



# Backup UPS Generators Brochure



**Bespoke Power  
Solutions Tailored  
To Your Business**

## Contents

01 Emergency Power

02 Benefits of a Generator

03 Service & Support

04 Servicing

05 Load Bank Testing

06 Generator Types

07 Generator Models

08 Generator Engines

09 Generator Components

10 Fuel Tanks

11 Changeover Switches

12 Generator Export

13 UPS Systems

14 About Us

01

## Emergency Power Solutions



**Backup UPS Generators are specialists in providing emergency power systems of all sizes and output, for any scenario from a small generator running 1 item to a shopping centre, hospital or large office development.**

We tailor all systems to your individual requirements and offer a range of quality new and used generators from well-known manufacturers. Our experienced team can advise on the generator size, location and other requirements.

Whilst our service and products are of the highest standards and quality our prices are typically 20% cheaper than many of our rivals.

### Emergency Power Solution

For those organisations who have a requirement for an emergency power solution, but find that the cost of purchasing, installing and maintaining a generator can be prohibitive, Backup Generators have developed our Emergency Power Plan which is a cost-effective way of restoring power within a short time.

No matter how small or how large your project is, Backup Generators can help by supplying, installing, commissioning and maintaining new and used equipment or if you wish to take on any part of the project using your own engineers we will be only too happy to assist.

## 02

# Benefits of a Generator

### Why do you need a Generator?

Generators can be used for a range of applications that fit into three main categories:

#### Continuous Power:

The maximum power which a generating set is capable of delivering continuously whilst supplying a constant electrical load. The average load can be 100%. The generator must not be overloaded.

#### Standby Power:

The max power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 hrs of operation per year under average of 70% load. Overloading isn't permissible.

#### Prime Power:

The maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hrs.



#### Residential:

Backup power during outages and off-grid electricity for remote areas.

#### Commercial/Industrial:

Emergency power for buildings, construction sites, and event venues.

#### Recreational/Mobile:

Power for RVs, boats, and mobile businesses. Generators provide versatile and reliable power solutions in these diverse settings.



## 03

## Service & Support



### Installation

Can we help with generator installation for your standby power solution Corporate, Industrial and Public Sector?

We can handle projects of all sizes, from a single generator installation up to multi generator set installations and associated project work as part of a Turnkey solution including de-commissioning/re-commissioning.

Our professional team of highly experienced staff including electricians, mechanical fitters and rigging teams will ensure your project run smoothly all work is carried on a CSM of Project Managed basis.

If required we can complete a site survey and offer cost-effective standby power options to suit your requirements and budget. As well as installing a wide range of diesel generators we also install hybrid, CHP and vegetable oil generators.

## Servicing



### Servicing

Routine maintenance plays a critical role in maximising the reliability of your standby power systems, therefore a planned program should always be considered as an essential part of any standby power system. This will ensure that your equipment is kept at its peak performance and is always in accordance with the manufacturer's specifications and requirements.

Maintenance should be scheduled every 6 months or 400 hours running time, whichever comes first. We offer both standard 2 x annual visit maintenance contracts and also tailored maintenance packages to suit your exact requirements, Backup Generators understands that client's requirements can differ depending on generator use, maintenance requirements and types of equipment to be maintained. We offer a 24/7 365-day emergency service with response times specified in your contract to suit your requirements.

