

Diamant Suvea – Compendium document

Accessory Bar:

The Accessory Bar is a two-component construction. Component 1 is a metal rail (with a color that matches all paintjobs of the Suvea alike) with an attached seat clamp at the rear and a decoupler at the front. The rail has three long openings on the side to use with straps, and a long continuous opening at the bottom to flexibly place bolt inserts wherever needed. During assembly. Component two is a lightweight cover that gives a finished look. It's clipped in and it's secured against rattling with two bolts that can also be used to attach a top tube bag. The accessory bar withstands a load of 120kg.



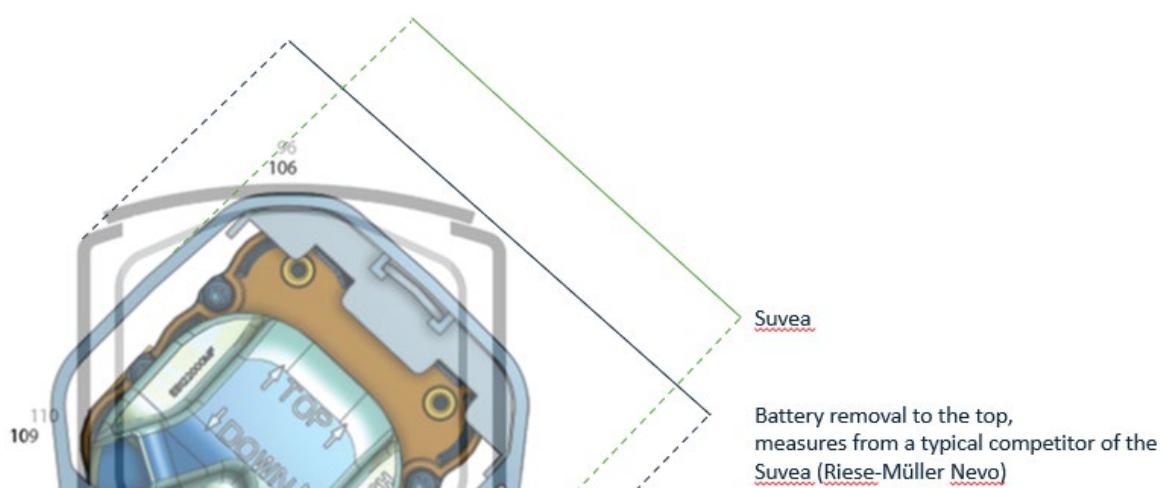
Clever Cockpit:

Buyers of contemporary premium e-bikes expect compliance with visual aesthetics. Manufacturers have introduced integrated cables for cleaner looks, but they are usually routed through the headset. This makes service very painful. The Suvea routes the cables in front of the headset and then they lead into two channels underneath the battery compartment – a side benefit of the $\frac{3}{4}$ orientation of the battery. Cable assembly and headset assembly are now independent of each other. Extensive tests with assembly line workers at our factory ensured that assembly is as fast as with non-integrated cables. The construction also allows for easy mounting of bags and baskets to the handlebar. The result is not entirely hidden, but organized and clean. It's a contemporary, but honest design with all dirt-protection benefits of integrated cables, but without maintenance hassle.



¾ Battery Eject:

