

NOVA 2 AND NOVA 2 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 2 in a mobile home!

Manufactured by: MF Fire, Inc. 3031 Washington Blvd STE G, Baltimore, MD, USA. Report Number F20-619



Table of Contents

Table of Contents	1
Safety Precautions	3
Installation	3
Operation	4
Maintenance	5
Features and Specifications	6
Configurations	6
Dimensions	7
Heating Specifications	8
Emissions and Efficiency	8
Safety Listings	8
Label	8
Stove Installation	9
Planning the Installation	9
Stove Placement Requirements	10
Minimum Clearance Requirements	11
Floor Protection Requirements	13
Chimney Connector Requirements	14
Chimney Requirements	15
Chimney Termination Requirements	16
Special Installation: Exterior Factory-Built Chimney	17
Special Installation: Masonry Chimney	18
Special Installation: Hearth Mount Into Masonry Fireplace	19
Installing Legs and Ash Lip (Optional)	20
Configuring the Optional Top or Rear Vent	22
Installing the Air Inlet Pipe	24
Installing the Bypass Handle	25
Installing the Insulation and Fire Brick	26
Catalytic Combustor	28
Bypass Shield Plate	32

Stove Top Thermometer	33
Installing the Room Blower Fan (Optional)	34
Installing Rear Heat Shield (Optional)	35
Initial Curing	36
Operation	37
Bypass	37
Starting a Fire	37
Controlling the Burn	38
Reloading	39
Wood Selection	39
Ordinary Operating Sounds	39
Regular Maintenance and Troubleshooting	40
Glass	40
Disposal of Ashes	40
Door Gaskets	41
Catalytic Combustor	41
Monthly Maintenance	42
Creosote – Formation and Need for Removal	42
Gasket	42
Annual Maintenance	43
Exterior Paint	43
Glass	43
Catalytic Combustor Replacement	44
Appendix A: Nova 2 Tower Assembly	45
Appendix B: Lifetime Limited Warranty	50

Safety Precautions

Installation

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

Nova 2 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 2 in conjunction with any air distribution ductwork unless specifically approved for such installations.

Operation

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

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

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

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

Do not burn garbage or flammable fluids such as gasoline, naphtha or engine oil.

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 2 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.

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.

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

Maintenance

Allow Nova 2 to cool before conducting any maintenance.

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

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

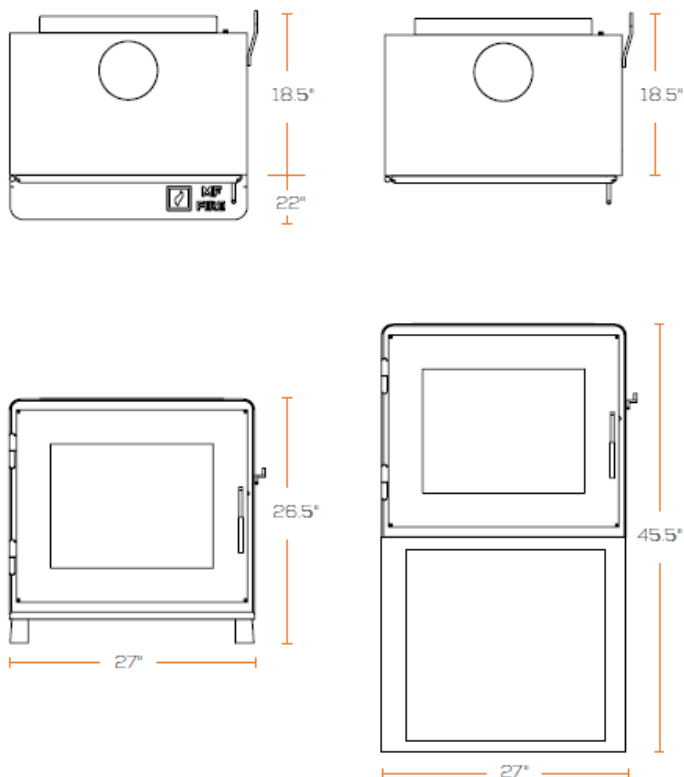


Nova 2 is available in two configurations, Nova 2 and Nova 2 Tower. Nova 2 can be optionally equipped with 3" (standard, shown above), 6", or 9" legs. Nova 2 Tower is available with no legs (standard, shown above) or 6" legs.

Additionally, both Nova 2 and Nova 2 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 2 is equipped with a 2.4 ft.³ firebox and accepts logs up to 22" in length.

Nova 2 has a 2,500 sq. ft. (175 m²) approximate maximum heating capacity. Heating capacity will vary depending on the home's floor plan, degree of insulation, and the outside temperature.

