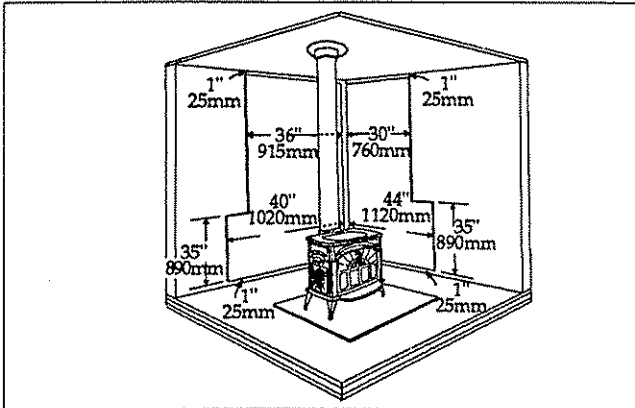
⁴The ceiling heat shield required when chimney connector shields are used should meet the wall protector. This will require trimming the ceiling shield along the line of intersection with the wall protector.

⁵In top exit installations, this clearance requires the use of the rear heat shield with the shield insert installed.

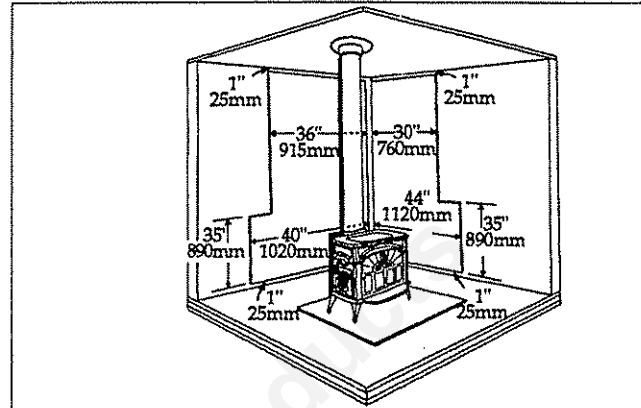
Intrepid II Clearance Diagrams / See the chart on Page 11 for dimensions indicated by letter in the diagrams below.

<i>Unprotected Surfaces</i>		<i>Protected Surfaces</i>	
Stove Installed Parallel to Wall	Stove in Corner	Stove Installed Parallel to Wall	Stove in Corner
<i>Top Exit Installations, no heat shields</i>			
<i>Top Exit Installations, rear heat shield, and chimney connector heat shields or double-wall connector</i>			
<i>Rear Exit Installations, rear heat shields</i>			
	NA		NA

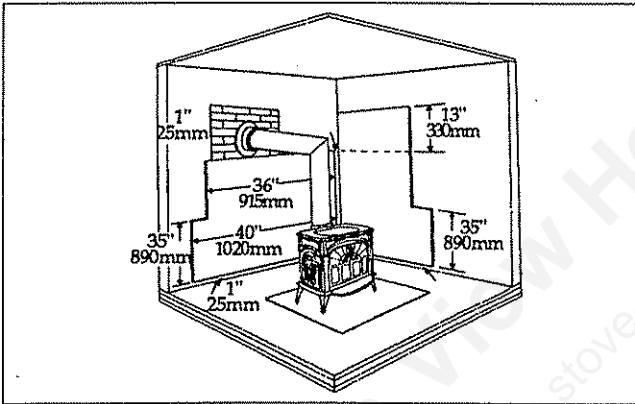
Wall Shield Requirements for Some Common Intrepid II Installations



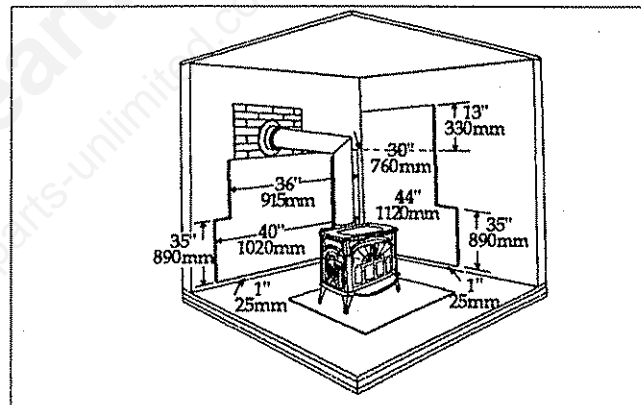
Parallel installation, vertical chimney connector, two wall shields. Reduced clearances for both rear and side walls. Wall shields may meet at corner if desired. Shielding for connector is centered behind connector.



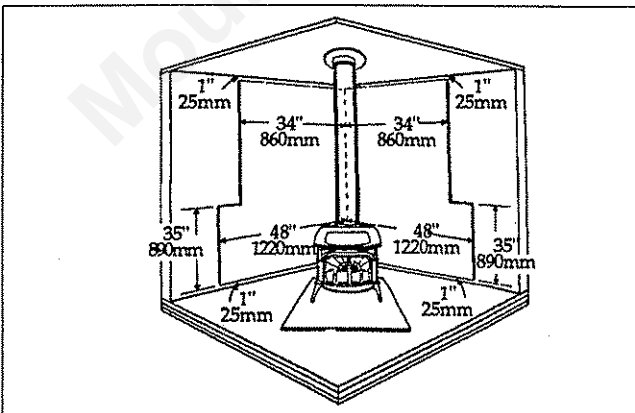
Parallel installation, vertical chimney connector, with stove, connector and wall shields. Maximum reduction for rear and side walls. Wall shields may meet at corner if desired. A heat shield 24" (610mm) in diameter suspended 1" (25 mm) below the ceiling must surround the chimney.



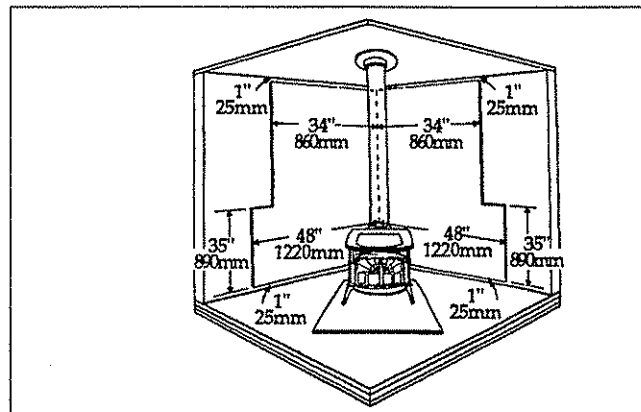
Parallel installation with rear wall pass-through, two wall shields. Reduced clearances for both rear and side walls. Wall shields may meet at corner if desired. Shielding for connector is centered behind connector. Wall pass-through must comply with codes.



Parallel installation with rear wall pass-through, with stove, connector and wall shields. Wall shields may meet at corner if desired. Connector heat shield extends 28" (710 mm) above flue collar, or below elbow, whichever is less. Wall pass-through must comply with codes.



Corner installation, vertical chimney connector, with rear, stove, connector and wall shields. Wall shields MUST meet at corner. Connector heat shield extends 28" (710 mm) above flue collar. A 24" (610 mm) diameter ceiling heat shield must surround the chimney and be suspended 1" (25 mm) from ceiling.



Corner installation, vertical chimney connector, two wall shields. Reduced side clearances. Wall shields MUST meet at corner.

Distance from the Center of the Flue Collar to the Wall in Top-Exit Installations

The information on this page is helpful in planning stove placement for top-exiting installations, particularly those installations with chimneys that pass through the ceiling. However, this is not a clearance chart. Final stove clearances must adhere to the guidelines stated in the clearance charts on Page 11.

