



1. **What are the limitations of an E-Foy Fuel Cell Charger?**
 1. Boat owners often ask what an E-Foy can do for them on their boat. The answer is that an E-Foy is a Battery Charger and will take care of recharging and properly maintaining your 12 volt DC system in most recreational boats. An E-Foy is not a Generator in the traditional sense, as it does not create AC current so it won't power things like an electric stove or an air conditioner.
2. **Which size of E-Foy Fuel Cell Charger should I buy?**
 1. You should determine the correct size of E-Foy based on your average daily consumption of DC power when you are not connected to shore power. There are three models available. They are typically sized based on their capability to return power to your House battery bank in 24 hours. The Models are 80, 140 and 210. The 140, our best seller, is capable of returning up to 140 amp hours to your house battery bank in 24 hours.
3. **What size batteries do I need for an E-Foy Fuel Cell Charger?**
 1. The answer is, it depends. Most cruising boats have a House battery bank large enough to support their 12 volt DC needs for 24 to 48 hours without charging. Some boats have more, and can go 3 or 4 days. An E-Foy will charge any size of battery bank, so there really is no minimum size. There are practical limitations though when vessels have very large battery capacity of over 400 amp hours and so we would provide more detailed advice in those cases upon request.
4. **Will an E-Foy work on AGM Batteries?**
 1. The E-Foy works just like most modern Battery Chargers and so it can be configured to properly charge and maintain traditional flooded lead-acid batteries, Absorbed Glass Mat (AGM) batteries, Gel Batteries and even some Lithium batteries.
5. **Will an E-Foy work with Lithium Batteries?**
 1. Some Lithium Batteries may be charged with an E-Foy but the battery must be certified Lithium Iron phosphate (LiFePo4) batteries with 12V.Certification is available from SFC the E-Foy manufacturer.
6. **What sizes of E-Foy Fuel Cell Chargers are available?**
 1. There are three models of E-Foy Chargers
 1. E-Foy 80 (40 watt)
 2. E-Foy 140 (72 watt)
 3. E-Foy 210 (105 watt)
7. **How big is an E-Foy Charger?**
 1. All our units have the same physical dimensions and they vary only in weight. The approximate dimensions are 17 ½" Long, 8" Wide and 12" Tall (44.3 x 20.2 x 28.8 cm). They vary in weight between 15 and 18 lbs, (7 and 8.2 kg).
8. **How much does an E-Foy weigh?**
 1. They vary in weight between 15 and 18 lbs, (7 and 8.2 kg).
9. **Can I use an E-Foy Fuel Cell Charger on a sailboat?**
 1. An E-Foy is ideally suited for use on a sailboat as many sailboats have space constraints making it difficult to install a generator or a large solar power system for battery charging.
10. **How does an E-Foy compare to Solar?**
 1. Over the period of one year, an E-Foy Charger can provide 3 to 10 times more power than a solar system with the same power rating. To produce the same amount of electricity as an EFOY 80 (40 W) with solar power, depending on the location and time of year, you would need a solar system with an output of between 120 and 400 W.
11. **Can an E-Foy work along with my Solar Charging system?**
 1. **The answer is it depends on the Solar Charging system and its controller if you wish to have the two systems work together automatically. We would be able to answer this when we can understand more about the specific installation. Many of our customers do use their E-Foy along with the solar charging system and manage them individually.**
12. **How much does an E-Foy Fuel Cell Charger cost?**
 1. It depends on the model that is selected for your particular application. An E-Foy will require installation but the installation cost will be minimal when compared to Solar or a Generator. An E-Foy dealer will be able to specify the correct model and price based on your particular need.
13. **How long will an E-Foy Fuel Cell Charger last?**
 1. There is a theoretical lifespan in terms of operating hours but in a recreational vessel application an owner will likely never reach that point. E-Foy units are used in industrial applications with far heavier use and the lifespan is seldom a consideration.
14. **Is an E-Foy Fuel Cell Battery Charger portable?**
 1. The units are compact and lightweight. The connections are very simple and take seconds to connect or disconnect. The unit and the Fuel cartridge are held in sturdy trays and held down with straps to make them easy to move and portable. An E-Foy can easily be moved between boats or RVs or taken home during layup periods.
15. **How much does E-Foy Fuel cost?**
 1. Currently the Canadian retail price for an M10 cartridge, which is 10 litres, is \$78.00. This works out to \$7.02 per kilowatt hour.
 2. If an E-Foy 140 needed to replace 100 amp hours in a battery bank over 24 hours it would last approximately 9 days after the batteries reach the level where they need charging. This assumes nothing else has been done to charge batteries like running an engine or plugging in to shore power.

