

Performance Line

More drive.
More passion.
More character.



Bosch eBike Systems 2016



BOSCH

Invented for life



Performance Line **The powerful drive system**

Power at the right moment: With the Bosch Performance Line, you experience the ultimate in riding enjoyment – whether on long trails or through the city. The on-board computers Nyon and Intuvia are clearly arranged and user-friendly. Bosch PowerPacks set new standards in terms of weight, energy density, and range. Perfectly matched components are combined to form a first-class system. Fans of pure dynamics opt for the new, even higher torque Drive Unit Performance CX – the optimal drive system for off-road use.



Your mobility is our drive

In the world of Bosch eBike Systems, the focus is on people. In the development of each product, we keep in mind what will really help you with eBiking. For individual needs and individual riding enjoyment, always the right drive – that is our claim.

Riding sensation

Harmonious or powerful? The main thing is that it needs to feel natural. The Bosch riding sensation creates a unique eBike experience. Three sensors measure pedaling power, cadence, and speed more than 1000 times per second. This enables organic interplay between the rider and eBike.

Ergonomics

The comfortable and safe handling of your eBike is always at the center of our product development. We keep user-friendliness and ergonomics in mind in particular. This is because the interaction between the rider and eBike only works optimally when components and controls optimally match the movements of the rider.

Range

In every Bosch drive system, perfectly matched components work together efficiently, allowing you to ride the maximum ranges with your pedelec.

Service

We challenge ourselves to meet the highest standards of quality and reliability. This applies to our drive system as well as our comprehensive service infrastructure. For this we train Bosch eBike Experts throughout Europe who are available at bike dealers to offer advice and support.

Design

Bosch eBike Systems sets trends. This applies not only in the technical and ergonomic sense but also in terms of aesthetics.



The Bosch eBike system at a glance

On-board computer, Drive Unit, PowerPack – the components of the Performance Line work together as members of a practiced, perfectly coordinated team. The result: a symbiotic connection between the rider and eBike and a thrillingly natural riding sensation.

Nyon

The all-in-one eBike on-board computer accompanies you from route planning to evaluation of the fitness data and is connected to the online portal and smartphone app. Nyon is the first fully networked ecosystem of the industry.

PowerPack

The powerful lithium-ion batteries are available as a frame battery with an energy content of 300, 400, and now 500 Wh, or as a rack variant with 400 or 500 Wh.



Intuvia

Using this clever control center, you control your pedelec experience easily and intuitively. Intuvia informs you clearly and reliably regarding all relevant information about your eBike system.

Drive Unit Performance

The Drive Unit Performance Cruise provides support up to a top speed of 25 km/h, and the Drive Unit Performance Speed can even support you up to 45 km/h.

Drive Unit Performance CX

The optimum drive for off-road – powerful acceleration, ultimate uphill flow, and a new dimension in riding enjoyment.

Drive Unit Performance

The powerful drive

Whether getting to work relaxed or taking extended tours in your spare time – with the Drive Unit Performance you expand your action radius. The powerful drive accelerates with a noticeable boost – powerfully and naturally. In this way you can cope with long distances and gradients easily while having lots of fun – up to 25 km/h with the Drive Unit Performance Cruise or even 45 km/h with the Speed variant.



Pure riding enjoyment thanks to the three-sensor concept

The Drive Unit Performance is equipped with three sensors for pedaling power, cadence, and speed. With 1000 sensor measurements per second, these provide optimum coordination of the system components. The result: maximum energy efficiency and a thrillingly natural riding sensation.

Sporty riding, gentle shifting

While you are shifting, the drive adapts its torque automatically to the shifting process. This takes stress off the components and makes eBiking extremely comfortable.

Compact and lightweight

Bosch eBike drive systems set standards in matters of ergonomics and weight. The compact drive arrangement enables optimal integration of Drive Unit Performance into the frame. There is more ground clearance for the eBiker. The reduced volume makes the drive lightweight.

