

Power meets Control: Bosch again sets new eMountain biking standards with its new Performance Line CX

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More dynamic, more agile and quieter than ever before

- ▶ The next evolutionary step of the Performance Line CX combines power, dynamics, efficiency and range in an ideal ratio
- ▶ Even better riding dynamics and agility thanks to optimised sensor technology
- ▶ Reduced noise and lower weight
- ▶ Sporty ecosystem: Bosch eBike ABS Pro, Purion 400 display and PowerTube 600 and PowerTube 800 batteries complement the new drive unit

Stuttgart/Reutlingen – More dynamic on the mountain, more agility on the trail, smoother riding on tour: In the new Performance Line CX generation from Bosch eBike Systems, power meets control and a success story lives on. In conjunction with the Bosch eBike ABS Pro, the Purion 400 display, the powerful PowerTube batteries and new features for long tours and steep passages, Bosch presents a comprehensive sporty ecosystem for the ultimate eMountain bike experience.

The ideal balance of power, efficiency and range

For eMountain bikers, it is not just performance data that is crucial, but above all the precise fine-tuning of the motor. This determines the flow factor on the trail. “With 85 Newton metres of torque, a maximum power of 600 watts and up to 340 percent support, the new Performance Line CX (BDU384Y) delivers the ideal balance of power, dynamics, efficiency and range,” says Claus Fleischer, CEO of Bosch eBike Systems. “Whether for sensitive starts on steep trails or powerful, perfectly controlled exits from bends: With its precise, sensitive response behaviour, our new drive unit allows sporty eBikers to experience unique riding dynamics for the perfect eMTB experience.” A variety of different [riding modes](#) are available for Performance Line CX, which can be selected and customised in the [eBike Flow app](#).

Sensitive sensor technology and dynamics on a new level

The power of the new Performance Line CX (BDU384Y) unfolds dynamically and is precisely matched to the relevant riding manoeuvre and accurately follows the pedal input. This is made possible by re-engineered sensor technology. Several high-performance sensors precisely measure the pedal input – more than 1,000 times per second. The many sensors used include a high-resolution cadence sensor and precise torque measurement technology. Inertial sensors (IMU) also measure acceleration and rotation speeds in six dimensions, and recognise inclination and tilt angles as well as vibrations. This means that the eMTB “knows” how steep the ascent is and whether eBikers are on a forest path or a root-covered trail. The drive unit responds highly sensitively to changes in acceleration, the rider’s pedal power and the current speed. Thanks to the newly interpreted sensor signals, eBikers always receive the right motor power – sensitive, controlled and immediate. Or gentle, restrained and reliable for long tours and leisurely excursions. The Performance Line CX is an all-rounder.

The sound of the trail and nothing else

On trails and discovery tours, many cyclists want a motor that is as quiet as possible, combined with a natural riding experience. Bosch has optimised the gearbox of the new Performance Line CX (BDU384Y) with a view to achieving a good balance between power delivery, efficiency and noise levels. When riding downhill, the external drivetrain (chain, chainring, cassette) is decoupled from the internal drivetrain (freewheel, gearbox, motor). This further reduces the mechanical noise generated by comparable drive units on the trail. The full focus remains on the trail and nature.

The weight of the Performance Line CX has also been reduced by around 100 grams compared to the previous version. The drive unit is extremely robust. Its magnesium housing withstands the toughest conditions. A black powder coating protects against stone chips and damage as well as corrosion.

The motor that defined eMountain biking: Performance Line CX

If there is one eBike motor that is synonymous with eMountain biking, it’s the Bosch Performance Line CX. Specially developed for eMTBs, it has established itself as a permanent fixture in the mountain bike scene since its launch almost ten years ago (2015) and has defined sporty eBiking as a field in its own right. Since then, the drive unit has undergone several stages of evolution and continues to set standards in terms of riding experience and motor characteristics. The pioneering, progressive/dynamic eMTB mode and many other technical developments complement the Performance Line CX, making the riding experience on the eMountain bike unique.

Full support right up to the summit: useful features for steep passages

If eBikers have to stop on challenging uphill terrain, it is important to get out of this situation in a controlled manner. With the new **hill start assist** you can ride off in relaxed manner and with full traction. Thanks to the sensors, the eMTB knows how steep the slope is and provides optimum support. Also new: With the **walk assistance** feature, the drive unit adapts the pushing speed to the walking speed.

Maximum braking performance: the new Bosch eBike ABS Pro

On the downhill trail, demanding mountain bikers want to focus more on their riding line and less on braking. Bosch eBike Systems now has a solution for them: the new Bosch eBike ABS Pro for high-performance braking systems. This increases riding stability by allowing late and powerful braking without the front wheel slipping. During development, Bosch incorporated experience and technology from eMTB racing. This has resulted in two ABS Pro modes: ABS Trail Pro for discerning mountain bikers and ABS Race for enduro racers. The new eBike ABS Pro achieves the optimum balance between riding stability and maximum braking performance.

