NOVA 2C AND NOVA 2C TOWER OWNER'S MANUAL

Safety Notice: Please save these instructions for future reference. Please check our website for the most up to date version of this manual. 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. Contact local building or fire officials about restrictions and installation inspection requirements in your area. Do not install Nova 2C in a mobile home!

Manufactured by: MF Fire, Inc. 3031 Washington Blvd STE G, Baltimore, MD, USA. Report Number 0552WS004E, 0552WS004S

MFFIRE

EM O-TL C US

Tips/Tricks

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Safety Precautions

Installation

- Nova 2C must be properly installed to prevent house fires. Please strictly adhere to the installation instructions.

- Nova 2C must be connected to a listed high temperature chimney or approved masonry chimney with liner.

- We recommend you use smoke and CO detectors.

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

- Contact your local building officials to obtain information on any local wood stove installation requirements.

- Carefully route all power cords through to avoid contact with hot stove surfaces.

- Do not connect to or use Nova 2C in conjunction with any air distribution ductwork unless specifically approved for such installations.

Operation

- Nova 2C is hot while in operation. Keep children, clothing and furniture away as contact may cause skin burns.

- Do not touch Nova 2C while hot. Young children should be supervised around Nova 2C.

- Keep all flammable objects (fabrics, paper, wood, etc.) at least 1 yd (1 m) from the front of the Nova 2C.

- Nova 2C has been designed for the burning of cordwood only. Do not attempt to burn any other type of fuel in Nova 2C.

- Do not burn garbage; lawn clippings or yard waste; materials containing rubber, including tires; materials including plastic; waste petroleum products, paints or paint thinners, or asphalt products; materials containing asbestos; construction or demolition debris; railroad ties or pressure-treated wood; construction lumber, pallets, manure or animal remains; salt water driftwood or other previously salt water saturated wood; unseasoned wood; or paper products, cardboard, plywood, or particle board (the prohibition against burning these materials does not prohibit the use of paper, cardboard, or similar substances for the purposes of starting a fire.)

- Do not use chemicals or fluids to start the fire.

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

- The viewing door of Nova 2C must be shut and latched during operation.

- Do not use additional grates, andirons, or other means for supporting the fuel.

- Never obstruct airflow through the inlet vents or exhaust vents.

- This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual.

- Never over-fire Nova 2C, as it could lead to a house fire. If the unit or chimney connector glows, you have over-fired the unit.

- This wood heater contains a catalytic combustor, which needs periodic inspection and replacement for proper operation. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in this manual, or if the catalytic element is deactivated or removed.

Maintenance

In addition to the items below, please check out additional common maintenance and operation tips by scanning the QR code below:

- Allow Nova 2C to cool before conducting any maintenance.

- Never attempt to modify or repair the appliance beyond instructions given in this manual.

- Inspect the catalytic combustor at least monthly.

- Empty the ash regularly and dispose of it in a metal container with a tight lid.

- Inspect the chimney connector at least twice monthly.

Features and Specifications

Configurations

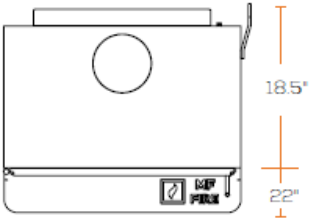
Nova 2C *Nova 2C Tower*

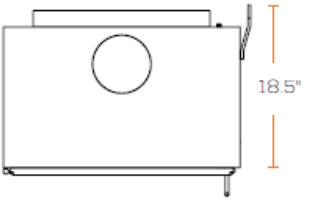
Nova 2C is available in two configurations, Nova 2C and Nova 2C Tower. Nova 2C can be optionally equipped with 3” (standard, shown above), 6”, or 9” legs. Nova 2C Tower is available with no legs (standard, shown above) or 6” legs.

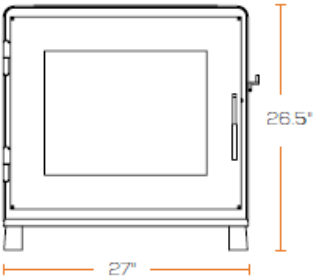
Additionally, both Nova 2C and Nova 2C Tower can be used in either a rear vent or a top vent configuration, to best fit your home and preferences.

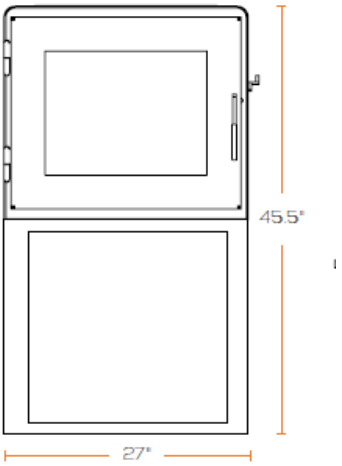
Dimensions

Dimensions shown are for the standard configurations. All clearances, front, side, corner, back and top, are measured from the largest dimensions.









NOVA 2

Height with 3" legs	26.5"
Width (w/o bypass)	27"
Depth w/ 4" ash lip	22"
Depth w/o 4" ash lip	18.5"
Side to center of flue collar	13.5"
Height to center rear flue collar	21.5"
Back to center top flue collar	6.25"

NOVA 2 TOWER

Height with tower	45.5"
Width (w/o bypass)	27"
Depth	18.5"
Side to center of flue collar	13.5"
Height to center rear flue collar	40.5"
Back to center top flue collar	6.25"

Heating Specifications

Nova 2C is equipped with a 2.4 ft.^{3} firebox and accepts logs up to 22” in length.

Nova 2C has a 2,500 sq. ft. (175 m^2) approximate maximum heating capacity. Heating capacity will vary depending on the home's floor plan, degree of insulation, and the outside temperature.

Nova 2C has a 20,010 BTU per hour (6 kW) EPA certified heat release rate, with actual heat release rates ranging from 9,000 to 50,000 BTU per hour (2.5 to 15 kW) depending on user loading and reloading.

Performance and Draft

Draft is the driving force that pulls air through the appliance and up the chimney. The draft of your chimney system depends a variety of factors including the height of your chimney, chimney cap type, local geography and topography, nearby obstructions, the pressure within your home, and other factors. Inadequate draft can cause smoke back puffing into the room, while too strong of a draft may cause damage to your stove and chimney system.

Negative pressure within the home may also cause back puffing or poor performance of your stove. Negative pressure can be caused by:

- Tightly sealed home
- Closely located HVAC return air vents
- Bathroom exhaust fans and kitchen range hoods
- Clothes dryers
- Other combustion appliance combustion air requirements (furnace, hot water appliance, etc.)

MF Fire assumes no responsibility or liability for improper performance of the stove due to down drafts, tightly sealed homes, negative pressure in the home, environmental conditions affecting draft, improper installation, or overfiring caused by excessive chimney height.

Emissions and Efficiency

U.S. Environmental Protection Agency certified the Nova 2C to comply with 2020 particulate emission standards for single burn rate heaters. This single burn rate wood heater is not approved for use with a flue damper. This heater meets the 2020 U.S. EPA's crib wood emission limits for wood heaters. Tested to EPA ASTM E2780-10, ASTM 2515- 11, and CSA B415.1-10. This heater has been shown to deliver an average Emissions rate of 1.38 grams/hour and 78% HHV Efficiency

Safety Listings

Nova 2C is available for sale in the United States and Canada has been listed with OMNI-Test Laboratories and is tested and compliant in accordance with UL 1482 – 2011(R2015), ULC-S627-00 (R2016), and ULC S628-93 (R2016)

Label

Nova 2C comes with a metal certification label on a chain affixed to the bottom back of the stove. This label is in English and French. For safekeeping, the label may be affixed to the air duct of the stove during installation.

Stove Installation

Safety Notice: 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. Contact local building or fire officials about restrictions and installation inspection requirements in your area. Do not install Nova 2C in a mobile home!

Planning the Installation

Proper care and attention to service helps to protect you from unnecessary fires and carbon monoxide poisonings. To get the best service and wood stove installation for your Nova 2C wood stove, we recommend Installers or Chimney Sweeps certified by the National Fireplace Institute (NFI) or the Chimney Safety Institute of America (CSIA).