Nova 2 has a 35,000 BTU per hour (10 kW) EPA certified heat release rate, with actual heat release rates ranging from 13,000 to 75,000 BTU per hour (4 to 22 kW) depending on user loading and reloading.

Emissions and Efficiency

U.S. Environmental Protection Agency certified 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. Certified average emissions rate of 1.93 g/hr and a maximum tested efficiency of 81% LHV and an HHV efficiency of 75.2% tested to EPA Method 28R and ASTM E2515-11.

Safety Listings

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

Label

Nova 2 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 2 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 2 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 2 must be placed in a room with a source of fresh air.

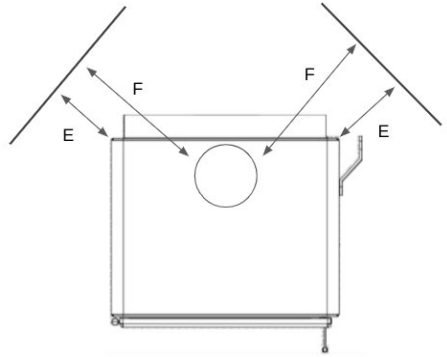
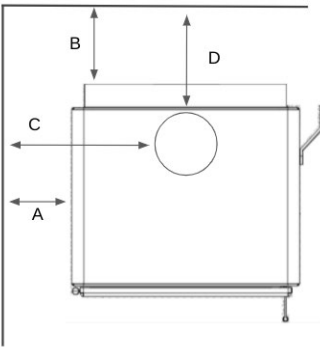
Nova 2 must be placed so that no combustibles are within, or can swing within 36" (914mm) of the front of the stove (drapes, doors, etc.).

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

Minimum Clearance Requirements

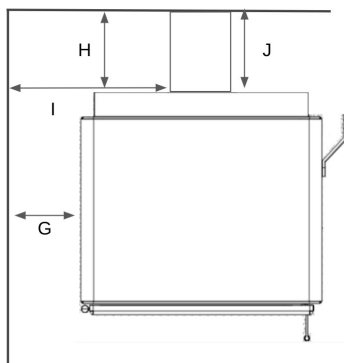
Nova 2 may be installed as a top vent with a ceiling exit in either a standard or corner configuration, or as a rear vent with a direct rear exit. The minimum clearance requirements are listed in the table below. Clearances may be reduced following methods in NFPA 211, listed wall shields, pipe shields, or other means approved by local building or fire officials. Rear clearances with optional rear heat shield are from the heat shield surface. For more information on heat shield installation, see section on rear heat shield installation.

Top vent, ceiling exit



		Single Wall Connector Pipe	Double Wall Connector Pipe	Double Wall Connector Pipe with Rear Heat Shield	Double Wall Connector Pipe with Reduced Clearance Kit
A	Sidewall to unit	22" (559 mm)	20" (508 mm)	20" (508 mm)	22" (559 mm)
B	Backwall to unit	20" (508 mm)	14" (356 mm)	6" (152 mm)	9" (229 mm)
C	Sidewall to connector	31" (787 mm)	29" (736 mm)	29" (736 mm)	31" (787 mm)
D	Backwall to connector	23" (584 mm)	17" (432 mm)	9" (229 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)

Rear vent, rear exit

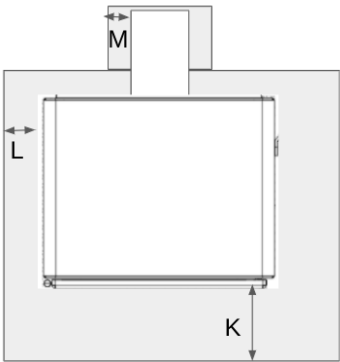


		Single Wall Connector Pipe
G	Sidewall to unit	22" (559 mm)
H	Backwall to unit	16" (406 mm)
I	Sidewall to connector	31" (787 mm)
J	Backwall to connector	16" (406 mm)

Floor Protection Requirements

Nova 2 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.

Floor Protection Clearances



K	Floor protection from front	16"US/18" CAN (406/457 mm)
L	Floor protection from side	8" (203 mm)
M	Floor protection from chimney connector	2" (51 mm)

Floor 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 Nova 2 equipped with various leg heights and with or without a 6" ash lip, floor protection requirements are as in the Table below. 'R' refers to the thermal rating of the floor protection, while Type 1 floor protection requires ember protection only.

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

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° of elbows (two 90° elbows or two 45° and one 90° 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.