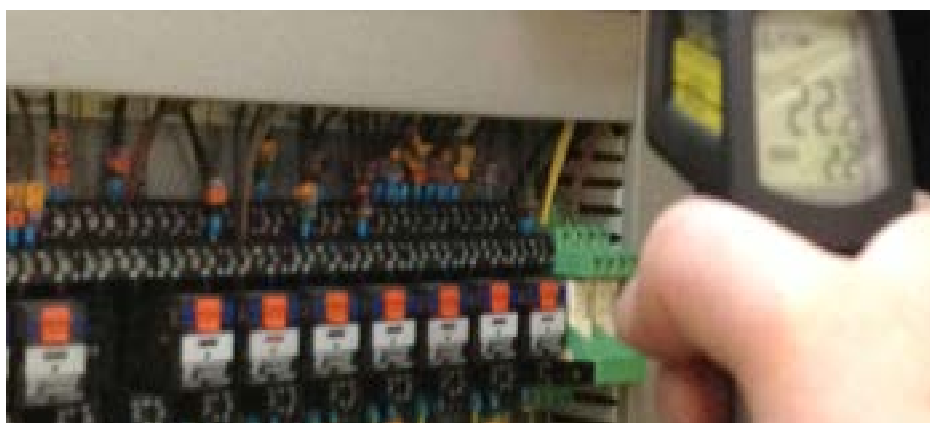
Backup Generators offer diesel generator servicing and repairs that are reliable and competitively priced to keep your generators running smoothly and reduce downtime. Our engineers are highly skilled will advise you of any issues with your system and offer solutions and recommendations to ensure your system is ready when it is required.

We pride ourselves in providing a quality service. On a service visit to your premises, our engineers will produce an in-depth report on the condition of your genset, which we will discuss with you. Our maintenance packages may also include thermal imaging of mechanical and electrical parts to detect any imminent failure, thus providing a pro-active service.

We recommend at least one full service per year even if the machine is rarely used. Backup Generators will provide a second visit to once again check the operation of the equipment, after which a fully documented operational report will be produced.

05

## Load Bank Testing



### Load Bank Testing

A Load Bank test will provide timely identification of any problems with your generator and the remedial actions necessary.

Do you rely on your Generator as part of a Critical Power System?

If you do, then a periodic load bank test is essential to ensure that it will run smoothly and efficiently when you need it.

Why? Because just starting up your generator every now and again is not enough.

Imagine just starting up a car and not driving it. Would you be confident it would perform for 500 miles?

No? So why assume a Generator will perform a simple AutoStart test? Full resistive Load Bank testing will push the unit to its limits so you can be sure it will work efficiently when you need it.

### What does a load bank test check for:

- The engine and its ability to provide the required power over time by using an artificial load
- The alternator's ability to provide the required voltage stability
- Frequency stability
- Efficient Control systems under varying conditions of load
- The performance of the whole system
- Oil and fuel pressure to make sure the engine is well lubricated and gets enough fuel to produce the power you need it to provide
- What else will a Load Bank test provide?
- Remove deposits from pistons, engine casings & exhausts
- Identify potential weaknesses
- Record results and remedial work to be done

**Anything else relating to generator installation and servicing we can offer. Please contact us for more information.**

## Generator Types

### Generator Type

#### Open

The design of our generator sets incorporates a common chassis where the water tank, diesel engine, alternator, and control box are installed together. This unified configuration provides a streamlined and efficient appearance. This type of generator set is commonly encountered and widely recognised due to its practicality and versatility.

By integrating these essential components onto a single chassis, we ensure a compact and cohesive unit that maximises space utilisation and simplifies installation. The unified design also enhances the overall stability and durability of the generator set.

#### Sound Attenuated Enclosure

Backup Generators sound attenuated enclosures deliver durability and security for your generating set. Manufactured of pre-treated galvanised steel and coated with polyester powder coated paint, the canopies are designed with low-velocity airflow to prevent the ingress of water, sand and dirt. This is extremely advantageous to the operational life of the engine and alternator and will ensure Backup Generators attenuated generating set will operate in even the harshest conditions. Also available are bespoke containers for the entire range of our generating sets.



### Generator Sizes

10,15,20,30,40,50,60,100,150,200,250,300,500,1000kVA, both engines types table including Alternator and Controllers





## 07

# Generator Models

### Hybrid Diesel or Vegetable Oil Generator:

The HKUB generator allows for work on sites where silence is mandatory. It starts up only when batteries are low or during peak consumption times, with pre-programmed startup times to avoid disturbances.

