Installation & Operating Instructions for USA & Canada

Aduro Hybrid Stoves

H1 & H2

Stove Builder International inc.
250, Copenhague street
St-Augustin-de-Desmaures (Québec)
Canada G3A 2H3
After-sale service: 1-877-356-6663
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46406A
2025-02-12

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Congratulations on your new Aduro Hybrid Stove!

To get the best possible experience and benefit from your new Aduro Hybrid Stove, it is important that you read the user manual thoroughly before you install your Aduro Hybrid Stove and start using it. Failure to follow instructions may result in property damage, bodily injury, or even death. For further information, please go to www.adurofire.com. Please keep this user manual for reference.

This manual describes the installation and operation of the Aduro Hybrid Stove (H1 & H2). This heater meets the 2020 U.S. Environmental Protection Agency's cord wood and pellet emission limits for wood heaters sold after 2020. Under specific test conditions this heater has been shown to deliver heat at rates ranging from 7500 to 53900 BTU/h (2.2 to 15.8 kW).

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.

Contact the local building officials about restrictions and installation/inspection requirements in your area. Installation requirements vary in different districts, and the local building officials have the final authorization to approve your installation. You should discuss the installation with them before beginning.

Production number

At the inside of the bottom front door, you can find the production number, the serial number, and the code for the Aduro Hybrid App. For the purposes of the guarantee and for other enquiries, it is important that you are able to quote the production number as well as the serial number.

HOW TO SUCCEED WITH YOUR NEW HYBRID STOVE
In Aduro's Customer Service Center you will find tips and tricks on how to succeed with your new Aduro hybrid stove. Here you will have direct access to interesting content about maintenance of your stove as well as support related information. Moreover, we recommend registering your hybrid stove in Aduro Cloud so you don't miss important information and alarms regarding your stove.

Tested & Listed by Intertek
Manufactured by: *Stove Builder International Inc.*
US ENVIRONMENTAL PROTECTION AGENCY PHASE II CERTIFIED WOOD STOVE COMPLIANT WITH 2020 CORD WOOD STANDARD

250 Copenhague Street, Saint-Augustin-de-Desmaures (Quebec), Canada, G3A 2H3
After-sale service: 1-877-356-6663
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Listed to standards CAN/ULC S627, UL 1482 and ASTM E1509

1. General

1.1 Compliance

Aduro Hybrid Stove meets the U.S. Environmental Protection Agency's emission limits for hybrid stoves and hybrid stoves sold on or after 2020.

The Aduro Hybrid stove series has been tested by Intertek. The test standards are for the United States and for Canada:

Testing of solid fuel appliance in accordance with DTI method "ELAB-PP-BR-15" based on relevant selection of standards and methods	
ASTM E2515	Yes
ASTM E3053 (Cordwood) *	Yes
ASTM E2779 (Pellets)	Yes
US EPA Method 28R in combination with ASTM E2780 (Cribwood)	No
CSA B415.1	Yes
EPA Communication on ALT-125 method for Cordwood testing	Yes

* *Single burn rate option*

The stove meets the requirements of NSPS §40 CFR Part 60.

Under specific test conditions, this stove demonstrated a heat output ranging from 7500 to 53900 BTU/h (2.2 to 15.8 kW).

Always check Local Building Codes:

When installing or operating your Aduro Hybrid stove always follow the instructions detailed within this user manual. Please store in a safe place and make them available to any person who requires it for future inspection or servicing.

A building permit may be needed to install a hybrid stove in your locality. In the US, Standard NFPA211 may apply, in Canada CAN/CSA-B365 may apply. For clarification consult your local building inspector.

1.2 Warnings and safety precautions

- **ADURO HIGHLY RECOMMENDS THE USE OF SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS WITH ANY HEARTH PRODUCT, INCLUDING THIS UNIT. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS WHEN USING SMOKE AND CARBON MONOXIDE DETECTORS.**
- A smoke detector located in the proximity of the stove may be activated when the door of the stove is open to reload or to stir.
- **CAUTION: THE LACQUERED SURFACE IS VERY SENSITIVE UNTIL THE HEAT-RESISTANT PAINT IS HARDENING.**
- This stove is approved for natural seasoned wood fuel and wood pellets only**. DO NOT BURN ANY OTHER FUELS OR GARBAGES.**
- **Always respect the "MAX LOAD" line in the vermiculite fire chamber.**
- It is highly recommended to install a smoke detector in the room where the Hybrid stove is installed.
- DO NOT OVERHEAT. If the flue gas temperature exceeds 660°F (350°C), it may damage the motor of the auger screw.
- If this hybrid stove is not installed properly, it may result in a house fire. To reduce the risk of fire, follow the installation and operating instructions carefully. Failure to properly follow the installation and operation

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.

- Never use chemical fire starters or fluid to start your fire.
- **DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.**
- **NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR FRESHEN UP A FIRE IN THIS HYBRID STOVE. KEEP ALL SUCH LIQUIDS AWAY FROM THE HYBRID STOVE WHILE IT IS IN USE.**
- For installation problems not covered by this manual, consult your local building or fire officials and where necessary defer to standards NFPA 211 in the US, or CAN/CSA-B365-M93 in Canada.
- **DO NOT CONNECT THIS STOVE TO ANY AIR DISTRIBUTION DUCT OR SYSTEM AND DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE**.
- **DURING ITS OPERATION THE STOVE WILL GET HOT; ALWAYS MAKE PROVISION (FIRE GUARD) TO ADEQUATELY PROTECT CHILDREN, PEOPLE WITH A HANDICAP OR INFLAMMABLE MATERIALS FROM HOT SURFACES. THESE HOT SURFACES WILL CAUSE SKIN BURNS IF TOUCHED.**
- Never allow your hybrid stove to overheat. Operate only within the guidelines set out in this manual. YOU OVERHEAT THE HEATER IF THE SMOKE TEMPERATURES GOES ABOVE 660°F (350°C)
- Never operate this hybrid stove if any of the components (including glass) are cracked or broken. Replace broken or damaged component before use.
- Do not elevate the fire by using a grate.
- Cooktop hoods, clothes dryers, and similar extraction units can have a detrimental effect on chimney draft; Avoid installing your hybrid stove in areas where they are present unless you are able to provide sufficient or additional outside air to the room.
- Your hybrid stove should be properly sized to the immediate area you need to heat; An under-sized hybrid stove may not deliver the required heat output without overheating and an oversized heat may produce too much heat.
- **WARNING: OPERATE ONLY WITH THE DOOR OF THE STOVE FULLY CLOSED. IF THE DOOR IS LEFT PARTLY OPEN, GAS AND FLAME MAY BE DRAWN OUT OF THE OPENING, CREATING RISKS FROM BOTH FIRE AND SMOKE.**
- Do not restrict air circulation around the unit. Air circulation around the unit is important. If air circulation is limited, this could increase heat on adjacent walls and ceiling.
- Always use approved chimney and chimney lining materials.
- Your chimney should be inspected and swept by an approved chimney sweep at least once every year, dependent upon usage.
- Never empty the ash drawer when the hybrid stove is warm. Embers may still be found in the ash drawer for up to 24 hours after the fire has gone out. Please wait to empty the ash drawer until you are sure that there are no embers in the ash.
- Using make-shift compromises during installation of this hybrid stove could create a fire hazard.
- This stove must be installed as a free-standing heater with the clearances listed in the manufacturer's installation instructions. It is strictly forbidden to install this stove in a factory-built fireplace.
- The installation requires a fresh air kit, sold separately.
- Never built the fire too close to the glass. It may cause higher temperature and produce a faster aging of the glass.
- This stove can be installed in a mobile home. Its installation requires the installation of a fresh air intake kit, sold separately.
- **WARNING: DO NOT INSTALL IN THE SLEEPING ROOM OF A MOBILE HOME.**
- **THE PRODUCT MUST BE SECURED TO THE STRUCTURE OF THE MOBILE HOME.**
- **CAUTION: THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL, CEILING AND ROOF MUST BE MAINTAINED.**
- **IT IS PROHIBITED TO USE THIS WOOD STOVE WITH A FIRE SCREEN.**
- The lid to the pellet container must always be closed during use.

- When using wood logs in periods without electrical power you must always look after the stove, as security sensors are not active.
- The product and the cladding must be stored in a dry place and must not be exposed to weathering.
- Disconnect the product from the power supply before performing any inspection or maintenance operation.
- Improper use or poor maintenance of the product can cause hazardous situations.
- Do not place flammable materials on the stove to dry. Keep any flammable materials in safe distance to the stove according to the manual.
- Installation, start-up visits, tests, and maintenance must be carried out by authorized and qualified personal.
- Turn the product off in the event of a fault or malfunction.
- If one of the following alarms "drop shaft hot", "shaft sensor defect" or "external auger output defect" is activated, do not use the stove - not with firewood either - until the fault has been rectified, as this may damage the stove. Using the stove anyway can lead to a very costly repair of the stove. If you want to fix the error yourself, then follow this FAQ: https://aduro.microsoftcrmportals.com/en-us/knowledgebase/article/KA-01157. If it is very important to you to get heat from the stove, even if there is a fault in the external auger, the internal auger must be removed and the fall shaft (shaft between the two augers) must be emptied of pellets. Remount the internal auger. The stove can now be used with firewood until a technician can rectify the fault.
- The doors on the stove must remain closed when it is not used.
- Do not put any fuel or anything else other than wood pellets in the container. We do not recommend a particular type of pellets, but they must be **dry**, of a good quality, approved and comply with PFI, ENplus or CANplus standards. Our experience, however, says that bright pellets burn better than dark pellets.
- The product must be powered by an electrical system that is equipped with a grounding system.
- In the event of fire in the chimney, turn off the device, disconnect it from the main electricity, close the air inlets and do not open the door and then contact authorities for help.
- The installation of the stove must be in accordance with legislation and regulations in the region or state.
- Any flammable objects must be kept at a safe distance from the product due to fire hazard in accordance with the user manual.
- Use only the fuel recommended by Aduro A/S. It is forbidden to use any liquid fuels and bioethanol fluids for lighting/ rekindle charcoal or pellets.
- Some of the surfaces on the product can get very hot (door, handle, glass, smoke outlet pipes, etc.). Avoid therefore direct contact with these parts, without adequate protective clothing or suitable tools, such as gloves with thermal protection.
- Accumulated and unburned pellets in the burning pot after “failed start-up” or alarms must be removed before lighting again. Check that the cave is clean and positioned properly before lighting again.
- It is recommended to let the stove burn empty for pellets and clean it before a still stand period longer than 2 weeks – especially if the humidity is high.
- This wood heater needs periodic inspection and repair for proper operation. It is forbidden to operate this wood heater in a manner inconsistent with operating instructions in this manual.

Aduro A/S declines all responsibility for any damage which may be caused, directly or indirectly, to persons, animals, or objects as due to non-compliance with any provision specified in the manual, especially warnings regarding installation, use, and maintenance of the stove.

The responsibility for improper use of the product is entirely borne by the user and relieves the manufacturer from any civil and criminal liability. Tampering or unauthorized replacement with non-original spare parts could be hazardous for the operator’s safety and relieves the company from any civil and criminal liability.

1.3 Technical data

Aduro Hybrid Stove	Data
Nominal power - Wood	27 630 à 53 832 BTU/hr (8.0 à 15.8 kW)
Nominal power - Pellets	7451 à 21 240 BTU/hr (2.2 à 6.2 kW)
Flue outlet	Ø 6 in (15 cm) top/rear
Fresh air supply	Ø 5 in (12.7 cm) external
Measurements (H x W x D)	47.25 x 19.125 x 19.125 in (120 x 50 x 50.8 cm)
Height exhaust branch above floor level	46 in (117 cm)
Distance from centre of exhaust branch to rear edge of stove	9.875 in (25 cm)
Weight	297 lbs (135 kg)
Material	Steel
Fuel	Wood and pellets Ø0.25in (6 mm), max length 1.5 in (40 mm). Pellets ENplus or CANplus premium grade or better and certified par PFI
Max wood length	15 in (38.1 cm)
Convection stove	✓
Primary, secondary and tertiary air intake	✓
Air-wash system	✓
Ash pan	✓
Ceramic igniter	✓
Electrical connection	120/ 60 Hz
Pellet container capacity	Approx. 28 lbs (13 kg)
Energy efficiency[1]	Wood/ Pellets: 80% by HHV[2] Basis Wood/ Pellets: 86% by LHV[3] Basis
Maximum combustion amount per hour: - Wood - Auger performance – pellets per hour	 Approx. 6.6 lbs (3.0 kg) Approx. 2.2 lbs (1.5 kg)
Heat rating in buildings with - Optimum insulation - Average insulation - Inadequate insulation	 1600 ft^2 (150 m^2) 1076 ft^2 (100 m^2) 645 ft^2 (60 m^2)

1.4 Transportation

When taking your Aduro Hybrid Stove home, please ensure that it travels in an upright position. The packaging must be disposed according to national rules regarding disposal of waste.

[1] As measured per CSA B415.1-10 stack loss method.
[2] Higher Heating Value of the fuel.
[3] Lower Heating Value of the fuel.

2. Installation of the Aduro Hybrid Stove

We recommend that the installation is carried out by a fully qualified installer. In any case, Aduro Hybrid stoves are very heavy and we recommend that installation is carried out by at least two people. We recommend using a handcart. Always consult your local building or fire officials to determine if any permits are required for installing a hybrid stove in your area. You may also need to inform your Homeowners Insurance Company. We recommend not install the heater too close to neighbors or in valleys that would cause unhealthy air quality or nuisance conditions.

After unpacking, check that insulation stones or liners are firmly in position and have not shifted in transit. Check also that the air control works freely. Before starting the initial fire, make sure that the baffle is placed correctly.

2.1 The chimney / flue system

Note that the flue system must be independently secured and must not rely on the stove for support. The chimney connector must be in good condition and kept clean. See also point 4 below.

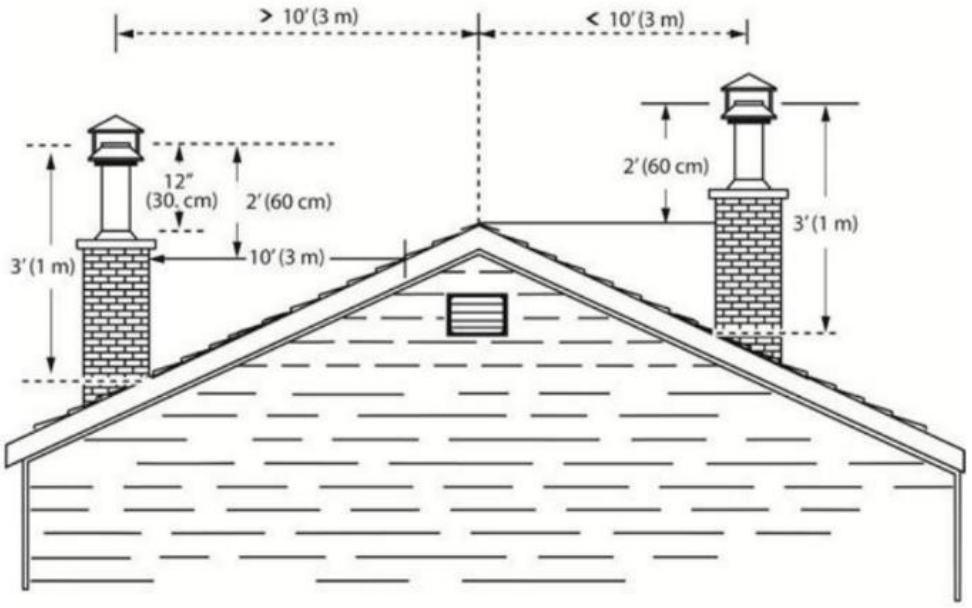
Use a residential type masonry or listed type HT factory-built chimney. High Temperature (H.T.) Chimney Standard UL-103 (2100º F.) or a code-approved masonry chimney with flue liner for the USA, and High Temperature (650ºC) Standard CAN/ULC 629 for Canada.

The internal dimensions of the chimney connector and chimney must not be less than 6 inches diameter (or equivalent cross section) and should not be significantly larger than this. Too large a section will tend to allow the flue gases to cool excessively, causing sluggishness or unpredictability in the stove's performance.

We recommend the length of the chimney system should be at least 16 feet (not required) above the stove in normal domestic situations, measured from the flue collar to the top of the chimney. Local conditions for example - roof constructions, large trees nearby and high altitude, may influence the chimney draft. Therefore, contact your local professional chimney sweep or your Aduro dealer prior to installation.

