Dear eBike user,

After their eBike purchase, lots of riders ask themselves the same questions: How do I best preserve my battery? How do I safely ride off on my eBike? What’s the best way to transport my eBike?

This brochure answers all these questions and provides a wealth of information, as well as tips and tricks to help get the most out of your riding experience. You can also find special articles online at bosch-ebike.com/tips, which will explore different topics in greater detail. In addition, you’ll find comprehensive advice on the best ways to transport and clean your eBike.

Happy eBike riding!
Your eBike Systems Team
10 reasons for choosing an eBike

1. The environment benefits
Pedelec users go easy on the environment, especially if they use their eBike on a daily basis. Half of all car journeys are five kilometres or less, and according to the Environmental Protection Agency the CO\textsubscript{2} emissions of a car are around 40 times higher than those of a bicycle with a battery-powered motor. So by using an eBike rather than a car for short distances you are protecting the environment – and also travelling quietly and economically.

2. Gone are the days of headwinds
Everyone is happy to repeat. With power assistance the eBiker can sail past many other road users freely and easily. Intermodal traffic? Not the slightest problem. Furthermore, the driver system prevents too heavy a burden on knees or thigh muscles. That eases pressure on joints, tendons and ligaments. Would you like to be fit and healthy and to improve your wellbeing? An eBike is a step in the right direction.

3. Keeps you fit, makes you mobile
An eBike is nothing waste. It is a sporting option. Are eBikes just for those who want to take it easy? Not at all! Despite the power assistance eBikers still have to hit the pedals to get moving. And it is up to you to decide how much power assistance you want or need. Studies have found that eBikers on their bikes more often and cover much longer distances than conventional cyclists. So now is the time to get on a bike with power assistance regardless whether for comfort or for sporting use.

4. Perfect for commuting
Would you like to keep fit on your commute? Then the eBike is for you. It is a sporting option. A glance at the statistics reveals that there are 30 million commuters in Germany and that nearly 25 million of them travel less than 25km to work. Indeed, nearly every German commuter travels less than 10km to work. eBikes are ideal for distances of this kind.

5. Ease of use, extra boost
Thanks to the even, adjustable assistance provided by the drive system an eBike is ideal for training or for getting back into cycling after an injury. Furthermore, the drive system prevents too heavy a burden on knees or thigh muscles. That eases pressure on joints, tendons and ligaments. Would you like to be fit and healthy and to improve your wellbeing? An eBike is a step in the right direction.

6. Wheely good advice
Could you do without discussions and complaints? No arguments, please? The mood can turn fast when people with unequal physical conditions and expectations set out on a cycling tour together. That is when a little motor can work wonders. Its power assistance offsets differences in performance and brings people closer together again – with the result that the tour is an experience everyone is happy to repeat.

7. Easy on the wallet
eBikes are much less expensive than cars to buy and to maintain. Fuel costs, insurance premiums, car tax or parking charges? Zero. The cost of fuel alone for a gasoline-powered car is currently around €2 per 100 km. 100 km on a pedelec costs around €0.25. Now that is a genuine saving. Plans already?

8. Fun factor
eBikes make cycling less work and more fun. With power assistance the eBiker can sail past many other road users freely and easily. The pedelec is often the fastest mode of transport available in urban traffic over distances of up to and including 5 km – and over distances of up to 10 km eBikers can easily keep up with car drivers.

9. Pure mobility
Intermodal traffic? Not the slightest problem with an eBike. The pedelec is the railroad station, take the train and then either public transportation or rent a pedelec to your destination. With an eBike you are fast and flexible. You can cover distances more easily and increase the radius of distances you can travel. Power assistance gives you a real boost in the city eBikers leave tailbacks behind them and don’t need to worry about finding somewhere to park either.

10. Something for everybody
The market is constantly coming up with new models and versions. Pedelecs capable of speeds of up to either 25 km/h or 45 km/h. eBikes are available for urban or cross-country use, for leisure tours or for summiteers with sporting ambitions. There is a wide range from which to choose and the right eBike for every kind of person. You really are spoilt for choice.
Choosing the right dealer

What makes a dealer a good dealer?

