



Case Study: Power for Portable Ultrasound

Background

In a sector where adaptability to diverse weather conditions and limited space are the norm, handheld devices are essential tools.

Partnering with [IMV](#), the leaders in veterinary imaging, Custom Power supply cutting-edge battery technology to power their reliable handheld bovine ultrasound devices. IMV approached us to design and manufacture a battery solution for their [Easi-Scan:Go](#) scanner, and our experienced team got to work.

The Challenge

The Easi-Scan:Go is a wireless, app based scanner that presents an ultrasound image on up to three smart devices simultaneously. Exceptional image quality allows for full fertility examinations as well as non-reproductive applications such as teat scanning, lung scanning, uterine scanning, post-calving examinations and body condition assessment.

As a tool for scanning pregnant cows, the device needed to be lightweight and highly portable as awkward spaces and stubborn customers were frequently involved! It also needed to be durable with a high IP rating for water and dust ingress.



The Solution

The wireless scanner is designed to meet the harsh requirements of an agricultural environment and delivers fast, accurate and easy to share images.

Size and weight were of paramount importance, and the end product measures in at just 190 x 83 x 62mm, with a weight of 850g.

Our team identified the optimum solution to be two Panasonic 18650 high-capacity cells in parallel. Known as a lithium-ion hybrid cell as it is also comprised of nickel and cobalt, the cell delivers high capacity and very good discharge features. The addition of silicon monoxide to this newer version of Panasonic's 18650 cell can improve the performance of batteries by up to 20%.

Battery life in the device is up to 300 minutes, and the probe can be charged from a 12v in-car charger or DC power adapter. The cell offers a long product life, delivering up to 500 charging cycles.

The Results

This solution for IMV met the challenging requirements of a robust yet portable, lightweight device. This collaboration yields several thousand units annually, demonstrating both companies' commitment to powering innovation and delivering advanced, reliable, and versatile solutions for the veterinary industry.



Part of the IMV Technologies group, IMV imaging is the leader in veterinary imaging. Previously known as BCF Technology and ECM (Echo Control Medical), they have 40 years of experience in building and supporting solutions for diagnostic imaging. With an ever-changing veterinary industry landscape, they continue to dedicate their business and team to provide the most innovative, and best equipment, advice, learning, customer care, and technical support. Visit the [IMV website](#) for more information.

