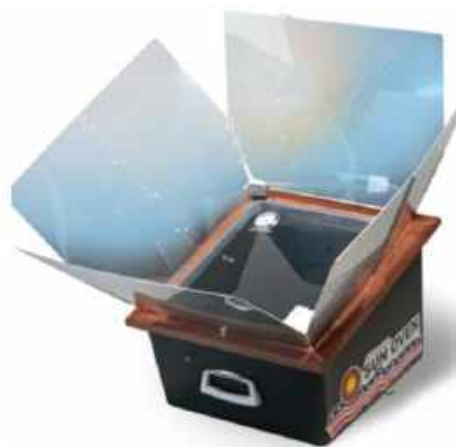


A Brighter Way to Cook

Sun Oven® Tutorial





A Brighter Way to Cook

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Introduction

Welcome to the world of Sun Ovens International, Inc. (SOI), the makers of the Sun Oven®. We are proud to present this Sun Oven® Tutorial. This booklet introduces you to everything you need to know about using the Sun Oven®.

In the next few sections, we will familiarize you with the benefits of cooking with the Sun Oven® from both practical and global perspectives. We will then discuss basic food safety and maintenance of your oven.

The bulk of this tutorial explains the most popular uses for the Sun Oven, as well as, how to cook in various weather conditions, and finally dives deep into several cooking topics. It closes out with a few uses you may not have thought of that are just as valuable as cooking bread and dehydrating herbs. The final sections showcase a few accessories that you can purchase at www.sunoven.com to make the Sun Oven® even more flexible and efficient.

Please enjoy this tutorial and “welcome to the fun of cooking with the sun”.





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STEP 1 >

Pre-Cooking Instructions [*Before you start cooking*]

The first time you use the Sun Oven®:

- Remove the protective film from the reflectors.
- Set the Sun Oven® facing the sun. Close the glass door and turn both latches over the glass. Leave the Sun Oven® in this position for 25 to 30 minutes.
- Using an oven mitt release the latches and open the glass door. Pour 1 ½ cups of water mixed with 1 ½ cups vinegar, with a few drops of dish soap, into a pot and place the pot, without a lid, inside the hot Sun Oven® and close and latch the glass door.
- Realign the Sun Oven®
- Leave the Sun Oven® in the sun for 90 to 120 minutes with the open pot of soapy water. Every 30 minutes realign the oven.
- After the oven has been heated and well steamed completely clean the inside of the chamber and the inside of the glass door with the hot soapy water/vinegar mixture. While cleaning, it is best to scrub hard on the interior of the glass around the area where the glass meets the black gasket.
- Now you're ready to start cooking.

STEP 2 >

Using the Sun Oven

Placement

Put your Sun Oven® in a sunny place which is unobstructed by shadows from trees, buildings, etc. Remember that areas not currently shadowed may be affected later by trees, buildings, or other large objects as the sun moves across the sky.

Setup

Unsnap the webbing strap that holds the reflectors in place. Lift and unfold the reflectors (which are hinged to the top of the Sun Oven®) and slide the slot in the bottom section of the reflectors over the thumbscrew in the wooden frame, making sure the thumbscrew fits through the slot. Twist the thumbscrew one-quarter turn to hold the reflectors in place.

The latches that hold the glass door shut (on the right side of the door) are tightened before shipping – you will need to unscrew them ¼ to ½ turn to make them easier to operate.

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Dual-Purpose Leveling Rack

The Sun Oven® is equipped with a dual-purpose leveling rack which hangs from the threaded rods inside the oven and swings freely to prevent spilling. The dual-purpose leveling rack can also be set on the floor of the oven to increase the usable area inside the Sun Oven® and allow larger pots or pans to be used. (It is important to note that pots and pans should be placed on the dual-purpose leveling rack, not on the floor of the oven. To cook evenly, there must be air flow all the way around the pot. The rack will allow air to pass under the pot and ensure an even heat.)

To hang the rack, bend the side arms inward and place the rack on the threaded rods.



The side arms can fold below the rack as shown below



Wind Resistant Alignment Leg

The Sun Oven® is equipped with a wind resistant alignment leg which will allow you to raise or lower the ovens orientation to meet the sun on the horizon. (The alignment leg is T-shaped.)

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The alignment leg is already inserted into the back of the oven. Two wire stakes are included which can be put through the holes in the alignment leg base and stuck into the ground for increased stability on windy days.



Focusing

Locate the white E-Z Sun-track indicators attached to the bottom corners of the glass door. Aim the front of your Sun Oven® towards the sun.

If you stand behind or on the left side of the Sun Oven® you will notice that each indicator has two small holes. As the light of the sun shines through the top hole, a small round dot of light will appear inside the indicator. When the oven is perfectly aligned with the sun, the round dot will be centered over the bottom hole. Move the oven from side to side and adjust the height of the rear alignment leg so the round dot of light shines directly into the bottom hole.





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While cooking it will be necessary to occasionally move the oven to follow the sun. To maintain the maximum temperature, it is best to refocus every 30 minutes. If you are leaving the oven unattended for a long period of time, we suggest that you immediately aim the Sun Oven® towards where the sun will be during its strongest time (between 10 AM and 2 PM). The Sun Oven® works best on clear, sunny days. Intermittent clouds will slow down (but not stop) the cooking.

STEP 3 > Notes, Tips and Warnings

- 1) Keep in mind that food cooks at a temperature of 180° in the Sun Oven®, if the temperature drops below 180°, you're no longer cooking.
- 2) Keeping your reflectors clean by simply using glass cleaner will always enhance the performance and heating of the Sun Oven®.
- 3) When you store your Sun Oven®, don't lock the glass door down with the latches, by leaving it open it won't retain the smell of the food you cooked before putting it away.
- 4) Any roast or large bird (for example a turkey) over 4 pounds must be 100% thawed before putting them into a pre-heated Sun Oven®, or they won't cook properly.
- 5) The Sun Oven® should always be preheated before cooking. It is recommended that you place the Sun Oven® with the glass door closed and latched down in the sun and let it preheat. In strong sun the Sun Oven® will usually reach 300 degrees F in about twenty minutes.
- 6) The Sun Oven® method of cooking is so natural and subtle that much less moisture is required for recipes – cooked in covered pans, that is. The natural, internal juices come into unique play, resulting in a superior, moist taste. Be sure to cut down, by at least one-third, any liquid measurements called for in rice, stews or sauces. This does NOT apply to bakery products.
- 7) Since foods do not burn in the Sun Oven®, it is not necessary to stir foods after they are placed in the oven. Use a meat thermometer to determine when to remove meats (put the meat thermometer in the meat before placing it in the oven). Opening the oven door unnecessarily will slow the cooking process, since some heat will escape.