René Gottschalk: To my mind a good cycle shop must first and foremost provide an environment in which the customer immediately feels welcome. In the next step a good choice of models on offer is important. The range of models on offer is also increasing in variety and differentiation – so much so that purchase advice is almost indispensable to find the eBike that suits you best. But all dealers are not the same, as Bosch consultant René Gottschalk well knows. The expert who trains hundreds of eBike dealers a year, answers questions in this interview, explaining what needs to be borne in mind when you are looking to choose the right dealer.

What requirements should a good cycle shop fulfill?

René Gottschalk: An essential point is that the dealer’s premises must be easy to reach. The sales area should be light and uncluttered. And if the customer can come in and promptly feel welcome, my advice to you is to leave. The customer will immediately sense an inviting atmosphere in a shop where he can look around in peace and quiet yet at the same time receive answers to his questions – these are decisive points.

What pre-sales service should a good dealer offer the customer?

René Gottschalk: Whatever happens, the customer should have an opportunity to test-ride different eBikes. It is important for the prospective customer to gain a feeling for handling properties that differ depending on the model and the drive system. There are various options. Some dealers have a test course in their back yard while others let the customer borrow the bike for a weekend or to cut a more sporting figure from work, to go on short excursions at the weekend or to test as a prelude to a sports day. Using the Bosch Diagnostic Tool the dealer can do so without the slightest difficulty. Regular inspections are important to ensure that each customer benefits as much as possible from his eBike. Ideally, the dealer will also offer a collection and return service.

About René Gottschalk

Gottschalk, 47, has been in contact with bikes of all kinds since childhood because his parents had a cycle shop. From the outset his career always focussed on bicycles too. After working for many years in bicycle retailing and as a sales representative for bicycle manufacturers he spent ten years as a self-employed cycle trade sales representative. René Gottschalk has now been a technical consultant with Bosch eBike Systems for over four years. He trains hundreds of dealers a year on all aspects of Bosch eBike systems, offering course participants helpful and hands-on advice. Personally he has found the eBike to be a frequently used alternative to the car, especially in city traffic.

What points must the dealer clarify with the customer before making a sale?

René Gottschalk: The dealer must inform the customer comprehensively about the eBike. Before buying, the customer must be aware of what options he has, what the advantages and disadvantages of different models are and which drive system is the right one. Different drive systems are suitable for different needs and uses. Bosch, for example, offers a choice of four different drive systems. In addition, classical criteria can also matter. Some customers set great store by a hub gear and backpedal brake; others prefer derailleur gears. The dealer should also brief the customer on how to best look after the bike and, especially in the case of an eBike, the battery. For this the Bosch Battery Guide is very helpful. It provides the most important information in a very pocket format that the customer can take home with him.

What after-sales service options does a good dealer offer the customer?

René Gottschalk: Good dealers offer an initial inspection for the eBike. That means the customer will come back for a check after a few weeks. As a rule, that will be after about four weeks or 300 kilometres. After the initial check the dealer should set the next service date. Using the Bosch Diagnostic Tool the dealer can do so without the slightest difficulty. Regular inspections are important to ensure that each customer benefits as much as possible from his eBike. Ideally, the dealer will also offer a collection and return service.

Find your Bosch eBike retailer at: bosch-ebike.com/dealer
The battery is the pedelec’s power source. It supplies the motor with the electrical energy that is required to provide power assistance when cycling. So it is hardly surprising that there is frequent discussion and “talking shop” about the eBike’s battery in particular. What is the difference between batteries? How far can you go on a fully charged battery? What do you have to remember about storage? Thomas Raica, head of technical customer application at Bosch eBike Systems, here provides information and advice.

What is special about lithium-ion batteries?