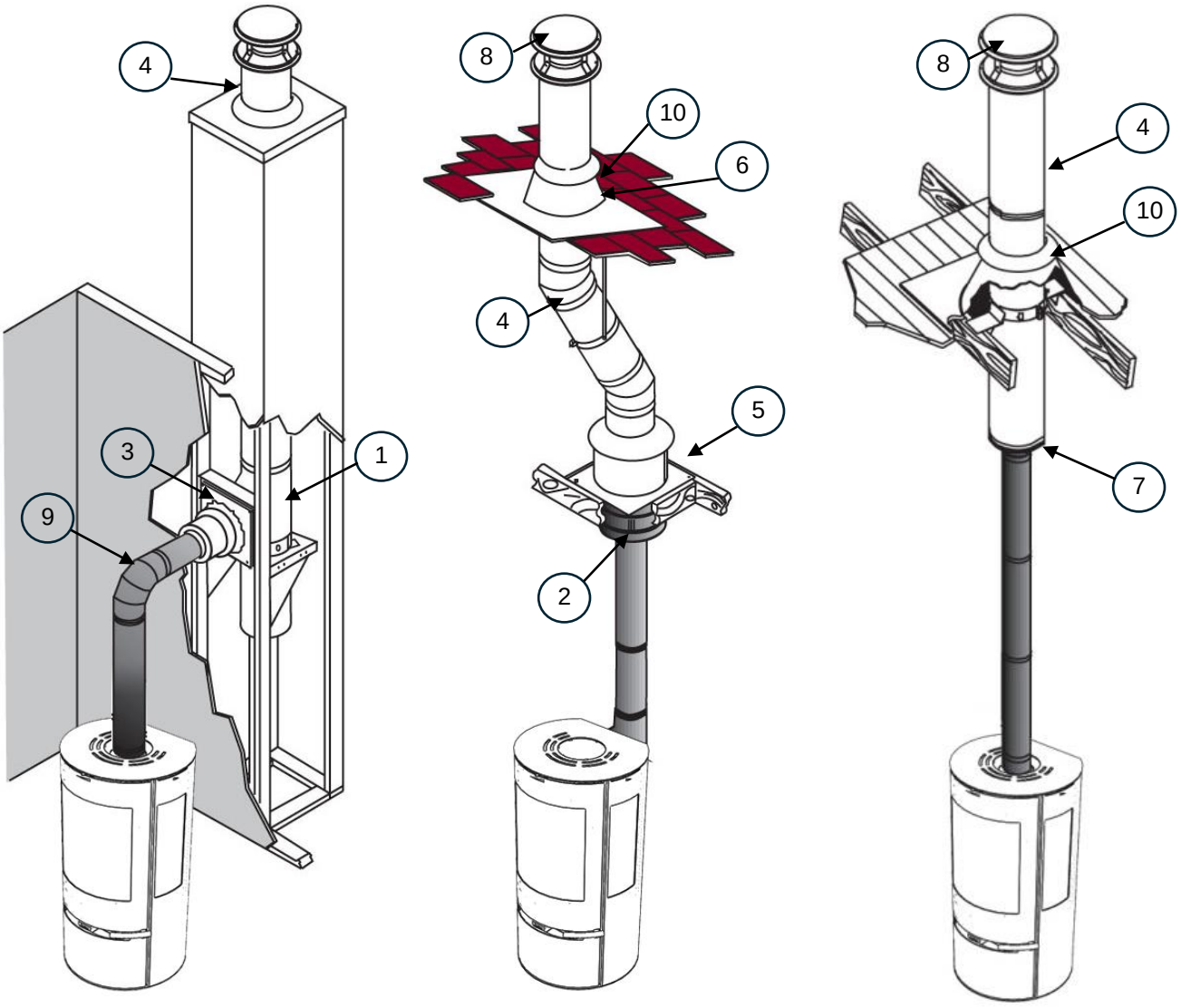
2.2 Minimum chimney height

The top of the chimney should be tall enough to be above the air turbulence caused when wind blows against the house and its roof. The chimney must extend at least 3 ft. (1 m) above the highest point of contact with the roof, and at least 2 ft. (60 cm) higher than any roof line or obstacle within a horizontal distance of 10 ft. (3 m).



2.3 Wall thimble installation

Wall Thimble must be installed with an appropriate length of chimney pipe for all horizontal through-the-wall installations. To accommodate thicker walls, the telescoping pieces of the Wall Thimble can be separated, and a field-fabricated extension may be installed.



#	Component	#	Component
1	Tee with Tee Cap	**6**	Flashing
2	Ceiling Support Box	**7**	Universal Adapter for 2100 chimney
3	Wall Thimble	**8**	Chimney Cap
4	Chimney Pipe	**9**	Elbow
5	Attic Insulation Shield	**10**	Storm collar

Please note: Components shown may differ from manufacturer to manufacturer.

Refer to our Typical Installation drawings to select the appropriate component parts for your installation.

- Chimney Adapter must be used when connecting pipe to a Ceiling Support Box or Finishing Collar. When connecting pipe, a Chimney Adapter, Slip Connector, or Snap-Lock Adapter must be used.

- Firestop Radiation Shield must be used when a chimney passes through a floor or ceiling without a support box.

The optimum combustion is achieved at a constant chimney draft of 0.04 à 0.05 in. w.c (0.10 to 0.14 mbar) measured in the flue pipe above the stove. There are many factors that affect the chimney draft, including the outside temperature, wind strength and surrounding buildings. Contact your local chimney sweep for more advice.

Existing Flue System

This unit is designed to connect to an existing flue system, such as masonry or a pre-manufactured Class A pipe system. If you have a masonry chimney the inside should be checked for cracks in the liner; if there is no liner in the chimney, we recommend installing a stainless-steel liner. If you already have a steel liner it should be carefully checked for buckling, warping or cracks. With either type system it is absolutely necessary to clean it before installation of this stove. A qualified chimney sweep can clean and inspect your system, and in many cases find problems the homeowner might overlook. The sweep can normally do chimney repairs or recommend a qualified person to do so.

Do not connect this stove to a flue system serving another heating appliance. do not install a flue damper in the exhaust venting system of this unit.

2.4 Flue Connection

Aduro Hybrid Stove leaves the factory with the flue outlet mounted on the top. If you require the flue outlet on the back, remove the round circle from the rear cover at the upper rear of the stove and then exchange the exhaust connector (located on the top outlet above the stove) with the cover plate (that covers the rear outlet). When mounting the exhaust connector or the cover plate, it is very important that all the bolts are in tight and the gasket makes an airtight seal. The top outlet is finished with the plate that lies in the ash drawer. A flue pipe with an internal diameter of 150 mm should be used for Aduro stoves. A flue pipe of 6in can also be used if it is paired with the adapter given with the product.

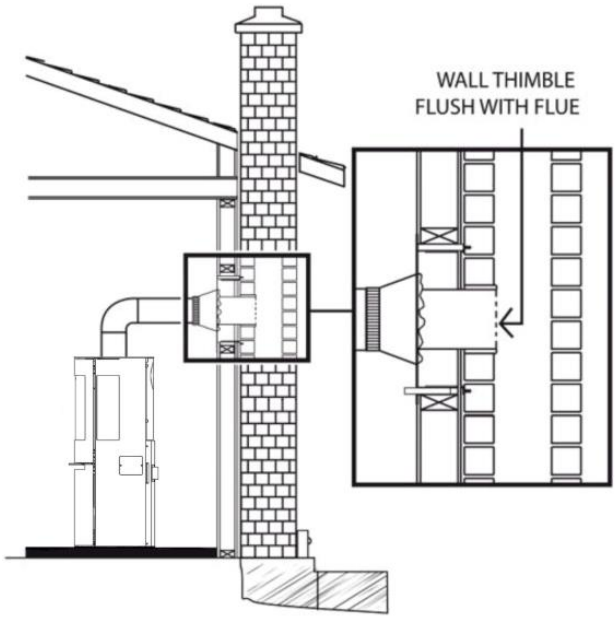
2.5 Connection to a brick chimney

If the stove is being connected to a code-approved brick chimney, the rear outlet should be used, or a curved flue pipe via the top outlet.

After measurement, a hole is made in the chimney in which the pipe sleeve is placed, and fireplace mortar is used to seal it in place. The stove is placed in position and the flue pipe is put in place. A thin gasket is placed between the flue pipe and the pipe sleeve to seal the joints.

The flue pipe should protrude 2 to 4 in (5–10 cm) into the pipe sleeve but must not block the opening in the chimney (see the illustration to the right).

Use a 24 MSG black chimney connector or listed double wall chimney connector. Refer to local codes and the chimney manufacturer's instructions for precautions required for passing a chimney through a combustible wall or ceiling. Remember to secure the chimney connector to the product using a minimum of three screws to each adjoining section.



Connector pipe should be 24-gauge or thicker steel pipe and eighteen inches (18") from a combustible wall or ceiling. if you are using double wall or shielded pipe the clearance can be reduced to six inches (6"). Follow the pipe manufacturer's installation instructions and directions for passing through combustible walls and ceilings. check your local codes.

2.6 Connection to the existing chimney (using single wall or double wall chimney connector)

A chimney connector is the double-wall or single-wall pipe that connects the stove to the chimney. The chimney itself is the masonry or prefabricated structure that encloses the flue. Chimney connectors are used only to connect the stove to the chimney. Double-wall connectors must be tested and listed for use with solid-fuel burning appliances. Single wall connectors should be made of 24 gauge or heavier gauge steel. Do not use galvanized connector; it cannot withstand the high temperatures that smoke and exhaust gases can reach, and may release toxic fumes when under high heat. The connector must be 6 inches (150mm) in diameter.

If possible, do not pass the chimney connector through a combustible wall or ceiling. If passage through a combustible wall is unavoidable, refer to the sections on Wall Pass- Throughs. Do not pass the connector through an attic or roof space, a closet or similar concealed space, or a floor or a ceiling, when installing the chimney connectors.

It is important to keep the flue gases moving smoothly in the right direction. Do not vent into a large void; rather form one continuous section all the way up. Use mild bends (e.g. 45º vs. 90º) rather than sharp angles where a change of direction is required. All parts of the venting must be accessible for cleaning purposes.

In horizontal runs of chimney, maintain a distance no less than 18 in. (45 cm) from the ceiling. Keep it as short and direct as possible, with no more than two 90 degree turns. Slope horizontal runs of connector upward 1/4 inch per foot (20 mm per meter) going from the stove toward the chimney. The recommended maximum length of a horizontal run is 3 feet (1 m), and the total vertical length should be no longer than 8 feet (2.5 m). Information on assembling and installing connectors is provided by the manufacturer's instructions.

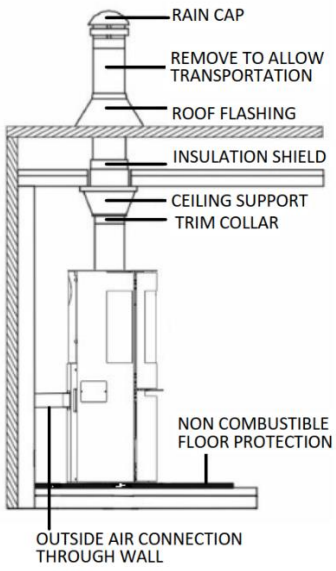
Be sure the installed stove and chimney connector are correctly distance from near by combustible materials.

2.7 Factory-built metal chimneys in mobile homes

For use in a mobile home (if allowed), this stove is to be connected to a 6" (15 cm) double wall factory built chimney pipe conforming to CAN/ULC 629 or UL 103 standards type HT for 650°C(1200°F) Factory-built chimneys.

The total length of the flue system should be at least 12 feet including elbows, from the top of the stove.

To maintain an effective vapour barrier, insulation and waterproof at the chimney and outside flue pipe, a roof flashing must be installed and sealed with silicone adhesive.



2.8 Clearances to combustible surfaces

No part of the stove or flue pipe may be located closer to combustibles than the minimum clearance figures given.

Clearances may only be reduced by means approved by the regulatory authority.

The clearances shown in this section have been determined by tests according to procedures set out in safety standards CAN/ULC S627 (Canada), UL 1482 (U.S.A.) and UL 737 (U.S.A.). When the stove is installed so that its surfaces are at or beyond the minimum clearances specified, combustible surfaces will not overheat under normal and even abnormal operating conditions.

The clearances to combustible walls may be slightly different in Canada and the U.S.A. and may also differ depending on whether single or double wall flue pipe is used. Make sure to choose the correct clearance for the stove location and type of flue pipe.

The clearances of the appliance and the flue pipes must be met individually, meaning the appliance cannot be installed closer to the combustible materials than the single or double wall pipe allows. For a safe way to reduce clearances refer to section"5. Reducing Wall and Ceiling Clearances Safely" of this manual.

2.8.1 Minimum clearances to combustibles

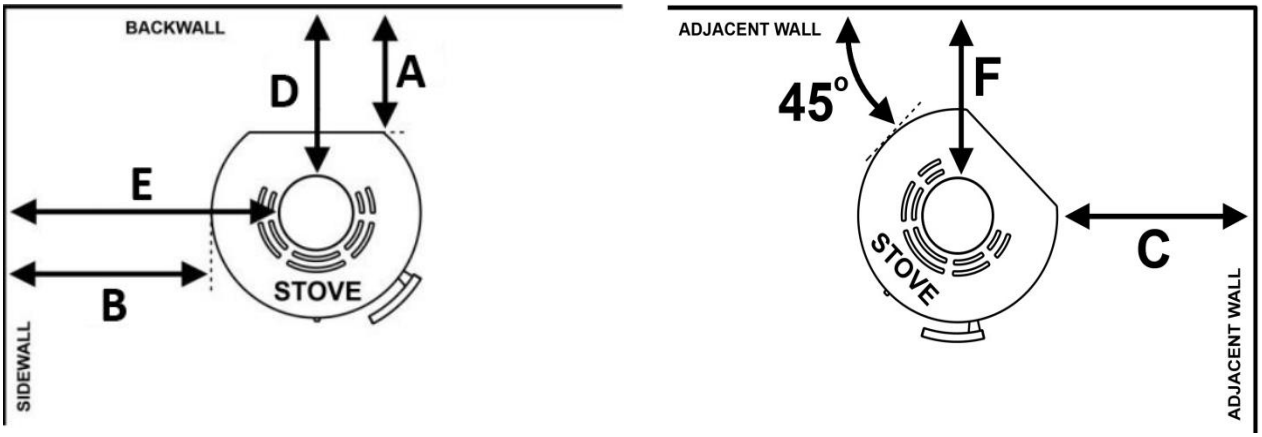
	APPLIANCE CLEARANCES WITH SINGLE WALL PIPE CONNECTOR		**APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR**	
	Canada	**USA**	**Canada**	**USA**
A	11" (279 mm)	11" (279 mm)	6" (152 mm)	6" (152 mm)
B	29" (737 mm)	29" (737 mm)	29" (737 mm)	29" (737 mm)
C	17 ½" (445 mm)	17 ½" (445 mm)	17 ½" (445 mm)	17 ½" (445 mm)

Minimal floor to ceiling clearances: 72"

If the above clearances are met, then the distances measured from the flue outlet will be:

	DISTANCES[4] FROM PIPE CONNECTOR WITH SINGLE WALL PIPE CONNECTOR		**DISTANCES[4] FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR**	
	Canada	**USA**	**Canada**	**USA**
D	18" (457 mm)	18" (457 mm)	12 ½" (318 mm)	12 ½" (318 mm)
E	36" (914 mm)	36" (914 mm)	35 ½" (902 mm)	35 ½" (902 mm)
F	24 ½" (622 mm)	24 ½" (622 mm)	24" (610 mm)	24" (610 mm)

[4] The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.



2.8.2 Installation with heat shield AC02762[5]

To reduce the clearances of an appliance with a single wall pipe connector, use instead the heat shield certified with a double wall pipe connector to be as close as 6" from combustible materials. Only in this case, the same clearances as a certified double wall pipe connector can be used. Refer to the booklet in the screen options to obtain the dimensions to be respected.

	APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR	
	Canada	**USA**
A	4" (102 mm)	4" (102 mm)
B	4" (102 mm)	4" (102 mm)
C	4" (102 mm)	4" (102 mm)

	DISTANCES[6] FROM DOUBLE WALL-PIPE CONNECTOR	
	Canada	**USA**
D	10 ½" (267 mm)	10 ½" (267 mm)
E	10 ½" (267 mm)	10 ½" (267 mm)
F	10 ½" (267 mm)	10 ½" (267 mm)

If the clearance reduction is on the same side as the door handle, position the stove at a minimum of 6 inches from the side wall (clearance B), otherwise it may be located at the clearance shown in the table above.

