ECTIVE Self-sufficient & mobile power supply

ECTIVE inverter PRO

P. 161 The bestseller among professionals

FULLY SELF SUFFICIENT FROM A SINGLE SOURCE

2024/2025 ective.de

HI, NICE TO MEET YOU AGAIN!

READY TO
GET ECTIVE?

EDITORIAL

Hello again!

It‘s time again for the new edition of our ECTIVE catalog! And as you‘ve probably noticed, we‘re not welcoming you in this issue in the classic black, but with a new cover and smiling faces from our team. Life is colorful and our products are as diverse as our employees and your requirements for a wide variety of power supply projects.

All of you, as part of the ECTIVE community, continually present us with new challenges with our products. And we can tell you: We‘ve been really busy again and have put some new things in this catalog: Our **ECTIVE LC Slim** (p. 120) and **LC Under Seat models** (p. 118) are now available as LT versions and can therefore can be charged even in freezing temperatures. There is an increase in our portable solar modules with the ultra-compact models of the **ECTIVE SunGrid series** (p. 54).

We are also particularly proud of the new **LC Marine LT** series: With these new water-proof and dustproof batteries, ECTIVE friends who travel on water can now also use our extremely powerful lithium batteries on their boats! You can find them on page 122.

We have also dirther expanded the range of our **ECTIVE PRO products**: **The ECTIVE PRO inverters** have been received phenomenally since their launch, which we are incredibly happy about. That‘s why we‘re currently redesigning our MPPT charge controllers from the **SC Pro** series, which we‘ll give you a little foretaste of on page 64.

For those of you who need a little help choosing the right products here and there, you will also find links in this issue to our help and explanation videos on our YouTube channel - really practical, right?

Oh, and there‘s something else we‘re really proud of: The Society for Climate Protection has recognized us as a climate-neutral company! That‘s really great, because our efforts to produce ECTIVE products more and more sustainably also benefit you if the products have a longer lifespan or can be repaired even more easily.

As always, we hope you enjoy the new catalog and look forward to seeing you in person again! At the Caravan Salon in Düsseldorf, perhaps? At the CMT in Stuttgart? We will be there – how about you?

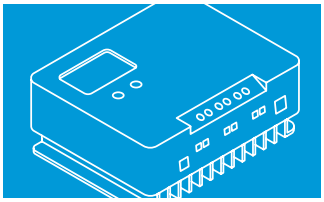
Best regards
The ECTIVE team

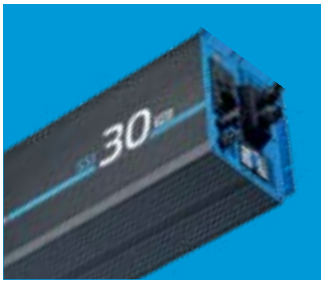
ECTIVE

CATALOGUE 2024/25

In these sections you will find useful tipps on how to optimally set up your power supply for your specific needs!

HIGHLIGHTS & INNOVATIONS





THE ECTIVE ECOSYSTEM

Mobile and Independent Power Supply.

The ECTIVE philosophy

Our products are at home wherever you want to enjoy **freedom** without the convenience of modern technology. ECTIVE products provide a **self-sufficient power supply**: In a motorhome, in a converted van or camper, on a boat, far from the beaten track in your allotment, in a tent or at the next festival... Where there's a will, there's a way. Where it takes you is up to you.

Our range

When developing our products, we focus on ensuring that you can combine everything perfectly and that our devices also work with your existing equipment. We want you to be able to use and operate our products easily and prefer to pack complex technology inside. This also leaves more space on the outside for the pretty blue stripe. We deliberately keep our range as manageable as possible and focus on products that we believe in. And we like to listen to our customers. This allows us to further develop our products based on your wishes and experiences. Our range covers all aspects of mobile power supply:

- Power generation via solar system
- Efficient charging technology
- Electricity storage in supply batteries
- Power conversion via inverter
- Innovative All-In-One solutions

This is what sets ECTIVE apart:

Innovative — We rely on innovative technologies and are happy to break new grounds.

Useful — We love to provide our products with many useful functions.

Easy as Pie — We coordinate our products perfectly so everything is child's play.

Reliable — We use reliable components and test our products extensively.

Our contribution to environmental protection

With ECTIVE, we not only want to create an ecosystem for safe and high-quality electricity supply, but also protect the ecosystem of all of us, the earth. We are therefore proud to be recognised as a climate-neutral company:

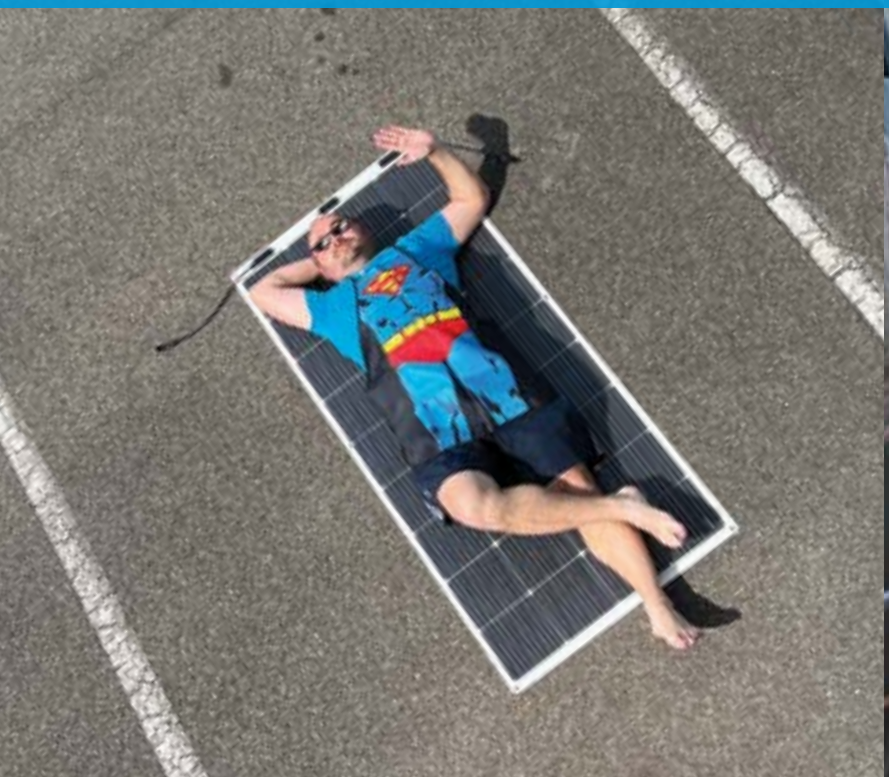
The ECTIVE Warranty

We are convinced of the quality of our products! That‘s why we offer a voluntary manufacturer‘s warranty on many ECTIVE batteries, solar panels and inverters in addition to the statutory warranty. When browsing through this catalog, look out for the warranty seals, which show you how many years of manufacturer‘s warranty we offer for the respective products!

You can find more detailed information on our guarantees on the respective product page in our online store: **ective.de**

Not all heroes wear capes.

Some are developing state-of-the-art components for self-sufficient power supply.



WE ARE ECTIVE!

Get to know the ECTIVE team.

ECTIVE products travel with you around the world.

They are developed in the tranquil town of Freiberg am Neckar, near Stuttgart. Here we are working diligently on the next battery, the next solar panel, the next innovative solution for your self-sufficient power supply.

Whether in the laboratory, in the warehouse, in customer service or on social media - our team consists of passionate outdoor, camping and self-sufficiency fans who know exactly what counts when it comes to electricity on the go.

That‘s why we give it our all, because your passion is also our passion:
More freedom on the go.

ECTIVE ON INSTAGRAM

instagram.com/ective.de

EXPERIENCE ECTIVE PRODUCTS IN THE WILD

Are you looking for inspiration for your next van conversion? On Instagram we present campers, projects and adventures that were implemented with ECTIVE products. Take a look around and get caught up in the travel bug!

ECTIVE ON YOUTUBE

youtube.com/@ective_strom

HELPFUL TIPS ON VAN CONVERSIONS AND OUR PRODUCTS

In this catalog you will find links to our YouTube channel on many topics related to expansion. There we will briefly and concisely explain what you should consider when planning and implementing your power supply and help you choose and commission your components!

ECTIVE Use solar power efficiently.

SOLAR POWER

How much power do I need?

S. 18 Calculate the requirements of your devices.

WELL CARED FOR ALL ROUND

ALL COMPONENTS OF YOUR SOLAR SYSTEM FROM A SINGLE SOURCE

Portable and mobile or mounted and stationary – the products for solar power from ECTIVE can be used in all situations and meet the most diverse requirements. Our extensive range of solar modules offers the right panel for every need and every application. With our MPPT solar charge controllers, you can charge your on-board and starter battery and supply your DC consumers with power.

The ECTIVE solar ecosystem also includes solar monitors for monitoring and mounting profiles for installation on the camper roof. This means that all components of your solar system come from a single source and are perfectly coordinated.

ADVANTAGES OF SOLAR ENERGY

Using Solar Energy Efficiently.

Sustainable, environmentally friendly and climate-friendly – solar power is accelerating the energy transition towards a better eco-balance. With your solar system, you can generate electricity where you need it!

Sun to electricity: How does a solar system work?

A solar system consists of solar modules and a charge controller. When exposed to light, the system generates electricity in the form of direct current at approx. 18 V to 40 V, which is converted into 12 V or 24 V with the help of a charge controller. This electricity can be stored in a battery or used directly. In motorhomes, this is a supply battery. The smart charge controler recognizes the charge status of the connected battery(ies) and ends the charging process automatically when fully charged.

ECTIVE solar modules are models with crystalline cell technology, the cells are further differentiated into monocrystalline, polycrystalline and those with CIS technology. In a price-performance comparison, the monocrystalline cells come out on top, scoring highly in terms of efficiency.

Mobile & independent: Where are solar modules used?

Solar modules can be used universally and are suitable for mobile and stationary power supplies. While stationary solutions are suitable for balconies and garden sheds, mobile solutions are particularly flexible. With a solar module for mobile use, you are self-sufficient and secure your power supply independently of a power socket. Solar power is ideal for

- Camping
- Festivals and outdoor concerts
- Boats
- Motorhomes and campers
- Garden shed, balcony

Note: Solar modules reliably produce electricity even on cloudy days.

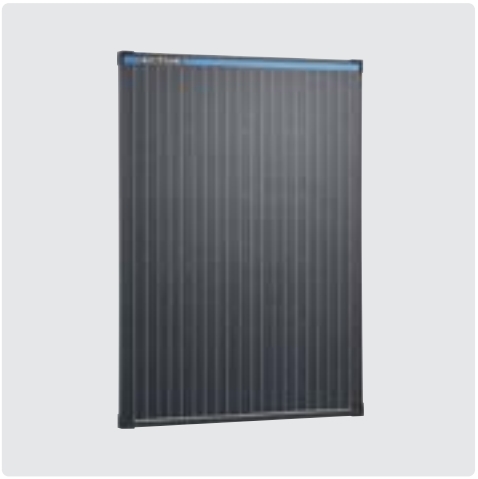
Cost-effective & sustainable: How solar power protects the environment and your wallet:

Your solar module uses the sun‘s energy to produce free electricity that can be consumed directly or stored in a battery. Although the production of the modules requires energy and resources, their operation is CO2-neutral and over the years the solar cells generate many times more energy than was necessary for their production. Solar batteries remain a cost and environmental factor, but with proper care they will last for many years. Lithium batteries in particular are especially durable and easy to care for.


MSP

ECTIVE SOLAR PRODUCTS

Our solar range at a glance.



Solar Panels

P. 16 | Solar modules in different sizes for various applications.

▸ **Portable panels | P. 40**

MPPT Charge Controllers

P. 56 | For gentle, efficient charging of batteries with solar power.

▸ **Silent charge controller | P. 62**

Solar Monitor

S. 69 | Convenient monitoring of all solar system values.

Mounting Profiles

S. 70 | For simple and safe installation of the solar modules.

ECTIVE SOLAR PANELS

Powerful, high quality, reliable.

The power of the sun

With modern solar panels from ECTIVE, you can convert natural sunlight into usable electrical energy extremely effectively. This allows you to operate electrical devices and store solar power in your batteries.

High efficiency

Our panels use advanced monocrystalline solar cells that allow a particularly high yield of solar energy. The modules deliver high yields even on smaller surfaces.

Well protected

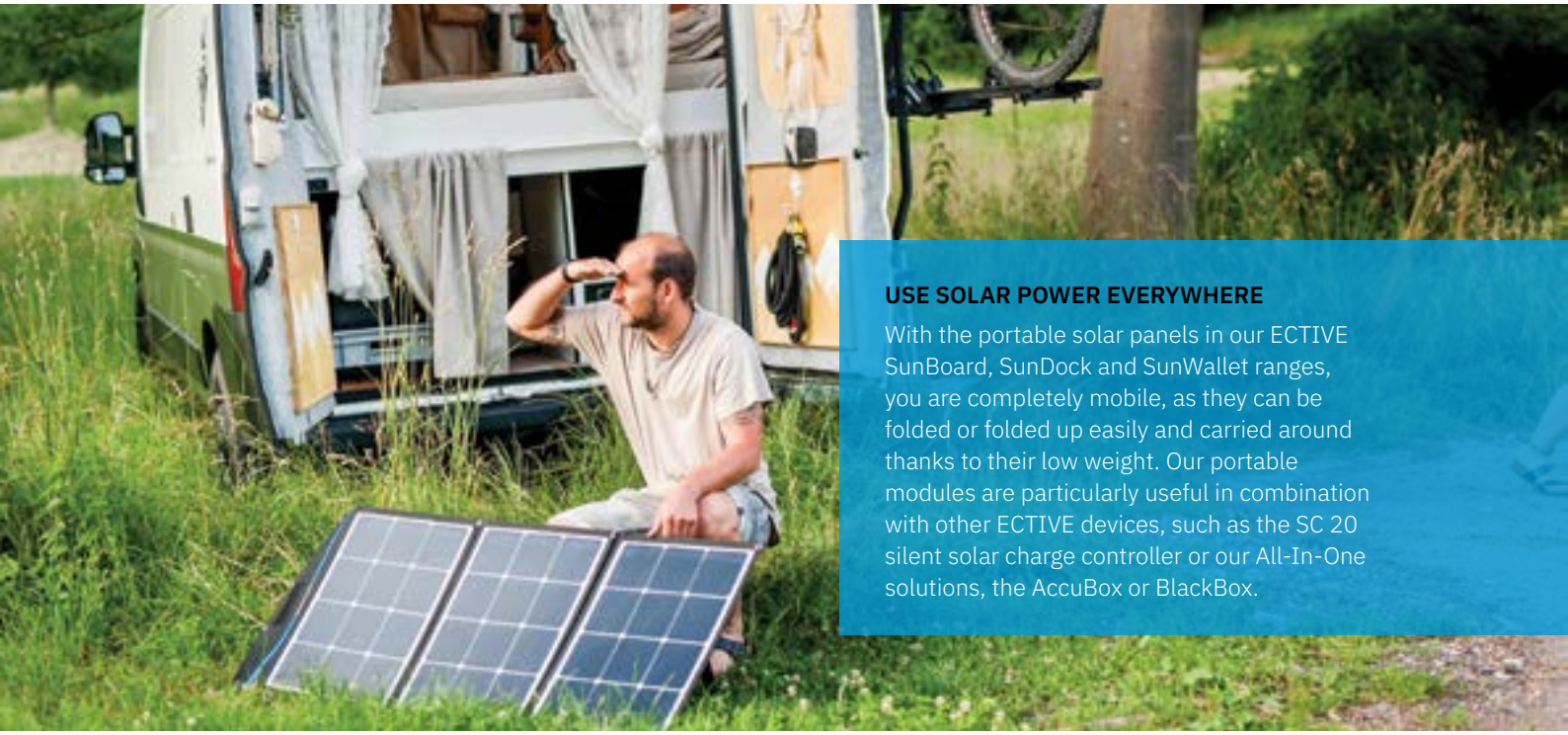
In contrast to conventional panels from many manufacturers, ECTIVE solar modules are covered by a safety glass plate. This reliably protects the panel from mechanical influences such as hail. The junction boxes of the modules are dustproof in accordance with protection class IP65 and protected against water jets from any angle, because even if the sun is a solar module's best friend, rain should of course not be able to harm your panels.

Get started right away

All our solar modules are equipped with pre-assembled MC4 connectors. This means you can easily connect your modules immediately after installation and use the power of the sun directly for your purposes.