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8) When you are done cooking it is best to remove any moisture from the interior of your Sun Oven® by wiping it out with a dry cloth. Maintenance on your Sun Oven® is very minimal. Using any non-abrasive glass cleaning solution, such as Windex, will keep the reflector material and glass clean. If the reflectors and glass are not kept clean, the oven will not reach its target temperature.

Why Use A Sun Oven?

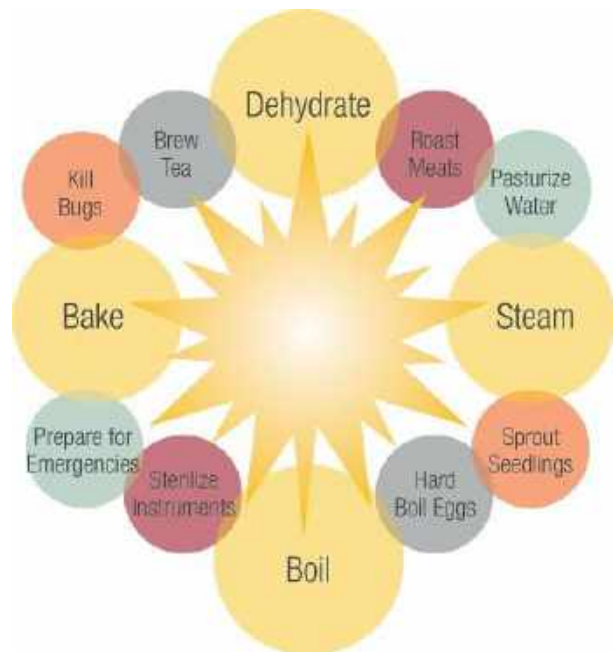
Sun Ovens International, Inc. (SOI) was born out of the entrepreneurial spirit of Tom Burns in Milwaukee, Wisconsin. Since its first days, it has had four simple goals.

- Make a reliable product
- Help people save energy
- Help people prepare for emergencies
- Dedicate a portion of the profits to promote Sun Oven® cooking in developing countries

SOI is proud of its products, history of benefiting the world, and of making the Sun Oven® right here in the USA. In fact, we've made them here for the past 35 years!

While many people enjoy the Sun Oven® for cooking off-grid or on the trail, there are additional benefits to consider. With the power of the sun, you can enjoy many benefits including:

- Improving your sprouting in the cold weather
- Kill bugs in your preparedness foods
- Dehydrate amazing jerky or sun-dried tomatoes
- Pasteurize drinking water when the grid goes down
- Save money on your energy bill while cooking



Seven Benefits of Cooking with The Sun

When you cook a meal with a Sun Oven®, you are not only saving on cooking fuel costs, but you are also experiencing the many benefits of cooking with the sun. From the fun of it to the financial independence of it. Let's look at the top seven benefits of this "Brighter Way to Cook".

Number 1: Fun

Cooking in the Sun Oven® is **Fun!**

SOI does a lot of work in Haiti. There they call the Sun Oven® the "magic box." In a country that depends on wood for cooking fires, they have a hard time believing that there's no flame and yet their food comes out fully cooked. Amazingly, you can put food in a black box, add a little sun, and you get a cooked meal. One that is full of flavor, moist, with all the natural juices locked in. There is joy in simply changing your perspective on something that you take for granted and do every day. It's fun to add a little magic back to cooking.

Campers, RV travelers, off-road enthusiasts, hunters, preppers and homesteaders alike all love to pull their Sun Oven® out and cook for their friends and family. They have fun with the questions and comments. It's a unique crowd-pleaser and a great way to meet new people.

It's even fun teaching the kids about the power of the sun and how solar works. There is nothing more important than the sun, as it plays a big part in keeping our planet vibrant.

Number 2: Forgiving

Cooking with the Sun Oven® is **Forgiving!**

Because of its natural temperature controls, nothing burns when you cook in the sun. Food doesn't dry out or scorch. The Sun Oven® makes it really hard to screw up a meal. It's like a solar-powered Crock Pot, you can set it and forget it. Once cooked, the gentle heat keeps your food hot and moist longer than any oven.

Compared to any other method of cooking, it's by far the most forgiving.

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Number 3: Flavorful

Cooking with the Sun Oven® is **Flavorful!**

Gentle temperature changes draw out flavors from food. Slow and even cooking gives complex carbohydrates time to break down. The result is simple sugars that give your food a flavorful taste you can't get any other way. It's the difference between caramel and burned sugar. Which would you rather eat?

In the Sun Oven® there's no movement of air. The warm and humid environment seals in the flavor. Also, nothing boils over and burns. Flavors never leak out.

The even heating gives fresh-baked bread an incredible taste and texture. A Sun Oven® makes the absolute best environment for the perfect loaf of bread!



Number 4: Flexible

Cooking with the Sun Oven® is **Flexible!**

Ever use an oven where you can't burn, dry, scorch or overcook your food? That's the Sun Oven®. Knowing the sun will never burn or dry out your meal puts you in control. Your food never controls you. We call it "cooking with confidence".

Cooking in the Sun Oven® gives you two ways to cook.

First, you can cook quickly. Take a thawed and oven-ready three-pound chicken and put it in a pot with your choice of vegetables. Then simply place the pot with chicken and vegetables in your preheated Sun Oven®, realign your oven with the sun every 30 minutes for the next hour and a half, and your three-pound chicken is done!

Second, you take your time and cook slowly. Using the same sized chicken, this example uses a frozen chicken. Put the frozen chicken and vegetables in a pot and place it in the Sun Oven® early in the morning, before you go to work. Then set the Sun



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Oven® facing due South and leave for the entire day. You'll come back home to a hot and juicy meal ready to eat. Remember, you can't overcook it!

Think about your Sun Oven® as a "solar crockpot" and you get the picture.

Quick-cooking fact: If you realign your Sun Oven® every 30 minutes, your cooking time is only 30 minutes longer than an oven or stovetop recipe.

Can't wait to check your dinner? Simply add 30 additional minutes to your cooking time every time you open the glass door for any reason.