To locate one of the more than 2,000 active NFI or CSIA Certified installers across North America, please use the installer locator on our website: https://mffire.com/installers/

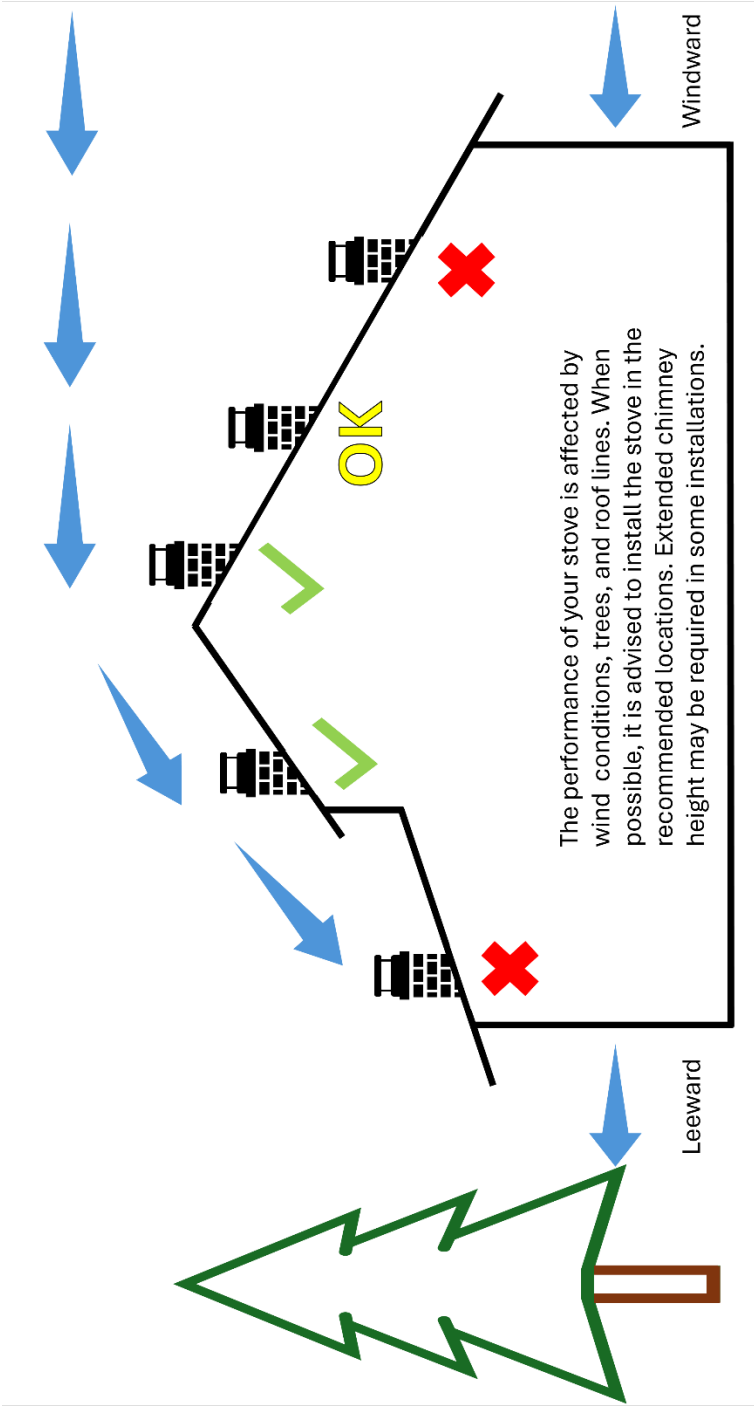
Check with your local building officials and your home insurance company before installation. When this room heater is improperly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.
If there are any major dents or other damage to your stove, please report to MF Fire prior to installation.

Stove Placement Requirements

Nova 2C must be placed in a room with a source of fresh air. The minimum room height that the stove can be installed in is 8 feet.

Nova 2C must be placed so that no combustibles are within or can swing within 36" (914mm) of the front of the stove (drapes, doors, etc.).

Caution: Avoid makeshift compromises during stove placement or installation. Failure to follow instructions may result in property damage, bodily injury, or even death.


Windward
OK
The performance of your stove is affected by wind conditions, trees, and roof lines. When possible, it is advised to install the stove in the recommended locations. Extended chimney height may be required in some installations.
Leeward

Minimum Clearance and Floor Protection Requirements

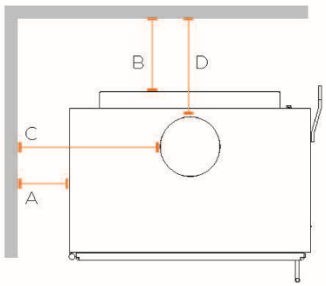
Nova 2C may be installed as a top vent with a ceiling exit in either a standard or corner configuration, or as a rear vent with a direct rear exit. The minimum clearance requirements are listed in the table below. Clearances may be reduced following methods in NFPA 211, listed wall shields, pipe shields, or other means approved by local building or fire officials.

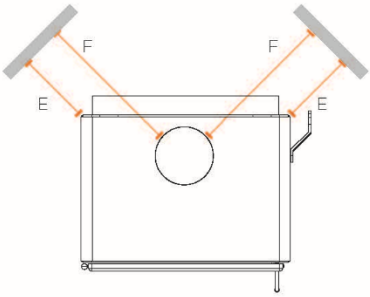
Nova 2C must be installed on a non-combustible surface or with adequate floor protection. Floor protection must extend around the front, sides, and rear of the stove, according to listed clearance requirements below.

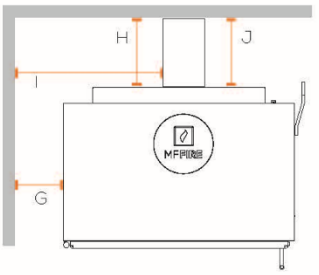
Type 2 floor protection (thermal protection) must be listed to UL 1618. Floor protection must be made of a non-combustible material and at least 0.018" (0.45 mm) thick. For a Nova 2C equipped with 6" legs and ash lip, Nova 2C equipped with 9" legs, and for all Nova 2C Tower configurations, only Type 1 ember protection is required. For Nova 2C equipped with 3" legs and an ash lip, Type 2 thermal protection with minimum R-value of 1.35 is required. For Nova 2C equipped with 3" legs (no ash lip), Type 2 thermal protection with minimum R-value of 2.0 is required.

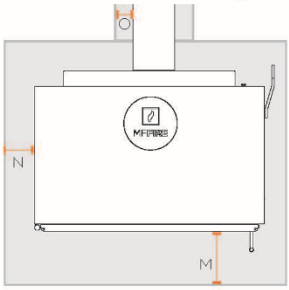
FLOOR PROTECTION REQUIREMENTS

Leg Height	With Ash Lip	Without Ash Lip
3"	R = 1.35	R = 2.0
6"	Type 1	R = 1.35
9"	Type 1	Type 1
Tower	Type 1	Type 1









MINIMUM CLEARANCE REQUIREMENTS

		Single Wall Connector Pipe	Double Wall Connector Pipe	Double Wall Connector Pipe with Reduced Clearance Kit
A	Sidewall to unit	22" (559 mm)	20" (508 mm)	22" (508 mm)
B	Backwall to unit	20" (508 mm)	14" (356 mm)	9" (228 mm)
C	Sidewall to connector	31" (787 mm)	29" (736 mm)	31" (787 mm)
D	Backwall to connector	23" (584 mm)	17" (432 mm)	12.5 (318 mm)
E	Corner to unit	14" (356 mm)	9" (229 mm)	9" (229 mm)
F	Corner to connector	23" (585 mm)	18" (457 mm)	18" (457 mm)
G	Sidewall to unit	22" (559 mm)		
H	Backwall to unit	16" (406 mm)		
I	Sidewall to connector	31" (787 mm)		
J	Backwall to connector	16" (406 mm)		
K	Top of unit to ¾" trim	10" (254 mm)		
L	Top of unit to 10" mantel	14" (356 mm)		
	Floor Protection			
M	Front	16" US/18" CAN		
N	Side	8" (203 mm)		
O	Chimney Connector	2" (51 mm)		

FLOOR PROTECTION REQUIREMENTS

Leg Height	With Ash Lip	Without Ash Lip
3"	R = 1.35	R = 2.0
6"	Type 1	R = 1.35
9"	Type 1	Type 1
Tower	Type 1	Type 1
Bench	Type 1	Type 1

Chimney Connector Requirements

A chimney connector is required from the flue collar of the stove to the factory-built chimney or a masonry chimney. The chimney connector must be 6” (152 mm) diameter and at minimum 24 gauge black steel. Aluminum or galvanized steel is not allowed – these materials cannot withstand the flue temperatures and may give off toxic fumes when heated.

The chimney connector may not pass through a ceiling, attic, roof, closet, or similar other concealed space, or a floor or ceiling. Per, ULC, where passage through a wall, or partition of combustible construction is desired, the installation shall conform to CAN/CSA-B365, Installation Code for Solid-Fuel- Burning Appliances and Equipment

Use listed UL 103 HT chimney – see “Chimney Requirements for details. DO NOT USE CONNECTOR PIPE AS CHIMNEY.

The chimney connector should be as short and direct as possible. No more than 180^{o} of elbows (two 90^{o} elbows or two 45^{o} and one 90^{o} elbow, etc.) may be used for the entire chimney system. Horizontal runs should slope upwards at least 1/4” (6 mm) per foot and be a maximum 36” (914 mm) long.

NOTE: Additional elbows may be allowed if draft is sufficient. Whenever elbows are used the draft is adversely affected. Additional chimney height may be required to boost draft. Poor draft may cause adverse effects such as smoke out of the door when reloading.

The chimney connector must be installed with the crimped end pointing downwards. This prevents creosote or condensation from leaking to the exterior of the pipe.

The chimney connector must be fastened to the stove and each adjoining section and kept clean.

