



EVOLUTION ELECTRIC VEHICLES

Driving Distance Per Charge With Different Vehicle Models/Batteries/Terrains

DRIVING MILEAGE

LANCE.LIAN

TIME TO
GO WILD

These will be compared with different golf cart battery products and their unique on struction and design features to see how well they cover the deep cycle application requirements in different terrains.



What is a golf Cart?

A golf cart is a small motorized vehicle meant to carry people, golf clubs or equipment from point A to point B. With this in mind, a golf cart can be much more than just a vehicle to hold your golf clubs and make a 4-hour sport a little easier (and more fun). Golf carts have become diverse, multi-purpose vehicles for all sorts of people and jobs. They are a great fit for landscapers, college campuses, hospitals, farms, country clubs, small communities and much more. Whatever you need a golf cart for, there are tons of options out there for you to choose from. This manual will help you figure out which type of golf cart will work best for you, and how to make sure that buying a golf cart is a positive, fun experience.

What Types of Golf Carts are There?

You can categorize the different types of golf carts in three ways:

Gas or Electric

2-seater, 4-seater, 6-seater or 8-seater

Golf, personal, work

Regular, lifted

Each of these categories is a selection that you can make when purchasing a golf cart. You can have an electric 6-seater golf cart used for work or you can have a 2-seater gas golf cart used for personal use. a lifted cart for off-roading. Golf carts do not typically come in sport, performance, or lite categories.

What Do I Need to Know Before I Buy a Golf Cart?

The most important things to consider before purchasing a golf cart are what you need a golf cart for and what type of golf cart you want.

Ask yourself some of these questions before buying:

What will I do with my golf cart?

How much weight does it need to carry?

How many seats do I need?

What type of terrain will I drive my golf cart on?

Does my golf cart need to be street legal? / Will I drive my golf cart on the road?

Do I want Gas or Electric?

Gas vs Electric Golf Cart: Which is Better?

Both gas and electric golf carts are great options and deciding which option is better for you comes down to personal preference. Both options will require some maintenance. The main difference is that with an electric golf cart you will have to replace the battery every 5 to 7 years and with a gas golf cart, you will need to have oil changes, belt changes and pay for fuel and filters. Therefore on average, the electric golf cart is more expensive, but the cost difference is manageable.

If you own an electric golf cart, you have probably wondered about the battery. Electric golf carts run on a rechargeable battery. Recharging the battery might be more convenient than refilling a gas tank every week, but it also will eventually need to be replaced.

Gas:

The maintenance on a gas golf cart may be required annually or every 2-3 years. Gas golf carts have more power so they can haul more weight and climb higher inclines. Probably the biggest benefit of a gas golf cart is that they can run for significantly longer on one tank of gas than an electric cart can run on one charge. In addition to the increased maintenance, the drawbacks are the noise and smell of gas and fumes and gas is more expensive than electricity.

Electric:

Electric golf carts are appealing due to their low maintenance costs and requirements. Electric golf cart batteries are usually changed every 5 years so, there are typically no annual servicing costs for an electric golf cart. Although maintenance on a golf cart is always recommended no matter which type! Electric golf carts need to be charged in order to run. Electric golf carts are cost-effective, environmentally friendly, low maintenance and quiet. Golf Cart is ideal for, well, golf, and activities like cruising around a neighborhood or campus.

Conclusion

The best part about golf carts is how versatile they are. There are so many types, variations, modifications, and uses for golf carts. You will definitely find one that fits your needs perfectly with the amount of variety available. Golf carts are a fun, affordable, and extremely practical option for work and for play.

What Type Of Battery To Choose For A Golf Cart?

There are two categories of golf cart batteries, each with some subsets.

Deep Cycle Lead Acid Batteries

Lithium-Ion Batteries

There are pros and cons to each type of battery. Most golf carts come standard with a deep cycle lead-acid battery. Lead-acid batteries cost less upfront, but do not last as long as their competitor and require regular maintenance throughout their life span. The rate you use your golf cart with lead-acid batteries will also determine how long your lead-acid batteries last (as a pack). For example, you should run down the batteries to a ¼ charge level +/- on a regular occasion to ensure they cycle properly and get the advantage of a longer, slower charging cycle.

