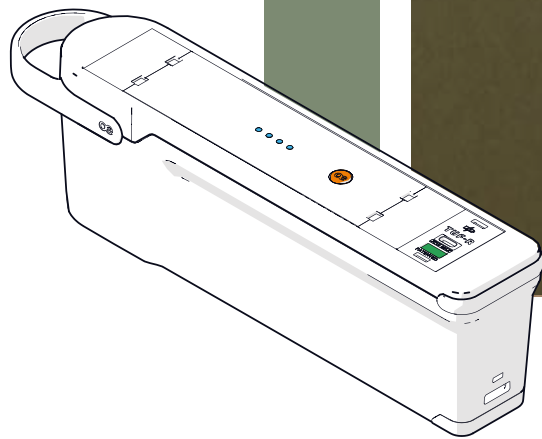
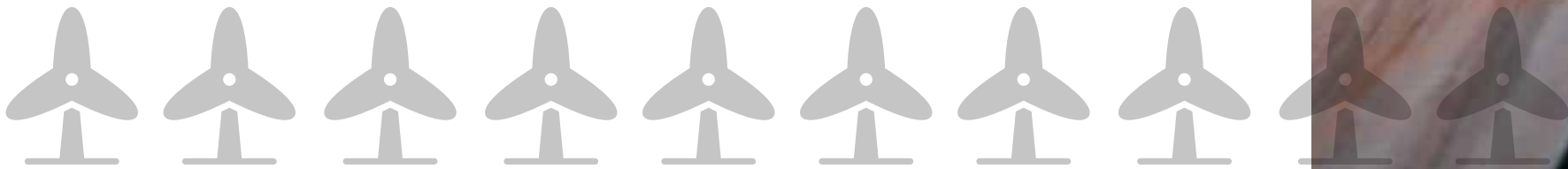


MOBILE POWER IN THE WORKPLACE




As the global push for sustainability continues to gain momentum, businesses are actively seeking energy solutions that are reliable and environmentally friendly. One technology that has gained traction in office settings is the use of lithium-ion batteries. This white paper aims to explore the advantages and challenges associated with employing lithium-ion batteries in offices.