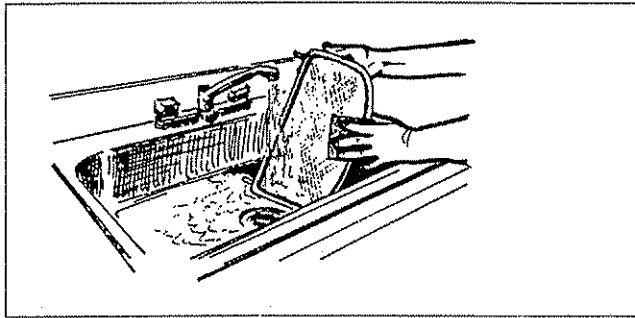
Intrepid II: WITHOUT Stove and Chimney Connector Heat Shields					
<i>Unprotected Surfaces</i>			<i>Protected Surfaces</i>		
Parallel Installations		Corner Installations **	Parallel Installations		Corner Installations **
Side (A)	Rear (B)	Corner (C)	Side (D)	Rear (E)	Corner (F)
34- 3/4" 882 mm	29" 740mm	26- 3/4" 682mm	22-3/4" 575mm	11" 280mm	16- 3/4" 425mm
<p>* This distance, from the center of the flue collar to the front edge of the hearth, is the same for all installations on this page: 35" in the United States and 37" (940 mm) in Canada.</p>					

Intrepid II: WITH Stove and Chimney Connector Heat Shields					
<i>Unprotected Surfaces</i>			<i>Protected Surfaces</i>		
Parallel Installations		Corner Installations **	Parallel Installations		Corner Installations **
Side (A)	Rear (B)	Corner (C)	Side (D)	Rear (E)	Corner (F)
34- 3/4" 882mm	15" 380mm	18- 3/4" 475mm	22-3/4" 575mm	8" 200mm	16- 3/4" 425mm
<p>**To locate center of flue collar for corner installation, add 7" (180 mm) to the clearance distance from stove corner to wall. Mark off the resulting distance from the corner along both walls. Next, measure the same distance from these two points out from the walls. These last two measurements will meet at a point representing the center of the flue collar. Refer to the diagrams above.</p>					

Assembly

Clean the Griddle Before Use

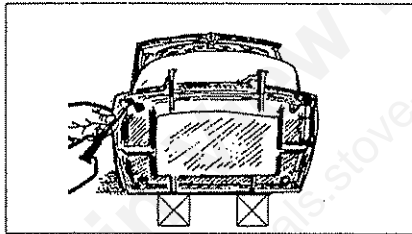
Use soap and warm water to wash the protective coating of oil from the griddle.



Set Up the Stove

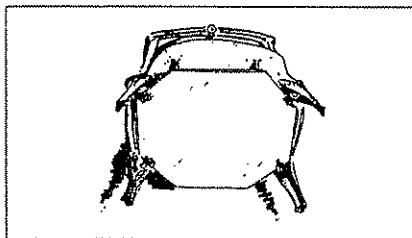
Remove any loose parts from inside the stove. Place a protective pad on the floor, arrange some sections of 4 x 4 lumber on the pad for support, and carefully tip the stove onto them.

Remove the four large slot-head screws from the stove bottom and install the stove legs, using the hex head bolts. 3/8" washers are used with three of the legs; the door/damper handle holder is installed in place of a washer on the right front leg. Position the holder so the hole to accept the handle nub faces out from the right side of the stove. Tighten the bolts firmly.



Install the Bottom Heat Shield

The bottom heat shield is mandatory on stoves installed in Canada, and a desired safety accessory in any installation. To install the bottom heat shield, loosen the leg bolts, and slip the bottom heat shield C-clips onto the bolts. Attach the bottom heat shield to the C-clips with the wing nuts, and tighten the leg bolts.

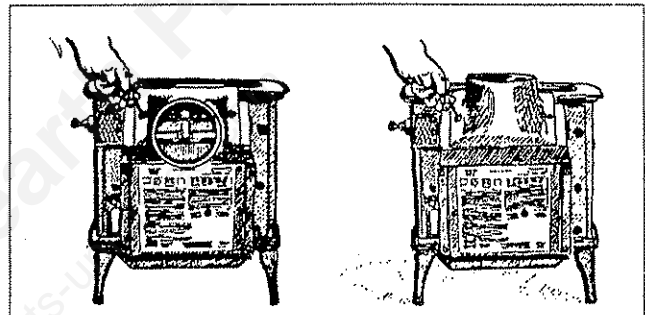


Storing the Insert Handle

The removable insert handle is used to open or close the front doors, or to change the position of the damper. After it has been used, it is removed so it won't get hot, and should be stored in the handle holder installed behind the right leg.

Reversing the Flue Collar

The flue collar may be reversed by removing the two screws that attach the collar to the back of the stove. Be sure the gasket around the flue collar opening is in position when you screw the collar back on to the stove.



Operation

Your Intrepid II's Controls and What They Do

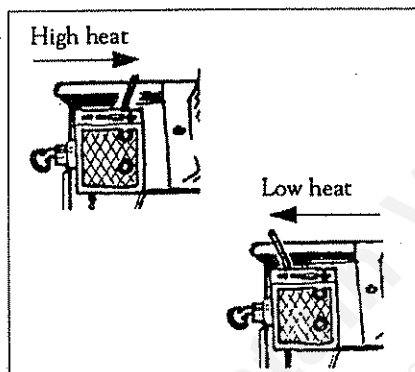
The operator of the stove uses two controls to regulate the performance of the Intrepid II: a primary air control supplies oxygen for the fire, and a damper directs air flow within the stove to activate and deactivate the catalytic combustor.

Symbols cast into the stove are reminders of the correct directions for opening and closing the controls. The symbols assume that you are facing the front of the stove.

Additional air for catalytic combustion is regulated automatically, and does not require operator control.

A Single Air Control Regulates the Amount of Heat the Fire Will Produce and How Long It Will Burn

The primary air control lever, located at the right rear corner of the stove, controls the amount of incoming air for starting, maintaining, and reviving a fire.

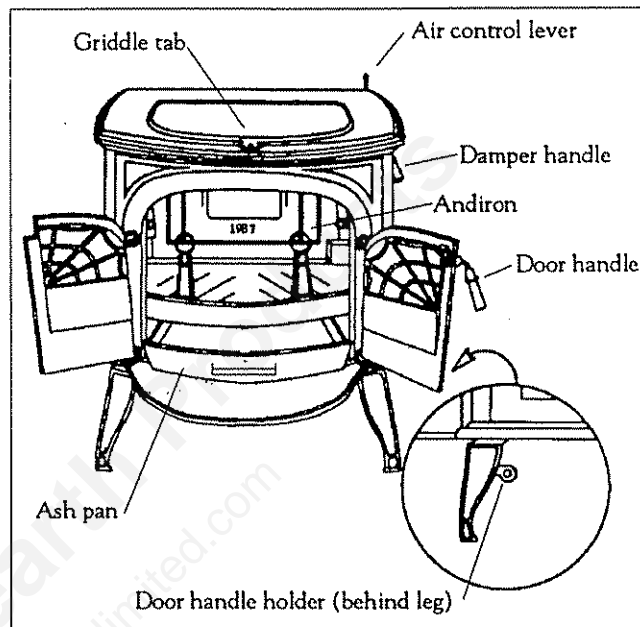


The handle also may be positioned anywhere between the two extremes for different heat levels. The view to the left is from the back of the stove.

More air entering the stove makes the fire burn hotter and faster, while less air prolongs the burn at a lower heat level.

For the greatest air supply and maximum heat output (but the shortest burn time), move the lever to the left. For a fire that will last longer with less heat, move the lever to the right. The lever also may be set anywhere in between the left and right extremes.

The Intrepid II's air control system also features an automatic thermostat to ensure an even heat output at whatever manual setting you select. The thermostat senses the heating and cooling of the stove surface and adjusts the air shutter accordingly.



The Intrepid II's controls are conveniently located and easy to operate.

A Damper Directs Air Flow Within the Stove

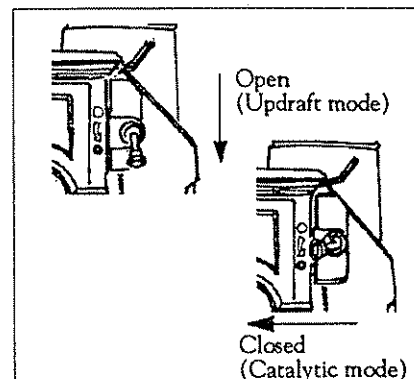
The damper handle opens and closes the damper to direct air flow within the stove, and is adjacent to, and to the right of, the primary air control lever on the right side of the stove.

