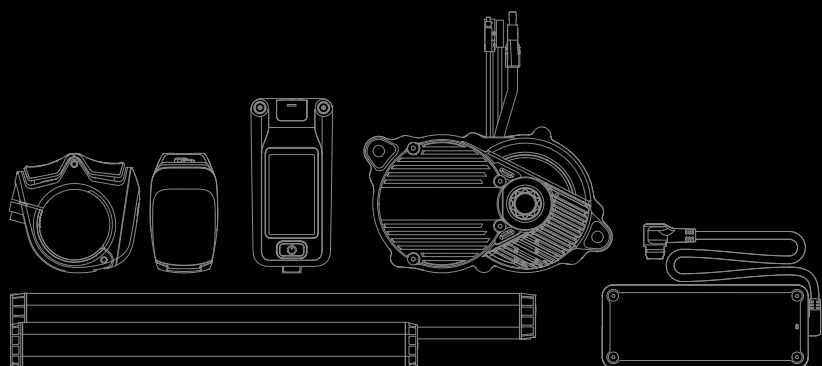


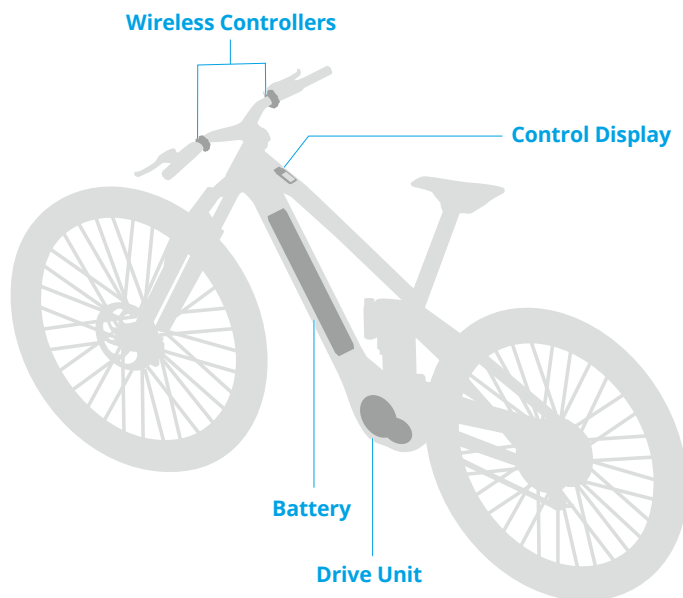
AVINOX DRIVE SYSTEM



Introduction

The compact, lightweight, easy-to-install construction of AVINOX Drive System allows improved integration within the eBike, providing greater freedom in frame design. The drive system offers a choice of different modes, including five riding assist modes (Auto, Eco, Trail, Turbo, and Boost) for different riding environments and a Walk Mode to assist the user when pushing the bike. Based on multiple sensors' input, the drive system provides a smooth ride when shifting gears and launching from a standstill. The built-in IMU provides attitude detection to the bike (pitch and roll angle), which automatically adjusts the assistance level based on the attitude data in Auto mode. Users can personalize the riding experience via the app by customizing the bike screen display and assist parameters according to the riding environment and rider preferences.

Overview



Drive Unit

The drive unit is innovatively equipped with compound planetary gear structure for lightweight and compact architecture. The motor offers a maximum torque of 105 N·m (120 N·m in Boost mode), providing users with powerful ride support. Multiple sensors deliver accurate measurements while riding to provide appropriate power in any riding situation. With a protection rating of IP66, the Drive Unit can handle a wide variety of weather conditions and environments.

Battery & Charger

Avinox Drive System offers two lithium-ion battery models. The batteries have a uniform width but vary in length, making it easy to design a universal bicycle frame for both batteries. The batteries have a power density of approximately 216 Wh/kg and a capacity of 600 Wh and 800 Wh, respectively, which can hold 80% max capacity even after 500 full charge cycles. It takes approximately 2 hours and 25 minutes to fully charge the 800 Wh battery using the 508W fast charger.

