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FREQUENTLY ASKED QUESTIONS

1. What is the range of an electric bike?

The range of a fully charged battery varies. It is usually between 15 to 25 miles with gentle pedalling. Most of the power is drained when moving off and on hills so pedalling at these points will preserve the power.

Distance varies with the weight and size of the rider and the terrain encountered:

Smooth, clean and dry pavement - **Excellent Range**

Rough terrain - **Reduced Range**

2. How fast will it go?

To gain exemption from road tax, road insurance, MOT tests, vehicle registration, the requirement of a driving licence and wearing a motorcycle helmet, the speed under power is restricted to 15 miles per hour. They can of course be cycled beyond this speed.

Like people, as batteries age, their performance gradually decreases. (Actually, in the first 25 or so charge/discharge cycles, many batteries get better)

3. Do I need to pedal?

Strictly speaking when on the road the law requires you to pedal with the power assisting your pedalling (PAS); however on most models you have a throttle which can be used without pedalling or in conjunction with the pedals.

Hills slow you down so you need to pedal to maintain speed.

4. What are the running costs?

Other than charging the batteries at a cost of approximately 10 pence per full charge, there are no other significant running costs. You should carry out basic maintenance as you would with a normal pedal cycle; however the electronic parts of the bikes are designed to be trouble and maintenance free.

5. Does the battery recharge when I pedal?

We are asked the question by almost every customer. The answer that applies to most electric bicycles is no, but you preserve the battery by pedalling.

6. How long does the battery last?

Again this varies, but a battery that is used correctly should last between 400 and 500 charges, which could equate to 8000+ miles!! Bear in mind that if the battery runs out, you can always pedal! It is not like running out of petrol.

7. Are there any UK laws I need to be aware of?

The UK law differs slightly from EU law and hence there is some confusion, but if you adhere to the following, you should be acting within our current regulatory guidelines.

- average continuous motor power output no more than 200 watts
- maximum speed under power no more than 15 mph
- must have functioning pedals
- the use of a throttle is now allowed
- weight must not be more than 40kg unless a tandem or tricycle
- riders must be at least 14 years old (sorry kids - your time will come)

NB Laws can and do change without prior warning. These are accurate at the time of writing and we shall endeavour to keep them up to date.

WHAT ARE THE ADVANTAGES OF ELECTRIC BIKES?

1. Hill Climbing

That may sound obvious, but it's the primary advantage. A good electric bike effectively flattens hills, increasing your average speed and eliminating the 'groan' factor when a gradient comes into view. Provided you supply a reasonable amount of effort, you can expect to climb hills of 1 in 10 (10%) on an electric bike with ease, and clear a maximum gradient of 1 in 7 (14%), or much more. In hilly country, the effect is nothing short of miraculous.

2. Safety

It sounds unlikely, doesn't it? But the mathematics is compelling. Think of a steep and busy road, with cars climbing at 30 mph. If you previously slogged up the hill at 6 mph, but can tackle the same gradient at 12 mph with an electric bike, you will see 33% fewer cars, and they will pass you at 18 mph rather than 24 mph. Or at least we think that's correct.

Whatever the figures, there's no doubt that an electric bike helps keep you out of danger. The same general principle applies to road junctions - the faster your acceleration, the sooner you can get out of trouble. And with no need to rush the hills, you won't be tempted to ride downhill at breakneck speed ... another useful safety feature.

3. Personal fitness

Surely a conventional bike will keep you fitter? That, of course, depends on how much - if at all - you use it. Research has found that 46% of conventional bikes are used only once or twice a week, with a further 30% being used once a fortnight, or even less. By contrast, a recent survey of electric bicycle owners reveals that a third ride their bike at least once a day and 81% use the bike at least once a week.

The figures confirm our experience that an electric bike typically gets used at least twice as often as a conventional machine. Because riding an electric bike is a

great deal more enjoyable in hilly country, into strong winds, or when carrying heavy loads, users tend to make better use of them. The motor provides up to half the effort, but more regular use means more exercise for the rider.