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

Do not connect Nova 2 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:

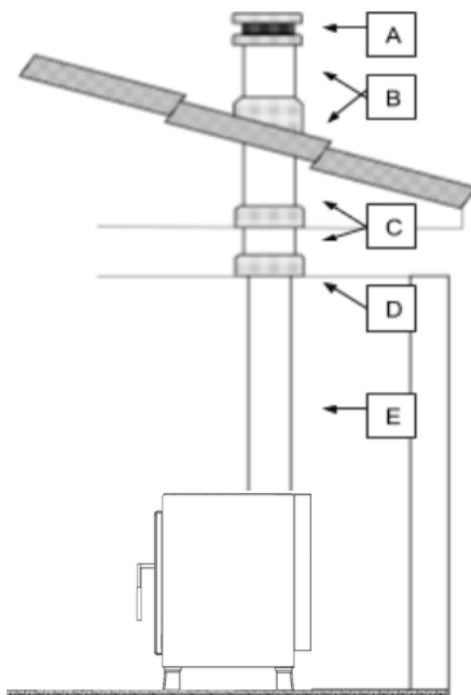
1. A 6" (150 mm) diameter, UL 103 HT chimney, from a single manufacturer

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

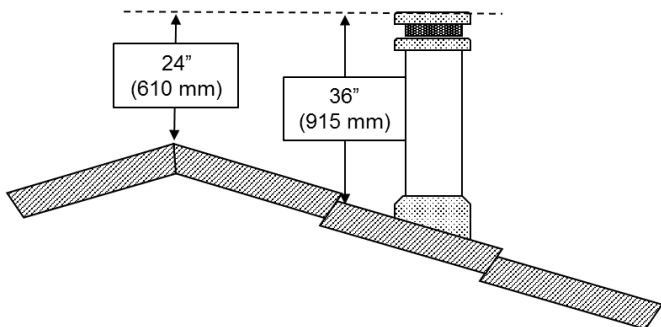


Chimney Termination Requirements

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).

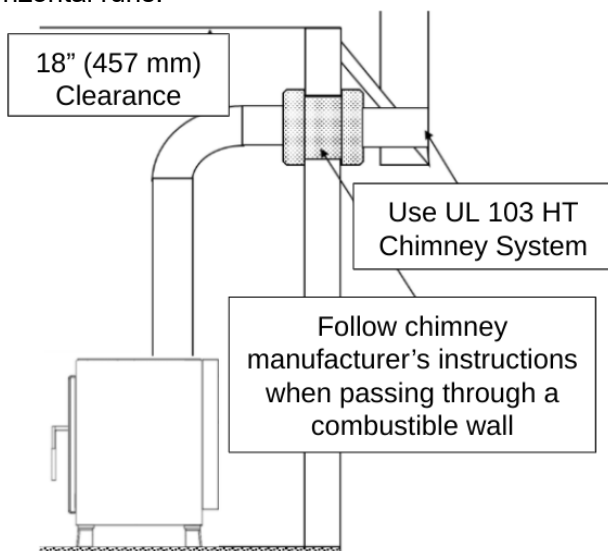


Special Installation: Exterior Factory-Built Chimney

Nova 2 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.

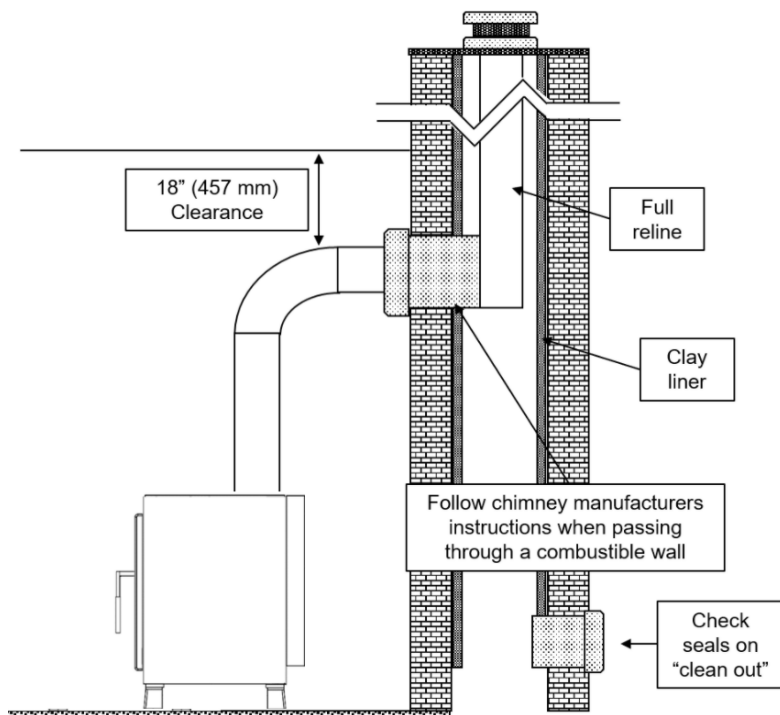
Floor protection is required 2" on both sides of the chimney connector for any horizontal runs.



Special Installation: Masonry Chimney

Nova 2 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 2 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.