Control Display

The control display can automatically adjust the brightness of the screen according to the lighting environment, which provides optimal readability even in bright lighting. The dashboard on the display can be adjusted via the app to accommodate various user preferences. During outdoor rides, the drive system supports up to 65 W fast charging to charge external devices via the display USB-C port.

Wireless Controller

The wireless Controller is connected to the control display via Bluetooth, reducing cable clutter. While riding, users can quickly switch the assist mode and control the touchscreen via the buttons of the remote.

Avinox App

The app allows users to customize the assist parameters. Riding data such as route, speed, cadence, and power can start to be recorded as soon as the ride begins, and also can be shared to Strava.

Features

Range Estimate

The app can estimate the available range with the current battery level.

Remote Bike Control

With a 4G connection, the app can show the real-time bike location. If the bike detects accident movement while locked, it will sound an alarm on the bike and trigger a notification in the app.

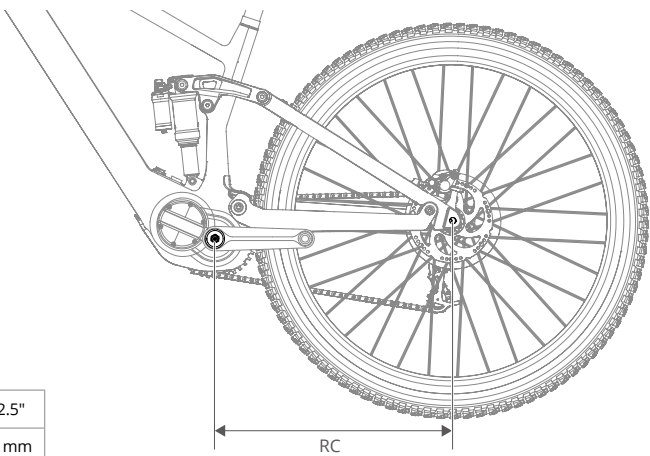
Mobile Key Unlock

A digital password can be set to protect the bike. When the bike and a smartphone are connected via Bluetooth, users can enable Mobile Key Unlock function to automatically unlock the bike according to proximity.

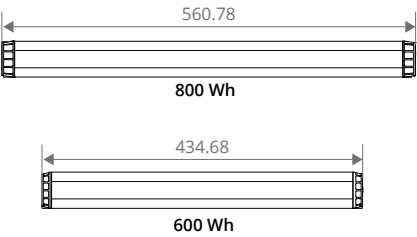
Dimensions

Frame

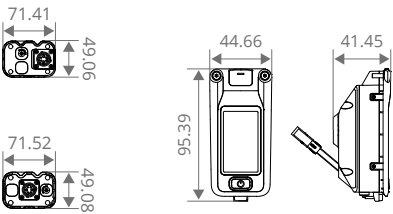
Rim×Tire Size	27.5×2.5"	29×2.5"
RC	≥425 mm	≥440 mm



