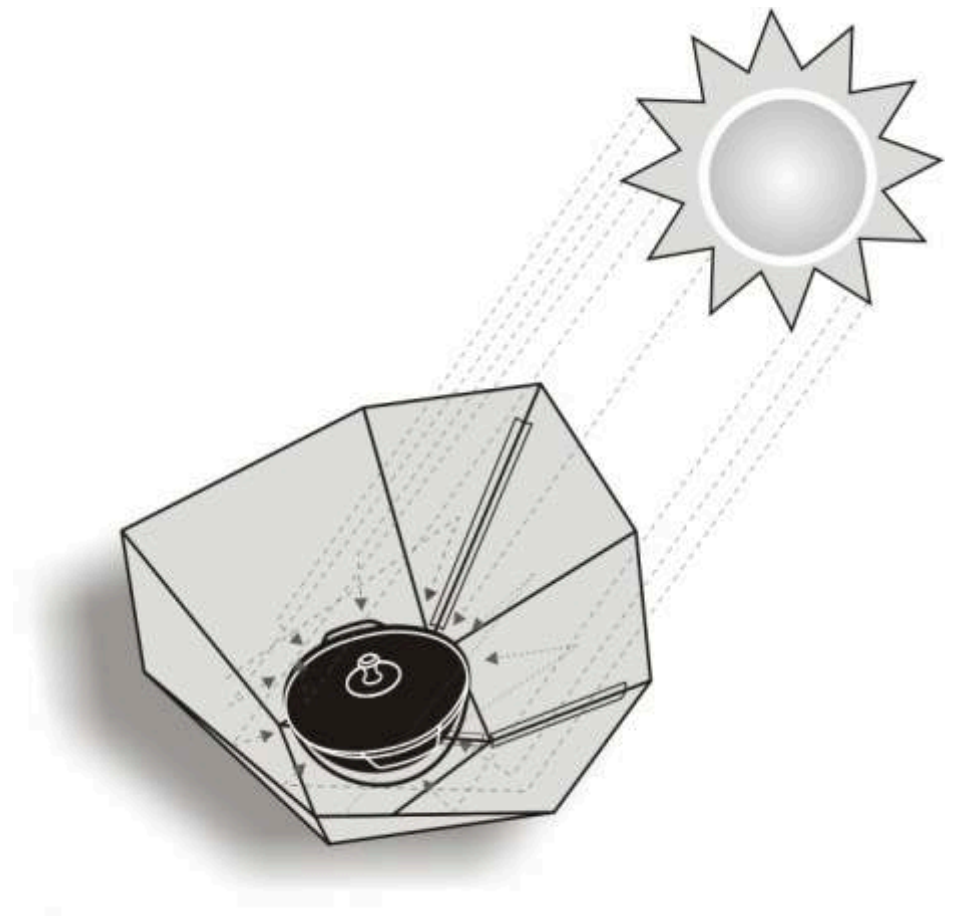


# HotPOT

## User's Guide



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## Parts checklist

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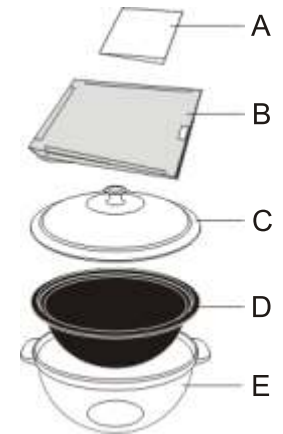
A. User's guide

B. Reflector

C. Glass lid

D. Black enameled steel pot

E. Glass "Greenhouse"



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## Instructions for using your HotPot Solar Oven

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This is the "HotPot", or "Tilenafa" as it is known in Mali, or "Olla Solar" as it is known in Mexico where it is manufactured by Energía Portátil S.A. de C.V. in Monterrey, Mexico. It is a durable, versatile and easy-to-use panel solar oven. We hope it will give you many years of delicious, environmentally friendly meals!

The HotPot was developed by Solar Household Energy, Inc. ([www.she-inc.org](http://www.she-inc.org)) to provide an economical, healthy and environmentally friendly alternative to cooking with fuel wood and other biomass in developing countries. It will work equally well in developed countries with favorable climatic conditions.