Portable panels for ultimate mobility

In addition to our classic solar modules, which you mount on your vehicle, boat or garden shed, we also have extremely light-weight, foldable solar panels in our offer. You can simply carry them with you as they are completely mobile and independent.



USE SOLAR POWER EVERYWHERE

With the portable solar panels in our ECTIVE SunBoard, SunDock and SunWallet ranges, you are completely mobile, as they can be folded or folded up easily and carried around thanks to their low weight. Our portable modules are particularly useful in combination with other ECTIVE devices, such as the SC 20 silent solar charge controller or our All-In-One solutions, the AccuBox or BlackBox.

THE RIGHT PANEL

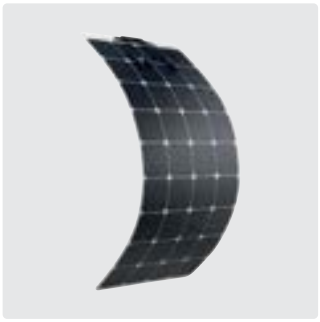
Flexible, particularly lightweight or ultra mobile: We‘ve got you covered!

MSP Black

P. 22 | More power thanks to reduced reflections.

MSP S Black

P. 26 | Greater efficiency thanks to Advanced Cell technology.



MSP Flex

P. 28 | Flexible panels for curved surfaces.

SSP Black

P. 32 | Innovative and efficient shingle technology.

SSP Flex Black

P. 36 | Flexible panels with shingle technology.

SSP Black Lightweight

P. 38 | Particularly lightweight shingle panels with ETFE coating.

Portable Solar Modules

Portable solar panels for complete independence and mobility.

ECTIVE SunBoard | P. 48
ECTIVE SunDock | P. 50
ECTIVE SunWallet | P. 52
ECTIVE SunGrid | P. 54

HOW MUCH POWER DO I NEED?

This is how you determine the daily consumption of your appliances.

Choosing the right solar module

The output of a solar module depends on its size and the technology used, as well as the intensity and duration of the sunlight. You should therefore plan well in advance what you expect to need. To make it easier for you to choose your solar panel, we have prepared a few tips to help you.

A sample calculation

You are on tour with your camper, but work a few hours a day in your mobile home office. Your laptop consumes around 60 W or 5 Ah, and your equipment also includes lighting and a water pump. The following table illustrates the calculation of the daily consumption for the devices used:

Electrical consumer	Perfor-mance (W)	Runtime (h)	Energy requirement (Wh)	Required battery capacity (at 12 V)
Water pump	25 W	0,5 h	25 × 0,5 h = 12 Wh	12 Wh / 12 V = 1 Ah
Light	15 W	4 h	15 × 4 = 60 Wh	60 Wh / 12 V = 5 Ah
Laptop	60 W	4 h	60 × 4 = 240 Wh	240 Wh / 12 V = 20 Ah

This calculation shows that the battery of the solar system must provide a capacity of 26 Ah in order to power the devices over the entire runtime.

A 120 Wp solar panel on the roof of your camper generates around 33 Ah per day in good weather from spring to fall. This is already sufficient for a continuous operation of your electrical devices. When choosing your battery, however, you should make sure it is not discharged too deeply. The battery capacity should be around 4 times the capacity expected to be drawn by the consumers.

This means that with a daily power consumption of 26 Ah, the capacity of the solar battery should be 26 × 4 = 96 Ah. A gel battery or an AGM battery with a capacity of 110 Ah or more is then the right choice. Alternatively, lithium batteries are convincing as innovative supply batteries.

ECTIVE auf YouTube youtube.com/@ective_strom

SOLAR SETUP & WIRING IN THE VAN
The budget decides, but so do your needs!

Aleksei explains how you can connect your solar system in series or parallel.

In order to operate electrical appliances reliably, it makes sense to use a solar system with a higher output than the calculated requirement. In the example, with a daily consumption of 26 Ah and a calculation × 3, this corresponds to a solar system with an output of 78 Ah. For power supply on cloudy days and during the darker seasons, double the output is recommended. For large touring vehicles and year-round tours, a system with at least 280 Wp is often recommended: this is sufficient for additional electrical consumers.

Note: The output of a solar system can be increased by connecting modules in parallel or in series. The available surface area is of course a limiting factor here.

Your actual needs

Your requirements will certainly differ from this example. The actual energy requirements of your appliances will of course depend on your appliances and how long you want to use them. It makes sense to get an overview in advance of which appliances you want to use for how long each day.

The following rules of thumb apply in any case:

- The capacity of your solar battery should be at least four times your calculated daily requirement.
- The output of your solar system should be at least three times your calculated daily requirement.

TIP:

With compressor fridges in particular, it is worth taking a look at the manufacturer‘s data sheet. If a running time of 24 hours is assumed, this leads to a considerable overestimation of the power consumption, as the compressor for cooling does not usually run continuously.

MONOCRYSTALLINE SOLAR CELLS

Originally developed for space travel and satellite technology, monocrystalline solar cells are characterized by a particularly high level of efficiency. With values of 14 to 26%, they significantly exceed the efficiency of conventional polycrystalline modules, which only convert 12 to 16% of the sun‘s radiation into usable electricity. What may initially sound like very little added value actually makes a huge difference in the field of solar technology.

The higher efficiency is immediately noticeable where the highest possible yield is to be achieved on a small area. The best example is a motorhome roof. The monocrystalline solar cells are manufactured from a single silicon crystal in a complex production process, resulting in a homogeneous crystal structure. In addition to high efficiency, they are also characterized by robustness, long service life and dark blue to black colouring.

ECTIVE MSP BLACK SOLAR PANELS

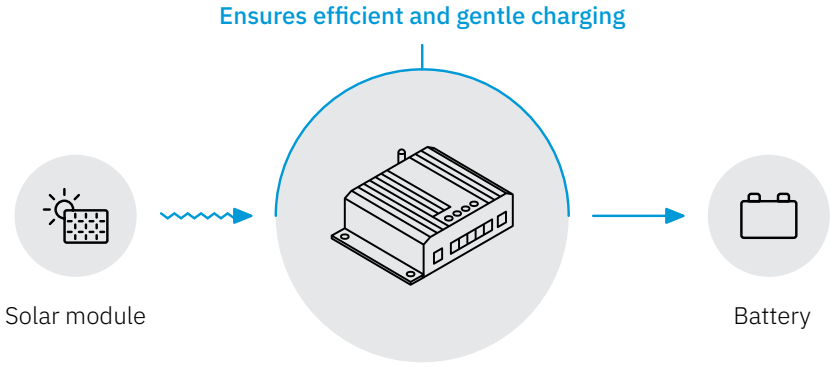
More power through reduced reflections.

Black is chic! But the **ECTIVE MSP Black** Line solar panels not only impress with their elegant look: their black anodized aluminium frame and black base surface help to reduce reflection. As a result, more solar energy is absorbed and the Black Line panels deliver even more power than conventional panels with monocrystalline cells with identical dimensions.

5 YEARS WARRANTY	**Our ECTIVE manufacturer's warranty** — at least 80% of the rated output after 5 years.
15 YEARS WARRANTY	**Our ECTIVE manufacturer's warranty** — At least 70% of the rated output after 15 years.

Practical tip: Charging batteries with solar power

To provide for times when the sun is not shining, simply store solar power in your supply battery. The advanced MPPT charge controllers from ECTIVE ensure efficient and gentle charging and thus help to extend the service life of your batteries.



Solar charge controller

Our charge controllers are compatible with many of our inverters. They convert the stored electricity into alternating current and thus supply your electrical devices. For a practical all-in-one solution, choose our SSI inverters: The MPPT solar charge controller is directly installed here.

MPPT Solar Charge Controllers
S. 56

Inverters
S. 156

ECTIVE auf YouTube youtube.com/@ective_strom

SOLAR IN FOCUS:
This is what you need to know for your self-sufficient project

Aleksei explains how solar power is generated, converted and stored.

MSP 50 Black

Rated Power (Wp) 50 W
Nominal Voltage: 18,72 V
Rated Current: 2,67 A
Size: 798 × 360 × 25 mm
Weight: 3,4 kg

MSP 70 Black

Rated Power (Wp) 70 W
Nominal Voltage: 18,06 V
Rated Current: 3,88 A
Size: 676 × 540 × 25 mm
Weight: 4,1 kg

MSP 90 Black

Rated Power (Wp) 90 W
Nominal Voltage: 18,74 V
Rated Current: 4,81 A
Size: 1350 × 335 × 35 mm
Weight: 5,0 kg

MSP 100 Black

Rated Power (Wp) 100 W
Nominal Voltage: 18,82 V
Rated Current: 5,31 A
Size: 780 × 676 × 25 mm
Weight: 5,6 kg

MSP 110 L Black

Rated Power (Wp) 110 W
Nominal Voltage: 20,40 V
Rated Current: 5,39 A
Size: 1050 × 540 × 30 mm
Weight: 5,72 kg

MSP 120 Black

Rated Power (Wp) 120 W
Nominal Voltage: 18,78 V
Rated Current: 6,39 A
Size: 915 × 676 × 25 mm
Weight: 6,5 kg

Technical Specifications

Solar cells: Monocrystalline
Plug connection: MC4
Cable length: 790 mm

Junction box: Protection Class IP65
Efficiency: Over 17,9 %
Temperature Range: –40 to +85 °C

MSP 175 Black

Rated Power (Wp) 175 W
Nominal Voltage: 18,98 V
Rated Current: 9,23 A
Size: 1324 × 676 × 35 mm
Weight: 9,6 kg

MSP 190 Black

Rated Power (Wp) 190 W
Nominal Voltage: 19,88 V
Rated Current: 9,56 A
Size: 1482 × 676 × 35 mm
Weight: 11,1 kg

ECTIVE MSP S BLACK SOLAR PANELS

Advanced cell technology for even greater efficiency.

More power and even more yield: this is the benefit of the Advanced cell technology of the **ECTIVE MSP-S-Black** models. This innovative advancement in solar technology ensures optimal usage of solar energy, even if parts of the panel are in partial shade or even in the shade. These high-end modules have 64 or 72 individual cells connected in parallel: On the same surface area, that's around twice as many cells as regular panels. Thanks to this high number of cells and the optimized circuitry, MSP-S-Black models reliably deliver a higher solar yield even in unfavourable light and weather conditions.

RELIABLE PERFORMANCE EVEN IN PARTIAL SHADE

The view. Protection from wind and weather. Many factors determine the perfect location for your camper. Unromantic considerations such as making the most of the sun's energy should not be in the focus. And if the camper is parked under a tree in partial shade – so be it! Because it is precisely in these situations that the Black S models come into their own.

Technical Specifications

Solar cells: Monocrystalline
Plug connection: MC4
Cable length: 790 mm
Junction box: Protection Class IP65

Efficiency: Over 17,9 %
Temperature Range: –40 to +85 °C
Warranty (80 % Rated Power): 5 Years
Warranty (70 % Rated Power): 15 Years

MSP 70 S Black

Rated Power (Wp) 70 W
Nominal Voltage: 36,19 V
Rated Current: 1,94 A
Size: 676 × 540 × 25 mm
Weight: 4,1 kg

MSP 100 S Black

Rated Power (Wp) 100 W
Nominal Voltage: 36,17 V
Rated Current: 2,77 A
Size: 780 × 676 × 25 mm
Weight: 5,6 kg

MSP 120 S Black

Rated Power (Wp) 120 W
Nominal Voltage: 36,24 V
Rated Current: 3,32 A
Size: 915 × 676 × 25 mm
Weight: 6,5 kg

MSP 175 S Black

Rated Power (Wp) 175 W
Nominal Voltage: 37,16 V
Rated Current: 4,71 A
Size: 1324 × 676 × 35 mm
Weight: 9,6 kg

MSP 190 S Black

Rated Power (Wp) 190 W
Nominal Voltage: 37,28 V
Rated Current: 5,1 A
Size: 1482 × 676 × 35 mm
Weight: 11,1 kg

5 YEARS WARRANTY **Our ECTIVE Warranty** — At least 80% of the rated output after 5 years.

15 YEARS WARRANTY **Our ECTIVE Warranty** — At least 70% of the rated output after 15 years.

ECTIVE MSP FLEX SOLAR PANELS

Flexible panels for curved surfaces

Sometimes very special flexibility is required – and with our **MSP Flex** solar panels, the name says it all. With a carrier plate that is just three millimetres thick and consists of a plastic-coated aluminum core, these panels are extremely flexible and at the same time extremely stable. Whether on the curved roof of your camper, on one of the many curves of your boat or even on your balcony railing: with their flexibility of up to 30 degrees, the Flex panels adapt perfectly to all curves and bends. This means you can also use areas that cannot be fitted with rigid panels.

The sturdy aluminum and plastic construction is complemented by a translucent, textured ETFE coating. This ensures high scratch resistance and is resistant to ageing and weathering. It is particularly useful when used on a boat, as the coating also protects the installed solar cells from aggressive salt water.

The Flex modules are extremely easy to install: they can be glued to almost any surface, even if it is not perfectly flat. In addition, the junction box assembled with MC4 connectors is located on the front of these panels. This means you can easily connect the panels directly after installation.

MSP 50 Flex

Rated Power (Wp) 50 W
Nominal Voltage: 18,0 V
Rated Current: 2,78 A
Size: 670 × 535 × 3 mm
Weight: 1,00 kg

MSP 100 Flex

Rated Power (Wp) 100 W
Nominal Voltage: 20,0 V
Rated Current: 5,00 A
Size: 845 × 710 × 3 mm
Weight: 1,90 kg

MSP 120 Flex

Rated Power (Wp) 120 W
Nominal Voltage: 23,0 V
Rated Current: 5,22 A
Size: 930 × 710 × 3 mm
Weight: 2,20 kg

MSP 140 Flex

Rated Power (Wp) 140 W
Nominal Voltage: 26,9 V
Rated Current: 5,20 A
Size: 1110 × 710 × 3 mm
Weight: 2,60 kg

MSP 180 Flex

Rated Power (Wp) 180 W
Nominal Voltage: 18,5 V
Rated Current: 9,73 A
Size: 1430 × 710 × 3 mm
Weight: 3,30 kg

MSP 200 Flex

Rated Power (Wp) 200 W
Nominal Voltage: 20,5 V
Rated Current: 9,76 A
Size: 1595 × 710 × 3 mm
Weight: 3,65 kg

5 YEARS WARRANTY

Our ECTIVE Warranty — At least 80% of the rated output after 5 years.