The damper is open when the handle points to the floor, enabling smoke to pass directly into the chimney. The damper must be open when starting or reviving a fire, and whenever the griddle or doors are opened.

When the handle points to the front, the damper is closed. Smoke from the fire is directed through the catalytic combustion system where it can be further burned for greater efficiency, before passing up the chimney.

The damper has no intermediate positions.

When closing the damper, push firmly and snap it into the locked position to ensure that the stove remains in the catalytic mode.



The damper is either open or closed. There are no intermediate positions. The view to the left is from the side of the stove.

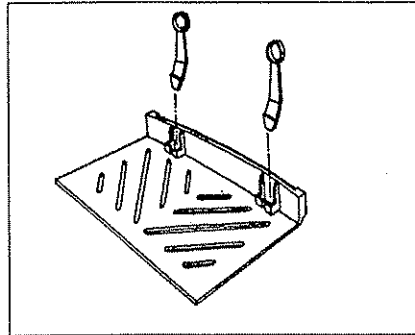
Glass Door Panels

The glass panels used in the doors have a reflective coating on the outside surface. Heat reflected back to the inside of the glass helps keep the inner surface at a higher temperature than the outer surface. In combination with a pre-heated "airwash," this helps provide clear fireviewing at low operating levels as well as high..

Andirons

Your stove is equipped with andirons to keep logs away from the glass panels. The andirons are important to maintain clear fireviewing and should be removed only while reloading through the front doors.

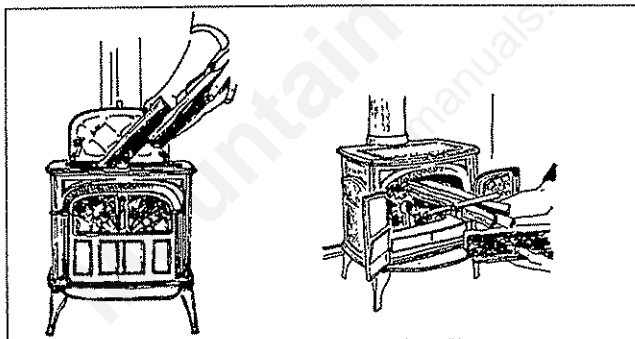
Wear heavy stove gloves when removing the andirons, and place them on a non-combustible surface until you replace them in the stove.



Removable andirons make it possible to load wood through the front.

Two Ways to Add Fuel

The Intrepid II's griddle lifts for convenient top-loading of logs, and is the easiest way of regularly adding fuel. However, the front doors open as well for adding an occasional log to a fire.



Top-loading is the best way to add fuel during regular use. Front loading is useful for kindling a fire.

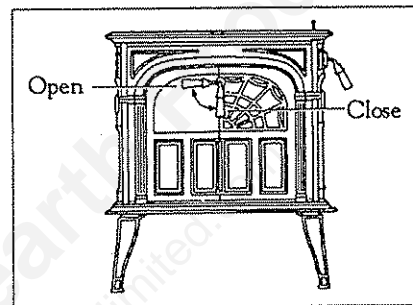
The front doors also may be opened (or even removed) and the Intrepid II spark screen placed in the opening for open-fire viewing.

WARNING: FOR SAFETY AND GREATEST EFFICIENCY, OPERATE YOUR STOVE ONLY WITH ALL DOORS/GRIDDLES FULLY CLOSED. THE TEST STANDARD FOR YOUR STOVE WHEN IT IS OPERATED IN THIS MODE IS UL 1482.

YOUR STOVE MAY BE USED AS A FIREPLACE WITH THE FRONT DOOR(S) OPEN OR REMOVED ONLY WHEN THE SPARK SCREEN IS PLACED CORRECTLY IN THE OPENING TO PROTECT AGAINST THE POSSIBILITY OF SPARKS AND EMBERS LEAVING YOUR STOVE. THE TEST STANDARD FOR YOUR STOVE WHEN IT IS OPERATED IN THIS MODE IS UL 737.

USE ONLY THE INTREPID II SPARK SCREEN, PART #0136, WITH YOUR INTREPID II.

INTREPID II SPARK SCREENS ARE AVAILABLE FROM YOUR VERMONT CASTINGS' AUTHORIZED DEALER.



To open the front doors, turn the handle clockwise.

To open the front doors, insert the handle into the door latch stub and turn it to the left and up.

To close them, always close the left door first. Turn the handle in the right door to the left and up (to the open position) and close the door. Push on the door as you turn the handle to the right and down. The doors will draw in slightly, and the handle should offer some resistance as you turn it to the closed position.

Avoid striking the glass or slamming the doors to reduce the risk of breaking the glass.

When you're not using the door handle, store it in the hole on the right front leg of the stove. replace them in the stove.

Most stove owners will prefer the convenience of top loading through the griddle, and will leave the andirons permanently in place.

Burn Only High-Quality Wood

The Intrepid II is designed to burn natural wood only; do not burn fuels other than that for which it was designed.

You'll enjoy the best results when burning wood that has been adequately air-dried. Avoid burning "green" wood that has not been properly seasoned. The wood should be 16" (410 mm) in length.

The best hardwood fuels include oak, maple, beech, ash, and hickory that has been split, stacked, and air-dried outside under cover for at least one year.

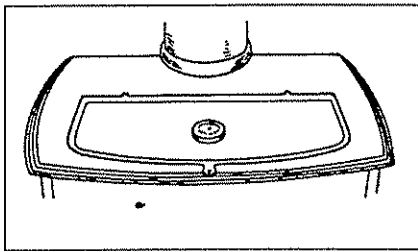
For areas that do not have a supply of hardwood, commonly burned softwoods include tamarack, yellow pine, white pine, Eastern red cedar, fir, and redwood. These too should be properly dried.

Wood should be stored under cover to maintain dryness. Dry, well-seasoned wood performs better for heating and fire-viewing. However, avoid wood dried more than two years that is grayish in color. This wood burns very quickly, reducing burn time.

Even for short-term storage, however, keep wood a safe distance from the heater and keep it out of the areas around the heater used for refueling and ash removal.

A Surface Thermometer is a Valuable Guide to Operation

An optional surface thermometer lets you know when to adjust the air control, when to refuel, and when your catalyst is operating properly.



Take temperature readings with the thermometer located in the middle of the griddle.

For example, when the thermometer registers at least 450°F. (230 C) after start-up you know that the stove is hot enough to begin catalytic combustion and that it is time to close the damper.

When thermometer readings drop below 350°F. (175 C) it's time to adjust the air control for a higher burn rate or to reload the stove.

A temperature reading over 750° F. (400 C) is a sign to cut back on the air supply to slow the burn rate.

Use the following temperature ranges as a guide to operation:

- Readings in the 300-400°F. (150-200 C) range indicate low to medium heat output.
- Readings of 500-650°F. (260-340 C) indicate high heat output. Operating your Intrepid II continuously at griddle temperatures of 750°F. (400 C) or higher may damage the cast iron or enamel finish.

Use the Air Control Settings that Work Best for You

No single air control setting will fit every situation. Settings will differ depending on the quality of the fuel, the amount of heat desired, and how long you wish the fire to burn.

The control setting also depends on your particular installation's "draft," or the force that moves air from the stove up through the chimney. Draft is affected by such things as the length, type, and location of the chimney, local geography, nearby obstructions, and other factors.

Too much draft may cause excessive temperatures in the Intrepid II, and could even damage the combustor. On the other hand, too little draft can cause backpuffing into the room and/or the "plugging" of the chimney or combustor.

How do you know if your draft is excessively high or low? Symptoms of too much draft include an uncontrollable burn or a glowing-red stove part. A sign of inadequate draft is smoke leaking into the room through the stove or chimney connector joints, low heat, and dirty glass.

In some newer homes that are well-insulated and weather-tight, poor draft may result from insufficient air in the house. In such instances, an open window near the stove on the windward side of the house will provide the fresh air needed.

Another option for getting more combustion air to the stove is to duct air directly from the outside to the stove. In fact, in some areas provisions for outside combustion air are required in all new construction.

Your Intrepid II is designed so that it is possible to incorporate outside air for combustion.

