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# Household Appliance Capacity and Inverter





## Overview

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How to choose a power inverter?

To do this, we need to find the suitable size of inverter and batteries based on the required load in watts. A power inverter is always rated in VA (Volt-Amps), but we assume its rating in watts based on the appliances' wattage rating.

How to convert DC power into AC power using inverters?

As DC supply is available from different sources such as batteries, solar panels, portable generators, we can convert the DC power into AC power using inverters to run 120V or 230/240V appliances. To do this, we need to find the suitable size of inverter and batteries based on the required load in watts.

What is a power inverter?

**Solved Example** A power inverter is a device that converts DC supply to AC supply. Most household appliances are designed to operate on AC supply (120V or 240V in the US and 230V in the UK and EU). That's why we need an appropriately sized inverter to run and handle the AC load and appliances in case of an emergency or electricity failure.

How much power does an inverter need?

For example, if your total running wattage is 2200W and your surge wattage adds another 400W, your total power requirement is 2600W. Inverters typically operate at an efficiency of around 85%-95%. To ensure your inverter can handle your total load, divide your total power consumption by the inverter's efficiency.



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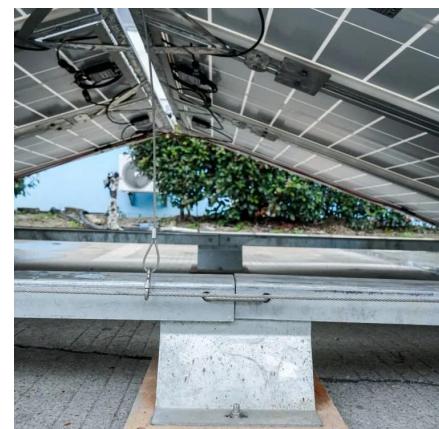
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