MSP 260 Flex

Rated Power (Wp) 260 W
Nominal Voltage: 21,0 V
Rated Current: 12,40 A
Size: 1740 × 775 × 3 mm
Weight: 4,60 kg

Technical Specifications

Solar cells: Monocrystalline
Plug connection: MC4
Cable length: 350 mm
Junction box: Protection Class IP67
Efficiency: Over 22 %
Temperature Range: –40 to +80 °C
Warranty (80 % Rated Power): 5 Years

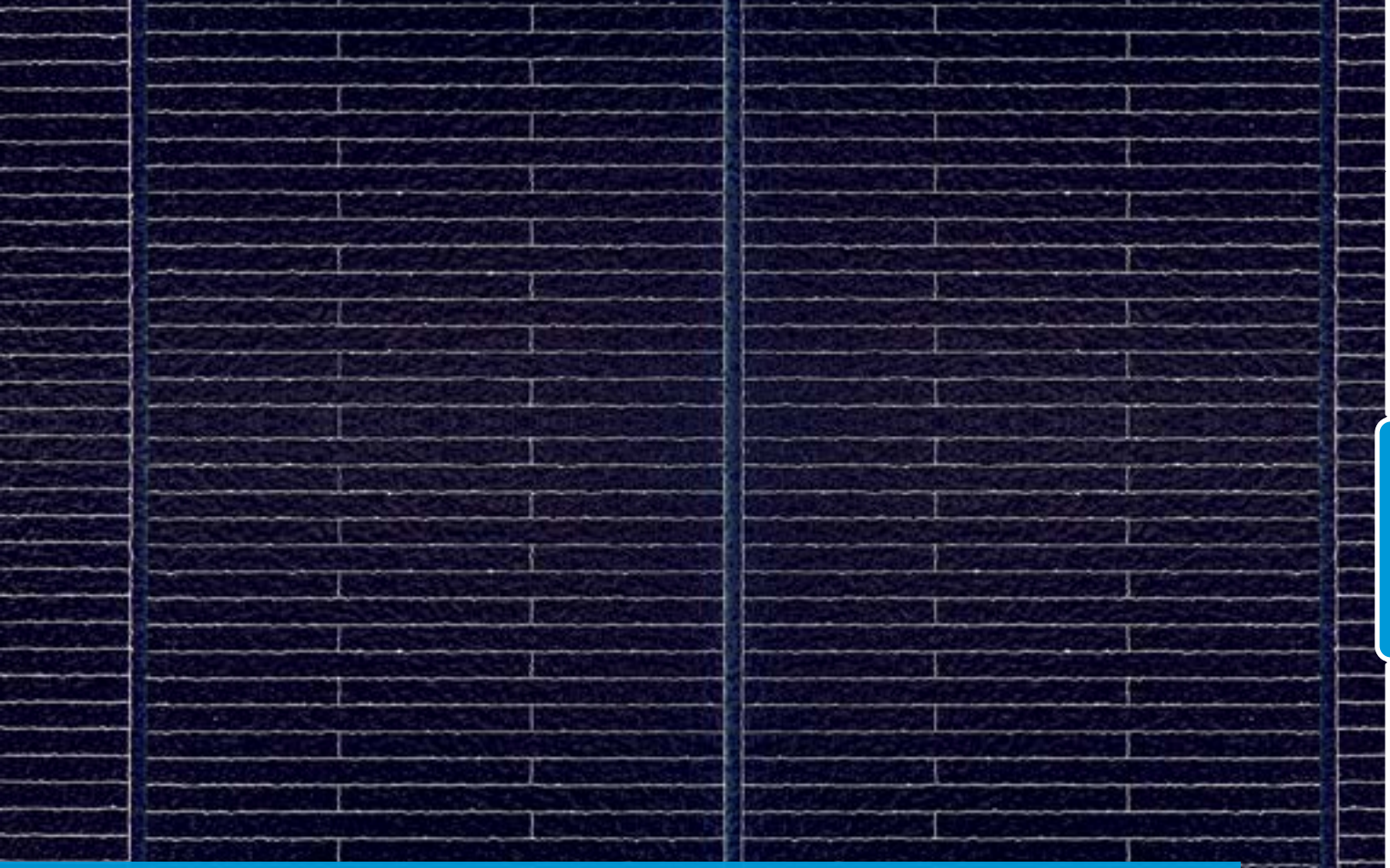
ECTIVE SSP BLACK SOLAR PANELS

Panels with advanced shingle technology.

The „SSP“ in the **ECTIVE SSP-Black** series stands for Shingle Solar Panel. These advanced panels use the latest technological development in the field of solar cell development: shingle technology. In these innovative panels, the cells are attached and interconnected in a special way, eliminating the conspicuous conductor paths of conventional solar panels. In practice, this means more power with less surface area, higher yield in the event of shading and a longer service life.

Well protected and ready for immediate use

Like all ECTIVE solar panels, the SSP models are equipped with pre-assembled MC4 connectors so you can connect them immediately after installation. A safety glass plate protects your panel against mechanical influences such as hail, and thanks to the dust-tight junction box protected against water jets (protection class IP67), you don‘t have to worry about your system even in rainy weather.



SHINGLE TECHNOLOGY

The special feature of solar panels with shingle technology is recognizable at first glance: the copper connections that run through conventional panels and interconnect the individual cells are missing. The eye-catching silver-colored main conductor tracks, the so-called busbars, are also missing. Instead of the usual individual cells connected in this way, SSP models use narrow cell strips in which the electrical connection is implemented using a special, extremely conductive adhesive. Each cell is connected to the next cell with minimal overlap, similar to roof shingles, from which the name is derived. However, the result is not just the stylish appearance of the panel surface.

MORE POWER WITH LESS SPACE

The innovative interconnection of the cells saves up to 10% of the surface area. In addition, the parallel cell arrangement allows an unhindered flow of energy, which reduces internal resistance and minimizes internal losses.

HIGHER YIELD IN THE SHADE

Thanks to the innovative connection, even in the event of shading, the cells that are not covered or shaded remain active and continue to deliver their full output.

NO FORMING OF HOTSPOTS

One problem with conventional solar modules is the localized heat development on a small area – the so-called hotspots. Due to partial shading or soiling, individual cells no longer supply current, which increases the internal resistance. This leads to strong and uneven heating of the module. The result: reduced yield or even failure of the entire solar module. Thanks to the advanced cell interconnection of the shingle technology, hotspots are ruled out with SSP models.

SSP 50 Black

Rated Power (Wp) 50 W
Nominal Voltage: 17,58 V
Rated Current: 2,84 A
Size: 800 × 350 × 30 mm
Weight: 3,5 kg

SSP 80 Black

Rated Power (Wp) 80 W
Nominal Voltage: 26,65 V
Rated Current: 3,0 A
Size: 1200 × 350 × 30 mm
Weight: 5,5 kg

SSP 100 C Black

Rated Power (Wp) 100 W
Nominal Voltage: 18,14 V
Rated Current: 5,51 A
Size: 830 × 670 × 30 mm
Weight: 6,5 kg

SSP 110 L Black

Rated Power (Wp) 110 W
Nominal Voltage: 23,81 V
Rated Current: 4,62 A
Size: 1080 × 510 × 30 mm
Weight: 6,3 kg

SSP 120 Black

Rated Power (Wp) 120 W
Nominal Voltage: 20,98 V
Rated Current: 5,72 A
Size: 1200 × 510 × 30 mm
Weight: 7,1 kg

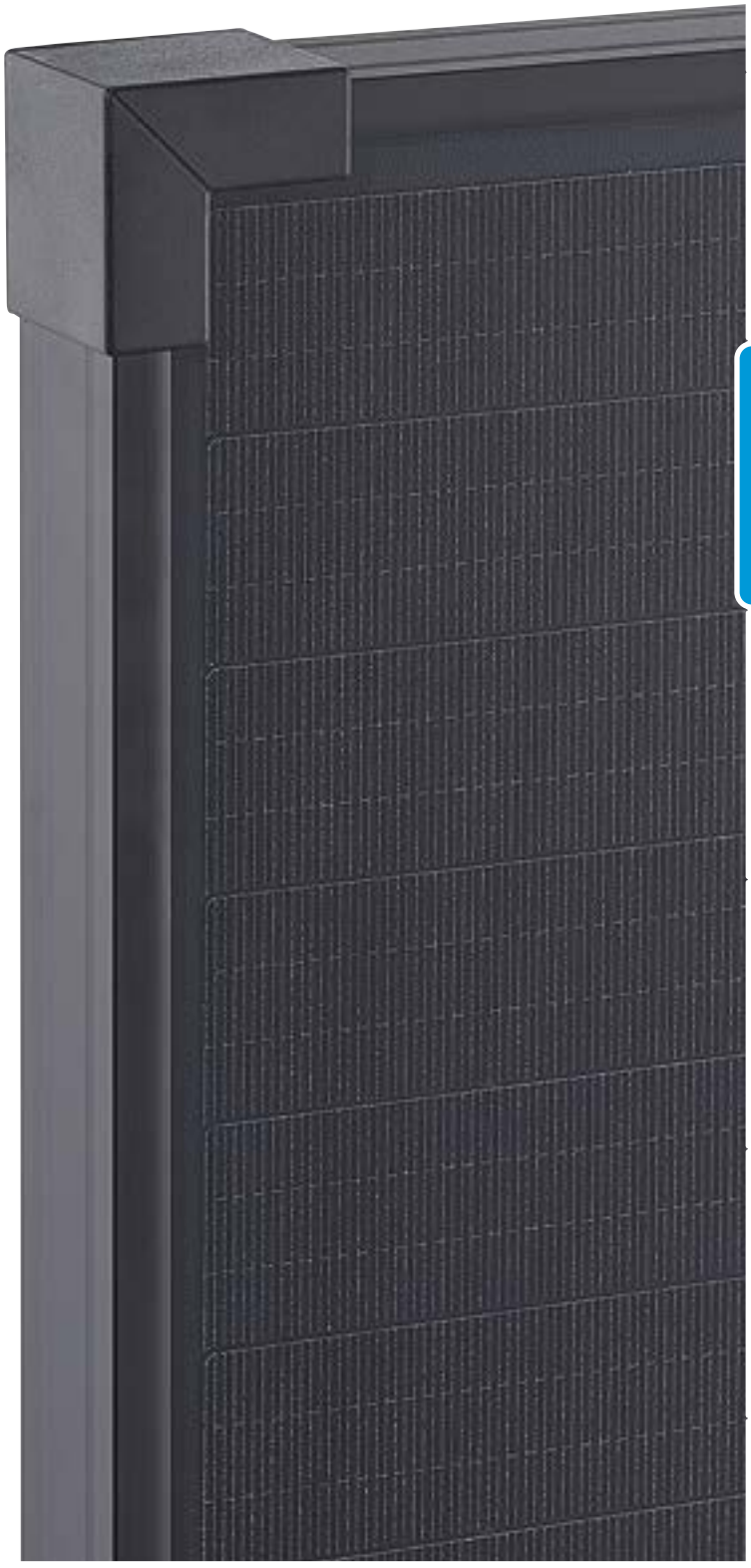
SSP 170 Black

Rated Power (Wp) 170 W
Nominal Voltage: 23,82 V
Rated Current: 7,14 A
Size: 1230 × 670 × 30 mm
Weight: 7,9 kg

25 YEARS WARRANTY **Our ECTIVE Warranty** — At least 80 % of rated power after 25 years.

SSP 200 Black

Rated Power (Wp) 200 W
Nominal Voltage: 28,34 V
Rated Current: 7,06 A
Size: 1480 × 670 × 30 mm
Weight: 10,7 kg



Technical Specifications

Solar cells: Shingle-Technologie
Plug connection: MC4
Cable length: 500 mm
Junction box: Protection Class IP67

Efficiency: Over 21,4 %
Temperature Range: –40 to +85 °C
Warranty (80 % Rated Power): 25 Years

ECTIVE SSP BLACK FLEX SOLAR PANELS

Flexible panels with shingle technology.

Just like the **ECTIVE SSP** Black solar panels, the SSP Black Flex series uses modern shingle technology, which leads to better utilization of the surface area and a higher yield in the event of shading and prevents the formation of hotspots. However, as the name suggests, the Flex modules are extremely flexible. The carrier plate of these modules is just three millimetres thick and consists of a plastic-coated aluminum core, making it extremely stable despite its remarkable flexibility of up to 30 degrees. A high-quality ETFE coating provides the necessary protection for your solar panel. This highly transparent material is resistant to ageing and weathering and protects the cells from scratches and other mechanical damage. And if you use your SSP Black Flex modules on a boat, the ETFE coating is doubly worthwhile, as it is also extremely resistant to salt water.

With these highly efficient flexible modules, you can also use the advantages of shingle technology on curved surfaces of your camper or boat and generate solar power particularly effectively.

Convenient installation

The junction box on the Flex modules is located on the front. This allows you to bond the modules to almost any surface, even if it is not perfectly flat. Like all other ECTIVE solar modules, the Flex modules are also equipped with pre-assembled MC4 connectors. This means you can easily connect your modules immediately after installation.

5 YEARS WARRANTY **Our ECTIVE Warranty** — At least 80% of the rated output after 5 years.

SSP 30 Black Flex

Rated Power (Wp) 30 W
Nominal Voltage: 18,14 V
Rated Current: 1,66 A
Size: 570 × 360 × 2 mm
Weight: 0,9 kg

SSP 60 Black Flex

Rated Power (Wp) 60 W
Nominal Voltage: 19,85 V
Rated Current: 3,02 A
Size: 945 × 350 × 2 mm
Weight: 1,5 kg

SSP 100 Black Flex

Rated Power (Wp) 100 W
Nominal Voltage: 18,14 V
Rated Current: 5,52 A
Size: 1080 × 520 × 2 mm
Weight: 2,5 kg

SSP 150 Black Flex

Rated Power (Wp) 150 W
Nominal Voltage: 18,71 V
Rated Current: 8,02 A
Size: 1170 × 680 × 2 mm
Weight: 3,5 kg

SSP 180 Black Flex

Rated Power (Wp) 180 W
Nominal Voltage: 21,55 V
Rated Current: 8,35 A
Size: 1260 × 710 × 2 mm
Weight: 4,5 kg

Technical Specifications

Solar cells:
Shingle Technology

Plug connection: MC4

Cable length: 500 mm

Junction box:
Protection Class IP67

Efficiency: Over 21,4 %

Temperature Range:
–40 to +85 °C

Warranty
(80 % Rated Power):
5 Years

ECTIVE SSP BLACK LIGHTWEIGHT

Particularly lightweight panels with shingle technology and ETFE coating.

The brand new solar panels in the **ECTIVE SSP Lightweight** series combine the best features of the SSP Black and SSP Flex series: the robust frame of the SSP Black modules is used here in a flatter and therefore even lighter version. This guarantees secure fastening and stability of the panel. The surface of the module corresponds to that of the SSP Flex modules: Shingle technology ensures higher yields even in shady weather conditions and, thanks to the extremely resistant ETFE coating, there is no need for additional safety glass. This design enables an incomparably low weight with impressive performance.

Technical Specifications

Solar cells: Shingle-Technologie
Plug connection: MC4
Cable length: 500 mm
Junction box: Protection Class IP67

Efficiency: Over 21,4 %
Temperature Range: –40 to +85 °C
Protective coating: ETFE
Warranty (80 % Rated Power): 5 Years

SSP 80 Black Lightweight

Rated Power (Wp) 80 W
Nominal Voltage: 26,65 V
Rated Current: 3,0 A
Size: 1200 × 350 × 25 mm
Weight: 2,09 kg

SSP 100 Black Lightweight

Rated Power (Wp) 100 W
Nominal Voltage: 18,14 V
Rated Current: 5,51 A
Size: 830 × 670 × 25 mm
Weight: 2,67 kg

SSP 110 Black Lightweight

Rated Power (Wp) 110 W
Nominal Voltage: 23,81 V
Rated Current: 4,62 A
Size: 1080 × 510 × 25 mm
Weight: 2,54 kg

SSP 120 Black Lightweight

Rated Power (Wp) 120 W
Nominal Voltage: 26,65 V
Rated Current: 4,5 A
Size: 1200 × 510 × 25 mm
Weight: 2,90 kg

SSP 170 Black Lightweight

Rated Power (Wp) 170 W
Nominal Voltage: 23,82 V
Rated Current: 7,14 A
Size: 1230 × 670 × 25 mm
Weight: 3,69 kg

SSP 200 Black Lightweight

Rated Power (Wp) 200 W
Nominal Voltage: 28,35 V
Rated Current: 7,06 A
Size: 1480 × 670 × 25 mm
Weight: 4,40 kg

5 YEARS WARRANTY

Our ECTIVE Warranty — At least 80% of the rated output after 5 years.

PORTABLE SOLAR MODULES

Absolute mobility and independence.

Be completely independent: The **portable solar panels** from ECTIVE make it possible! You don't need to permanently install these lightweight, handy modules to harness the sun's energy. Instead, you can fold them up or take them with you wherever you go and set them up quickly and easily in the ideal position. This means you can operate your electrical devices and charge your batteries wherever the sun is shining.

So whether you're camping, on a trip to the lake, a weekend in the countryside or at a festival, our portable solar modules are the perfect companion for self-sufficient power generation on the go. They are also perfect for film or photo shoots far away from civilization and, of course, ECTIVE's portable modules also use monocrystalline cells, which ensure outstanding performance. The high efficiency of the individual cells is what makes the handy format and low weight possible in the first place.

Our portable solar panels come in three different series: the modules in the ECTIVE **SunBoard**, **SunDock**, **SunWallet** and **SunGrid** series each have their own special advantages. They are all robustly manufactured and easy to clean, transport and store. You are sure to find the perfect model for you, so you can start your next adventure well equipped!

ECTIVE SunBoard

S. 48 | The stylish, hinged panels in the SunBoard range are particularly robust and suitable for demanding applications. They can be transported perfectly in the included carrying bag.

4 Models (80 to 200 W)

ECTIVE SunDock

S. 50 | The modules in the SunDock range offer a practical integrated USB port to charge small devices such as cell phones or cameras with solar power without any further detours. Carrying bag included.

4 Models (60 to 200 W)

ECTIVE SunWallet

S. 52 | The ECTIVE SunWallets are particularly thin and light. When folded, they can be stowed away to save space and carried around by the integrated handle for mobile use.