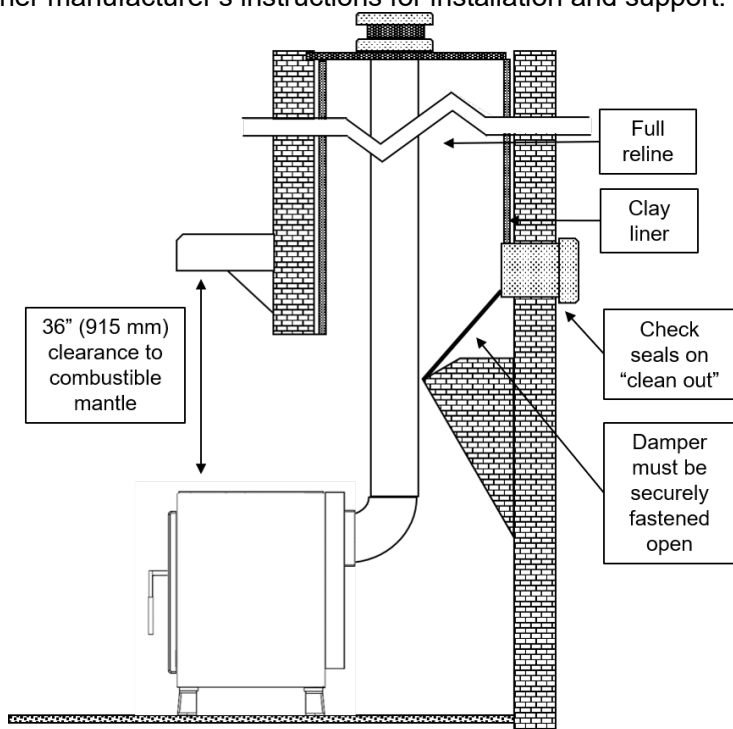


Special care must be taken regarding the wall thimble, or penetration from the chimney connector pipe to the masonry chimney, if the wall thimble must pass through a combustible exterior wall. Here all chimney manufacturer's instructions must be followed, including guidance on spacing to combustible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

Special Installation: Hearth Mount Into Masonry Fireplace

Nova 2 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 and Ash Lip (Optional)

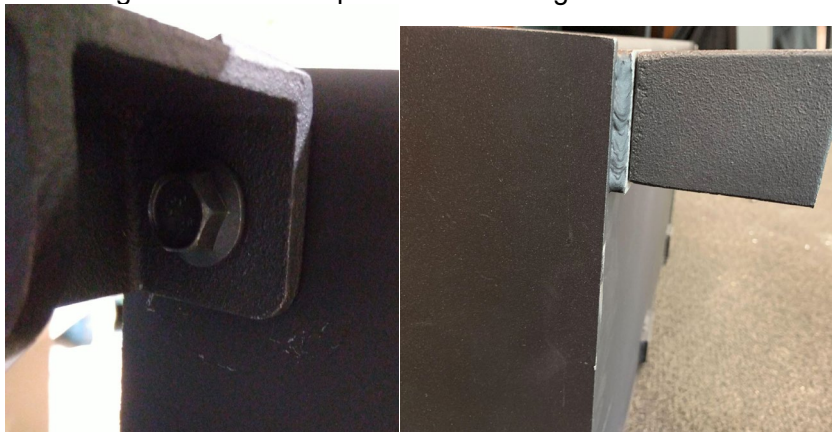
Nova 2 will arrive bolted to a pallet with legs and leg bolts packed separately. The leg securement bolts are located inside the firebox and labeled “Leg Pad Bolts”. If ordered with the optional ash lip, this will also ship separately along with two spacer plates for the rear legs. To install the legs follow the steps below. If you ordered a Nova Tower, you can skip these steps

Step 1: Unbolt Nova 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.

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 between 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 a bolt through the leg, and optionally the ash lip, into the leg pad hole. Rotate the leg so the solid sides are parallel to the outside edges of the stove. Hand then wrench tighten the bolt. Repeat for all four legs.



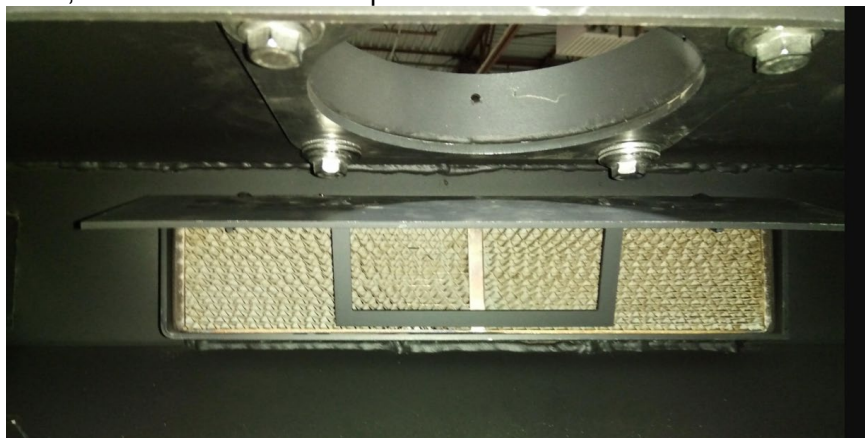
Configuring the Optional Top or Rear Vent