Number 5: Flameproof

Cooking with the Sun Oven® is **Flameproof!**

Flameproof means it's safe! Use it at parks or campgrounds even when they ban open flame cooking.

Being portable, the Sun Oven® is easily set it up in your backyard, the beach, or beside your camper. No need to worry about setbacks and fires! Only the inside gets hot—the outside always stays cool!

The reason nothing ever burns in the Sun Oven® is the same reason it is flameproof. The Sun Oven® is a sealed environment. The air, the pot, and the food are all exactly the same temperature within a very insulated container. Compare that to cooking on your stovetop. The heat transfers from the stove burner to the pot, then to the food. If you forget to stir the pot, your food burns. You need to stir to distribute the heat throughout the food. Your stove is openly heating the pot and much of the energy is lost or heat's up the outside of the pot.

Since the outside stays cool, you can use your Sun Oven® when fires are not allowed on your deck, and even in dry conditions. It's safe as well as convenient.

Number 6: Fossil Fuel Free

Cooking with the Sun Oven® is **Fossil Fuel Free!**

Think about it! No wood. No gas! No charcoal! No dinosaurs!

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Your power to cook isn't dependent on anyone. The sun comes up every morning. You just get up in the morning and look East and there it is! The Sun Oven® requires nothing other than the sun. Align it and you are ready to cook.



Cooking with the sun is free! You'll never run out of solar energy. You'll never need to run to the store for charcoal or a tank of propane again.

Number 7: Financially Favorable

Cooking with the Sun Oven® is **Financially Favorable!**

Our customers initially purchase a Sun Oven® as a part of their preparedness plan. Their goal being using a Sun Oven® during emergencies and power outages. Many use their Sun Oven® to gain the necessary experience. Then they used it over and over and eventually use it regularly. As they used it more and more, they noticed lower utility bills. Soon switch to using it out of financial freedom as much as convenience and taste.

As an added benefit, with a Sun Oven®, you don't heat up your house! By cooking outside you save on fuel costs and save cooling costs. The average American household spends about 14% of its utilities on cooking fuel. The savings aren't all from cooking fuel. Depending on where you live, you can spend a significant portion of your utility budget on air conditioning too.

With your Sun Oven® and the freedom of cooking outdoors, your inside oven is no longer working against your air conditioning. Our customers tell us it's amazing how quickly the Sun Oven® paid for itself with the resulting reduction in cooking fuel and utility bills.

Food Safety

Is slow cooking meat safe?

Naturally, a few questions may come up about food safety and slow cooking in a Sun Oven®.

- Are there safety issues?
- Is salmonella a problem?
- What are the various things I need to concern myself with?

The danger zone for cooking beef, pork, and poultry is between 40° and 150° Fahrenheit. When food sits in this range for 90 minutes, the environment is perfect for bacterial growth. The exception to this is dehydrating.

Proper use of the Sun Oven® moves food through this zone quickly and safely. When pre-heated, using the Sun Oven® does not differ from using your normal oven. Even long-term cooking with small frozen meals heat quickly and don't dwell in the danger zone long enough for bacteria to grow.

Let's look at two examples.

First, let's look at cooking a whole thawed chicken. This recipe calls for pre-heating the Sun Oven® and a three-pound whole bird. Once pre-heated, the Sun Oven® is approximately 350°. Place chicken and vegetables in a pot and place the pot in the oven. Within 90 to 120 minutes, the chicken is hot, moist, and ready to eat at 165° to 185°. During the cooking time, the chicken never dwells in the danger zone and safely reaches 165° where the USDA recommends as the safe internal temperature for poultry.

Second, let's look at a full day of cooking with a frozen chicken. Start with a frozen chicken inside the Sun Oven® at eight o'clock in the morning. Position the oven where the sun will be at noon (due south). From 8:00 until 4:00, the sun is over the reflectors and heating the oven. In the morning the chicken remains below 40° safely cool until the sun is over the reflectors heating the oven.

Two things now happen at once. The chicken thaws and the oven heats to a temperature of over 300°. The sun remains directly overhead for about 4 hours. This



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cooks the now thawed chicken to its final temperature of over 165°. This happens in about 2 hours.

If you use a Dutch oven or a cast-iron pot, they keep the heat for many hours. This allows your food to stay moist, warm, and above 150°, out of the danger zone, for six to seven hours, as the sun passes over the reflectors.

This process is perfect for chickens that are four pounds or less, as well as beef or pork roasts that are four pounds or less.

One note about Turkeys. You must defrost turkeys 100% before putting them into a pre-heated Sun Oven®.

Bugs and Insects

The Sun Oven® chamber has an airtight seal. Aside from creating the perfect cooking environment that locks in the heat, the seal also keeps out critters. The air-tight seal forms a barrier to insects. With this barrier, bugs can't get in and spoil your food.

With this sense of security, you can leave your Sun Oven® out for hours, comfortable that you won't have an issue with bugs and insects.

Sun Oven® Insulation

The Sun Oven® is well insulated from top to bottom. High-quality, food-grade insulation surrounds the cooking chamber. The low-iron tempered glass door further insulates the cooking chamber from heat loss.

In the heat of the day, the glass door of the Sun Oven® gets warm to the touch. When the oven chamber is 350°, the surface of the glass door only heats to about 155°.

This is hot enough to keep your neighbor's dog, or any other animal, from eating your pot roast. They'll sense the heat and stay away from the Sun Oven®.

Even at high noon, there is little to no heat that you can feel on the outside of the oven. This is because it's very well insulated. Additionally, the reflectors don't get hot.

The result of the high-quality insulation is your Sun Oven® remains efficient, cool, and safe.

High-Quality \ Low Maintenance

The most important part of the Sun Oven® is the gasket. The gasket forms an airtight seal and will last a lifetime. The gasket is the reason the Sun Oven® gets much hotter than homemade solar cookers or other knockoffs you may have seen. A quick wipe between uses with a damp cloth is all the maintenance the gasket needs.

The reflectors are constructed of highly polished, anodized aluminum that is 86% reflective. They'll never oxidize, rust, or corrode. Clean the reflectors with any household glass cleaner. Use Windex, vinegar, water, or whatever you use to clean your windows. The reflectors might get scratched and dented over time, but that's ok, it doesn't affect the performance of the Sun Oven®.

The outer shell is made of ABS plastic, while the inner cooking chamber is constructed of black anodized metal. Sandwiched between the cooking chamber and the outer shell is a thick layer of nontoxic, food-grade, fiberglass insulation used in pizza ovens.