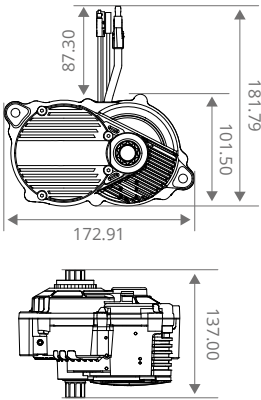
Battery



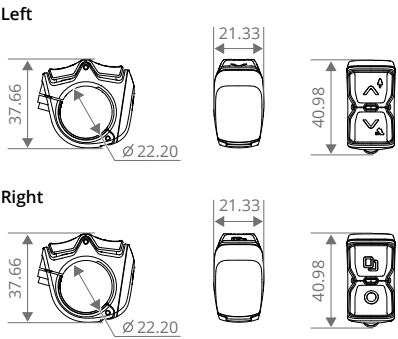
Control Display



Drive Unit



Wireless Controller



Unit: mm

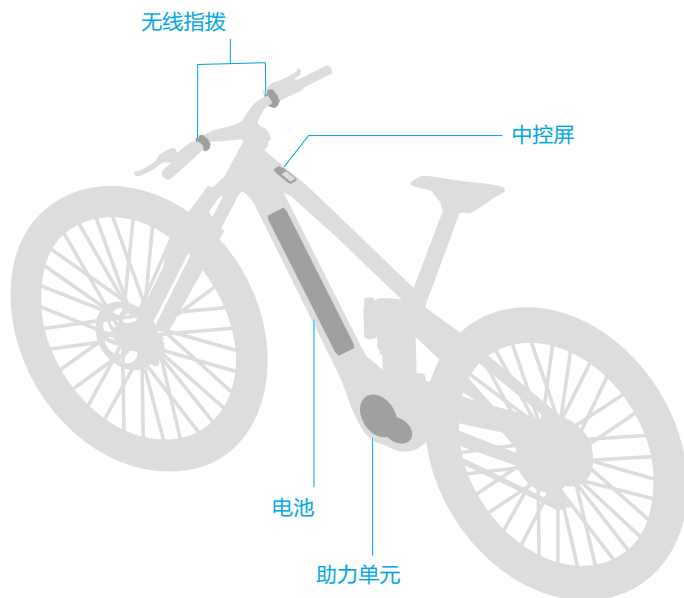
Specifications

Drive Unit		
Continuous Rated Power	250 W	
Peak Power	850 W	
Maximum Drive Torque	105 N·m (Normal); 120 N·m (Boost)	
Torque Density	42 N·m/kg	
Maximum Cadence	150 rpm	
Max Assist Speed	25 kph (Europe and China), 20 mph (North America)	
Assist Mode	Auto Mode: Maximum torque 105 N·m, default assistance ratio 200% to 400% (automatically adjusts based on road conditions), app customizable range 100% to 400%	
	Eco Mode: Maximum torque 105 N·m, default assistance ratio 100%, app customizable range 50% to 200%	
	Trail Mode: Maximum torque 105 N·m, default assistance ratio 300% to 400% (automatically adjusts based on road conditions), app customizable range 175% to 600%	
	Turbo Mode: Maximum torque 105 N·m, default assistance ratio 600%, app customizable range 250% to 800%	
	Boost Mode: Torque 120 N·m, default assistance ratio 800%, not customizable	
Protection Rating	IP66	
Weight	Approx. 2.52 kg	
Battery	800 Wh	600 Wh
Battery Type	Li-ion	
Voltage	35.9 V	
Protection Rating	IP56	
Capacity	22.3 Ah	16.7 Ah
Energy	800 Wh	600 Wh
Charging Time	168W charger approx. 5 h 50 min (0-100%) approx. 4 h 28 min (0-75%) 508W charger approx. 2 h 25 min (0-100%) approx. 1 h 30 min (0-75%)	168W charger approx. 4 h 45 min (0-100%) approx. 3 h 3 min (0-75%) 508W charger approx. 2 h 25 min (0-100%) approx. 1 h 30 min (0-75%)
Weight	Approx. 3.74 kg	Approx. 2.87 kg
Control Display		
Screen	2.0-inch OLED 326 ppi 800 nit	
Expansion Port	12V 2.0A 24W	
4G LTE	LTE-Cat.1	
Bluetooth	BLE 5.1	
Power Output Port	USB-C PD3.0 65 W	
GNSS	GPS+Galileo+BeiDou+GLONASS+QZSS	
Sensing System	Built-in IMU, barometer, compass, ambient light sensor torque/cadence/wheel speed sensors	
Storage Capacity	8 GB	
Protection Rating	IP56	
Wireless Controllers		
Bluetooth	BLE 5.1	
Battery	CR1620	
Protection Rating	IP56	