Nova 2 can be configured as either a top venting or a rear venting stove. Nova 2 will arrive in the top vent configuration. To switch to the rear vent configuration, the following procedure may be followed.

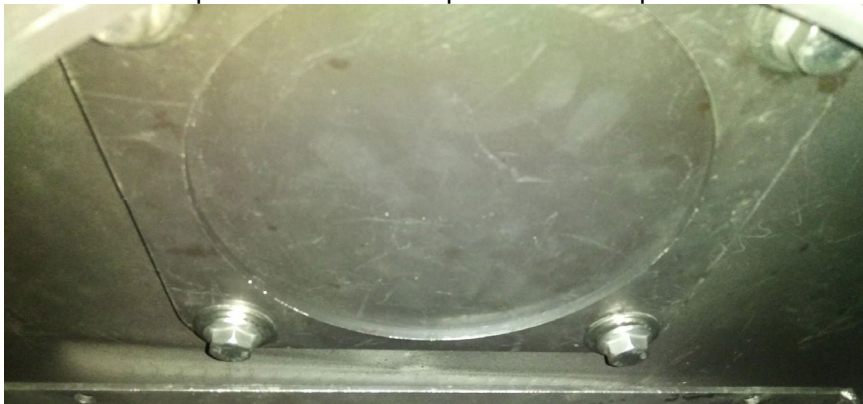
Step 1: Remove the rear blocker plate collar, secured with 4 bolts and 1 washer each, and access panel, secured with 6 bolts and no washers, from the back of the stove as shown below.



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 as 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 2 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 free standing configuration. To attach, simply bolt over the air inlets on the rear of the stove with the pre-installed bolts, as shown below. Only the top two bolt holes are used for this install.



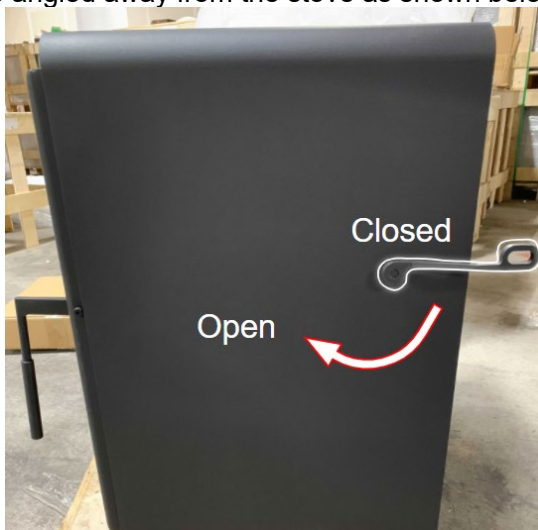
Installing the Bypass Handle

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

Step 1: Remove the set screws 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 such that the handle is pointed towards the rear of the stove, with the bent portion of the handle angled away from the stove as shown below.



Step 3: Rotate the bypass handle on the bypass rod until the set screw holes are aligned with the holes in the bypass handle, insert the set screw in the rear-most hole, and tighten into the hole. Tighten the set screw, wiggle the handle, tighten the set screw, wiggle the handle, etc. until the handle is tight and there is no wiggle.

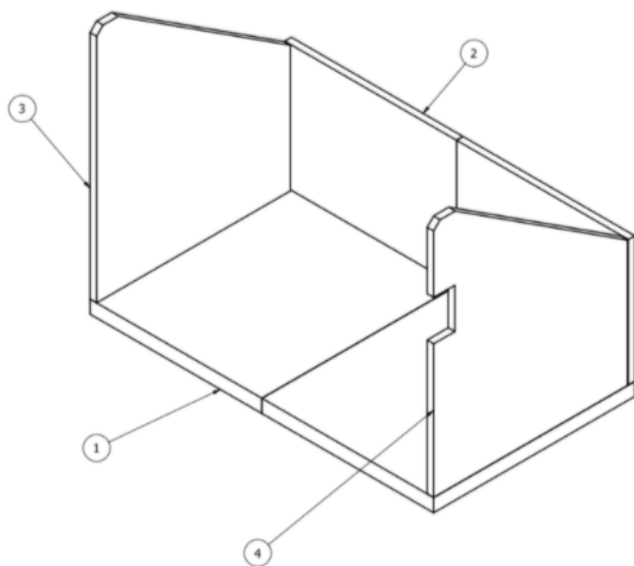
Installing the Insulation and Fire Brick

Nova 2 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 firebricks provide a durable platform for your fire and maintain smooth even heating.