When first using the stove, keep track of the air control settings. You will quickly find that a specific setting will give you a fixed amount of heat. It may take a week or two to determine the amount of heat and the length of burn you should expect from various settings.

Most installations do not require a large amount of combustion air, especially if adequate draft is available. Do not for any reason attempt to increase the firing of your heater by altering the air control adjustment range outlined in these directions.

Use the following air control settings as a starting point to help determine the best settings for your installation. Each is described as a fraction of the total distance the lever may be moved from right to left.

Intrepid II Control Settings

<u>Burn Rate</u>	<u>Primary Air Control</u>
Low	From far right to 1/3 the distance to left
Medium	From 1/3 to 2/3 the distance to left
High	From 2/3 the distance to left to far left

How To Build a Wood Fire and Keep It Going

An Intrepid II leaves the factory with the combustor installed.

In the United States, it is against the law to operate this wood heater in a manner inconsistent with operating instructions in this manual, or if the catalytic combustor is deactivated or removed.

High-Efficiency Wood Burning with Catalytic Combustion

The components of the catalytic combustion system in your Intrepid II work together to produce optimum conditions for secondary combustion.

When the stove damper is closed, smoke is directed through the catalytic element, causing ignition of smoke at temperatures of 500-600° (260-315 C), half the temperature normally required for unaided secondary combustion.

The catalytic element is a ceramic "honeycomb" coated with the catalytic material. The element is located in the secondary combustion chamber, molded from a special high-temperature insulating refractory material. The design of the chamber provides the correct environment necessary for secondary combustion of the fuel (smoke).

Closing the damper may also reduce draft. Closing the damper too soon may put out the fire or deactivate the combustor. Close the damper only when the fire is well established. When starting a fire, wait until there is an ember bed of at least 3-4 inches before closing the damper.

Never kindle a fire with colored paper or paper that has colored ink or a glossy surface, and never burn treated wood, garbage, solvents, or trash. All of these may poison the catalyst and prevent it from operating properly. Never burn cardboard or loose paper except for kindling purposes. Never burn coal; doing so can produce soot or large flakes of char or fly ash that can coat the combustor and cause smoke to spill into the room. Coal smoke also can poison the catalyst so that it won't operate properly.

In general, the fire must be sufficiently well-established to ensure that catalytic activity is initiated. When first starting a fire, a medium- to high- firing rate must be maintained for at least twenty minutes. This ensures that the stove, catalyst, and fuel are all stabilized at the proper operating temperatures.

Even though it is possible for the fire to get quite hot within a few minutes after a fire is started, the combustor may stop working or the fire may go out if the fire is allowed to die down immediately as a result of the damper being closed. Once the combustor starts working, heat generated by burning the smoke will keep it working.

To determine whether the combustor is operating, observe the amount of smoke leaving the chimney when the damper is activated and when it is not. This procedure is described on Page 23.

Conditioning Your Stove

Cast iron is extremely strong, but it can be broken with a sharp blow from a hammer or from the thermal shock of rapid and extreme temperature change.

The cast plates expand and contract with changes in temperature. When you first begin using your Intrepid II, minimize thermal stress by allowing the plates to adjust gradually during three or four initial break-in fires following Steps 1-3 below.

Starting and Maintaining a Wood Fire

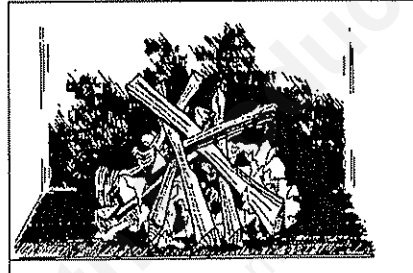
Burn solid wood fuel only in the Intrepid II, and burn it directly on the grate. Do not elevate the fuel. Do not burn coal or other fuels.

The damper must be open when starting a fire or when refueling.

Step 1. Open the stove damper, and open the primary air control fully.

Step 2. Place several sheets of crumpled newspaper in the stove. Do NOT use glossy advertisements or colored paper, as they can poison the catalyst. Place on the paper six or eight pieces of dry kindling split to a finger-width size, and on the kindling lay two or three larger sticks of split dry wood approximately 1-2" (25-50 mm) in diameter.

DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE. DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA, OR ENGINE OIL. Also, never use gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire. Keep all such liquids well away from the Intrepid II while it is in use.



Start the fire with newspaper and dry kindling.

Step 3. Light the newspaper and close the door. Gradually build up the fire by adding a few 3-5" (80-120 mm) diameter splits. If this is one of the first few "break-in" fires, let the fire burn brightly, and then let it die out.

During the break-in fires, don't let the stove get hotter than 500°F. (260 C) as measured on an optional stove-top thermometer. Adjust the air control lever as necessary to control the fire.

Some odor from the stove's hot metal, the paint, and the cement is normal for the first few fires.

NOTE: Some chimneys need to be "primed," or warmed up, before they will draw sufficiently to start a fire. To correct this situation, roll up a couple pieces of newspaper, place them on top of the kindling and toward the back of the stove, light them, and close the doors. This should heat the chimney enough to initiate a draft.

Once the draft is established, open the front door and light the rest of the fuel from the bottom. Do not light the main bed of fuel until the chimney begins drawing, and repeat the procedure as often as necessary if the initial attempt is unsuccessful.

Step 4. If your Intrepid II has been broken-in previously using Steps 1-3, continue to build the fire gradually. Add larger wood with a diameter of 3-4" (75-100 mm).



Add larger pieces of wood as the fire begins to burn well.

Continue adding split logs of this size to the briskly-burning fire until there is a glowing ember bed that at least 3" (75 mm) deep. A good ember bed is necessary for proper functioning of the catalytic system and may take an hour or more to establish.



Add full-size logs when the ember bed is 3" (75mm) deep.

Step 5. Close the damper when the griddle temperature reaches 450° F. (230 C).

Step 6. Adjust the air control for your desired heat output.

Refuel While the Embers Are Still Hot

Reload the Intrepid II while it is still hot and there are plenty of glowing embers to re-kindle the fire. Include some smaller pieces of wood in the new load of fuel to help the stove rebuild its operating temperature quickly.

Wear stove gloves, and follow this procedure when you reload your stove:

Step 1. Open the thermostat lever.

Step 2. Open the damper.

Step 3. Check the ash level in the ash pan; empty, if necessary, and replace the pan.

Step 4. Open the griddle.

Step 5. Load wood — smaller, split pieces first.

Increase the amount of fuel you load into the stove as you become familiar with your stove and the heating requirements of your home.

Step 6. Close the griddle. Leave the damper and thermostat lever in the open position, until the surface temperature reaches 450° F. (230 C).

NOTE: If the remaining charcoal bed is relatively thick and if your fuel is well seasoned, it is possible to add fresh fuel (smaller pieces first), close the door and damper, and reset the primary air thermostat for the desired heat output.

Do not break the charcoal into very small pieces or pound or compress the charcoal bed.

It is important that air be able to circulate under the wood in order for the fire to be quickly revived.

WARNING: OPERATE YOUR INTREPID II ONLY WITH THE DOORS EITHER FULLY OPEN OR FULLY CLOSED.

CAUTION: THE INTREPID II WILL BE HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.

DO NOT OVERFIRE THIS HEATER. Overfiring may cause a house fire, or can result in permanent damage to the stove and to the catalytic combustor. If an exterior part of the Intrepid II glows, you are overfiring.

Ash Disposal

Remove ash before it reaches the top of the ash pan. Check the level at least once a day, and before each re-fueling. If the ash is close to the top edge of the pan, empty it according to this procedure:

Step 1. Open the damper.

Step 2. Open the front doors fully.

Step 3. Using stove gloves, pull the ash pan out of the stove by its handle.

Step 4. Remove the ash pan and properly dispose of the ashes.

Step 5. Return the ash pan to its original position in the stove.

Keep the ash pan level to prevent ash spillage.

Empty the ash pan regularly, typically every one to three days. The frequency will vary depending on how you operate your Intrepid II; if you burn more wood at higher heat output settings, ash will accumulate rapidly.