Don't be discouraged if you have problems with the HotPot the first time. Like a sailboat, the performance of the HotPot depends on an ever-changing environment. It will take a little practice to get the "feel" for what it will do in different weathers. After that, it's smooth sailing.

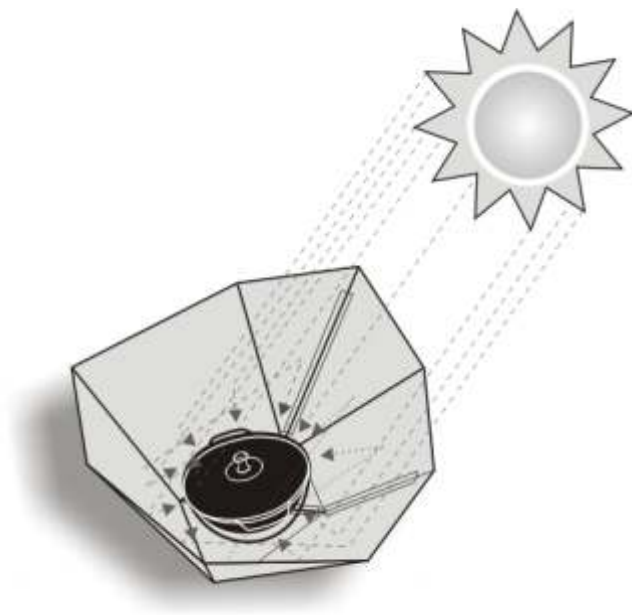
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## Here's how the HotPot cooks

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It is fueled uniquely by direct solar energy and by indirect solar energy from the reflector. The sun's rays penetrate the tempered glass "greenhouse" bowl, strike the 5-liter black enameled steel pot and convert to heat. The heat is retained around the pot by the greenhouse, achieving cooking temperatures.

Your HotPot is most efficient under a cloudless sky, in the shelter of cold winds, and between the hours of 10 AM and 4 PM. Ambient temperature has only slight impact on cooking performance. More important is the elevation of the sun in the sky. Higher is better. Therefore, in temperate zones, The HotPot will be most efficient in the summer, spring and fall.

