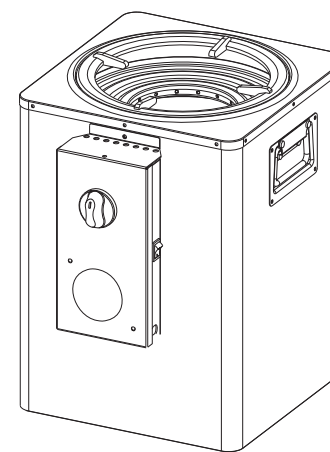




# **Operating instruction**

## **(Biomass Clean Cookstove)**



Printed on recycled paper

Keep your environment clean



Attention

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 .

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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 Super Dragon 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, pine cone, corn cob, 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**

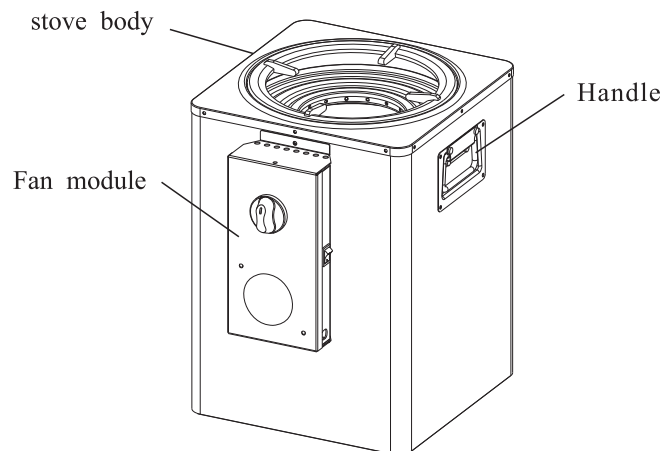
- 1.Fire intensity of cooking:  $\geq 1.5KW$ ;
- 2.Heat efficiency: heat efficiency  $\geq 35\%$ ;
- 3.Emission concentration of smoke:  $\leq 25mg/m^3$ ;
- 4.Emission concentration of  $SO_2$ :  $\leq 20mg/m^3$ ;
- 5.Emission concentration of  $NO_x$ :  $\leq 120mg/m^3$ ;
- 6.Emission concentration of CO:  $\leq 0.1\%$ ;
- 7.Blackness of smoke and gas(Ringelmann, level) :  $\leq$ level 1;
- 8.Work power DC12V/0.48A ( $\leq 6W$ ) ; input power: AC110V

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.

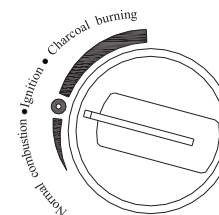
## PRODUCT INSPECTION

1. The Super Dragon is shipped fully assembled. Please confirm there are no missing or damaged parts upon opening packaging
2. Install fan module and blast pipe joint on furnace body with M4x10 bolt.
3. Place stove on a level, secure surface to insure safe operation.
4. Confirm 12 volt plug is securely attached to stove power port and the 110AC plug is firmly plugged into AC power outlet prior to use. Turn off stove power switch after use and unplug stove from AC outlet.

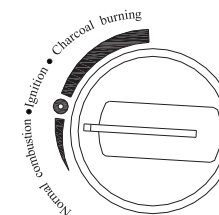


## OPERATION

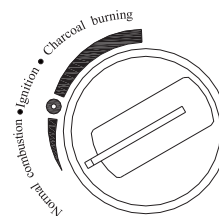
1. Place combustible biomass fuel in combustion chamber, with small tinder at top.
2. Place control knob to the ignition position (10 o'clock position, see diagram below, a). Ignite small tinder on top of combustion chamber. Turn on fan switch. Place fire ring pot adaptor in position on top of stove prior to adding pot, wok, or cookware on stovetop.
3. Fuel combustion is ideal at approximately 5 to 8 minutes after ignition. Now select preferred cooking temperature (fire power), this is between the 9 o'clock position (intense, high firepower cooking, see diagram b). and the 7 o'clock position (lower firepower cooking, see diagram c).
4. In the event there is no flame or loss of firepower after the initial combustion period, return control knob to the ignition position. If desired firepower is not resumed after 20 seconds, turn control knob to the charcoal burning position (12 o'clock position, diagram d).
5. In the event there is inadequate fuel while cooking, turn control knob back to the ignition position to add more fuel. Utilize small amount of additional fuel.
6. After all fuel is exhausted turn off fan and unplug stove.



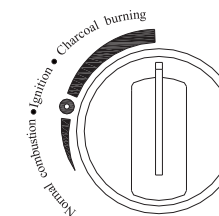
(a) Ignition position



(b) Position of normal combustion big fire



(c) Position of normal combustion small fire



(d) Position of charcoal combustion

## SAFETY NOTES AND WARNINGS

1. Insure adequate ventilation.
2. Prevent burns and injury. Keep all flammable material and children a minimum of 3 feet / 1 meter from operating stove.
3. The Super Dragon 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 stove fan can only be turned off after 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. Use caution and do not touch cooking area of stove during and after use until entirely cool to prevent burns or scalding.

## STOVE COMPONENTS

| Name                             | Quantity |
|----------------------------------|----------|
| Fan module                       | One      |
| DC12V/110V Stabilized power line | One      |
| Air inlet joint                  | Two      |
| Poly-fire ring                   | One      |
| Install bolt                     | Two      |
| 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.                          | Turn control knob to charcoal burning setting (12 oclock), then return control knob to desired fire power setting after adequate flame is re-established. |
| Excess smoke during ignition                                         | Wet fuel                                                                      | Use dry fuel                                                                                                                                              |
|                                                                      | Fan Switch Off                                                                | Turn Fan Switch On                                                                                                                                        |
|                                                                      | Control Knob not in ignition position                                         | Select ignition position                                                                                                                                  |
|                                                                      | Smoke from leaves & green yard debris                                         | Use dry wood shavings or twigs                                                                                                                            |
| Smoke during high power operation, after ignition phase              | Fire too large                                                                | Reduce firepower setting with control knob to lower setting                                                                                               |
|                                                                      | Flames observed around pot                                                    | Remove poly fire ring for better pot fit                                                                                                                  |
| Smoke during low power operation, after ignition phase               | Mixed fuels can cause erratic flame                                           | Increase fire power setting with control knob                                                                                                             |
| Smoke observed when adding fuel                                      | Air flow too high                                                             | Turn control knob to ignition position                                                                                                                    |
|                                                                      | 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.