Thomas Raica: Lithium-ion batteries are among the most up-to-date and common pedelec batteries. Thanks to their high energy density they can store more energy and are relatively light in weight. We rely on lithium-ion technology for all of our Bosch eBike batteries. Bosch batteries weigh about two and a half kilograms and are among the lightest on the market. They also have the highest energy density.

How long does a battery last?

Thomas Raica: Lithium-ion batteries are not only light; they also have a long service life. Bosch batteries are designed for many tours, distances and years of use. The smart electronic Bosch battery management system protects lithium-ion batteries from too high temperatures, overloading and deep discharging. A precise life span is impossible to forecast, however. The battery’s service life will depend mainly on the nature and duration of the stress to which it is subjected.

How can you influence the service life?

Thomas Raica: To get the longest service life out of a battery eBikers need only to follow a few simple rules in respect of protection, transport and storage. They include storing the battery in a dry environment and protecting it from direct sunlight at a room temperature of around 15° to 20°C. The ideal charging level for a battery is between 30% and 60%. Ideally, the battery should be recharged at room temperature. When transporting an eBike it is important to remove the battery from the bike and store it safely in the car.

How long does it take to charge a battery?

Thomas Raica: The charging time depends on the battery’s capacity. Using the standard charger the PowerPack 300 takes about an hour to half-charge, the PowerPack 400 about an hour and a half, and the PowerPack 500/PowerTube 500 around two hours. A totally flat PowerPack 300 takes two and a half hours to fully recharge, a PowerPack 400 three and a half and a half and a PowerPack 500/PowerTube 500 four and a half hours.

How far can you travel on one battery? And which factors affect the battery’s range?

Thomas Raica: For many eBikers these are crucial questions to which there are, however, no generally valid answers. The answer can differ enormously – from less than 20 to well over 100 kilometres on a full battery charge. Many different factors affect the range. They include the assistance level, cycling behaviour, air resistance, the cyclist’s weight, tyre pressure and, of course, the terrain. What are the ground conditions? Am I cycling on a paved road, a farm track or a forest trail? Does my route include ascents or consist solely of flat and open country? All of these factors influence the battery range. If you are planning a tour, a visit to www.bosch-ebike.com is highly recommended. The website includes a range assistant that takes the different factors into account and gives you an idea of how far you can expect to travel in the conditions that you specify.

What precautions should be taken in winter?

Thomas Raica: A general rule is that cold weather reduces battery performance. That is why, in winter at below-zero temperatures, it is advisable to wait until just before you set out before attaching to your eBike a battery that has been charged and stored at room temperature. If you will not be going to use the eBike for quite a while – in winter, for example – the battery should be stored in an environment that is dry and cool at about 30% to 60% of its charge capacity.
How are batteries best charged?

Thomas Raica: Batteries with their lithium-ion cells can be charged for as short a period as you like irrespective of their charge status. The integrated battery management system, combined with a Bosch charger, protects the battery from overload when charging. Interrupting the charging process does the battery no harm. An important point to bear in mind is that eBike batteries should only be charged with the right charger because irreparable damage might otherwise result and warranty or guarantee claims might become invalid.

Even after 500 full charges the battery will still retain a high capacity.

How often can a battery be recharged?

Thomas Raica: Even after 500 full charges the battery will still retain a high capacity. 60 to 70% of the original capacity will then still be available. In an ADAC test carried out in autumn 2015 a Bosch eBike battery was fully discharged and recharged 1,515 times before it retained only 30% of its original capacity and was no longer of any real use. This means that the battery would have been sufficient for up to 57,000 kilometres – or one and a half times round the globe.

Where can batteries be repaired?

Thomas Raica: High-quality lithium-ion batteries like the Bosch PowerPacks are complex, finely-tuned systems the repair of which requires special expertise and elaborate production facilities. That is why a defective battery must in nearly all cases be replaced. We recommend the following procedure. First, let the dealer check whether the battery really is defective and has, for instance, a fault in its electronics. That is something the dealer can check using the battery management system and the Diagnostic Tool. If the battery is defective, the dealer will dispose of it with due regard for the safety regulations.

