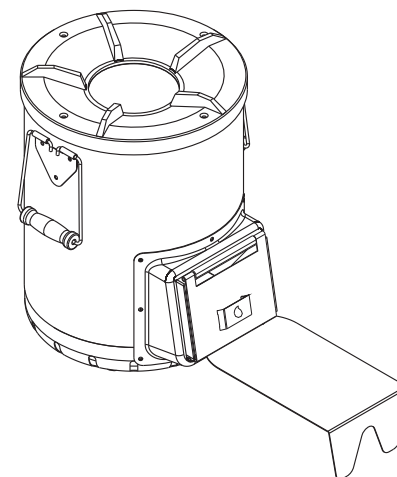




Operating instruction

(Biomass Clean Cookstove)



Printed on recycled paper

Keep your environment clean



Please read instructions prior to use
to insure safety and efficiency.

Customer Information:

Thank you for purchasing our biomass clean cook stove. This portable stove is highly efficient and designed for low emissions. Maximize safety and efficiency by reading manual carefully, prior to use.

The Manufacturer shall not be held responsible for any damages to persons or property caused by incorrect installation or use of the appliance.

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The Manufacturer shall not be held responsible for any inaccuracies in this handbook due to printing or transcription errors, also the designs in the figures are purely indicative. The Manufacturer also reserves the right to make any modifications to the products as may be considered necessary or useful, also in the interests of the user, without jeopardizing the main functional and safety features of the products themselves.

PRODUCT FEATURES

The biomass stove is a highly efficient clean cook stove. The design is patented for proprietary intellectual property rights. This product is designed to operate with just twigs or other readily available biomass. Biomass is any flammable organic matter, such as wood product, pinecone, corncob, coconut shell, husk, straw, or other flammable yard debris. A fully loaded combustion chamber should provide an hour or more of cook time. This stove is easy to use for Emergency or Recreational use outdoors.

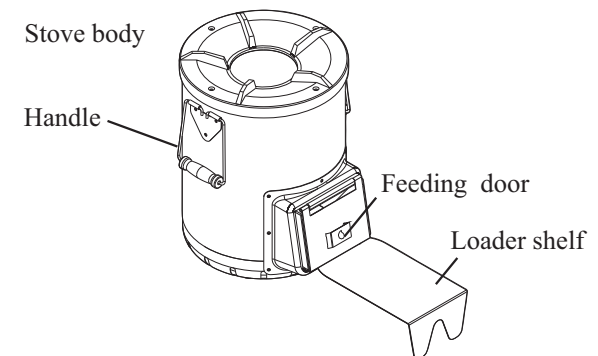
SPECIFICATIONS

1. Fire intensity of cooking: $\geq 1.5\text{KW}$;
2. Heat efficiency: heat efficiency $\geq 35\%$;
3. Emission concentration of smoke: $\leq 25\text{mg/m}^3$;
4. Emission concentration of SO_2 : $\leq 20\text{mg/m}^3$;
5. Emission concentration of NO_x : $\leq 120\text{mg/m}^3$;
6. Emission concentration of CO: $\leq 0.1\%$;
7. Blackness of smoke and gas (Ringelmann, level): $\leq \text{level } 1$;

Note: The Manufacturer reserves right to modify product at any time to insure safety and function of stove.

This product has been patented, and copying is not permitted.

PRODUCT STRUCTURE DIAGRAM



PRODUCT INSPECTION

1. The stove is shipped fully assembled, minus the carrying handles. Please attach stove handles to stove body with enclosed screws.
2. The carton also includes a free standing fuel shelf. Stand fuel shelf rack in front of stove door and insure door can be easily open with twig or stick during operation.
3. Place stove on a level, secure surface to insure safe operation.

OPERATION

1. Insure stove is placed in a safe level location, prior to operation.
2. Ignite tinder, twigs, or small biomass with naked flame only. Do not use flammable fuel accelerants in stove for ignition of wood or biomass.
3. Flip open fuel door to fully access tinder. Light tinder (match stick sized twigs or biomass debris). Slide fuel sticks into stove igniting two small sticks, or other dry, flammable biomass. Keep sticks close together with minimal spacing between each other (match stick air gap) and 1 & ½ inches / 3 cm off the back of the combustion chamber wall for best results.
4. Allow the stove door to lower as fuel is fed into the combustion chamber. This will allow for a hotter fire, optimal cooking temperatures, and live ember control for increased safety.
5. Place cookware on stove top after appropriate flame is established for cooking.
6. Cook with the door closed. View fire through horizontal viewing port. Open door to add fuel or push it deeper into the combustion chamber. The stove is very intuitive to use; more fuel larger fire, less fuel, smaller fire. The fuel gauge on the door is to remind cooks that only small fuel is required for operation. This stove is designed to cook successfully with minimal sized fuel. The fuel gauge serves as an indicator of the diameter of twigs, sticks or other flammable biomass that can be used in the stove.
7. After cooking, insure fuel is fully exhausted and the stove has cooled to touch before handling.

SAFETY NOTES AND WARNINGS

1. Insure adequate ventilation. This stove is designed for outdoor use.
2. Prevent burns and injury. Keep all flammable material and children a minimum of 3 feet / 1 meter from operating stove.
3. The stove is a horizontal fuel fed stove. All wood or biomass must be placed on side and pushed into stove combustion chamber. The design is intended to burn the tips of wood or biomass, as slid into stove. This stove is intended to be monitored at all time during operation.
4. Fuel can be top lit with small tinder such as wood shavings, match sized twigs, and other small flammable biomass thinly layered in combustion chamber.
5. After cooking, the fuel ember combustion is not complete until all fuel in the combustion chamber is completely exhausted. Special Note: The fire cannot be smothered or extinguished until all fuel is exhausted.
6. Removing spent embers & ash: After all fuel is exhausted and stove is cool to touch, simply turn stove upside down to clear ash.
7. Use caution and do not touch cooking area of stove during and after use until entirely cool to prevent burns or scalding.

TROUBLE SHOOTING TIPS

Problem	Reason	Suggested Solution
Difficulty igniting fuel	Inadequate amount of fuel	Add fuel
	Wet or damp fuel	Use dry Fuel
	Combustion chamber overloaded	Insure minimum clearance of fuel 1 & ½ inches /3cm from fuel to top of combustion chamber
Extended time period from ignition of fuel to appropriate firepower.	Overloaded combustion chamber with high density ash content.	Reduce high density or green fuel.
Excess smoke during ignition	Wet fuel	Use dry fuel
	Ventilation door not in appropriate position.	Adjust door as shown in diagrams.
	Smoke from leaves & green yard debris	Use dry wood shavings or twigs
Smoke during high power operation, after ignition phase	Fire too large	Use less fuel
Smoke during low power operation, after ignition phase	Mixed fuels can cause erratic flame	Insure fuel dry, not green
Smoke observed when adding fuel	Fuel Green	Use dry fuel
	Fuel overloaded	Add less fuel
Continued smoke after combustion	Fuel has low melting point and high ash content (leaves, straw, shells, etc...) or green.	Normal outcome, add dry wood or twigs

AFTER-SALE SERVICE

If you discover a problem or are confused, please refer to “trouble shooting tips”. If problem not resolved, contact dealer.