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Press Release

The world's lightest electric mountain bike features maxon BIKEDRIVE AIR

The new Lightrider E Ultimate is the first full-suspension cross-country electric mountain bike that weighs less than 15 kilograms, according to Swiss cycling company Thömus. This record-breaking weight is made possible by the small and efficient maxon BIKEDRIVE AIR drive in the extremely lightweight Thömus ultra-high modulus carbon frame.

Results are being produced through the relationship between Thömus and drive specialist maxon, which began in the winter of 2021. In recent months, significant work has been done behind the scenes on a new, ultra-lightweight electric mountain bike that, along with the maxon BIKEDRIVE AIR drive, ushers in a new era for electric mountain bikes. With a total weight of less than 15 kilograms and a slim, rigid frame, the Lightrider E Ultimate is a true racing bike that can be simply and agilely steered across any terrain.

For Thomas Binggeli, CEO and owner of Thömus, the new development is a milestone: "We developed the Lightrider E Ultimate in close cooperation with maxon and our World Cup team. The feedback we have had from training on the ride and the low weight has been amazing. The new e-bike is not designed with just professional athletes in mind, however every cyclist can enjoy this unique riding experience."

Perfect combination of ride and design

The hardly noticeable addition of the maxon drive's of 3.5 kilograms when combined with Thömus' outstanding carbon technology, results in a ride that feels just as natural on the trail as it does on Mathias Flückiger's World Cup bike, the overall World Cup winner. The Lightrider E Ultimate is ideal for training or group rides because as soon as you start to climb, it feels like a tailwind softly pushing you uphill. The maxon BIKEDRIVE AIR e-bike system's distinctive freewheel technology provides smooth transitions from supported to unsupported riding, and vice versa. The end result is an e-bike that has the ideal weight-to-agileness ratio and rides just like a typical bike. The Lightrider E Ultimate frame is also available in an extra small frame size so there is a frame size suitable for everyone.

The system's tiny size, which enables the battery to be fitted invisibly into the frame, is a reflection of maxon's 60-year experience in the creation of drive motors for Mars rovers. The additional power concealed in the bike is only hinted at by a discretely integrated control element on the top tube. Technically difficult terrain can be easily navigated with the help of a 250 Wh battery and an optional Range Extender with an extra 250 Wh capacity.

Swissness down to the smallest detail

For more than 30 years, the name Thömus has been associated with high-tech bicycles from Switzerland. Olympian Mathias Flückiger has used the brand for the last four years. The new Lightrider E Ultimate's distinctive geometry and kinematics were created in partnership with the best riders on the Thömus maxon Swiss Mountain Bike Racing Team. Professional racers use the Thömus Lightrider in World Cup competitions. This design is substantially incorporated into the new e-bike, which enables the squad to train more frequently without going above their ideal heart rate and performance range. "We can now have much longer training sessions and therefore work more intensely on improving our technique. The Lightrider E Ultimate has the potential to be a real game changer," says Mathias Flückiger.

Technical data

Battery capacity	250 Wh (integrated battery) + 250 Wh (Range Extender)
Torque	30 Nm 40 Nm (Peak)
Maximum support	25 km/h 20 mph
Weight	from 14.8 kg
Sizes	XS/S, M/L, L/XL
Wheel size	29"
Front suspension travel	120–150 mm
Rear suspension travel	120–130 mm
Head tube angle	65.5°/66.5°
Use	Cross country/trails

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The press release is available on the internet at: www.maxongroup.net.au

maxon BIKEDRIVE AIR drive



BIKEDRIVE AIR invisibly integrated in the frame

Thömus Lightrider E Ultimate with maxon BIKEDRIVE AIR drive



Lightrider E Ultimate in action

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The Swiss specialist for quality drives

maxon is a developer and manufacturer of brushed and brushless DC motors, as well as gearheads, encoders, controllers, and entire mechatronic systems. maxon drives are used wherever the requirements are particularly high: in NASA's Mars rovers, in surgical power tools, in humanoid robots and in precision industrial applications, for example. To maintain its leadership in this demanding market, the company invests a considerable share of its annual revenue in research and development. Worldwide, maxon has more than 3000 employees at nine production sites and is represented by sales companies in more than 30 countries.