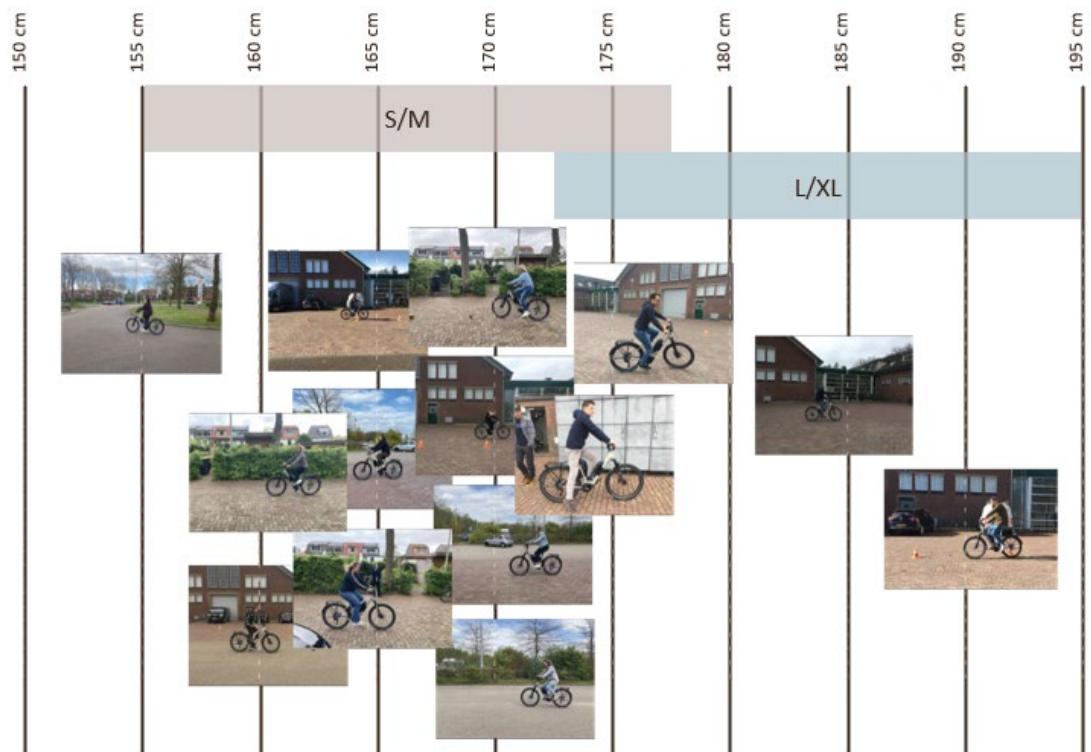
Hitherto, Diamant used either a sideways opening of the battery (which maintains classic aesthetics, but has a larger risk of inaccurately mounted batteries falling out to the side while riding) or an upward opening (which is user-friendly due to the gravitational arrangement, but often requires an aesthetically unpleasant kink in the top tube). The third alternative to the bottom is least user-friendly for recurring removal of the battery, and most exposed to dirt. The Suvea pioneers a new ¾ orientation. This works with a straight top tube, i.e., makes the accessory bar possible, and it still benefits of gravity. (Batteries are removed when the bike leans to the left while parking on its kickstand, so that the ¾ opening effectively points upwards.) From the most common visual perspective of an adult human, i.e. standing next to the bike and looking down, the tube profile is significantly slimmer. The entire battery compartment is constructed with Standard Bosch parts, which makes it easy to find spare parts anywhere. An added pull strap assists with battery removal.



Comparison of similar perspectives on Diamant Suvea and a typical competitor, displaying the slimmer visual profile of the Suvea.

Two-size Geometry

Previous Diamant models offered three sizes from 154 cm to 197 cm. The Suvea covers 155 to 195 cm with just two sizes. Dealers can therefore stock just two bikes and one accessory bar to offer as many bikes as previously with six bikes. In a time period where inventory risk is amplified, this makes the Suvea a particularly dealer-friendly option. Testing involved people of many sizes (sample shown below) to make sure that fit works perfect. The stock bike is delivered with a fixed stem length, while alternative stem lengths for individual adjustments are available as aftermarket items. Both sizes overlap at around 175 cm, i.e. at the center of the height distribution. Riders can switch between a more dynamic and a more laid-back ride as they prefer, but don't need to worry about choosing the wrong size. Geometrically, this is achieved with a particularly low stepthrough height, a flat seat angle and a non-parallel arrangement of seat tube and head tube. Therefore, pulling out the saddle increases reach proportionally, but doesn't increase height from the ground as much as a standard seat tube would.



Clever Rack Pro

The Clever Rack Pro aims to be the most effective luggage rack for standard weight capacity on the market. The standard: Compatibility with MIK HD allows 27.5kg load and direct mounting options also for child seats. Also standard: Extra rails for panniers still leave the top surface usable. The extra: The D-Wings on the side of the handlebar. (1) They are built in a way that pannier hooks only need to be set once and then the same pannier can be used on either side without re-adjustment. (2) They also have bolt threads to add nuts for Ortlieb 3.1 or MIK Side, for even easier pannier mounting. (3) At the bottom, they lean a bit outward, and thus increase the gap between pannier and frame, and pannier and rear derailleur, avoiding damage. (4) The increase triangulation also reduces vibrations of panniers and stabilizes the load, because they lean on that surface. (5) Instead of panniers, drybags or botte cages could be mounted as well. - Further, the rack has a length that allows for mounting both folding lock and PowerMore adapter as well. (In case both are mounted, ABUS' largest folding lock can still be removed.) The rack is mounted directly to the frame, thus directing its load forces into the most stable part in the rear triangle. A breaking light function is standard on any Suvea, and the light-protecting element of the rack also serves as a handle to lift the bike.



Other features

The motor cover of the Suvea has a concealed place to carry an Apple AirTag for added theft protection. Additionally, there is space for a Bosch Connect Module. The motor cover itself is optimized for the interplay of airflow and accessibility.



The Suvea rides on 65mm wide tires, which improves comfort, grip, braking performance, and stability. We are the first to use tires in this width on a city/trekking® e-bike.

The very simplified and invisible frame split follows the Active Break Pivot principle and is designed with UDH split dropouts.



One pair of screws on either side of the head tube allows for attaching bottles in a very ergonomic position. The headtube also includes an easy-to-replace knock-block to prevent the front wheel from over-rotation. When triggered in an incident, the bike can still be ridden like normal afterwards.