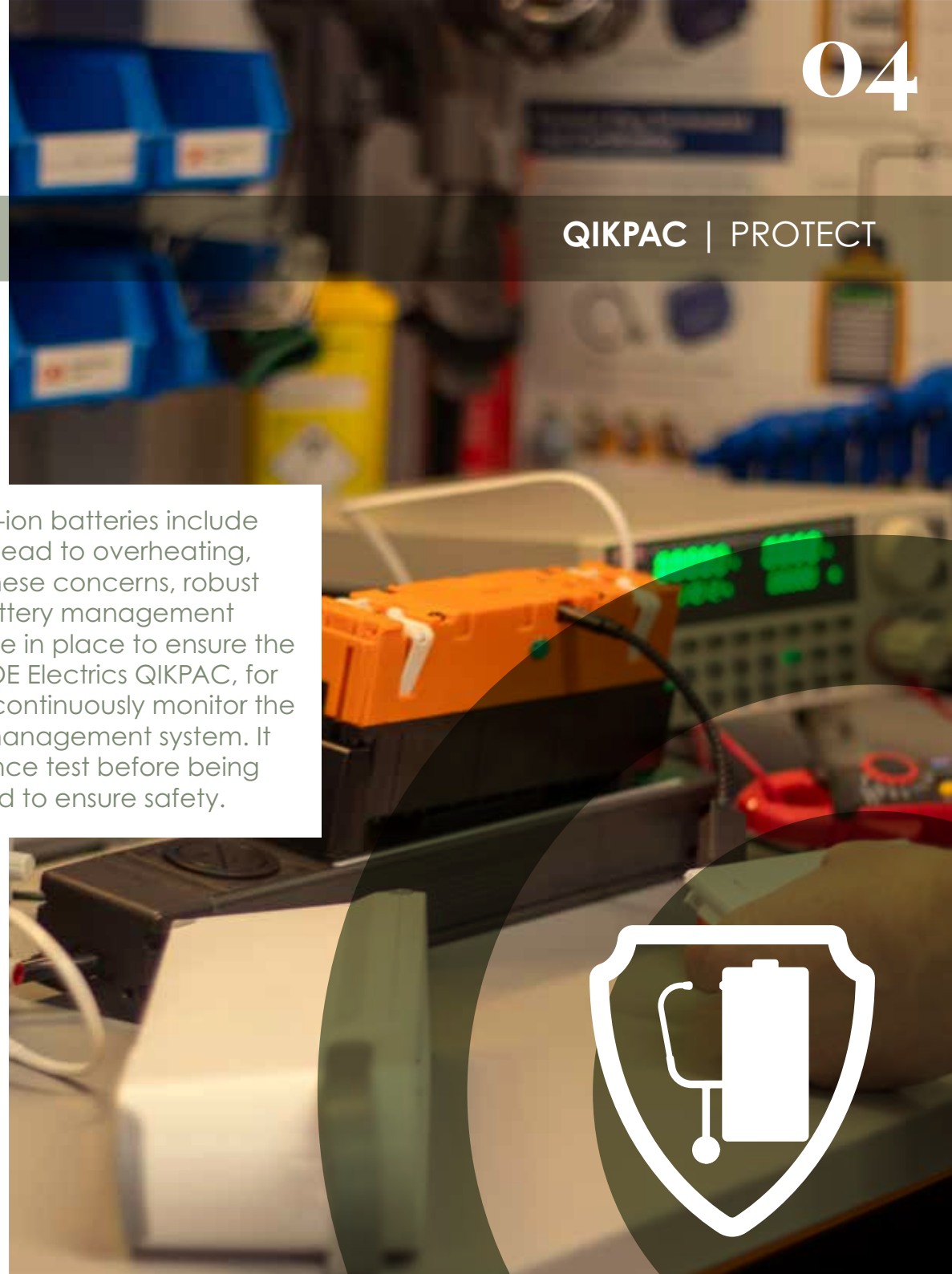


Lithium-ion batteries have a remarkable energy density, allowing them to store a significant amount of energy in a small and lightweight package. They are commonly found in mobile phones, power tools, laptops, and some larger appliances. In an office environment where space is limited, the compact nature of lithium-ion batteries allows for efficient energy storage without taking up much room. There are now several battery solutions available on the market with a small enough form factor to enable office workers to utilise mobile power. Of course, the size of the battery determines its capacity; the smaller the form factor, the smaller the capacity.





Safety concerns associated with lithium-ion batteries include the risk of thermal runaway, which can lead to overheating, and potential fire hazards. To address these concerns, robust safety measures, such as advanced battery management systems and thermal monitoring, must be in place to ensure the well-being of personnel and property. OE Electrics QIKPAC, for example, includes safety features that continuously monitor the battery through its integrated battery management system. It undergoes a 30-point factory acceptance test before being shipped, and it is independently certified to ensure safety.



The adoption of mobile power in the form of lithium-ion batteries has opened up new design possibilities for workspaces and potential savings in power distribution. By utilising battery power, there is less reliance on hardwired power provision, which can be costly, inflexible, and messy, leading to potential health and safety issues with trailing sockets. Plus, how many broken floor boxes have you seen?

With portable power, furniture can be placed anywhere without the constraints of conventional power sources. Some mobile battery solutions, including OEs QIKPAC, even allow for integration into furniture, providing power not just for laptops but also for second monitors and even the desk itself. This increased flexibility can save time and money while enabling a workspace that can easily adapt to the changing needs of the company.

**Free up your
design with
mobile power.**

One of the key advantages of lithium-ion batteries is their extended lifespan compared to traditional batteries. This longevity translates to reduced maintenance costs and fewer replacements, making them a cost-effective choice for office applications. The lifespan of a battery depends on factors such as how it is charged and discharged. Fast charging and allowing the battery to completely run out of energy can shorten its lifespan. For example, allowing a lithium-ion battery to drain to 0% from a top charge of 100% (a common practice for smartphones) can result in a decay in power storage after only 500 charge cycles (around 18 months, as is often experienced with mobile phones).

When the charge of a lithium ion battery is limited, the lifespan increases. For example, QIKPAC is programmed to shut down at 10% and charge only to 90%. This minimal limitation extends the longevity of the battery, increasing its charging cycles to an estimated 1,500*.


*After 1500 the capacity is still at 70% therefore QIKPAC is still usable for many more charges



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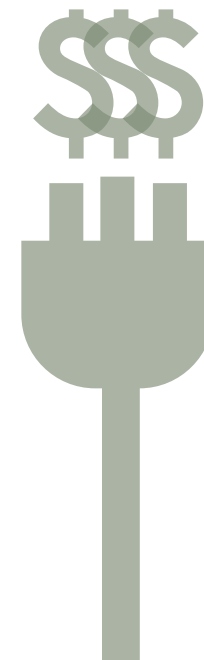
From an environmental sustainability perspective, lithium-ion batteries are considered more eco-friendly than their counterparts. Their recyclability and reduced dependence on toxic materials contribute to a greener energy solution for offices, aligning with corporate social responsibility initiatives. Several recycling schemes around the world are focused on recovering critical materials from used lithium-ion batteries and reintroducing them back into the supply chain. Australia's Envirostream is one of these companies, which effectively recovers 95% of a used battery's reusable materials. Additionally, lithium-ion batteries play a crucial role in the transition to sustainable, renewable energy by storing energy harvested from wind and solar sources.



Lithium-ion batteries exhibit high performance efficiency, allowing for quick charging, lower self-discharge rates, and a reliable power supply. In the dynamic and fast-paced environment of offices, where uninterrupted power is crucial, the efficiency of lithium-ion batteries makes them a suitable choice. Well-designed battery management systems ensure that batteries can deliver enough power not just for laptops but also for entire workstations or acoustic booths. A suitably sized battery could power these devices for a full workday, and it can be easily recharged overnight.



While lithium-ion batteries offer long-term savings, the initial investment can be a barrier, for some businesses. The higher upfront cost may discourage immediate adoption, necessitating a thorough financial analysis to justify the investment over the battery's lifespan. However, compared to the costs of conventional electrical installations, the cost of installing a battery solution can be relatively low.



The production of lithium-ion batteries has raised concerns about reliance on scarce raw materials, but the growth of the battery recycling industry is expected to alleviate this dependence in the future. The rise in electric car production, in particular, has heightened awareness of the need for proper battery recycling. QIKPAC batteries use the same cells as those used in car manufacturing, making it easier to recycle these common battery cells.



In conclusion, lithium-ion batteries offer a promising solution for powering workspaces that prioritize flexibility, efficiency, and sustainability. Their high energy density, longer lifespan, and environmental friendliness make them a compelling choice, along with the potential financial savings compared to conventional electrical installations. However, selecting the most suitable battery solution requires careful consideration, rather than simply going for the most aesthetically appealing or least expensive option. OE Electrics offers a scalable mobile battery solution that can grow with businesses, ensuring safety and reliability.

To learn more about our battery and battery safeguards, go to www.oeelectrics.com.au/qikpac/ or contact us on 1300 357 233.





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