Quiet, sturdy, and durable

Due to direct processing of the sensor signals and the precise motor control, Drive Unit Performance is optimized for minimum sound emissions and vibration. The secure chain run keeps the chain from being derailed and prevents the components from being subjected to undue strain. This reduces wear, maximizes comfort, and increases service life. The rock and splash water protection make the Drive Unit extremely rugged.

1000 sensor measurements per second



Scan here for the Bosch Uphill Flow II.

Specifications

Drive Unit Performance Cruise, CX and Speed

	Cruise 25 km/h	Cruise 25 km/h	CX 25 km/h	Speed 45 km/h
Gear system type	Hub gear system	Derailleur system	Derailleur system	Derailleur system
Power	250 watts	250 watts	250 watts	350 watts
Support level (%)	TURBO: 260 SPORT: 170 TOUR: 110 ECO: 50	TURBO: 275 SPORT: 190 TOUR: 120 ECO: 50	TURBO: 300 SPORT: 210 TOUR: 120 ECO: 50	TURBO: 275 SPORT: 190 TOUR: 120 ECO: 55
Maximum possible drive torque (Nm) (converted to a gear ratio of 1:1 crankset to chainring)	TURBO: 50 SPORT: 50 TOUR: 45 ECO: 40	TURBO: 60 SPORT: 55 TOUR: 50 ECO: 40	TURBO: 75 SPORT: 60 TOUR: 50 ECO: 40	TURBO: 60 SPORT: 55 TOUR: 50 ECO: 40
Maximum cadence (rpm) with drive support	TURBO: 120 SPORT: 120 TOUR: 120 ECO: 120	TURBO: 120 SPORT: 120 TOUR: 120 ECO: 120	TURBO: 120 SPORT: 120 TOUR: 120 ECO: 120	TURBO: 120 SPORT: 120 TOUR: 120 ECO: 120
Start-up behavior	dynamic	sporty	very sporty	sporty
Max. support up to	25 km/h	25 km/h	25 km/h	45 km/h
Backpedal function	no	no	no	no
Gear shift detection	no	yes	yes (dynamic)	yes
Weight	< 4 kg	< 4 kg	< 4 kg	< 4 kg

Drive Unit Performance CX

For fans of pure dynamics

Experience mountain biking with unknown dynamics. The new Drive Unit Performance CX is the ideal drive off-road. The powerhouse thrills trail enthusiasts with a torque of up to 75 Nm, powerful pedal assistance up to 300%, and a dedicated mountain bike design. Real flow on the trail with incredible drive.



Maximum momentum

Durable and strong – allowing high speeds with continuous maximum torque up to 75 Nm.

Direct flow

Small turn, big impact! Foot on the pedal and directly into the flow. You come out of the turn with power even at low cadence.

Gear Change Control

Direct gear changes enable sporty acceleration. With a 14T chainring in combination with SRAM 10-42 for the utmost mountain-climbing ability.

Trail Control

Through the dynamic power control typical for Bosch, the driver always has the right level of support (50–300%) in steep terrain off-road.

eMTB-designed

A purist rough look and optimal integrability with high-quality ISIS interface and minimum Q factor; Trail Control and Gear Change Control are easy on the chain and cassette.

