



## GETTING THE BEST FROM YOUR UPS BATTERIES

The batteries connected to your UPS system are crucial to its ongoing operation. Any battery failure puts your vital power continuity in jeopardy.

Most UPS batteries have a 5 or 10-year design life, but performance starts to deteriorate from the very moment dioxide paste is applied to its grids in the factory.

Each battery cell and string behaves slightly differently and has its own unique deterioration rate. This is affected by several factors such as ambient temperature, the frequency and depth of discharge, and how they are stored.

The best way to reduce your risk of premature battery failure is a proactive regime of regular battery monitoring, maintenance, and testing.

## MAKING SURE YOU AREN'T LEFT DRAINED

- Replace 10-year design life batteries in year 7-8. With 5-year design life, we recommend year 3-4.
- Keep your batteries at an optimum temperature of 20-25°C. Every 10°C increase reduces their service life by 50%.
- Overcharging causes dry out and thermal runaway. Undercharging leads to sulphation that reduces capacity.
- Storing unused batteries at 10°C or below will prolong their life. Remember to top-up charge them every 3-4 months too.





## UPS BATTERY TESTING

Riello UPS's on-site battery testing examines the performance and suitability of your UPS battery set.

Our inspections assess individual battery cell condition, total battery capacity, and remaining operational life.

Inspections are meticulous and can include **impedance testing** and **load bank testing**.

**Impedance testing** is a non-intrusive test designed to build up a history of each battery cell.

Undertaken annually, it allows battery condition to be benchmarked over time.

Also known as discharge testing, **load bank testing** examines the batteries under normal and peak load conditions, demonstrating which cells hold their charge as well as identifying which are near the end of service life.

UPS battery testing is offered as a one-off service or as part of our ongoing battery maintenance plans.

## BATTERY REMOVAL & DISPOSAL

Where possible, UPS battery replacement should be planned in advance at the appropriate point in their design life.

This approach is far more cost-effective than having to replace an entire string unexpectedly which risks the possibility of damaging failure.

Riello UPS partners with all major battery manufacturers and can source virtually any replacement cells.

We are registered with the Environment Agency so you can be assured that we will remove, transport, and dispose of your old batteries in a safe and fully-compliant way.