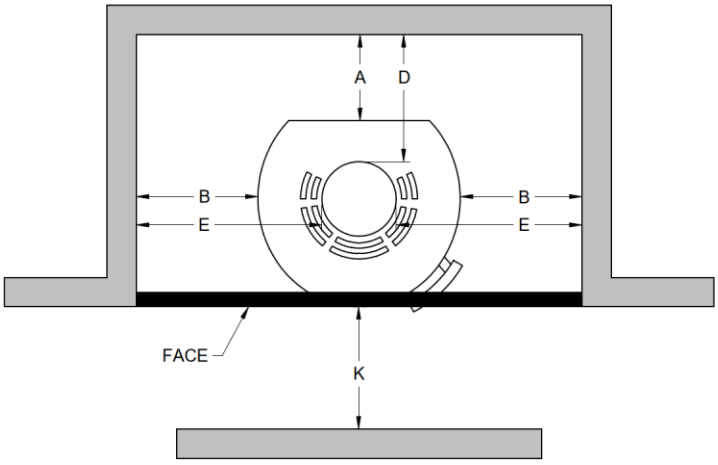
[5] Note that to reduce the clearances of an appliance using a single wall pipe connector, the use of a heat shield certified with the single wall pipe connector to be used as close as 6" from combustible materials must be used. Only in this case, the same clearances as a certified double wall pipe connector can be used.

[6] The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.

2.8.3 Installation inside a combustible alcove

	APPLIANCE CLEARANCES WITH DOUBLE WALL PIPE CONNECTOR	
	Canada	**USA**
A	6" (152 mm)	6" (152 mm)
B	29" (737 mm)	29" (737 mm)
D	12 ½" (318 mm)	12 ½" (318 mm)
E	35 ½" (902 mm)	35 ½" (902 mm)
K	48" (1219 mm)	36" (914 mm)

Minimal floor to ceiling clearances: 72"



2.8.4 Installation in a mobile home

It is strictly forbidden to install a unit with a single wall pipe in a mobile home.

	DISTANCES[7] FROM PIPE CONNECTOR WITH DOUBLE WALL PIPE CONNECTOR	
	Canada	**USA**
A	6" (152 mm)	6" (152 mm)
B	27" (686 mm)	27" (686 mm)
C	17 ½" (445 mm)	17 ½" (445 mm)
D	12 ½" (318 mm)	12 ½" (318 mm)
E	33 ½" (851 mm)	33 ½" (851 mm)
F	24" (610 mm)	24" (610 mm)

Minimal floor to ceiling clearances: 84"

[7] The pipe distances listed in this table refer to the distances obtained when the stove is installed in accordance with the appliance clearances above mentioned.

2.8.5 Installation in a mobile home with heat shield AC02762

It is strictly forbidden to install a unit with a single wall pipe in a mobile home.

	DISTANCES[8] FROM PIPE CONNECTOR WITH <u>DOUBLE</u> WALL PIPE CONNECTOR	
	Canada	**USA**
A	4" (102 mm)	4" (102 mm)
B	4" (102 mm)	4" (102 mm)
C	4" (102 mm)	4" (102 mm)
D	10 ½" (267 mm)	10 ½" (267 mm)
E	10 ½" (267 mm)	10 ½" (267 mm)
F	10 ½" (267 mm)	10 ½" (267 mm)

Minimal floor to ceiling clearances: 84"

Install vent at clearances specified by the vent manufacturer.

2.9 Floor protection

This stove is meeting the requirements of CAN/ULC-S627 and is suitable for installation on a combustible floor. However, it must be placed on a non-flammable surface to protect the floor from hot embers that may fall during loading. The floor protection must be a continuous, non-combustible material, such as steel with a minimum thickness of 0.015" (0.38 mm) or ceramic tiles sealed together with grout. Cement board, brick, or any other approved or listed material suited for floor protection. No R factor required. Any type of tile will require a continuous non-combustible sheet beneath to prevent the possibility of embers falling through to the combustible floor if cracks or separation should occur in the finished surface. Check local codes for approved alternatives. No protection is required if the unit is installed on a non-combustible floor (ex: concrete).

Floor protection requirements	**Non combustible material beneath stove**	
	Canada	**USA**
A. Extending distance, back	8” (203 mm)	-
B. Extending distance, right side	8” (203 mm)	8” (203 mm)
C. Extending distance, left side	8” (203 mm)	8” (203 mm)
D. Extending distance, front	18” (457 mm)	16” (406 mm)
E. Under the chimney connector	-	-
F. Beyond each side of chimney connector	2” (51 mm)	2” (51 mm)

[8] Les distances de tuyau listées dans ce tableau se réfèrent aux distances obtenues lorsque le poêle est installé en accord avec les dégagements de l’appareil mentionnés ci-dessus.

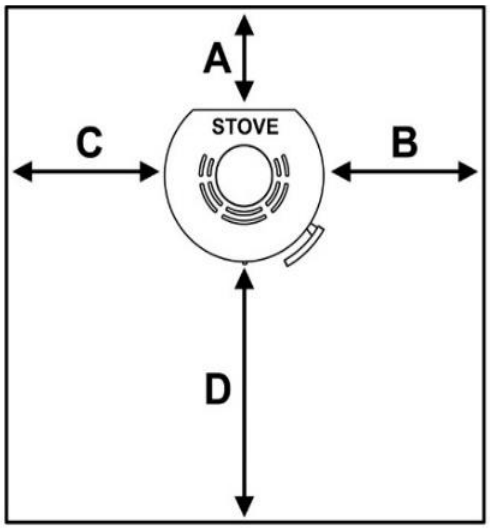
The Aduro Hybrid must be installed on a floor with the adequate load-bearing capacity. If the existing construction does not meet this requirement, appropriate adaptation measures must be taken (e.g. a load-distributing plate).

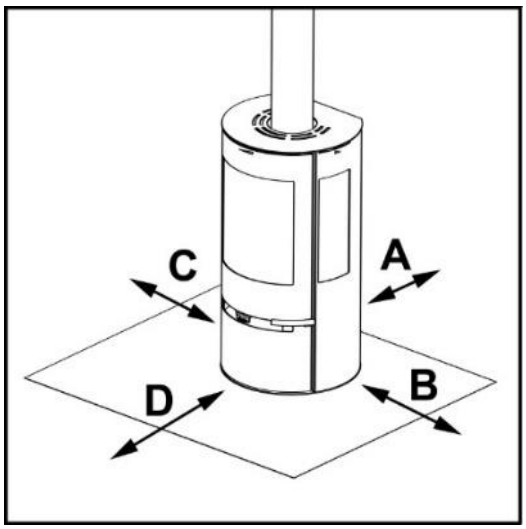
If the floor is constructed of a non-combustible material such as brick or concrete, you are not required to have floor protection. If the floor is constructed of a combustible material such as hardwood, carpet or linoleum, floor protection must be placed between the unit and the combustible material. There are many stoves and wallboards on the market, and you should be very careful in your selection. The board must be UL approved.

It is forbidden to place any combustible material underneath the product.

In Canada, to comply with CSA B365, Installation Code for Solid-Fuel-Burning Appliances and Equipment, any combustible covering beneath the appliance and/or within the area extending horizontally at least 450 mm (18 in) beyond the appliance on any side equipped with a door **(D)** and at least 200 mm (8 in) beyond the appliance on other sides **(A-B-C)**, shall be protected by a continuous, durable, non-combustible pad that will provide ember protection. The 450 mm (18 in) ember protection required on any side with a door shall extend for the full width of the appliance plus the 200 mm (8 in) required on each side of the appliance without a door. Where an appliance is installed less than 200 mm (8 in) from a wall, the ember pad need only extend to the base of the wall.

An ember pad shall not be placed on top of a carpet unless the pad is structurally supported to prevent displacement and distortion:





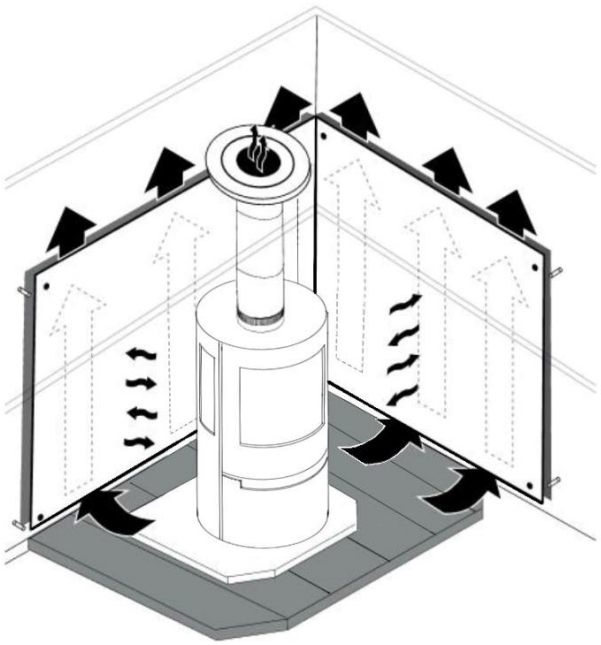
2.10 Reducing wall and ceiling clearances safely

Reducing Wall and Ceiling Clearances Safely

It is often desired to use as little space as possible when installing a wood stove. To do this, it is possible to reduce the clearances safely and install the stove closer to the walls by permanently installing a heat shield between the stove and the flammable material.

The rules for heat shields are sometimes complicated. Read and apply the instructions carefully. Some regions may have different regulations. Consult the local building code or contact the fire department for restrictions, inspection and installation requirements in the area.

Warning: To reduce the clearances of an appliance using a single wall pipe connector, the use of a heat shield certified with the single wall pipe connector to be used as close as 6" from combustible materials must be used. Only in this case, the same clearances as a certified double wall pipe connector can be used. Refer to the booklet in the screen options to obtain the dimensions to be respected.



Shield Construction Rules:

- Adhesives used in shield construction must not ignite or lose adhesive qualities at temperatures likely to be encountered.
- Mounting hardware which extends from the shield surface into combustibles may be used only at the edges of the shield.
- Mounting hardware must allow full vertical ventilation.

A. Minimum clearance between the appliance top and an unshielded combustible ceiling: 25" (635 mm)

B. Shield extension above the appliance: 20" (500 mm)

C. Minimum space behind the shield: 1" (25 mm). In Canada 7/8" (21 mm)

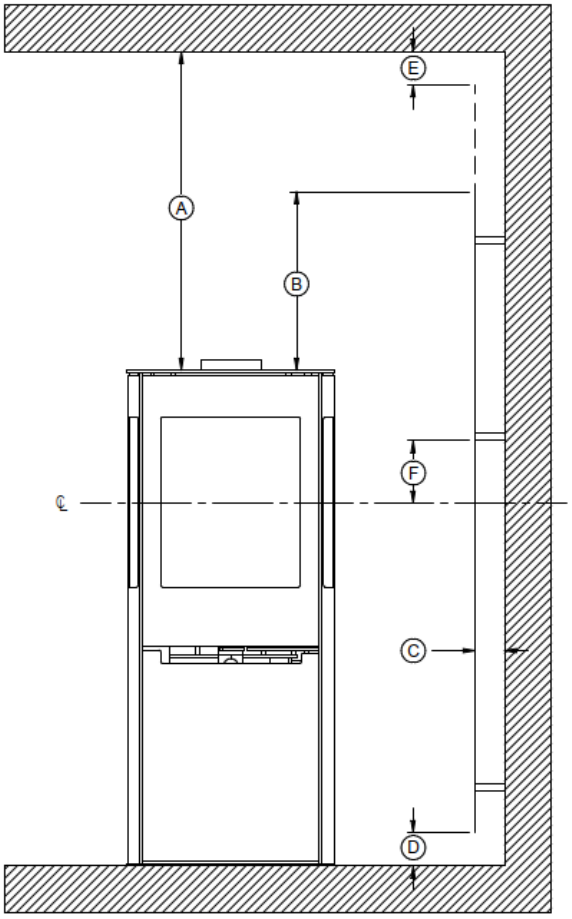
D. Clearance along the bottom of the shield: minimum 1" (25 mm) and maximum 3" (75 mm)

E. Minimum clearance along the top of the shield: 3" (75 mm)

F. Mounting hardware must not be located closer than 8" (200 mm) from the vertical centre line of the appliance.

G. Edge clearance for ceiling shields to side and back walls: 3" (75 mm)

H. Shield extension beyond each side of the appliance: 18" (450 mm)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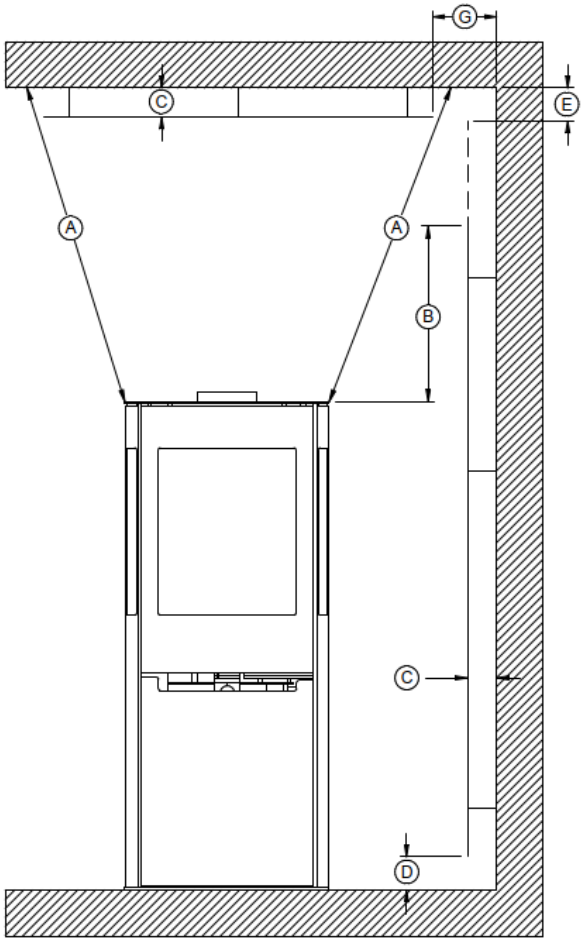
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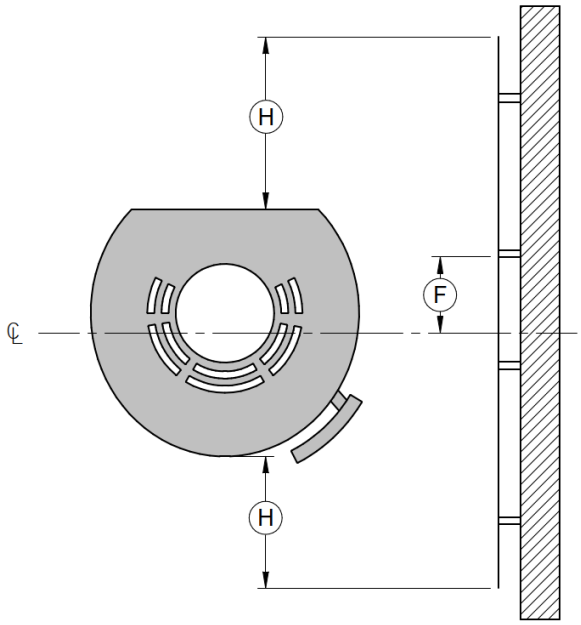
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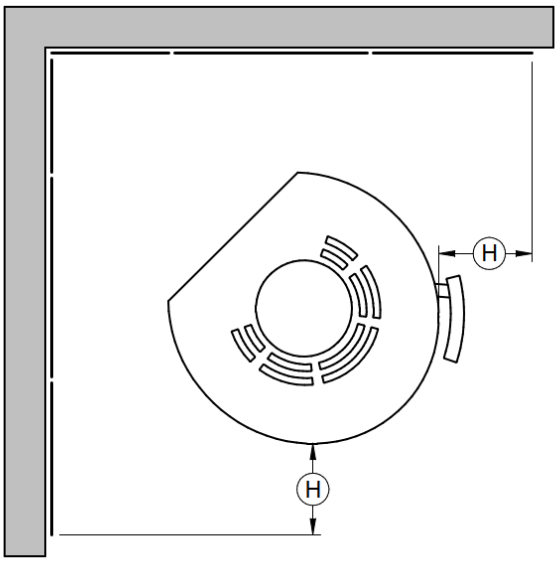
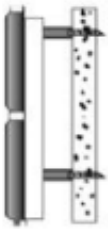
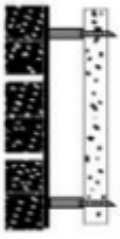

H
H

TYPE OF SHIELD	CLEARANCES MAY BE REDUCED BY THESE PERCENTAGES				
	SIDES AND REAR		TOP (CEILING)		
	CAN / USA (%)	USA MIN.	CAN / USA (%)	USA MIN.	
Sheet metal, a minimum of 24 gauge (0.61 mm) in thickness , spaced out at least 1" (25 mm)* by non-combustible spacers	67	12" (305 mm)	50	18" (457 mm)	
Ceramic tiles, or equivalent non-combustible material, on non-combustible board spaced out at least 1" (25 mm)* by non-combustible spacers	50	18" (457 mm)	33	24" (610 mm)	
Ceramic tiles, or equivalent non-combustible material, on non-combustible board, with a minimum of 24 gauge (0.61 mm) sheet metal backing spaced out at least 1" (25 mm)* by non-combustible spacers	67	12" (305 mm)	50	24" (610 mm)	
Brick, spaced out at least 1" (25 mm)* by non-combustible spacers	50	18" (457 mm)	N/A	N/A	
Brick, with a minimum of 24 gauge (0.61 mm) sheet metal backing, spaced out at least 1" (25 mm)* by non-combustible spacers	67	12" (305 mm)	N/A	N/A	

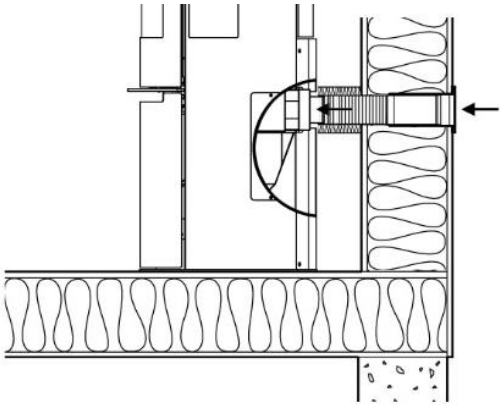
* In Canada this space can be ⅛" (21 mm)

ENGLISH

2.11 Supply of combustion air

WARNING: It is strongly discouraged to connect the Aduro H1 & H2 to a crawl space (an often damp area) as this can cause rust in the combustion chamber.