Lithium-ion batteries last longer than lead-acid and do not require maintenance while in use, but they do cost significantly more for those added benefits. Lithium-Ion batteries are made for deep cycle applications and are sealed units. There are no water levels to check and the degree that you use your golf car on any occasion does not matter regarding cycling or recharging times. A Lithium-Ion battery controls it's voltage output in conjunction with the car's speed controller, so you have more power when needed and less power when it's not needed.

How Long Do Golf Cart Batteries Last?

Golf cart batteries typically last anywhere from 4-10 years.

Put another way, a lithium-ion battery should last between 2,000 and 5,000 charging cycles. A lead-acid battery should last somewhere between 500 and 1,000 charging cycles.

That's quite the range. The reason for the wide range is because **there are different factors that will affect your golf cart battery life span**. The amount of daily or weekly use will determine how quickly your battery wears out. Some other factors that can influence how long a battery lasts in a golf cart include:

How fast you typically cruise

How far each ride is

How quickly you drain each full charge

Terrain

Temperature

Note: Lithium-ion batteries weigh less than lead-acid, they do not lose power as their voltage dips, they charge 80% faster than lead-acid.

How Much Are Golf Cart Batteries?

The price depends on the voltage and on the "AH". AH stands for ampere-hour and is the amount of charge in a battery that will allow one ampere of current to flow for one hour. The higher the AH, the longer one charge on the battery will last, like having a bigger fuel tank in a car. This will also increase the price of the battery.

The higher the voltage or AH, the more expensive the battery will cost.

The higher the AH is on an Lithium battery, the longer run time you will have.

The Mileage My Golf Cart Can Make ?

Like Stated Above ,AH stands for ampere-hour and is the amount of charge in a battery that will allow one ampere of current to flow for one hour. The mileage you can make will depend on golf cart models/Load/Battery size /Terrain/Speed .

.Small battery with small current drain out >long mileage

.Small battery with big current drain out >battery will drain out shortly, with short traveling mileage

.Big battery with small current drain out> extra long mileage

.Big battery with big current drain out >battery will drain out as predicted ,with decent mileage

.Big Battery with times of rated current drain out >battery will drain out shortly, with short traveling mileage

What Is The Best Battery Configuration For Long Mileage ?

.For Heavy Models like 6-seater lifted carts ,8-Seater people carriers >Big motor /controller /battery is needed

.For Light Models like 2-seater golf carts with heavy loads >Big motor /controller /battery is needed

.For Light Models like 2-seater golf carts used in steep terrains > Big motor /controller /battery is needed

.For Heavy Models like 6-seater lifted carts used in steep terrains > Big motor /controller /Extra large battery needed

What Will Lead To Under Mileage Performance /Prematurely Failed Battery ?

.Under Size Battery

.Drawing more amps then the battery is rated to continually discharge in the specifications

.Over speed driving

.Exceed terrain limits

.Exceed payload limits

WHY LITHIUM BATTERY ?

Reduces Weight of Your Golf Cart

It should come as no surprise that standard sealed lead acid (SLA) batteries are incredibly heavy. And the longer you want your battery to last, the heavier the unit will be. These batteries make even the zippiest light-weight golf cart incredibly heavy. And the heavier your golf cart is, the slower it'll move across the course. Worse, if you're playing on damp turf, the cart will sink in. No one wants to be responsible for leaving tire tracks on the fairway. Lithium golf cart batteries are much lighter. This makes your golf cart easier to maneuver and helps you reach a comfortable speed faster. As an added bonus, lighter golf carts need less power to move. Less power means less drain on the batteries, so you can expect a longer-lasting charge cycle with each use.

Lasts Longer Over Time

All batteries, whether SLA or lithium, can get charged a set number of times before they start losing their ability to hold a charge. The more you use the battery, the less charge it holds. This means you'll need to plug the golf cart in more often once the batteries reach their maximum number of charge cycles. So, what exactly counts as a charge cycle? One cycle is when the battery goes from fully charged to completely empty. After several hundred charge cycles, the battery will stop charging to 100 percent. The more you use the battery, the lower its total capacity gets. Lithium batteries handle more charge cycles than SLA models, letting you get more out of each unit.