Chimney Requirements

The minimum chimney height, as measured from the stove top, is 15 feet. Do not connect Nova 2C to a chimney flue serving any other appliance or use in conjunction with any air distribution ductwork, unless specifically approved.

This room heater must be connected to:

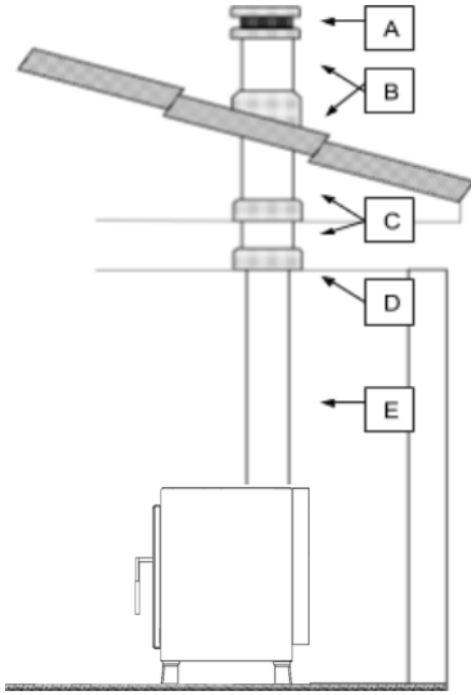
1. A 6” (150 mm) diameter, UL 103 HT chimney, from a single manufacturer

   OR

2. A code approved masonry chimney with a flue liner.

Standard Chimney Arrangement

A. Chimney termination
   a. Minimum height: 15’ (4.5m)
   b. Maximum height: 33’ (10 m)
B. Roof penetration
C. Chimney sections
D. Ceiling penetration
E. Chimney connector

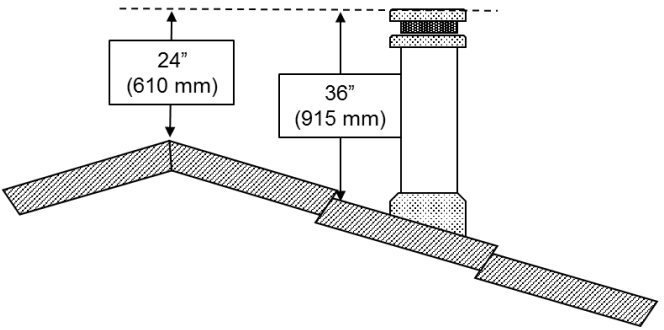


Chimney Termination Requirements

The chimney must have an approved cap (to prevent water from entering).

The chimney must not be located where it could become plugged by snow or other material.

The chimney must terminate at least 3' (914 mm) above the roof and at least 2' (610 mm) above any portion of the roof within 10' (3 m). This is commonly know as the 3-2-10 rule and is critical for proper stove performance and draft.

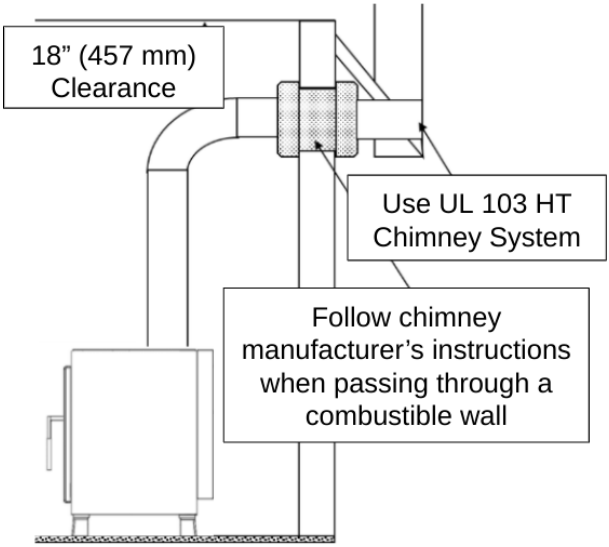


Exterior Factory-Built Chimney: Special Installation

Nova 2C may be used in conjunction with an exterior factory-built chimney provided that the chimney meets UL 103 HT requirements.

Special care must be taken regarding the wall thimble, or penetration from the chimney connector pipe to the exterior chimney, if the wall thimble must pass through an exterior wall. Here all chimney manufacturer's instructions must be followed, including guidance on spacing to combustible surfaces, piping requirements, and liner requirements. Check with local authorities before installation to ensure all requirements are met.

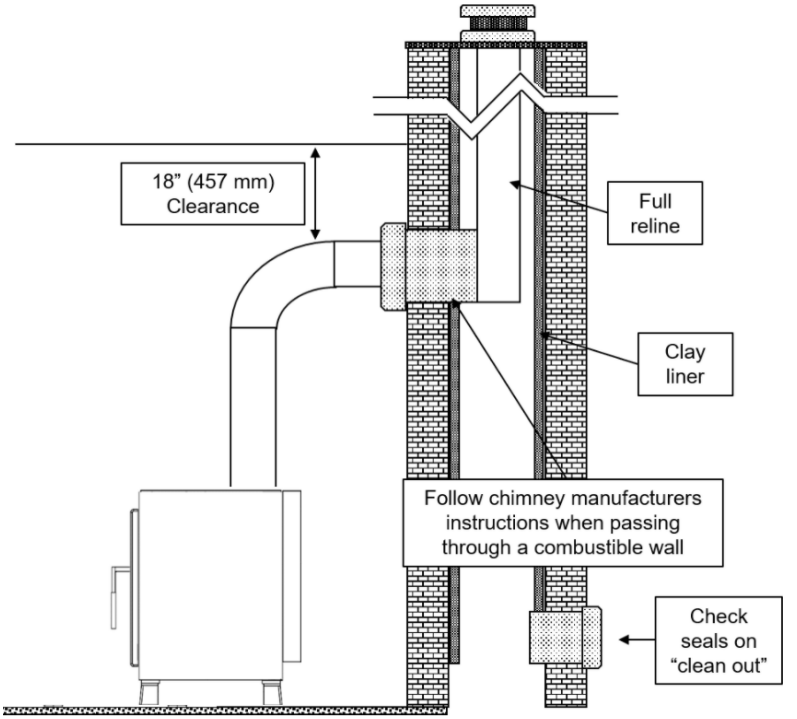
Floor protection is required 2" on both sides of the chimney connector for any horizontal runs.



Masonry Chimney: Special Installation

Nova 2C may be used in conjunction with a masonry chimney provided all installation instructions are followed.

We strongly recommend a full reline when installing the Nova 2C in a masonry chimney. If the chimney does not have a clay tile liner, a full reline is required. The chimney must be clean, undamaged, and meet all local building codes.

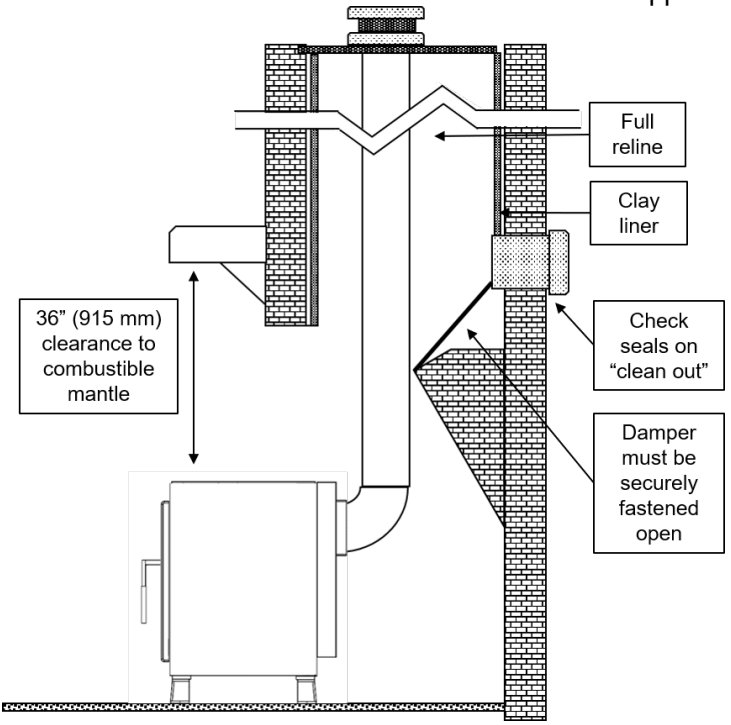


Special care must be taken regarding the wall thimble, or penetration from the chimney connector pipe to the masonry chimney, if the wall thimble must pass through a combustible exterior wall. Here all chimney manufacturer's instructions must be followed, including guidance on spacing to combustible surfaces, piping requirements, and liner requirements. Check with local authorities before installation to ensure all requirements are met.

Hearth Mount in Masonry Fireplace: Special Installation

Nova 2C may be used in conjunction with a masonry fireplace provided all installation instructions are followed.

The entire fireplace must be clean, undamaged, and meet all local building codes. This installation requires a full reline. The liner must be a stainless steel chimney connector or flexible vent pipe. Follow the liner manufacturer's instructions for installation and support.