New

Maximum momentum up to 75 Nm

Direct Flow up to 300%

Trail Control

Gear Change Control

ISIS interface

Rugged powder coating



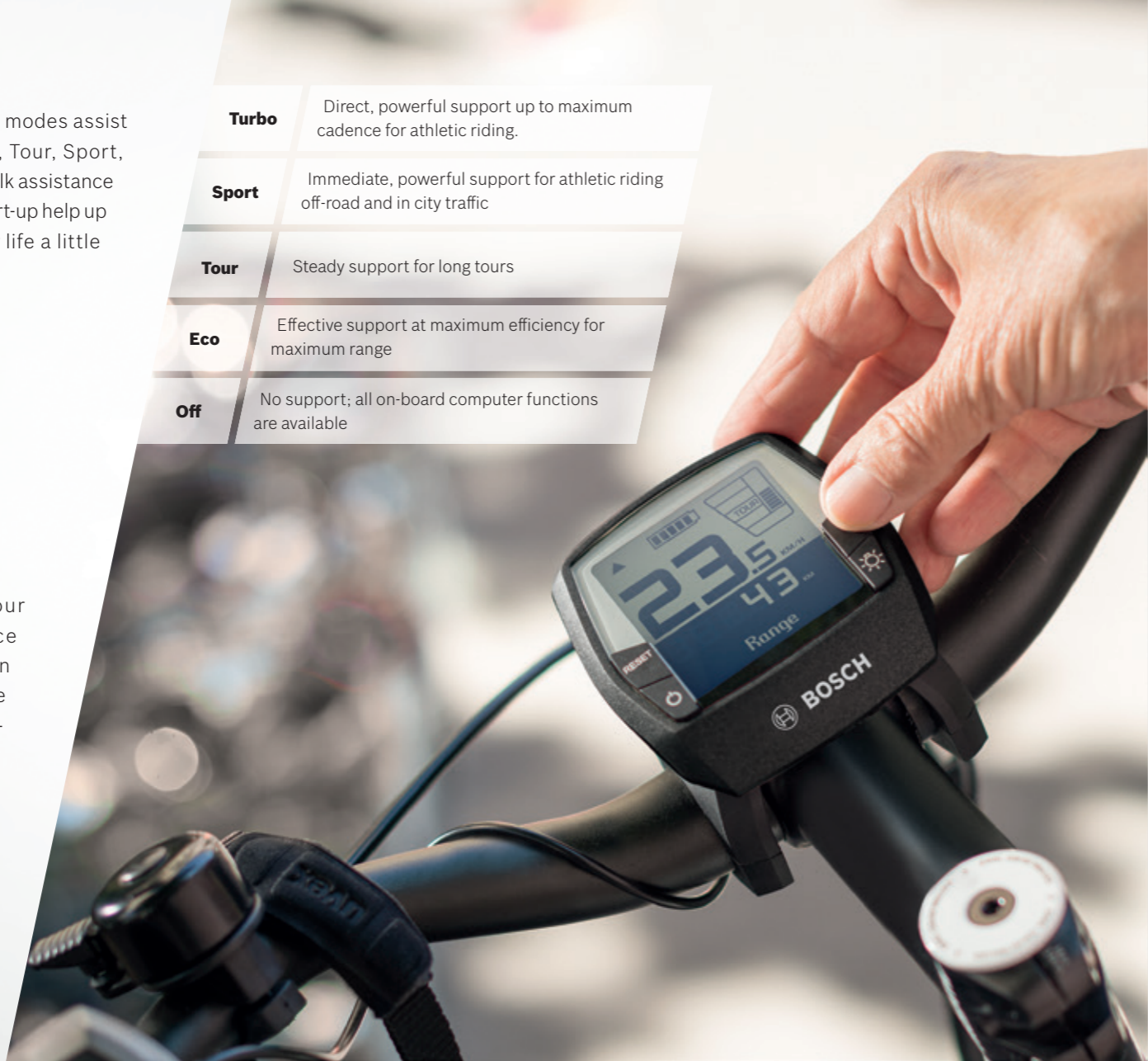
Riding modes

You have the choice. Five riding modes assist you in individual mobility: Eco, Tour, Sport, Turbo, and Off. The additional walk assistance up to 6 km/h (Cruise) and the start-up help up to 18 km/h (Speed) make your life a little easier.

Service interval display

An optional feature from your dealer: With the new service interval indicator, you find out in due time when your eBike is due for service. Maintenance performed by your dealer increases safety, maintains value, and extends the service life of your pedelec.

Turbo	Direct, powerful support up to maximum cadence for athletic riding.
Sport	Immediate, powerful support for athletic riding off-road and in city traffic
Tour	Steady support for long tours
Eco	Effective support at maximum efficiency for maximum range
Off	No support; all on-board computer functions are available



Intuvia

The clever control center

With the on-board computer Intuvia, you control your pedelec experience easily and intuitively. The display, which is easy to read even in sunlight, informs you reliably about speed, support mode, battery charge level, and range.