Ash should be removed frequently and placed outdoors in a metal container with a tight-fitting lid. The closed container of ash should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ash is disposed of by burial in soil or otherwise locally dispersed, it should be retained in the closed container until all cinders have thoroughly cooled. Wood ash may be used as a garden fertilizer.

CAUTION: Never use your household or shop vacuum cleaner to remove ash from the stove; always remove and dispose of the ash properly.

Maintenance

Keep Your Stove Looking New and Working Its Best

Let the fire in the stove go out and allow the stove to cool completely before beginning any maintenance procedure.

Care of the Cast Iron Surface

An occasional dusting with a dry rag will keep the painted cast iron of your Intrepid II looking new.

The stove's paint can be touched up as needed. First, clean the areas to be painted with a wire brush. Remove the griddle and set it aside.

Then, touch up the stove with Vermont Castings' high temperature stove paint. Apply the paint sparingly, and keep in mind that two light coats of paint are better than a single heavy one.

Care of the Porcelain Enamel Surface

Use a dry or slightly damp rag or soft brush to remove spills or stains. For difficult jobs that require a cleaning agent, use only a kitchen appliance cleaner or polish recommended for use on enamel surfaces.

Cleaning the Glass

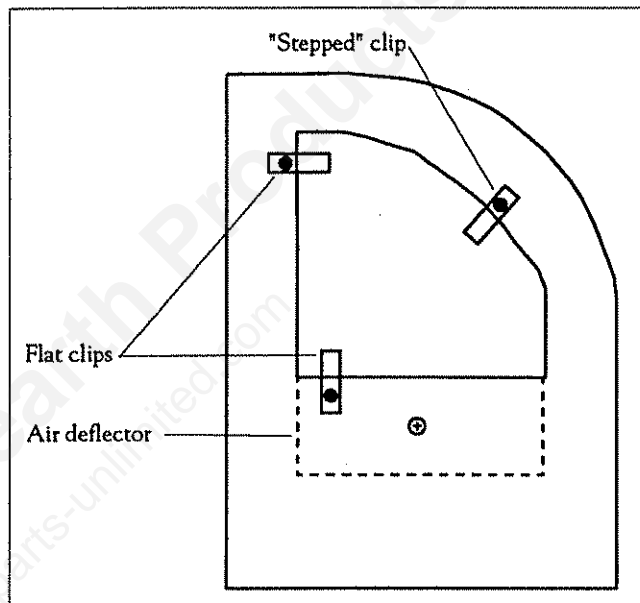
Most of the carbon deposits on the glass will burn off during hot fires.

However, the ash residue that accumulates on the glass surface should be removed regularly to prevent etching. To clean the glass, follow this procedure:

- Be sure the glass is completely cool.
- Clean the glass with water or a cleaner made especially for this purpose. Do not use abrasive cleaners.
- Rinse the glass thoroughly.
- Dry the glass completely.

Replace Broken Glass Immediately

The panes of glass in the doors of the Intrepid II rest on a cushion of gasket, and are held in place by three clips. The glass is coated on one side. The coated side is slightly colored and is further identified with white labels marked "CV+". The doors should be removed from the stove and placed on a sturdy, level work surface, and the air deflectors should be removed as well.



The main components of the Intrepid glass assembly.

To install the glass, follow this procedure:

Step 1. Install the Gasket.

Be sure the channel around the window opening is clean, free of old cement, paint or dust. Determine the correct length of the gasket by laying it out in the channel; avoid stretching it. Cut the gasket so that the ends meet firmly but not overlap.

Lay a narrow (1/8") bead of gasket cement in the channel to hold the gasket in place. Do not apply a large amount of cement, as too much will saturate the gasket and reduce its effectiveness.

Place the gasket in the newly-cemented channel.

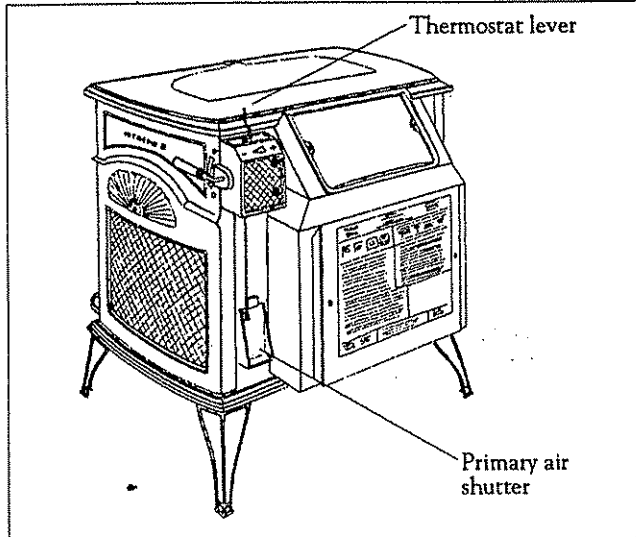
Step 2. Install the Glass.

Lay the glass on the gasket with the coated side down (toward the outside of the door). The off-set clip is screwed to the boss on the raised section at the top of the opening. The flat clip is used at the bottom. Tighten the screws firmly, but loose enough to allow for a little movement of the glass when the stove is in operation.

Step 3. Replace the Air Deflectors.

Check the Operation of the Primary Air Shutter

The primary air shutter is visible from the back of the stove. The shutter must open and close freely when you move the thermostat lever. If it doesn't, check for any obstruction, or for a bound or stretched chain needing adjustment.



The primary air shutter must move freely.

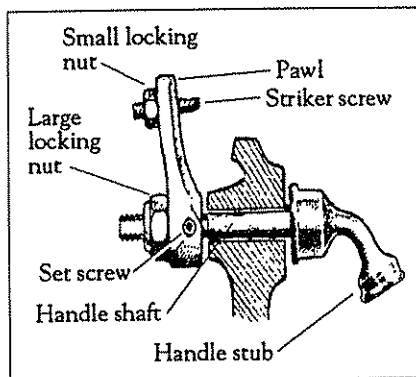
On a cold stove the shutter should be open no more than 1/8" (3 mm) when the primary air control lever is pushed completely to the left (closed). When the lever is pushed completely to the right (open), the shutter should be open to an angle of approximately 70 degrees from the stove back.

The ball chain should measure 8-1/2" (216 mm) from connection to the thermostat coil to connection on the primary air flap.

If the setting is incorrect, the thermostat coil may be bent or broken. Contact your local Vermont Castings Authorized Dealer for assistance

How to Adjust the Door Latches

Over time, the gasketing around the doors will compress, and the latch may need adjustment. To adjust the latch, loosen the small locking nut, extend the striker screw one turn, and re-tighten the small locking nut while preventing the striker screw from turning. Keep making adjustments a little at a time until the setting is right.



The door latch striker screw can be turned in or out to tighten or loosen the door latch.

The front doors of the stove should close securely and tightly, when the handle is in the closed position. When the handle is properly adjusted, a slight resistance should be encountered as the doors are moved to the completely closed position.

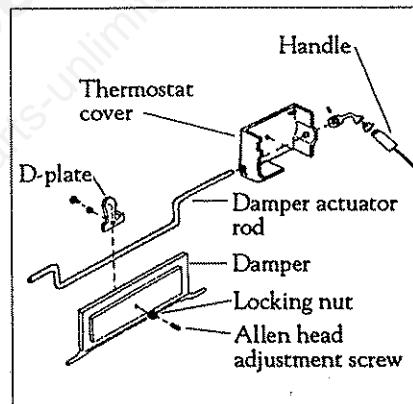
Tighten the Damper Handle as Needed

The damper handle is attached to the damper actuator rod with a set screw. Check the set screw periodically for tightness and tighten as necessary.

Damper Adjustment

When the stove damper is closed, the pressure of the actuator rod against the D-plate assures a good seal between the damper and the damper housing. Adjustment may be needed after a period of time to retain adequate pressure.

To make this adjustment, start with the damper in the closed and locked position. Loosen the 7/16" locking nut located in the center of the damper. Using a 1/8" Allen wrench, turn the Allen screw a full turn in the clockwise direction. Test the damper mechanism for snugness, and continue adjusting the Allen screw as needed. Tighten the 7/16" locking nut when the mechanism operates smoothly but firmly.



