

# Considerations When Buying An E-Bike

## STYLES

### FAT TIRE BIKES

Technically defined as a ride with tires 4 inches wide or more. Fat bikes are a kind of mountain bike, but with wider tires that can actually be ridden through snowy trails or on sandy beaches, floating on top rather than sinking in.

### FOLDING ELECTRIC BIKES

Can fold up for easy storage and transport. Folding electric bikes are a great choice for many riders, including people who travel and want to be able to store their bike in a car trunk, or in the hold of a plane or boat. Folding e-bikes are diverse in design, with a variety of folding mechanisms, frame styles and sizes, and battery placement options. Typically, the folding bike will have a strong hinge that is located near the center of the frame tube, which you unclamp to fold the e-bike. Some of the folding electric bikes integrate the battery into the frame of the bike, which both hides it from public view and contributes to even weight distribution and improved balance. Other folding bikes place the lithium ion battery pack directly behind the seat post, which makes for easy access.

### CRUISING E-BIKES

Cruisers usually combines balloon tires, an upright seating position and straightforward steel construction with expressive styling. Cruisers are popular among casual bicyclists and vacationers because they are very stable and easy to ride.

### STEP-THROUGH ELECTRIC BIKES

Many Boomer and Gen X cyclists are choosing step-through e-bikes, for their comfort, convenience, and ease of use. Once considered a frame style for women riders, many men are discovering the joy of step-through and easy boarding designs. Most step through designs use a "pedal forward" design where the pedals are slightly forward of the seat tube. This means that often the rider can maintain the proper seat to pedal distance and still put their feet flat on the ground while seated. This makes the wheelbase a bit longer than a conventional bike, and has a small effect on the handling but, it actually enhances the riding comfort. Because step-thru frames are such a popular form factor, you will find a variety of electric bike styles which are step-through in design, including fat bikes, mountain bikes and cruisers.

### TRIKES AND TRICYCLES

Just think about the pleasure you will find in being able to cruise around, visit friends, go grocery shopping, all from the comfort of your personal electric tricycle (three tires). These trikes are especially useful for people with limited mobility.

### CLASSES of E-Bikes, Canada

Class 1: Pedal-assist only: The motor only provides assistance when the rider is pedalling. Maximum speed: 32 km/h (20 mph). Generally allowed: On bike paths, multi-use trails, and roads.

Class 2 E-Bike: Pedal-assist and throttle: The motor can assist when pedalling or when using a throttle. Maximum speed: 32 km/h (20 mph). Throttle use restrictions: Throttle-only riding may have additional restrictions in some provinces. Generally allowed: On bike paths, multi-use trails, and roads.

Class 3 E-Bike: Pedal-assist only: The motor only provides assistance when the rider is pedalling. Maximum speed: 32 km/h (20 mph) in Canada. Note: While some Class 3 bikes may have higher speed capabilities, Canadian regulations limit them to 32 km/h to align with the other classes. Restricted use: Typically not allowed on bike paths, but allowed on roads.

Considered motorcycles: In some cases, Class 3 eBikes may be considered motorcycles and require a license and insurance.

## OTHER CONSIDERATIONS

**Handlebars** -- Upright vs drop. For most e-bike riders, especially those using their bikes for commuting, errands, or leisurely rides, upright handlebars offer a better balance of comfort, ease of use, and visibility. If you prioritize speed and aerodynamics on longer rides or are an experienced road cyclist, drop bars might be a better fit, but consider the potential trade-offs in comfort and control.

**Geometry** -- Look for a frame geometry that suits your riding style, whether it's upright for commuting or more aggressive for sporty riding. Be sure to find one that is appropriate for your size.

**Sensor Torque Sensor vs. Cadence Sensor** -- Torque sensors measure how much force you're applying to the pedals, providing a more natural and responsive feel. Cadence sensors detect the speed of your pedaling, which can sometimes feel less intuitive.

**Brakes** -- Hydraulic disc brakes offer the best stopping power and are recommended for safety, especially when riding at higher speeds or in wet conditions.

**Throttle** -- Some e-bikes are equipped with a throttle in addition to the pedal assist function inherent to all e-bikes. Throttle does not ever HAVE to be used but if you choose to use it, at times can be very helpful. Twist or push the throttle on the handlebar for direct power to the motor. Get up to speed quickly (like when trying to move into a space for single file when a car is approaching). Convenient for starting up a hill or fatigue. Use does result in faster battery drain, it will reduce your overall life per charge.

**Weight** -- E-bikes generally weigh between 40-80 pounds. Larger batteries increase the weight, and the material the bike is made from is a factor. It is probable that you will require a different bike rack for your car to carry an e-bike. You might want to consider a rack with a ramp if you are loading the bike alone.

**Frame Material**—steel (heavier, smooth ride) aluminum (lighter than steel, can have kickstand), carbon fibre (light weight, usually premium bikes and usually do not accommodate kickstand), Titanium (strong, resistant to corrosion)

**Battery** -- Consider the voltage (e.g., 36V or 48V), which impacts power and range. Higher voltage (48V) typically means more power for acceleration and hill climbing, while 36V offers a longer range. Battery capacity (measured in watt-hours) determines the range. A larger battery capacity generally means a longer riding distance, however weighs more.

**Handlebar-mounted LCD display** -- There's a lot going on with an e-bike, so it's helpful to have a handlebar-mounted bike computer that lets you monitor battery life, pedal-assist mode, km ridden, speed and more.

**Comfort** -- Consider features like suspension forks and seat posts, as well as adjustable handlebars and saddle positions, for a more comfortable ride.

**Accessories** -- Consider essential accessories like lights, horn or bell, mirror, fenders, and a comfortable saddle. These can be purchased separately along with a helmet lock as required.