Suitable for every riding situation

Five riding modes assist you depending on your wishes and riding situation: Eco, Tour, Sport, Turbo, and Off. The spectrum ranges from smart support for the greatest possible range in Eco mode to maximum, powerful support in the highest cadences in Turbo mode.

Off-board mode

Even when removed from the eBike, Intuvia remains a useful basis information source that makes it possible for you to view all your tour information.

Charging mobile devices

Using the integrated micro-USB interface, you can charge mobile devices such as your smartphone while you are on the go.

Shift recommendation

Your system detects whether you are in the optimum efficiency range and recommends a higher or lower gear – using simple arrow symbols. The result: a more pleasant riding experience and the greatest possible range.



Nyon

Connect your Way



The all-in-one on-board computer for the eBike

Everything you need for your personal, fascinating eBike experience is in view and ready to be accessed. Navigation, riding data, range, fitness, incoming text messages, and much more: Nyon supports you from route planning to the tour to the evaluation of your activities with additional features and custom options. Nyon marks the beginning of a new era: the first fully networked ecosystem of the industry.

Usability

The all-in-one on-board computer is rugged and adapted to the needs of eBikers. Control is intuitive using the 5-way joystick on the device or – during the ride – on the separate control unit.

Overview

Large display, characteristic screen design, concise presentation. The transreflective 4.3-inch color display is readable in all lighting conditions.

New

Nyon is now available for retrofitting on all eBikes with Bosch drive starting with model year 2014. This also includes the Active Line.

More storage

To make more maps available on Nyon, the storage capacity has been expanded to 8 GB.



Scan here for the Nyon tour report from Switzerland.



Intelligently networked

Welcome to the world of Bosch eBike Systems

By connecting with the smartphone app *eBike Connect* and the online portal *eBike-Connect.com*, Nyon provides access to the fascinating world of Bosch eBike Systems. It offers numerous features that provide useful insights from data and make eBiking into a completely personalized experience. Welcome!



Smartphone app *eBike Connect*

Through custom adjustments in the smartphone app *eBike Connect*, you make Nyon into your personal eBike assistant. You configure your screen or refine the settings of your riding modes just as you wish with our premium feature. Data is exchanged via Bluetooth.

Online portal

The Bosch online portal *eBike-Connect.com* creates your own personal eBike information profile for you. There you have a clear overview of all activities. You can plan and analyze customized tours in the portal, with an overview of times, altitude, distance, and your fitness. Or you import a GPX track and transmit it to Nyon via the portal.

Your personal eBike assistant

Nyon features overview



Ride

All of the most important information relevant to riding at a glance. Speed, riding mode, cadence, range, and much more: You decide for yourself what data is displayed on your Ride screen. And the size and order of presentation is according to your wishes.



Navigation

Plan your route online, on your smartphone, or on the on-board computer itself. With intuitively understandable, distinctive symbols, Nyon takes you on the most scenic or fastest eBike routes.



Fitness

Nyon turns your pedelec into your own personal trainer. The on-board computer measures fitness-relevant data such as cadence and pedaling power. And Nyon calculates how effectively you are exercising based on your body data. If you wear a chest strap, Nyon even takes your cardiovascular values into account in this calculation. In this way you have all the information for supporting you in maintaining and improving your fitness and health over the long term.



Smartphone function

A pop-up informs you via Bluetooth regarding arrival of a new SMS on your smartphone and the sender. In this way you are always up to date – no matter where your eBike adventure takes you.

New

MTB Routing

With the route profile "eMTB", Nyon takes you mainly on unsurfaced paths and trails.

GPX import

You define your own routes and import them into the *eBike-Connect.com* portal.