All wood burning stoves need constant supply of air to ensure a clean and efficient combustion. This is often a problem in modern energy-efficient houses that are very tight. Therefore, the Aduro Hybrid Stove is equipped with external supply of combustion air, where the air to the combustion is supplied from the outside and directly into the wood burning stove. Air from outside can be provided through a channel, which is connected to the connecting pipe under the combustion chamber. The amount of air needed for combustion is 25 m^3/h.



The connecting pipe has an external diameter of 4.15/16in (125 mm), to which you need a pipe with a diameter of 5in (127 mm). If the pipework is more than 39in (100 cm), or if there are bends on the tube, the resistance in the pipe increases significantly. You can easily test the resistance in the pipe by opening a window close to the stove, disconnect the external air supply and then light up the stove. If the combustion looks different than before, there is too much resistance in the external air supply. In warm rooms the channel should be insulated with 1.18po (30 mm) mineral wool covered with a damp-proof course (plastic). It is important that the lead-in between the pipe and the wall (or floor) is sealed with jointing compound.

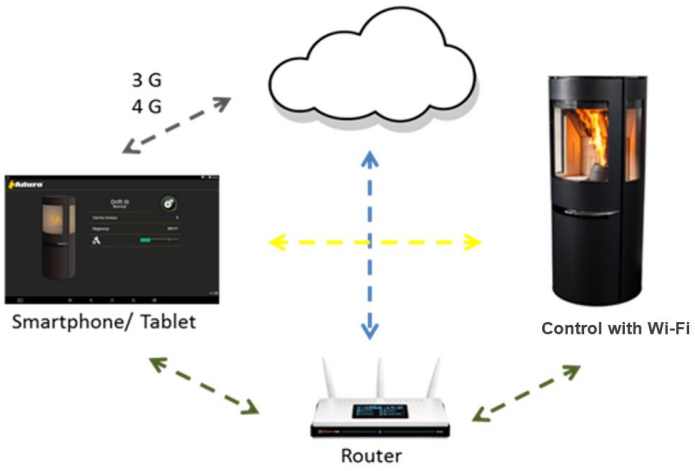
2.12 Electrical Connection

The Aduro Hybrid Stove H1 & H2 comes **with approx. 39 in (1.5m) of power cord** that should be connected to a 120V / 60Hz outlet. Power consumption during operation is approx. 33 W. The cord must be positioned so it is not in contact with hot surfaces or pointed objects.

3. Operating the hybrid stoves

You can operate the hybrid stove in three ways:

1. On the control panel on the stove.
2. Through the Aduro Hybrid app and the local Wi-Fi “Aduro-xxxxx” generated by the stove in its near vicinity.
3. Through the Aduro Hybrid app when the stove is connected to the router/Wi-Fi and thereby connected to Aduro Cloud. When your stove is connected to Aduro Cloud, it can be controlled remotely.



3.1 Aduro Hybrid app

The Aduro Hybrid app is free and can be downloaded from App Store or Google Play. Look for this app icon in your app store:

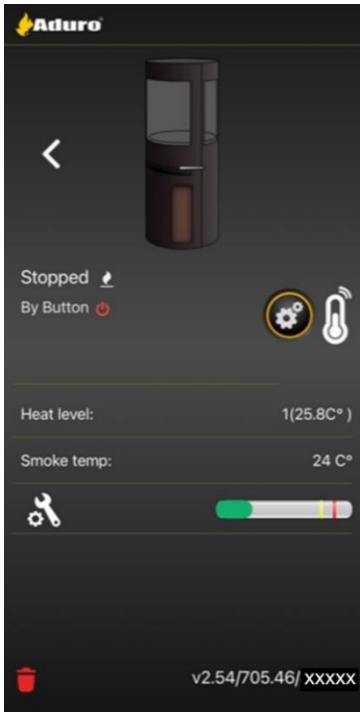
3.1.1 Configuration of the app

1. Connect the stove to power (see section 2.12).
2. Download the Aduro Hybrid app from either Google Play (Android) or App Store (Apple).
3. Follow the instructions of the guide in the app or find the extended guide in our Customer Service Center (https://aduro.microsoftcrmportals.com/en-us/knowledgebase/article/KA-01218)
4. The serial number for operation (5-6 digits) and password for the app (10 digits) can be found on the label inside the bottom front door. It looks like this:

5. Software and app are now updated to the newest version.
6. Now you are connected and able to operate using the app.

3.1.2 App features

The app has several features to choose from: heat level, desired room temperature, and timetable. The timetable makes it possible to plan, how the stove should run during the week. See more here. (https://aduro.microsoftcrm-portals.com/en-us/knowledgebase/article/KA-01139)



On the app's home page, you can see:

- Power status
- Heat level
- Smoke temperature
- External room temperature sensor (if connected)
- CO level*
- App version, firmware version and the stove's serial number.

*Safety measurement which measures whether there is smoke in the back of the system. A green bar is OK. If the bar reaches yellow, the hybrid stove will lower its heat level to 1. If red level is reached, the stove will turn off.

The CO sensor is located by the pellet inlet to prevent the stove from firing when the chimney draft is not sufficient. Sometimes the CO-sensor can be affected by wood pellets. Some pellet bags have a high level of CO that can affect the sensor for up to 24 hours after loading the stove with pellets. If this problem occurs, you can open the door to the pellet container and add fresh air to the room until the CO level has dropped.

From the app's home page, you can also access and adjust the stove's settings via the gear icon, switch between the stoves via the arrows (if you are connected to several Aduro hybrid stoves) or delete a stove from the app via the trash can icon.

3.2 How to connect the stove to the internet

The hybrid stove can only be connected to a 2.4 GHz network (router). It is important to have a strong and stable Wi-Fi signal where the stove is installed, otherwise it may be difficult to connect the stove to the router and thus use the cloud solution, and an unstable connection may occur.

It is recommended to install the stove where there is a maximum Wi-Fi signal with 3 out of 3 or 4 out of 4 . Your smartphone must be connected to the local Wi-Fi network. If you experience any difficulties controlling the stove via the smartphone it can be because the smartphone has a control system that does not meet our requirements (see section 3.2). If you can control the stove through the smartphone but can't connect the stove to the Wi-Fi router, the router is too old and/or the signal too weak. If this is the case, we recommend you buy a new router with a strong signal and a Wi-Fi amplifier that is located somewhere between the router and the stove.

If the hybrid stove can't connect while other electronic devices in the house work well with your Wi-Fi, it is due to the fact that the hybrid stove requires a stronger Wi-Fi signal than other electronic devices.

You can find a guide on connecting the stove to Wi-Fi in our Customer Service Center. (https://aduro.microsoft-crmportals.com/en-us/knowledgebase/article/KA-01218)

3.3 Register your stove on Aduro Cloud

We recommend that you register your hybrid stove on our cloud www.adurocloud.com as soon as the stove is connected to your Wi-Fi router. When you register the stove on Aduro Cloud, you will gain direct access to your stove's data and settings. You can find information and statistics on combustion, temperature, pellet consumption and times of ignitions. You can also see and adjust the stove's settings and check potential alarms.

Registering your stove on Aduro Cloud is also helpful for us and the service technician in case you are experiencing issues with your stove, or when it needs the mandatory service visit from a professional. I You can find instructions for logging into the cloud in our Customer Service Center. (https://aduro.microsoftcrmportals.com/en-us/knowledgebase/article/KA-01131)

4. Firing in the Aduro hybrid stove

During transportation, it may happen that the baffle plate in steel falls out of place. Therefore, before using the stove, please make sure that the baffle plate is properly placed on the hooks to achieve optimum combustion and to prevent soot on the glass.

The burning pot must not be removed during use with either wood nor pellets (doesn't apply when conducting a fast cleaning under the burning pot to clean out ash and cinders). Never use wood with nails and other objects that can damage the auger carrying the pellets. Never place pellets in the combustion chamber. Pellets must be supplied from the pellet container.

You can light the fire using just pellets or light it manually with wood – or a combination where you put firewood in the combustion chamber and use the pellets to light the fire. We recommend a combined usage, since firing with wood gives a higher temperature which burn the remains of the pellets.

WARNING: if the stove is not operated or installed in accordance with the manufacturer's instructions or the fuel quality is poor, creosote buildup may occur within the flue thus increasing the risk of a chimney fire. To reduce the risk of smoke and flame spillage, operate the stove only with door fully closed.

Important safety information

- The Aduro Hybrid Stove will become warm during use and therefore it should be treated with all necessary caution.
- Never keep easily combustible fluids such as petrol in the near of the stove.
- Never use easily combustible fluids to light the fire in the stove.
- Never empty the ash pan when the stove is warm. Embers may still be found in the ash pan for up to 24 hours after the fire has gone out. Please wait to empty the ash pan until you are sure that there are no embers in the ash.
- When lighting a fire, it is important to get the fire burning fast. If the fire does not start quickly and wood only smoulders, it can cause strong smoke formation and in the worst case, cause an explosive ignition of the flue gasses. This could damage the stove.
- The door should be kept closed while the stove is in use. While lighting the fire, the door can stand ajar for the first few minutes.
- The pellet function stops if the door is opened for more than 3 minutes.
- The combustion pot must not be removed during heating phase with either wood nor pellets
- When putting logs in a hot stove, you must always open the startup air intake and make sure that the wood ignites within 2-3 minutes. If the wood does not ignite, add some ignition products and ignite them manually.
- In the event of a chimney fire: Close all the dampers on the Aduro Hybrid Stove and call the fire-fighting service.

4.1 Choosing your fuel

Do not store solid fuel within the hybrid stove installation clearances or within the space required for charging and ash removal.

DO NOT BURN THE FOLLOWING MATERIALS:

- Coal
- Garbage
- Lawn clipping, organic waste or yard waste
- Materials containing rubber, including tires
- Waste petroleum products, paints or paint thinners, or asphalt products
- Saltwater driftwood or other previously saltwater saturated materials
- Paper products, cardboard, plywood, or particleboard
- Materials containing asbestos
- Construction or demolition debris
- Railroad ties or pressure-treated wood
- Manure or animal remains
- Materials containing plastic unseasoned wood.

Burning the above-mentioned materials may result in release of toxic fumes or render the heater ineffective and cause smoke. IF THESE FUELS ARE BURNED, IT COULD CREATE A HIGHER CONCENTRATION OF CO THAN BURNING HARDWOOD.

4.1.1 Recommended fuels

Recommended Wood
All types of natural wood can be burned in your hybrid stove, but it must be well-seasoned and dry. For the correct combustion efficiency and heat output, wood fuel should contain no more than 18%, which roughly corresponds to storing the wood under cover outdoors for two years. The moisture level of the wood can be measured using a moisture meter or by applying washing up liquid to one end of the log and blowing air in the other end. If the wood is dry enough, soap bubbles will appear. The wood should be chopped into logs with a diameter of approx. 4” (10 cm) and a log length of max. 15” (38cm).

When wood fuel is cut to length you should allow for an inch gap between the fuel and side walls of the firebox so as to ensure adequate circulation of the gases. Cut wood should also be split down middle to allow for the quick release of moisture.

To naturally season wood fuel, it should be stacked and stored under cover in an airy location where fresh air can move around the stack. Some soft woods may take as little as one good summer to season whereas harder woods such as oak, maple, and elm may require up to 18 months or more.

Avoid burning overly dry wood that is gray in color as under certain conditions it can cause performance problems, such as back-puffing and poor performance. Well seasoned wood will be light to hold and when looking at the ends it will show signs of cracking from the center outwards.

If your wood spits or sizzles when burned and the door glass of your hybrid stove persistently clouds up, it is possible that your wood is not properly seasoned (although a poor chimney draft can also cause this). Never use driftwood (from the sea) as salt content may cause corrosion; construction wood that may have been impregnated with chemicals should also be avoided.

Wood that has been stored indoors has a tendency to become too dry and will burn too quickly. We recommend that you fell the wood in the winter, when a lot of the moisture in the wood will have been drawn down into the roots. In order to achieve optimum combustion, the wood’s moisture level should not exceed 18 %, which roughly corresponds to storing the wood under cover outdoors for one year. The moisture level of the wood can be measured using a moisture meter or by applying washing up liquid to one end of the log and blowing air in the other

end. If the wood is dry enough, soap bubbles will appear. The wood should be chopped into logs with a diameter of approx. 4in (10 cm) and a log length of max. **16in** (39 cm). We recommend log of 12in length .

Good combustion provides optimum heat output and maximum economy. At the same time, correct firing prevents environmental damage in the form of smoke and malodorous fumes and also reduces the risk of chimney fires. Well-seasoned wood fuel is essential for correct use. Make sure your fuel is kept dry. If the fuel is wet, a large proportion of the heat will be used to vaporize the water, and this energy will disappear up the chimney. It is clearly not only uneconomical to fire with wet fuel but also, as mentioned above, increases the risk of producing soot, smoke and other environmentally damaging by-products.

Burning varnished wood, impregnated wood, chipboard, paper and other waste is strictly forbidden. Burning these materials will damage the environment, the Aduro Hybrid Stove and your own health. Fossil fuels must not be used.

Recommended Pellets

You can only use Ø 0.25pin (6 mm) pellets with a maximum length of 1.5in (40 mm) – Use ENplus or CANplus pellets of **at least premium grade**, **certified by PFI.** We recommend that you use pellets of a good quality – and preferably bright pellets instead of dark pellets. The quality of the wooden pellets has a direct influence on the noise level, the efficiency, and the cleaning interval of the stove. It is important that the pellets are kept dry, as moist pellets can reduce the nominal heat output by up to 50%.

When the firing season is coming to an end, it is important to completely remove all pellets from the pellet container and the augers. If you don't do this, material damage can occur when you start using the stove again.

At our website you can find more information. Go to www.adurofire.com/aduro-hybrid.

4.2 Wood heating

The Aduro Hybrid Stove is intended **for intermittent combustion.** This means that each stoking should burn down to embers before new logs are added. Always respect the "**MAX-load" line** which marks the limit for wood. You can regulate the effect/heat output with the fuel.

To obtain the best possible combustion, you should regulate the effect/heat output with the fuel. Burning small logs provides more powerful combustion than burning large logs as the surface area is greater and more gas is released. The amount of wood in the combustion chamber is another factor that affects combustion. The optimum combustion is achieved by adding two pieces of logs. If you want an enhanced effect, you can add more logs. The nominal heat output is reached by burning approx. 3.3lbs (1.5 kg) per hour, divided between 3 pieces with a length of approx. 8po (21 cm).

