

CHOOSING A GENERATOR

It's easy to feel left in the dark when it comes to knowing what to look for when selecting a generator. The selection guide below will enable you to make the correct decision.

Traditional Portable Generator

Traditional portable generators produce power by using an engine to rotate two large coils of wire (the rotor) inside a circumference of magnets (the stator). Each full rotation of the engine produces one complete sine wave of AC power. Therefore the engine must maintain a constant speed of 3000RPM to produce the standard of 50Hz. (3000 revs / 60 seconds (1min) = 50Hz). No matter what the load, a traditional style generator must run at full speed to provide the correct power.

Inverter Generator

An Inverter Generator is normally used where power is required for sensitive electronic equipment like PCs, TVs and instrumentation. They are also chosen when portability or size is important and where noise must be kept to a minimum.

Portable Generator

A portable generator consists of two main components, a gasoline or diesel powered engine and an alternator. The alternator consists of a rotor (rotating) inside a stator (fixed).

The engine power is used to rotate the rotor inside the stator which generates AC power. Portable generators have many applications at work and around the home and have made outdoor events and projects much easier to tackle.

Note the wattage required

The list below offers a guide on the wattages used on most common appliances and items used at home and in the workplace. For exact figures we recommend you check the nameplate or instruction manual for your individual appliances. Also listed (where applicable) is the "starting wattage" or "surge wattage" which is the amount of wattage needed to start an appliance with a motor. This may be up to three times the wattage required to run the appliance, so this must be taken into consideration. All generators also have a maximum and rated wattage output.

Other generator selection criteria includes:

- Weight / portability
- Operating sound levels
- Engine type (2 stroke, 4 stroke or diesel)
- Fuel capacity
- Starting system (electric or EZ start recoil)
- Investment cost

Calculate your total power needs

This chart lists average power requirements. Your particular tool or appliance may require more or less than the listed wattage. Firstly, add up all the “running wattage” requirements for all the items that you need to power simultaneously. Next, add to that total the highest of the “starting wattages” you listed down. Now you know approximately how much power you need to start and run your appliances and equipment.

Average Power Requirements

HOME APPLIANCES / TOOLS	APPROX. RUN (W)	APPROX. START (W)
Microwave 750W	750	1200
Coffee Maker	1750	1750
Electric Clothes Drier	5750	5750
Washing Machine	1150	2300
Refrigerator	700	2200
Lights	100	100
Colour Television	350	350
Electric Frypan	1500	1500
Dehumidifier	400	400
Computer - Desktop	700	700
Electric Jug	2400	2400
Dishwasher - Cool Dry	700	1400
- Hot Dry	1450	2000
Toaster - 2 Slice	1250	1250
- 4 Slice	1600	1600
Freezer	2200	2500
Hair Dryer	800-1700	800-1700
Steam Iron	1800	1800
Garage Door Opener - 1/4 HP	550	1100
- 1/3 HP	725	1400
Radio	200	200
Blender	375	500
Sump Pump 1/2 HP	1050	2150
Well Pump 1/2 HP	1000	2100
Household Water Pump	1200	2700

WORKSHOP APPLIANCES / TOOLS	APPROX. RUN (W)	APPROX. START (W)
Central Air Conditioner:		
10,000 BTU	1500	2200
24,000 BTU	3800	5000
32,000 BTU	5000	6500
Room Air Conditioner		
10,000 BTU	1500	2200
Circular Saw 7 1/4"	1400	2300
Chainsaw 2HP	1100	2500
Portable Air Compressor	1200	3600
Hand Drill 1/2"	600	900
Drill 1/2"	600	900
Battery Charger 15 amp	500	700
Electric Welder 200 amp AC	9000	9000
Jigsaw	300	400
Electric Weed Trimmer	500	650
Router	1000	1300
Belt Sander	1000	1300
Table Saw 10"	1750	4250
Bench Grinder	1400	2450
Concrete Mixer 3.5c/f	1900	2500
Band Saw	1100	1350
Power Drill - Medium	1000	1200
- Heavy Duty	1500	1800
Angle Grinder - 100mm	1000	1200
- 230mm	2400	2700