



**SEE  
THE  
FAQs ►**

# GENERATOR **BUYING GUIDE**

Find the generator that is right for you.

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# Unsure Which Type of Portable Generator is Right for You?

## Follow our simple guide.

Let's determine what size generator you need for your situation. Size refers to output and is usually measured in W (Watts), kW (Kilowatts) or kVA (Kilovolt-Amps) – all our generator listings clearly state these figures. The higher the generator output, the more appliances / load it can sustain at any given time.

### **1.**

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Start by adding up the Running Watts of everything you might want to power at the same time. Most appliances / tools have their Wattage stamped on the nameplate or listed in the owner's manual. If an appliance is rated in Amps only, multiply Amps by Volts to get Watts ( $A \times V = W$ ).

### **2.**

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Next, pick the device with the highest running watts, and add its Starting Watts to the previous total (use our Wattage chart found on the next page for quick reference).

## Generator Buying Guide

	Incandescent Lamp	Radio	Television	Computer	Laptop	Microwave Oven
<b>Start-up Watts</b>	50 to 150	100 to 200	150 to 500	800	200	1400
<b>Running Watts</b>	50 to 150	100 to 200	150 to 500	800	200	1400
	<b>Slow Cooker</b>	<b>Blender</b>	<b>Power Tools</b>	<b>Electric Fan</b>	<b>Deep Fryer</b>	<b>Fluorescent Lamp</b>
<b>Start-up Watts</b>	250	850	1000 to 1500	600	800 to 2000	N/A
<b>Running Watts</b>	250	400	400 to 600	200	600	As Stated
	<b>Iron</b>	<b>Music Player</b>	<b>Refrigerator (small)</b>	<b>Toaster</b>	<b>Vacuum Cleaner</b>	<b>Video Player</b>
<b>Start-up Watts</b>	N/A	N/A	800 to 2000	600	750 to 1800	N/A
<b>Running Watts</b>	1200	30	600	200	600 to 1500	50
	<b>Washing Machine</b>	<b>Water Heater</b>	<b>Water Pump</b>	<b>Coffee Maker</b>	<b>Hair Dryer</b>	<b>Video Game</b>
<b>Start-up Watts</b>	3400	N/A	2500 to 5000	600 to 1500	N/A	N/A
<b>Running Watts</b>	1150	3000 to 4500	500 to 1000	600 to 1500	300 to 1200	20

### 3.

Now you have the total amount of Watts you need from your generator, let's choose whether you need an Inverter, Single Phase, Three Phase, Petrol or Diesel option. Read through our generator guide below and select a unit suitable for your application that can deliver both the Running Watts and Starting Watts with ease.

# Inverter Generators

These portable generators are perfect for light to medium loads (for example, those associated with a caravan or camper) and are the type often found in many holiday parks and camp sites throughout Australia. Small, light and quiet, these super-efficient generators run for hours with one fill of regular unleaded petrol, and output from 1000W to over 3000W of continuous power, depending on the model.

Inverter generators (also known as digital) use sophisticated electronics to produce an output similar to household supply. This means that sensitive electronics such as computers are well suited to this type of generator. Another unique function of this series is that the maximum generator output can be drawn from a single 240V outlet if needed. They are well suited to the great Aussie outdoors, for those needing power on the go, and can easily slip out of sight into the car or trailer! If you need quiet, light and compact power that can be taken anywhere, this is the type for you.



# Petrol Generators – Single Phase

These generators also provide power anywhere, with the smaller models being ideal for light/medium loads, and some larger models suitable to power your entire residence during an outage. They range in size and output and are the most cost-effective solution on the market today. These are also the kind of generators you will find in holiday parks, work sites, events, receptions, fairs and shows.

Portable single phase generators are perfect for 240V appliances, can run a wide variety of items from 50W to 8000W, and are simple, reliable and great value. Being single phase, there is also no requirement to balance loads across the outlet. One fill of regular unleaded petrol will provide hours of unattended operation.

If you need power to run lights, compressors, white goods, a bain-marie or even an entire house, this is the type for you.

**Please note:** If the model you are considering also has three phase functionality, it is essential you also read about [three phase generators](#) so that you can determine if it is best for your needs.



# Diesel Generators – Single Phase

Diesel powered generators are best in permanent situations (like a backup generator) or with limited portability (such as a worksite or large event). They are super-efficient, relatively quiet and intended to run for lengthy periods (4 to 6 hours). Hence, you will not find a small portable diesel generator, with most units starting from around 3kW. Diesel powered generators tend to be dependable and somewhat less expensive to operate than their petrol counterparts. Likewise, these units are also super-efficient under varying load conditions. You will commonly find diesel generators on job sites, farms, large events or attached via transfer switch (ATS) as a backup power supply – we sell these too!

