

Mile by mile, the eBike learns more

AI-based features: Bosch presents intelligent route planning and navigation

- ▶ Artificial intelligence makes eBikes more fun to ride with the smart system from Bosch
- ▶ Customized route planning and navigation – thanks to technical solutions that recognize user behavior
- ▶ New “Range Control” function makes it possible to arrive with the desired battery level
- ▶ New Eco+ mode for an energy-saving riding experience and longer range

AI solutions are increasingly being used to make a variety of everyday tasks easier. They impress with personalized applications by analyzing individual needs and continuously learning from them. Thanks to Connected Biking, the physical riding experience merges with the digital world. Consequently, the eBike has long become an intelligent companion. Connected via the eBike Flow app, it forms part of a modern, digital lifestyle and always remains up-to-date. Bosch eBike Systems integrates AI-based solutions into the smart system, which recognize user behavior, learn from it, and enable, for example, smarter route planning and navigation.

“We’re confident that Connected Biking is the future. Only by merging the physical riding experience with the digital world can the full potential of our eBike systems be realized,” explains Gregor Dasbach, Vice President Digital Business at Bosch eBike Systems. “With the integration of AI, we are taking the next logical step in developing and creating priceless added value for eBike riders: Mile by mile, the eBike learns more and unnoticed, becomes a smart and connected companion along the way.”

Range Control: AI ensures greater reliability when it comes to range on the eBike

The new, AI-based “**Range Control**” feature makes planning rides easier: eBike riders no longer need to worry about their battery range. When you plan a route in the eBike Flow app, it immediately indicates the percent of battery charge remaining when you reach your destination. To display the most accurate range possible, the smart system gathers various information, including the system weight, the elevation profile of the route, and your personal riding behavior during your recent rides. Its predictions become increasingly precise: Once the first activities have been recorded, the system is able to determine the battery status on arrival much more accurately than on the first journey. The predicted battery level is also updated during the journey and the current riding style is taken into account. This means that riders can concentrate fully on their eBike experience.

To rule out every last worry about range during the journey, you can even set the desired minimum battery level at destination. The smart system takes care of the rest – extremely practical if, for example, charging isn’t possible before the return journey or the next ride. If required, eBike riders can enable this additional feature via a toggle button in the eBike Flow

app. A slider can then be used to precisely set the desired battery level at destination. Depending on the selection, the app indicates whether the route can be traveled with full, low, or very low support. During the journey, the smart system then adjusts the motor support as necessary. This ensures that you arrive with the predetermined battery level. With this new development, wondering whether the battery will last to the destination is now a thing of the past for eBikes with a smart system from Bosch.

Personalized arrival time and route planning

The smart system also uses other AI features for personalized planning. The expected arrival time, for example, can be calculated and displayed before a ride. An analysis of previous riding behavior on similar routes helps here. eBike riders also benefit from personalized route suggestions: The smart system knows, for example, which road types, which surfaces, and which gradients and speeds are preferred, and makes a corresponding route recommendation.

Current charge level for easy planning and detailed maps for Kiox displays

Further new functions make navigation and planning even easier. With the **“current charge level” feature**, users can track the battery status live during the charging process on the eBike Flow app and view it anytime and anywhere. So you can plan your next ride or onward journey at home on the couch or in a cozy café. The **“extended navigation” feature** enhances the navigation display on the Kiox 300 and Kiox 500 displays. This no longer only shows the planned route and junctions, but also all side roads. These new, additional map details ensure the best possible orientation and intuitive navigation. “Extended navigation” and “current charge level” are part of the Flow+ subscription service.

New insights on completed journeys

Bosch also presents numerous innovations in terms of the **ride statistics**. This means that all riders who have a Bosch eBike ABS installed on their eBike can view the percentage of braking maneuvers with and without ABS as a direct comparison in the eBike Flow app. During the ride, the number of braking maneuvers where ABS was activated is also displayed.

The **“riding mode usage” display** is no longer only available during the ride, but also as a statistic afterward. A clear pie chart shows the ratios of the riding modes used (including Off mode). The same applies to the **“power share” screen**. The “power share” screen provides insights into the average rider power compared to the average power of the drive unit, based on current activity and the selected riding mode. This information helps eBike riders improve their fitness level and optimize their training. Display of riding mode usage and power share after the ride are both part of Flow+.

New Eco+ mode enables longer range

In addition to the digital features, Bosch is also introducing a new riding mode for the smart system. The new Eco+ mode blurs the boundaries between eBiking and normal cycling, saves

energy, and enables particularly long range. It is particularly suitable for eBike riders who enjoy pedaling without support on flat terrain, but instead prefer motor assistance on climbs or when overtaking. Depending on the rider performance, the motor remains completely switched off until an activation threshold that can be customized in the eBike Flow app is exceeded. This is ideal for lightweight eBikes, but also for hybrid eBikes and touring eBikes. When support is no longer required, the motor switches off automatically. This makes it easy to save energy and extend the range, making even lengthy rides possible without charging or replacing the battery. The Eco+ mode is available for all drive units with the smart system from Bosch eBike Systems and can be installed on your own eBike using the eBike Flow app.