Installing Legs, Tower, and Ash Lip (Optional)

Nova 2C will arrive bolted to a pallet with legs and leg bolts packed separately. The leg securement bolts are located inside the firebox and labeled “Leg Pad Bolts”. If ordered with the optional ash lip, the ash lip will contain two spacer plates for the rear legs, four longer bolts, and two filler pieces for the ash lip when used in the 6” position. To install the legs follow the steps below.

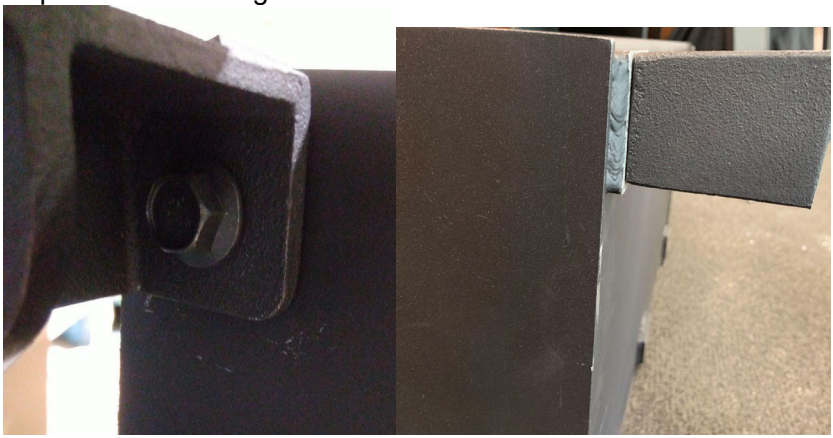
Step 1: Unbolt Nova 2C from the pallet and gently rock back onto a soft surface such as a rug or a blanket. If installing the ash lip follow step 2, if not go directly to step 3.

NOTE: If you are installing the Nova 2C Tower, refer to Appendix A now.

Step 2: Press the ash lip up against the bottom of the stove such that two appropriate holes (front for 4” ash lip, rear for 6” ash lip) are over the leg pad holes. Note: In Step 3, installation will require the included longer leg bolts for installing the ash lip.

Place spacer plates over the leg pads on the rear legs of the stove.

Step 3: Position a front stove leg so that the hole in the leg aligns with the hole in the leg pad. Insert the bolt and washer through the leg, into the leg pad hole. Rotate the leg so the solid sides are parallel to the outside edges of the stove. Use a wrench tighten the bolt. Repeat for all four legs.



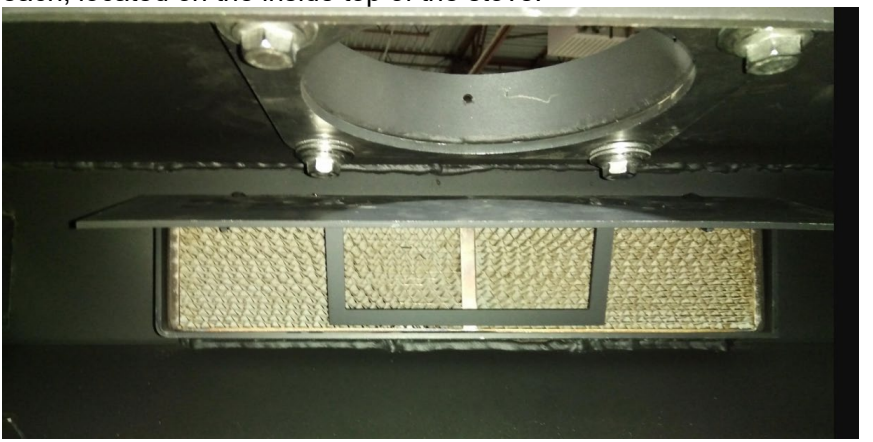
Configuring the Optional Rear Vent

Nova 2C can be configured as either a top venting or a rear venting stove. Nova 2C will arrive in the top vent configuration. To switch to the rear vent configuration, the following procedure may be followed. Scan this QR code to watch a video!

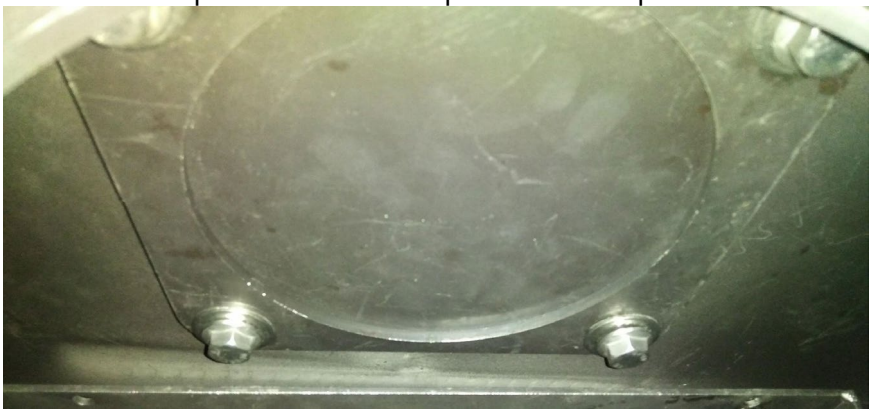
Tips/Tricks

Step 1: Remove the rear blocker plate collar, secured with 4 bolts and 1 washer each, and access panel, secured with 6 bolts and no washers, from the back of the stove as shown below.

Step 2: Next, reach inside the back of the stove and remove the spacer plate and the flue collar, secured with 4 bolts and 2 washers each, located on the inside top of the stove.



Step 3: The blocker plate that was removed from the rear of the stove can then be inserted over the opening at the top of the stove, the spacer plate placed below, and the entire assembly secured to the top of the stove with bolts ash shown below. Before tightening bolts, be sure that no gaps exist between the blocker plate and the top of the stove whereby smoke may escape. If necessary, gasket cement can be placed between the plate and the top of the stove.



Step 4: Replace the access plate and install the flue collar, as shown below.

Installing the Air Inlet Pipe

Nova 2C comes with an air inlet pipe to cover the air inlets on the rear of the stove and prevent interference with the blower in a freestanding configuration. To attach, simply bolt the Air Inlet Pipe over the air inlets on the rear of the stove with the pre-installed bolts, as shown below. The set screw holes should be in the vertical orientation for use on a later step.

Installing the Rear Air Duct

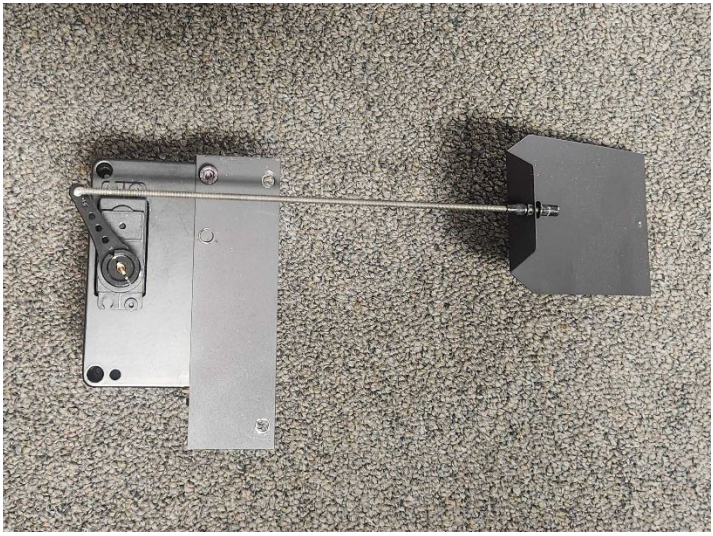
The rear air duct is packaged within its own cardboard box inside the stove crate. After unpacking the rear air duct, it should be hung on the back of the stove. If the stove is being used without a blower, the air duct should be installed in the bottom position (shown below). If a blower is to be installed with the stove, the rear air duct should be installed in the top position.

Installing the AirX System

Recommended: Scan the QR code to watch a step-by-step video on how to install the AirX system (https://youtu.be/wRVKogAFsFE)

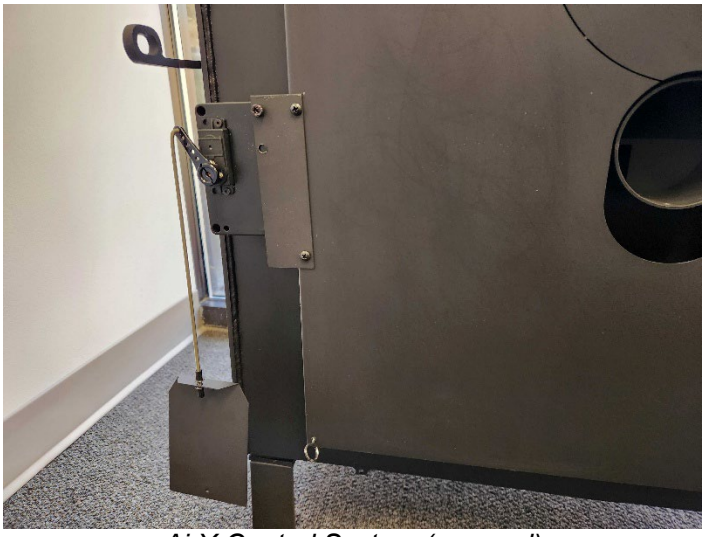
SCAN ME

Step 1: Install AirX system onto Rear Air Duct
With the two included sheet metal screws, secure the AirX control system to the rear air duct using the two pre-dilled holes on the left side of the rear air duct.



