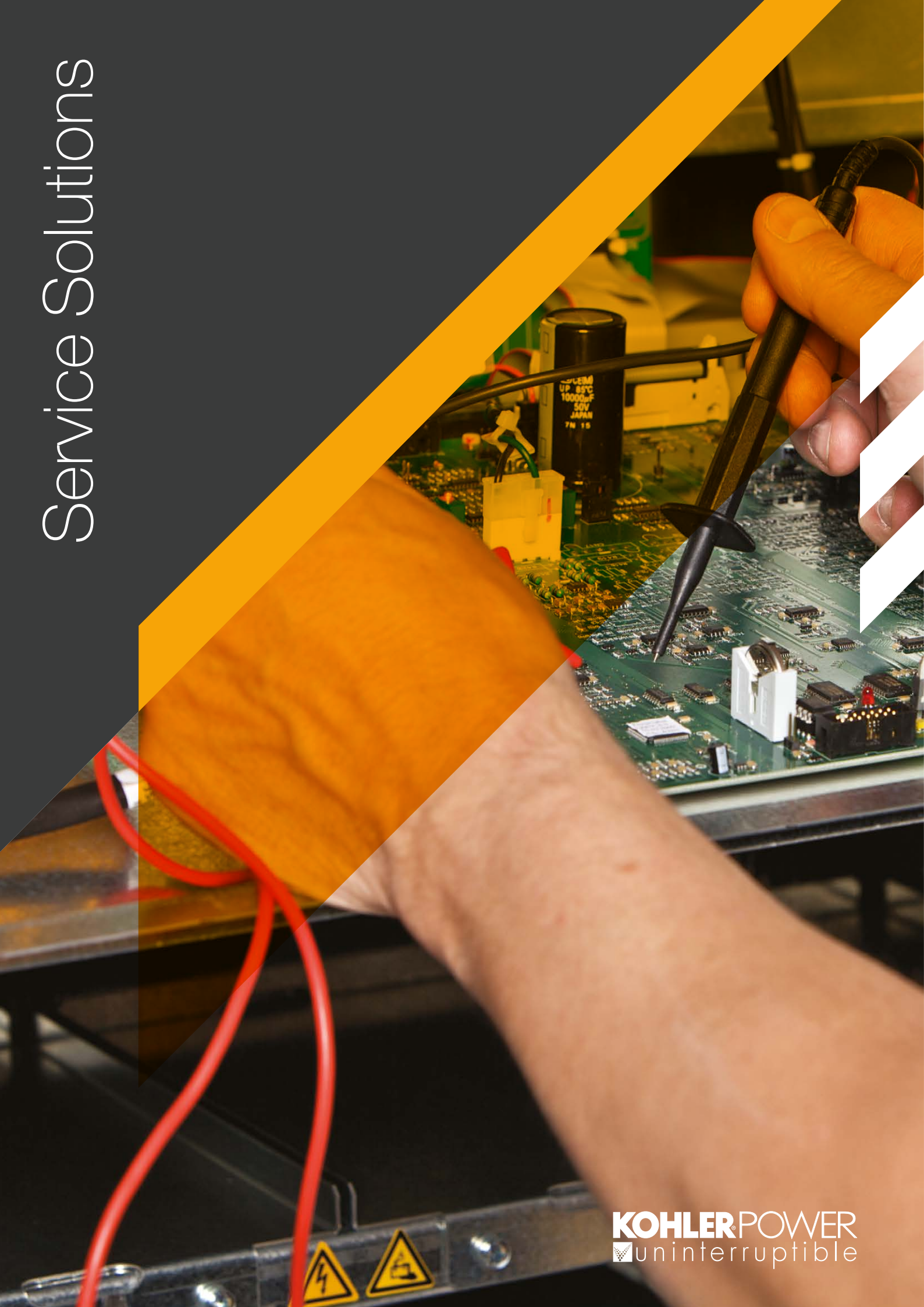


# Service Solutions



**KOHLER** POWER  
uninterruptible

Flexible service plans,  
load bank testing,  
UPS and generator rental.