It can be 400° inside the oven and the sides are cool enough to touch. You won't feel any heat from the inside.

Occasionally the parts in the direct sun get warm, but the Sun Oven® isn't losing any heat. The insulation is rated for pizza ovens that operate at over 500°. Therefore, the Sun Oven® retains heat very well.

The inner anodize shell is easy to clean and maintain. Just wipe it out with a dishrag or even spray it out with a garden hose.

The glass door of the Sun Oven® is constructed of custom-formulated, low-iron, tempered glass. While the low-iron glass is four times more expensive than standard tempered glass, it adds efficiency and is critical to the heat retention of the Sun Oven®.

The thick, wooden bessel around the top of the Sun Oven® is handmade out of high-quality poplar wood, with a water-resistant stain.

An Important Emergency Preparedness Tool

The Sun Oven® is one of the most powerful tools you can have in your emergency preparedness supplies. There is nothing like a hot meal at the end of a long and stressful grid-down day. But don't limit yourself to just cooking. Heat water for a bath, sterilize medical tools, etc. All are uses that can get you through the tough times.

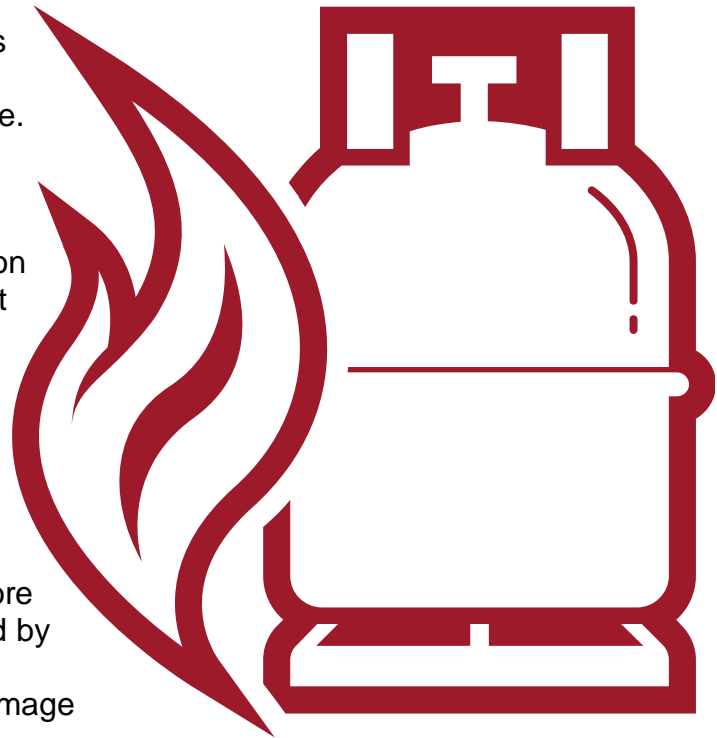
Alternate Power Sources

No single cooking solution will solve 100% of your emergency preparedness needs. You must have backup options. Two of the best are propane and butane.

While the fuels themselves don't expire, it's important to keep in mind that manufacturers only rate the seals on these canisters for five years. You must plan on cycling any fuel you plan on using during grid-down times.

It's also important to know how much propane you can legally store. There will not be a propane police officer knocking on your door to confiscate your propane. However, if you have more propane on your premises than allowed by the local ordinance or your insurance company, you may be liable for any damage caused by a fire.

If you ever have a fire, there's a good chance that you've just voided your homeowner's insurance or your fire insurance. Just a quick tip, be aware of all applicable rules.



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Global Benefits

SOI thinks and acts domestically and globally. From its very beginning, SOI has strived to share the benefits of the Sun Oven® with the world.

Why We Do What We Do

The founders of SOI spent a lot of time in Africa and saw the abject poverty in rural communities. It's amazing the things taken for granted in America. Today, 2.5 billion people in the world will need to find wood, charcoal, or dung to cook this evening's supper. As they cook, entire families breathe in these fumes. Over their lifetime, this is equivalent to smoking three packs of cigarettes a day.



Each year, just in the continent of Africa, 1.6 million children under the age of five die of respiratory diseases. The primary cause is indoor air pollution from cooking fires. In more than half the African countries, more children under the age of 5 die of respiratory diseases than from HIV/AIDS, and malaria combined. So, when we can replace 80% of that smoke with the sun, it makes a tremendous impact.

Next, deforestation has gotten worse around the world. Gathering wood is largely the responsibility of women and girls. As humans destroy the forests, these women and girls must travel further and further away from home. This makes them susceptible to harm via injuries, rape, or animal attacks. So, when we can replace all the issues associated with wood, charcoal, and smoke with healthy cooking using the sun, it's worth every effort.

SOI has had a huge effect on the health and safety of women and children, and it takes every opportunity available to continue to help.

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People Helping People

SOI has a pretty simple business model. Help families in the United States to save energy and be better prepared for emergencies, and use a portion of our profit to work in rural communities around the world changing lives.

Through various programs, SOI has installed the giant Villager Sun Oven® in about 55 countries. Each Villager Sun Oven® can make 1,200 meals in an eight-hour day! That same oven can make 28 loaves of bread an hour. All with just the power of the sun!

SOI works with Non-Governmental Organizations (NGOs), orphanages, and schools to subsidize the cost of the ovens. Working with these organizations builds a sense of ownership and pride in the communities. When the ovens are free, they aren't as appreciated and often end up missing. By working with the community and an organization, the community comes together to feed themselves or to build a business.



One commonly beneficial case is as follows. An orphanage with 100 children needs approximately 200 meals a day. They don't need the 1200 meals that a giant Villager Sun Oven® can make. So in this case, SOI ships the giant Villager Sun Oven® with a full complement of pots and pans. SOI also delivers insect-proof flour containers. This enables the orphanage to use the spare Villager Sun Oven® space and time to set up a micro-bakery business. Not only are they able to feed themselves without resorting to dangerous and deadly fuels, but they also generate income through the bakery.

Children who don't have parents, usually because of HIV/AIDS, war, etc., learn bread baking and business skills. When they leave the orphanage, they have job skills that give them a head start in life.

SOI doesn't solicit money for international work. SOI simply uses a portion of its profits. Therefore, the purchase of each Sun Oven® helps their global work in benefiting developing countries and people.