Portable single phase diesel generators are perfect for 240V appliances; they can run a wide variety of items from 50W to 5000W, as well as being simple, reliable and great value. Being single phase, there is also no requirement to balance loads across the outlets, as most of the total generator output can be drawn from a single 240V outlet if needed. One fill of diesel will provide hours of operation. If you need power or backup power to run lights, compressors, white goods, bain-marie or even an entire work site, this is the type for you.

**Please note:** If the model you are considering also has three phase functionality, it is essential you also read about [three phase generators](#) so that you can determine if it is best for your needs.



# Petrol Generators – Three Phase

Just like their single phase counterparts, these generators provide power anywhere. They range in size and output and are the most cost effective three phase power solution on the market today. They provide almost identical performance to single phase units with the added benefit of featuring true three phase output, and are suitable for a multitude of three phase appliances. This means you can connect single phase and three phase appliances to the one generator – what a versatile series!

Portable three phase generators are perfect for both 240V and 415V appliances. However, with the units equipped with a three phase alternator, it is important to note that single phase loads must be balanced across the outlets as each 240V outlet supplies approximately 1/3 of the total generator output.

If you need power to run a number of smaller single phase appliances (under 1000W each) and require the ultimate blend of single and three phase power, then this is the type for you.

# Diesel Generators – Three Phase

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Portable three phase generators are perfect for both 240V and 415V appliances. However, with the units equipped with a three phase alternator, it is important to note that single phase loads must be balanced across the outlets as each 240V outlet supplies approximately 1/3 of the total generator output. If you need power or backup power to run a number of smaller single phase appliances (under 1500W each), and require the ultimate blend of single and three phase power, then this is the generator for you.



# FAQ's

**Q: What is the difference between Continuous Power and Peak Power?**

**A:** Most generators have two power figures quoted – Continuous Power (Running Watts) and Maximum/Peak Power (Starting Watts). Continuous Power is the "Total Output Power" in Watts (Wattage as listed on your appliances) that the generator can produce for hours on end. Peak Power is the "Start-up Power" in Watts that the generator can produce and sustain for a limited amount of time (normally less than 30 seconds). The reason this value is quoted is so you can better determine what generator is suitable for your needs when connecting appliances that have an initial "in-rush" power draw such as compressors, or most items with an electric motor.

**Q: What is a Backup Generator?**

**A:** This is a term referred to a generator that is sold with accessories (commonly referred to as an ATS or Automatic Transfer Switch) that make it capable of automatically supplying power when grid power is not available. Most electric start generators can be used as a backup generator, and likewise we sell transfer switches for selected models. Note: a licensed electrician is required to make this connection.

**Q: Kilowatts, kVA and Power Factor – what does it all mean?**

**A:** Generator output in kW (k (kilo) W (Watt)) and kVA (1kVA k (kilo) V (Volt) A (Amp)) are related by "power factor". A power factor of 1 equals 1kW equals 1kVA. That's right, 1kVA and 1kW are exactly the same as long as the power factor is 1. However, some loads that have inductance / capacitance (fluorescent lighting, etc.) can change the power factor to 0.9 or 0.8. Although this sounds technical, it simply means that the voltage (electrical pressure) and amperage (the volume of electrical energy) become out of sync (one lags behind the other), purely due to the type of load. This is why you will see some generators advertised with higher kVA ratings, so although still factual, when deciding on a generator, you should always refer to the continuous / rated output.

**Q: How do I know what type of load my appliances draw?**

**A:** Easy, we simply break that down into two types:

### **Inductive Loads**

Induction motors driving devices such as air conditioners, refrigerators, freezers, compressors, motors, pumps, etc. may well have a start-up / in-rush current 3 to 4 times their continuous rating. That's right; your generator must be up to 4 times the rated output to safely start and run these items. Generator under sizing is one of the most common mistakes committed by buyers. Not only does it involve the risk of damaging your new asset (the generator), but it can also damage other assets, i.e. connected loads.

### **Resistive Loads**

These are loads that everyone loves, especially generators. They are incandescent lights, chargers, game consoles, kettles, toasters and to a certain degree, even the coffee machine and microwave. The idea is that these loads apply relatively constant power consumption to your generator and in most cases choosing a generator 1.5 times the appliance's rating is more than adequate.

**We should always remind ourselves that no matter what size, it's still a generator, not a power station, hence choosing a model with 30 to 50% power above your needs is always a good advice. If you're still unsure of your requirements, ask us or a licensed electrician.**