16. How much fuel does an E-Foy consume?
 1. Fuel consumption is determined by the amount of power required to charge the battery bank. In practical terms most users consume 2 cartridges per boating season.
17. How does E-Foy get shipped?
 1. The E-Foy M10 Cartridge is a sealed container and is itself a certified shipping container. It can be shipped by virtually any means, including air freight.
18. Where can I buy E-Foy Fuel?
 1. E-Foy M-10 cartridges are available from our Canadian E-Foy dealer network and can also be ordered from any marine dealer, service shop or boatyard in Canada. Inventory is held in our own warehouses in Vancouver and Barrie, Ontario.
19. Where does E-Foy fuel come from?
 1. E-Foy fuel comes from Germany however large stocks are held in Calgary, Alberta and at our warehouses in Vancouver and Barrie, Ontario. It is also service shop or boatyard.
20. Can I refill my E-Foy cartridge?
 1. The E-Foy fuel cartridge cannot be refilled. The cartridge has a built-in no-spill valve which interfaces with the fuel line from the E-Foy.
21. Are there problems with E-Foy Fuel Cell Chargers?
 1. E-Foy units are very, very dependable. There are over 30,000 units in the use in both recreational and industrial application, many of those in Canada. The total operating time of the units in use exceeds 8 million hours. With well over 100 units sold, primarily for marine use, by our company in Canada we have never had a failed unit.
22. What are the alternatives to solar power on a boat?
 1. We believe that the E-Foy is the best choice for battery charging when away from shore power. Solar is very simple and reliable however it is dependent on, of course, sunlight. On cloudy days its performance will be reduced and it will not work through the night. Wind power or trailing generators are also alternatives used by some boaters.
23. E-Foy Fuel Cell vs Solar Power
 1. E-Foy fuel cell chargers are very often compared to solar. Solar power is constantly improving and is of course free once the initial installation is paid for.
 2. Solar panels can be difficult and expensive to install depending on the power required and the limitations of the vessel. The E-Foy takes up no deck space and is hidden away below deck.
 3. Solar works best when the panels are in full sun. When the panels are in shade or during inclement weather and at night the solar charge rate will be reduced or non-existent. The E-Foy will work for as long as the batteries require and is unaffected by the availability of sunlight and will work day and night.
 4. An E-Foy fuel cell will supply between three and ten times the amount of electricity as a solar energy system with the same output over the course of a year. To produce the same amount of electricity as an E-Foy 80 (40 W) with solar power, depending on the location and time of year, you would need a solar energy system with an output of between 120 and 400 Wp.
24. How much noise does an E-Foy Fuel cell make?
 1. An E-Foy unit is very, very quiet. Measured in decibels, an E-Foy generates about 25db which could be compared to someone whispering. In practice, you may need to put your hand on it to be sure it is running.
25. Is an E-Foy Fuel Cell safe for the environment?
 1. E-Foy Fuel Cell Chargers are very safe for the environment. The only bi-products of the process used to generate power are CO₂ and distilled water. The amount of CO₂ produced would be similar to an additional person in a room.
26. What temperatures will an E-Foy operate in?
 1. An E-Foy is guaranteed for safe operation in an ambient temperature range of -20 °C to +40 °C (-4° F to +104° F).
 2. At 40c (104F) The E-Foy unit interrupts the charge function and starts again, fully automatically, once the temperature falls. This prevents damage to the fuel cell.
 3. The E-Foy unit has a built in frost protection mode so that, provided it has fuel, and is connected to a battery, it will not freeze.
27. What happens if an E-Foy freezes?
 1. If the fuel cell freezes, simply switch it off in a warm environment to thaw over a period of approx. 24 hours before putting it into operation. Please note that a fuel cell's efficiency may decrease when allowed to freeze repeatedly.
 2. The unit is very simple to disconnect. We recommend removing it to storage during long winter layup periods.
28. Does an E-Foy Fuel Cell burn fuel?
 1. There is no combustion of fuel in an E-Foy. Power is generated by a chemical reaction.
29. How much waste heat does an E-Foy generate?
 1. The level of waste heat depends on the ambient temperature. The heat (measured in watts) is approximately three times as high as the electrical energy (rated power) generated by the unit. For example, an EFOY 80 Fuel Cell produces approximately 120 W of heat.
30. What happens inside an E-Foy Fuel Cell Charger
 1. A fuel cell is a galvanic cell that converts the energy created by the chemical reaction between a constant stream of fuel and an oxidant into electrical energy. The underlying principle is an electrochemical process that is also known as "cold combustion". It is, in principle, the reverse of electrolysis. A fuel cell is not an energy storage device, but a converter that generates electricity. The energy required to produce electricity comes from the fuel.
31. How does an E-Foy work?
 1. The EFOY Fuel Cell converts the fuel in the fuel cartridge directly into electrical current. This direct conversion, which is performed with no moving parts, is completely silent and creates no pollutants. The fuel cell is extremely efficient, clean and environmentally friendly.
32. How is the E-Foy controlled?
 1. The E-Foy is supplied with an attractive full function remote control panel. All set-up and control functions, including charge control, are performed by the remote panel.
33. Where should I install an E-Foy Fuel Cell?