If you experience problems lighting the fire or the fire dies after a short time, it can be due to the following reasons:

- The firewood is not dry enough. The firewood should have a moisture content of max. 18%.
- There is a negative pressure in the house.
- The smoke outlet from the outside may be blocked from sooth. This can occur after chimney sweeping. Control the smoke outlet.
- The used amount of wood may have been too small. Therefore, the embers were too weak and cold to light the next load of wood.

If you overfire the hybrid stove and burn more than the recommended amount of wood per hour, there is a risk that the paint on the stove will discolor and later fall off. The stove can later be repainted.

Simple rules for controlling your hybrid stove:

If you want less heat, put fewer logs on the hybrid stove however, it is extremely important to maintain a good layer of glowing embers throughout the combustion process.

Carbon monoxide (CO)

Carbon monoxide (CO) is an odourless gas that is highly toxic which can cause death at high concentration in air. Installation of a CO detector is highly recommended. When unburned logs remain in the firebox and the flame disappears, go outside and look at the chimney exit. If there is visible smoke, it means that there is still combustible to burn but that the fire lacks air to burn properly. In this situation, the CO rate will increase so it is important to react. Open the door slightly and move the log with a poker. Turn it over and create a passage for the air below, making a trench with the coal bed. Add small pieces of wood to restart the combustion.

4.2.1 Air control for wood heating

The stove is equipped with a control under the door, which regulates the primary, secondary and tertiary air upply. The primary combustion air is used at the beginning to get the fire going. Primary air is used to control the fire and make sure the burning power is constant and the secondary and tertiary air burns completely the gases emitted by the wood logs. You must always open the secondary and tertiary air inlets when using the stove.

The damper allows you to adjust the stove's power according to the draft of the flue and the desired heat. The more the damper is pulled, the greater the amount of air brought in, increasing the combustion power. The illustration below shows where the damper is located and what its positions correspond to. Use the written indications at the bottom of the door to see the correct position for the air inlet.

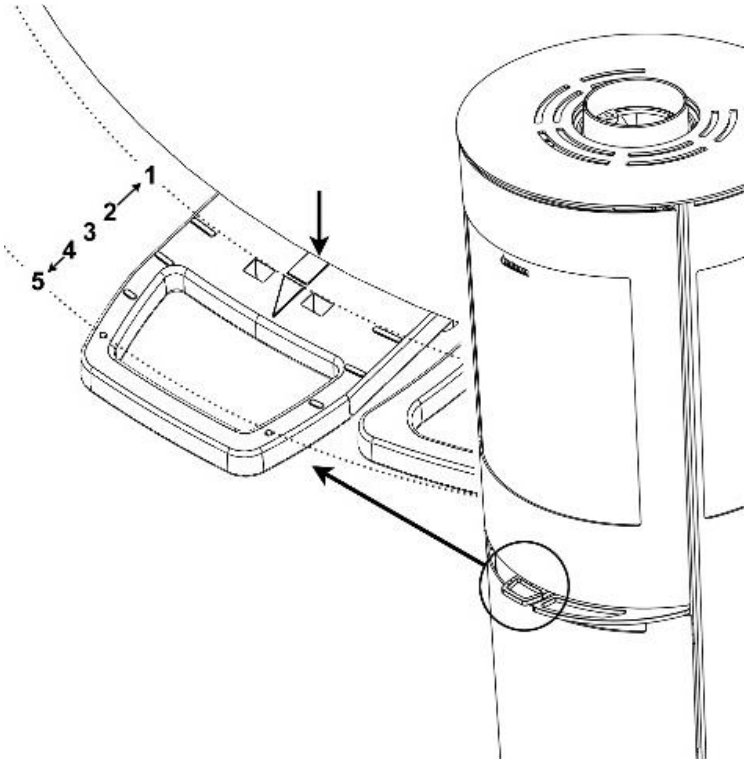
1: Fully open primary, secondary, and tertiary air inlet. This position can be maintained with the Aduro Key, which must be placed in the two holes (see section 4.1.2.1).

2: Closed primary air inlet, fully open secondary and tertiary air inlet.

3: Closed primary air inlet, halfway closed secondary air inlet, and fully open tertiary air inlet.

4: Closed primary and secondary air inlet, fully open tertiary air inlet.

5: Damper pushed all the way in. All air inlet closed (only used when burning wood pellets).



4.2.1.1 Primary air (start-up air)

When you add a new log, the primary air control should be opened until the fire is burning properly To make the best use of your fuel, it is preferable to wait until the layer of embers has sufficiently decreased before adding new logs. You should then open the startup air vent for about 2 minutes to allow the fire to catch on the new logs.

In order to reduce the risk of ash falling from the stove when the door is opened to add more fuel, it is a good idea to open the primary damper for approx. 1 minute before the door is opened. This increases the draft through the stove and reduces the risk that ash will drop on the floor.

4.2.1.2 Secondary air

In normal circumstances, the stove should be working with the secondary air supply open between 60 % and 100 % (the damper is placed between position 2 and 3. See section 4.2.1). You should never close the air supply so far that the flames go out. There should always be visible flames in order to achieve a clean and efficient combustion. A too low supply of air can lead to bad combustion, high emissions, and a low efficiency.

If you want to fire in the stove with the lowest possible effect – around 3 kW – you must close the secondary air almost completely approx. 45 minutes after stoking. At this point there are only few flames, and the stove can burn clean by using the tertiary air from the back of the combustion chamber.

4.2.2 Aduro-tronic

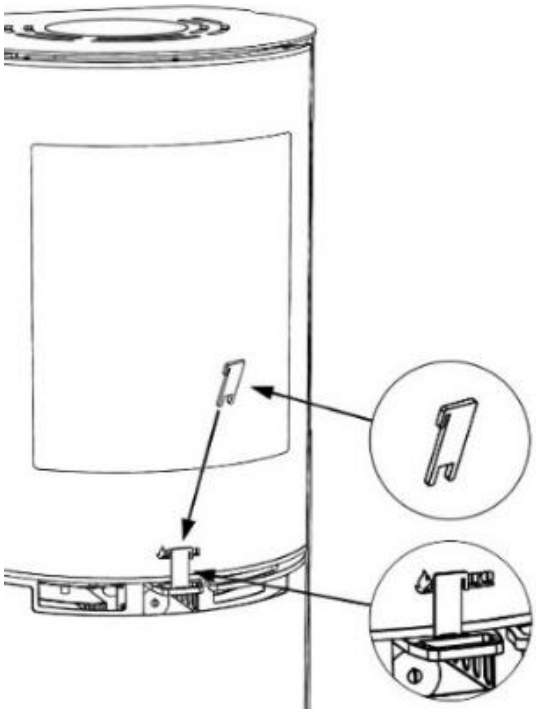
Aduro hybrid stoves are equipped with the patented Aduro-tronic automatic as a standard. Aduro-tronic is a manually operated mechanical start-up device, which works without the use of electricity. It automatically regulates the combustion air and thus secures an efficient combustion. For further information, go to www.adurofire.com.

4.2.2.1 How to operate Aduro-tronic

Lighting with wood only

When lighting a fire in the Aduro Hybrid Stove for the first time, the maximum amount of primary combustion air will be needed to light the fire. For that reason, the primary damper can be kept “forcibly open”. This is done by pulling the start-up damper forward as far as possible and then fixing it with the Aduro Key (see illustration). When the stove is warm and a layer of embers has been created on the bottom of the combustion chamber, the Aduro-tronic can be set to the automatic position, i.e. the Aduro Key can be removed.

Alternatively, you can leave the door ajar the first minutes during lighting the fire (without the key).



When stoking

You activate the automatic by pulling out the damper every time new firewood is added. The Aduro-tronic automatic will then close the damper gradually after the pre-programmed time.

⚠	**Always respect the max load line and never place wood logs above this line**

Regulation of the Aduro-tronic control

The control is pre-set to close the primary air intake within 6 minutes. This setting has been used during testing at the Danish Technological Institute using a standard chimney and ‘standard’ sized logs (approx. 30 cm long, 10x10 cm thick) with maximum moisture content of 18%. In practice, such circumstances can differ, which is why the Aduro-tronic control can be adjusted to your circumstances. If you want a slower intake of primary air (e.g. for a slower flue draft, larger sized wood or for longer intervals between stoking), adjust the screw on the front of the control level using a small allen key to slow closure rate. **If the screw is turned to the right closing time is increased and if turned to the left closing time is reduced.**

4.2.3 The first ignition

⚠	**During transportation, it may happen that the exhaust deflector in steel falls out of place. Therefore, before using the stove, please make sure that the exhaust deflector is properly placed (on the hooks or fastened to the bolts depending on the model) for optimum combustion and preventing soot on the glass.**
⚠	**The control handle will get warm when the stove is in use. Please use the glove provided when you operate the stove.**

During the first firing, which should be carried out using approximately 2lbs (1 kg) of wood, the stoking door must be left slightly open and must not be closed until the stove is cold. This is to prevent the door sealing gasket to stick to the stove.

The first few times the Aduro Hybrid Stove is used, it is normal that there may be some smoke and unpleasant odours from the Aduro Hybrid Stove. This is caused by the heat-resistant paint hardening. Make sure there is sufficient ventilation during this stage. It is also important not to let the fire burn too fiercely the first 2-3 times, so that the Aduro Hybrid Stove has time to expand slowly.

You should also be aware that the stove may make clicking sounds as it heats up and cools down – rather like pouring boiling water into a sink. These are caused by the great differences in temperature to which the materials are being exposed.

4.2.3.1 Lighting the fire manually with firewood

The fire lighting method is very important for starting combustion quickly and efficient.

1. Pull the air control under the door fully out so that startup and secondary air supply is completely open.
2. Place a log of wood crosswise in the combustion chamber and put 2 firelighters close to the log. Light the firelighters and quickly put a new log close to the firelighters and several small logs at an angle above it. Air must be able to reach the firelighters, but the logs should be touching to “warm” each other. We recommend you to build the kindling and start-up fuel like the picture to the right.
3. Keep the door approx. 1 cm ajar, until the glass is too hot to touch. Then close the door. When there are distinct, visible flames and the fire has taken hold, close the startup air intake.

If you overfire the hybrid stove and burn more than approx. 4.5 lbs (2kg) of wood per hour, there is a risk that the paint on the stove will discolor and eventually fall off. The stove can later be repainted. The stove can be repainted, but this is not covered by the manufacturer’s guarantee. In the same way, any other damage to the stove caused by overloading will not be covered by the warranty. If the smoke temperature exceeds 660°F(350°C), it can damage the gear motor.

4.3 Pellets heating

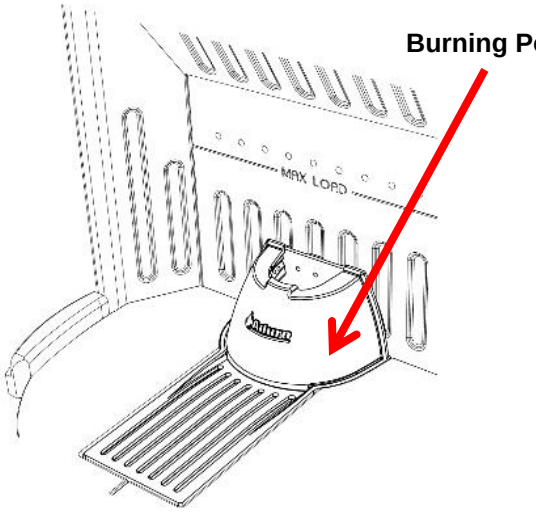
4.3.1 How to add pellets?

Place the enclosed funnel in the opening of the pellet box and add the pellets. The pellets are distributed with a poker in the box to make use of the entire capacity (approx. 28lbs (13 kg) of pellets).

By the first use, the augers must be filled with pellets:

Open the door to the combustion chamber and lift out the front of the burning pot (the black cast iron cone with the Aduro logo) so you can see the pellets. Close the stove's door. Press and hold the **AUGER** button and the augers will start **transporting** the pellets (only at **OFF** mode yellow button). After approx. 12 minutes where you press and hold the **AUGER** button, the auger pipe will be filled with pellets. Stop pressing the **AUGER** button when the pellets are about 2 cm under the auger pipe's top edge. Insert the burning pot and close the stove's door. In section 5 you will find an overview of the different alarms.

Burning Pot



Auger screw button

4.3.2 Ignition with pellets

Before the pellet function of the stove is turned on, you should ensure that there are enough pellets underneath the burning pot. You can do this by moving the burning pot to the side. If there are pellets up to around 3/8in (1 cm) under the edge of the auger tube, there are enough pellets. You can now put the burning pot back in place. Remember to check that it is placed correctly and fits tightly. Then, you can turn on the stove.

4.3.2.1 Ignition via the stove's control panel

Push the **ON/OFF** button and wait until the **ON** button displays a constant green colour. The lighting of the fire will then start automatically, and the pellet burner will start. When the stove is lighting, the combustion chamber will be filled with smoke until the ignition starts. After approx. 6 minutes flames should appear. Normal use should be achieved after 15-20 minutes.

When the smoke temperature reaches 195°F(90°C), the stove will shift from the “warm up mode” to “normal mode” and continue with the last settings. You can manually change between 3 heat levels without using the app by pushing the logo with an auger, which is placed directly under the **ON/OFF** button on the display.

- Step 3 (100 % operation): **‘ON button’** lights green constantly.
- Step 2 (50 % operation): **‘ON button’** flashes quickly.
- Step 1 (10 % operation): **‘ON button’** flashes slowly.

When you want to switch of the pellet burner, push the **ON/OFF** button or use the app.

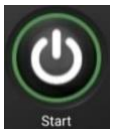
The pellet function can burn up to 24 hours on a full pellet container at level 1, 12 hours at level 2, and 8 hours at level 3. The stove is capable of running day and night, if pellets are added in time.

4.3.2.2 Ignition via the app

Press the gear icon on the app’s home page.

Choose the function you wish to fire with: Heat level, room temperature, or timetable. If timetable is selected, the stove automatically switches on according to the times you have saved in the calendar.

If you choose heat level or room temperature, you can start the stove immediately. Press “Start” to activate ignition.



4.3.2.3 Alarm “Ignition Failed”

If you experience that the stove does not turn on in the first or second attempt but instead shows the alarm “ignition failed”, it is important that you do not try to turn on the stove again. Instead, wait until there is no more smoke in the combustion chamber, and then move the burning pot to the side and scrape the pellets away if they have accumulated.

You can now put the burning pot back in place. Remember to check if it is placed correctly. Then, you can turn on the stove again.

The alarm “ignition failed” is often caused by an insufficient chimney draft. You can create chimney draft by igniting some paper or small pieces of firewood - this can sometimes remove pockets of air in the chimney.

4.4 Lighting the fire with a mix of wood and pellets

4.4.1 Cold stove

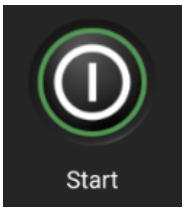
Put dry wood in the combustion chamber - just as if you wanted to start the stove manually (see section 3.4.2). However, you won’t need any firelighters. After this step, the ignition will take place just like at section 3.5.2. The fire is lid with pellets. It will be an advantage, if you start with a closed air inlet until the fire is burning in the pellet burner. After this, you can open the air inlet for easier lighting of the firewood. When the logs have caught fire and the smoke temperature is about **540°F (**280°C**)**, the pellet supply will stop automatically.

4.4.2 The stove in pellet operation

When the stove is in pellet operation, you can always add firewood – you just have to remember to close the door within 3 minutes following loading because of the security inbuilt in the stove. Open the door carefully, the pellet supply will stop and the ALARM will flash red. Add good quality firewood and respect the MAX load line. Close the door again and the combustion of pellets will resume. During the firewood combustion, when smoke temperature

reach about 540°F (280°C), the pellet supply will stop automatically. After this, the stove will change to HYBRID mode.

If you use the function "Heat Level" on the app and want the stove to restart automatically on pellets when the wood has burned out, you can set the stove on standby mode with just 1 click on the button (see illustration). The stove will now be in standby mode and await a smoke temperature below 210°F(100°C) before it starts the pellet combustion and ignites again. However, if you use the function "Desired Room Temperature", the stove will start automatically again when the smoke temperature is below 210°F(100°C).



IMPORTANT!

If the door to the combustion chamber is open for more than 3 minutes, the pellet combustion will shut down and must be started again by pushing **ON/OFF**. The stove starts when the smoke temperature is below 100 degrees. If the stove **flashes** green **ON**, it means that the stove will start but is waiting for the smoke temperature to be below 100 degrees C or timer.

When you want to switch off the pellet burner, push the **ON/OFF** button. If you open the stove door during operation, the red **ALARM** will light. If you close the door before 3 minutes, the pellet burner goes back to **ON** mode automatically.