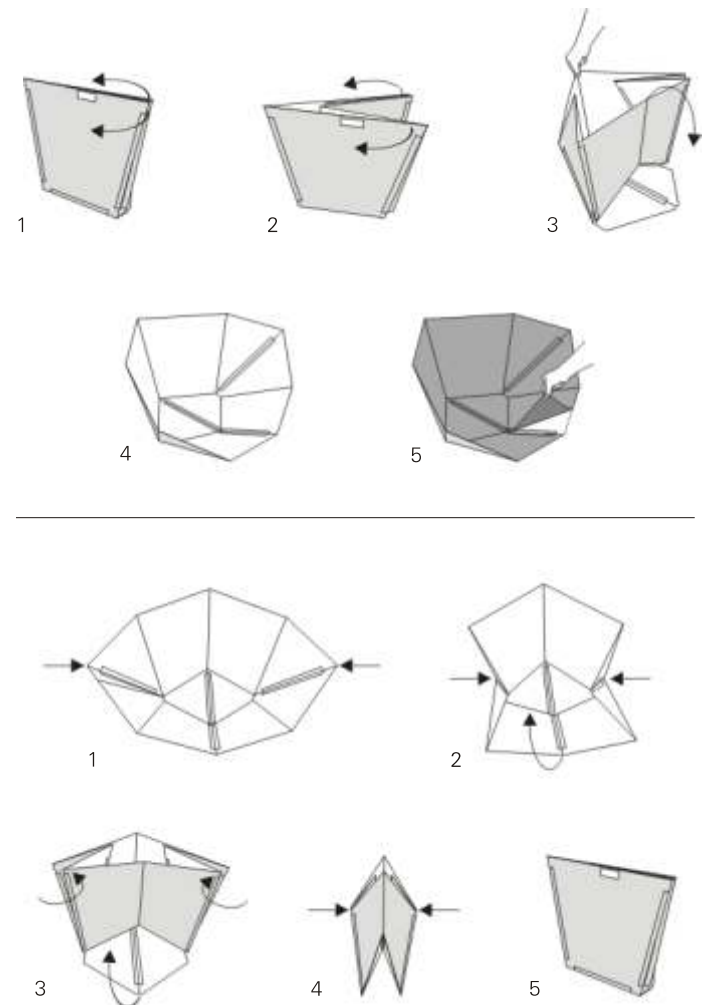


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## The Reflector

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The HotPot comes with a durable hinged reflector designed for compact storage. Unfolding and folding it is easy once you've done it a few times. The illustration below will help you get the hang of it. Be sure to peel the protective plastic film off the reflector before exposing it to the sun! (Otherwise it will be difficult to remove.)



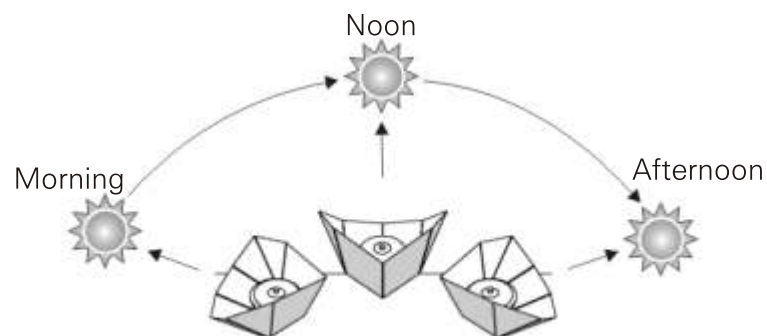
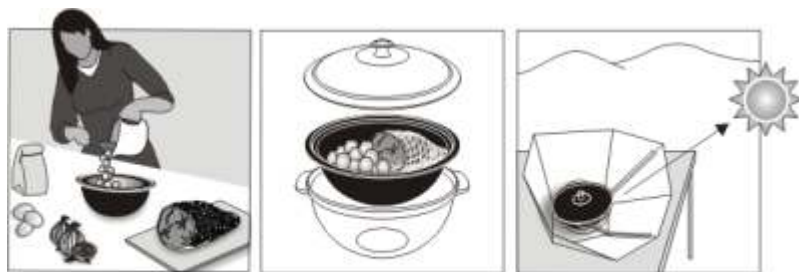
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## How to use the HotPot

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Select a site that will not be shaded by trees or buildings during the course of the day. Deploy your reflector on an elevated surface or on the ground and orient the low side of the reflector to the sun. When you have loaded the pot with food, put it in the glass "greenhouse," cover it with the lid and place the pot assembly on the bottom panel of the reflector.

The performance of your HotPot depends on the reflector's orientation to the sun as it arcs across the sky. For maximum efficiency, an adjustment should be made each hour or so. In doing this it is well to "lead" the sun as you would a moving target. Should you wish to curtail cooking but keep food hot, aim the reflector a bit behind the sun. (Under a strong sun, you can simply aim the HotPot at where the sun will be at noon rather than make any adjustments during the cooking). With experience you will quickly learn what works best for you.



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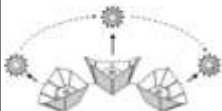









## Cooking tips

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As with any cooking device, cooking times in the HotPot will depend on what you are cooking. For example, most beans take longer than rice; large pieces cook more slowly than smaller ones. The higher the heat (the more intense the sunlight), the faster the food cooks.

- Little or no water is needed for this slower cooking. Liquid is created from the "sweating" of the food which renders the result more flavorful, since it is undiluted.
- There is no need to stir food during cooking. It will not carbonize and stick to the pot.
- There are differences in the preparation of certain foods:
  - Rice may be added to cold water at the start of cooking. As usual, use two cups of water to one cup of rice.
  - Soak dried beans in water the night before; drain and add fresh water.
  - Lentils do not need to be soaked (re-hydrated).
  - Eggs should be "hard boiled" without water.
  - There are two methods to bake bread or cake: The black pot itself can be used as the form. Or, another form may be placed inside the black pot. (Grease and pre-heat the black pot while preparing the batter or the dough.)
  - Potatoes in their jackets can be pierced with a fork and baked without water. (Throw in a sprig of thyme or rosemary.)
  - Chickens can be stuffed with onion, rubbed with herbs and baked without water or oil. (A splash of wine adds flavor.)
- The HotPot cannot fry foods. (Solar frying can only be accomplished with paraboloid solar ovens.)
- Cooking times. Here are some broad guidelines:
  - 1-2 hrs: Soups, eggs, rice, fish, vegetables, fruit
  - 3-4 hrs: potatoes, some beans, meats, stews, bread
  - 4-8 hrs: dry beans (not re-hydrated), large roasts.