概述

Avinox 助力系统由助力单元、电池、中控屏和无线指拨组成，整体设计紧凑、轻量且便于安装，可为车架设计提供更多可能性。系统提供 Auto, Eco, Trail, Turbo, Boost 五种助力模式及步行推车模式，可适应更多路况。得益于多个传感器，系统可在档位切换及启停时为用户提供自然舒适的助力感受。Auto 模式时，内置 IMU 可通过检测车身水平姿态自动调节助力比，提高骑行安全。连接 App 后，用户可根据骑行偏好及场景对屏幕数据页进行个性化设置。

产品简介



助力单元

Avinox 助力单元创新采用 N-W 型双联行星齿轮结构，使整体结构更加紧凑、轻量。助力单元最大扭矩为 105 N·m，Boost 模式下可达 120 N·m，为车手提供强大动力支持，且通过分析多个传感器采集的实时骑行数据，在任意时刻都能提供适当的助力。IP66 的防护等级使其在各种天气及路况条件下都经久耐用。

电池及充电器

Avinox 提供两款功率密度约为 216 Wh/kg、容量分别为 600 Wh 和 800 Wh 的电池，在 500 次充电循环后仍可保持 80% 容量。两款电池采用相同的截面设计，可兼容同款车架设计。此外系统还提供 168W 便携版和 508W 快充充电器，以满足不同需求。使用快充充电器时，仅需约 2.5 h 即可充满 800Wh 的电池。

中控屏

Avinox 中控屏幕采用 2 英寸高清 OLED 屏，可根据环境自动调节亮度，户外强光下仍能保持良好的可见性。用户可通过 App 自定义屏幕显示，多个可选数据项充分满足差异化需求。户外场景下还可通过中控屏幕的 USB-C 口外接电子设备实现 65 W 快充。

无线指拨

Avinox 无线指拨体积小巧，可通过蓝牙与中控屏幕进行连接，有效简化车头走线。骑行时，通过按键即可快速切换助力模式及屏幕显示。

Avinox App

Avinox App 支持定制助力模式，车手可根据需求对助力参数进行个性化设置。骑行时，可通过 App 自动记录骑行轨迹、速度、踏频、功率等数据，并可直接分享至 Strava。