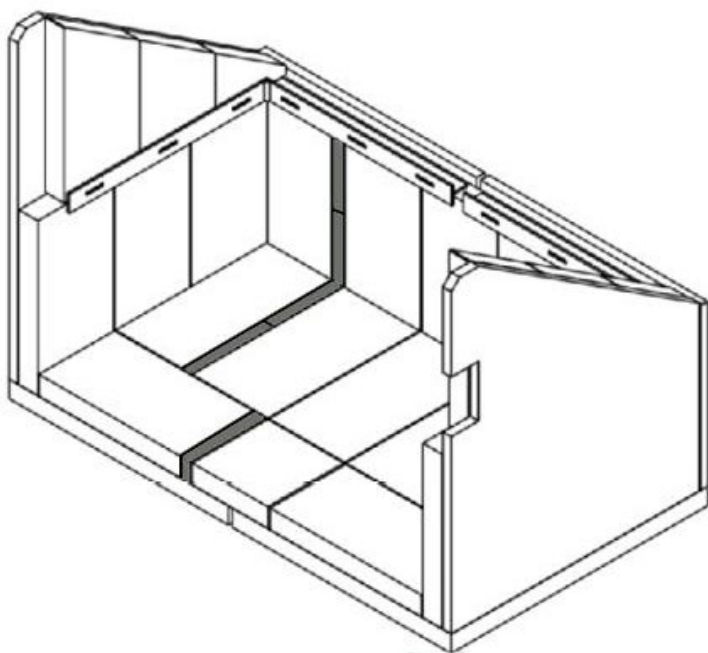
The insulation and bricks must be installed before the first fire and should be installed following the procedure below. Gloves and safety glasses should be worn during installation.

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

Step 2: Insert insulation blanket as shown below. Note: your stove may have the insulation blanket preinstalled. First, the two bottom pieces (1) are installed. Next the rear wall is installed (2). Then the sidewalls (3 and 4) are installed. Gentle pressure may be needed to press the pieces into place. Some small bending and cracking is not unusual or a problem.



Step 3: Next, install the fire bricks. The first bricks to be installed should be the five rear wall bricks and then the three bricks on the left and right side wall. A small gap may exist in between the corner of the bricks as shown in the diagram. Next, install the seven bricks and one half brick on the floor of Nova 2. 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 to both sides of the stove.



Occasionally due to small variations in components and materials, it is normal for the bricks and insulation 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. Slight gaps will be filled with ash from your first few fires.

Catalytic Combustor

The Nova 2 catalytic combustor is a long rectangular piece with a honeycomb-like structure. **Note: the catalytic combustor may already be installed on your stove.**

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

To install the catalytic combustor follow the steps below.

NOTE: If your flame shield is not pre-installed and is located within the firebox packaging, your stove does not use bolts for keeping the flame shield in place. Instead, your flame shield is set “up and over” the top baffle opening with the tabs facing at the downward angle, shown below. If your flame shield is pre-installed, proceed to Step 1 below. The flame shield and bypass shield plate are the same.



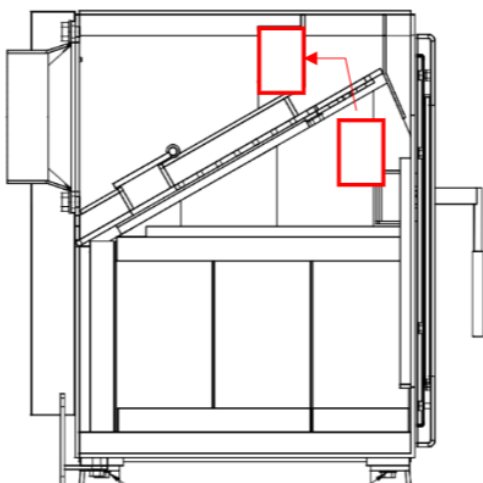
Step 1: Remove the packaging surrounding the catalytic combustor.



Step 2: Unscrew the two bolts holding in the flame shield, the thick piece of metal located on the inside top of the stove at the front most portion of the baffle. Set the flame shield to the side.



Step 3: Reach inside the opening and remove the 'U'-shaped catalyst retaining peg from the inside bottom of the rectangular opening. 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 4: Slide the catalytic combustor into the holding box, pushing back the combustor 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 5: 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.