Because it is adjustable, the damper may be tightened for a snug seal.

The Catalytic Combustion System

Inspection and Cleaning

This wood heater contains a catalytic combustor, which needs periodic inspection and replacement for proper operation. In The United States it is against the law to operate this wood heater in a manner inconsistent with the operating instructions in this manual, or if the catalytic element is deactivated or removed.

Under normal operating conditions, the catalytic combustor should remain active for two to six years (depending on the amount of wood burned). However, it is important to monitor the combustor periodically to ensure that it is functioning properly, as well as to determine when it needs to be replaced.

A probe thermometer, passing through the back of the stove into the catalytic combustion chamber, automatically regulates the catalytic combustion air supply. Deterioration of the probe may result in decreased catalytic combustor performance.

A poorly-functioning catalytic combustion system will result in a loss of heating efficiency, and an increase in creosote and emissions.

The combustor should be visually inspected "in place" for fly ash accumulation and physical damage three times per year. Actual removal of the combustor is not recommended unless a more detailed inspection is warranted because of diminished performance as outlined below, or to inspect the probe thermometer.

The refractory package that houses the catalytic combustor should be inspected annually for a build-up of fly ash and cleaned if necessary. This may be done during examination of the combustor.

The probe thermometer should be inspected annually, or more often if decreased catalytic combustion performance is not due to a defective combustor.

When To Suspect a Combustion System Problem

The best way to evaluate the performance of your Intrepid II's combustion system is to observe the amount of smoke leaving the chimney — both when the combustor has achieved "light-off" and when it has not. Follow this simple two-step procedure:

- With a fire going and the combustor properly activated with the damper closed to route smoke through it as described in the Operation Section, go outside and observe the smoke leaving the chimney.
- Then, open the stove damper and once again observe the smoke leaving the chimney.

Significantly more smoke should be observed after the second step when the stove damper is open and exhaust is not routed through the combustor. Be careful not to confuse smoke with steam from wet wood, however.

If this test indicates a problem, consider other possible factors as well, such as the time of year or a change in the quality of your fuel. In spring and fall, draft is weaker than it is in colder winter weather, and fires can burn sluggishly. Small, hot fires are a good solution under these conditions.

Burning "green" (insufficiently seasoned) wood will result in poorer performance than when burning properly seasoned fuel. You may have to run your stove hotter (more air) to achieve good performance if you are burning green or wet wood.

Also, consider any changes in your operating routine as well.

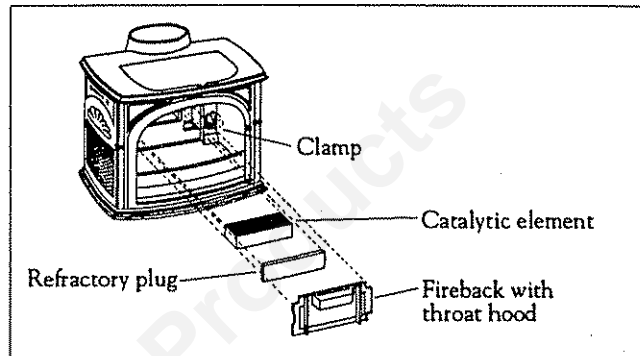
Once you have ruled out any other possible causes for a decline in performance, you may proceed with an inspection of the combustor and probe. Wear a dust mask, safety glasses and gloves.

Step 1. Remove the andirons.

Step 2. Reach inside the stove with a pair of pliers and turn the two clamps that secure the fireback 90 degrees. Turn the left clamp clockwise, and the right clamp counterclockwise.

Step 3. Grasp the fireback by its vertical ribs and remove it, together with the attached throat hood. Pull the left side out first.

Step 4. Clean the left and right exhaust pockets of the refractory package. Use a shop vacuum to avoid damaging the fragile refractory material.



The refractory and the catalytic element are extremely fragile and must be handled carefully.

Step 6. Inspect the gasket that seals the upper fireback to the damper frame, stove back, and lower fireback. Replace if necessary.

Step 7. Carefully remove the refractory plug.

Step 8. Gently slide the catalytic element out of the refractory chamber. Check the element and the bottom of the refractory chamber for a build-up of fly ash.

Step 9. Inspect the probe. The end of the probe should extend about 1" into the combustion chamber and not show any signs of deterioration.

Step 10. If the honeycomb is clogged, take it outside for cleaning. Blow gently through the honeycomb. A sizeable quantity of ash may be removed from the element.

Step 11. Inspect the element. Although small hairline cracks will not affect performance, the element should be intact. If the element is broken in pieces or has sections missing, it should be replaced. Call your local Vermont Castings Authorized Dealer for a replacement element, Part #160-2521.

Operate the stove in a typical manner for two weeks, inspecting the chimney and the chimney connector frequently.

If creosote does not build-up as quickly as previously, it is likely that the performance change was caused by fly ash deposits on the catalytic element. However, monitor the chimney system for a few weeks to ensure that proper performance continues.

If you continue to find a significant creosote build-up or if you continue to see excessive smoke from the chimney, the catalytic element will need to be replaced. Contact your nearest Vermont Castings Authorized Dealer for information about a replacement element.

NOTE: Use only a Vermont Castings replacement catalyst.

Replace the Stove Gaskets as Needed

Your Intrepid II uses rope-type fiberglass gaskets to make a tight seal between some parts. With use, particularly on those parts that move, gaskets can become brittle and compressed and can begin to lose their effectiveness. These will need periodic replacement.

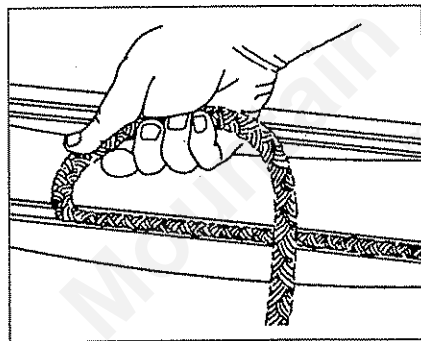
All of the gaskets are made of fiberglass. The sizes of replaceable gasket are listed below, along with their applications.

Gasket Diameter...	...And the Parts it Seals
5/16"	The griddle to the stove top (wire reinforced gasket)
3/8"	The ash door to the front of the ash drop
3/16"	The outer glass panes to the doors
5/16"	The damper to the upper fireback; the front doors to the stove front; and the door halves to each other.

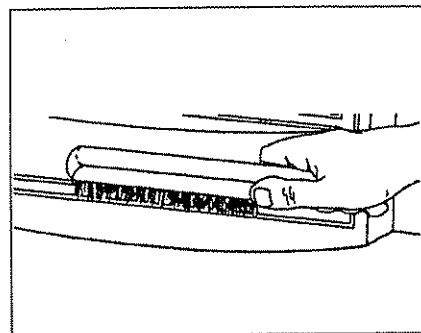
Should you need to change a gasket, first obtain an appropriate replacement from your Vermont Castings' Authorized Dealer.

Wait until the fire is out and the stove has cooled. Be sure to follow the standard safety procedure for working with dusty materials: Wear safety goggles and a dust mask.

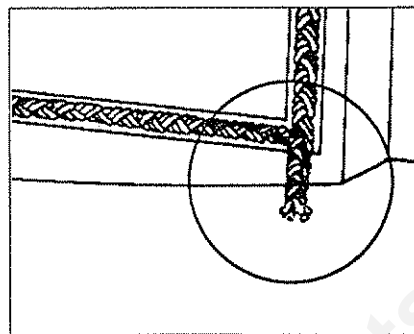
The procedure for replacing gaskets is the same, regardless of the gasket location: Eight easily-accomplished steps are involved:



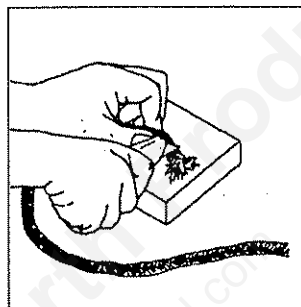
Step 1. Remove the existing gasket by grasping an end and pulling firmly.



