

New range of home batteries: the AQ-LITH® ENERGYBOX

What is the function of a home battery?

Over the past ten years, many families have installed solar panels. Until now everyone could use the reverse counters. If the production of the solar energy exceeds the consumption, this energy is put back into the grid and the counter turns back. If you do need the energy in the evening, you can get it back from the grid and the counter will turn forwards. However, the imbalance between the consumption and the production causes a considerable headache to the network operator/administrator because they have to take care of a constantly increasing heavier network. That is why the digital meter has been introduced. The backward rotating counters (and their advantages) will disappear: new installations can no longer benefit, and old installations will be granted a period of 15 years from the installation of the solar panels. Afterwards, the energy you put into the grid will be less profitable. It will then be important to make your own consumption (% ratio of the solar energy that you can immediately use yourself) as high as possible: by using smart consumers (smart washing machines, boilers,...) and/or by using home batteries.



An installation with a home battery always measures the energy that goes to or from the grid. As soon as it notices that there is solar energy left, it will charge the battery. In the evening, when the sun no longer supplies that much energy, the battery will initially be discharged before it is switched to the more expensive grid power.

Who would benefit from a home battery?

The payback period of such a home battery depends on many different factors and is therefore not easy to calculate. However, the following criteria are important in order to have a fast payback period:

- The home battery is especially interesting for homes with lots of solar panels and whose owners are not at home during the day. Then the self-consumption is very low.
- The home battery is interesting for users who can no longer benefit from the reverse counter.
- Users with higher consumption will recover their home battery more quickly because the installation costs are relatively lower.

There are many other reasons why you can choose a home battery:

- The calculation is based on the current grid costs. Everyone expects that these grid costs will still be (even with variable costs per hour), in favour of the home battery.
- The battery can be used as an emergency battery when your neighborhood or street is suffering from an electrical breakdown or cut-off plan. Usually, certain important consumers such as your freezer or the outside fence are connected to this emergency battery. Or perhaps also the cash register or the electric door of your shop... Attention, you can only use this emergency battery if it is not fully discharged (at night it is usually discharged).
- After the installation of the home battery you can monitor the consumption of your solar panels and battery, with a handy app at any moment. It will help you to check and adjust your actual use and benefits.



What does an installation look like?

You need a battery anyway. Battery Supplies has launched a new range of Lithium-ion batteries for this purpose: the AQ-LITH® Energybox. These batteries have a very long life expectancy (10 years, used every day), are very compact and are safe thanks to the LiFePO4 technology. The AQ-LITH® consists in three capacities: 3 - 5 - 7 kWh.

In addition, an inverter is required that can charge and discharge the battery and convert the DC voltage into alternating current. Battery Supplies chose a 3 kw inverter, an inverter that has already proven its worth. The Victron Multiplus II has a built-in controller for correct control of the inverter and for communication with your app on your smartphone.

How large does my home battery need to be?

It is generally stated that the capacity of your battery (in kWh) is close to your annual consumption (in MWh/year). In many cases, the AQ-LITH® Energybox 5 kWh is the best choice.

What will it cost?

The total cost depends on the size of the AQLITH® Energybox and the complexity of the installation. Calculate an average amount of about 5000 EUR for battery, inverter, controller and installation and you can deduct the subsidies from that.

The AQ-Lith Energybox is eligible for subsidies in Flanders (Belgium). Per kWh you will receive 250 EUR (with a maximum of 3200 EUR and a maximum of 35% of the total cost). In practice, for the AQ-LITH® Energybox of 3 - 5 - 7 kWh, you will receive 750, 1250 and 1750 EUR subsidies respectively.



AQ-LITH EnergyBox

	3 kWh	5 kWh	7 kWh
	BAT/49010	BAT/49011	BAT/49012
Technology	Li-ion (LiFePO4 or LFP)		
Nominal Voltage (V)	51,2		
Capacity (Ah)	57,6	100,8	136,8
Capacity (kWh)	3	5,2	7
Power	2,5	3	3
Dimensions (mm)	523 x 679 x 152,5	564 x 650 x 212	662 x 717 x 205
Weight (kg)	45	66	89
Max. Charging voltage	56.8V		
Design life (year)	10		
Warranty (cycles)	8 yrs (*)		
Temperature (°C)	-20 -> +60		
IP	54		

Installation kit with inverter, controller and ampere meters

Kit for monophase net
Kit for three-phase net

BAT/49151
BAT/49152

Cont output power at 25°C	3000 VA or 2400W
Max efficiency	95%
Zero load capacity (W)	11
Interface	USB, ethernet, wifi
Temperature (°C)	-40 -> +65 °C
Weight (kg)	26
IP	21
Dimensions (mm)	506x275x147
Warranty (years)	5
VENUS controller	built-in

*Warranty conditions: 8 yrs at 0.5C/0.5C – 25°C / 80% DOD and 80% EOL

If you are interested, please send an email to info@batterysupplies.be stating your address as well as your annual consumption and annual production of the solar panels. We will put you in contact with a certified installer. The AQ-LITH Energybox is always installed by a qualified installer of Battery Supplies. This is the only way to qualify for subsidies. If you are interested in being recognized as an installer, please send us an e-mail.

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