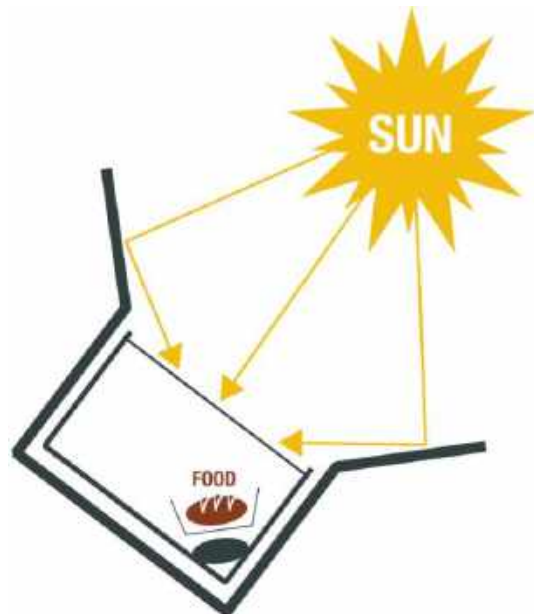
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How The Sun Oven® Works

The Sun Oven® is actually pretty simple. They use the same principles as the Greenhouse Effect. This is the same effect you experience in a car on a sunny day. When sealed up, a car can get toasty warm even if it's cold outside.

About 60% of the heating energy comes from the sun shining directly on the Sun Oven's® glass door. The other 40% comes from the sun bouncing off the reflectors into the oven's chamber. The glass, insulation, and sealing gasket all trap the heat, making the oven super-efficient.

On perfect days, with totally clear skies, and no haze or clouds, the oven can reach temperatures of 400°. On any day where the sun casts a shadow, the Sun Oven® stay's consistently at temperatures between 325° and 375° if aligned every 30 minutes to the sun.



Preheating a SUN OVEN

Just like a conventional oven, some recipes require preheating. In short, preheat for everything unless you are using an all-day recipe.

To preheat the Sun Oven®, set it up and align it to the sun before you prepare a recipe. That way the oven is preheating while you're getting the food ready.

When your food is all prepared, the Sun Oven® is preheated and ready to cook. On a clear day, the Sun Oven® heats to 300° in about 20 minutes.

Cookware

One big advantage of the Sun Oven® is that it uses any pot or pan that is oven safe. Any pan that you can put in your regular oven you can also use in the Sun Oven®. There are several suggestions to keep in mind with pots and pans. First, except for bread, cakes, muffins, etc. use a pot or pan with the lid on it. If you cook with an open pot, the escaping steam fogs up the inside of the glass. This decreases the solar heating and therefore the temperature inside the oven.

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The most efficient and fastest way to cook in the Sun Oven® is with enamelware pots. Not to be obvious, but enamelware pots are enamel-coated steel. These types of cookware are thin and dark. www.sunoven.com is a great resource for these pots.

Remember, in the chamber of the Sun Oven® everything is at an even temperature, so the thicker the pot, the more mass you have to heat and the longer it takes for the cookware to come to temperature.

Go back to cooking a whole chicken. If the desire is to cook a 3-pound bird in an hour and a half, then use

enamelware. The enamelware heats quickly and seals in the steam, making the perfect environment for cooking chicken.

Extend this example to all-day cooking with a frozen chicken. Here, the frozen chicken is prepared early in the morning in a cast iron Dutch oven. Position the Sun Oven® facing south and come back later and dinner is hot, juicy, and ready to eat. Dutch ovens take an hour and a half longer to come up to temperature when compared to enamelware pots. This is because of their increased thickness and thermal mass.

The big advantage of Dutch ovens and other cast-iron pots is the flexibility when cooking with them. If the meal is to be left unattended all day, there's no need to worry if it gets cloudy later in the day. Once the cast iron comes up to temperature, the thermal mass of the Dutch oven, and the superior insulation of the Sun Oven®, ensure the chamber retains temperature and continues to cook the meal to completion. Even if the sun completely disappears!

Corningware or Pyrex works well too. With this cookware, add about 15% to the cooking time compared to enamelware. A simple hint, start cooking a little earlier.

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RV users like to cook with silicone bread “pans” and muffin “tins” because they’re lighter to travel with. These work equally well for baked goods in the Sun Oven®.

The only cookware to use caution with is reflective, shiny pots such as stainless steel. These pots reflect light out of the Sun Oven®. This decreases the temperature inside the oven. If these are all you have, don’t worry! Still use them, just drape a dark dish towel over the lid and sides. This limits the reflections and keeps the temperatures up in your Sun Oven®.

One final tip. Use mason jars to cook two different things at the same time. There’s enough room on the leveling rack to place two quart-sized mason jars next to the pot. Cook a full meal in the Sun Oven® with side dishes in mason jars!

How Much Sun Do You Need?

- If there’s enough sun to cast a shadow, then you can cook in the Sun Oven®.
- If it’s overcast or cloudy and you can’t see a shadow, then you can’t cook in the Sun Oven®. It won’t get hot enough.

Cooking Year-Round

There are some distinct differences between winter cooking and summer cooking. As an example, in southern latitudes in June, the Sun Oven® is used for up to 13 hours a day. In comparison in December, the season limits cooking times to about 5 hours a day. As long as the sun’s strong enough to cast a shadow, cooking with a Sun Oven® is effective and fun.

People have cooked in temperatures as low as 10 below zero with no problem. Last January, an owner in Wisconsin sent SOI a photo of cooking with the Sun Oven® when it was 30 below zero. SOI has even shipped Sun Oven® to Antarctica, where the new owners cooked for several weeks at temperatures as low as 40 below zero.



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The Sun Oven® can be efficiently used year-round. One thing to keep in mind is the T-leg on the back of the Sun Oven®. The T-leg extends to full height and perfectly angles the oven even between early November and late February.

Turn the Sun Oven® upside down when cooking in the winter. Open the reflectors and latch them in place with the thumbscrew. Next, lay the Sun Oven® with the back of the oven on the ground, and the carrying handle at the top. This gives the Sun Oven® stability and increased winter efficiency. It's ok to let the reflector of the Sun Oven® lay flat on the ground. It can rest on the snow, even on a table when cooking in the winter.

Cooking in the Winter

Align the Sun Oven® perfectly in winter with the E-Z sun-track indicators. The leveling



rack folds up, so it fits right behind the thermometer, flat on the bottom. The only drawback to this winter configuration is that the thermometer ends up upside down.

It's impressive the way this position adds an hour of cooking in the morning and the evening of November through February.