How do you dispose of an old battery?

Thomas Raica: The dealer will ensure that a Bosch battery is disposed of in an environmentally sound way free of charge. Disposal is handled by Germany’s GRS battery recycling system. Valuable materials are returned to the raw material cycle, thereby conserving resources.

About Thomas Raica

Raica, a 50-year-old mechanical engineer, has been with Bosch for 24 years. As head of Technical Customer Application department at Bosch eBike Systems his responsibilities include maintaining relations with bicycle manufacturers and collaboration with customers in the field of development. To take it easy from his innovative career environment, Raica, a father of two, is a vintage car lover after work. In his spare time he is also a keen mountain biker and enjoys swimming.

PowerPack 300 / 400 / 500

With the PowerPack 300, 400 and 500 offer excellent mileage, a long lifespan, low weight, ergonomic design and easy handling. Frame batteries are constructed so that the PowerPack sits close to the centre of your eBike, which provides greater stability. The rack batteries can be used on bikes with a low step-through. Regardless of where the battery is mounted, it can be easily removed and charged at the nearest power socket.

PowerTube 500

Just keep on riding: DualBattery is the perfect solution for tour bikers, long-distance commuters and cargo bikers or eMountain bikers. The combination of two Bosch batteries delivers up to 1,000 Watt hours and can be installed either vertically or horizontally. The battery is concealed and perfectly protected within the frame. A convenient feature means that the battery pops 2 cm out of the frame when unlocked, making it easier to handle. Recesses in the top surface are suitable for attaching bottle holders or design trims. The surface impresses with its classy, black anodised aluminium finish.

DualBattery

DualBattery is also possible in combination with PowerTube. The system switches intelligently between the two batteries both during charging and discharging. DualBattery is suitable for long distances and heavy loads.
Daily exercise can help keep illnesses away! Physiotherapist Philipp Hausser gives us the answers to these questions.

**How important is exercise for our health and fitness?**

Philipp Hausser: Let's start with a few statistics. More than half the population of Germany is overweight. Every year some 400,000 to 500,000 Germans are fitted with permanent prostheses – and this number is increasing. And 500,000 Germans are fitted with permanent weight reduction programmes.

Sport is healthy. That's a well-known fact. But in spite of that, many people don't get enough exercise. Almost fifty percent of Germans do little or no sport. The reasons are often a lack of motivation or physical limitations, such as overweight. But why are physical exercise and fitness so important? And how much exercise is healthy? How can the eBike help us?

**How much exercise is healthy?**

Philipp Hausser: Daily exercise can help keep illnesses at bay. In fact, there is evidence that fifteen minutes of physical activity every day are enough to extend life expectancy by all of three years. The World Health Organisation recommends 150 minutes of moderate-intensity exercise per week (resulting in a higher pulse rate, slight breathlessness) in order to achieve positive effects. The basic rule is: any form of physical activity is better than being totally inactive!

**What role does the bicycle play in your work?**

Philipp Hausser: Cycling is ideally suited for people who experience pain when they walk, because the strain on the joints can be controlled more effectively. In our practices we use the cycle ergometer for the recuperation process, e.g. following an operation, for warm-up prior to training sessions or to counterbalance the everyday soccer routine.

Where do you see the benefit of eBikes for people’s health? Philipp Hausser: The special feature of the eBike is that the stress can be regulated and adapted to suit the stamina and state of health of the rider. As a result, the eBike is perfect for patients who have just had a joint replacement – it’s an ideal means of remaining active. In this way they can step up the stress levels in a series of stages. For patients who are less fit, the power assistance enables them to make up for any physical deficit. Nowadays the eBike is used in professional sport – including Germany’s national football team – for regenerative training units or to counterbalance the everyday soccer routine.