5. The chimney

With natural draft the draft in the chimney will be between 0.07 à 0.1 in w.c. (18 et 25 Pa) when conditions are optimum. There are many factors that affect the chimney draft, including the outside temperature, wind strength, and surrounding buildings. There are no requirements with respect to specific chimney heights, but a chimney must be tall enough to provide a good draft. Furthermore, the draft in the chimney can also be impacted by the fresh air intake or an elbow in the chimney that might restrict too much the flow or air or exhaust gases. If the recommended chimney draft is not achieved, there may be problems with smoke out of the door by firing. An uncontrollable burn or excessive temperature indicates excessive draft.

Data for chimney calculation	Wood	Pellets
Flue temperature at [20°C]	273	210
Chimney draft at testing power [mbar]/[Pa]	0.13/13	0.11/11
Flue gas mass flow [g/s]	5.7	4.7

5.1 Inadequate draft in the chimney

If you experience poor draft in the stove after the installation, please make sure that there is nothing in the chimney to restrict the smoke and that no nearby buildings or trees affect the winds around the chimney.

If the chimney is too short, leaks, or is inadequately insulated, there may be problems with the chimney draft (let the chimney sweep assess this). The draft should be sufficient during the ignition phase when the stove/chimney is cold to provide a clean combustion and prevent smoke leakage. Therefore, we recommend a chimney draft around 0.02 in. w.c. (5 Pa) in the ignition phase when it is still cold.

Once the ignition is a success and the smoke temperature is rising, it is important that the chimney draft reaches a stable area around 0.07 à 0.1 in w.c. (18 et 25 Pa) in operation (1 hour after ignition) when the chimney/stove is hot. The draft in the area of 0.07 à 0.1 in w.c. (18 et 25 Pa) when the stove is hot is essential in order to achieve

an optimum and clean combustion and avoid problems such as pellet accumulation and smoke leakage. Therefore, we recommend that you measure your chimney draft when the chimney is cold and when it is hot after 1 hour in operation.

In practice, the chimney draft will differ – especially in cold condition. Therefore, the best indication of the chimney draft is to measure the draft when it is hot. If the chimney sweep judges the draft to be sufficient, but you still have problems lighting a fire in “wood mode”, try extending the fire lighting phase by using more thin pieces of kindling and 1-2 firelighters, so that the chimney gets thoroughly warm. The chimney will not draw at optimum effect until it is warm. When a layer of embers has been formed, add 2-3 dry logs.

When in "pellet mode", the stove will not be able to ignite and instead give the alarm “failed ignition” if there is not enough chimney draft in the ignition phase. If you experience that the stove does not turn on in the first or second attempt but instead shows the alarm “ignition failed”, it is important that you do not try to turn on the stove again. Instead, wait until there is no more smoke in the combustion chamber, and then move the burning pot to the side and scrape the pellets away if they have accumulated. You can now put the burning pot back in place. Remember to check if it is placed correctly. Then, you can turn on the stove again. The alarm “ignition failed” is often caused by an insufficient chimney draft. You can create chimney draft by igniting some paper or small pieces of firewood - this can sometimes remove pockets of air in the chimney.

5.1.1 Supply of Combustion Air

For the stove draft to work correctly, the room must have an outside or fresh air inlet, with a minimum of 5" diameter, from the house exterior to the room, that is at least sufficient to replenish the volume of air that comes out of the chimney flue. In well insulated houses an air inlet must be fitted through the outer wall that is not exposed to the prevailing winds, depending on the surrounding conditions of the house. If a vent is installed, it must be fitted in such a way that it cannot be blocked. A fresh air intake registers with a airtight damper may be installed to help prevent any uncomfortable air draft.

When the stove and the chimney are completely cold, it may be necessary before starting up to provide an external air supply by opening a door or a window for a short period. A house constructed or renovated in a waterproof manner is prone to not having the air exchange required for the proper functioning of a wood heating appliance. In that case, avoid, during startups, to use appliances that evacuate air outside of the house, such as:

- Cookstove hood
- Bathroom vent
- Air exchange system
- Ventilated central vacuum cleaner
- Dryer

The supply of fresh combustion air can be done in several ways, provided they comply with CSA B365 and NFPA211. In Canada, wood stoves are not required to have a combustion air supply from outside, except for mobile homes. Research has shown that outside air supply does not compensate for the depressurization of the house and may not be sufficient to provide a supply of combustion air in windy weather. However, to reduce the risks against smoke spillage due to house depressurization, Page 32 Wood Stove - Owner's Manual ENGLISH a carbon monoxide (CO) detector is required in the room where the stove is installed. The CO detector will provide warning if for any reason the wood stove fails to function correctly.

5.2 Chimney and smoke

If you experience smoke coming out of the stove or the start section of the smoke pipe, it could be due to certain weather conditions. On stormy or cold winter days or if the chimney has not been used in a while, a cold plug can be created in the chimney, meaning the natural draft will be at its minimum.

If the chimney is cold and cold plugs are created, you may experience smoke leaks during the ignition and startup phase. In this situation there can be more smoke than usually in the combustion chamber and some of it might

leak out of the stove. Therefore, if you have a cold chimney that has not been used for a while, we recommend that you use some wood sticks to heat the chimney and eliminate the cold plug before turning the pellet function on.

It is normal that a rear vent configuration produces more smoke when you open the stove door.

5.3 Draft and pellet combustion

The pellet combustion is affected by the draft in the chimney. If necessary, it is important to reduce or improve the draft with a damper in the chimney or with a smoke exhauster, e.g. Aduro DraftOptimizer, if the draft is too high or insufficient.

You can connect Aduro DraftOptimizer to Aduro Hybrid Stove and control it automatically to ensure optimum draft. For further information, go to www.adurofire.com.

Aduro Hybrid has certain standard settings when it comes to the speed of the auger and the fan, and in order to achieve the most efficient / clean pellet combustion, it may sometimes be necessary for the user to adjust these settings to customize the stove to their own installation such as chimney, smoke pipe, external factors from the outside etc. If you're interested in knowing more about the app's features/functions, calibration, and various FAQ's, then you can read more about it on our website www.adurofire.com.

Below 3 examples of pellet combustion, depending on the draft level:

Optimum flame	**Flame generates high quantity of "sparkles" = the chimney draft is too high**
	
Flame is low and burning pot is overflown = the chimney draft is not sufficient	
	

Aduro hybrid stoves come with standard settings regarding e.g., the speed of the augers and the performance of the fan. To achieve the most efficient pellet combustion it may be necessary to adjust these settings to match your specific installation and your chimney draft.

You can partly compensate for a poor chimney draft by increasing the fan speed on the hybrid stove's three heat levels.

You can adjust this in the app by pressing the gear icon on the home page:

Now press "Adjust":

Unlock the settings by pressing the lock icon in the top right corner:

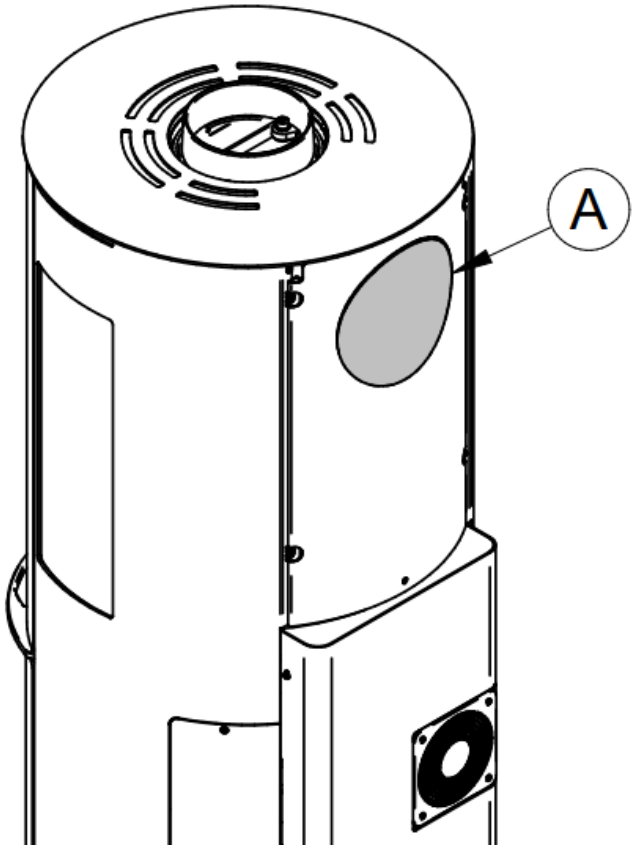
It may also be necessary to reduce the chimney draft with a flue damper or increase the draft with a smoke exhauster, e.g. Aduro DraftOptimizer.

5.4 Rear vent configuration

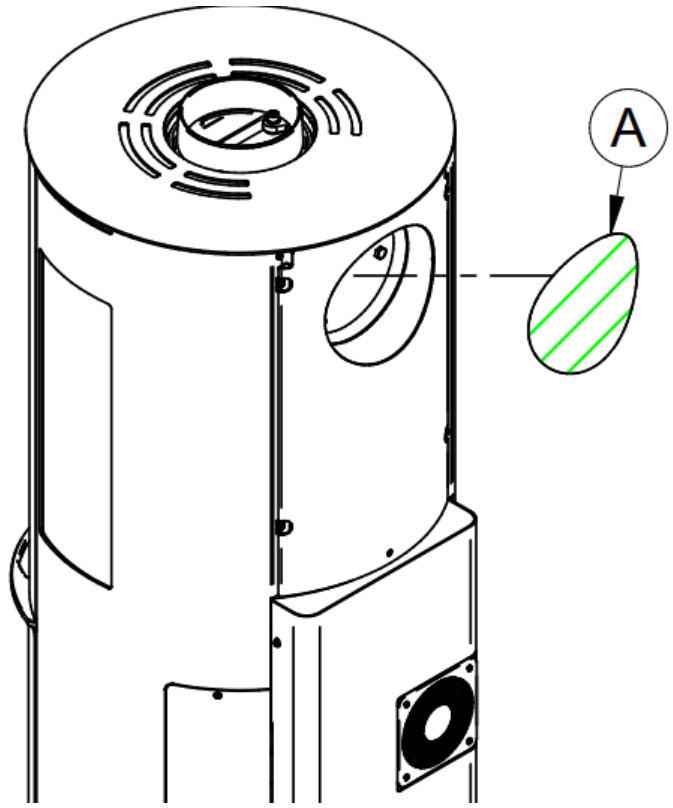
During operation, a rear vent installation might produce more smoke when opening the stove door.

It is posible to install the chimney at the back of the Aduro hybrid Stove. The following instructions show how:

Locate the rear panel of the Aduro Hybrid stove and cut out the round pre-cut shape in section (A) using tin snips.

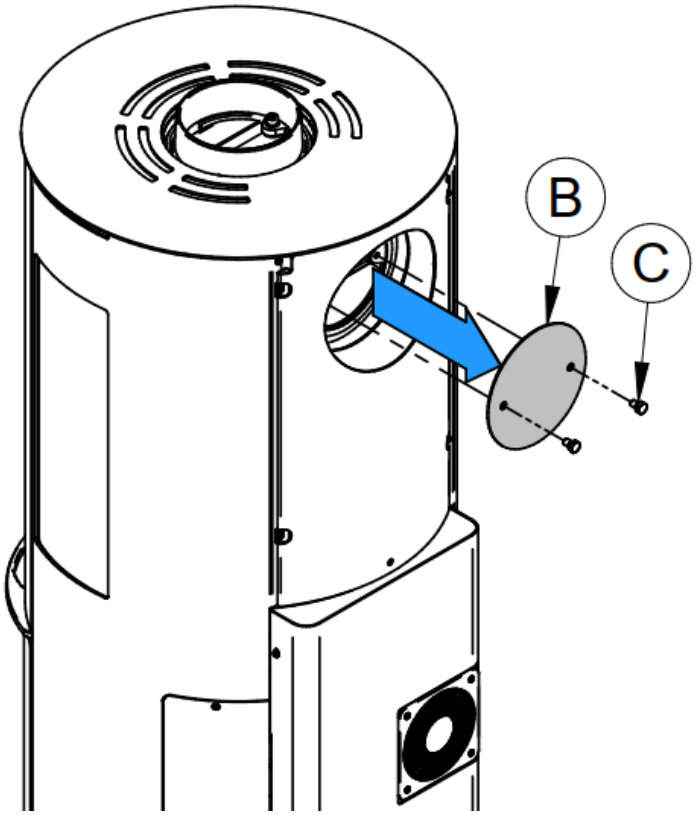


Recycle cutout (A).



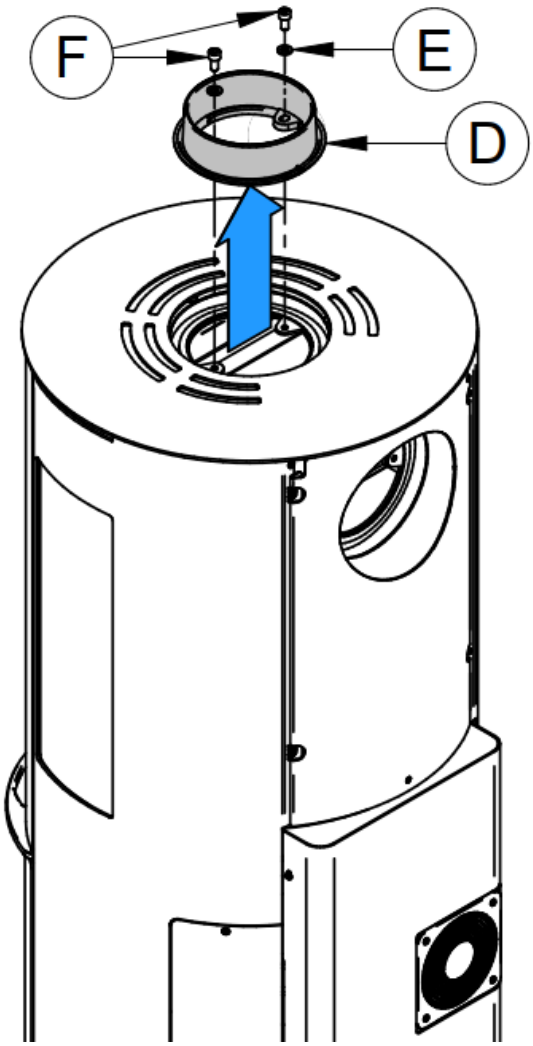
Unscrew the 2 screws (C) from the pipe cover (B). Remove the pipe cover (B).

Keep the removed parts.



Unscrew the 2 screws (F) from the chimney flange (D).
Remove the washers (E) and the chimney flange (D).

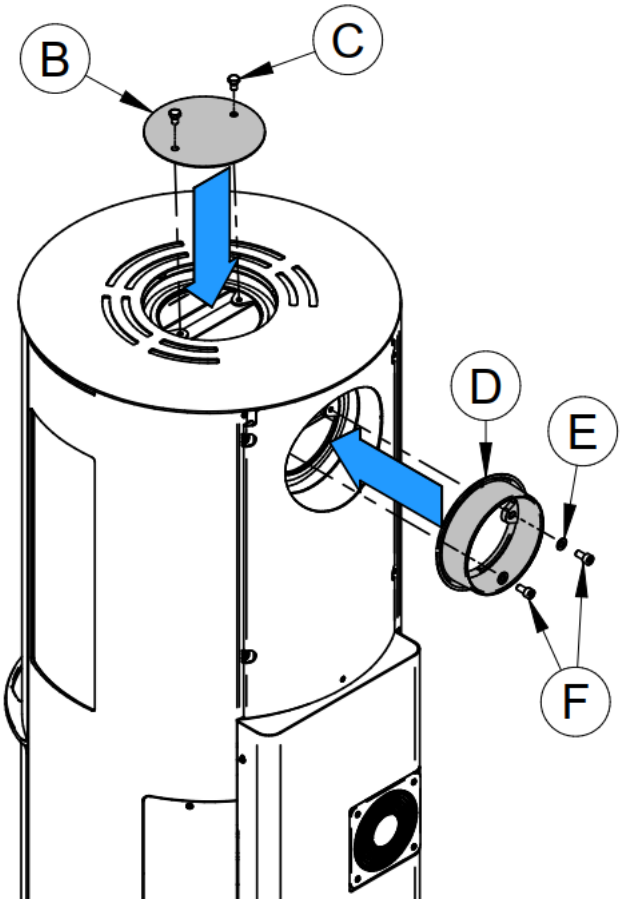
Keep the removed parts.



Swap the positions of the pipe cover and the chimney flange.