AirX Control System

Pre-drilled holes (Rear Air Duct)



AirX Control System (secured)

NOTE: If you are installing a blower with the stove, the securement bolt on the AirX control bracket must be moved down one hole location in order to accommodate the blower installation in a later step.

AirX Control System Position (Blower Installation)

Step 2: Installing Slide Collar to Air Inlet Pipe
With the Slide Collar in one hand and the slide from the AirX control in the other, insert the slide into the Slide Collar.

Next, press the Slide Collar into the Air Inlet Pipe such that it is parallel to the ground, as shown below. Tighten the set screw on the bottom of Air Inlet Pipe to secure Slide Collar into place. NOTE: if you are installing a blower in a later step, the set screw should be on the top side of the Air Inlet Pipe.

Slide Installation into Slide Collar

Step 3: Connecting AirX to Battery or Power Supply
Your AirX system can be powered by a rechargeable battery or wall power supply. Either can be used to power the AirX system. In fact, the wall power supply can charge the battery while the battery is powering the AirX system.

On the underside of the AirX system enclosure is the power jack (type USB-C). The power cord should be run through the cable guide located in the bottom corner of the Rear Air Duct. NOTE: the power cord may make contact with the Rear Air Duct but should not touch the firebox itself.

After the AirX system is plugged into either the battery or wall outlet, a system check will be performed which includes moving the slide. **Be sure the AirX is properly installed before connecting to power.**

Battery Power:
To utilize the battery for power, plug the USB cable (provided) into the battery and the USB-C end into the AirX system. The cable guide should be used to route the cable. The battery can then be attached to the Rear Air Duct or the leg kit (if applicable) using the provided magnet.

Wall Power:
To utilize the wall power supply for power, insert the plug into a standard 110/120 V wall outlet. Next, insert the USB-C end of the cable into the AirX system. If needed, the cable guide located in the bottom corner of the Rear Air Duct can be used.

Combined:
A combination of the battery and wall power can be used by connecting the wall power plug, battery, and AirX system in series. First, follow the battery steps above. Next, insert the USB-C cable end from the power supply into the battery then insert the wall power supply into a standard 110/120V wall outlet.

Battery Power

Wall Power

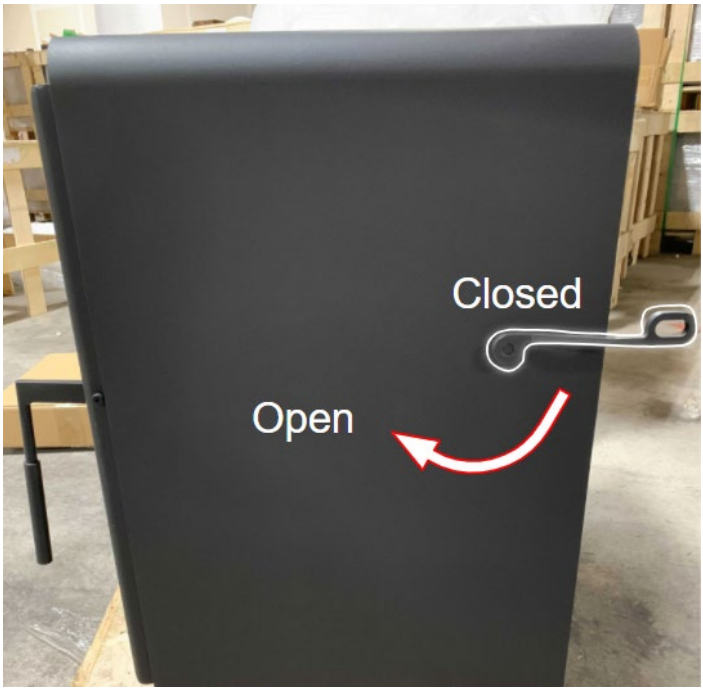
Combined

Installing the Bypass Handle

Nova 2C comes with the bypass handle detached for safety during transport.

Step 1: Remove the set screw from the bypass handle.

Step 2: To install the bypass handle simply slide the handle over the bypass rod on the back of the right side of the stove with the bent portion of the handle angled away from the stove as shown below. OPEN = Bypass Open, CLOSED = Combustor Engaged/Bypass Closed



Step 3: Tighten the set screw until the handle is tight.

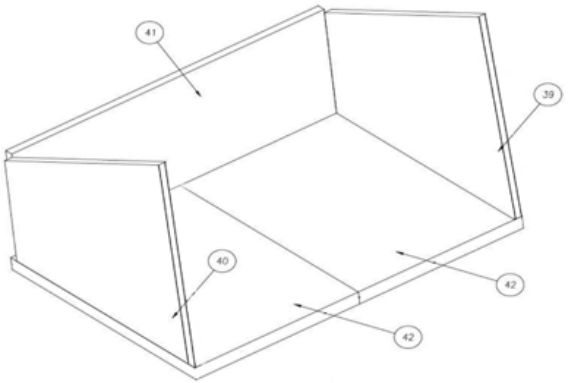
Insulation and Fire Brick

Nova 2C comes equipped with a two-part insulation strategy to maintain clean, efficient fires and a long-lasting coal bed. The insulation blanket maintains efficient and long-lasting heat while the fire bricks provide a durable platform for your fire and maintain smooth even heating.

The insulation is pre-installed in the firebox, while the fire bricks must be installed before the first fire and should be installed following the procedure below. Gloves and safety glasses should be worn during installation.

Step 1: Unpack the fire bricks that accompany your Nova 2C, and ensure all pieces are present. The fire bricks received with your stove may not have the corresponding numbers in the steps below.

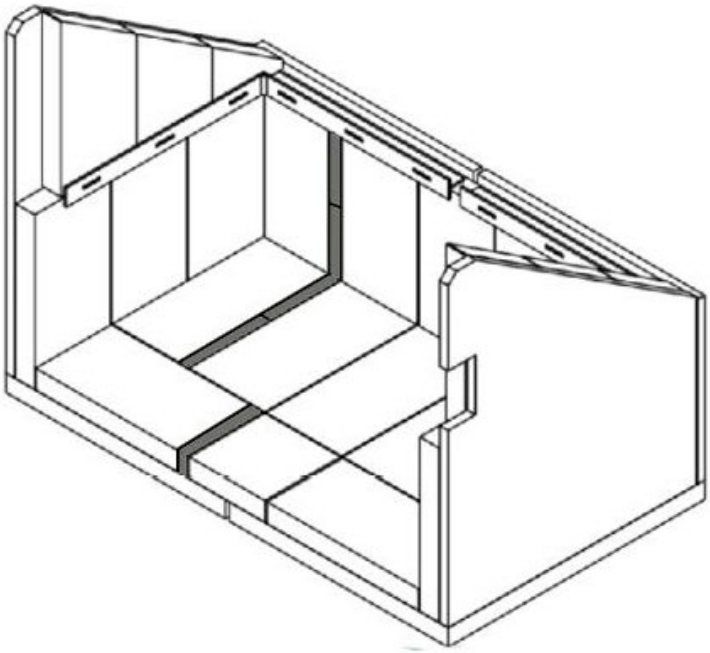
Step 2: The insulation blanket will be pre-installed as shown below.



Step 3: Next, install the fire bricks. The first fire bricks to install are the five rear wall bricks and then the three bricks on the left and right sidewall. A small gap may exist in between the corner of the fire bricks in the rear corners of the firebox Next, install the seven fire bricks on the floor of Nova 2C. Push all fire bricks up against the side and back walls. You may have a gap in the middle of the firebox as shown below. These can be filled with the brick slivers contained within your fire brick boxes.

Tips/Tricks

Lastly, the partial bricks that make up the second row of bricks on the side of the stove should be installed. To hold this row of bricks in place, the two T-bar retainers need to be inserted on top of the vertical row of fire bricks on both sides of the stove.



Occasionally due to small variations in components and materials, it is normal for the bricks to have differing degrees of fit in any stove, but the specific fit and tolerance will not change or impact your stove performance. This includes slight gaps or a tight fit. In the event some bricks are tight, some adjustment or manual force may be needed to install these pieces. Slight gaps will be filled with ash from your first few fires.

Catalytic Combustor

The Nova 2C catalytic combustor (Part # N11) is a long rectangular piece with a honeycomb-like structure.

