

**The M.A.D.Gallery Presents Handmade Electric Bikes by Avionics: Disrupting the
Standard Way to Ride**

AVIONICS VM handmade electric bike captures the thrill of flying high while riding on solid ground. Blending minimalistic features into a retro style reminiscent of the 1930s, these two-wheelers boast an unparalleled spirit sure to turn heads as they speed by.

This artful conception hails from Avionics, a business started by two Polish gentlemen, Bartek and Jaromir, who discovered their joint passion for adventure and the golden age of invention by a chance encounter. “From the very beginning, we knew that Avionics must stand out in terms of design and performance. The design of Avionics references vehicles and planes from yesteryear, while its interior technology showcases the twenty-first century,” explains Jaromir. “Absolute fusion of nature and engineering powered by electricity.”

The innovative engineering, refined details, and incredible grandeur are all elements embedded in *AVIONICS VM*, now exhibiting at the M.A.D.Gallery in Geneva. We can’t wait to get in the saddle as this is not your run-of-the-mill bicycle.

AVIONICS VM

AVIONICS VM disrupts the standard way to ride a bike with its unique and striking form built to be reliable and withstand time. A ride on the *AVIONICS VM* provides freedom of movement in harmony with nature, a surge of adrenaline, or the opportunity to defeat agonizing traffic jams on an environmentally friendly alternative free from noise and exhaust.

Created exclusively for the M.A.D.Gallery, the *AVIONICS VM* is limited to 52 electric bikes, numbered accordingly, each arriving with a certificate of authenticity. The sweeping lines of the sturdy frame are made with chromium-molybdenum steel, an incredibly strong and corrosion-resistant material, and chrome steel, a standout colour produced specifically for this M.A.D.Gallery collection. Integrated into the frame is an ergonomic seat using leaf spring suspension to provide a smooth ride and a notable design element.

“When you look at Avionics from the profile you will see the section of the airplane wing created from the leaf spring and part of the frame,” describes Bartek. “This is an unusual solution for suspension and a feature distinguishing Avionics from any other bike or motorcycle.”

Accents handcrafted from Jatoba wood enhance the *AVIONICS VM*'s visual allure with rich, warm tones. The sleek wooden chest located at the bottom of the frame confidentially houses the battery, immobilizer, and electrical components, protecting them from weather and dust while simultaneously adding a touch of class with old-school leather straps. From the saddle and grips to the headlight and fork covers, these hardwood features are exquisite.

The *AVIONICS VM* has a massive 5,000-watt electric motor harnessing incredible torque (125 newton-meters or 92 feet-pound) with top speed reaching 36 miles per hour (58 kilometres/hour), which is a hefty amount of acceleration for everyday use. Featuring a 24-ampere hour lithium-ion battery pack, the bike can travel an estimated range of 74.5 miles (about 120 km) in low-power street mode and can be topped up in two to three hours from a domestic plug socket. Additionally, there is a USB port for charging the bike.

The *AVIONICS VM* e-bike is programmed with various street modes limiting its power to more street-friendly speeds. The three different lower-speed modes for street riding restrict the power from 750 W to 500 or 250 W. Using the force mode of the *AVIONICS VM*, you can ride like the

wind – which is certainly why the ‘M’ in ‘VM’ stands for makani, meaning wind in the Hawaiian language.

Controlling that kind of speed means being outfitted with the right tires and brakes to match the *AVIONICS VM*'s particularly impressive power. Decked out with hardy disc brakes measuring 203 millimetres (8 inches) on both the front and back wheels makes stopping as effective as possible. Another bonus to the brake system is that the power created from slowing down is recouped and helps charge the battery pack, extending the ride time until you have to plug in. Oh, and for when the battery runs dry or for the very sporty, *AVIONICS VM* is armed with traditional cycling components like pedals to get back home the old-fashioned way. The chrome-plated headlamp will help guide a night ride with its 1,000 lumens of light while the bike's taillight offers an output of up to 15 lumens via a bank of 18 COB LEDs.