Even more customization: display configuration on the Purion 200

The networking of components creates new possibilities for customization. Like the Kiox 300 and Kiox 500 displays, the display of the Purion 200 control unit can now also be customized according to your own preferences: eBike riders can sort, add, or delete content in the eBike Flow app. You prefer the speed to be displayed on the left and always want the heart rate on the right? No problem, because two tiles per screen can be freely assigned. The screen order can also be redefined.

Features at a glance

Feature	Flow+	Release
Range Control		July 2024
Riding statistics: ABS		July 2024
Eco+ mode		July 2024
Purion 200: Display configuration		July 2024
Current charge level	x	August 2024
Extended navigation	x	August 2024
Additional statistics: Riding mode usage and power share	x	August 2024

Press photo 1:



More fun thanks to AI-based features: eBikes with the smart system from Bosch learn mile by mile.

Press photo 2:



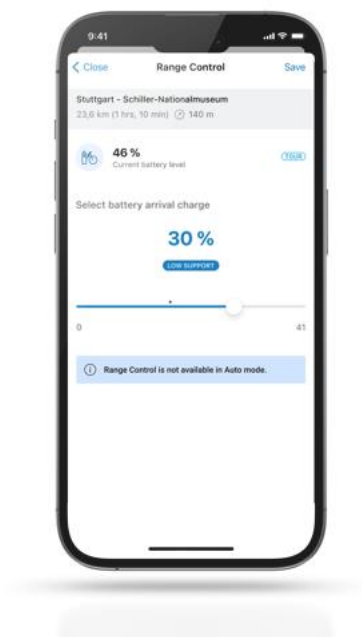
Thanks to Connected Biking, the physical eBike experience is merging with the digital world and has long become an intelligent companion in everyday life.

Press photo 3:



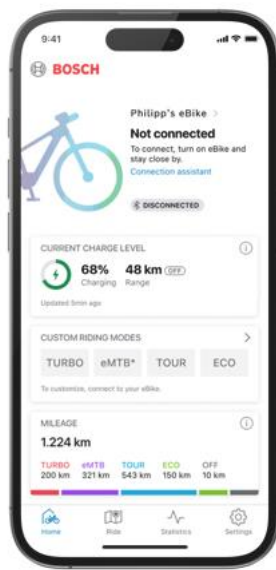
Know what battery level you will reach your destination with before your ride – or even set the desired minimum battery level at destination yourself: This can be done with the new “Range Control” feature.

Press photo 4:



With the “current charge level” feature, the battery level can be tracked live on the eBike Flow app during the charging process and viewed anytime and anywhere.

Press photo 5:



The new Eco+ mode blurs the boundaries between eBiking and normal cycling, saves energy, and enables particularly long ranges.

Bosch eBike Systems is shaping the future of eBike mobility with innovative products and digital services ranging from highly efficient drive systems to the first production-ready ABS for eBikes and connected biking solutions. On daily routes through the city, on leisurely rides through the countryside or for sporting adventures in the mountains: Bosch eBike Systems offers eBike riders the right drive system (drive unit, battery, display, and app) for every requirement and every area of use, ensuring a unique riding sensation. Today, more than 100 of the world's leading bicycle brands trust the perfectly coordinated, modular product portfolio. As an independent division within the Bosch Group, Bosch eBike Systems also makes use of the Group's technology and manufacturing expertise. For healthy, safe and sustainable mobility that is fun.

For more information please visit <https://www.bosch-ebike.com/us/>

About Bosch

Having established a presence in North America in 1906, today the Bosch Group employs 42,000 associates in more than 100 locations in the North American region (as of Dec. 31, 2023). Bosch generated consolidated sales of \$16.5 billion in the U.S., Mexico and Canada in 2023. For more information visit www.bosch.us, www.bosch.mx and www.bosch.ca.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 429,000 associates worldwide (as of December 31, 2023). The company generated sales of \$99 billion in 2023. Its operations are divided into four business sectors: Mobility, Industrial Technology, Consumer Goods, and Energy and Building Technology. With its business activities, the company aims to use technology to help shape universal trends such as automation, electrification, digitalization, connectivity, and an orientation to sustainability. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in sensor technology, software, and services to offer customers cross-domain solutions from a single source. It also applies its expertise in connectivity and artificial intelligence in order to develop and manufacture user-friendly, sustainable products. With technology that is "Invented for life," Bosch wants to help improve quality of life and conserve natural resources. The Bosch Group comprises Robert Bosch GmbH and its roughly 470 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. Bosch's innovative strength is key to the company's further development. At 136 locations across the globe, Bosch employs some 90,000 associates in research and development, of which nearly 48,000 are software engineers.

Exchange rate: 1 EUR = 1.0818