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## Service solutions

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### Maintenance

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UPS maintenance contracts

Generator maintenance contracts

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### Batteries

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Battery replacement and upgrade

Load bank testing

Impedance testing

Lithium-ion batteries

PowerNSURE battery monitoring

Battery disposal

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### Monitoring

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PowerNSURE battery monitoring

PowerREPORTER remote UPS  
monitoring

Generator monitoring

SNMP onsite monitoring

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### Onsite

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Site survey

Installation and commissioning

Black building testing

Load bank testing

UPS relocation and disposal

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Pioneering solutions for  
total power protection.

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At KUP, our core business is the design, installation and maintenance of secure power protection systems. Delivered by our trained engineers and support staff, we offer the most comprehensive and cost-effective service plans available ensuring your power protection systems are expertly maintained on a regular basis and ready to support your business load.



### UPS maintenance contracts

KUP's maintenance plans offer the flexibility to choose the level of service needed to ensure that risks and costs are minimised. They all provide regular maintenance visits and you can choose the level of service time you need to suit your business requirements. To maximise the reliability of your UPS, a service plan from KUP also ensures critical component degradation is identified and that repairs or replacements are carried out before a fault occurs. Immediate spares availability is assured through our extensive spares inventory.

#### Features

Routine inspection and preventative maintenance

Emergency call-out options including guaranteed speed of response, 24 hours a day, 365 days a year

Remote monitoring (optional)

Battery maintenance

A range of cover available

#### Key benefits

Comprehensive plans competitively priced optimising UPS availability – with no unscheduled budgetary surprises

Guaranteed response times to site – we're there when we say we'll be there

24/7 telephone support for an instant response to your service needs

Extensive network of trained field service engineers

Service for a wide range of UPS brands

Support contracts tuned precisely to each installation, so you only pay for the service level you need

Remote monitoring options to complement telephone support

Extensive spare parts inventory ensuring maintenance and repairs are carried out without delay

### Generator maintenance contracts

KUP offers a comprehensive and cost-effective range of service plans to ensure your standby generator is ready to perform when it is needed most. Our standby generator service plans cover all key components including engine, alternator, control system, fuel, exhaust, cooling and air handling systems.

Since generators are usually inoperative for long periods, regular service is needed to ensure that they are fully functional and able to supply power when required. All our service plans offer the flexibility to choose the level of service needed to ensure that risks and costs are minimised. They all provide regular maintenance visits and you can choose the level of response time you need to suit your business requirements.

#### Features

Inspection and cleaning

Electrical, hydraulic and lubricant checks

Engine maintenance and repair

Battery checks and maintenance

Fuel checks and replenishment

Oil sampling and changing, air and water filter replacement

24/7 emergency support

Load bank testing (optional)

Identification of critical component degradation

Immediate spares availability

We will communicate with you right through the service process, proactively managing your service visits and organising the best time to visit to minimise any disruption.

All this not only ensures your power protection system will guarantee your business continuity but assures your peace of mind.

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### Battery replacement and upgrade

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We supply and fit batteries of all types into all models of UPS and secure power systems. KUP also offers a battery replacement programme for a wide range of battery supported products. We can supply a replacement UPS battery compatible with your AC UPS, DC equipment, emergency lighting and generator starting batteries

A key benefit of regular battery maintenance is the early detection of weak battery blocks. As they are such a critical part of a power protection system, replacement of weak battery blocks should therefore take place before they fail. If a UPS replacement battery is not purchased, a weak or faulty battery will compromise the integrity of the whole power protection system.

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### Impedance testing

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Almost any battery problem will lead to an increase in internal impedance. Recorded at regular intervals, impedance testing will track battery condition and enable end-of-working-life prediction for individual cells, so batteries can be replaced before they cause a critical power protection failure

An electrical current is passed through each battery in turn and a measurement taken. The internal impedance of each battery is then calculated, logged in a table and plotted on a graph.