4. No sweat!

Sweat may not be a serious issue when you're out for a leisure ride, but it's more important if you're cycling to work. Although some employers are rather grudgingly providing showers and other facilities for cyclists, the great majority have no intention of doing so. An electric bike eliminates the problem at source. In hot weather, it's possible to maintain a normal schedule by transferring a bit more load to the electric motor. In colder weather - or if you feel in need of exercise - just throttle back, or turn the motor off.

5. Clean and green

Electric bikes obviously consume energy, where a conventional bike does not (provided we ignore the environmental cost of growing and processing food - see below). However the amount of energy used is very small compared to a moped, motorcycle or car. Besides fuel, the only consumables are the batteries, and these can normally be recycled when life-expired. As for the energy use, electric bikes typically consume fuel at an average rate of 100 to 150 watts of electrical energy, against 15,000 or so for a car (admittedly travelling much faster). In terms of fuel consumption, an electric bike achieves about 800-2,000 mpg. No other commercially available vehicle can match figures of this kind.

If it's hard to place these numbers in your own lifestyle, think of a 100 watt electric light bulb burning for an evening - that's enough energy to propel an electrically assisted bike for 20 to 40 miles....

6. Genuinely sustainable

There's a lot of nonsense talked about sustainability in transport, but an electric bicycle can be made genuinely sustainable. Purchase electricity from a 'green' supplier, or generate your own with a roof-mounted windmill or solar panel array, and the vehicle's fossil fuel consumption will be zero. Surely a conventional bike does that already? Only if you grow the food you consume whilst riding it. Unfortunately most modern food production and distribution is so fuel-intensive that the consumption of a typical cyclist is not terribly good.

7. Faster travel

In theory a car can travel at high speed, but in practice speed often falls below 10 mph in cities. The problem is congestion - motorcycles get around this to some extent, but they're still confined to the road network. An electric bike can maintain a higher average speed than a bicycle but take advantage of the same network of cycle facilities, giving access to routes that cars and motorcycles cannot reach. The result is often a faster door-to-door journey time than any other mode. And by taking advantage of the uncongested cycle network, but eliminating hills and headwinds, electric bikes are often the most consistent mode of travel.

8. High resale value

Electric bikes are new technology, and it's early days yet, but the evidence points to a much better resale value than a conventional bike. True, a typical electric bike costs more to buy, at £500-£1,000, but it seems you'll get most of that back if you sell the machine on.

9. Motorise, but no Red Tape!

You know how it is --- MOT due, log book missing, insurance costs rising year on year. Electric bikes are treated just like ordinary bicycles for legislative purposes, so there's absolutely no registration or legislation to worry about. You are, of course, free to insure the machine if you wish, but there's no compulsion to do anything but enjoy yourself!

ARE ELECTRIC BIKES LEGAL IN THE UK?

1. What are the main legal issues for electric cycles being used on UK roads?

Electrically-assisted bicycles are Road Legal in the UK provided:

- the electric cycle weighs 40kg or less
- the motor rating is not over 200 watts continuous power output
- powered speed does not exceed 15mph
- the cycle has working pedals
- riders are aged 14 or over

2. Are licences, insurance or MOTs required for electric bikes?

No - unlike motor cycles there are no legal requirements for Insurance, MOTs or Road Tax provided the products meet the requirements outlined above.

3. Are motor cycle helmets needed?

No - the same rules and recommendations that apply to cycles also apply to electrically assisted cycles.

So wearing a cycle helmet is recommended, but not a legal requirement for use on the road.

4. Is the maximum speed limit 15mph?

No - this maximum only applies to the use of electric power - riders can travel beyond 15mph with pedal power alone.

A pedal sensor ensures that electrically assisted power is cut when speed exceeds 15mph.