No More Maintenance

When you bought your golf cart, you probably thought the only maintenance you'd need to do would be to the cart itself. But if you have SLA batteries, you'll need to maintain them as well. These batteries need to get topped off with distilled water every few months. If the cells in the battery go dry, the battery stops holding a charge. Though it only takes a few minutes to service your batteries, it's still time you're spending away from the golf course. Lithium batteries are virtually maintenance-free. All you need to do is inspect the connections and clean them as needed. This means less time tinkering and more time perfecting your swing.

They're Eco-Friendly

Once you're ready to replace your batteries, you can recycle them. But some batteries are harder to recycle than others. Lithium batteries are easier to recycle and put less strain on the environment. This means they're the most eco-friendly battery type on the market! All you need to do is find a licensed battery recycling drop-off location.

No Risk of Acid Spills

SLA batteries are full of corrosive acid. It's part of what makes the battery hold a charge and produce electricity that your golf cart uses to run. If the battery leaks or the casing corrodes, you'll have to face an acid spill. These spills are hazardous to the components of your golf cart, the environment, and your health. And the only way to prevent them is to keep the batteries properly charged and stored at all times. For most golf cart owners, that's not an option. After all, you're out on the course using the cart, not storing it for weeks at a time. Quality lithium batteries don't contain the same acids as standard SLA models. They have protected cells that generate the power you need. This means you won't expose yourself to the chemicals inside even when you inspect them for wear and tear.

Cheaper Per Hour of Use

As we said earlier, lithium batteries can go through more charge cycles than SLA batteries. This means they last longer. And the longer your batteries last, the less you'll spend on replacements. Over the life of the battery, you'll spend far less on maintenance costs. But that's not all. Lithium batteries are more efficient. Their charges tend to last longer. And the less you have to charge your batteries, the less you'll pay on your electrical bill!

More Power Means More Speed

A lithium golf cart battery has more power than a comparably sized SLA battery. What this means for your golf cart is a huge improvement in speed and power. The more power your batteries give your engine, the easier it is for the cart to navigate uneven terrain. And when you're on the flat, that same power means you'll go faster without draining your batteries as quickly!

Less Vulnerable to Temperature Changes

If you're a year-round golfer, you need the cart to work in all weather conditions. This includes freezing temperatures. But some batteries drain faster in cold weather. This means you could find yourself stranded on the back nine. By upgrading to a lithium battery, you'll have to worry less about the weather. Lithium cells work well in all temperatures. And though you might see a slight decrease in power in extreme conditions, you'll still make it through your round before having to plug in.

Use a Proper Battery Charger

Attach the battery to a 2-phase charger, ensuring that the charger's positive lead is attached to the battery's red or positive pole and negative lead is joined with the negative pole. It's also prudent to charge the battery after every time the golf cart is used.

Trickle Charge the Battery

If you're going to store your battery for a long time, use a trickle charger to keep charging it while it's being stored. Using a solar charger also works and prolongs the battery's life.

Prevent Corrosion

Corrosion of the battery's connections and posts is a major factor in shortening its life. That's why you need to ensure that the battery is never discharged for more than eighty percent of its rated reserve capacity. This is because the longer it takes to recharge, the more it creates heat and destroys itself gradually by eroding its plates.

Pay More to Last More

Quality matters. Cheaper batteries have much shorter life spans compared to quality golf cart batteries that cost more. The latter may last up to 10 years if maintained properly. So, you end up gaining in the long run even if your initial investment is high. Also, be on the lookout for tax cuts from time to time. These batteries are often used in renewable energy projects.

The bigger capacity battery will give more driving range especially in harsh terrains .

Use Anti-Corrosion Lubricants

The tightness of golf cart battery terminals is one of the main agents for corroding its internal parts. In order to prevent this, coat its wire lugs, terminals, nuts, and bolts with any quality non-hardening sealant. A thin layer of pure Vaseline or petroleum jelly on the battery's terminals also provides extra protection. Finally, sealing any exposed wires at the terminal lugs with submersible rubber tape also extends the battery life. These products can typically be found at your local auto parts store.