

1 Selecting the right Generator for You.

Here are some additional factors that should be considered when buying a generator.

- Fuel types are Diesel, Petrol and LPG. If the generator is your only source of electric power you may be able to purchase Red diesel(Gasoleo B*) at a significant reduction in cost. Petrol units can improve convenience but can be expensive to run.
LPG units offer more flexibility but can also be expensive to run. Petrol is highly inflammable and therefore is an increased safety risk. (*Requires Tarjeta de Bonificardo)
- Life expectancy, usually based on running hours, at this point it is useful to take account of service intervals. Diesel 1500RPM water cooled units usually offer long life and greater reliability over air-cooled 3000RPM units. Service intervals are usually about every 200 hours or every six months
- Unit run rating, Ensure you understand what the generator is designed to do, a generator that is built to act as standby in a power failure situation for a few hours on an infrequent basis will have a much reduced life expectancy if run daily for 8/10 hours per day. Generators usually have a run rating of continuous or Standby/intermittent, buying a unit designed to operate as a standby unit and then running it continuously will seriously reduce the life expectancy of the generator.
- Noise, most open frame generators produce an unacceptable amount of noise for domestic use, there is a good range of Silent generators available. Noise is measured in dBA and will be stated in the unit specification. (70dBA or higher rating will be very noisy indeed)
- Fuel tank capacity, convert this into running hours and see if it meets your run time requirements. Most diesel or LPG units can sometimes be fitted with a large bulk tank reducing fuel purchasing costs and offering more convenience.
- Running costs, are shown as litres per hour at a % of full load IE 1.3 litres per hour @ 70% of load
- When selecting install location, check physical size and access to the generator for refuelling and servicing, consider where you are going to site the unit and ensure that you can access all parts for servicing with obstruction, also note noise factors.
- Engine Speed, usually at 1500RPM (Rev per minute) or 3000RPM, the slower engine speed 1500RPM is more robust in build with better reliability and are more economical to run, particularly for heavier loadings. A 1500RPM generator properly maintained and serviced can be expected to provide many years of reliable and cost effective service. The 3000RPM (Usually air cooled) generator should only be considered in applications where use is infrequent and with only intermittent heavy loading. (Standby power applications in the event of mains failure, or to support correctly designed Solar Systems where use is limited to Solar system support only)

Generator Power rating.

1. List all the electric tools and appliances you are going to use with your generator
2. Using the information on the name plate find the required power for each item (usually shown in watts or KW)
3. Add up the total watts of all the items that will be run at the same time*
4. Choose the generator that has the rated watts that meet or exceed the total power requirement.

*When an electric motor starts, such as on well pumps, refrigerators, and airconditioning units they can typically take up to 4/6 times the required power during the startup period, this must be added into the calculation for selecting a suitable generator.,

See power table on next page.

Most and LPG diesel generators can be fitted with a remote autostart for Solar system integration, or direct switching from the house.

2 GENERATOR COMPARISON

We do not recommend Petrol or LPG generators except in specific situations.

3000RPM Super Silent Diesel Generator 5KVA 230V These units usually imported from Asia, are suitable for use in applications where running times are infrequent and short. These are not suitable for applications where sustained heavy loading or long run times are required, which will significantly reduce the operational lifespan of the generator. (Typically 500 hours per year max)

The units are ideal for use in a Solar System application on smaller correctly designed Systems where use is very infrequent. These units are supplied on the basis that they are used only as standby support power and are not subjected to direct or continuous heavy loading applications. These units carry a parts only limited warranty. We only recommend **the Hyundai** range of this type of generator these tend to be more robust than the other "Branded" types of similar design

Priced from 1950.00€ Plus IVA.

3000RPM Air Cooled Silent Generators, EU manufacture, There are some excellent quality units of this type produced by PRAMAC, Hyundai, and HIMOINSA. These units are ideal for use in medium sized solar system (7KW - 15KW per day systems), The quality of build is good and there are extensive service networks and Spares support in Spain, Our experience of these is that properly maintained they will give a good level of power and service for many years.

Priced from 4,050.00€ plus IVA

1500RPM water cooled Diesel generator These top of the range generators, are of a very robust nature and rated for continuous running, Fitted with a 3 cylinder water cooled motor, the low revs give extended life and very quiet running combined with good fuel economy. Designed for continuous operation in domestic, commercial and industrial applications, we recommend these units where power requirements are in excess of 6.5KVA or long running hours are anticipated.

Priced from 5,995€ plus IVA.

Why we recommend Hyundai, Pramac and Himoinsa. These generators are are well designed and made to a very high quality standard providing very robust units. Our experience is that correctly specified into Solar off grid systems they offer high reliability with good running economy. Properly maintained you can expect many years of reliable service from this range of generators. The noise rating on this range of generator is well below the EU recommended levels making these ideal in residential locations. These units tend to have a high resale value. There is an extensive network of service centres in Spain with factory trained and qualified engineers available to provide both routine maintenance and breakdown cover.

We can supply generators at competitive prices of all makes and brands. Please contact us for advice on selecting the correct generator for your needs.

All our generators can be pre-wired for autostart/remote starting, and are easily integrated into Solar or Hybrid systems for completely automatic operation.

*Power Table

| Size in Horsepower (HP) Running Power (watts) | | | Start Power (Watts needed) | | |
|---|-------|---------------------|----------------------------|-------|---------------------|
| HP | Watts | Start power (Watts) | HP | Watts | Start power (Watts) |
| 1/4 | 400 | 1050 | 1/3 | 450 | 1350 |
| 1/2 | 600 | 1800 | 3/4 | 850 | 2600 |
| 1.00 | 1100 | 3300 | | | |

Many manufacturer's rate the power of Generators in KVA. To convert this to watts multiply by 0.8, for example a generator rated at 5KVA will produce 4KW of power (1kw = 1000Watts) 5(KVA) X 0,8= 4.00 KW To start and run a 1/2HP motor and a 1HP motor at the same time would require a generator capable of producing at least 4.4KW or 5.5KVa