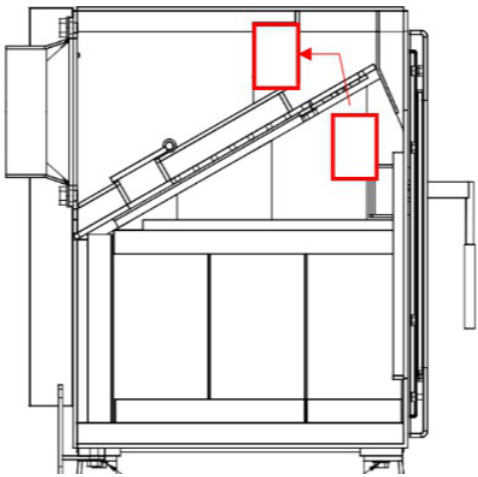
It can easily be installed as a final step prior to using your stove. Nova 2C may not be operated without the catalytic combustor properly installed. To prevent improper operation, Nova 2C has a special catalytic combustor swing door that stops airflow if the catalytic combustor is improperly installed.

To install the catalytic combustor and flame shield follow the steps below and watch the video using this QR code.

Tips/Tricks

Step 1: Remove the packaging surrounding the catalytic combustor.

Step 2: Slide the catalytic combustor through the rectangular opening. The mesh sides should be facing the front and rear of the stove as shown in the diagram below.



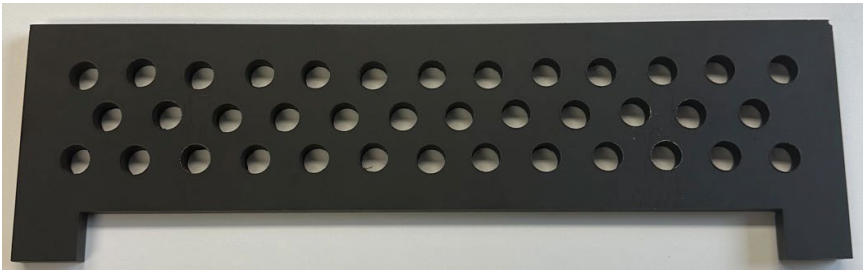
Step 3: Slide the catalytic combustor into the holding box, pushing back the combustor swing door, and sliding the combustor back as far as it can go in the holding box. The combustor may be a snug fit, which is normal.

Step 4: Insert the ‘U’ shaped retaining peg in the front of the catalytic combustor. The combustor retaining peg may be in the top of the stove in front of the combustor.

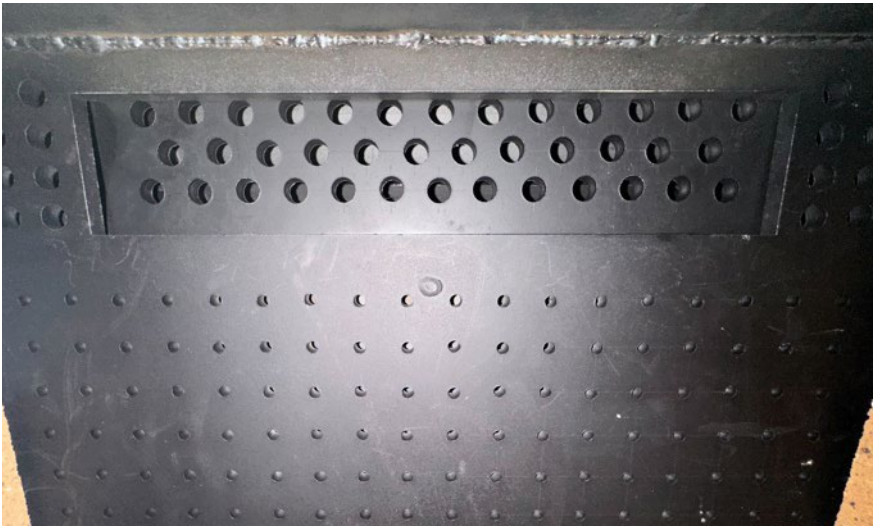
Caution: Without this retaining peg the catalytic combustor may slide forward, preventing the stove from operating as intended.

Step 5: Install the flame shield.

To install the flame shield (shown below), take the flame shield and angle it up into baffle opening where the combustor passed through. Next, lay the flame shield flat with the two tabs pointed towards the rear of the stove.



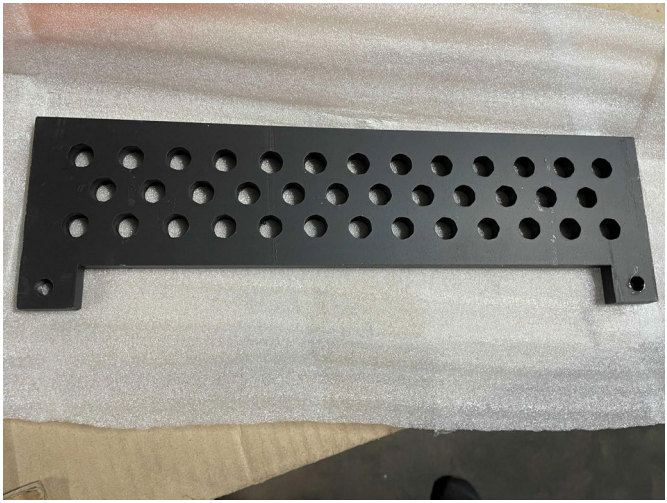
Flame shield

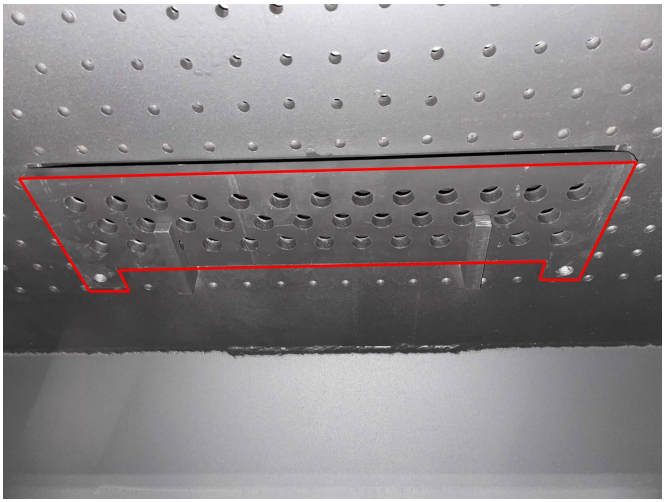


Flame shield final position

Bypass Restrictor Plate

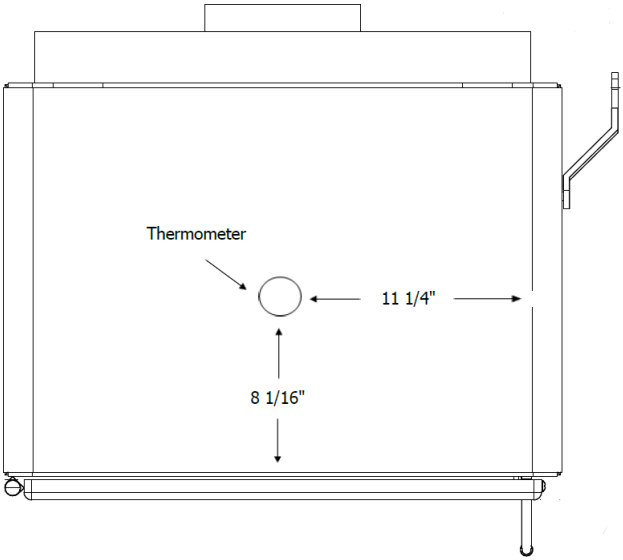
Unpack the bypass restrictor plate from within the cardboard packaging within your stove. The bypass restrictor plate should be placed on the underside of the bypass opening at the rear of the firebox as shown below. The tabs should point towards the rear of the fire box. NOTE: this part is the same and interchangeable with the flame shield noted in the Catalytic Combustor section.





Stove Top Thermometer

The stove top thermometer is an accessory that can be used to help determine when to close the catalytic combustor bypass on your Nova 2C. The thermometer should be placed on the stove top, 8” from the front of the stove and 11.25” from the side of the stove. For most uses, when the thermometer reads “ENGAGE CATALYST”, the catalytic combustor bypass can be swung closed (to the rear of the stove).



Initial Curing

During the first several burns of your wood stove (often 3-4), the paint on the stove and stove pipe will off-gas as part of its final curing process. This is to be expected.

Open windows and ventilation means are recommended. Please refer to the Exterior Paint section for additional details.

Operation

Nova 2C is built to be simple and easy to use. It just works. Just build a fire, sit back and enjoy. Below are written operation instructions. We also **highly recommend watching** our series of videos on how to best operate your stove by scanning this QR code.

Quick Start/Operations Videos

Using the AirX System

The Nova 2C is equipped with the AirX system which increases your burn time and efficiency. To use the AirX system, you can follow the basic steps below. Please note: all other recommendations in this manual should be followed in conjunction with using the AirX system

What does the AirX system do?

The AirX system is a timed air control system that is designed to reduce air flow to your Nova 2C 35 minutes after being initiated. This significantly increases both your burn time and efficiency.

How do I use the AirX system?