### Economical:

By reducing generator operating hours, the HKUB generator lowers fuel and maintenance costs. Surplus energy is stored in the battery bank for later use, optimizing energy efficiency.

### Reliable:

The HKUB generator is highly reliable and has a longer lifespan compared to standard generators. It ensures a secure power supply and protects equipment during outages.



### Small to Medium Power CHP Generators: Simultaneous Heat and Power Generation

Our CHP generators produce electricity and capture waste heat using a heat exchanger. They provide autonomous heating and hot water systems, reduce CO<sup>2</sup> emissions, and cut costs in half. Combine them with our hybrid solutions for fully autonomous sites using renewable energy sources. Experience efficient heat recovery and the benefits of simultaneous heat and power generation.

08

## Generator Engines



**Cummins and Perkins engines** are one Backup Generators' most popular engines to be built into generators, whether for use in the UK or export. All of our generators are built on-site in the UK. Your generator can be customised to your requirements, with the most common choice being the engine type.

### Cummins:

Cummins Power Generation designs and manufactures generator engines, designed to provide emergency backup, critical standby, prime power or peak shaving to applications such as healthcare, water and wastewater treatment plants, manufacturing, government facilities, mining and large commercial buildings.

Cummins generator engines are controlled by digital control technology that integrates with other components of the overall power system and can be easily configured to meet the power generation requirements of our customers.

### Perkins:

For over 85 years Perkins have worked with generator set manufacturers to bring light, warmth, protection and of course peace of mind to thousands of people. Perkins produce engines that will operate in a harsh environment or under strenuous conditions. Maybe it will only ever be used in an emergency. Whether it's running every day or just once a year, you can count on Perkins engines to provide the innovative, efficient and reliable power solutions you need for your application.

With an engine range from 0.5 to 36 litres, Perkins engines power more than five thousand different applications throughout the world.

### Gas Engines

The gas engines can be operated with various types of gas, such as natural gas, shale gas, mine gas, bio-gas, landfill gas, sewage gas, and syngas. They are designed for maximum electrical and thermal efficiency, low operating and service costs, and high reliability and availability. Thus they achieve efficiency of over 90 percent.

## 09 Generator Components



### Alternators

To ensure world-class quality our major components such as engines, alternators and steel are all produced or sourced in the United Kingdom, Europe, United States of America or Japan. Investment in class-leading technology and processes ensure that each Backup Generators set meets and exceeds your expectations time after time. We offer a range of engine choices and two alternator choices - Mecc Alte or Newage Stamford.

### Mecc Alte

Mecc Alte are a world-leading producer and supplier of synchronous alternators. As a totally independent company, they are focused totally on producing world class alternators.

### Newage Stamford

Manufactured in the UK and have nearly 100 years' experience in building electrical machines on its main manufacturing site in Stamford, United Kingdom. Widely known throughout the world of power generation for reliability.

### Controllers

Deep Sea Electronics is one of the world's top manufacturers of generator controllers and automatic transfer switch controllers. DSE is based in the United Kingdom and has nearly 45 years of experience. The company develops and manufactures a range of over 140 different products that provide flexible control solutions for multiple applications.



## 10

## Fuel Tanks



### Fuel Tanks

Most generators will come with a standard base fuel tank typically offering 10 hours run time at 75% load. However, in instances where longer run times are required, space is an issue or where legislation comes into play, you may require a bespoke bulk fuel system.

We offer extended base tanks or bulk fuel tanks with a generator day tank local to the generator. This then gives you the option of going for a fuel transfer system or standard flow and return.

Under the control of Pollution (Oil Storage) Regulations 2001 there are requirements for operators and owners to provide safer and more environmentally friendly fuel storage. All commercial storage facilities in excess of 200 litres capacity must have a 'second containment' capable of holding at least 110% of the maximum tank capacity.

Backup Generators offers fully compliant compact bunds for all our generators that are complete with fork truck pockets for easy location. Cleverly designed rain covers complete an attractive and functional package that meets and exceeds the legal requirement.

