

VR|46 E-MTB, THE SOUL BEHIND EVERY CHALLENGE

The attention to detail that leaves nothing to chance is the sensation you can feel as soon as you cross the entrance gate of Valentino Rossi's Ranch in Tavullia. It represents a sacred place for the world of sport and beyond and is characterized by a dominant personality which leaves no room for choice in comparison with others. The VR|46 E-MTB project takes inspiration from the spirit of competition and the VR|46 character that emerges behind every curve and every straight which leaves room for the riders' imagination.

The project

VR|46 E-MTB is the first e-mtb conceived between Tavullia and Bologna. It concerns a bi-cushioned enduro e-bike able to offer a smooth pedaling and high downhill and cornering control, thanks to the careful study of design and the choice of cutting-edge technical solutions.

After the announcement at the Italian Bike Festival held in Rimini in 2021, **MT Distribution and VR|46** present a premium electric bike at EICMA 2021. The e-bike has been designed to satisfy even the most demanding bike riders thanks to the Made in Italy design quality and careful choice of components, selected directly with the parent companies of the most important and prestigious brands in the sector through the main European distributors. Several important players in the bike and electric components sector are involved in the project such as **Bosch, Pirelli, Sram/Rock Shox, Fulcrum, Ohlins, Crankbrothers, Technomousse and Ochain**.

The project has been developed by the MT Distribution research and development team, located in the industrial and cultural district of Emilia-Romagna, known internationally as the "Motor Valley", cradle of some of the most renowned automotive brands in the world. The team have dealt with the engineering and design of the frame and the bike.

The Frame

The heart of the project is the 6061-T6 hydroformed aluminum frame entirely studied and designed in Italy, created with the aim of combining innovative technological choices with a unique design.

Particular attention was given to the geometric dimensions and in particular to the saddle, designed in an advanced position to ensure an excellent riding position even with prohibitive slopes. Combined with an important Reach share, this solution offers full stability even in the most technical descents.

Optimal downhill performance as well as great stability and rider support on steepest climbs are ensured by the kinematic study of the compression curve. Furthermore, thanks to the flipchip system positioned on the lower fulcrum of the shock absorber, it is possible to transform the geometry of the bike, going from a performing All-Mountain to a competitive E-Enduro. It is in fact possible to vary the steering angle from 65.5°

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to 64.5°. In addition to lowering the bottom bracket it lowers by 12mm to the benefit of downhill performance.

Some elements of the frame, such as the boxed engine mounting plate, have been designed by using typical solutions of the world of motorcycles. It was also chosen to use large bearings together with oversized thruaxles to the advantage of the torsional rigidity of the whole frame.

The cable routing is fully integrated to ensure protection from possible impacts and not affect the design of the bike, completing the design choices that make VR|46 E-MTB a new reference in the panorama of modern e-bikes on the market.

The Design

The VR|46 E-MTB design represents the natural transition of the VR46 brand towards a high tech and sustainable future, as well as anchored to an unrepeatable history of sporting successes and a human heritage of great depth.

The shapes of the frame and the elements are extended forward without being elusive. The section of the triangle contracts strongly near the fork tube, as if to suggest the threatening shape of a centaur ready to shoot forward. The alignment of the triangle profile with the wagon is perceptible in its entirety from the handlebar to the rear wheel hub, thanks also to an exceptionally short and tight seat tube which contributes to the general tension of the lines.

The widening of the triangle in the portion close to the steering head is appreciable especially when viewed from the driver's seat, the position where the greatest emotions are experienced. The shape, obtained through a play of edges and surfaces, is a reference to the typical shape of the motorcycle tank. A particular stylistic focus was given to the connecting rod.

The technological, austere and glossy black is dominant especially in the rear area where the engineering part is more visible, while the more emotional, contracted and pulsating area is dominated by the iconic VR|46 yellow.

The Two Faces of VR|46 E-MTB

In 2022, VR|46 E-MTB will be launched on the market in two versions:

- **VR|46 E-MTB Limited Edition**, will be manufactured in a limited edition of 46 numbered pieces and supplied with an exclusive certificate signed by Valentino Rossi, assembled with wireless and carbon components.
- **VR|46 E-MTB Premium**, assembled with high-end components.



We thank everyone for their work and collaboration:

Cristian Trippa, E-bike Specialist Manager of MT Distribution, for the coordination and development of the project.

Ing. Fabrizio Dragoni, for the geometric/3D study of the frame.

Dragoni Design Lab, for the study of product design.

The main partners:

Bosch, Pirelli, Sram / Rock Shox, Fulcrum, Ohlins, Crankbrothers, Technomousse and Ochain.