**How can an eBike ensure more exercise?**

Philipp Hausser: The supportive effect of an eBike and the rapid successes achieved can encourage the user to make more frequent use of this “sports equipment”. With the pedelec distances seem much shorter. The eBike can also be used for trips which are usually undertaken by car, for example to commute to work or for the weekly shopping expedition. In this way exercise can become part and parcel of everyday life. Some people will find additional motivation by using a fitness tracker which indicates precisely the achievement of training targets. In the case of the eBike this is the onboard computer, which can even be sure that he or she is always training in the correct pulse range. In other words, the biker’s “personal trainer” is there on the handlebars all times.

What is important to remember when eBiking? Philipp Hausser: The basic requirements for eBike users are, firstly, to have sufficient joint mobility to mount the bicycle and, secondly, to be able to react quickly and confidently to the situations which arise in road traffic. Anyone who uses a pedelec for health reasons should seek expert advice and request a training programme based on a performance check. An ergonomic seating position is also essential for continuous enjoyment and comfort when cycling. It is therefore advisable to check with one’s dealer to make sure that the Frame, handlebars and saddle are set to the right height and everything else is correctly in position.

How fast am I going? How many kilocalories have I burned? Bosch’s all-in-one eBike on-board computer can supply the eBike rider with all relevant fitness data in real time. Nyon uses pedal force and pedaling rate in order to work out performance and energy consumption. And with an extra heart rate belt the rider can even be sure that he or she is always training in the correct pulse range. In other words, the biker’s “personal trainer” is there on the handlebars all times.

**About Philipp Hausser**

Philipp Hausser is a physiotherapist and sports and gymnastics instructor, a partner in two physiotherapy and physical training practices. He also teaches a variety of sports and physical education courses. The 38-year-old attaches major importance to sport and a health-conscious lifestyle. He balances his daily routine with regular physical exercise.
Together, roughly 30 million commuters in Germany travel a total of 835 million kilometres every single day. Since 82 percent of these commuters live less than 25 kilometres from their place of work, the vehicle best suited to them would clearly be the pedelec. So why not leave the car in the garage for once, jump on one’s pedelec and enjoy the gentle support it provides as you cycle along? This article explains the numerous advantages of the modern-day “commuter mobile”.

Stress-free and convenient
People who travel to work by eBike in urban areas waste no time in mile-long traffic jams. With a pedelec, these holdups can be bypassed conveniently. And on steep inclines, there is no need to exert oneself unduly – thanks to the support provided by the electric motor. The eBiker can cope with distances up to 25 kilometres almost effortlessly. Commuting by eBike means relaxed, comfortable travel – reaching one’s destination feeling clean and fresh.

Fast and flexible
Time is precious. And by using a pedelec in a town or city, the biker is gaining time, enhancing his or her quality of life. Over distances of up to five kilometres, a pedelec is frequently the fastest means of transportation in urban traffic. But even over distances up to ten kilometres the eBike easily keeps up with the car. Intelligent route planning enables the biker to reach his or her destination quickly and conveniently; for example, they can select routes with few traffic lights and holdups. Navigation is facilitated by the Nyon on-board computer: with Bosch’s all-in-one on-board computer, routes can easily be plotted in advance on the PC or laptop.

Pedelecs are ideally suited for health-conscious people eager to train their fitness and stamina.

Fit and healthy
On average, every adult spends 11.5 hours in a sitting position each day. Office workers, in particular, often take too little exercise. Commuting by eBike is a practical means of remedying this situation. And since the electric drive can be regulated via the different support levels, cyclists can decide themselves how forcefully they want to pedal. Pedelecs are ideally suited for health-conscious people eager to train their fitness and stamina.

Good for the environment
Every commuter who opts for the eBike in preference to his or her car is not only avoiding the worst of city traffic but also doing the environment a favour: the pollution levels of an eBike are merely 1.25 percent those of a Bosch private car. Based on an average petrol consumption of eight litres per 100 kilometres for all the commuting cars in Germany, this results in a daily consumption of almost 70 million litres of fuel, which in turn produces roughly 156,000 tons of CO2. The pedelec offers huge potential for savings. Apart from that, the eBiker moves along almost silently and causes little or no noise pollution. This is crucial in city traffic: with a sound pressure level of 65 – 75 decibels or more, the noise pollution increases susceptibility to stress. In heavy urban traffic the average noise level is around 80 decibels. Thus, the eBike helps to quieten down the inner city areas.