Adjust the position to stay aligned with the sun every 30 minutes when cooking in winter to keep the oven at peak temperature.

A Brighter Way to Cook

Cooking on Windy Days

The T-Leg is designed to be staked down to add support to the Sun Oven® for windy days. Use the included stakes to secure the Sun Oven® against the occasional gust of wind.

Additionally, the reflectors have a notch with a thumbscrew that locks them into place. As long as the oven is staked into the ground, and the reflectors are locked, the Sun Oven® is wind-proof up to 40 MPH.

Cooking with the Sun Oven®

Even though it's called an oven, you can do a lot more than just bake. The Sun Oven® cooks anything normally cooked on a stovetop or in a gas or electric oven.

The only exception is fried food. The Sun Oven® is not compatible with frying food.

So, anything that is baked, boiled, roasted, or steamed can be cooked in the Sun Oven®.



Bread

Sun-baked bread is delicious! This section will cover a few of the secrets to baking the best loaf of bread possible.

When baking bread in the Sun Oven®, **ALWAYS!, ALWAYS!, ALWAYS!** preheat the Sun Oven®. This is absolutely critical!

A Brighter Way to Cook

Next, when proofing\raising your dough, don't let it raise the same height as when using a gas or electric oven. For the Sun Oven®, it's best to proof it $\frac{1}{2}$ " - $\frac{3}{4}$ " below the top of the bread pan.

The reason behind this is the even heating of the Sun Oven®. When preheated to 325°, if the glass door is opened to put two loaves of bread in the temperature inside the Sun Oven® will drop by 50° to 75° and then gradually increase. The bread is at room temperature and will continue to rise until the oven comes up to temperature.



If the bread was proofed to full height already, it would overproof above the top of the pan. As the Sun Oven® comes back up to temperature, there's a good chance the bread will fall. Therefore, start with the bread $\frac{1}{2}$ " - $\frac{3}{4}$ " below the top of the bread pan, it will rise to just the right height.

Next secret. To guarantee that the bread browns in the Sun Oven®, spray a light mist of water on the dough just before putting it in the Sun Oven®. The mist helps build that nice golden-brown crust.

The Sun Oven® bakes white bread, wheat bread, gluten-free bread, sourdough bread, rye bread, and pretty much any kind of bread desired. When making bread in the Sun Oven®, bake 1 loaf in about 45 to 50 minutes and 2 loaves in an hour to an hour and ten minutes.

A Brighter Way to Cook

Sun Oven® just introduced its new white and wheat **bread mixes**. We think it's the best bread you've ever eaten, but you can judge for yourself by going to www.sunoven.com to order some.

Drinks

Sun Tea

Sun tea is a delicious thirst quencher!

Make sun tea in the Sun Oven® faster by putting it in Mason jars. Make up to six jars at a time. The perfect ratio is four cups of water to five tea bags.

It's also easy to make a variety of herbal teas. Put one cup of assorted herbs like mint or chamomile in 4 cups of water.

It's amazing how excellent tea tastes when you make it in the sun.



Side Dishes

Beans

When cooked in the Sun Oven®, beans develop flavor you just can't get anywhere else.

There are too many varieties of beans for a single recipe. Therefore, here are a few hints.

If soaked overnight before cooking, beans cook a lot faster compared to unsoaked. Slowly simmer them all day with the align to noon method. They can also be cooked quicker by realigning the Sun Oven® every 30 minutes. The Sun Oven® can even get them bubbling and boiling for a really delicious taste.



A Brighter Way to Cook

The starter recipe is 2 ½ cups of water for each 1 cup of dry beans. Add a few flavorings while they cook. Brown sugar, mustard, and bacon. The larger the bean, the more water and time you will need. The smaller the bean, the less time and less water. Feel free to experiment.

Hard-Boiled Eggs

The best way to illustrate the even heat of the Sun Oven® is to cook an egg. If you preheat the Sun Oven® and put just one egg in for about 35 minutes, you'll have a perfect hard-boiled egg. All done with no water at all & amazingly easy to peel!

Think about the principle of boiling an egg, it's very simple. Bring water to a boil, put the egg in the water, and the water heats the egg evenly around the eggshell. Well, that's the way everything is cooked in the Sun Oven®. The only difference is the Sun Oven® uses hot air evenly around the eggshell (or anything that you're cooking).

When you cook two dozen eggs, preheat the sun oven before you put them in and leave them in for about an hour. You can overcook eggs if you leave them in way too long, 30 mins is ok. One final note, if you have your eggs in the refrigerator, you will want to take them out of the frig about an hour before you cook them so you will get the best texture.

Entrees

Sun-Roasted Turkey

Turkey is amazing when cooked by the sun. It's so moist and juicy that it's hard to describe. Everyone who eats sun turkey says the light meat is even moister than the dark meat. This is all thanks to the slow cooking process.

The Sun Oven® can make up to a 21-pound turkey. The key is to use a baking bag. Fold up the leveling rack and store it on the bottom of the Sun Oven® floor. Put the turkey in a baking bag and set it on the rack. It works perfectly.



Never set a pot or a pan or baking bag directly on the floor of the Sun Oven®, always fold up the leveling rack and set it on the floor of the oven. Purchasing a Sun Oven® turkey rack makes this even easier.

A Brighter Way to Cook



The way the Sun Oven® heats is by producing an even flow of air that moves around the food. In technical jargon, this is convection. Hot air rises, cold air falls. If there isn't airflow around the food, it won't heat evenly and will have hot spots.

Remember, when using a baking bag, don't cut slits in the bag. Even if the bag instructions tell you to do it, just tie the baking bag tightly, trapping the moisture inside, and then put it in the Sun Oven® on the rack.

Rubbing butter, olive oil, or sprinkling paprika on the skin of the turkey will turn the turkey dark brown. You will be totally blown away by how delicious it is.

Pizza

Yes, the Sun Oven® can cook a pizza. Make mini-pizzas or up to a 12-inch pizza. 12" pizza stones give the best results. Put the stone in the Sun Oven® and preheat as normal.

Once it reaches 300° put the pizza on the stone and you'll get a nice crispy crust. It does come out really, really delicious.



Vegetarian Cooking

The Sun Oven® is wonderful for vegetarian cooking. The even temperatures of a Sun Oven® are ideal for vegetable-based dishes.

