## Power consumption on board

Many charter skippers are not sufficiently aware of the fact that normally there is much less electricity available on board a yacht than at home or in general: on land.
Especially on sailing yachts, this can quickly lead to problems – particularly if it is a anchoring in a quiet bay.

**Motor at least five hours a day to charge the batteries**

If you motor for five hours or more a day at medium speed, to be able to use normal consumers on board for a while. In general, however, you should call at a port with a shore power connection every two to three days to fully charge the batteries again.
But when are batteries actually "sufficiently" charged and what does "normal consumers" mean?
Only those who regularly check the voltage know their consumers on board.
This could look like this: when the yacht is disconnected from shore power, after about ten to 15 minutes the voltage/volt of the consumer battery should be read and noted. This voltage/volt may be not less 12.8 volts.
After an hour of sailing or a swim stop, the voltage should be checked again to correctly estimate the voltage loss. This should become a routine on board, because only if the voltage is checked regularly, it is possible to estimate which consumers on board are unloading the batteries.

**The lion's share of power consumption on a yacht is usually the refrigerator.**The consumes on average about 100 watts per units (eight amps per hour), and often runs through on hot summer days. This means that this consumer alone draws up to 120 amps per one unit from the batteries.
The number of crew/people on board should also be considered when looking at the energy balance on board. How often is the refrigerator opened, how often do the guests shower off with fresh water after swimming in the sea? On an average summer day, you should generally calculate with about 100 amps for basic needs plus about 40 amps per person. Based on that, for a yacht with a crew of six, the main engine with its alternator should be able to replenish consumption after about five hours at medium speed, or 40-amp shore charger through night in marina.

**If the voltage is too low: full charge with shore power.** 12-hour charge with shore power should be used to bring the batteries back to normal voltage.
In the evening before going to bed should be fully charged again. **The refrigerator should be off during the night if you stay without shore cable with anckor light, germetic close refrigerator keep the cold enough hours without electricity if it is not opening by crew.**

**Guide values for the power balance of individual consumers**

Here are a few rough guide values for orientation:

- Refrigerator per day about 120 amps or 240 amps for two units
- Pressurized water pump per person per 24 hours about 10 amps
- Shower pump per person per 24 hours about 10 amps
- Light for the cabins per hour approximately 15 amps
- Radio or music system per hour approximately 7 amps
- Mobile phone charging via 12 volt plug approx. 5 amps
- Anchor light for the night (eight hours) approx. 20 amps
- Diesel heating about 20 amps also per hour.

## Saving electricity is the number one motto on board

**For this reason, you should consider in advance whether (especially at night) your crew are ready for less comfort to safe the batteries energy or it then makes sense to visit a port and use shore power. The general rule on the water is: Saving electricity is the top priority on board.**