The *AVIONICS VM* is set for any circumstances with 26 by 3 inch special tires with retro ZigZag tread and able to take on a variety of terrain. The e-bike is also waterproof so you can take it out while it is raining without any worries: simply deactivate the immobilizer and a rear-wheel electric blockade anti-theft system with your key and off you go.

Every component, down to the last detail, was considered and finessed by expert craftsmen (apart from the electric motor and lithium-ion battery packs), putting this electric bike in a class by itself.

Creation Process

Utilizing two workshops in Poland, Avionics creates incredible handmade electric bikes with the best craftspeople in the fields of electronics, woodworking, computer numerical control (CNC) milling, and pipe bending. The workshop in Poznań handles the production of wooden parts, Avionics details, electronic elements, and corresponds with customers. Located in Krakow, the other studio assembles, tests, and services the bikes in addition to developing the films and photos for marketing purposes.

The creation process begins by sketching an idea on a piece of paper. The team reviews and revises the concept until the initial design looks promising. From paper to digital, the idea is then brought to life through computer-aided drafting (CAD). Viewing the element on screen in 3D allows for further adjustments. Once the details are finalized in the CAD program, a prototype is output by a 3D printer and another iterative process begins until the element fulfills expectations.

During production, the components are individually cut to exact specifications on CNC machines and then moved to the manual processes. Each wooden and metal element requires manual work, including sanding, polishing, fitting, and oiling – a laborious and time-consuming step in the process. All wooden components require repeated sanding, polishing, and oiling with natural linseed oil to enhance the natural beauty and provide a protective coating against the weather. Once complete, the electronic components are embedded in the wooden elements and the finished parts are mounted on the bike.

“Avionics is a synthesis of philosophy, art, and the creative demon that constantly makes us fly higher, farther, faster,” states Jaromir.

It takes approximately six months to design and produce an Avionics electric bike with the longest and most demanding stage in the process being the electronics and the shortest assembling the bike, which takes a week.

Avionics is the brainchild of Jaromir and Bartek, but they have enlisted the support of three more friends at the moment. Inside Avionics, all decisions from the shape of individual bike elements to business and marketing decisions are considered by the team. As Jaromir and Bartek say, “Together we overcome all difficulties. Let’s fly together!”

About the Avionics founders

A fortuitous meeting during the summer of 2015 on a Baltic beach led to Jaromir and Bartek discovering their common enthusiasm for wild adventures, transportation, and view to nature for inspiration. These coincidental similarities are the genesis of Avionics.

“We are like two sprockets perfectly matched in a machine,” claims Bartek. The dynamic and slightly chaotic character of Jaromir is expressed in the temperament and uncompromising presence of Avionics. On the flip side, Bartek brings a calmness and balance to the team. This is reflected in the smooth, beautiful shapes of these extraordinary bikes and the impeccable attention to the details and finish.

Born in 1976, Jaromir graduated from the philosophy department of Marie-Curie Skłodowska University in Lublin and the director's department of the Łódź Film School. He went on to become a creator of music videos, animated films, documentaries, and film music as well as the recipient of many film awards. Jaromir’s love for motorization, aviation, and electricity in every form is also reflected in his fascination with synthesizers and electronic music, which he consistently illustrates with film impressions. As he says, “Philosophy does not give any answers but allows us to look at things from a perspective that is not obvious, ask the right question, and

then try to find answers.” Jaromir’s mindset pushes Avionics further through philosophy, art, and creativity.

Bartek was born in 1971 and studied at the Poznań University of Technology and graduated from the Academy of Visual Arts in Poznań with a diploma in interior design and computer graphics. For part of his career, he worked as a freelancer designing advertisements and multimedia presentations for leading companies in Poland and worldwide.

In his work Bartek believes that simplicity, minimalism, and an uncompromising attitude are the most important.

Future plans for the company have the partners flying high with creativity, including dreaming of an Avionics plane!