Perfect eMTB display: the new Purion 400 display

The new **Purion 400** display is part of the sporty ecosystem and complements the Performance Line CX. With a minimalist look adapted for eMTBs and optimally protected in the handlebar triangle, the transmissive 1.6-inch display offers a good overview of the essential riding and fitness data such as speed, range, power and total distance.

Battery innovations for even longer tours: PowerTube 600 and 800

Energy reserves play a decisive role on demanding, multi-day tours covering many metres of elevation gain. For this purpose, Bosch has developed the **PowerTube 800** – the largest PowerTube battery in the smart system to date, perfectly matched to the new Performance Line CX. At around 205 Wh/kg, the battery has the highest energy density in the portfolio. The portfolio is complemented by the new **PowerTube 600**.

Bosch uses battery cells with an optimised energy density and a newly developed aluminium housing for both batteries. Seamlessly integrated into the frame tube, they blend seamlessly into the eBike design. Thanks to their identical length, they can be easily removed and replaced – if provided for by the eBike manufacturer. They are also DualBattery-capable and can be combined. eMTB enthusiasts, for example, can use two PowerTube 800s to achieve a total capacity of 1,600 Wh in order to master even the most challenging route sections with many metres of elevation gain and no possibility of intermediate

charging. Alternatively, you can use the drinking bottle-sized range extender [PowerMore 250](#) as an additional battery.

Focus on sustainability in production

Bosch aims to continuously improve all eBike systems in terms of sustainability throughout the entire product life cycle. For the production of the Performance Line CX and of the two PowerTube 600 and PowerTube 800 batteries, Bosch eBike Systems therefore uses partially recycled materials: for the first time in the largest plastic part of the drive unit as well as in the battery holder and the battery housing¹. Furthermore, the amount of material used for the rechargeable batteries has been reduced² and the black colour coating has been omitted from the PowerTube 600 and PowerTube 800. A further milestone: In pilot projects, Bosch eBike Systems is focussing on purchasing components that were produced using electricity from renewable sources. This applies to the aluminium of the PowerTube 600 and the PowerTube 800 as well as to the housing of the Performance Line CX.

More than the sum of its parts: the eMTB ecosystem from Bosch

The Performance Line CX takes centre stage – and around it, Bosch eBike Systems presents a sporty portfolio that takes the eMountain biking experience to a new level: powerful batteries for long ranges, a lightweight range extender, a compact display, eBike ABS Pro and the eBike Flow app. With the eShift solution featuring TRP presented in July 2024, eMountain bikers will also benefit from the first automatic derailleur in the smart system.

And Bosch is also involved beyond the trail Bosch eBike Systems: As one of several well-known stakeholders in the electric bike industry, Bosch is supporting the collaboration in the Charge2Bike consortium to develop an industry-wide, standardised charging solution. "The fascination of eMountain biking is a holistic experience," says Claus Fleischer. "And we are also pursuing this approach in our product development. With our comprehensive sporty ecosystem, we offer eMountain bikers more dynamics, more control, more riding pleasure – and therefore more 'trail' – through the interplay of all components." Claus Fleischer believes that the advantages of this holistic approach will change the market: "We are convinced that in 5 years' time, eBikes with ABS, eShift, the eBike Flow app and an infrastructure with Charge2Bike as standard will be available for hire."

¹ Primary plastics and metals were used for previous drive units and batteries. Recycled material is now specifically used in the grease guide plate of the drive unit, in the protective cap of the battery mount system and in the battery housing. By providing the grease reserve, the grease guide plate makes a significant contribution to the efficiency level and service life of the drive unit and was produced for the first time with a plastic that consists of approximately 50 % recycled material. We use recycled polypropylene for the protective cap of the battery mount system, while we use aluminium, consisting of approximately 38% recycled material, for the battery housing.

² The reduction is achieved by reducing the wall thickness of the housing. This produces the following result: when comparing PowerTube 600 with PowerTube 625, the housing wall is 26% lighter, and 37% lighter when comparing PowerTube 800 with PowerTube 750.

Press photo 1:



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Press photo 2:



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Full focus on the trail and nature: Bosch has optimised the gearbox of the new Performance Line CX with a view to achieving a good balance between power delivery, efficiency and noise levels.

Press photo 5:



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Press photo 6:



The new Purion 400 display is part of the sporty ecosystem and complements the Performance Line CX. With a minimalist look customised for eMTBs, it is optimally protected in the handlebar triangle.

Press photo 7 + press photo 8:



The new PowerTube 800 is the largest PowerTube battery in the smart system to date. At around 205 Wh/kg, it has the highest energy density in the portfolio. The new PowerTube 600 completes the portfolio.

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For more information please visit www.bosch-ebike.com

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The company was set up in Stuttgart in 1886 by Robert Bosch (1861–1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-four percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The remaining shares are held by Robert Bosch GmbH and by a corporation owned by the Bosch family. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust.

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