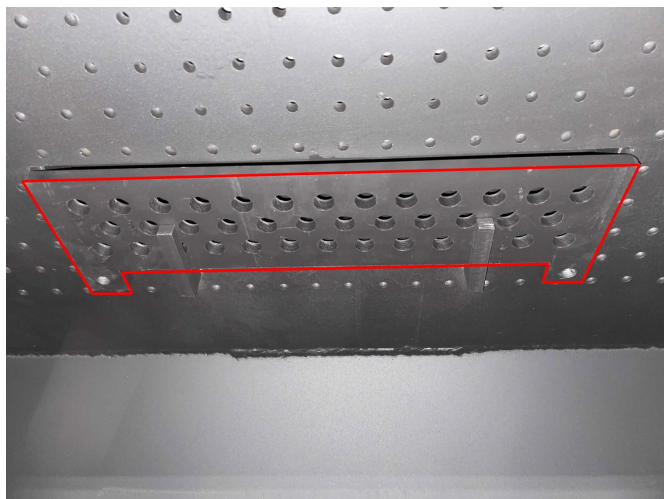
Caution: Without this retaining peg the catalytic combustor may fall forward, preventing the stove from operating as intended.

Step 6: Reinstall the flame shield

Bypass Shield Plate

Unpack the bypass shield plate from within the cardboard packaging within your stove. The bypass shield plate should be placed on the

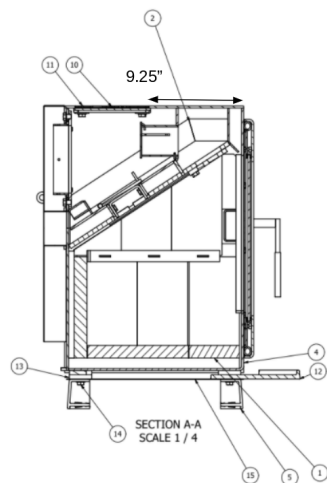
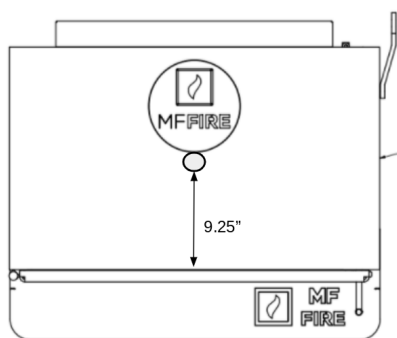
underside of the bypass opening at the rear of the firebox as shown below. The tabs should point towards the rear of the fire box. NOTE: this part is the same and interchangeable with the flame shield noted in the Catalytic Combustor section.



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 2. The thermometer should be placed on the stove top, 9.25"

from the front of the stove and centered on 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).



Installing the Room Blower Fan (Optional)

A room blower fan is a helpful accessory for pushing heat from the wood stove out into the room and the rest of your home. At the end of the installation, the room blower fan should be sitting on the floor close to the rear of the stove.

It is recommended that the fan kit be installed by a qualified installer. Please ensure the blower is unplugged prior to installation. After installation, the room blower fan should be plugged into a 110 V, three-prong grounded outlet. Take care to route the blower fan cord away from all hot surfaces of the stove or other hazards.

To install the room blower fan you will need the Blower fan assembly, the temperature sensor and wire harness, and speed controller. Please see instructions within room blower fan packaging for additional detail.

Step 1: Place Nova 2 rear air duct in the top position.

Step 2: Place room blower fan temperature sensor bracket in vertical position over the top screws on the center of the blower housing. The screw may need slightly loosened if the bracket does not easily slide over. After sliding the bracket over screws, tighten screws.

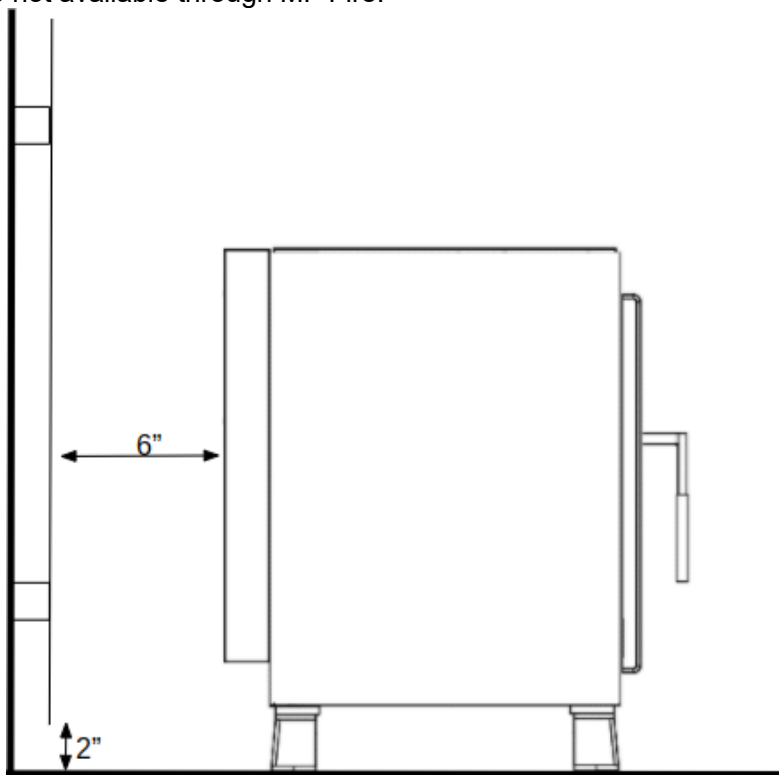
Step 3: Slide the blower under the rear air duct with the temperature sensor bracket facing the stove. The temperature sensor should touch the rear of the stove. The rear air duct may need to be rotated out from the bottom or removed to fit the room blower fan into place. Replace Nova air duct into the top position after the room blower fan is set into place.

