



Company: SilverFire Company
Address: 777 Washington Street
Eugene, OR 97401
001 541 485 7114 Pacific Time Zone
E-mail: sales@silverfire.us
www.silverfire.us

Printed on recycled paper

Keep your environment clean



Operating instruction

(Biomass Clean Cookstove)



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

INDEX

Product Features	2
Specifications	2
Product Inspection	3
Operation	4
Safety Notes and Warnings	5
Stove Components	5
Trouble Shooting Tips	6
After-sales Service	6

The Manufacture 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 SilverFire Hunter 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 mater, 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.

SPECIFICATIONS

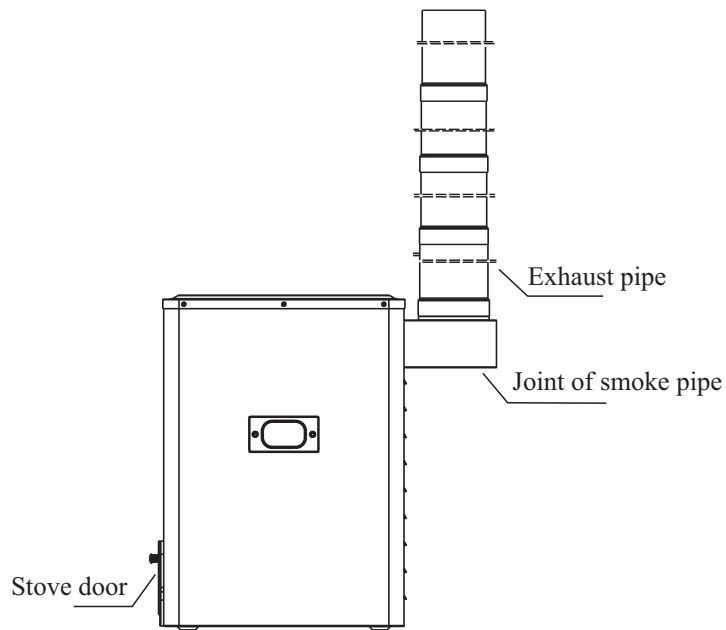
- 1.Fire intensity of cooking: $\geq 1.5\text{KW}$;
- 2.Heat efficiency: heat efficiency $\geq 35\%$;
- 3.Emission concentration of smoke: $\leq 25\text{mg/m}^3$;
- 4.Emission concentration of SO_2 : $\leq 20\text{mg/m}^3$;
- 5.Emission concentration of No_x : $\leq 120\text{mg/m}^3$;
- 6.Emission concentration 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 INSPECTION

1. The SilverFire Hunter stove is shipped fully assembled, the addition of the chimney is required prior to use. Please confirm there are no missing or damaged parts upon opening packaging.
2. Place stove on a level, secure surface to insure safe operation.
3. Attach chimney to stove emissions outlet, insure appropriate fit to exhaust emissions through chimney outside. See diagram below.
4. Insure the chimney assembly is stable and orientated in the vertical position. Inspect chimney connections are tight and free from exhaust leaks. The chimney must be vented outdoors.



OPERATION

1. Top load combustable biomass fuel in combustion chamber, in vertical position with small tinder on top.
2. Adjust natural draft ventilation door to the 3 o'clock position, as in diagram below (a), before lighting. Ignite small tinder on top of combustion chamber.
3. Fuel combustion is ideal at approximately 5 to 8 minutes after ignition. Adjust ventilation door to the 6 o'clock position, as in diagram below ("b"). It is now in the closed position.
4. In the event there is no flame or loss of firepower after the initial combustion period, adjust ventilation door to the 4 o'clock position, as detailed in the diagram below ("c"). The ventilation door is partially opened.
5. In the event there is inadequate fuel while cooking, adjust the ventilation door back to the 3 o'clock position to add more fuel (fully open position). Add small amount of additional fuel.

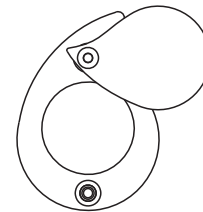


Figure a

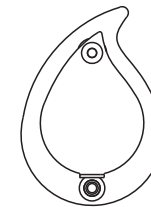


Figure b

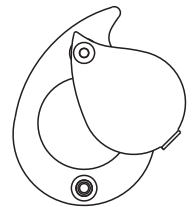


Figure c

SAFETY NOTES AND WARNINGS

1. Insure adequate ventilation and that the chimney is venting all exhaust outdoors.
2. Prevent burns and injury . Keep all flammable material and children a minimum of 3 feet / 1 meter from operating stove.
3. The SilverFire Hunter is a vertical batch loaded stove.All fuel must be place on end into combustion chamber in the vertical positioned and packed tightly, 1 & ½ inches / 3 centimeters below top of combustion chamber. Fuel 4&¾ inches/12 centimeter long inserted in the vertical position is ideal.
4. Fuel is easily lit with small tinder such as wood shavings,match sized twigs, and other small flammable biomass thinly layered on top vertical packed fuel 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. Inspect bottom of combustion chamber to insure ventilation holes are clear.
7. When adjusting firepower,it is suggested to make small gradual adjustments and wait 20 seconds after adjustment to fine tune flame.
8. Don't touch the surface near the stove mouth before stoves cooled down during or after the use.
9. Use caution and do not touch cooking area of stove during and after use until entirely cool to prevent burns or scalding.
10. Insure all cookware forms tight fit to stove top to exhaust all emissions through chimney.

STOVE COMPONENTS

Name	Quantity
Chimney Assembly	Four
Chimney elbow	One
Instruction manual	One

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.	Adjust ventilation door to 4 o'clock position ("c") until flame is re-established. Return ventilation door to the 6 o'clock position ("b"), after the cooking flame is re-established.
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	Reduce ventilation door airflow by adjusting door to 6 o'clock position ("b").
Smoke during low power operation, after ignition phase	Mixed fuels can cause erratic flame	Insure fuel dry, not green
Smoke observed when adding fuel	Air flow too high	Adjust natural draft ventilation door to the 3 o'clock position.("a")
	Fuel overloaded	Add less fuel
Continued smoke after combustion	Fuel has low melting point and high ash content (leaves, straw, shells, etc...).	Normal outcome, add 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.