A Brighter Way to Cook

Dehydrating

Dehydrating is one of the oldest forms of food storage and preservation. It's also one of the best things about the Sun Oven®. Use the Sun Oven® for dehydrating fruits, vegetables, and even making incredible jerky.

Dehydrating takes less time and cost less money than virtually any other form of food storage. The best part, it's perfect for emergency preparedness when there is no power.



Benefits of Solar Dehydrating

The Sun Oven® is an excellent solar dehydrator. You can dehydrate just about anything with the right precautions. When dehydrating, keep the temperature of the Sun Oven® between 110° and 155°. Always keep it below 180°. At 180° you are cooking.

Dehydrating with the Sun Oven®

To dehydrate, place a piece of parchment paper on the rack. Cut the pieces to fit the racks and place one on the leveling rack (on the bottom of the oven). Wash and dry the fruit or veggies and slice them thin. The thinner the better. Put the sliced food on the parchment with about 1/2" between the slices.

Remember the thinner the cut of meat the faster it dries. In the summer, if you have too many tomatoes, slice them thin, place them 3 layers high, and in no time, the Sun Oven® has produced perfect sun-dried tomatoes. Store them in a Mason jar and they'll last about six months.

The two latches on the glass door shut to give it an airtight seal. To dehydrate use these latches to allow excess humidity to escape. Once the fruit, veggie, jerky, or herbs are placed on the dehydrating racks, instead of locking the glass door shut, turn one latch in, towards the center of the Sun Oven®, and set the glass on top of the latch. The

A Brighter Way to Cook

resulting gap allows moisture to escape. This also keeps it from getting too hot inside the oven. It creates the perfect solar dehydrator.

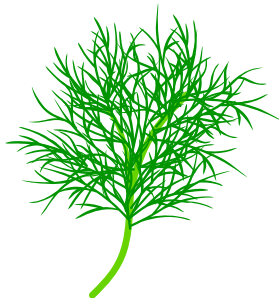
Once the food is in the Sun Oven®, just line it up with the sun using the white E-Z sun indicators. Then move the oven back towards the East about six inches to keep it at a lower temperature. From there all you have to do is realign the oven 3-4 times during the day.

Quick Note: If you get to the end of the day and the dehydrating isn't done, no problem. Simply lock the glass door with the latches to form an airtight seal. This suspends the drying process overnight.

As far as bugs are concerned, the Sun Oven® chamber has an airtight seal, so don't worry. No bugs will spoil your food overnight.

Align the Sun Oven® the next morning with the glass propped open to finish.

Jerky takes around 12 hours to complete. This depends on how thick the meat is sliced.



Drying Herbs

The Sun Oven® also dehydrates herbs. The real advantage of drying herbs in the sun is that the herbs retain more of their essential oils and vitamins. This is because the gentle heat doesn't break them down like other methods of drying.

Dried herbs are safe from rot, spoiling, and bacteria. Once dried, they remain potent for 6-12 months.

A Brighter Way to Cook

When using home-grown herbs, water them well the night before you plan on picking and drying. It's always best to pick in the morning in the days before they flower. Pick them and strip off the lower, tougher leaves.

Rinse them well and shake off the excess water.

Next, dry them off on a towel. Strip off the leaves and place them on the drying rack. Keep ½" of space between the leaves.

Herbs need to be dried at a lower temperature. When dehydrating herbs in the Sun Oven®, don't exceed 100°. Just keep in mind that between 95° and 100° is the sweet spot for herbs. Check on the Sun Oven® every hour and realign as necessary to keep the temp low.

Alternate Uses

Sterilize Instruments

Several international aid groups that take short-term medical mission trips take a Sun Oven® with them. They use it to heat water to pour over the instruments and towels.

An autoclave basically brings the psi to 20 and the temperature up to a above 250 degrees Fahrenheit for 30 consecutive minutes. After 30 mins above 250 degrees at 20 psi, you have sterile utensils.

The medical missionaries place the medical utensils in a pot inside the Sun Oven®. Then monitor the Sun Oven® to temperatures above 250° for 30 minutes at 20psi, giving them sterile utensils. Sterilized medical instruments can be the difference between life and death.



Insect Infestation

While unpleasant, dealing with insects is important. Especially for those with a lot of food stored, dehydrated, or freeze-dried.

If you have an insect infestation in your stored food, put them into the Sun Oven®. Bring it up to a temperature of 140° for 10 minutes. That not only kills the bugs, but it also kills them in all stages of development.

Now, if it's something boiled during cooking, boil it and the bugs will float to the top. When they do, skim them off. For dried goods, sift through them and pick the insects out. It's not the most pleasant thing, but at least the food will be saved and won't have to be thrown away. Just bring it up to 140° for 10 min.

Restore Potting Soil

The Sun Oven® restores potting soil. This process eliminates seeds, insects, and bacteria that can harm new seeds and plants.

First, remove all plant material and roots from the soil. Next, take an old baking pan and put in a 2" to 4" layer of dirt. Spread it out evenly.

Cover it with aluminum foil, shiny side of the foil facing down on the soil. Take an old dark dish towel and cover the foil. You don't want to reflect the sunlight out of the Sun Oven® and decrease the heat. Poke a hole through the dish towel and foil into the soil and stick a meat thermometer into the soil through the hole.

Once the temperature reaches 180°, wait 30 minutes. You now have totally rejuvenated potting soil just with the power of the sun.



A Brighter Way to Cook

Winter Sprouting

Enhance winter sprouting with the Sun Oven®. Sprouting thrives at temperatures between 75° and 80°. Use the Sun Oven® in the winter to give seeds a head start. Put the seeds in the Sun Oven® with a long burning candle, the sprouts will flourish. It won't hurt the seeds to take them out of the Sun Oven® and use it to cook. Just put them back when you're done cooking.



When sprouting and using candles, dollar stores are the best bet! It's not uncommon for them to carry big boxes of candles for a buck.

Leave the glass door "open" and sitting on top of one latch, like during dehydrating. Otherwise, the candle won't stay lit.

Cloudy Day Hay Box

The Sun Oven® needs enough sun to cast a shadow to cook. On overcast days, use the Sun Oven® as a hay box. Also called a wonder box or retained heat cooker. These cookers hold heat for a long time, allowing you to cook without added energy.



When used as a hay box, cook food halfway on a campfire, stove, or other means. Then put it into the Sun Oven® and latch the glass door shut. Fold the reflectors down on top of the glass, as in the picture, and set it aside to finish cooking.