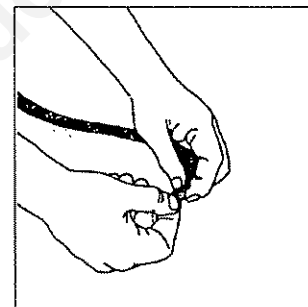
Step 2. Use a wire brush or the tip of a screwdriver to clean the channel of any remaining cement or bits of gasket. Remove stubborn deposits of cement with a cold chisel if necessary.



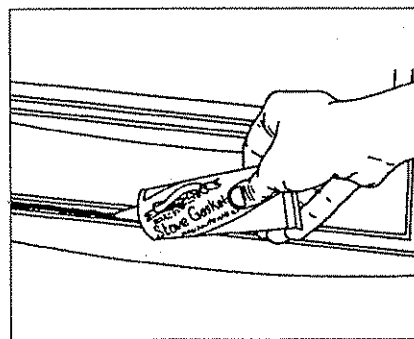
Step 3. Determine the correct length of the appropriate-sized gasket by laying it out in the channel. Allow an extra 1-2" (25-50 mm), and mark the spot to be cut.



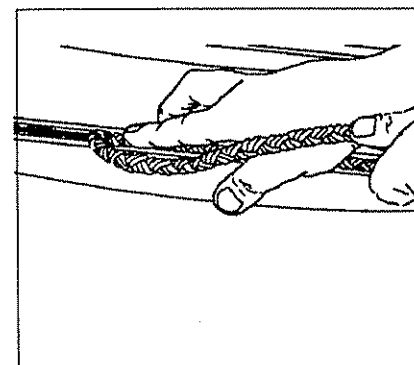
Step 4. Remove the gasket from the channel, place it on a wood cutting surface, and cut it at the marked spot with a utility knife.



Twist the ends slightly to discourage the gasket from unravelling.

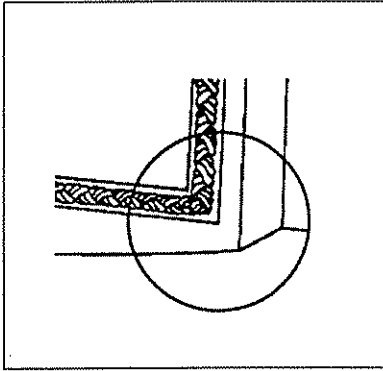


Step 5. Lay an unbroken 1/8" (3 mm) bead of gasket cement in the newly-cleaned channel



Step 6. Starting at one end, press the gasket into the channel.

Ensure a good joint where the gasket meets before trimming any excess. Do not overlap the gasket ends or leave ends with ragged edges.



Step 7. Press the gasketed part firmly against its normal mating surface to seat the gasket evenly in its channel. Close and latch the door to do this, or tap other parts with the rubber mallet (or hammer/block of wood).

Step 8. Clean excess cement from around the channel. Let the cement that holds the new gasket dry thoroughly.

Adjust the Door If Necessary

The stove's door(s) may need adjustment after you have regasketed it. Initially, it may require loosening to accommodate the new gasket; after a few weeks, it may need tightening to compensate for compression of the new gasket. The directions for adjusting the door are on page 9.

Permanent Intrepid II Gaskets

Other gaskets form seals between non-moving parts, but these are not subject to the same wear and deterioration as gaskets on moving parts. It is unlikely that you will ever need to replace these gaskets unless the involved parts are disassembled and then put back together. If this is the case, the job should be done only by a qualified service technician. The diameter of the gasket that seals these non-moving parts is 5/16", and the areas sealed are the flue collar to the stove back, the ash drop to the bottom, and the lower fireback to the sides.

The Chimney System

Creosote

Your Intrepid II is designed to reduce creosote build-up significantly. However, regular chimney inspection and maintenance must still be performed. For safety, good stove performance, and to protect your chimney and chimney connector, inspect your chimney and chimney connector on a regular schedule. Clean the system if necessary. Failure to keep the chimney and connector system clean can result in a serious chimney fire.

When wood is burned slowly, it produces tar, organic vapors and moisture that combine 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 within the flue system that can damage the chimney and overheat adjacent combustible material.

If a significant layer of creosote has accumulated — 1/8" (3 mm) or more — it should be removed to reduce the risk of a chimney fire.

If you do experience a chimney fire, act promptly to:

- Close the damper and thermostat lever.
- Get everyone out of the house.
- Call the Fire Department.

You should inspect the system every two weeks during the heating season as part of a regular maintenance schedule. To inspect the chimney, let the stove cool completely. Then, using a strong light, sight up through the flue collar into the chimney flue. If it is not possible to inspect the flue system in this fashion, the stove must be disconnected to provide better viewing access.

Clean the chimney using a brush the same size and shape as the flue liner. Flexible fiberglass rods are used to run the brush up and down the liner, causing any deposits to fall to the bottom of the chimney where they can be removed through the clean-out door.

The chimney connector should be cleaned by disconnecting the sections, taking them outside, and removing any deposits with a stiff wire brush. Reinstall the connector sections after cleaning, being sure to secure the individual sections with sheet metal screws.

If you cannot inspect or clean the chimney yourself, contact your local Vermont Castings' Authorized Dealer or hire a professional chimney sweep in your area.

Annual Maintenance

A thorough cleaning, inspection and repair should be performed each Spring, at the end of the heating season.

- Thoroughly clean the chimney and chimney connector.

- Inspect the chimney for damage and deterioration.

Replace weak sections of prefabricated chimney. Have a mason make repairs to a masonry chimney.

- Inspect the chimney connector and replace any damaged sections.

- Check gasketing for wear or compression, and replace if necessary.

- Inspect and clean the catalytic element, and vacuum out the ash at the bottom of the back plate after removing the lower fireback. Lightly clean the refractory assembly that houses the element but be careful not to damage the refractory material, which is very fragile.

- Inspect the probe thermometer

- Check door and damper handles for tightness. Adjust if needed.

- Check heat shield screws. Tighten as necessary.

- Clean dust from the inner sides of bottom, rear and connector heat shields.

- Remove ashes from the ash pan and replace with moisture absorbing material (such as cat litter) to keep the stove interior dry.

- Touch up the paint on black stoves.

Appendix: Catalytic Combustor

In any chemical reaction, including the combustion process, there are certain conditions which must be met before the reaction can take place. For example, a reaction may require a certain temperature, or a certain concentration of the reactants (the combustion gases and oxygen), or a certain amount of time. Catalysts, though not changed themselves during the reaction, have the ability to act at a molecular level to change these requirements. In the Intrepid II's secondary combustion chamber the catalyst reduces the temperature at which secondary combustion can start from the 1000 - 1200° F. (540 - 650° C) range to the 500 - 600° F. (260 - 315° C) range, increasing efficiency, and reducing creosote and emissions.

The catalytic reaction, though advantageous, does have some limitations of its own. Primary among these is that the reactants (the gases) come into close physical contact with the catalyst itself.

To ensure the necessary contact, the catalytic element in your Intrepid II is composed of a ceramic base in the shape of a honeycomb. On each of the honeycomb's many surfaces a coating of the catalyst (usually a noble metal such as platinum or palladium) is applied. The large surface area exposed in this configuration ensures that the combustion gases have the greatest opportunity to come in contact with the catalyst.

Loss of catalytic activity will be apparent in several ways. First you may notice an increase in fuel consumption. Second, there will be a visible increase in the rate at which creosote builds up in your chimney connector system. You may also notice a heavy discharge of smoke from the chimney. There are a number of catalytic problems which can cause loss of activity:

Blockage

While the honeycomb pattern ensures good contact, it also increases the resistance to flow of the combustion gases, and, because of the many surfaces, provides more places for creosote and fly ash to deposit. It is important to follow the operating instructions in order to minimize these deposits, and to periodically inspect your catalyst for signs of blockage.

Masking and Poisoning

While the catalyst itself does not enter into the combustion process, it is possible for certain elements, such as lead and sulfur, to attach to the active sites on the surface of the honeycomb. Though the catalyst is still there, it is covered, or masked, by the contaminant, and cannot function. To avoid this situation, it is important not to burn anything in your Intrepid II that is a source of these contaminants. Particularly avoid painted or treated wood, coal, household trash, colored papers, metal foils, or plastics. Chemical chimney cleaners may also contain harmful elements. The safest approach is to burn only untreated, natural wood.