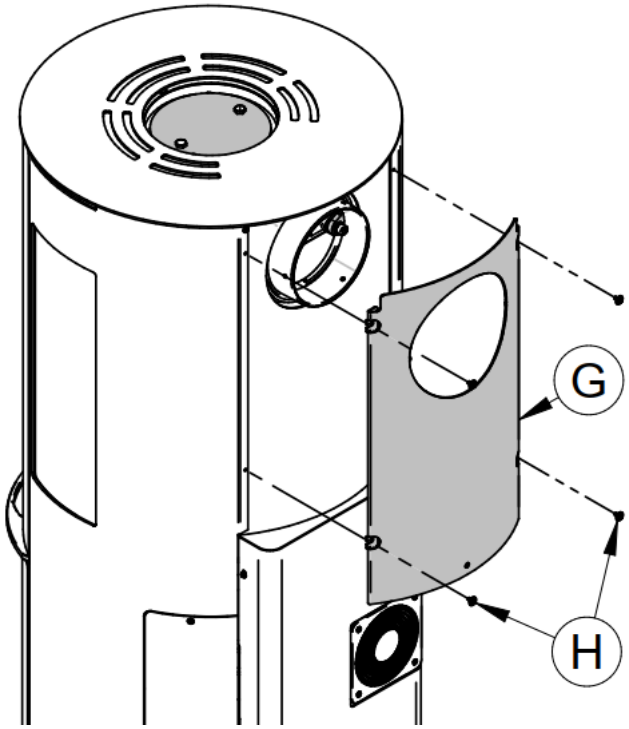
The cover (B) now goes on top, and the chimney flange (D) now goes at the back.

Screw in the respective screws for the cover and the flange.

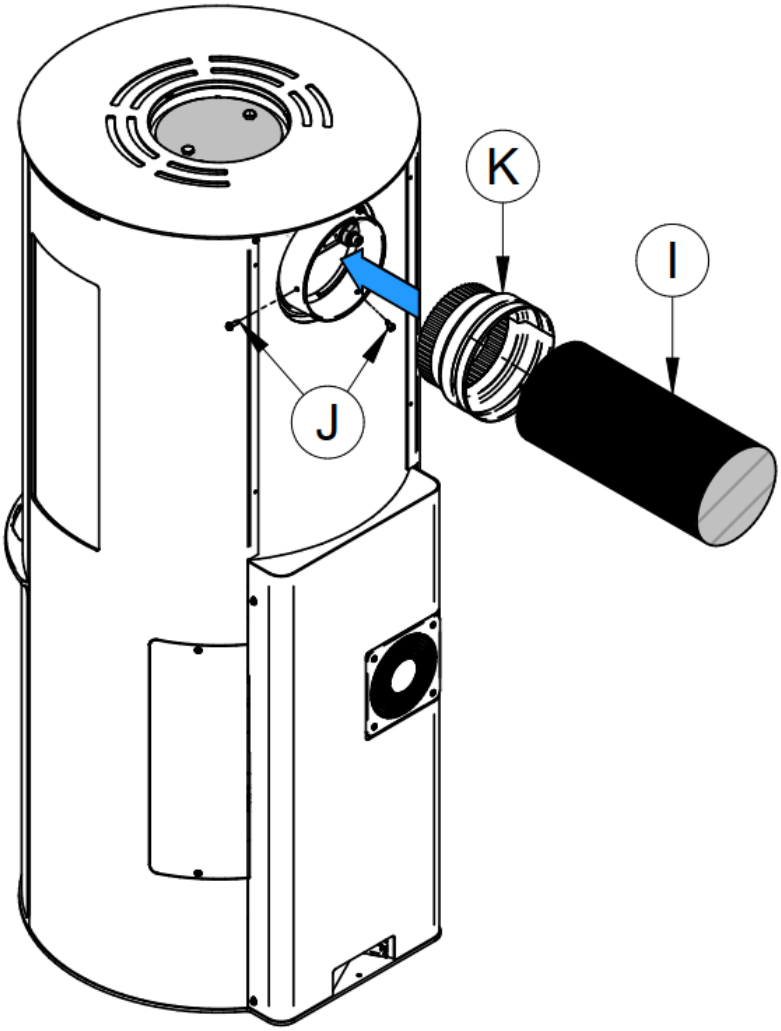


To install a section of chimney, remove the rear part of the Aduro (G) by unscrewing the 4 screws and their washers (H).

Keep the part and the screws.



Insert the adapter (K) into into the flange. Secure it with 3 self tapping screws (J). Insert a section of the pipe (I) in the adapter (K) then secure the pipe section using 3 self-tapping screws (J).



Reattach the rear part (G) of the Aduro Hybrid stove with its 4 screws and washers (H).

Continue the chimney installation as usual, following the instructions and required configuration.

6. Aduro Hybrid Stove alarms

The Aduro Hybrid Stove has the following ALARM modes where pellet delivery must be stopped immediately:

- SMOKE SENSOR: smoke sensor defect.
- SHAFT SENSOR: shaft sensor defect.
- TERMO: shaft sensor too hot.
- DOOR CONTACT: door open.
- PELLET DAMPER: damper closed.
- EXIT: defect exit for external auger.
- FUEL: smoke temperature too low after more than an hour of operation – no fuel?

- LIGHTING: smoke temperature not reached after two attempts to light the fire.
- CO: CO (carbon monoxide) level is too high.

Here the **ALARM** will light red. When the cause of alarm has been rectified, the stove can be started by pushing **ON/OFF** twice.

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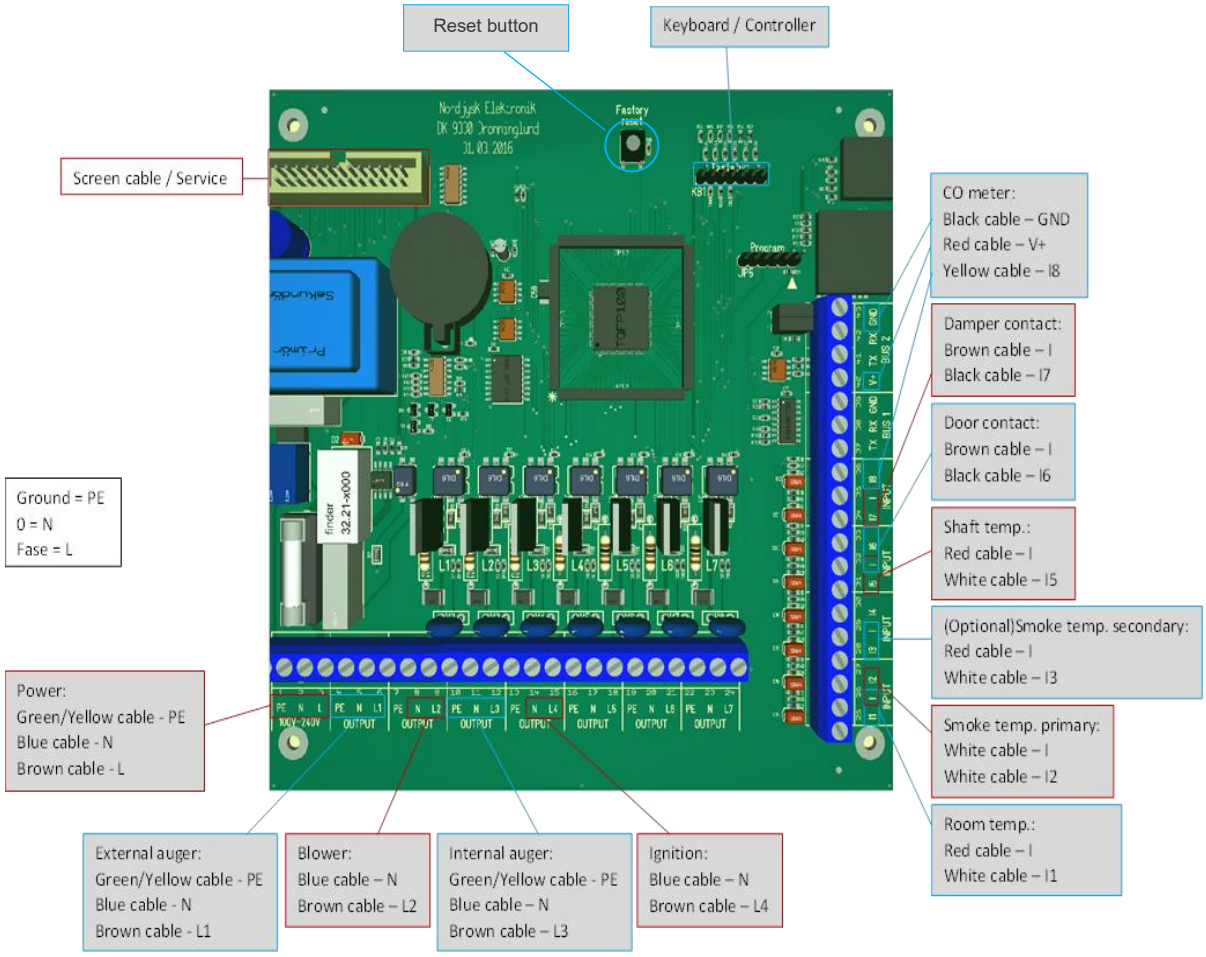
7. Control Board



8. Maintenance of the stove

All cleaning and maintenance of the hybrid stove (except for the quick, daily cleaning) should only be carried out when the stove is cold, and the power is disconnected.

8.1 Daily maintenance – when using pellets

When you add pellets, you should brush the burning pot free from of ashes and cinders. Open the door to the combustion chamber and lift the front of the burning pot (the black cast iron cone with the Aduro logo). Brush the ashes and the cinders through the grate to the ash pan. Avoid brushing ashes and cinders down into the pellet auger. Put back the front of the burning pot.

Empty the ashpan when needed.

8.1.1 Cast iron burning pot

We recommend two types of weekly maintenance:

- A short cleaning while the stove is lit (cannot last more than 3 minutes because of the sensor in the door. The combustion pot must be cleared of ashes and residues. We recommend using gloves and pushing the combustion pot to the side with a poker, then clearing the ashes and residues from the combustion pot. Finally, put the combustion pot back in place. We recommend that you conduct the short cleaning 2 times a day.
- A more thorough cleaning should be done when the stove is cold and unplugged. You will need to remove the vermiculite plates and vacuum the ashes and residues from the auger screw and the combustion chamber using a vacuum cleaner. We recommend that you conduct the thorough cleaning every 4 days.

Additionally, you should check the air holes inside and around the combustion chamber daily. There are 10 in total, and they must never be blocked by ashes, as this could result in poor combustion.

8.2 Regularly maintenance – when needed

8.2.1 Disposal of ashes

Never empty ash when the hybrid stove is in operation. never use your household or shop vacuum cleaner to remove ash from the hybrid stove as it may still contain hot coals. Always dispose of ash in a metal container with a tight-fitting lid. Other waste shall not be placed in this container.

Empty the ash pan before it is completely full. When igniting with wood, you can leave a layer of ashes in the combustion chamber, because it insulates and makes it easier to light a fire. A full ash pan allowed to build up underneath the bottom grate could trap heat and lead to premature failure of the grate/pilot air assembly.

The container of ashes should be moved outdoors immediately and placed on a non-combustible floor or on the ground, well away from combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Other waste shall not be placed in this container.

Remove ash from the burning pot and clean the top auger for ashes with a vacuum cleaner. This is done easiest by making a "paper ring" of paper roll, which is laid around the opening of the auger. Then, press the vacuum cleaner muzzle down towards the "paper ring" so it fits tightly. After this, the ashes can be vacuumed up.

8.2.2 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 its 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 (1/8in (3 MM) OR MORE) it should be removed to reduce the risk of a chimney fire.

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.

8.2.3 Soot and fly ash: Formation and need for removal

The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room heater will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least once every year to determine if cleaning is necessary.

8.3 Chimney sweeping and inspection

No matter how often you use your Aduro hybrid stove you should establish a monthly inspection routine of the hybrid stove and chimney system especially during the heating season. Perform a chimney inspection when the hybrid stove is not in use. Using a mirror, look up through the chimney connector collar and look for visible signs of creosote build-up.

If you are unable to inspect the flue system through the hybrid stove, it must be disconnected from the chimney connector to provide better viewing access.

Cleaning the chimney must be done using a brush the same size and shape as the flue liner or chimney system. Run the brush up and down the liner several times until all soot deposits have fallen to the bottom of the chimney where they can be removed through a clean-out door or from inside the hybrid stove (if still connected) using a vacuum cleaner.

The chimney connector should be cleaned in a similar way using a stiff wire brush. This procedure might be better performed outside. Reinstall the connector sections after cleaning, making sure to secure the joints between the individual sections with sheet metal screws.

If you cannot inspect or clean the chimney yourself, contact your local certified chimney sweep or your approved Aduro Dealer.

If you do experience a chimney fire, you must act promptly!

1. **Completely close the primary air control.**
2. **Ensure ALL persons have vacated the building.**
4. **CALL THE FIRE DEPARTMENT.**

8.3.1 Glass

Burning of wet wood, insufficient chimney draft and wrong use of the hybrid stove can result in soot stains on the glass. They can easily be removed using a damp cloth that you dip in cold ash and rub on the sooty glass. Special cleaning agents are also available to remove soot from the glass, e.g. the Aduro Easy Clean pad. The pad neither scratches nor damages the glass, and it can be used multiple times. Water or other cleaning agents are not necessary.

Do not abuse the glass door by striking or slamming shut. Do not use the stove if the glass is broken. Do not use abrasive products to clean the glass.

8.3.2 Pellet container

Burn all pellets and brush the pellet container clean. Vacuum the leftover pellet dust in the bottom.

8.3.3 Adjusting the door

Adjusting the door and the closing mechanism is a necessary part of the maintenance of the stove, which you can easily do yourself. If the door hangs on one side, feels sluggish to close or does not close properly, you should adjust and tighten the hinges and fittings around the door.

8.3.4 Leaving the hybrid stove for extended periods - Important notice!

When stove is to be left unused for a long period of time (summer months etc.) it is essential to clean it out thoroughly and leave the air control open to allow airflow around the combustion chamber and chimney. Ventilating your stove and chimney will prevent excessive corrosion from moisture present in the chimney.

Make sure that the chimney has adequate protection from the rain and that rain water cannot come into contact with the hybrid stove; install a chimney rain cap, but do not under any circumstances block off the flue completely.

If moisture is allowed to settle within the hybrid stove, rust will form.

8.4 Periodically maintenance – after about 500 hours of use

If the stove is placed in dusty surroundings, it may be necessary to clean the ventilator. Clean the burning pot for ash and cinders, e.g. with a scraper. Clean the air pathway for electrical igniter for ash and cinders that might be covering the hole placed on the left side of the tube under the burning pot, e.g. using a small, straight screwdriver.

For further information regarding maintenance of the stove, please go to www.adurofire.com.

8.5 Yearly maintenance

The yearly maintenance must be conducted by a professional. Contact your local Aduro GO partner for further information as rules for chimney sweeping and stove maintenance differ from area to area.

The chimney must be maintained and swept according to local rules.

The Aduro Hybrid stove must be inspected after one year for cleaning and adjustment of internal parts. Hereafter, maintenance must be conducted by an Aduro certified professional every other year or for every 4400 lbs (2000 kg) pellets burned.

8.6 Other maintenance

8.6.1 Gaskets

Over time, the gaskets around glass and door wear out and should therefore be checked regularly. If they are leaky, they should be replaced, as it is essential that the stove is tight. In addition, check regularly that the gaskets stay in place so that no smoke escapes from the stove. The gaskets might last longer if they are “massaged” regularly to ensure they stay flexible, be careful not to pull them out.

Glass gaskets

The glass gasket is flat, adhesive-backed, woven fibreglass. The gasket must be centred on the edge of the glass.

1. Follow the steps to remove the glass (page 41).
2. Remove the old gasket and clean the glass thoroughly.
3. Peel back a section of the paper covering the adhesive and place the gasket on a table with the adhesive side up.
4. Stick the end of the gasket to the middle of one edge, then press the edge of the glass down onto the gasket, taking care that it is perfectly centred on the gasket.
5. Peel off more of the backing and rotate the glass. The gasket must not be stretched during installation.
6. Cut the gasket to the required length.
7. Pinch the gasket onto the glass in a U shape, all around the glass

By following these instructions, the edge clearances are maintained.

Door gaskets

It is important to replace the gasket with another having the same diameter and density to maintain a good seal:

1. Remove the door and place it face-down on something soft like a cushion of rags or a piece of carpet.
2. Remove the old gasket from the door. Use a screwdriver to scrape the old gasket adhesive from the door gasket groove.
3. Apply a bead of approximately 3/16" (5 mm) of high temperature silicone in the door gasket groove. Starting from the middle, hinges side, press the gasket into the groove. The gasket must not be stretched during installation.
4. Leave about ½" long of the gasket when cutting and press the end into the groove. Tuck any loose fibers under the gasket and into the silicone.
5. Close the door. Do not use the stove for 24 hours.