1. The E-Foy Installation manual contains detailed information on location do's and don'ts. The unit installation options are very flexible and in most boats it is not a problem to find a good location. There are some things to carefully consider so reference to the manual is important.
 2. The unit will function in the same way as a modern marine battery charger. It is fully automatic and is adjustable for battery chemistry, switch-on and switch-off voltage, absorb time and more.
34. Is there a warranty on EFOY?
1. The E-Foy carries a one year warranty and an additional two years is available for an additional charge.
 2. The purchase date of the new fuel cell on the invoice and its registration with SFC determine the start of warranty coverage.
 3. Warranty Registration ensures that we can provide you with the latest information on a regular basis, for example when there is a new firmware update. In addition, SFC will have all the necessary details if you require service, which means that we can process a case faster.
35. Why should I buy an E-Foy Fuel Cell Battery Charger?
1. An E-Foy will provide you with a clean, efficient and virtually silent method of maintaining your batteries when away from the dock without the impact of deck space and limitations of solar and also without the limitations of wind power.
36. Who shouldn't buy an E-Foy Fuel Cell Battery Charger?
1. An E-Foy Fuel Cell charger is not a replacement for an AC Generator as it functions only as a battery charger. For large AC loads that would not normally be powered by an Inverter we would recommend a diesel or gas AC Generator.
 2. There are three sizes (outputs) of E-Foy units available. Some vessels would have charging requirements in excess of the capabilities of the largest unit. If the charging requirements exceed approximately 150 amp hours per day we would recommend additional or alternate charging methods.
37. Where can I buy an E-Foy Fuel Cell Battery Charger in Canada?
1. E-Foy Chargers are sold through an authorized dealer network in Canada. There are dealers in B.C., Ontario, Quebec, and Nova Scotia. See our website Dealer Locator.
 2. E-Foy Fuel cartridges are sold through an authorized dealer network in Canada. There are dealers in B.C., Ontario, Quebec, and Nova Scotia. See our website Dealer Locator.
 3. Fuel may also be ordered from any marine dealer, service shop or boatyard in Canada. It is held in stock at Western Marine in Vancouver and Transat Marine in Barrie, Ontario.
38. What is an E-Foy Fuel Cell Charger?
1. An E-Foy Fuel Cell Battery Charger, sometimes referred to as an EFOY COMFORT, is a sophisticated battery charger. The charger receives its power from an integral fuel cell.
 2. The fuel is supplied in a 10 litre sealed cartridge which is connected to the E-Foy and is changed when empty.
 3. The battery charger is fully adjustable to match the battery type and size found on most recreational vessels.

Phone: 604-253-7721 ~ Toll Free: 1-800-663-0600

sales@westernmarine.com ~ www.westernmarine.com