Our purpose-built, double-skinned steel tanks are manufactured to your specific size requirements, to meet BS799 type, J British Standard. They can be designed as freestanding units or as an integral base tank for long run applications where space is limited.

- Easy maintenance
- Manufactured to BS799 part 5
- Complies with statutory pollution prevention PPG2
- Complies fully with DEFRA regulations
- Tank contents gauge



11

## Changeover Switches



### Changeover Switches

Drawing on over 30 years of combined experience Backup Generators supply Changeover Switches to suit your requirements.

We pride ourselves in being able to supply every customer with well-designed and expertly manufactured Changeover Switches. If the power goes out, the generator will take over, until power is resorted. Backup Generators Changeover Switches use only quality components - chosen for their reliability and longevity. We are constantly striving for improvement as industry technologies develop. Meeting our client's needs, budget and deadline are our highest priorities.

Changeover Switches are used to distribute power in a building and come in all sorts of different sizes to meet any needs.



## 12 Generator Export



### Generator Export

Backup Generators export new UK built generators too many countries in the world, as well as parts and equipment.

Backup Generators can offer excellent products, business, support and advice to businesses world-wide. Backup Generators is a well-established British business with a long and celebrated history in supplying high quality generators to a variety of markets. We have consistently set the standard in innovation, quality and reliability. Our ambition is to grow our business globally by helping to grow our customer's businesses locally.



## UPS Systems



### UPS Systems

The Backup Generators range of Uninterruptible Power Supplies when combined with a generator allows Backup Generators to offer a first-rate solution to all your power needs. Backup Generators power supplies are designed to make sure that your company can protect any mission critical applications and we do that by maintaining a steady flow of energy even under adverse power conditions.

We make sure that every aspect of your needs are covered including detailed specifications and product sourcing, through to full project management, installation, commissioning and the provision of complete after sales service and maintenance.

Backup Generators develop tailor-made solutions to meet your specific requirements and application. The more batteries the longer the autonomy of the system, however, if the system is backed up by a Backup Generator the UPS battery usage will be minimal.

### Choosing a UPS System

Your choice of UPS will depend on the answers to the questions below:-

**What is my approximate load size in kVA?**

**What are the priorities for protecting the load?**

**What electrical problems will my load present to a UPS system?**



## About Us



BackUPS Generators is a leading provider of standby power solutions, specialising in standby, CHP (Combined Heat and Power), hybrid, and diesel generators. We are dedicated to being the trusted source for power generation equipment, offering a comprehensive range of products and services to meet the diverse needs of our customers.

With a deep understanding of the industry, we pride ourselves on sourcing high-quality diesel generators that come with full guarantees and warranties. What sets us apart from our competitors is our commitment to affordability. Our diesel generators are typically 20% cheaper than those offered by many other suppliers, without compromising on quality or reliability.

Our success and reputation for excellence stem from our ability to deliver practical and cost-effective power solutions tailored to each customer's unique requirements. Whether it's for homes, businesses, hospitals, or large facilities, we have the expertise to provide reliable standby power that ensures uninterrupted operations and peace of mind.

At BackUPS Generators, we offer a comprehensive range of services across the UK. Our services include supply, installation, maintenance, removal, fuel polishing systems, hire services, and UPS (Uninterruptible Power Supply) systems. We have a dedicated team of experts who are trained to provide top-notch service, ensuring that our customers receive the best solutions and support throughout their entire power generation journey.

We take pride in our customer-centric approach, striving to exceed expectations and build long-term relationships with our clients. Our goal is to be your trusted partner for all your backup power needs, offering tailored and quality solutions at unbeatable prices. When it comes to backup power requirements, you can rely on BackUPS Generators to provide reliable and efficient solutions that others simply can't match.

[Contact us today to discuss your power generation needs and discover how BackUPS Generators can help you achieve uninterrupted power supply and peace of mind.](#)