## Factors that affect the speed of the cooking

	Fast	Slow	
Food's size			
Food's quantity			
Water used for cooking			
Reorienting the reflector			
Season and hour of the day (by the length of shadow)			No cooking 
Clouds or dust			
Wind			

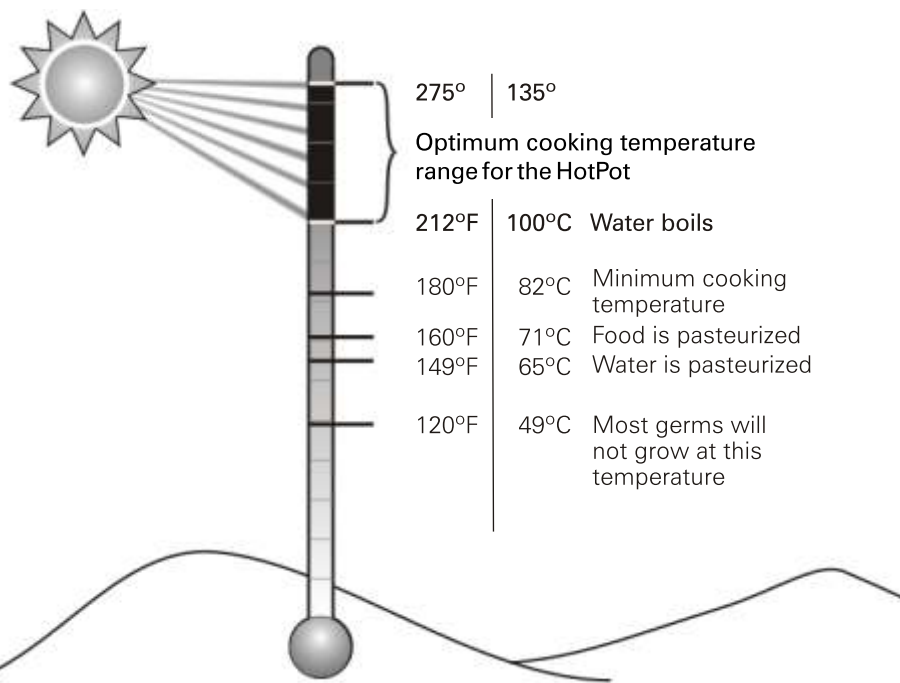
## Time needed to cook 9 pounds in a sunny day

Fast 1 or 2 hours	Medium 3 or 4 hours	Slow 5 to 8 hours
 Eggs	 Soups	
 Rice	 Potatoes	 Beans and lentils (dry)
 Fish	 Beans (soaked)	
 Most vegetables	 Meat	 Big roasts
 Fruit	 Vegetables (roots)	
	 Bread	

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## Temperatures

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## Caution!

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Although the HotPot is a very safe device, it can cause burns if not handled prudently. The hottest component is the black steel pot. The glass greenhouse may also be hot.

- The tempered glass greenhouse bowl is strong, but it could break with rough treatment. Try not to drop it.
- The pot is made of enameled steel; it could chip if mishandled.

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## Caring for your HotPot

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The greenhouse and steel pot can be cleaned in the same manner as conventional cooking vessels. Cleaning the pot is easy and requires no special care.

To avoid scratching the reflector, if you spill food on it, clean promptly with a soft cloth and abundant water. To clean the whole reflector splash a very diluted solution of dishwashing soap (one drop per gallon) and allow to drip dry.

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## Solar cooking resources

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**The Solar Cooking Archive,**  
<http://solarcooking.org/recipes/Introduction.htm>  
is a good source of recipes. It also has a selection of solar cook books for sale at <http://solarcooking.org/books.htm>