

Solar Freezer vs Solar Refrigerator/ Solar Fridge & the Solar Powered Appliances available by Sunstar, SRC & Phocos

Solar Refrigerator Company explores what a solar freezer and solar fridge/ solar refrigerator are, the various types and how to determine a user's best solution

ORO VALLEY, ARIZONA, USA, March 13, 2023

/EINPresswire.com/ -- [Solar Refrigerator Company](#) is a full-service solar equipment supplier providing quality products from various manufacturers. Visit our website for a full list of recommended [solar fridges](#), [solar freezers](#), inverters, solar panels, solar batteries and charge controllers. Currently on offer is the [SRCR450DW stainless steel color 15.9 cu ft. DC refrigerator](#), reduced in price from \$2,195 to \$2,055 and is shipping for free to US customers for a limited time.

WHAT IS A SOLAR REFRIGERATOR

- A solar-powered refrigerator or solar powered fridge is a refrigerator/ fridge which runs on electrical energy directly from the sun (DC/ direct current), and is typically powered by photovoltaic (solar panels). These products are most commonly of an upright (or standup) design. They are also available in smaller more portable designs too.
- In addition to photovoltaics, they typically require a battery bank for storage of electrical energy to keep the solar refrigerator running during night-time or cloudy days. A solar charge controller/ solar electric regulator helps to protect the system and regulate the electric charge from the battery bank and solar panels.
- Solar-powered refrigerators or fridges are able to keep perishable goods such as meat and dairy cool and are used to keep much needed vaccines at their appropriate temperature to avoid spoilage.
- Typical commercial refrigerators use electricity and a motor that compresses a refrigerant, but with solar refrigeration, there is no motor. The refrigerant is converted from a gas to a liquid by thermal energy created by the sun, and then the liquid depressurizes and reverts back to its



original state to help keep your food cold and fresh.

In some countries, these types of products are more commonly referred to as a solar fridge and in other countries a solar refrigerator. Other names for this product are DC fridge or DC refrigerator, 12 volt fridge or 12 volt refrigerator. Most 12 volt refrigerators also operate at 24 volts. Any solar system, however small, will always be most efficient and consume less power when operated at a higher voltage. So, 24 volt systems are more efficient than 12 volts etc. They are also named after their most common applications. For example, off-grid fridge because they are used in off-grid homes powered using renewable energy; RV refrigerators because they are used in RVs that run off 12 or 24 volts. In Europe they are commonly referred to as caravan fridges; tiny house fridges or tiny home refrigerators as they are used in tiny homes etc. In NGO/ NFOs, these products can also be referred to as solar direct drive refrigerators. Solar fridges are infinitely better for the environment and more convenient.

As more and more industries and individuals look for 'greener' ways to run their businesses and households, solar power is an industry that is getting a lot more attention. By harnessing the power of the sun to run a range of different appliances that typically rely on electricity, one's carbon footprint is significantly reduced. Every home, NGO/ NFO and business that relies on refrigeration to keep perishable food and medicines safe and unspoiled can rely on solar-powered refrigeration.

In solar-powered refrigerators, the key lies in the amount of insulation that's used. They depend on heavy insulation around the lining to help keep the contents safe from external heat. This allows you to keep food cold for hours upon hours. Also, the thermal energy produced by the change from gas to liquid refrigerant helps keep the refrigerator cold even when no sun is available. In the past, solar refrigeration relied on the sun and PV cells to charge lithium-ion batteries, but that is no longer the case.



Solar Refrigerator by Sunstar



Solar Freezer by Phocos

Benefits of Using a Solar-Powered Fridge

- They also usually produce more energy than they consume, resulting in a “net negative” energy status which makes them more environmentally sustainable. Solar-powered refrigeration is also safer than conventional forms of energy production as it doesn't rely on a power grid and leaves zero waste when generating power. Plus, it's a safer option during installation as there is no need to tinker with your electrical system.
- One of the most notable is energy efficiency. Most commercial varieties of solar refrigerator can create 65-75 BTUs of cooling power after they've absorbed about 100 BTUs worth of heat from the sun. This increased energy efficiency is naturally a cost-effective option.

WHAT IS A SOLAR FREEZER

Similar to a solar fridge, a solar freezer is a freezer which runs on electrical energy directly from the sun (DC/ direct current), and is typically powered by photovoltaic (solar panels). These products typically operate as a whole at higher temperatures (- 7.6 degrees Fahrenheit/ -22 degrees Celsius).

Solar freezers were one of the first types of these types of products that were manufactured. In time, they were made in the upright/ standup designs. In the last 15 years, more and more upright/ standup solar refrigerator products are in manufacturing and the efficiencies have dramatically increased and become as efficient as solar freezers. Many would argue that with DC compressors made by manufacturers like Secop (formally known as Danfoss) and LG, solar refrigerators and solar freezers are more efficient than the conventional AC fridges and freezers commonly found in most homes around the world.

So, for the question on solar freezers vs solar refrigerators, well, the choice on which of these products to go for, would largely depend on the application. A most vaccine and medical applications utilize solar freezers instead of solar fridges. Some businesses like farms, ranches and restaurants prefer solar freezers to solar fridges. Solar freezers also tend to be the product of choice for people that go hunting and need to store large amounts of meat from their catch.

Solar Refrigerator Company carries all of these products and can be reached via phone at 520-200-7330. Visit the company's website www.solarrefrigerator.com or the office at 1846 East Innovation Park Drive, Oro Valley, AZ 85755, USA, for more information.

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