A report will be provided after the batteries have been tested detailing the status of each bank and advising which, if any, will need to be replaced.

This service is included as part of the PowerNSURE system or can be purchased separately.

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### Load bank testing

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Comprehensive commissioning procedures and the regular testing and maintenance of UPS systems and batteries go a long way towards ensuring the integrity of a power protection system. However, there is only one certain way of establishing that all the components of the system will function correctly together and perform as intended when required – load bank testing.

Fully loading the power support system stresses all components. It is clearly preferable to identify potential weaknesses under controlled conditions rather than to wait until the system is supporting a critical load. It is also cost effective to acquire this service and the expertise and experience of a professional specialist service provider.

Load bank testing is the provision and connection of an electrical load to a power supply, often a UPS, in order to simulate the client's load and prove the integrity of the overall system. Load bank testing ascertains the performance of the UPS, and of the entire electrical supply infrastructure including cabling, switchgear, generator and fuses. A load bank can also be used to discharge batteries as an effective, accurate and relatively low cost method of determining battery autonomy.

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#### Key benefits

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Mobile AC/DC load banks of any size

Engineer-controlled tests carried out to individual requirements

Battery autonomy and integrity testing

Out-of-hours testing to suit the client's operational requirements

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### PowerNSURE battery monitoring

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The PowerNSURE system from KUP is the most advanced product on the market today, providing an ethernet-network integrated battery monitoring and management system.

Using web-management technology, PowerNSURE checks the internal resistance, temperature and voltage of every single battery sequentially. Through the equalisation process, the system corrects the charging voltage operating range. This prevents gassing, dry-out and thermal runaway. The constant monitoring and controlling of the individual charging voltages for each battery ensures the availability of the battery at all times.

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### Battery disposal

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We manage the safe and environmental disposal of batteries and replacement UPS batteries in line with Hazardous Waste Regulations. As a registered carrier of such waste, KUP ensures that all the legal requirements associated with the removal, transportation and disposal of waste batteries are fully complied with.

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### PowerNSURE battery monitoring and care

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All UPS systems rely on the integrity of batteries to protect the critical load in the event of a power failure. To ensure the integrity of your secure power system is not compromised, we provide a comprehensive range of battery services including design installation, maintenance, monitoring, replacement and disposal.

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### PowerREPORTER remote UPS monitoring

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PowerREPORTER is specifically designed to ensure your business' critical load is protected by dedicated trained personnel, even when your facility is unmanned.

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### SNMP onsite monitoring

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Connect your UPS directly to your computer network as a network device with KUP's SNMP solution. Contact us on 0800 731 3269 for more information.

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### Generator monitoring

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The new Remote Monitoring Systems are much more than just a piece of communication hardware fitted to your generator. KUP's Remote Monitoring System is an industry-leading, monitoring, management and fault rectification system integrating GSM communications technology with the best 24/7 generator support personnel anywhere in the world.

Once a week, the system automatically starts your generator and runs it for 10 minutes, checking vital operating parameters such as voltage, frequency, oil and water temperature, battery condition, emergency stop and fuel levels. After the test, a full condition report is sent to the remote monitoring centre via phone line or GSM upload. You can also choose to receive SMS or voicemail reports sent to nominated numbers.

If your standby generators are in action, or you're using prime power generators equipped with the latest monitoring system, you get 24-hour monitoring, 365 days a year.

Features include:

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Fully automatic operation 24/7

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Continuous monitoring of generator conditions

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Notification of mains failure and generator operation

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Confirmation of a successful test run

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Automatic low fuel warning

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Based on a common platform, the monitoring system can be fitted to new or existing generators and programmed to monitor a huge range of parameters including:

- Electrical – voltage, current, frequency of generator and mains power
- Mechanical – engine data including speed, oil pressure, and temperature
- Physical – location of the generators using the GPS network
- Remote control – test running, fuel levels, alarms and alerts
- Site specific requirements – intruder alarms, fire alarm, etc.