3 Models (80 to 180 W)

SPACE SAVER

ECTIVE SunGrid

S. 54 | The ultra mobilen ECTIVE SunGrid solar panels are particularly efficient and can be folded down to a size ofa A4-sheet of paper. Perfect for hikes, nature photography and other outdoor activities.

3 Models (72 to 216 W)

UNLIMITED POSSIBILITIES

...with the portable solar panels from ECTIVE.

Renewable electricity for your home or garden

Many homeowners are already using the sun's energy. Tenants, on the other hand, are not allowed to install solar systems on their roofs without further ado. The mobile solar panels from ECTIVE are the perfect solution for them too: the foldable and flexible modules serve as mini solar systems for self-sufficient power supply on the balcony or in the garden. This means you are independent of the household grid and produce environmentally friendly energy yourself.

Charging batteries – simple and efficient

To charge with solar power, connect a solar charge controller between your solar panel and the battery. The ECTIVE MPPT SC 20 Silent is particularly suitable for our portable solar modules. This fully automatic and maintenance-free charge controller maximizes charging efficiency using MPPT technology, which keeps energy losses very low. This means that charging times are significantly reduced and the battery is protected. The ECTIVE MPPT SC 20 Silent is also particularly flat and compact. It is therefore easy to transport and can even be attached directly to the portable modules using Velcro straps, for example.

With this combination of solar panel and charge controller, you can generate environmentally friendly direct current that you can use to charge different types of supply batteries:

- Classic wet batteries (lead-acid batteries)
- Sealed wet batteries
- Gel and AGM batteries
- Lithium batteries

A perfect match for our portable solar modules: The **ECTIVE SC 20 Silent** solar charge controller.

USE SOLAR POWER IMMEDIATELY

Combine your portable panel with the ECTIVE BlackBox or AccuBox.

The dream team for mobile power supply

Our portable panels in combination with the **ECTIVE BlackBox** or **ECTIVE AccuBox** offer the absolute optimum in flexibility and manageability. These compact, portable all-in-one solutions for mobile power supply have an integrated MPPT charge controller and inverter. Simply connect your solar panel to one of these oversized power banks to charge the built-in lithium battery. The BlackBox and AccuBox have different connections and allow you to easily operate your electrical devices with the solar power generated.

No matter when. No matter where. No matter which device.

AC 230 volt outputs:
Electrical appliances such as Laptops or kitchen appliances

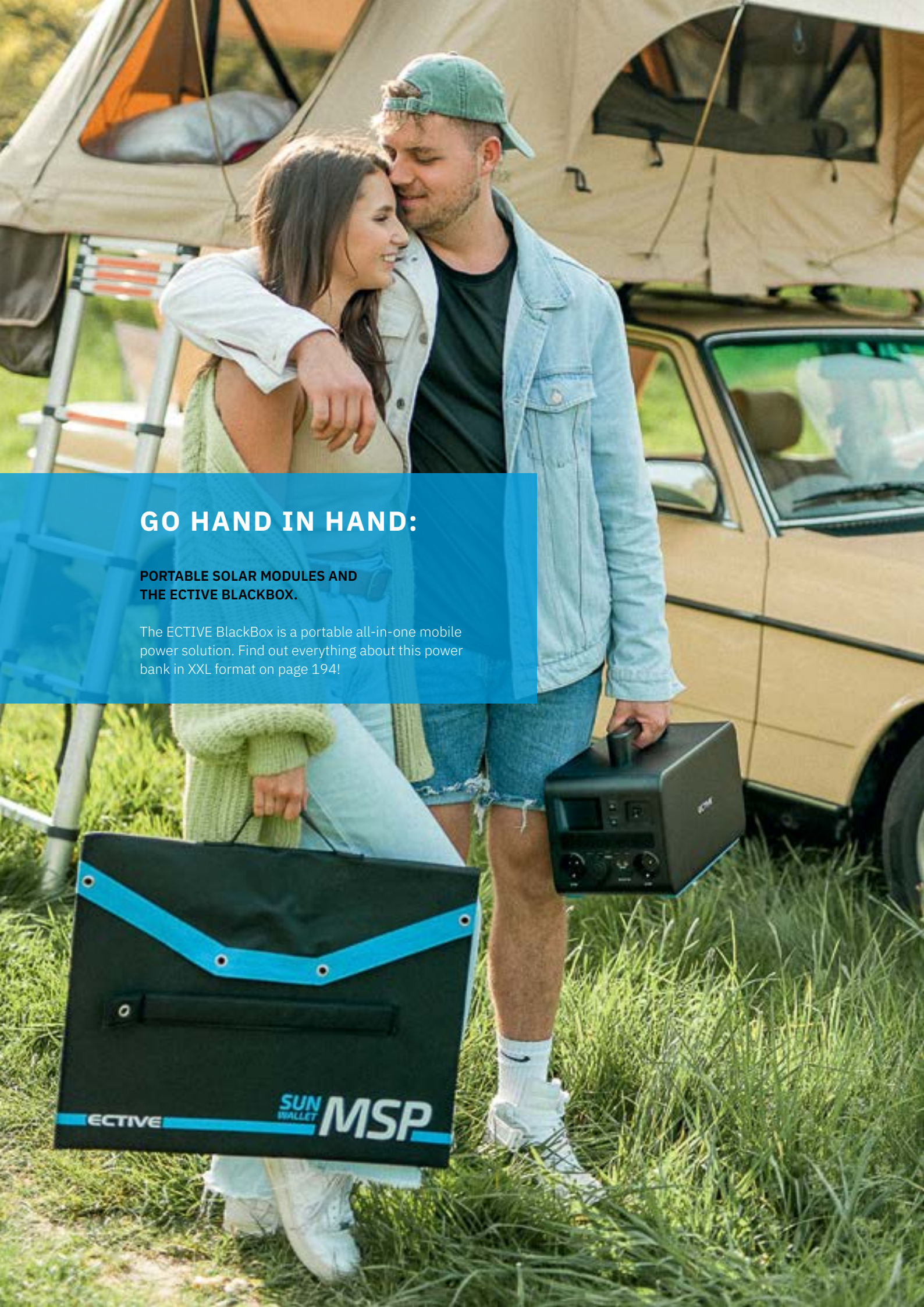
USB ports:
Smartphones, tablets, cameras, e-readers...

On-board voltage socket:
Freezers, 12-volt appliances...

DC-12-Volt Outputs:
LED lamps, laptops...

PRACTICAL TIP: THE PERFECT ANGLE

No matter what you use your panel for: The yield is always highest when the sunlight falls vertically on the cells. So you can easily adjust your module to the position of the sun from time to time to maximize the yield.



GO HAND IN HAND:

PORTABLE SOLAR MODULES AND THE ECTIVE BLACKBOX.

The ECTIVE BlackBox is a portable all-in-one mobile power solution. Find out everything about this power bank in XXL format on page 194!

ROBUST POWER SUPPLY ON THE GO

WITH THE ECTIVE ACCUBOX.

The ECTIVE AccuBox is a true all-rounder and the perfect choice for demanding outdoor activities. Find out more about this robust, powerful power source on page 198.

ECTIVE SUNBOARD

Robust and stylish, including carrying bag.

The four stylish and robust solar modules in the **ECTIVE SunBoard** series are equipped with a practical folding mechanism so you can easily take them with you in the bag provided and set them up in the ideal location. The fold-out legs ensure a secure stand and you can easily mount the perfectly compatible **SC 20 Silent charge controller** on the underside of the module. So you always have your reliable, self-sufficient power supply with you.

MSP 80 SunBoard

Rated Power (Wp) 80 W
Nominal Voltage: 19,8 V | **Rated Current:** 4,04 A
Size (Open): 1022 × 515 × 25 mm
Size (Closed): 515 × 515 × 50 mm
Weight: 4,5 kg

MSP 100 SunBoard

Rated Power (Wp) 100 W
Nominal Voltage: 19,8 V | **Rated Current:** 5,05 A
Size (Open): 1022 × 615 × 25 mm
Size (Closed): 515 × 615 × 50 mm
Weight: 5,55 kg

MSP 120 SunBoard

Rated Power (Wp) 120 W
Nominal Voltage: 18,2 V | **Rated Current:** 6,6 A
Size (Open): 1053 × 670 × 25 mm
Size (Closed): 525 × 670 × 50 mm
Weight: 6,3 kg

MSP 200 SunBoard

Rated Power (Wp) 200 W
Nominal Voltage: 19,8 V | **Rated Current:** 10,1 A
Size (Open): 1370 × 800 × 25 mm
Size (Closed): 685 × 800 × 50 mm
Weight: 9,5 kg

Useful accessories can be easily stowed in the bag.

Can be perfectly combined with the SC 20 Silent MPPT charge controller.

ECTIVE SUNDOCK

With integrated USB connection, including carrying bag.

The blue carrying handle of the **ECTIVE SunDock** modules conceals a particularly practical feature: small devices such as smartphones, tablets, navigation devices or Bluetooth speakers can be connected directly to the two integrated USB ports. This allows you to charge or operate these devices without any additional equipment: perfect for a trip or the next festival!

The SunDock series comprises four foldable models with different sizes and capacities. The smallest weighs just 2.5 kg and can be carried comfortably over longer distances using the convenient handle, while even the largest model weighs a pleasantly light 6.2 kg.

MSP 60 SunDock

Rated Power (Wp) 60 W
Nominal Voltage: 19,8 V
Rated Current: 3,03 A
Size (Open): 873 × 530 × 25 mm
Size (Closed): 440 × 530 × 45 mm
Weight: 2,5 kg

MSP 100 SunDock

Rated Power (Wp) 100 W
Nominal Voltage: 22,0 V
Rated Current: 4,55 A
Size (Open): 1040 × 675 × 25 mm
Size (Closed): 520 × 675 × 45 mm
Weight: 3,8 kg

MSP 120 SunDock

Rated Power (Wp) 120 W
Nominal Voltage: 19,8 V
Rated Current: 6,06 A
Size (Open): 1630 × 540 × 25 mm
Size (Closed): 445 × 540 × 45 mm
Weight: 4,8 kg

MSP 200 SunDock

Rated Power (Wp) 200 W
Nominal Voltage: 19,8 V
Rated Current: 10,10 A
Size (Open): 2250 × 535 × 25 mm
Size (Closed): 605 × 535 × 45 mm
Weight: 6,2 kg

Charge your small devices such as smartphone, camera, tablet etc. directly at the USB port of the ECTIVE SunDock!

ECTIVE SUNWALLET

Particularly thin and light, perfect for folding.

The particularly thin and lightweight modules in the **ECTIVE SunWallet** series are a panel and bag in one. They can be folded up to save space, stowed away and carried around using the integrated handle. Thanks to this innovative design, you don't even need a carrying bag, as there is also plenty of integrated storage space for accessories such as cables. This makes the SunWallets ideal for particularly mobile applications. Simply place or hang your SunWallet in the perfect spot and use the solar power generated wherever you are.

To charge your battery, combine the SunWallet with the compact and lightweight **SC 20 Silent MPPT charge controller**.

MSP 80 SunWallet

Rated Power (Wp) 80 W
Nominal Voltage: 20,88 V | **Rated Current:** 3,98 A
Size (Open): 1075 × 560 × 4 mm
Size (Closed): 440 × 560 × 15 mm
Weight: 1,6 kg

MSP 135 SunWallet

Rated Power (Wp) 135 W
Nominal Voltage: 22,3 V | **Rated Current:** 6,05 A
Size (Open): 1525 × 560 × 4 mm
Size (Closed): 440 × 560 × 20 mm
Weight: 2,7 kg

MSP 180 SunWallet

Rated Power (Wp) 180 W
Nominal Voltage: 22,3 V | **Rated Current:** 8,08 A
Size (Open): 1975 × 560 × 4 mm
Size (Closed): 440 × 560 × 25 mm
Weight: 4,1 kg

ECTIVE SUNGRID

Ultra-mobile solar power in DIN A4 format.

With our new **ECTIVE SunGrid** modules, we offer you an **ultra-mobile** and highly efficient way to use solar power anywhere.

With an extraordinarily high efficiency of 23%, the modules of the **ECTIVE SunGrid** series are the most efficient portable modules in our range - and in an extremely compact format: When folded, an **ECTIVE SunGrid** is about the size of a **DIN A4 sheet**. This makes it the perfect companion when space and efficiency come first. Whether camping with a tent, hiking, nature photography or a bike tour: simply fold out the SunGrid and position it using the practical **fastening eyelets**, which can be used, for example. B. also have suction cups attached. You can use the solar power generated to charge your **ECTIVE BlackBox** or use the integrated **USB ports** to independently power your small devices.

Thanks to the included bag, the ECTIVE SunGrid is not only safe and easy to transport, but also easy to store. This makes it also suitable as a reliable **backup solution for emergencies**.

The thin and light SunGrid modules are very easy to put into operation thanks to the fastening eyelets: hang them, for example. B. with suction cups directly on the side of your motorhome!

Particularly practical: The USB ports for cell phones, cameras, etc.

Particularly mobile: simply fold it up and pack it into the robust bag.

MSP 72 SunGrid

Rated Power (Wp) 72 W
Nominal Voltage: 20,0 V
Rated Current: 3,6 A
Size (Open): 934 × 578 × 5 mm
Size (Closed): 288 × 200 × 50 mm
Weight: 2,4 kg

MSP 162 SunGrid

Rated Power (Wp) 162 W
Nominal Voltage: 20,0 V
Rated Current: 8,1 A
Size (Open): 1185 × 866 × 3 mm
Size (Closed): 295 × 200 × 90 mm
Weight: 4,3 kg

MSP 216 SunGrid

Rated Power (Wp) 216 W
Nominal Voltage: 26,7 V
Rated Current: 8,1 A
Size (Open): 1744 × 866 × 3 mm
Size (Closed): 295 × 200 × 100 mm
Weight: 5,7 kg

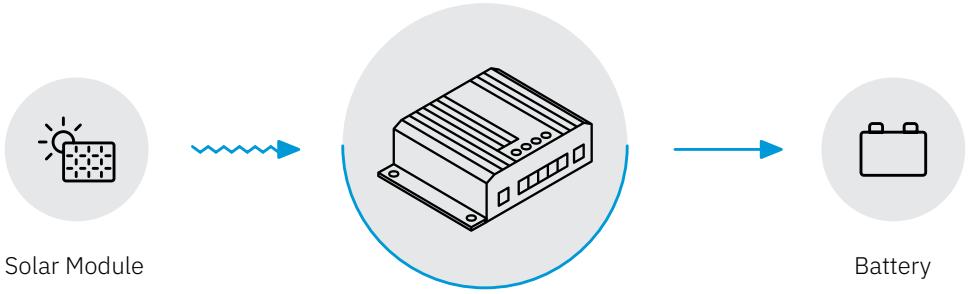
MPPT-SOLARLADEREGLER

What is a charge controller anyway?

A solar system – often referred to as an off-grid system – consists of one or more solar modules and one or more batteries in which the generated energy is stored. Another component that comes into play is the **solar charge controller**. It forms the link between your solar modules and your battery by ensuring a gentle charge. This extends the service life of the batteries. In addition, our charge controllers offer comprehensive protective functions to protect your electrical devices and your batteries even under adverse conditions or in the event of incorrect use.

ECTIVE charge controllers are technically advanced **MPPT charge controllers**. This "Maximum Power Point Tracking" technology adjusts the input voltage so that the solar system always delivers maximum power. This makes them far superior to conventional, simpler PWM controllers, which can only transfer part of the generated energy to the battery. In short: only an intelligent solar charge controller completes your off-grid system so you can use every last ray of sunlight efficiently.

You can find out which charge controller is right for you on the following pages.



PROPERTIES

- MPPT technology for optimum charging efficiency
- Conserves and protects your batteries
- Compact design for convenient installation
- Connection for temperature sensor and solar monitor
- Bluetooth module for monitoring performance data from a smartphone
- „DSC" models with additional charging output for a starter battery

CHARGE CONTROLLERS AT A GLANCE

Here you will find the right charge controller for every application.

Whether you want to charge a starter battery, have a powerful solar system or look for a particularly compact and lightweight charge controller, there is a charge controller series for every purpose in the ECTIVE range:

ECTIVE DSC

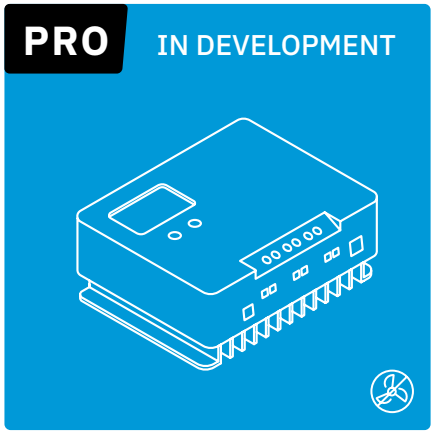
S. 60 | Charge controller with starter battery connection.