Flame Impingement

The catalytic element is not designed for exposure to direct flame. If you continually overfire your Intrepid II, the chemistry of the catalyst coating may be altered, inhibiting the combustion process.

Thermal degradation of the ceramic base may also occur, causing the element to disintegrate. Stay within the recommended guidelines of the Operation section.

Mechanical Damage

If the element is mishandled, damage may occur. Always treat the element carefully. Remember the catalyst is made of a ceramic material; treat it as you would fine china. Hairline cracks will not affect the performance of the catalyst, as long as the steel sleeve holds the element in the proper position.

Peeling

Peeling of the surface coat may occur if the catalytic element is frequently subjected to excessive temperatures. Follow the operating instructions carefully to avoid this type of damage.

Every Vermont Castings' product is equipped with either a Corning "Long-Life"® or a Technical Glass Products "Honeycomb"®. The products are equivalent. If for any reason you must ship your catalytic element, remember its fragile nature. Place the element in a plastic bag, and package it with a generous amount of shock absorbing material.

Specifications

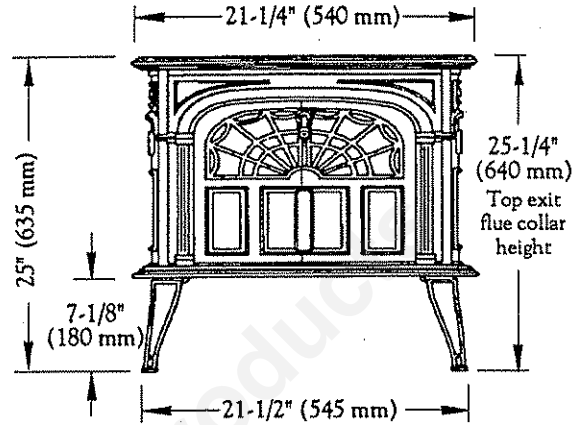
Range of heat output	9,200-19,300 Btu's/hr. ⁴
Maximum heat output	24,000 Btu's/hr. ¹
Area heated	Up to 1000 sq. ft. (92 sq. m.) ²
Fuel size/type	16" (410 mm) logs
Efficiency rating	72.3% ³
EPA emissions rating (GPH, catalytic)	2.4 ⁴
Loading	Front or top
Chimney connector	6" (150 mm) diameter
Chimney flue size	6" (150 mm) minimum
Flue exit position	Reversible, top or rear
Primary air	Manually set, thermostatically maintained
Secondary air	Self-regulating
Ash handling system	Removable ash pan
Glass panel	High-temperature ceramic
Weight	223 lbs. (101 kg.)
Width (leg-to-leg)	21-1/2" (545 mm)
Depth (leg-to-leg)	13-3/4" (350 mm)
Height to top of flue collar:	
With regular legs	25" (635 mm) top exit
.....	24" (610 mm) rear exit
With optional short legs	21" (535 mm) top exit
.....	19-3/4" (500 mm) rear exit

¹This value can vary depending on how the stove is operated, the type and moisture content of the fuel used, as well as the design, construction, and climatic location of your home. Figures shown are based on maximum fuel consumption obtained under laboratory conditions and on average efficiencies.

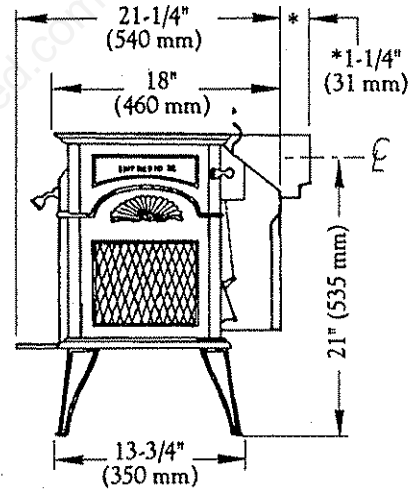
²These values are based on operation in building code-conforming homes under typical winter climate conditions in New England. If your home is of non-standard construction (e.g., unusually well-insulated, not insulated, built underground, etc.) or if you live in a more severe or more temperate climate, these figures may not apply. Since so many variables affect performance, consult your Vermont Castings Authorized Dealer to determine realistic expectations for your home.

³Based on CSA B415 methods.

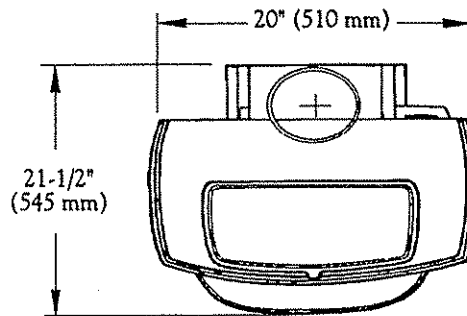
⁴Under specific conditions used during EPA emissions testing.



Front View



Side View



Top View

Mountain View Hearth Products
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Intrepid II Parts List Model 2070 (1990-97)

1. Secondary Air Cover	130-6762	49. Andirons	130-6717
2. Flue Collar	130-6561	50. Left Insert (Air Tube)	130-6714
3. Back	130-6761	51. Grate	130-6712
4. Damper Actuator Rod	160-2523	52. Right Insert (Air Tube)	130-6713
5. D-Plate	130-6725	53. Ashpan Assembly	500-3521
6. Damper	130-6701	54. Slicer/Poker Assembly	500-5708
7. Damper Housing	130-6702	59. Griddle	130-6356
8. Throat Hood	130-6763	60. Right Griddle Quadrant	130-1807
9. 3/8" x 16 Weld Screw	120-1583	61. Left Griddle Quadrant	130-1832
10. Upper Fireback	130-6703	62. Top	130-6340
11. Rotating Clamp	130-6724	63. Right End	130-6723
12. 3/8-16 x 1 1/2" Hex Hd Cap Screw	130-1456	64. Bottom	130-6764
13. Lower Fireback	130-6704	65. Left End	130-6709
14. 1/4-20 x 1/2" Phillips Rd Head Machine Screw	120-0895	66. Leg	130-6333
16. Rear Air Tube	130-6706	67. Tie Rod	160-1640
20. Thermostat Cover	130-6711	68. 3/8"-16 x 1" Hex Head Cap Screw	120-1432
21. Damper Handle Stub	160-0608	69. Door Handle Holder	160-0600
22. Compression Spring	120-1846	75. Front	130-6444
23. Thermostat Coil and Handle	160-1420	76. Right Door	130-6765
24. Jump Ring	120-1985	77. 5/16" Med. Density Gasket	120-3588
25. Ball Chain Fitting	120-1972	78. Right Door Glass	140-1153
26. Ball Chain	120-1960	81. Right Air Deflector (Cast)	130-6719
27. Primary Air Flap	130-6710	82. Right Air Guide (Stainless Steel)	160-1497
28. 1/8 - 1 1/2" Air Flap Pin	160-1551	83. Left Air Guide (Stainless Steel)	160-1496
29. 1/2" x 3/4" Glass Clip Retainer	160-1396	84. Left Air Deflector (Cast)	130-6718
30. 10-24 x 3/8" Phillips Pan Hd Mach Screw	120-0983	85. Left Door	130-6766
35. 10-24 x 1/4" Phillips Pan Hd Machine Screw	120-0980	86. Left Door Glass (not shown)	140-1154
36. Secondary Air Probe Assembly	160-1489	90. 1/4-20 x 3 3/8" Slotted Oval Head Machine Screw	120-1294
37. Secondary Airlink	160-1486	91. Ceramic Handle	160-0620
38. Shim Ring	120-1986	92. Handle Adaptor Insert	160-0650
39. Secondary Air Flap	160-1490	93. Door Handle with Shaft	500-4237
45. Refractory Assembly	160-2527	94. 1/4-20 x 3/4" Oval Point Socket Set Screw	120-0461
46. Canned Catalyst Block	160-2521	95. Pawl	130-0515

Intrepid II Parts List Model 2070, 1990-1997