Multiple waypoints

Plan routes with up to ten destinations.

eShift

Solutions for integrated gear shifting

The integrated electronic gear shifting solution for those who like to focus on what is essential in eBiking – riding enjoyment. The innovative concept provides greater riding comfort, more safety, and – due to a gear ratio that is always optimal – even more range. eShift is available in three variants optimized for different riding styles.

eShift with NuVinci Optimized™ Harmony H|Sync™

NuVinci CYCLING

The cadence-based, continuously variable automatic transmission for the eBike. Whether at full acceleration downhill or when ascending – the rider pedals constantly at the selected frequency of between 30 and 100 revolutions per minute. The continuously variable gearbox provides for this. Those who want to pedal more quickly or slowly adjust the cadence at the press of a button.

eShift with SRAM DD3 Pulse

SRAM

The speed-dependent shifting solution combines a 3-speed hub system with a manual derailleur system. The gear hub selects the gear automatically according to your speed. Fine adjustments are made manually on the derailleur system. Because the hub automatically shifts back when the rider comes to a stop, starting up is noticeably easier.

eShift with Shimano Di2

SHIMANO

Fast, sporty, efficient: eShift with Shimano Di2 shifts your pedelec like a sports car. Touching the Shimano shift paddle is sufficient for quick and dynamic gear shifting. In manual mode the gearshift recommendation helps you to always make optimal use of the battery. With the Auto-Downshift function, the gear system automatically switches to the defined starting gear – increasing safety and riding comfort.

New

eShift with Shimano Di2

Now with Auto-Downshift function: When the rider comes to a stop, the gear shifting system automatically shifts to the defined starting gear.

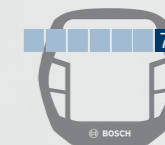
eShift with SRAM DD3 Pulse

Those who do not want to use automatic shifting can shift the 3-speed hub electronically on the Bosch control unit.

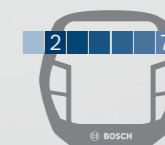
eShift with NuVinci Optimized™ Harmony H|Sync™

Manual electronic gear shifting is now possible in nine pre-set speeds.

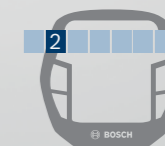
Auto-Downshift when stopping with Shimano Di2



Riding with speed



Stop: eShift automatically shifts down



Starting up in low gear

PowerPacks

Your reliable energy source

Select the battery that suits you. Bosch PowerPacks for the Performance Line are available as a frame battery with 300, 400, and now also 500 Wh, or as a rack battery with 400 and 500 Wh. Common to all is their high energy density, exceptional mileage, long service life, low weight, and easy handling.

Best in class: There's nothing lighter

Bosch PowerPacks are the batteries with the best balance of performance, size, and weight. How do you benefit? A power-house for a unique riding experience.

Simply ingenious: The handling

Thanks to the ergonomically well-conceived handle and optimal mount, the batteries can be easily inserted and removed. The only thing easier is charging the PowerPacks directly on the eBike.

High mileage and long life

The integrated Battery Management System (BMS) reliably protects the battery from overcharging, undervoltage, overheating, and short circuit. A long service life with high mileage is guaranteed.

Easy to store, optimally charged – anytime and anywhere

Lithium-ion batteries have neither memory nor self-discharge effects. This means the PowerPacks can also be partially re-charged at any time – without affecting the service life.



New

PowerPack 500

25% more range with additional weight of just 4% compared to PowerPack 400.

Lithium-ion battery

40-cell packs with the highest energy density (190 Wh/kg) and the lowest weight and volume.

Reduced charging time

In approx. 4.5 hours, you can completely charge the PowerPack 500, and you can charge it up to half in approx. 2 hours.