Easy on the purse-strings
Riding a pedelec saves money. Over a distance of 100 kilometres, the energy costs for a standard petrol-fuelled car amount to roughly €12. The equivalent cost for a pedelec, over the same distance is €0.25. The eBike wins out easily as far as purchase cost is concerned: in Germany the average eBike costs €3,287, whereas the average price for a new car is currently €31,400. And for a conventional pedelec there are no insurance costs, no vehicle tax and no MOT charges: all of which makes the eBike a very special means of transport indeed.
Travelling by eBike

Combining relaxation with exercise – that’s what many people consider to be the perfect holiday. And travelling with one’s eBike – in particular – is becoming more and more popular. Bosch eBike Systems has now compiled a number of important tips. The conclusion: with careful preparation, cyclists can look forward to a highly successful trip with their eBikes.

Fully charged

There are handy chargers for people on the move, such as the Bosch Compact Charger. The charger weighs a mere 600 grams or so and fits perfectly into the saddle bag or day pack. With a two amp charging current the Compact Charger keeps the battery fully charged even on longer tours.

Bosch batteries should always be kept securely inside the car during transportation.

Tips for transport

eBike enthusiasts are advised to use a rear-mounted carrier system to transport their cycles. However, Bosch batteries should always be kept securely inside the car during transport. Important note: During long-distance journeys, eBike batteries are classified as hazardous freight and in most cases may not be taken on board aircraft. Possible alternatives include advance shipment by sea or air.

Better safe than sorry

Effective protection against theft: U-locks have a solid reputation and tests have shown them to be among the most secure locks.

A head start

In-mould helmets provide reliable protection. The foam interior liner of the helmet is “blown in” while the hard exterior shell is still in the manufacturing mould. The purchaser should look out for the test seal: DIN EN 1078 (CE).

No problems in wet weather

Before going on a cycling vacation, it’s advisable to buy a waterproof jacket and waterproof trousers – or a large cape. This ensures good protection in light rainfall and there is no need to stop cycling.

First aid for the bike

Repair kit, pump, spare tube, rag and the necessary tools in a mini-kit are all essentials for every trip.

Just in case

Some “musts” for every eBiker: plasters, bandages, disinfectant and disposable gloves, which are also practical for repair work. Plus, depending on the region and the time of year: sun lotion, mosquito repellent and a cooling gel.

Always on the right road

Losing one’s way can be very frustrating. So eBikers are advised to take along a reliable guide: with Nyon, Bosch eBike Systems’ eBike onboard computer, routes can easily be planned well in advance. During the trip Nyon not only navigates, it also gathers fitness data reliably.
A journey, a trip or a move is planned – and you need to bring the eBike with you? Depending on the means of transport, different regulations apply. Bosch eBike Systems has compiled the most important information and some tips for you in the following post.

1 By Car
If you would like to transport your eBike as a private user by car and there is limited space, you can also use a bike rack, just as with a conventional bike. A few points must however be noted: eBikes are somewhat heavier, and their frames are often larger than conventional bike frames without electric support. A rear rack mounted to the tow-bar fixture helps with the loading. Consider the maximum load on coupling, since it varies between 50 and 100 kilos. In principle, the following applies: “If the eBike is being transported with a bike rack, remove the battery first and place it in a safe location inside the car. The same applies to removable on-board computers. This helps to avoid damage to the components. Regarding the Drive Unit, it is recommended to add waterproof protective covers for the trip. You can buy them from your dealer,” says Tamara Winograd, Head of Marketing and Communication at Bosch eBike Systems.