功能亮点

里程预估

支持预测当前电量支持的骑行里程，在 App 中可查看四种助力模式分别可骑行的里程。

远程监控

通过 App 可远程监控车辆状态，当系统检测到车辆出现意外移动时，车辆将进行蜂鸣报警，且 App 将实时推送安全提醒。

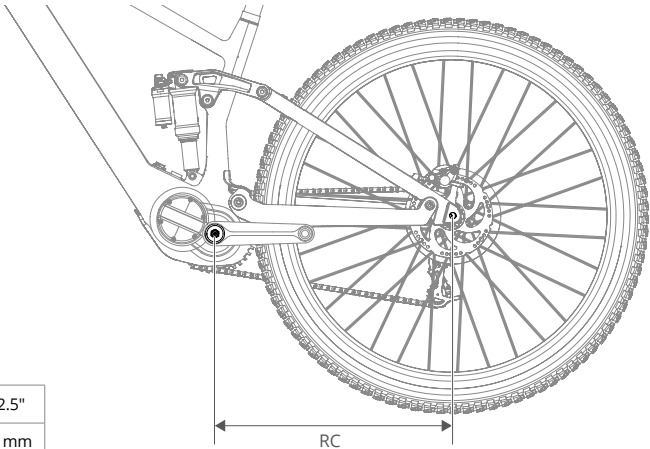
防盗功能

支持设置数字密码为车辆提供保护，手机与车辆蓝牙连接后，可启用手机蓝牙解锁，在靠近车辆时自动开锁。

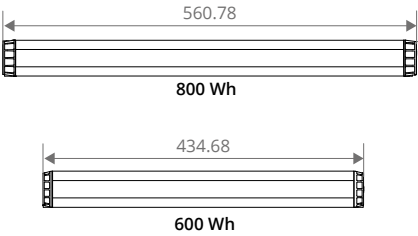
尺寸

车架

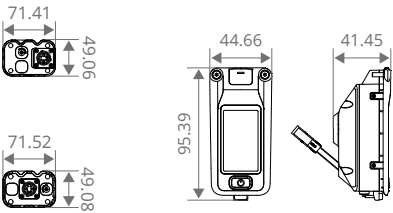
轮辋 × 轮胎	27.5×2.5"	29×2.5"
RC	≥425 mm	≥440 mm



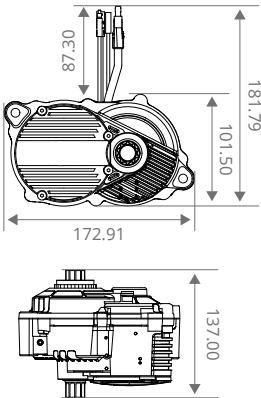
电池



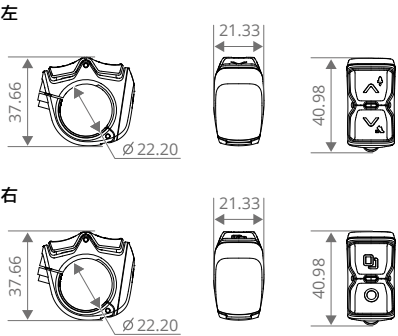
中控屏



助力单元



无线指拨



单位: mm

规格参数

助力单元		
额定输出功率	250 W	
最大功率	850 W	
最大扭矩	105 N·m（普通）；120 N·m（Boost）	
扭矩密度	42 N·m/kg	
最大踏频	150 rpm	
最高助力速度	25 kph（欧洲与中国），20 mph（北美）	
助力模式	Auto 模式：最大扭矩 105 牛·米，助力比默认 200% 至 400%（随路况自动调整），支持 app 自定义范围 100% 至 400%	
	Eco 模式：最大扭矩 70 牛·米，助力比默认 100%，支持 app 自定义范围 50% 至 200%	
	Trail 模式：最大扭矩 105 牛·米，助力比默认 300% 至 400%（随路况自动调整），支持 app 自定义范围 175% 至 600%	
	Turbo 模式：最大扭矩 105 牛·米，助力比默认 600%，支持 app 自定义范围 250% 至 800%	
	Boost 模式：扭矩 120 牛·米，助力比默认 800%，不支持自定义	
防护等级	IP66	
重量	约 2.52 kg	
电池	800 Wh	600 Wh
电池类型	Li-ion	
电压	35.9 V	
防护等级	IP56	
容量	22.3 Ah	16.7 Ah
能量	800 Wh	600 Wh
充电时间	168W 充电器	168W 充电器
	0-100%：约 5 h 50 min	0-100%：约 4 h 45 min
	0-75%：约 4 h 28 min	0-75%：约 3 h 3 min
	508W 充电器	508W 充电器
	0-100%：约 2 h 25 min	0-100%：约 2 h 25 min
0-75%：约 1 h 30 min	0-75%：约 1 h 30 min	
重量	约 3.74 kg	约 2.87 kg
中控屏		
触控屏	2 英寸 OLED 326 ppi	
	800 尼特	
拓展接口	12V 2.0A 24W	
4G	LTE-Cat.1	
蓝牙协议	BLE 5.1	
电源接口	USB-C 口，支持 PD3.0 65 W 快充	
GNSS	GPS+Galileo+BeiDou+GLONASS+QZSS	
传感器系统	IMU，指南针，气压传感器，轮速传感器，扭矩传感器，踏频传感器，环境光传感器	
内置存储容量	8 GB	
防护等级	IP56	
无线指拨		
蓝牙协议	BLE 5.1	
电池类型	CR1620	
防护等级	IP56	

AVINOX