ECTIVE SC

S. 61 | Charge controller with direct current connection.

ECTIVE SC 20 Silent

S. 62 | Particularly high-voltage charge controllers for all battery types.



ECTIVE SC PRO

S. 64 | Compact, quiet portable charge controller.

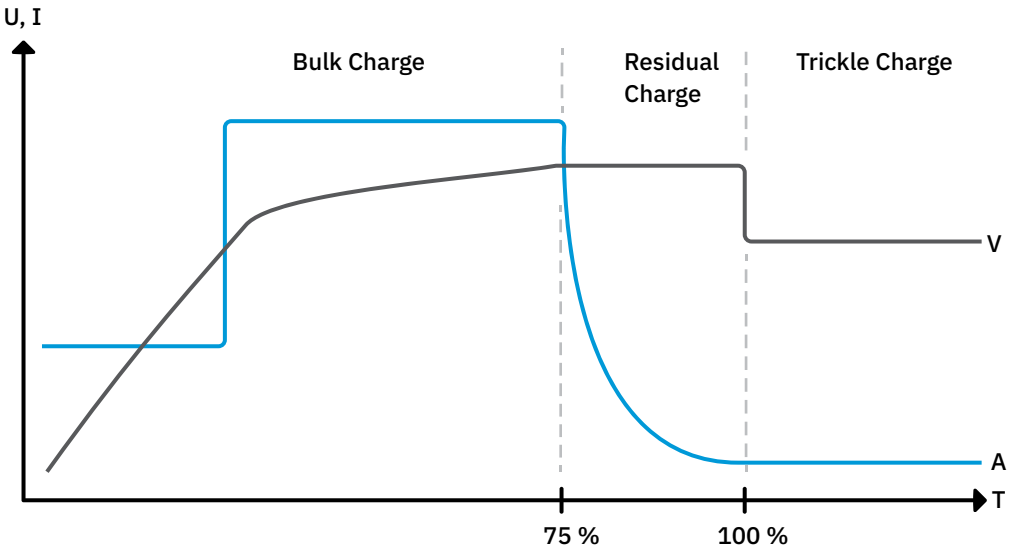
OPTIMAL CHARGING CHARACTERISTICS

Efficient and gentle charging for all battery types.

The battery that you have connected to your solar system to store energy should be charged as quickly and efficiently as possible. How exactly the optimal charging process for the battery should take place depends on the battery technology. Modern microprocessors in our charge controllers ensure that the so-called IUoU charging characteristic is permanently maintained. This way the battery is charged considerably faster and more gently than with conventional charge controllers. With the tried-and-tested DIP switches on the charge controller, you simply set which battery technology you want to use the device with. The smart charge controller does the rest and ensures optimal charging.

Our charge controllers support all common battery technologies:

- Wet batteries
- Gel batteries
- AGM batteries
- $LiFePO_4$ batteries



TIMO‘S TIP: Der richtige Laderegler

Achte bei der Auswahl deines Solarladereglers unbedingt darauf, welche Eingangsspannung das Gerät unterstützt. Schau hierzu auf die technischen Daten deiner Solarmodule. Die dort angegebene Ausgangsspannung darf die Soll-Eingangsspannung des Ladereglers nicht übersteigen. Nutzt du mehrere Module, dann achte auf die Gesamtspannung aller miteinander verbundenen Module.

PROTECTIVE FUNCTIONS

This is how your ECTIVE charge controller secures your system.

All MPPT solar charge controllers from ECTIVE are equipped with versatile protective functions to ensure safe, unmonitored operation.

- **Overload Protection**
  The charge controller protects against excessive input and output loads.
- **Overcharge Protection**
  Damage to your battery due to overcharging is reliably prevented.
- **Protection against Overheating**
  Permanent temperature monitoring ensures that the charge controller and battery do not exceed their operating temperature.
- **Protection against Reverse Polarity**
  The charge controller only works if the positive and negative cables are connected correctly. The battery and charger are therefore always optimally protected.
- **Protection against Reverse Discharge**
  If the solar power is too low, the charge controller prevents the current flowing back from the battery and thus prevents discharging.

DSC MPPT CHARGE CONTROLLERS

Charge controller with starter battery connection.

The “D” in the **ECTIVE DSC** series stands for “Dual”: in addition to the regular connection for your main supply battery, these models have an additional charging output for vehicle starter batteries. This is a clear advantage if, for example, you want to stay in one place with your motorhome for a longer period of time. Depending on the age and condition of your starter battery, even short periods of inactivity without such a charge can mean that your vehicle will no longer start reliably after the inactivity phase.

DSC 12

Max. solar power: 165 Wp
Max. solar current: 10 A
Max. solar voltage: 50 V
Battery voltage (DC): 12 V
Size: 147 × 80 × 41 mm
Weight: 0,34 kg

DSC 25

Max. solar power: 350 Wp
Max. solar current: 21 A
Max. solar voltage: 50 V
Battery voltage (DC): 12 V
Size: 147 × 80 × 41 mm
Weight: 0,40 kg

DSC 35

Max. solar power: 500 Wp
Max. solar current: 35 A
Max. solar voltage: 50 V
Battery voltage (DC): 12 V
Size: 147 × 158 × 41 mm
Weight: 0,76 kg

Anschlüsse für:

- Solarmonitor
- Temperatur Sensor
- Bluetooth-Modul
- Starterbatterie

SC MPPT CHARGE CONTROLLERS

Charge controller with direct current connection.

The larger charge controllers in the **ECTIVE SC** series support higher maximum solar module output, nominal battery voltage and charging current than the models in the DSC series.

They also have an integrated DC connection, which you can use to operate small 12 V consumers such as fans, car relays or even a small refrigerator with a D+ control input.

SC 20

Max. Solarmodulleistung: 240/480 Wp
Max. solar current 20 A
Max. solar voltage 50 V
Battery voltage (DC): 12/24 V
Size: 147 × 130 × 41 mm
Weight: 0,50 kg

SC 40

Max. Solarmodulleistung: 480/960 Wp
Max. solar current 20 A
Max. solar voltage 50 V
Battery voltage (DC): 12/24 V
Size: 147 × 158 × 41 mm
Weight: 0,77 kg

Connections for:

- **Solar monitor**
- **Temperature sensor**
- **Bluetooth module**
- **12 V consumer**

SC 20 SILENT MPPT CONTROLLER

Compact, quiet, portable.

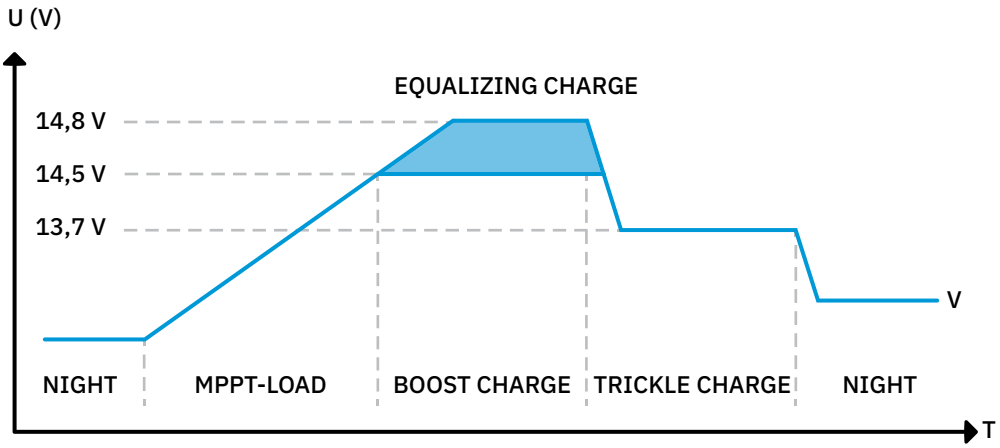
With its compact, flat design, the **SC 20 Silent** MPPT solar charge controller is a practical companion for on the go. The handy and simple use is rounded off by comprehensive protection functions, connection options for a temperature sensor, an LED status display and a four-stage charging process. Thanks to its fanless design, the SC 20 Silent offers quiet and safe operation.

Combine the SC 20 Silent with our portable solar modules from the **SunBoard**, **SunDock** and **SunWallet** series for power supply on the go. Particularly practical with the ECTIVE SunBoard series: the SC 20 Silent can be conveniently stowed between the folded panels for transportation. When in use, you can simply attach it to the desired position on the inside of the module using the Velcro fasteners supplied.

SC 20 Silent

Max. solar module output: 260 / 520 Wp
Max. solar module current: 20 A
Max. solar module voltage: 55 V
Battery voltage (DC): 12/24 V
Dimensions: 164 × 107 × 32 mm
Weight: 0,70 kg

Four-stage charging process



YOUR PORTABLE SOLAR SYSTEM

CAN BE PERFECTLY COMBINED WITH PORTABLE SOLAR PANELS

The ECTIVE SC 20 Silent is perfect for use with our foldable and collapsible solar modules. This gives you a compact, portable solar system that makes it easy to charge your batteries on the go. For example, the SC 20 Silent fits perfectly between the folded panels of the ECTIVE SunBoard modules!

MPPT CONTROLLER SC PRO

A new charge controller for higher performance and full control

WE DEVELOP SOMETHING NEW...

In the ECTIVE laboratory we are constantly working on new products to offer you a more efficient, safer and more convenient self-sufficient power supply! We constantly develop our existing products with exactly the same care.

We are currently working on the MPPT solar charge controllers from the **SC PRO** series and are working on the **highest-voltage** charge controllers in the ECTIVE range to date.

These charge controllers are characterized by the fact that they can process particularly high solar voltages - in the case of the SC 60 PRO up to 150 V! In addition, two identical SC PRO charge controllers can be **linked togethe**r and effectively use twice as many solar modules. The devices coordinate with each other and charge your batteries particularly quickly and efficiently. By the way, the battery technology doesn‘t play a role because the SC PRO has **charging characteristics for every conventional type**.

The models in the SC PRO series are also impressive in their application: thanks to the cooling fins, they do not require a fan and therefore do not cause any noise during operation - particularly practical if you want to install your charge controller in an interior!

You can easily read data such as charging current and battery capacity on the LCD display. Or you can easily connect your charge controller to the app on your smartphone or tablet and keep an eye on all the relevant values of your solar system.

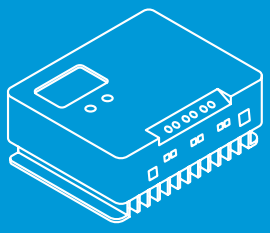
Thanks to the practical **DC output**, you can also easily operate 12 or 24 V consumers. The SC 60 PRO even supplies 36 or 48 V DC consumers.

The simple and reliable application is rounded off by versatile **safety mechanisms** that protect against short circuits, overcharging, overheating or reverse polarity.

We are looking forward to offering these new products in our shop on ective.de soon!

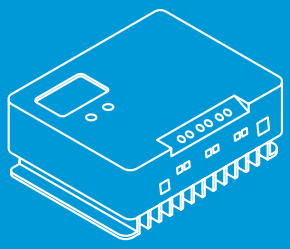
Connections for:

- **Temperature sensor**
- **DC consumers (max. 20 A. 12 or 24 V; SC 60 PRO: 12, 24, 36 or 48 V)**
- **Coupling two identical SC PRO charge controllers (parallel charging)**



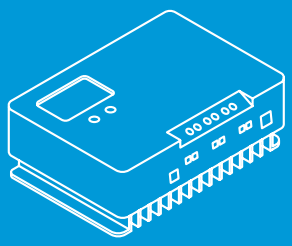
SC 20 PRO UNDER DEVELOPMENT

Max. solar module power: 300/600 Wp
Max. solar current 20 A
Max. solar voltage 100 V
Battery voltage (DC): 12/24 V
Size: 180 × 140 × 71 mm
Weight: 1,0 kg



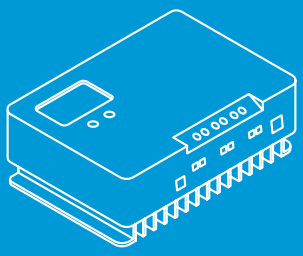
SC 30 PRO UNDER DEVELOPMENT

Max. solar module power: 450/900 Wp
Max. solar current 30 A
Max. solar voltage 100 V
Battery voltage (DC): 12/24 V
Size: 245 × 180 × 82,5 mm
Weight: 2,0 kg



SC 40 PRO UNDER DEVELOPMENT

Max. solar module power: 600/1200 Wp
Max. solar current 40 A
Max. solar voltage 100 V
Battery voltage (DC): 12/24 V
Size: 245 × 180 × 82,5 mm
Weight: 2,0 kg



SC 60 PRO UNDER DEVELOPMENT

Max. solar module power:
900/1800/2600/3200 Wp
Max. solar current 60 A
Max. solar voltage 150 V
Battery voltage (DC): 12/24/36/48 V
Size: 280 × 210 × 90 mm
Weight: 3,0 kg

EXPAND YOUR SOLAR SYSTEM

These practical components optimize your solar system.

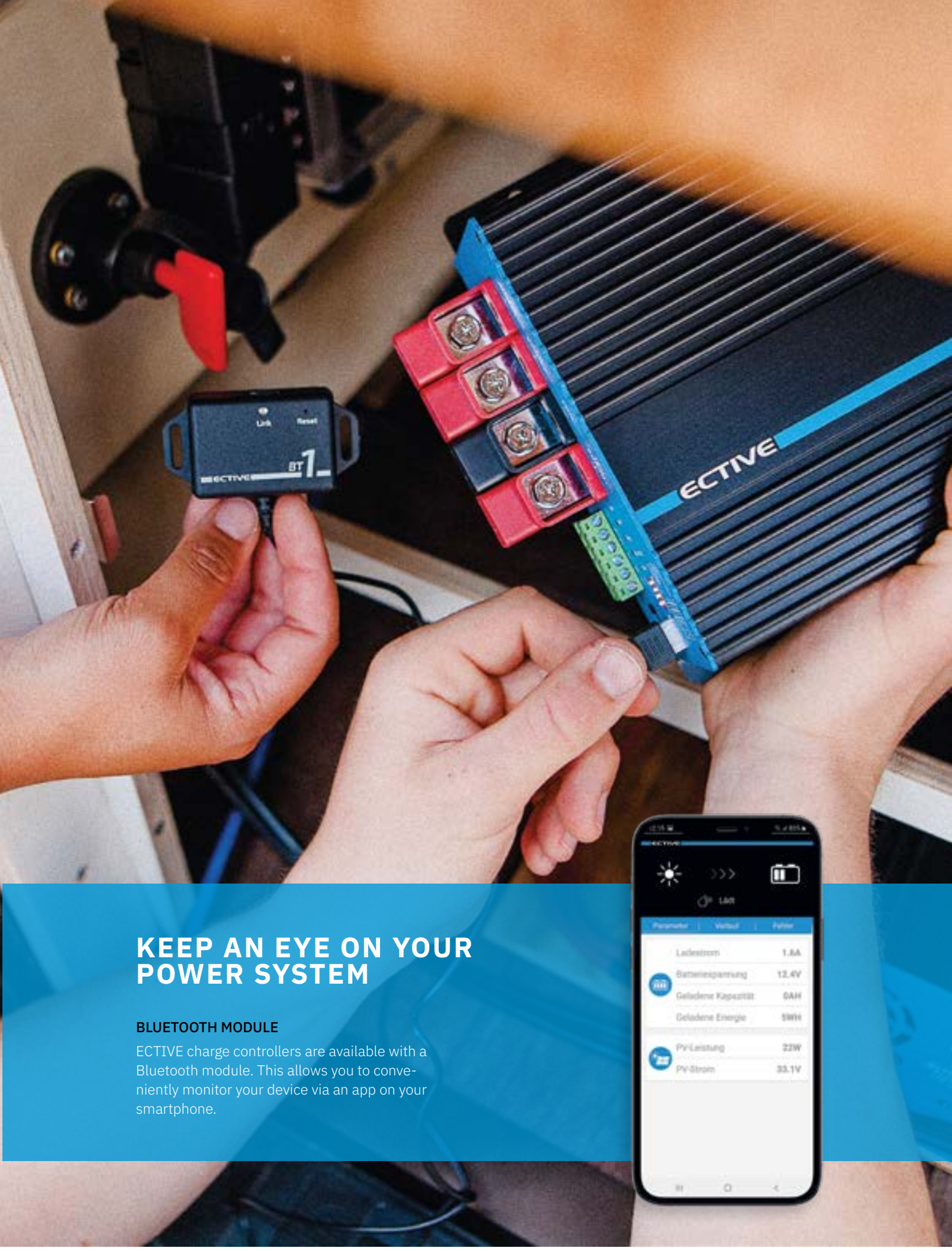
You can achieve optimal efficiency and operability by adding useful accessories to your solar system. With the **ECTIVE solar monitor**, you can always keep an eye on all the values of your solar system. The **ECTIVE battery temperature sensor** also optimizes the charging characteristic of the charge controller based on the current temperature of the battery.