8.6.2 Cleaning of the surface

The stove's surface will stay at its best just by being vacuumed with a small, soft mouthpiece or dusted with a soft, dry cloth. Do not use spirit or other solvents, as they will remove the paint.

Do not clean the stove with water. If the stove is exposed to moisture, the stove may develop rust. Do not clean the glass when the stove is hot.

8.6.3 Cleaning of the stove's inside and flue pipe

The interior of the hybrid stove and the chimney can be cleaned through the door and possibly through the cleaning opening in the chimney. The top insulating stone (the flue plate) can be removed. To gain free access to the top of the hybrid stove and flue, remove the metal flue plate. The flue can also be removed from the stove and cleaned. The interior of the hybrid stove and flue should be cleaned annually or more often if necessary, depending on how often the hybrid stove is used. This work can also be ordered from a chimney sweep or your local Aduro GO partner.

8.6.4 Repairing the surface

Aduro stoves are painted with a heat-resistant paint that can withstand temperatures up to 930°F (500°C). If the surface of the stove gets scratched or worn, it can easily be renewed using this type of paint. Everybody can repair the surface and obtain a perfect result. The paint is available in black metallic at aduroshop.com.

8.6.5 Combustion chamber

The insulation stones in the combustion chamber eventually wear out and should be replaced when the cracks are larger than 1/4in (5mm) in diameter or when they are worn and have lost up to half their thickness. The durability of the stones depends on how often and how intensively the stove is used. You can change the stones yourself. They are available as a ready-to-use set. For further information, go to www.aduroshop.com.

How to change the vermiculite step by step:

1. Open the door.
2. Remove the small side stones in each side.
3. Lift the baffle plate up and remove the side stones furthest away from you.
4. Dismount the baffle plate.
5. Dismount the remaining stones.
6. Install the new vermiculite in the opposite order as described above. Be careful when mounting the vermiculite, it is a very porous material.

Hereafter you can use your stove again.

8.6.6 Spare parts and unauthorized alterations

You may only use original spare parts for your stove. All forms of unauthorized alterations to the stove are strictly forbidden, as the stove will no longer comply with the approved specifications. At www.aduroshop.com you can buy original spare parts for your stove.

8.6.7 Replacement of the glass

Do not use substitute materials when replacing the glass.

To remove or replace the front glass:

1. Open the door.
2. Remove the Bauart spring using pliers or a special tool.
3. Remove the two pins holding the door and remove it. If the pins are blocked, remove them using flat pliers.
4. Place the door face down on a soft surface to protect the paint.
5. Unscrew all the clips that hold the seals in place. After some time exposed to heat, it may be necessary to use anti-rust oil.
6. Remove the old window and insert the new one. If the seals are worn, we recommend that you change them.
7. Replace the clips that hold the window in place. Avoid any contact between the glass and the metal parts.
8. Put the door back in place and replace the two pins (and the part that blocks them) in the hinges.
9. Replace the Bauart spring if desired. It is only compulsory in Germany.

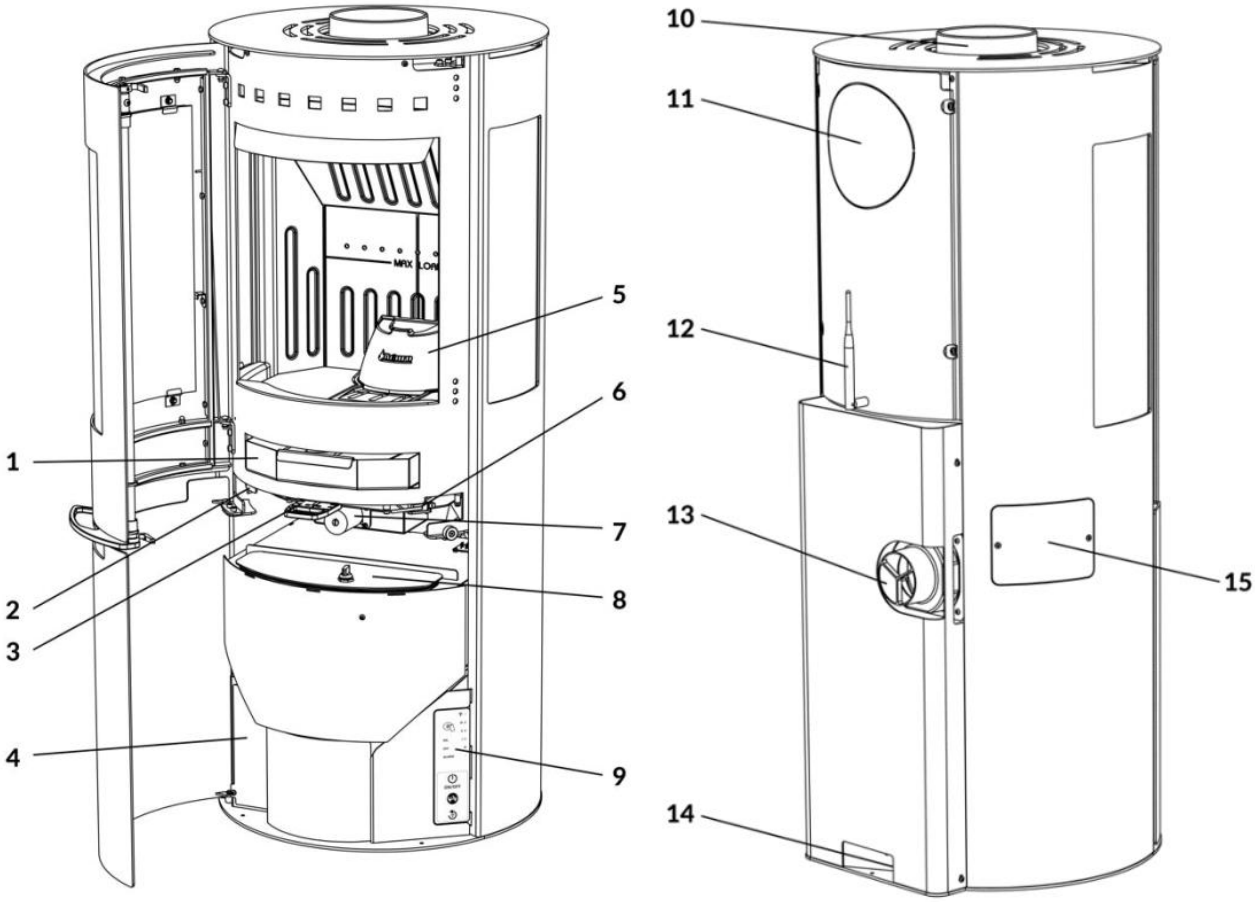
To remove or replace the side glass:

1. Open the door.
2. Remove the closing spring with pliers.
3. Carefully remove the cast iron grill and the vermiculite stones.
4. Remove the 2 nuts from the metal plate at the top of the window in question and remove the plate as well as the two spacers.
5. Loosen the 2 nuts behind the plate.
6. Remove the bottom clips holding the window. It is best to apply a little oil if the nuts are seized or rusted.
7. Remove the broken window and install the new window.
8. Repeat points 3-6 in reverse order.
9. You can rewind the automatic closing spring. However, it is only mandatory in Germany, so you are not obliged to keep it.

9. Accessories

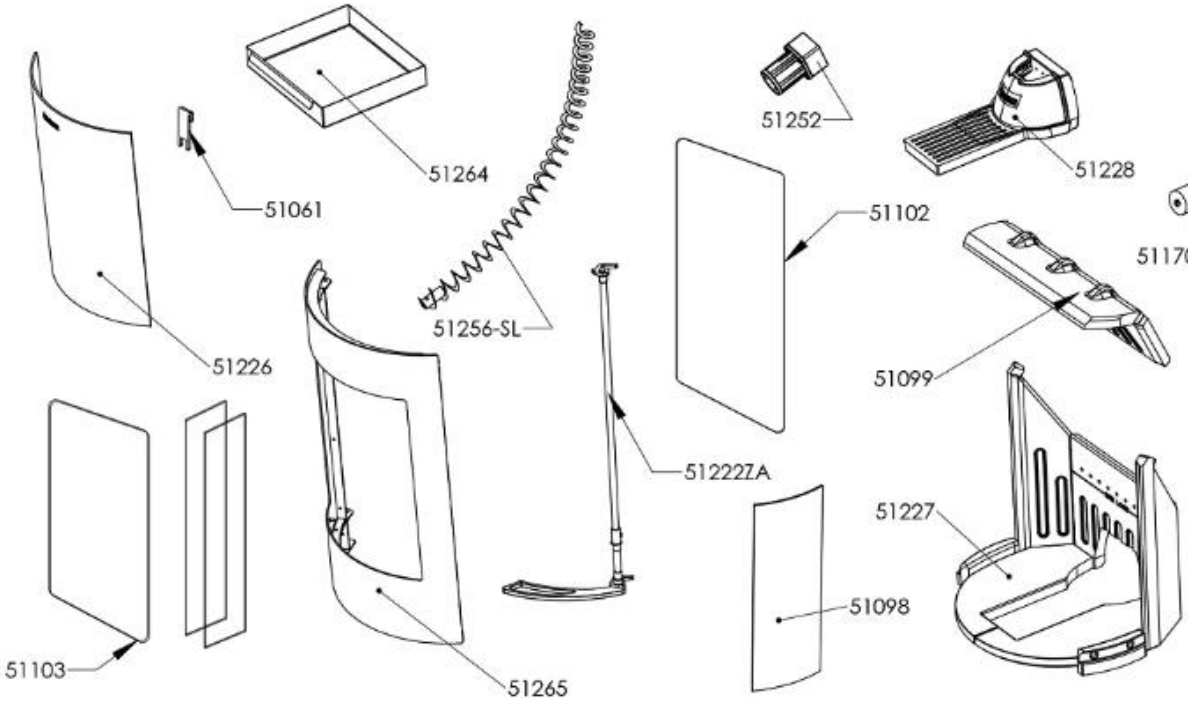
For Aduro stoves we offer a wide product range of accessories to fulfil the experience: Companion sets, firewood baskets and buckets, fireplace grid, briquette buckets, floor hearths in glass and steel, flue pipes, Aduro Easy Firelighter, and Aduro Easy Clean pad. For further information, go to www.adurofire.com/accessories.

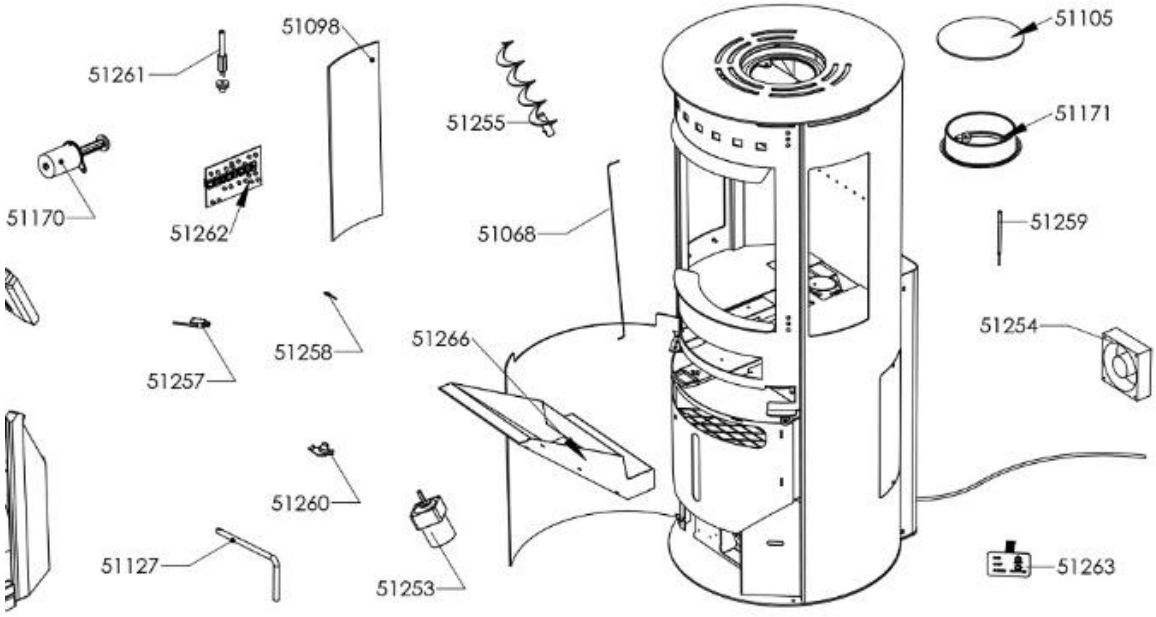
10. Basic features of the Aduro hybrid stove

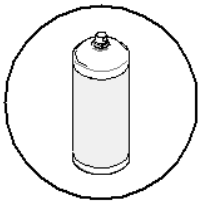


Part #	Description
1	Ashpan
2	Damper for firing with pellets
3	Damper for firing with wood
4	Opening for control board (incl. Wi-Fi board)
5	Cast iron burning pot
6	Door switch
7	Aduro-tronic
8	Pellet container lid
9	Display keyboard
10	Top smoke outlet
11	Back smoke outlet
12	Wi-Fi antenna
13	External air inlet
14	Power plug
15	Igniter service opening

11. Exploded diagram and parts list







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IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your stove, please provide the model number and serial number. We reserve the right to change parts due to technology upgrade or availability. Contact an authorized dealer to obtain one of these parts. Never use substitute materials. The use of unapproved parts can cause poor performance and risk to your safety.

# Item	Description	Quantity
51227	Vermiculite without high plate	1
51099	Vermiculite high plate	1
51103	Glass gaskets	1
51102	Door gaskets	1
51226	Front window	1
51098	Side window	2
51170	Aduro-tronic II system	1
51061	Aduro key	1
51266P	Pellet funnel	1
51228	Grille and burning pot	1
51371	Burning pot gaskets	1
53341	Tongs for stoves and pellets	1
51265	Door, complete	1
51264	Ash tray	1
51068	Closing spring	1
51127	Assembly tool	1
51105	Plate cover	1
51222ZA	Closing system	1
51171	Smoke evacuation nozzle	1
51256-SL	Loading screw, external - SLIM	1
51252	Large screw loading motor	1
51255	Loading screw, internal	1
51253	Small screw loading motor	1
51263	Stove interface	1
51262	Printed circuit board 13.7	1
51259	Smoke sensor PT 1000	1
51258	Temperature sensor	1
51260	Carbon monoxide sensor	1
51267	Door sensor	1
51257	Switch	1
51261	Ceramic electric candle	1
51294	Aduro Air Booster	1
51254	Combustion air fan	1
53343	Wireless temperature sensor	1
51066	Plastic hinge ring	2
53040	Combustion air inlet kit	1
AC05958	Touch up paint	1

12. Right of complaint

The right to complain applies in accordance with the sales act in the country where the stove was purchased. The dated receipt will be sufficient proof.

All pellet stoves may require adjustment of the combustion air and the speed of the augers in order to optimize the function and to reach an effective and clean combustion. Aduro and our service partners can monitor and adjust your hybrid stove on Aduro Cloud. However, this is only possible if the stove is connected to the cloud via Wi-Fi. This happens as you set up the Aduro Hybrid app.

If you have difficulties getting the stove online, it can be because of your local Wi-Fi network, your router or how your smartphone is set up. You find guidance on connecting to Wi-Fi in our Customer Service Center.

It is required that your stove is online in case you want to make a claim about combustion or function, but it is not Aduro's responsibility to secure connection. You can purchase a service visit from one of our service partners to get the stove online.

The right of complaint does not cover:

- Damages resulting from incorrect installation and use of the stove, overheating and wrong or missing maintenance of the stove (including the mandatory service visits) etc.
- Consumable service parts (glass, gaskets, firebricks, slides, painted surfaces, electrical igniter, sensors/switches, brazier in cast-iron, cast-iron grate), which are subject to normal wear and tear. You can buy these parts at aduroshop.com.
- Damages caused by electrical surcharge, (condensation) water in and around the chimney, too much or too little draft in the chimney and missing maintenance/cleaning of the chimney/flue pipe/installation.
- Damages to the stove caused by external influences or damages caused by the stove on other objects.

Read more at www.adurofire.com/warranty/

13. Disposal of your Aduro stove

When disposing of your hybrid stove, metal, vermiculite, and ceramic glass must be sorted separately. Dispose of these materials according to the regulations at your nearest recycling depot.