	PowerPack 500	
Mount type	Frame battery	Rack battery
Voltage	36 V	36 V
Capacity	13.4 Ah	13.4 Ah
Energy content	500 Wh	500 Wh
Weight	2.6 kg	2.7 kg
Size	325 × 92 × 90 mm	372 × 122 × 80 mm

	PowerPack 400	
Mount type	Frame battery	Rack battery
Voltage	36 V	36 V
Capacity	11.0 Ah	11.0 Ah
Energy content	400 Wh	400 Wh
Weight	2.5 kg	2.6 kg
Size	325 × 92 × 90 mm	372 × 122 × 80 mm

	PowerPack 300	
Mount type	Frame battery	
Voltage	36 V	
Capacity	8.2 Ah	
Energy content	300 Wh	
Weight	2.0 kg	
Size	325 × 92 × 82 mm	

Range of the PowerPacks

■ Ideal conditions**

Flat terrain, approx. 15 km/h average speed, no headwind, approx. 20 °C ambient temperature, high-quality bike components, tire tread and pressure with minimal rolling resistance, experienced eBike rider (always shifts gears correctly), additional weight (excluding bike weight) < 70 kg.

■ Favorable conditions**

Slightly hilly terrain, approx. 20 km/h average speed, slight headwind, approx. 10 °C to 20 °C ambient temperature, medium-quality bike components, tire tread and pressure with average rolling resistance, favorable cadence, eBike rider shifts correctly most of the time, additional weight (excluding bike weight) 70 kg to 80 kg.

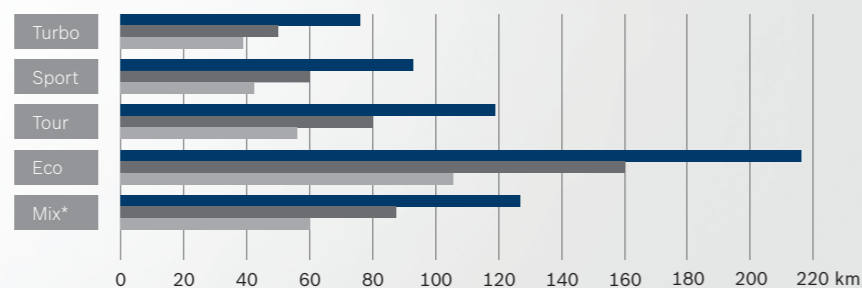
■ Difficult conditions**

Terrain with long and steep inclines at 25 km/h average speed, possibly strong headwind, < 10 °C ambient temperature, bicycle components with relatively low efficiency, tire tread and pressure with increased rolling resistance, unfavorable gear selection/cadence, additional weight (excluding bike weight) > 85 kg.

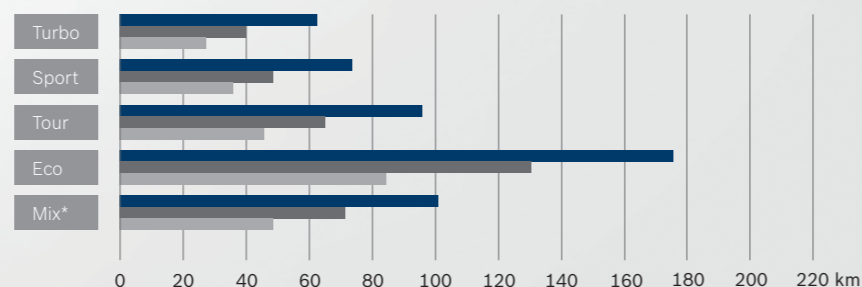
* Average of equal use of all four modes.

** The calculated ranges are typical values which can be reduced if any of the conditions listed worsen. The actual range of the eBikes is the responsibility of the eBike manufacturer.