You can round off your solar system with an **ECTIVE inverter**. This enables you to operate your electrical devices directly with solar power. If you already have an **ECTIVE SI** or **CSI** inverter, an MPPT charge controller is the perfect addition. This allows you to continue using solar energy in the future and saves you having to purchase a new inverter. If you do not yet have an inverter or charge controller, take a look at the **ECTIVE SSI** series inverters. An MPPT charge controller is already integrated in this practical all-in-one solution!

ECTIVE Solar Monitor
Connect the ECTIVE solar monitor to your charge controller to keep an eye on all the values of your solar system in real time.

Battery Temperature Sensor
Add the ECTIVE battery temperature sensor to your charge controller. This optimizes the charging characteristic based on the current battery temperature.

Inverter
Operate your electrical loads directly with solar power.
You can find out whether the ECTIVE SI, CSI or SSI is the right one for you from P. 162.



KEEP AN EYE ON YOUR POWER SYSTEM

BLUETOOTH MODULE

ECTIVE charge controllers are available with a Bluetooth module. This allows you to conveniently monitor your device via an app on your smartphone.

SOLAR ACCESSORIES

Get the most out of your solar system!

Our range includes numerous **accessories** so that you can set up and operate your solar system in the best possible way. From high-quality adapters and distribution cables to easy-to-install **retaining spoilers** and an elegant and helpful **solar monitor**: with accessories from ECTIVE, you can get the most out of your solar system.

ECTIVE SM SOLAR MONITOR

Your solar system – in full view.

With our **solar monitor**, you can add a really useful tool to your solar system. Simply connect the solar monitor to an ECTIVE MPPT solar charge controller and use it to monitor all relevant performance values. The device is compact and elegant, making it easy to install anywhere. The illuminated display is easy to read in all lighting conditions and always shows you all relevant data on the performance of your solar system and the charge status of the connected battery. The intelligent monitor automatically switches to energy-saving standby mode to avoid unnecessary power consumption. A quick press of the button shows you all the information at a glance.

ECTIVE SM 1

Nominal battery voltage: 12 / 24 V
Operating voltage range: 8 to 32 V
Display function: W, A, V, Ah, Wh
Display area: 51× 30 mm
Dimensions: 90 × 90 × 30 mm
Weight: 0,10 kg
Cable length: 5 m

The ECTIVE SM 1 keeps you up to date about all relevant values of your solar system:

- **Charging current**
  What current is your battery currently being charged with?
  A glance at the display will tell you.
- **Solar power**
  How much power are your solar modules currently generating? This display keeps you permanently informed.
- **Battery voltage**
  The voltage display keeps you informed about the status of your battery.
- **Charge quantity**
  How much energy was charged from your solar panels into the battery? You can find out here.

ECTIVE MOUNTING KITS

For safe and easy installation of your solar modules.

With our mounting profiles, you can easily and securely attach your ECTIVE MSP or SSP solar modules to the roof of your camper. The profiles are made of unbreakable plastic and provide additional weight savings thanks to their stable yet lightweight design.

Simple installation for a secure hold

The dimensions of the profiles are perfectly matched to the aluminum frames of the solar modules. This ensures a secure hold and clean installation of your panels. Simply attach the profiles with special body adhesive. Then attach the panels to the profiles with screws so that everything is securely connected.

Practical sets for every project

You can order the long and short rail profiles in pairs, the corner profiles are available as a set of 4. We have also put together complete sets that include corner profiles, long or short rail profiles and a cable socket. Now all you have to do is choose whether the black or white profiles are better suited to your camper.

Extra tip: adapters and distributors

With our high-quality connection adapters and distributors, you can set up your ECTIVE solar system quickly and exactly as you want it. Find out more about our range at ective.de!

4 × Corner profiles

Dimensions (L × W × H):
150 × 150 × 65 mm

2 × Short retaining spoilers

Dimensions (L × W × H):
180 × 89 × 65 mm

2 × Long retaining spoiler

Dimensions (L × W × H):
534 × 89 × 65 mm

Roof duct

Dimensions (L × W × H):
100 × 90 × 45 mm

7-piece complete set (short)

7-piece complete set (long)

All sets are available in
black and white color.


MSP

SOLAR POWER IN THE ECTIVE ECOSYSTEM

This is how you use the generated solar power.

As you can see, with our comprehensive range of solar power products, you can put together a solar power system exactly according to your wishes and needs. Whether on your camper, boat, the balcony of your rented apartment or even portable: ECTIVE solar panels provide you with exactly the power you need for your adventures. So you are self-sufficient and mobile and always on the safe side thanks to reliable, efficient and durable components. But what exactly happens to the solar power you generate? On the following pages, you will find out which **solar storage battery** is perfect for your plans, how to operate electrical devices with the help of an inverter and which practical **all-in-one solutions** exist for ultimate independence and mobility. and mobility. All this, of course, with reliable products from ECTIVE.

ECTIVE Power supply you can rely on.

SUPPLY BATTERIES

NEW: LiFePO$_4$ Boat Batteries

S. 122 ECTIVE LC Marine LT


LiFePO4 LITHIUM BATTERY
12.8 V | 100 Ah | 1280 Wh
-30°C
LC100

STARTER BATTERY AND SUPPLY BATTERY

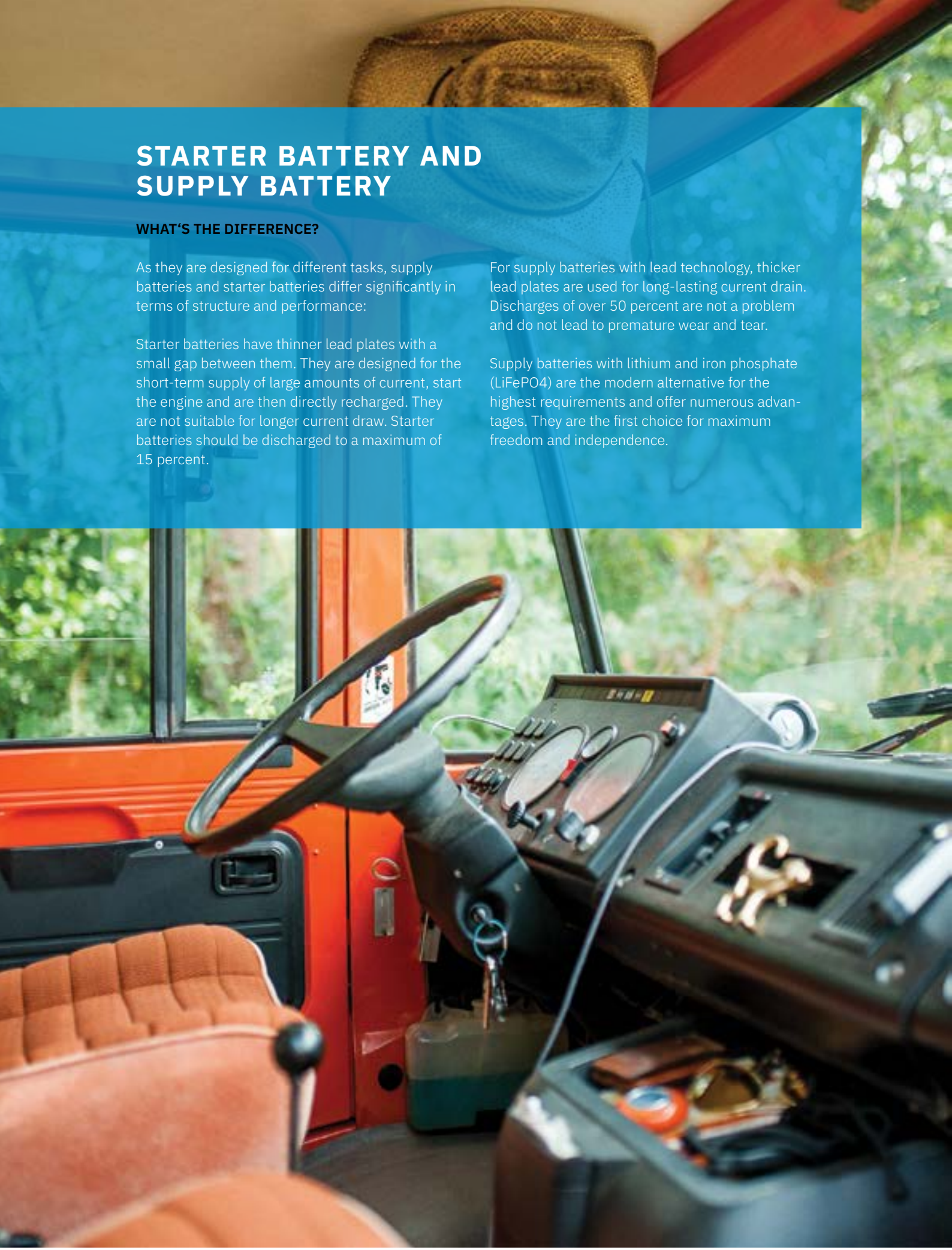
WHAT'S THE DIFFERENCE?

As they are designed for different tasks, supply batteries and starter batteries differ significantly in terms of structure and performance:

Starter batteries have thinner lead plates with a small gap between them. They are designed for the short-term supply of large amounts of current, start the engine and are then directly recharged. They are not suitable for longer current draw. Starter batteries should be discharged to a maximum of 15 percent.

For supply batteries with lead technology, thicker lead plates are used for long-lasting current drain. Discharges of over 50 percent are not a problem and do not lead to premature wear and tear.

Supply batteries with lithium and iron phosphate (LiFePO4) are the modern alternative for the highest requirements and offer numerous advantages. They are the first choice for maximum freedom and independence.



ECTIVE SUPPLY BATTERIES

What is a supply battery and why do I need it?

Every car has a **starter battery**. When the vehicle is started, this supplies the electrical energy for the engine's starter motor and also powers various consumers such as emergency lighting, the clock or the radio when the vehicle is stationary. The starter battery is charged while driving with the help of the vehicle's alternator. However, if you want to operate other electrical devices, for example in a stationary motorhome, then the starter battery is a very poor choice for the power supply: because if it is discharged, the vehicle is stranded for the time being and you are dependent on external charging or external jump-starting assistance.

This is where the **supply battery** comes into play. As the name suggests, a supply battery supplies electrical consumers with power. This allows you to use your devices even if your vehicle is parked away from campsites with access to shore power. This allows you to operate essential consumers such as the water pump or lighting, and even use devices such as televisions, notebooks or a coffee machine. ECTIVE supply batteries are largely maintenance-free, durable, reliable and safe. This means you are independent when traveling by boat or camper without having to give up the comforts of home.

However, there are a few things to consider when choosing the right supply battery. The type of electrical consumers and the total power requirement are decisive in determining which model is best suited to your purposes. There are also concerns such as the space available and the weight of the battery. It is therefore important to select a model with the right **battery technology** and optimum technical features.

To make your choice easier and help you find the perfect supply battery, we present the features and specific advantages of the different ECTIVE batteries on the following pages.

ECTIVE Battery Technologies:

AGM

AGM Batteries

S. 91 | Batteries for power-intensive devices

Gel

Gel Batteries

S. 100 | The solution for smaller consumers

LFP

Lithium Batteries

S. 108 | Advanced premium batteries

+

Accessories

S. 126 | Get everything out of your battery!

THE RIGHT BATTERY TECHNOLOGY

Wet, AGM, Gel or Lithium?

When choosing your supply battery, there are two key questions: Firstly, of course, you need to know how much power you actually need to operate your devices. But before you think about the **capacity** of your future battery, you should consider the more fundamental question of **battery technology**. Batteries can be constructed in very different ways and their function can even be based on different chemical reactions. Some battery types are therefore better suited to certain applications, while others are better suited to other uses. Once you have decided on a technology, our calculation tool will help you to determine your actual power requirements and then select a specific model for you.

So what are the different battery technologies, how do they differ and which one is right for you? You can find the answers here:

ECTIVE offers high-quality batteries with three different underlying technologies:

- AGM batteries
- Gel batteries
- Lithium batteries

Lead-acid batteries have been the standard for decades. More advanced, valve-regulated lead-acid batteries with VRLA technology have been developed from the classic, so-called **wet battery**: **AGM** and **gel batteries**. Nowadays, however, modern **lithium batteries** are considered the measure of all things.

Your individual requirements determine which supply battery is perfect for your motorhome or boat. Especially in the area of self-sufficient mobility, it is worth investing in safer and longer-lasting AGM and gel batteries compared to conventional wet batteries. This is particularly the case if you want to connect devices with high power consumption via an inverter.

For the highest demands, however, there is no way around lithium batteries. You can discharge them deeper without the risk of damage, so you can also choose a battery with a lower capacity. ECTIVE LiFePO4 lithium batteries also take up less space, weigh much less and are completely safe. The higher purchase price also pays off over the years, as they last almost 20 times longer than classic wet batteries.

THE OPTIMUM TECHNOLOGY FOR EVERY APPLICATION

Which battery technology is suitable for what?

A good first approach to choosing battery technology is to ask yourself what you intend to do with the battery and in what context it will be used. The following overview will give you an idea of which battery technology is best suited for which purposes and applications and how it is superior to conventional wet batteries. As you can see, no matter what you have in mind or which consumers you want to power on your upcoming adventures, ECTIVE has the right battery for your next trip.

Application | Technology	Wet	AGM	Gel	$LiFePO_4$
On-board power supply	★	★★	★★	★★★
Wind/solar system	★	★	★★	★★★
UPS systems, alarm systems	★	★★	★★	★★★
Series connection	★★	★★	★★	★★
Parallel connection	★	★★	★★	★★★
Shelf life	★	★★	★★	★★★
Charging time	★	★	★★	★★

ECTIVE auf YouTube youtube.com/@ective_strom

BATTERY TECHNOLOGIES IN COMPARISON

How to choose the technology for your DIY project.

Depending on your needs and power requirements, AGM, Gel or LFP could be the right choice.

FOCUS ON BATTERY TECHNOLOGIES

The advantages and disadvantages of the different battery technologies.

Wet batteries

Technically simple and therefore particularly inexpensive – wet batteries are often used as low-cost entry-level models. However, these conventional batteries quickly reach their limits, especially in mobile power supply and self-sufficiency, where safety, high cycle numbers and very specific consumer requirements play a major role.

In order to meet these special requirements, ECTIVE will only offer the more advanced technologies in future:

AGM batteries (P. 91)

„AGM“ stands for „Absorbant Glass Mat“. This is a glass fiber fleece that binds the electrolyte inside the battery like a sponge. As a result, AGM batteries are leak-proof, gas-free and can also be installed in inclined positions. AGM batteries can also deliver a significantly higher current at short notice for power-intensive consumers. With their high cycle stability, they also offer an outstanding price-performance ratio. They also have excellent high-current properties, reliably supply even demanding devices with power and can also be recharged more quickly.

The advanced ECTIVE DC-S models offer even higher cycle numbers and are therefore particularly suitable for use in the commercial sector or for use with a solar system.

Gel-Batterien (S. 100)

Due to the addition of silica, the electrolyte in these batteries has a gel-like consistency. This means that the batteries cannot leak and are insensitive to vibrations. While AGM batteries with their excellent high-current properties are particularly suitable for demanding consumers, gel batteries score points when used with simpler, permanently running devices with lower power requirements. They also have more cycles and a longer service life than AGM batteries.

The ECTIVE range includes different series of gel batteries: In addition to the standard models in the DC range, the DC-S models offer increased cycle stability, while the DC-SC batteries even have 12 V direct connections for consumers as well as an integrated solar charge controller. This means you can easily operate simple consumers such as an LED lighting system and connect the battery directly to a solar panel for charging. And if space is at a premium in your vehicle: with their slim housing, the „Slim“ models fit into previously unused corners of the vehicle and can therefore save valuable space.

