

Thermoelectric Generator System for Wood and Bio-fuel Stove

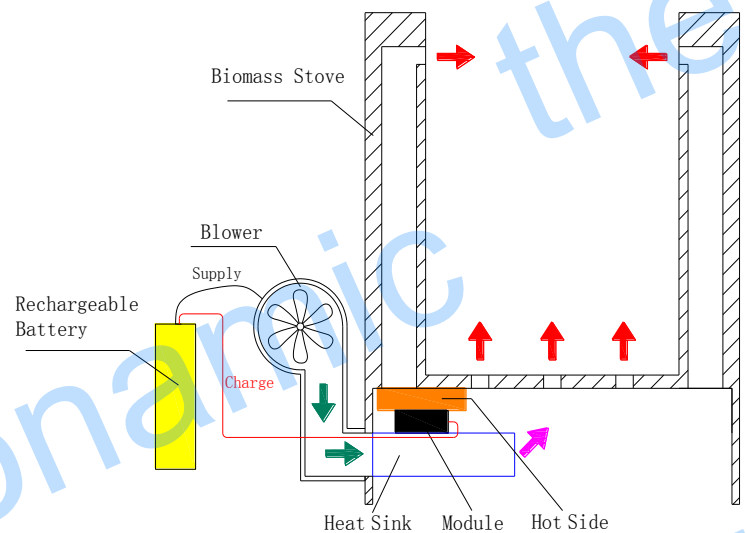
Description

The below is a thermoelectric generator system designed for a biomass stove to power its blower, hence increase its burning efficiency and bring smoke free burning for the stove. The generator consists of a thermoelectric module, a heat sink for the module cooling, a blower to provide the fresh air for the stove burning and heat sink cooling, and a rechargeable battery. The battery is used for starting burning when the stove is not heated up. The generator will take over the battery to power the blower and charge the battery after around 10 minutes cooking, when the combustion chamber is heated up. The generator provides a self-powered system for the stove without relying to outside electricity grid. It is suitable for biomass or wood stove. The biomass or wood burning in the combustion chamber heats up the wall of its combustion chamber. The heat can be converted into electricity by thermoelectric modules.

The thermoelectric generator is light in weight, small in size, easy to fix, and reliable, and has a high power generation efficiency. It is especially designed to convert a small portion of heat conducted from side wall and bottom of the stove to electricity which is enough for powering the blower and charging its battery, and its excess power can be used for powering small communication equipment like mobile phones and LED lamp during home cooking.



Thermoelectric Generator System



Bio-fuel Thermoelectric Generator Diagram

Fix the thermoelectric generator on the bottom of the combustion chamber by screws, and the blower to the inlet in bottom of the stove to provide the fresh air and cool the heat sink.

Specifications :

| | |
|--|----------------|
| Part Number | TEG2W-5V |
| Output Voltage/Power | 4.5 VDC/2Watts |
| Dimension Size (length x width x height) | 80 x 70 x 50 |
| Weight | 0.3kg |

Instructions in use

Fix the thermoelectric generator on the edge of the bottom of the combustion chamber by screws. Connect the blower with to the inlet in bottom of stove, then connect the output of the generator to the blower and battery .

Notes

- (1) Starting, please connect the battery to the blower to provide air for combustion, the generator will take over to power the blower and charge the battery.
- (2) After 15 minutes cooking, you use excess power from the generator to power small electronics product like mobile phone.

Packing List

Thermoelectric Generator System one set

System Demo

Fix the thermoelectric generation system to the stove, and connect the rechargeable battery to the blower, then put the biomass bricks into the combustion chamber and burn it. After the 10 minutes, the output from the generator is enough to power the blower and charge the battery back. Below is the demonstration.