The AirX system has a single start button to press, both on the remote control or on the bottom of the AirX control system enclosure. Only the start button on the remote **or** on the AirX control system enclosure should be pressed.

When do I use the AirX system?

The AirX system should be used after lighting your fire on a “cold start” and before reloading firewood onto a hot coal bed.

- *Cold Start (new fire)*
    1. Follow all steps in the Starting a Fire section (important) in this manual
    2. After the fire is well lit, press the AirX start button on either the remote or the AirX control system enclosure (Step 7 in Starting a Fire section).
- *Reloading a Fire*
    1. When the fire has reached the hot coals stage and you are ready to reload the stove, press the AirX start button on either the remote or the AirX control system enclosure.

2. Open the bypass
3. Open the front door to a crack. Wait 30 seconds for airflow to redistribute
4. Open the front door and promptly load firewood
5. Close the door to a crack until firewood begins to catch thoroughly.
6. Close the door
7. Close the bypass (handle pointed to the rear) after the stove top thermometer reads “ENGAGE CATALYST”

What if I don’t have power?

If there is a power outage and your Nova 2C is not connected to the rechargeable battery, your stove can still be used! Simply follow all of the normal Starting a Fire and Reloading instructions. If your AirX system was in the reduced air flow position already when power was lost, you may need to leave the door cracked for a longer period of time when starting a fire, or reloading.

Bypass

Nova 2C is equipped with a handle for bypassing the catalytic combustor. The bypass handle is located on the right side of the stove and can be operated with a gloved hand or with the fall-away handle. When not used, the fall-away handle can be stored on the rear of the unit.

The bypass should always be used in conjunction with the front-loading door. Prior to opening the stove door, the bypass should be rotated forward to the open position. Wait 30 seconds. The door may then be opened to a crack. To minimize smoke spillage when reloading, open the door slowly, cracking it open 1” – 2” for 30 seconds to allow airflow to redistribute before fully opening. Slowly open the front door and promptly load your pre-staged firewood. After reloading your stove, the door may be closed and then the bypass rotated to the closed position (facing to the rear of the stove). By operating the two in conjunction with one another you may minimize smoke spillage and maximize the efficiency of your stove.

Starting a Fire

We strongly recommend a top-down fire for burning in Nova 2C. In the top-down fire method, larger pieces of wood are first placed on the floor of the wood stove fire box, with smaller pieces of wood, kindling, and newspaper on top. Take a match or lighter to the newspaper, and the fire will burn slowly into the kindling and to the larger logs underneath. It may take a few tries to build a fire with the top-down fire in order to get it just right, but the result is a cleaner, easier, and by far the best way to build a fire in a wood stove.

Step 1: Establish draft

If starting from a cold start it is important to establish draft in your chimney before filling the stove with wood. Chimney's draft better when they are hotter than the air outside the chimney. Particularly on warm mornings in the spring or the fall, the chimney can be colder than the outside air. In this situation, air will flow down your chimney, through your stove, and into the room.

To remedy this, simply open the bypass and ignite a few pieces of newspaper up near the bypass opening until the flames are noticeably drawn (or sucked in) towards the bypass opening in the rear of the stove. A hair dryer or propane torch can also be used to heat the flue through the bypass opening.

Step 2: Build the base

Set larger logs on the floor of your wood stove firebox.
In beginning to build a fire, it is necessary to begin with a solid foundation of wood. The pieces should be at least 3 – 5 inches in diameter.

Step 3: Build the fire ladder

Set a 2nd layer of medium logs atop the larger logs in a crisscross fashion. It is best to choose medium logs which are approximately 50%-75% of the size of the larger logs. Then, place a third layer of small logs atop the medium logs in a crisscross fashion. The small wood pieces should be approximately 1-2 inches in diameter.

The initial fire you build will catch the smallest logs and these in turn will catch the medium logs which will in turn catch the largest logs.

Step 4: Place the kindling

Set fine kindling on top of small logs. Typically, we place wood splits,

heavy-duty cardboard, or both.

Step 5: Prepare the ignition material
We like using knots of newspaper as our ignition material. To make a newspaper knot, tear a sheet of newspaper, twist it together to create a rope-like piece, and tie into a knot. Place three or four knots above the kindling evenly throughout the width of the fire box.

Step 6. Light the fire
Be sure the bypass is still open (see Bypass section) and then ignite the newspaper. Leave the door open just a crack, being sure to monitor the fire at all times when the door is open. Ignite the newspaper knots. This can be done quickly with a long match or stick lighter. After three minutes, close the front door

Step 7. Press the AirX start button
By pressing this button, a 35-minute timer will start. After 35 minutes, the AirX system will move the slide and restrict the air flow automatically.

Step 8. Close the bypass
When the stove thermometer reaches the ENGAGE zone, close the bypass.

Controlling the Burn

Your Nova 2C has only one burn mode – perfect. If you would like more or less heat out of your Nova 2C, simply load more or less firewood into your stove or load more or less frequently.

Reloading

The best time to reload your wood stove is when there are hot coals remaining and there is none or limited active flaming. When reloading, if there is a large coal bed (glowing red coals, covering the entire bottom, at least an inch deep), there is no need to use kindling or newspaper. To reload:

1. Press the AirX start button on either the remote or the AirX control system housing. This starts your 35-minute timer.
2. Open the bypass
3. Open the front door to a crack. Wait 30 seconds for airflow to redistribute
4. Open the front door and promptly load firewood
5. Close the door to a crack until firewood begins to catch thoroughly.
6. Close the door
7. Close the bypass (handle pointed to the rear) after the stove top thermometer reads “ENGAGE CATALYST”

Wood Selection

Use ONLY untreated wood in your Nova 2C. The use of any other fuel may result in unsafe burning conditions that could cause damage to your stove. When choosing wood, you should use non-resinous, seasoned hardwoods if possible. Examples of appropriate hardwoods are oak, ash, and maple. Seasoned wood is wood with between 15-20% moisture content. To test the moisture content, split a piece of wood and use your wood moisture meter on the interior center of the wood. Store this wood in a dry place and remote from your Nova 2C.

Why does dry wood matter? It burns much more efficiently, increasing heat output from the stove and reducing creosote buildup in the chimney. Refer to our website blog posts for additional information regarding non-resinous, seasoned hardwoods.

Ordinary Operating Sounds

During the typical operation of your Nova 2C, the wood stove will make occasional creaking noises. This is completely normal and is likely caused by the heating and cooling of the stove.

Regular Maintenance and Troubleshooting

Wood stoves, even those as clean as Nova 2C, must be cleaned frequently because soot, ash, and creosote may accumulate.

Establish a routine for the fuel, wood burner and firing technique. Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire. Have a clearly understood plan to handle a chimney fire.

Glass

Caution: Do not clean the glass while hot. Glass could shatter causing burns and permanent damage.

The glass will accumulate some soot through the course of regular burning. More soot will accumulate during slow burns than during hotter burns. Sooting is worse with unseasoned or resinous woods. To clean the glass, the unit should be allowed to cool. Use a soft cloth and a non-ammonia, non-abrasive cleaner. There are many options for wood stove glass cleaner, including on the MF Fire website.

Sooting may also be a result of a loose door or glass seal. If there is smoke leakage around the edges of the glass, the glass seal may be improved by tightening the various bolts and nuts securing the glass to the door. Tighten with hand tools only. Machine tightening may result in glass breakage. Do not over tighten.

Disposal of Ashes

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

Door Gaskets

Inspect all gaskets and door seals before each use. Nova 2C should be operated with the front door tightly shut.

Catalytic Combustor

This wood heater contains a catalytic combustor to help achieve a clean burn. It is important to periodically monitor the operation of the catalytic combustor to ensure it is properly functioning and not clogged. A clogged or otherwise non-functioning combustor will result in poor performance, smoke leakage, a loss of heating efficiency, and an increase in creosote and emissions.

Your catalytic combustor should be visually inspected at least monthly to check its condition. Do not attempt to inspect the catalytic combustor unless the stove is cool and not currently in use. To inspect the catalytic combustor simply open the door of your wood heater, remove the catalytic combustor flame shield, and remove the combustor retaining peg. Next, pull the catalytic combustor forward and remove it from the stove for inspection. If there is some ash on the catalytic combustor, use a soft bristled brush or vacuum to clean off the ash.

A properly functioning catalytic combustor maintains temperatures in excess of 600 °F. Following cleaning, if the catalytic combustor does not function, it may need to be replaced. For replacement instructions refer to the Catalytic Combustor Replacement section of this owner's manual.

You can find a video on how to remove your catalytic combustor by scanning this QR code:

Monthly Maintenance

Creosote – Formation and Need for Removal

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

The chimney and chimney connector should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

The use of unseasoned (wet, green) and/or resinous wood will increase the formation of creosote.

If you are not confident in performing a creosote inspection, contact a local chimney sweep to perform an inspection. Excess creosote buildup may cause a chimney fire that may result in property damage, injury, or death.

Gasket

There is a gasketing located on the front door, and on the front door glass. The gasket in these areas should be visually inspected for any signs of deterioration or smoke leakage into the room. If the gasket is deteriorating, contact MF Fire for a replacement gasket.