### Site survey

KUP's experienced team of engineers are able to provide a free site survey, to offer you a choice of power protection solutions tailored to your requirements and budget.

The free survey is offered during normal working hours within our service network covers area.

A typical UPS site survey will last around 1-2 hours depending on the size of the installation. Full recommendations and quotations will be provided after the survey has been completed.

KUP endeavours to assess the following areas during the survey:

- Load size
- Physical location and environment
- Suitability for existing UPS and battery installation
- Delivery route and logistics requirements
- Remote monitoring requirements
- Ongoing maintenance and technical support requirements
- General programme of works and preferred installation timeframe

### Installation and commissioning

Both UPS and generators must be properly installed and commissioned to ensure a long and trouble-free working life. Whilst small less sophisticated UPS systems simply plug into a standard mains socket, larger UPS systems – must be electrically installed and commissioned by skilled and qualified professionals. Likewise with generators; larger standby generator systems should be professionally installed and commissioned. Additionally, a generator must be properly matched with all other power equipment for continuous power to be guaranteed.

As a leading generator supplier, our project team will work closely with you, from start to finish, ensuring your UPS and/or generator installation is commissioned safely, on time and with minimal disruption to your business.

Our factory trained, highly skilled field-service engineers will commission and test the complete power protection system. They work in accordance with factory-issued commissioning procedures and written method statements and provide full commissioning certification for warranty validation.

#### Key benefits

Full project management including site assessment, delivery and positioning

Organisation of any electrical and mechanical work required

Extensive network of trained field service engineers

Certification to BSI EN ISO 9001, environmental procedures ISO 14001, health & safety procedures OHSAS 18001 and SafeContractor scheme

### Black building testing

KUP's trained service engineers can be on hand to monitor your UPS systems during your annual IST (Integrated System Test) black building testing.

Black building tests are normally carried out to test for high availability, performance, business continuity plans and recovery capabilities in a disaster-like scenario. For example, the testing will result in the electrical power to the entire building being shut off imitating a street power outage.

Black building tests tend to be carried out to:

- Simulate a total power failure – leading to a complete power shut-down in a facility
- Test the functionality of generators, simulating a total (external) power outage, replaced by generator-provided energy. This does not touch any equipment except generators, thus not causing any disruption to systems

#### Why is the test important?

Equipment loss of power can result in compromised:

- Safety
- Product and equipment protection
- Comfort
- Staff convenience

#### Key benefits

KUP offers skilled and qualified engineers to attend site during the test period to monitor the UPS systems

Fully documented, procedures ensuring full traceability of all test events and actions

'Safe method of work' covering the power down and power up of a UPS and/or generator

KUP's ISO procedures and certifications assure quality of service and compliance with health and safety legislation

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### Key benefits

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Battery autonomy and integrity testing

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Out-of-hours testing to suit the client's operational requirements

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## UPS relocation and disposal

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### Relocation

If you have a requirement for a UPS to be relocated either to a different room within the same building or to a brand new location, KUP can assist you.

The relocation of a UPS involves the decommissioning, safe transportation and recommissioning of the UPS, associated batteries and electrical switchgear. Using trained engineers and our highly experienced logistics team, KUP can assist with this. Should you require help with the associated electrical works, we can accommodate this using one of our electrical contractor service partners.

### UPS disposal

If you have a requirement to dispose of a UPS, can assist with a wide range of UPS brands.

Using trained engineers and our highly experienced logistics team, we can carry out the disposal of the UPS and associated batteries. Our engineer will ensure that the UPS is safely decommissioned ready for our logistics team to pack and palletise the UPS and batteries for transportation and disposal.



**Exceptional 24/7/365  
Service Support**

## **KOHLERPOWER** uninterruptible

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Kohler Uninterruptible Power – the new name for Uninterruptible Power Supplies Ltd