



STERN MOTORCYCLES

PIONEERING THE FUTURE OF ELECTRIC OFFROAD RIDING

S T E R N

STERN Motorcycles emerged from the innovative spirit of four determined founders, each driven by a shared passion for sustainable motorcycling and advanced engineering. The company traces its origins to Electric Superbike Twente (EST), a student team focused on developing electric superbikes. Among the founders is Tim Veldhuis, who co-founded EST, alongside Anne Bulten, Thomas Maas, and Jan Veenhuis. Their collective experience and the steep learning curve within EST fuelled their ambition to take their knowledge beyond the academic realm and into the commercial market. This drive gave rise to STERN Motorcycles, a company dedicated to revolutionising the offroad motorcycle industry with cutting-edge electric technology.

The Mission and Evolution of STERN Motorcycles

Initially focused on leveraging their expertise from EST, STERN Motorcycles has continually evolved to address the specific needs of the offroad motorcycling community. Anne Bulten, COO and co-founder, highlights the urgency of transitioning to electric

vehicles in this sector due to noise pollution concerns and environmental sustainability. The company's mission has sharpened over time, emphasising the creation of electric motorcycles that not only match but exceed the performance of traditional internal combustion engine (ICE) motorcycles.

Performance and Sustainability: A New Standard

In a market that often clings to tradition, STERN Motorcycles aims to disrupt the status quo. Their electric motorcycles are designed to offer an experience that rivals ICE motorcycles, focusing on handling, range, and performance. With an 8.8kWh battery, STERN's motorcycles provide the same range as their ICE counterparts, coupled with higher torque and instant power delivery inherent to electric motors.

A standout feature of STERN's design is the hot-swappable battery pack. This innovative system addresses one of the main challenges in electric offroad riding: the lack of charging infrastructure. Each battery pack, comprising two modules, can be swapped out in just 30 seconds,

ensuring continuous riding without lengthy downtimes for recharging. STERN also plans to introduce green energy-powered docking stations at tracks, optimising the charging process and extending the battery lifespan without the need for costly, permanent infrastructure.

Circular Manufacturing and Net-Zero Emissions

STERN Motorcycles is committed to sustainability through circular manufacturing. They are working towards developing fully recyclable battery packs, where all components can be detached and reused. This approach is complemented by the advancement in recyclable battery cell technology, which STERN plans to adopt as soon as it becomes viable for high-performance applications. Additionally, the motorcycles feature aluminium components, known for their recyclability and performance benefits, thus enhancing the vehicle's lifecycle and environmental impact.

Market Reception and Future Prospects

The response from the offroad racing community, though awaiting official

By 2030 we want to have build a well known motorcycle brand an manufacture 5000 motorcycles per year. Also by this time we will have started the development of new models. In 10+ years we want to be a major player in the motorcycle manufacturing industry. And on a more personal note, in the future, I will hopefully be able to see my children riding on a STERN motorcycle and see that we have been able to contribute on preserving this beautiful sport for generations to come.

— Anne Bulten, COO and co-founder of STERN Motorcycles

product launch, has been notably positive. Dealers have confirmed a significant demand for road-legal bikes with swappable battery packs, addressing a major pain point in the current market. STERN Motorcycles is actively fundraising to advance the development of their pre-production models, aiming for a market launch in early 2025 with pre-orders opening soon.

Challenges and Overcoming Them

The journey to developing a commercially viable electric motorcycle has not been without challenges. One of the primary hurdles, according

to Anne Bulten, is securing funding in the early stages. The team has adopted a lean development approach, utilising techniques like 3D printing to minimise costs and delay significant expenditures until mass production is feasible. This strategy extends to their team and marketing efforts, ensuring maximum output with minimal resources.

The Future of Offroad Racing

STERN Motorcycles envisions a future where offroad racing thrives in an electric landscape. The shift to electric is seen not just as an environmental

necessity but as an opportunity to revitalise the sport. Electric motorcycles, being quieter and more accessible, can help mitigate issues like noise pollution and lower the barriers to entry for new riders, potentially expanding the sport's appeal and participation.

Innovations on the Horizon

Looking ahead, STERN Motorcycles plans to diversify its product lineup while maintaining a common battery platform. This strategy will allow riders to use a single battery pack across multiple motorcycle types, significantly reducing the resources required for manufacturing. By 2030, STERN aims to produce 5,000 motorcycles annually and establish itself as a leading brand in the motorcycle industry. The founders hope to see their innovations contribute to the durability and sustainability of offroad motorcycling, preserving the sport for future generations.

In summary, STERN Motorcycles is not just building electric motorcycles; they are spearheading a movement towards sustainable, high-performance offroad riding. With their innovative technology and commitment to environmental responsibility, they are set to make a lasting impact on the industry. ■