2 Shipping
If the eBike is being transported by commercial users or third parties (for example by air cargo or shipping company), special packaging and labelling requirements apply, which must be followed. The transportation company will provide more information on this. Batteries may only be shipped by private people when they have no damage to them. Open contacts should be covered and the battery should be packaged in a way that prevents it from moving around. When you want to make sure that the battery is being transported correctly, refer to competent dealers who provide suitable packaging recommended to remove the on-board computer and battery and to store the components safely at your seat,” says Winograd.

3 By Train
In trains with a bike compartment, pedelecs (up to 25km/h) may mostly be transported without any hassle. Just buy a bike ticket, fix the pedelec in the compartment safely and take a seat in the passenger wagon. For longer trips in IC and EC trains, you need a space reservation for the eBike. You cannot take bikes on ICE trains. For speed pedelecs, special regulations apply. For instance, Deutsche Bahn excludes their transportation. “If you want to take your eBike in a train, keep in mind that the way to the platform is not everywhere possible without obstacles. Thus, plan more time for the boarding and changing of trains. If you are not near your bike during the ride on the train, it is recommended to remove the on-board computer and battery and to store the components safely at your seat,” says Winograd.

4 Local public transport
For local public transport, like on the S-Bahn, you may take your bike if you bought a bike ticket. Regional locking times may exceptionally occur. The transport organisations will provide more information on this.

5 Travelling with the long-distance bus
For a surplus fee, usually you may take bikes on long-distance buses. However, space is limited. Thus, make sure to book early. On the other hand, pedelecs are not transported by all bus lines. Before starting your journey, get information from your long-distance bus provider.

6 Flights
The air transportation organisation IATA has forbidden the transportation of eBike batteries on passenger planes. If you still want to have your pedelec after a flight at your destination, you can send it by cargo aircraft. In order to do so, the battery has to be packaged separately as dangerous good and be certified for the transport. Though, some carriers allow transportation of eBikes without batteries on passenger planes. In this case, you can mostly rent an eBike battery at a local dealer. For avoiding hassle, it would make sense to check your destination for any pedelec rental stations nearby. This will allow you to enjoy riding an eBike even when on holiday.
Staying safe with an eBike

Someone buying an eBike will sometimes tend to treat it like a conventional bicycle. But there are small, yet subtle differences: the Pedelec weighs a little more, it can reach higher average speeds thanks to the extra thrust and the handling characteristics demand different skills. That’s why it may be advisable for those new to the Pedelec to do a riding course. Associations and institutions such as the ADFC offer such courses. Bosch eBike Systems has compiled some important eBike riding technique tips for beginners.

Before you set off

For the eBike as for all technical products the following rules apply: first you should take some time to get to know your eBike and its special features. It is advisable to take a look at the operating instructions or to research the manufacturer’s website. Then you can go for your first spin on the eBike – for example on a parking lot or an open field – to test the handling characteristics in practice.

Two safety aspects in particular have to be considered:

▶ Given the comparatively high speed, good brakes and correct braking technique are essential. So test this on an open stretch before you go riding around.

▶ To ensure a good travelling range and stability when going round bends the tyre pressure is crucial. On the casing side of the tyres you will find the minimum and maximum pressure for the relevant model. But be careful: when you pump up the tyres on your eBike you must take into account that the drive and battery mean extra weight. The tyre pressure selected should therefore tend to be greater than for a conventional bicycle.

If you don’t feel confident in technical matters, you should ask your specialist dealer. Bosch is actively involved in continuous training and regularly provides comprehensive courses for specialist dealers.

Riding with foresight

Electric drives put our road traffic habits to the test. Electric cars “whoosh” by almost without making a sound. With eBikes it’s similar. In addition road users have to get used to greater speed – in the case of pedelecs faster by about one to four kilometres an hour. That’s why it’s important to be attentive and ensure that you are ready at all times to react appropriately to unforeseen situations. The eBiker should adapt the speed to the relevant situation and should avoid dangerous situations.

Correct braking

The higher average speed and extra weight of the motor and drive demand that the eBiker be always ready to brake. You can ensure the shortest possible braking distance by the simultaneous use of the front and rear brakes. The biker should always be aware which lever activates which brake and how the bike reacts. After all, if incorrectly used the front wheel brake can hurt you from the saddle.