In a preparedness situation, use the Sun Oven® on an overcast day to finish food that is half cooked. This saves fuel, time, and effort.

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Resources and Accessories @ www.sunoven.com

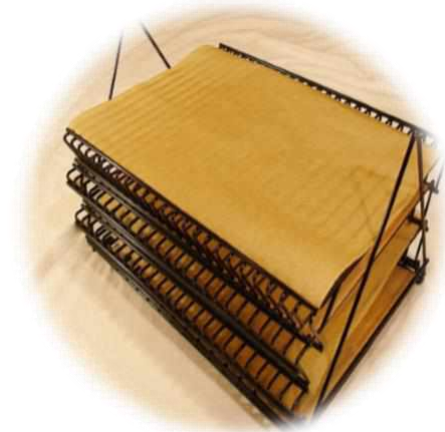
Sun Oven® has other resources that make cooking even more flexible and convenient.

Go to www.sunoven.com and you will find a Frequently Asked Questions section loaded with information. You can also download a pdf copy of the Sun Oven® manual.

Dehydrating & Baking Racks

Dehydrating is a great way to preserve fruit, veggies, and herbs. The Multi-Level Dehydrating & Baking Rack Set is the best and most efficient way to dry lots of food. Each rack measures 12" x 9" x 1.5" and three (3) come in the set. They make the following tasks easy.

- Preserving Fruits & Vegetables
- Drying Fish & Meats
- Baking Cookies or Pastries
- Saving Money on Food Bills and Food Storage



Stackable Pots

These pots make spill-free cooking easy. With this set, bake and cook at the same time. Safely and easily stack two interconnecting enamelware pots in the Sun Oven®. Each pot includes a glass lid for improved visibility and browning. The set includes:

- 9 ¾" Round Roaster holds 3-quarts or up to 3 lb. chicken or roast
- Graniteware surface is all-natural, free of any chemicals, PFOA or PTFE
- Steel core provides strength, dark enamel color absorbs oven's heat and provides even heat distribution during cooking
- The porcelain surface is non-reactive and will not alter the taste, color, or nutritional value of your food
- Metal tool and dishwasher safe



Size:

The diameter of each pot is 9.75", the height of one pot with the glass lid is 4.5", the height of stackable pots with the glass lid is 6.5".

Capacity: Holds 3-quarts or up to 3 lb. chicken or roast

A Brighter Way to Cook

Brownie Pans

Cross-stacking pans allow maximum use of the inner chamber of the Sun Oven®.



Pans are the perfect size for 3 layers of delicious sun-baked brownies.

- Constructed of lightweight tin
- Even heating for golden brown baking
- 11" x 7" x 1.5"

WAPI – Water Pasteurizing Indicator

SOI is pleased to offer the Multi-Fuel WAPI–Water Pasteurizing Indicator (WAPI). Pasteurization occurs when you hold water at 150°F (65°C) for 6 minutes. Pasteurization destroys all microorganisms and dangerous pathogens that cause diseases from drinking contaminated water.



A WAPI is a simple tool that shows when water has reached pasteurization temperature and is safe to drink.

This is the same process as boiling but is quicker (40% less time).

How does the Multi-Fuel WAPI work?

Use the Multi-Fuel WAPI in a Sun Oven®, a pot over a campfire, charcoal, or a propane stove. The Multi-Fuel WAPI has no delicate nylon line to tangle or burn off while hanging over the lip of a kettle. The Multi-Fuel WAPI floats inside the kettle.



The Multi-Fuel WAPI has a high temperature molded polypropylene case which serves as a carrying case for storage and as a float. This enables the WAPI to submerge in the water, where it represents a more accurate measurement of water temperature.

Remove the transparent tube from the case and snap it into the hole in the bottom of the carrying case. Make sure the wax end is up. Set the case in a pot, pan, or jar filled with water. When the wax has dropped to the bottom of the tube, the water is safe to drink. You can reuse the WAPI hundreds of times.

A Brighter Way to Cook

Turkey Roasting Rack

A sun-roasted turkey does not dry out, stays moist and flavorful.

The Hanging Turkey Roasting Rack mounts in the Sun Oven® and can hold up to a 21-pound turkey.

Package up your turkey in a baking bag and set it on the rack. The rack is curved, so it cradles both birds and roasts. You simply replace the leveling rack when using.

Dimensions 13" x 9" x 2"



The Sun Oven® Protective Cover

This weather & water-resistant cover will protect your Sun Oven® from any wear and tear! This includes transportation while moving locations of the Sun Oven® to simply stowing completely moisture free!

The Sun Oven Protection Cover is made with military specs 1000 Denier Cordura material This material designed for the outdoors and highly trusted by our military. It prevents all wear and tear and ensures the protection of your invested Sun Oven®.

- Made in the USA.
- Perfect Cover fit
- Water-Resistant
- Weather Resistant
- Naturally fits around handle
- Military-Grade Material

The best way to put the cover on is to unzip both sides completely, set the oven inside the cover then zip each side up little by little until it's completely zipped. The only way for the oven to fit inside the cover is to put the side with our logo on the reflector side of the oven with the zippers ending up on either side of the carrying handle.



A Brighter Way to Cook

Sun Oven® Cookbook

- ✓ 350+ Recipes
- ✓ Pictures with Every Recipe
- ✓ Detailed Descriptions
- ✓ Vegetarian Options
- ✓ Gluten Free Options
- ✓ For All Cooking Levels



Sun Oven® Essentials Bread Mix



Homemade bread is one of life's finest pleasures, and our mixes help you bake it easily in your Sun Oven®, or conventional oven. This bread goes with all types of meals or just enjoy it hot and fresh right out of your Sun Oven®. Made with only simple and high protein ingredients you want and nothing you don't: no artificial sweeteners or flavors, no artificial colors, and no high-fructose corn syrup. You'll be serving fresh bread from your Sun Oven in no time!

Sun Oven® Warranties and Life Span

Warranties

SOI takes pride in its products and to support you the best way possible we warranty every Sun Oven®. Replacement parts for the Sun Oven® are also available at www.sunoven.com.

- The reflectors are warranted for 15 years to remain reflective and to not rust or corrode.
- Gaskets are warranted for 15 years against failure or cracking.

If you're not completely satisfied with your Sun Oven®, you can return it anytime within the first 30 days and receive a full refund.

Life Span

This is always the hardest question to answer because the Sun Oven® has been in production for 35 years and customers are still using them today – So at least 35 years!