Annual Maintenance

Exterior Paint

To fix areas on the exterior of the stove that have been scratched or scraped, simply use aerosol stove paint. The paint needed for color match touch-up is Stove Bright Satin Black (1990).

Paint should only ever be applied while the stove is cool (room temperature). After applying the paint, the newly painted area may appear darker than original until it is cured. When using the stove next, the curing process may give off some fumes.

Glass

In the event of broken door glass, a new pane of glass must be installed before usage may continue. **Do not operate with broken glass!**

To prevent broken glass, avoid striking the glass, slamming the door shut, or building the fire too close to the glass.

To replace broken glass, carefully open the front door while the stove is cool. Remove large shards with gloves and dispose of appropriately. Then carefully unscrew the interior door frame, taking care to keep all screws.

Replace the glass with official MF Fire replacement glass. Do not use unauthorized substitute materials. Contact your place of purchase if replacement glass is needed.

When replacing glass, ensure the glass is properly surrounded by graphene impregnated wood stove gasket, and centered over the window opening.

Catalytic Combustor Replacement

If you suspect that your catalytic combustor is not working, the catalytic combustor should be removed and inspected to identify the source of the problem.

CAUTION: DO NOT OPERATE THE NOVA 2C WOOD HEATER WITH CATALYTIC COMBUSTOR REMOVED!

To access the catalytic combustor follow the instructions in the catalytic combustor installation section of this manual.

If any cracking or peeling is observed, the catalytic combustor must be immediately replaced. Please contact your place of purchase for a replacement catalytic combustor.

If you are unsure if the catalytic combustor is working properly, it should first be cleaned following the cleaning instructions in this manual. Then, a test can be performed. Start a new fire per the instructions in this manual. Next, you can compare the smoke exiting the chimney with the bypass open and then with the bypass closed. After the fire is established and the thermometer is in the ENGAGE zone, perform a visual test of the smoke exiting the chimney. First, open the bypass, wait a few minutes and then observe the smoke exiting the chimney. Now close the bypass, wait a few minutes and observe the smoke exiting from the chimney. There should be significantly less smoke exiting the chimney when the bypass is closed (catalytic combustor engaged).

Safety Notice: Burn untreated wood only. Burning materials such as treated wood, metal foil, coal, plastic, garbage, sulphur, or oil may damage the catalytic combustor. Excessive smoking indicates the combustor has failed and requires replacement.

Appendix A: Nova 2C Tower Assembly

Nova 2C Tower ships with the Nova 2C stove, a Nova 2C Tower Pedestal, and optionally 6” pedestal legs.

To assemble the Nova 2C Tower, follow all instructions and guidelines above and the additional guidance below. Please note, Nova 2C must be attached to the Nova 2C Tower Pedestal before the installation of ceramic fiberboard and firebricks.

Attaching the Nova 2C Tower Pedestal

CAUTION: Nova 2C and Nova 2C Tower are heavy. To avoid injury, at least two people should be used to perform all assembly steps involving heavy lifting.

Step 1: If installing the optional Nova 2C Tower 6” legs, carefully rotate the Nova 2C Tower Pedestal on to its side on a soft surface.

Skip to Step 3 if you did not order optional 6” pedestal legs.

Step 2: Using the bolts and washers provided, tightly fasten the 6” legs to the bottom of the pedestal using a socket or adjustable wrench. The hollow side of the legs should point towards the center of the stove, with the flush square surface attached to the stove, as in the image below.

Step 3: Carefully rotate Nova 2C Tower Pedestal into the upright position and place in its final position. Follow all requirements in the Stove Placement Requirements section. Your Nova 2C Tower must be level and sturdy prior to continuing to Step 4.

Step 4: Carefully place Nova 2C on top of the Nova 2C Tower Pedestal ensuring the leg pad holes are aligned with the holes on top of the pedestal. The front of the Nova 2C should face the same direction as the wood storage opening of the pedestal.

Step 5: Using a socket or adjustable wrench, secure the Nova 2C stove to the Nova 2C Tower Pedestal from the underside using the four bolts and four washers provided. At this point, Nova 2C should be very secure to the Nova 2C Tower Pedestal.

Step 6: Using gloves, place blanket insulation and sheet metal shield into the top of the pedestal. These next steps will require both hands and the proper order of operations to complete properly.

Step 7: While facing the pedestal, first place the metal shield and insulation directly on top of the fixed clips on the left-hand side. Next, the metal shield and insulation should be elevated above the clip holders on the right-hand side. Then, using your other hand, slide the two clips into place as shown in the pictures below. The metal shield can then be set down on top of the clips.

Step 8: To insert the removable ash tray, simply slide between the bottom of the stove and the top of the pedestal, as shown below.

To remove the tray, insert the included ash tray handle as shown below, and slide partially out. The same handle can be used to push the tray back into place. When not in use, the ash tray handle may be stored inside the pedestal base.

Appendix B: Warranty

To register your stove, go to mffire.com/myproduct. Please provide pictures of your beautiful new installation. Specific exclusions to this warranty are paint, gasket, glass, fasteners, and fire bricks. This warranty is subject to sections A and B. Mileage/labor charges, unless specified below, are not covered by warranty. Labor charges are subject to defined maximum limits by MF Fire. Additional service charges above the defined maximum limits may be charged by the service technician.

Component	Coverage Period			Labor Coverage Period
	Limited Lifetime	5 years	2 years	Years
Firebox, door frame (welds only)	✓			5
Tower or Bench assembly	✓			
Insert Surround Kit assembly	✓			
Bypass plate assembly		✓		2
Bypass handle		✓		2
Catalytic combustor (N11)	✓			
Combustor swing door assembly			✓	1
Air duct(s)			✓	2
Ash lip			✓	2
Front door handle assembly			✓	1
Wooden door handle			✓	1
Room blower fan and associated components			✓	1
AES insulation		✓		2
Fire brick retainers			✓	2
Ash retainer		✓		2
Cast iron legs		✓		2
All components not mentioned above are subject to a one-year warranty coverage period.				

A. If warranty service is needed

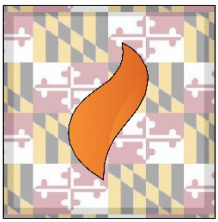
1. If you discover a problem that you believe is covered by this warranty, you must report it to the place of purchase WITHIN 30 DAYS, indicating model name and serial number.
2. MF Fire has the option of either repairing or replacing the defective component.
3. Any appliance or part thereof that is repaired or replaced during the limited warranty period will be warranted under the terms of the original limited warranty for a period not to exceed the remaining term of the original limited warranty.

B. Conditions and Exclusions

1. This device must be installed, operated, and maintained at all times in accordance with the instructions in the Owner's Manual. Any alteration, willful abuse, accident, neglect, or misuse of the product shall nullify this warranty.
2. This warranty only applies to the initial owner and residence as registered. A wood stove that has been resold or relocated is not covered under warranty.
3. Discoloration and minor expansion, contraction, or movement of certain parts and potential resulting noise, is normal and not a defect and, therefore, not covered under warranty.
4. This warranty does not cover misuse of the stove. Misuse includes over-firing or use of any fuel not recommended by the manual. Misuse of the wood stove can cause serious damage and will void the warranty.
5. Damage to the appliance while it is in transit is not covered by this warranty but is subject to a claim against the carrier.
6. The warranty, as outlined within this document, does not apply to the chimney components or other accessories used in conjunction with the installation or use of the stove.
7. MF Fire is not responsible for inadequate performance caused by environmental conditions.
8. Limited Lifetime is defined as up to seven years.
9. Exclusions to this lifetime limited warranty include: injury, loss of use, damage, failure to function due to accident, negligence, misuse, improper installation, alteration or adjustment of the manufacturer's settings of components, lack of proper and regular maintenance, damage incurred while the appliance is in transit, alteration, or act of God.
10. Damage to surfaces caused by fingerprints, scratches, melted items, or other external sources left on the surfaces from the use of abrasive cleaners is not covered in this warranty.
11. Damage to the surfaces from over-firing is not covered in this warranty.

12. MF Fire is free of liability for any damages caused by the appliance, as well as inconvenience expenses and materials. Incidental or consequential damages are not covered by this warranty.
13. This warranty does not cover any loss or damage incurred by the use or removal of any component or apparatus to or from the Nova.
14. Any statement or representation of products and their performance contained in MF Fire advertising, packaging literature, or printed material is not part of this limited lifetime warranty.
15. MF Fire will not cover the cost of the removal or re-installation of hearths, facing, mantels, venting or other components.
16. This lifetime warranty is the only warranty supplied by MF Fire, the manufacturer of the appliance. All other warranties, whether express or implied, are hereby expressly disclaimed and purchaser's recourse is expressly limited to the warranties set forth herein.
17. Should a return be required, MF Fire will instruct on proper packaging procedures prior to having the part returned. The return shipping address is: MF Fire, 3031 Washington Boulevard, Baltimore, MD 21230.

BORN IN | **MARYLAND**



MF**FIRE**