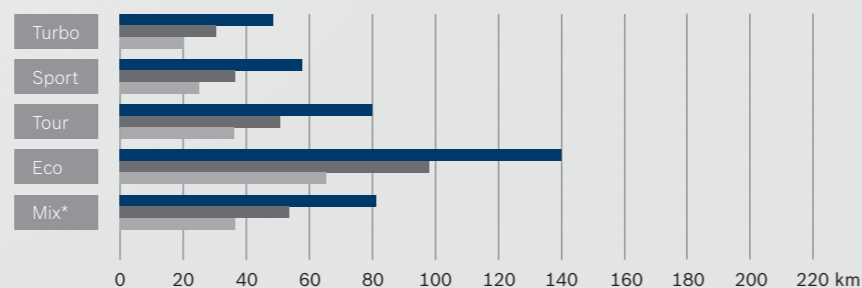
CX with PowerPack 500



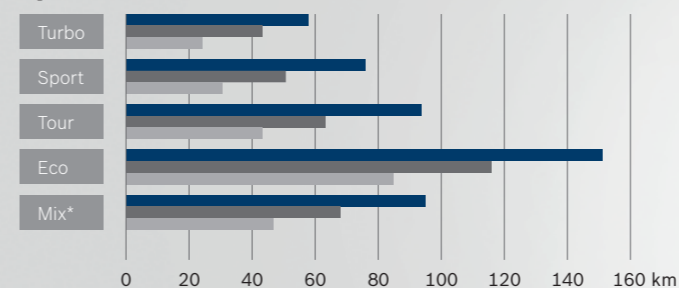
CX with PowerPack 400



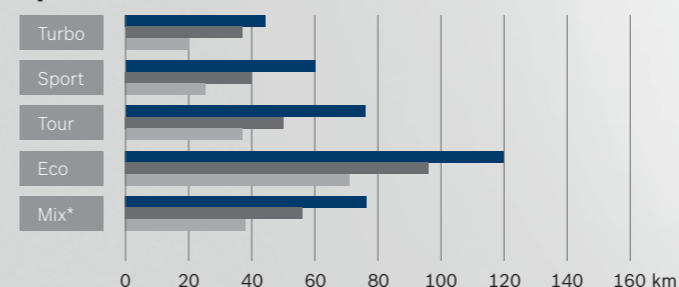
CX with PowerPack 300



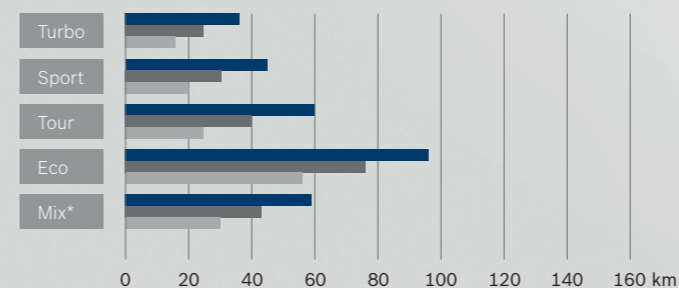
Speed with PowerPack 500



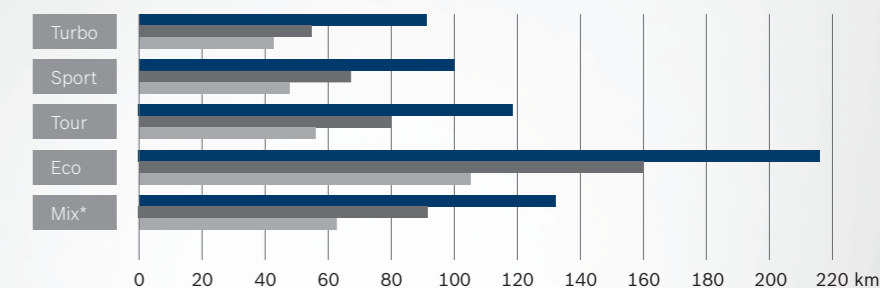
Speed with PowerPack 400



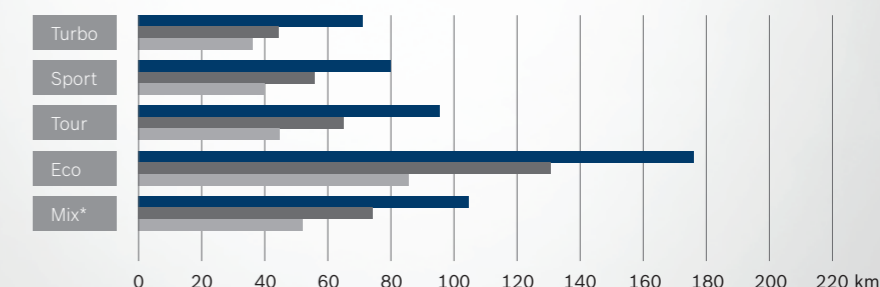
Speed with PowerPack 300



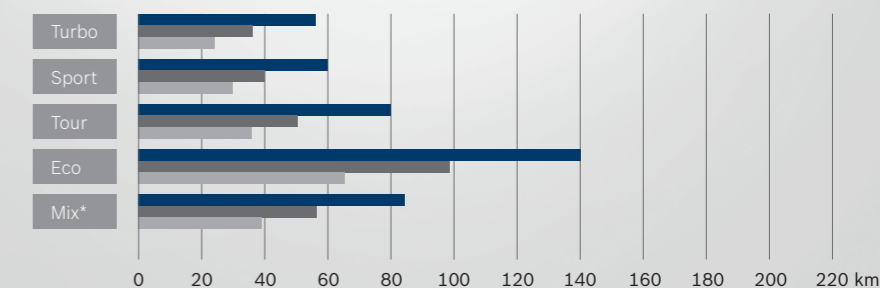
Cruise with PowerPack 500



Cruise with PowerPack 400



Cruise with PowerPack 300



Click here for the range calculator:

www.bosch-ebike.com

You can find out everything worth knowing about the PowerPack in the eBike battery guide.

Charger

Faster charging made easy

Bosch Chargers are compact, lightweight, and rugged. And above all, really fast. To allow you to enjoy your eBike experience without interruption, you do not necessarily need 230 volts: while traveling you can charge your eBike with the Travel Charger on the cigarette lighter of a car or motorhome.



Doesn't waste any time: The Bosch eBike Charger

An empty PowerPack 300 is fully charged within 2.5 hours, while a PowerPack 400 requires 3.5 hours for this. The new PowerPack 500 is fully charged within 4.5 hours. Approx. 1 hour is required to charge the PowerPack 300 up to half, 1.5 hours for the PowerPack 400. It takes approx. 2 hours to charge the PowerPack 500 to 50%.

Compact and lightweight

The Bosch eBike Charger is only about as big as a water bottle and very lightweight, at just under 800 grams.

Type	Standard Charger
Charging current	4 A