This means you have to practise, practise, practise. In this way you will then gradually find the optimum braking pressure. And it’s not only the brake lever which affects the braking but also the road surface: in snow, slush or gravel in particular the eBiker should apply the front wheel brake in a measured fashion.

Balance and cornering

Stop-and-go traffic travelling at moderate speed is always on the cards on the roads. But keeping to your lane is also a matter of practice. What’s more: you must keep your eyes on the road ahead and actively turn your head and your body into the curve when going round bends.

Overcoming obstacles

Kerbs and potholes are an everyday hazard for cyclists. The best thing to overcome them is by relieving the load on the front wheel: to do this, move your upper torso in the direction of the handlebars just before you reach the edge and suddenly shift your body’s weight upwards. This manoeuvre requires some practice until it’s routine. If you feel unsure or the obstacle is too high, simply dismount briefly. To practise this you can use a low kerb or a small stick on a practice area. The important thing is not to pull on the handlebars too vigorously. If you still tend to lean backwards, simply activate the rear brake and the front wheel will sink to the ground again. The general principle is that it is best to approach kerbs at right angles. This will make sure that you don’t skid.

The general principle is that it is best to approach kerbs at right angles. This will make sure that you don’t skid.
Safely through the winter

The days are getting shorter, the air is colder, there are fewer bikes on roads and paths. In the early days of winter a lot of people store their bikes in their basements or garages – not to be used again until the following spring. But that needn’t be the case! If you follow a few important rules, and if you don’t mind the winter winds on your face, there’s no reason why you can’t get safely through the colder months with your eBike.

Preparing the eBike for the winter

In winter it is of course wetter, colder and darker than in the summer months. It is therefore always advisable to carry out a complete check of the bicycle, whether with or without an integrated electric motor. With all types of winter weather possible, you need to make sure that the lights, brakes and gears are all in proper working order. Water will not have any adverse effect on an eBike, since the components are protected against rain, spray and splashes. When the temperature drops below zero, it is advisable to have a neoprene cover – obtainable from your bicycle shop – to protect the battery.

Protecting the battery

The battery is the most sensitive component of the eBike. It can lose capacity at low temperatures, which, in turn can limit the bike’s range. During winter use with temperatures below zero you are advised to remove the battery, store it at room temperature and replace it on the bike shortly before your next journey. When you return, you should ideally store the battery indoors at temperatures between 15° and 20°C. The same applies to charging the battery: the lithium-ion cells should be charged at room temperature.

Suitable clothing

eBikers have a distinct advantage when it comes to clothing: when temperatures drop and thick winter clothing is required, they tend to perspire a lot less – thanks to their motorized assistance. This means there is less risk of catching a cold. But eBikers will also appreciate the benefits of breathable jackets, which are comfortable to wear and insulate by trapping body heat in, but allow air flow to pass through the membrane. Cyclists’ fingers get cold very quickly, so gloves are indispensable. Thin headbands and woolen hats provide added warmth and fit snugly beneath your helmet, which is an absolute must in winter. During these dark months it is also particularly important to be visible to other road users. Bikers are therefore advised to wear bright-colored clothing with reflectors.

Where to keep the eBike in winter

eBikes can spend the winter either indoors or outdoors. Providing they are well protected against rain and snow, garages and basements are ideal for this purpose. If you keep your pedelec in a carport or in an unheated shed, you should detach the battery and store it at room temperature. The batteries of eBikes that are out of action all winter should also be removed and then kept in a dry, not-too-cold place with a charging capacity of about 30–60%. Unlike certain other batteries, the Bosch batteries don’t need to be recharged during a lengthy “rest” period – irrespective of how long the eBike is not in use.

It is advisable to have the eBike completely checked by the dealer before the start of winter: the lights, brakes and gears should be in perfect working order, so that they can withstand any type of weather.
All you need to know about your eBike

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