Step 4: Plug the three-prong plug into a proper three prong outlet.

Installing Rear Heat Shield (Optional)

Installing the optional rear heat shield is a way to reduce clearances to combustible walls to provide for installation in a tighter space.

The rear heat shield consists of two 18 ga (minimum) 18" x 36" panels to be configured in a 36" x 36" square located behind the stove. These panels are secured to the wall using included non-combustible spacers. The panels must be positioned such that there is a 2" air gap between the combustible wall and the rear heat shield, that panels extend 12" above the top of the stove, and that the panel assembly is centered horizontally with the stove. Rear heat shield panels can be of any variety of steel finish to best fit your decor and are not available through MF Fire.



Initial Curing

During the first burn of your wood stove, the paint on the stove may 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 2 is built to be simple and easy to use. It just works. We designed Nova 2 with no dampers to play with and so there is no need to try over and over again to light a fire. Just build a fire, sit back and enjoy.

Bypass

Nova 2 is equipped with a bypass lever for the catalytic combustor. The bypass handle is located on the right side of the stove and should be operated with the included 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. The door may then be opened. To minimize smoke spillage when reloading, open the door slowly, cracking it for several seconds before fully opening. After reloading your stove the door may be closed and then the bypass rotated to the closed position. 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 2. 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 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.

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 fire 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.

Controlling the Burn

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

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, open the bypass, wait 10-15 seconds for the exhaust gases to re-stabilize, and slowly open the front door. Fill the firebox chamber with logs, taking care not to stack the logs too close or touching the front door glass. Then simply shut the door and walk away. Close the bypass when the provided thermometer reads “ENGAGE CATALYST”.

Wood Selection

Use ONLY untreated wood in your Nova 2. The use of any other fuel may result in unsafe burning conditions that could cause damage to. 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 2.

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 2, 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 2, 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 thoroughly cooled.

Door Gaskets

Inspect all gaskets and door seals before each use. Nova 2 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 and remove the bolts holding the flame shield in place. 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 Troubleshooting and Replacement section of this owner's manual.

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 once every two months 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. Color match paint can be ordered directly from MF Fire. Contact us at support@mffire.com and tell us the color you need, and we will ship it right out to you.

Paint should only ever be applied while the stove is cool. Allow the paint at least one hour to cool. 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 MF Fire at support@mffire.com 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 2 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 MF Fire for a replacement catalytic combustor (Part Number: Nova -CAT) at support@mffire.com.

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 2 Tower Assembly

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

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

Attaching the Nova Tower Pedestal

CAUTION: Nova 2 and Nova 2 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 2 Tower 6" legs, carefully rotate the Nova 2 Tower Pedestal on to its side on a soft surface, such as a blanket or carpet as shown below.

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

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



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



Step 6: Using gloves, place the piece of ceramic fiberboard 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. NOTE: some models use two ½" pieces of insulation and other use a single piece of 1" insulation



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: Lifetime Limited Warranty

To register your Nova 2, go to mffire.com/myproduct to fill out your name, product type, serial number and installation pictures. Please provide numerous pictures of your new beautiful installation. All portions of the stove are subject to the warranty, excluding paint, gasket, glass, fasteners, catalytic combustor, and room blower fan. The room blower fan is subject to a 1-year limited warranty and the catalytic combustor is subject to a 5-year limited warranty also subject to sections A. and B. below. Mileage and service charges, if necessary, are not covered by this warranty.

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 Nova 2 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 Nova 2 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. 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.

9. 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.
10. Damage to the surfaces from over-firing is not covered in this warranty.
11. 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.
12. 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 2.
13. 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.
14. MF Fire will not cover the cost of the removal or re-installation of hearths, facing, mantels, venting or other components.
15. 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.