Voltage range	230 V
Size	190 × 86 × 54 mm
Cable lengths	AC input: 1.5 m, DC output: approx. 1.0 m
Plug	Country-specific power cord
Weight	Approx. 800 grams
Compatibility	Compatible with Active/Performance Line, compatible with Classic+ Line via adapter (optional part)
Charging time	300 Wh 50% in approx. 1 h, 100% in approx. 2.5 h 400 Wh 50% in approx. 1.5 h, 100% in approx. 3.5 h 500 Wh 50% in approx. 2 h, 100% in approx. 4.5 h

Type	Travel Charger
Charging current	2 A
Voltage range	12 V
Size	190 × 86 × 54 mm
Cable lengths	DC input: 1.0 m, DC output: approx. 1.0 m
Plug	12 V cigarette lighter + 12 V on-board power socket (via adapter cap)
Weight	Approx. 500 grams
Compatibility	Compatible with Active/Performance Line, compatible with the Classic+ Line using adapter plug (optional part)
Charging time	300 Wh 50% in approx. 2.1 h, 100% in approx. 5 h 400 Wh 50% in approx. 2.8 h, 100% in approx. 6.5 h 500 Wh 50% in approx. 3.5 h, 100% in approx. 7.5 h

Functional, rugged, and silent

An ergonomically shaped plug facilitates handling, and the very compact dimensions make the unit easy to stow in your luggage. The closed housing makes the Charger rugged and resistant to dirt.

When traveling: The Travel Charger

With the Travel Charger, you can charge your eBike on the move – using the cigarette lighter or the 12 V power socket of your car or motorhome. Clever: The device weighing barely 500 g has integrated discharge protection for the car battery.

Active Line
More flexibility.
More experience.
More riding pleasure.



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