Lithium-Batterien (S. 108)

While wet, AGM and gel batteries are lead-acid batteries and therefore all function very similarly, modern lithium batteries use a completely different chemical process. Thanks to this advanced technology, lithium batteries can be designed to be much smaller and lighter than conventional batteries with the same capacity.

The batteries from ECTIVE are a particularly advanced version of lithium batteries, namely lithium iron phosphate accumulators ($LiFePO_4$). These are extremely safe, gas-free and extremely cycle-resistant, meaning they have a particularly long service life. Another huge advantage is that they offer a constant power output until they are almost completely discharged – so you can really make full use of the specified capacity.

Lithium batteries are also impressive across the board in terms of their application: they are maintenance-free, have shorter charging times and have an integrated battery management system (BMS) that protects and optimizes the battery.

For ultimate convenience and special situations, the ECTIVE range offers special series with extra functions. The batteries with the suffix „BT“ in the model name have a Bluetooth

function that allows you to monitor the status of your battery from your smartphone or tablet. The BT+LT models are also suitable for operation under „low temperature“ conditions: They can be charged even in extreme conditions of up to –30°C. And the space-saving „Under Seat“ models can be easily installed under the passenger seat.

Feature | Technology	Wet	AGM	Gel	$LiFePO_4$
Usable capacity	50 %	55 %	65 %	100 %
Number of cycles	ca. 400	500 to 600	700 to 800	> 3000
Working temperature range	–15 to 50 °C	–20 to 40 °C	–20 to 60 °C	–20 to 50 °C
Charging temperature range	0 to 40 °C	0 to 40 °C	–20 to 50 °C	–30 to 45 °C
Warranty	2 Years	2 Years	2 Years	5 Years
Constant power output	★	★	★	★★★
Weight	🏋🏋🏋	🏋🏋🏋	🏋🏋🏋	🏋
Leak-proof	✗	✓	✓	✓
Battery Management System	✗	✗	✗	✓
Maintenance effort	⚙⚙	⚙⚙	⚙⚙	⚙

Now you know all about the different battery technologies and their advantages and disadvantages. Which technology you choose will of course depend on your plans and requirements. The next step is to determine your power requirements so that you can select the right model with the required capacity.

THE RIGHT MODEL

When choosing a battery, capacity, voltage and dimensions are particularly important.

Your power requirements

Now that you are well informed about the possible battery technologies, the question arises as to the required capacity that your future battery must provide. This value, which is given in ampere-hours (Ah), depends on the power consumption of the connected devices. Use the following simple steps to calculate your requirements:

First, determine the power consumption of one of your consumers using the rating plate or manual. Divide this value by the battery voltage you want to use:

Power consumption in watts / **Battery voltage in volts** = **Required current in amperes**

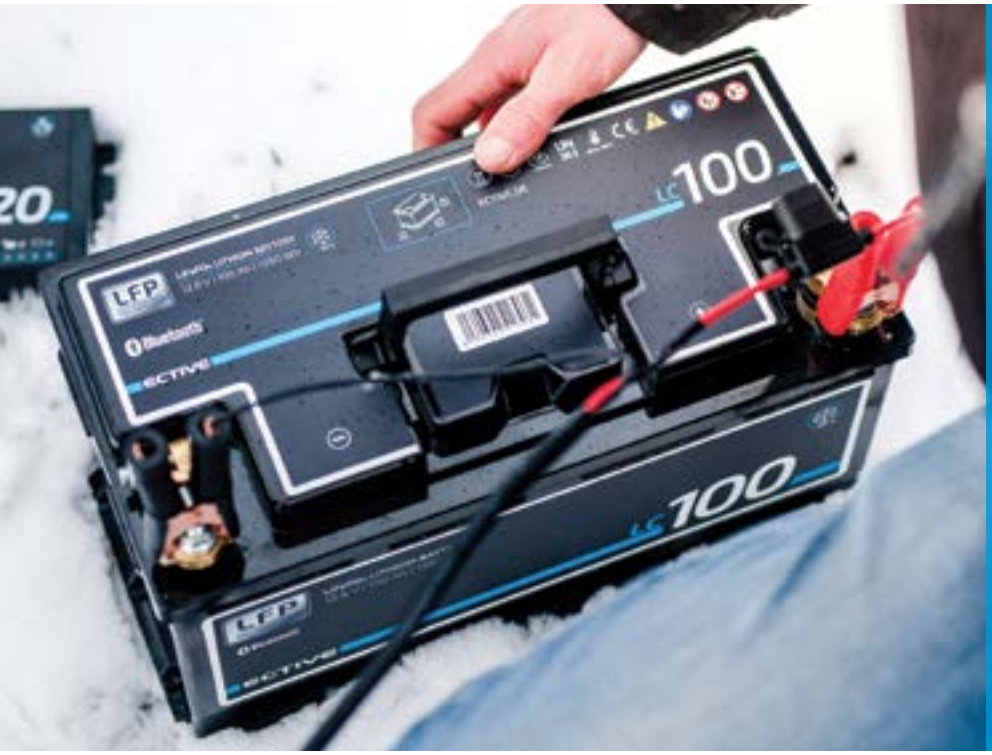
Next, multiply this value by the amount of time (in hours) you want to use the device every day. This will give you the required capacity:

Required current (A) × **Switch-on time** (h) = **Required capacity** (Ah)

Carry out these steps for all your loads and then add up the capacities of all your loads. To be on the safe side, you should calculate the nominal capacity of your battery at 1.5 times the total:

Required battery capacity (Ah) = **Capacity of all consumers** (Ah) × **1,5**

To find the perfect battery, compare your total requirements with the battery capacities of the technology and series you have chosen. The battery whose capacity is **closest to your requirements** is the best choice for your purposes.



PRACTICAL TIPS

The safety reserve is particularly important for lead-acid batteries, as you must not discharge them deeply. With lithium supply batteries, you can almost fully utilize the capacity.

Make sure you make a realistic estimate of how long you want to supply your consumers with self-sufficient power.

If the supply battery is charged using solar power, you need to factor in a reserve for bad weather.

CALCULATE THE REQUIRED CAPACITY

This will tell you which battery you need for your consumers.

Example calculation

In a boat or caravan, numerous appliances such as the radio, TV, heating, refrigerator and hairdryer require a reliable power supply. The required capacity of the respective devices is calculated as follows:

Consumers	Demand	Hours (daily)	Required current	Required capacity
TV	50 W, 12 V	2 h	50 W / 12 V = 4,2 A	4,2 A × 2 h = **8,4 Ah**
Charger	40 W, 230 V	1 h	40 W / 12 V = 3,33 A	3,33 A × 1 h = **3,33 Ah**
Hair dryer	1200 W, 230 V	0,2 h	1200 W / 12 V = 100 A	100 A × 0,2 h = **20 Ah**
Refrigerator	120 W, 12 V	6 h	120 W / 12 V = 10 A	10 A × 6 h = **60 Ah**

These values add up to the required total capacity:

8,4 Ah + **3,33 Ah** + **20 Ah** + **60 Ah** = **91,73 Ah**

If you now take into account the safety reserve (factor 1.5), this results in a value of **137.6 Ah**.

So you choose the model with the next highest capacity. In this scenario, for example, the **ECTIVE DC 150 AGM battery** would be a good choice (the „150“ in the model name stands for 150 Ah!), or if you want to use an advanced lithium battery, the **LC 150 L**.

Note: These figures are only an example. For your calculation, check the power consumption and voltage of the devices you are using and estimate the switch-on time realistically! You will find a calculation aid for your personal requirements on the next page.

Once you have determined your power requirements, it is worth considering whether you have any **space constraints** in your vehicle. Are you running out of space with all your equipment in the camper or boat? Or do you know of any niches that are difficult to access that you haven‘t been able to use yet? Then you should definitely take a look at our **slim models**. These slim batteries are designed to be installed in a space-saving manner and fit into previously unused storage space. Is a console for a supply battery fitted under your passenger seat? Then take a look at our **LC Under Seat** batteries, which can be easily installed there to save space.

THE SPECIAL FORM FACTOR

One of the trickiest challenges when converting a camper van is optimising the use of space. We have developed our powerful slim and under-seat batteries so that you can utilise every niche and every otherwise unused space. This means your power supply runs safely, efficiently and completely behind the scenes.


150L

YOUR POWER REQUIREMENTS

You can use this table to easily calculate your requirements.

Consumers	Wattage (W)	Required current (A = W / voltage of the battery in V)	Operating time per day (h)	Required capacity (Ah = A × h)
Light: Sleeping area				
Light: Seating area				
Light: Kitchen				
Light: Bathroom				
Light: Alcove				
Light: Other				
Refrigerator				
Pump (fresh water)				
Pump (waste water)				
Ventilation (kitchen)				
Ventilation (toilet)				
Ventilation (bathroom)				
Other				
Television				
Radio				
Heating				
Boiler				
Mixer				
Coffee machine				
Hair dryer				
Shaver				
Smartphone				
Laptop				
Tablet				
			Total Ah per day:	

YOUR CIRCUIT DIAGRAM & NOTES

Make a sketch of your power supply and write down your ideas!

Your Excel electricity demand calculator

Do you prefer digital? On our website you will find an **Excel template** in which all the necessary fields and formulas are already created to determine your electricity needs. Simply download, fill out and configure your desired power supply!

ective.de/strombedarf-richtig-berechnen

THE LARGE NUMBER ON THE ECTIVE BATTERY

Once you have decided on a battery technology and determined your daily power requirement in ampere hours – important: including safety reserve! – then it's easy to choose the right ECTIVE battery. The large number on each battery indicates its capacity in ampere hours. This means that you simply select the battery with the capacity that exceeds your power requirement and you're ready to go!

EXAMPLE

The ECTIVE LC 100 would be sufficient for a daily power requirement of up to 100 Ah.


ECTIVE

TIMO'S TIP: Is gel or AGM technology better for me?

As is so often the case, there is no simple right or wrong answer to this question. However, the following tips will usually get you closer to the answer quickly: AGM batteries are ideal for particularly power-intensive consumers, such as coffee machines, hair dryers, kettles or air conditioners, as they are better designed to deliver high currents. Batteries with gel technology, on the other hand, show their advantages above all when they are frequently charged and discharged, i.e. the number of charging cycles is very high. Typical scenario: You mainly use consumers that are less power-intensive, such as a TV or a mobile cooler, and recharge your battery frequently or regularly with the help of your solar system.

ECTIVE AGM BATTERIES

The solution for demanding consumers.

AGM batteries represent an excellent compromise between safety, flexibility, cycle stability and a favorable price. The glass fiber fleece inside the battery („Absorbant Glass Mat“, AGM for short) binds the electrolyte like a sponge. This means that the batteries can also be installed in an inclined position and cannot leak even if damaged. They are also gas-free and therefore suitable for installation indoors. Our new DC AGM Slim models are particularly suitable for this, as their slim form factor allows them to be installed in a particularly space-saving manner. The safety of AGM technology during operation is complemented by high cycle stability and the corresponding longevity. AGM batteries are also characterized by shorter charging times and significantly better high-current properties, especially in comparison with gel batteries: This means they also reliably supply power to demanding devices. And all this at an excellent price-performance ratio.

SC AGM

S. 92 | Solid AGM batteries that can also be used as starter batteries.

DC AGM

S. 93 | High-quality deep cycle AGM batteries with special cycle stability.

DC AGM Slim

S. 94 | Space-saving AGM batteries with a particularly slim form factor.

DC S AGM

S. 96 | Deep cycle batteries with smart display and integrated refill packs.

ECTIVE SC AGM

The entry-level AGM batteries.

The **SC series** represents the entry-level models of the ECTIVE AGM batteries. With the glass fiber fleece installed inside, these batteries are reliable, vibration-proof, leak-proof, gas-free and impress with a solid service life at reasonable prices. The SC models can also be used as starter batteries in cars or boats.

SC 80 AGM

Capacity: 80 Ah
Cycles (DoD 50 %): 500
Size: 278 × 175 × 190 mm
Weight: 20,70 kg

SC 95 AGM

Capacity: 95 Ah
Cycles (DoD 50 %): 500
Size: 315 × 175 × 190 mm
Weight: 23,10 kg

SC 110 AGM

Capacity: 110 Ah
Cycles (DoD 50 %): 500
Size: 353 × 175 × 190 mm
Weight: 26,90 kg

SC 120 AGM

Capacity: 120 Ah
Cycles (DoD 50 %): 500
Size: 392 × 175 × 190 mm
Weight: 29,50 kg

Technical Specifications

Usable Capacity: ca. 50 %
Voltage: 12 V
Temperature Range: –20 to 40 °C
Charging Temperature: 0 to 40 °C

Cycles (30 % DoD): 800
Cycles (50 % DoD): 500
Cycles (80 % DoD): 300
Cycles (100 % DoD): 200

ECTIVE DC AGM

High-quality deep-cycle AGM batteries.

The **Deep-Cycle Models** of the ECTIVE AGM batteries are particularly cycle-resistant and are therefore especially recommended if you want to operate particularly power-intensive consumers in your motorhome or camper.

The modern coffee machine, the powerful hairdryer or kettle are good examples of applications in which AGM batteries shine with their high-current capability.

DC 70 AGM

Capacity: 70 Ah
Cycles (DoD 50 %): 600
Size: 242 × 175 × 190 mm
Weight: 19,20 kg

DC 80 AGM

Capacity: 80 Ah
Cycles (DoD 50 %): 600
Size: 278 × 175 × 190 mm
Weight: 22,00 kg

DC 100 AGM

Capacity: 100 Ah
Cycles (DoD 50 %): 600
Size: 353 × 175 × 190 mm
Weight: 27,80 kg

DC 120 AGM

Capacity: 120 Ah
Cycles (DoD 50 %): 600
Size: 345 × 175 × 230 mm
Weight: 32,10 kg

DC 150 AGM

Capacity: 150 Ah
Cycles (DoD 50 %): 600
Size: 513 × 189 × 223 mm
Weight: 41,50 kg

DC 180 AGM

Capacity: 180 Ah
Cycles (DoD 50 %): 600
Size: 513 × 223 × 223 mm
Weight: 49,50 kg

DC 205 AGM

Capacity: 205 Ah
Cycles (DoD 50 %): 600
Size: 518 ×274 × 242 mm
Weight: 56,80 kg

DC 230 AGM

Capacity: 230 Ah
Cycles (DoD 50 %): 600
Size: 518 × 274 × 242 mm
Weight: 62,70 kg

Technical Specifications

Usable capacity: ca. 55 %
Voltage: 12 V
Temperature Range: –20 to 40 °C
Charging Temperature: 0 to 40 °C

Cycles (30 % DoD): 1000
Cycles (50 % DoD): 600
Cycles (80 % DoD): 400
Cycles (100 % DoD): 250

ECTIVE DC AGM SLIM

The slim AGM battery as a space-saving alternative.

In campers, motorhomes and boats, the space factor is often a tricky issue in addition to weight. After all, you can never have enough space and a battery does not necessarily have to be installed in a visible place. Due to their design, many motorhomes and boats have free space in the wheel arches or side panels. These are usually too tight for a battery with the usual housing dimensions, but – you've probably already guessed it – perfectly suited for the **ECTIVE Slim models**! These can be optimally installed in previously unused storage space. The terminals on these models are located on the top of the slim battery front. This means you can easily reach the battery terminals even in very confined spaces. The slim models are available in many common capacities and are in no way inferior to regular AGM batteries in terms of safety and performance. This makes them a real space-saving alternative.

So be sure to check your vehicle for narrow, previously unused niches, because this is exactly where you could place your supply battery in the future.

106 MM
DC 60 AGM Slim

110 MM
DC 120 AGM Slim
DC 150 AGM Slim

114 MM
DC 100 AGM Slim

125 MM
DC 230 AGM Slim

DC 60 AGM Slim

Capacity: 60 Ah
Cycles (DoD 50 %): 700
Size: 291 × 106 × 231 mm
Weight: 15,70 kg

DC 100 AGM Slim

Capacity: 100 Ah
Cycles (DoD 50 %): 700
Size: 562 × 114 × 194 mm
Weight: 25,40 kg

DC 120 AGM Slim

Capacity: 120 Ah
Cycles (DoD 50 %): 700
Size: 410 × 110 × 295 mm
Weight: 31,70 kg

DC 150 AGM Slim

Capacity: 150 Ah
Cycles (DoD 50 %): 700
Size: 552 × 110 × 240 mm
Weight: 36,60 kg

DC 230 AGM Slim

Capacity: 230 Ah
Cycles (DoD 50 %): 700
Size: 561 × 125 × 318 mm
Weight: 57,00 kg

Technical Specifications

Usable capacity: ca. 55 %
Voltage: 12 V
Temperature Range: –20 to 40 °C
Charging temperature: 0 to 40 °C

Cycles (30 % DoD): 1150
Cycles (50 % DoD): 700
Cycles (80 % DoD): 400
Cycles (100 % DoD): 300

ECTIVE DC S AGM

The S in the name – „Super“, „Smart“ or „Special“?

The advanced **DC-S series** of ECTIVE AGM batteries offers a whole range of upgrades compared to the regular DC models. With over 15% higher cycle stability (700 cycles on average compared to 600 cycles at 50% DoD), they are even more durable and optimized for particularly frequent charging and discharging. This makes them perfect for use with solar or wind power systems or applications such as electric wheelchairs, commercial industrial trucks or mobile lifting platforms. The DC-S models also have integrated refill packs to extend their service life, as well as the intelligent **ECTIVE Information System** (E.I.P.). This smart display allows you to easily monitor all relevant battery values.

Integrated refill packs
for extended service life.

ECTIVE Information System
for intelligent, simple operation.

Technical Specifications

Usable capacity: ca. 60 %
Voltage: 12 V
Temperature Range: –20 to 40 °C
Charging temperature: 0 to 40 °C

Cycles (30 % DoD): 1200
Cycles (50 % DoD): 700
Cycles (80 % DoD): 450
Cycles (100 % DoD): 300

DC 38 S AGM

Capacity: 38 Ah
Cycles (DoD 50 %): 700
Size: 194 × 132 × 170 mm
Weight: 10,60 kg

DC 46 S AGM

Capacity: 46 Ah
Cycles (DoD 50 %): 700
Size: 196 × 166 × 176 mm
Weight: 13,90 kg

DC 65 S AGM

Capacity: 65 Ah
Cycles (DoD 50 %): 700
Size: 228 × 137 × 211 mm
Weight: 16,70 kg

DC 75 S AGM

Capacity: 75 Ah
Cycles (DoD 50 %): 700
Size: 350 × 167 × 173 mm
Weight: 23,30 kg

DC 115 S AGM

Capacity: 115 Ah
Cycles (DoD 50 %): 700
Size: 333 × 173 × 216 mm
Weight: 32,40 kg

DC 135 S AGM

Capacity: 135 Ah
Cycles (DoD 50 %): 700
Size: 406 × 172 × 223 mm
Weight: 38,40 kg

DC 170 S AGM

Capacity: 170 Ah
Cycles (DoD 50 %): 700
Size: 484 × 170 × 241 mm
Weight: 47,80 kg

DC 230 S AGM

Capacity: 230 Ah
Cycles (DoD 50 %): 700
Size: 522 × 239 × 217 mm
Weight: 63,60 kg

DC 290 S AGM

Capacity: 290 Ah
Cycles (DoD 50 %): 700
Size: 520 × 269 × 220 mm
Weight: 73,10 kg

INTEGRATED REFILL PACKS

For increased battery life.

Integrated **refill packs** are hidden under the blue housing of some ECTIVE AGM and gel batteries. Even with AGM or gel technology, batteries lose water over time. You can counteract this natural process, which occurs more frequently at high temperatures or overcharging, with the refill packs. Open the blue cover in a few simple steps, remove the six packs and fill the individual valve openings of the battery. This extends the service life of your battery and allows you to benefit from it for longer than with conventional models.

ECTIVE batteries with refill packs:
AGM DC-S, Gel DC-S, Gel DC-SC

ECTIVE INFORMATION SYSTEM

For simple and intelligent monitoring and control.

The ECTIVE Information System is an intelligent, interactive display used with special ECTIVE batteries. The E.I.S. keeps you informed about the charge level and voltage of your battery at all times. If unusual voltage fluctuations occur, the system alerts you acoustically and via a message on the display. A day counter also provides information about the duration of use to date.

ECTIVE batteries with E.I.S:
AGM DC-S, Gel DC-S, Gel DC-SC

ECTIVE GEL BATTERIES

Reliable power supply for smaller consumers.

In supply batteries with **gel technology**, the electrolyte has a gel-like consistency due to the addition of silica. This means they are leak-proof, resistant to vibrations and can be installed in any position. They also have an even higher cycle stability, greater durability and longer service life than AGM batteries. Their resistance to high temperatures makes them particularly attractive for use in warmer regions. Gel batteries are also ideal for seasonal operation due to their very low self-discharge. As they are gas-free, gel batteries can also be installed indoors without any problems. Unlike AGM batteries, however, gel batteries are not as suitable for operating many or larger consumers. Instead, they score points when mainly consumers with low power requirements need to be supplied – but permanently. Do you use modern TVs and laptops and can do without your fully automatic coffee machine or electric heater? Then a gel battery is the right choice. This type of battery is also perfect if you prefer to charge your battery using solar energy.

DC Gel

S. 101 | Dependable and reliable gel batteries.

DC Gel Slim

S. 102 | Space-saving gel batteries.

DC S Gel

S. 104 | Gel batteries with refill packs and display.

PERFECT FOR SOLAR

DC SC Gel

S. 106 | Gel batteries with integrated solar charge controller.

ECTIVE DC GEL

Dependable and reliable gel batteries.

The **Deep-Cycle series** are reliable, long-lasting gel batteries. If you want to operate devices with low power requirements and can do without special features and special form factors, these models offer excellent value for money.

DC 70 Gel

Capacity: 70 Ah
Cycles (DoD 50 %): 750
Size: 278 × 175 × 190 mm
Weight: 21,40 kg

DC 95 Gel

Capacity: 95 Ah
Cycles (DoD 50 %): 750
Size: 353 × 175 × 190 mm
Weight: 23,60 kg

DC 100 Gel

Capacity: 100 Ah
Cycles (DoD 50 %): 750
Size: 328 × 172 × 228 mm
Weight: 26,60 kg

DC 145 Gel

Capacity: 145 Ah
Cycles (DoD 50 %): 750
Size: 513 × 189 × 223 mm
Weight: 40,00 kg

DC 180 Gel

Capacity: 180 Ah
Cycles (DoD 50 %): 750
Size: 510 × 222 × 228 mm
Weight: 46,70 kg

DC 240 Gel

Capacity: 240 Ah
Cycles (DoD 50 %): 750
Size: 510 × 278 × 247 mm
Weight: 62,70 kg

Technical Specifications

Usable capacity: ca. 65 %
Voltage: 12 V
Temperature Range: –20 to 60 °C
Charging temperature: –20 to 50 °C

Cycles (30 % DoD): 1250
Cycles (50 % DoD): 750
Cycles (80 % DoD): 450
Cycles (100 % DoD): 300

ECTIVE DC GEL SLIM

The slim gel battery as a space-saving alternative.

Just like their counterparts with AGM technology, the **ECTIVE DC Gel Slim** batteries are perfect for expansion projects where space-saving is the top priority.

They therefore score particularly well in campers, motorhomes and boats thanks to their low weight and unbeatable space factor. The DC Gel Slim models can be concealed where regular batteries would not fit, for example in the wheel arches or side panels. This allows you to make perfect use of this previously unused storage space. Thanks to the terminals mounted on the top of the slim battery front, you can still easily reach and connect the battery.

The DC Gel Slim models come in five sizes with different capacities and therefore offer an optimal, space-saving solution for almost every requirement. The slim housings naturally contain high-quality ECTIVE gel technology, just like the regular gel batteries.

So be sure to take a look to see if you can find any previously unused niches in your vehicle that would be suitable for an ECTIVE DC Gel Slim battery!

106 mm
DC 60 Gel Slim

110 mm
DC 120 Gel Slim
DC 150 Gel Slim

114 mm
DC 100 Gel Slim

125 mm
DC 230 Gel Slim

DC 60 Gel Slim

Capacity: 60 Ah
Cycles (DoD 50 %): 750
Size: 291 × 106 × 231 mm
Weight: 15,70 kg

DC 100 Gel Slim

Capacity: 100 Ah
Cycles (DoD 50 %): 750
Size: 562 × 114 × 194 mm
Weight: 25,40 kg

DC 120 Gel Slim

Capacity: 120 Ah
Cycles (DoD 50 %): 750
Size: 410 × 110 × 295 mm
Weight: 31,70 kg

DC 150 Gel Slim

Capacity: 150 Ah
Cycles (DoD 50 %): 750
Size: 552 × 110 × 240 mm
Weight: 36,60 kg

DC 230 Gel Slim

Capacity: 230 Ah
Cycles (DoD 50 %): 750
Size: 561 × 125 × 318 mm
Weight: 57,00 kg

Technical Specifications

Usable capacity: ca. 65 %
Voltage: 12 V
Temperature Range: –20 to 60 °C
Charging temperature: –20 to 50 °C

Cycles (30 % DoD): 1250
Cycles (50 % DoD): 750
Cycles (80 % DoD): 450
Cycles (100 % DoD): 300

ECTIVE DC S GEL

Long-life gel batteries with refill packs and display.

As with AGM batteries, we also offer gel batteries with the suffix „S“ in the model designation. These special models offer more than 25% higher cycle stability compared to regular DC gel batteries (on average 950 instead of 750 cycles at 50% DoD) and are therefore ideal for frequent charging and discharging, for example via solar or wind power systems, making these models particularly suitable for commercial applications, just like the corresponding AGM batteries. **ECTIVE DC S Gel** batteries are also equipped with integrated refill packs and the interactive ECTIVE Information System (see P. 98 and P.99) which allows you to easily keep an eye on the status of your battery.

Integrated refill packs
for extended service life.

ECTIVE Information System
for intelligent, simple operation.

Technical Specifications

Usable capacity: ca. 70 %
Voltage: 12 V
Temperature Range: –20 to 40 °C
Charging temperature: 0 to 40 °C

Cycles (30 % DoD): 1600
Cycles (50 % DoD): 950
Cycles (80 % DoD): 550
Cycles (100 % DoD): 350

DC 38 S Gel

Capacity: 38 Ah
Cycles (DoD 50 %): 950
Size: 195 × 132 × 168 mm
Weight: 9,90 kg

DC 45 S Gel

Capacity: 45 Ah
Cycles (DoD 50 %): 950
Size: 196 × 166 × 173 mm
Weight: 12,60 kg

DC 65 S Gel

Capacity: 65 Ah
Cycles (DoD 50 %): 950
Size: 228 × 137 × 214 mm
Weight: 16,70 kg

DC 85 S Gel

Capacity: 85 Ah
Cycles (DoD 50 %): 950
Size: 260 × 168 × 219 mm
Weight: 22,90 kg

DC 115 S Gel

Capacity: 115 Ah
Cycles (DoD 50 %): 950
Size: 333 × 173 × 216 mm
Weight: 30,90 kg

DC 135 S Gel

Capacity: 135 Ah
Cycles (DoD 50 %): 950
Size: 406 × 172 × 223 mm
Weight: 36,80 kg

DC 175 S Gel

Capacity: 175 Ah
Cycles (DoD 50 %): 950
Size: 495 × 170 × 245 mm
Weight: 43,20 kg

DC 230 S Gel

Capacity: 230 Ah
Cycles (DoD 50 %): 950
Size: 522 × 239 × 217 mm
Weight: 60,90 kg

DC 290 S Gel

Capacity: 290 Ah
Cycles (DoD 50 %): 950
Size: 520 × 269 × 222 mm
Weight: 73,10 kg

ECTIVE DC SC GEL

Gel batteries with solar charge controller and direct connections.

The **DC SC models** of the ECTIVE gel batteries add two really practical features to the DC S models: In addition to the increased cycle stability, the refill packs and the E.I.S., these premium models also have an integrated solar charge controller and direct connections for smaller consumers: this allows you to connect a built-in or portable solar panel (up to 10 A) directly to the battery to charge it.

When the battery is fully charged, the solar charge controller automatically switches to trickle charging. You can connect smaller devices that do not require 230 V AC voltage directly to the battery via the four outputs, which are easily accessible on the front. Charge your smartphone at the USB output or supply your LED lighting system with power via one of the 12 V outputs.

Integrated refill packs
for extended service life.

ECTIVE Information System for intelligent, simple operation.

USB port and 12-volt outputs
With these practical connections on the front of your ECTIVE DC SC Gel battery, you can supply small consumers such as your smartphone, laptop, camera or LED lamps directly with power.

Charging via solar panel
Thanks to the built-in solar charge controller, you can charge these advanced batteries directly with solar power. Our portable solar modules, for example, are also suitable for this purpose.

DC 38 SC Gel

Capacity: 38 Ah
Cycles (DoD 50 %): 950
Size: 195 × 132 × 168 mm
Weight: 9,90 kg

DC 45 SC Gel

Capacity: 45 Ah
Cycles (DoD 50 %): 950
Size: 196 × 166 × 173 mm
Weight: 12,60 kg

DC 65 SC Gel

Capacity: 65 Ah
Cycles (DoD 50 %): 950
Size: 228 × 137 × 214 mm
Weight: 16,70 kg

DC 85 SC Gel

Capacity: 85 Ah
Cycles (DoD 50 %): 950
Size: 260 × 168 × 219 mm
Weight: 22,90 kg

DC 115 SC Gel

Capacity: 115 Ah
Cycles (DoD 50 %): 950
Size: 333 × 173 × 216 mm
Weight: 30,90 kg

Technical Specifications

Usable capacity: ca. 70 %
Voltage: 12 V
Temperature Range: –20 to 60 °C
Charging temperature: –20 to 50 °C

Cycles (30 % DoD): 1600
Cycles (50 % DoD): 950
Cycles (80 % DoD): 550
Cycles (100 % DoD): 350

ECTIVE LITHIUM BATTERIES

The advanced battery technology for all applications.

The already important topic of electrical energy storage is becoming increasingly important in times of sustainable and climate-friendly power generation. One answer to this need is a battery technology that can already be found in many areas of our daily lives due to its compactness and low weight, for example in smartphones or laptops: **lithium batteries**.

There are numerous different versions of this technology, which differ in particular in their cell chemistry and the electrode materials used. However, **lithium iron phosphate batteries ($LiFePO_4$)**, also known as **LFP** for short, have proven to be particularly effective and safe.

ECTIVE's lithium batteries are also state-of-the-art lithium iron phosphate batteries. These advanced batteries are a longer-lasting, more efficient and lighter alternative to conventional lead-acid supply batteries and are suitable for almost all applications in which gel, AGM or wet batteries are used. Although lithium batteries cost more to purchase, this higher price quickly pays for itself with appropriate use. Calculated over the operating time, the long service life (more than 4,000 cycles at 80% DoD) actually means lower costs than with a comparable lead-acid battery. An integrated battery management system (BMS) also reliably protects the battery from factors that could reduce its service life.

Another advantage of lithium batteries is that they deliver power almost until they are completely discharged. This means you really do use almost all of the battery's capacity! What's more, thanks to significantly shorter charging times, they are fully charged again more quickly and ready for the next use. At the same time, they are characterized by extremely low self-discharge and can therefore be stored for up to 6 months. LiFePO4 batteries are also low-maintenance, completely safe and perform reliably even at ambient temperatures of over 60°C.

The $LiFePO_4$ batteries from ECTIVE come in five series: from the standard models of the LC series, to the LC BT series equipped with a Bluetooth module, to the cold-resistant LC LT models. For a special form factor, opt for the models in the LC Slim LT or LC Under Seat LT series. They allow you to benefit from the advantages of a lithium battery and save space at the same time!

Brand new in our range are the powerful and excellently protected ECTIVE LC Marine LT boat batteries.

ALEKSEI'S ADVICE: The Price Factor

You may be asking yourself: „Aren't lithium batteries far too expensive?"
Clear answer: No! Of course, a higher purchase price puts many people off at first. However, you should consider a battery over its entire service life. The significantly longer service life of a lithium battery alone beats other technologies hands down. Added to this is the extremely high cycle stability. The costs per cycle (charge/discharge) are therefore actually much lower than with other batteries.

ALL ECTIVE LITHIUM SERIES

LFP batteries with features such as cold resistance or space-saving form factor.

LC

S. 112 | High-quality lithium batteries.

LC BT

S. 114 | Lithium batteries with Bluetooth function.

LC LT

S. 116 | Cold-resistant lithium batteries with Bluetooth function.

LC Under Seat LT

S. 118 | Space-saving under-seat batteries with cold resistance.

LC Slim LT

S. 120 | Lithium batteries with a small form factor and cold resistance.

LC Marine LT

S. 120 | Powerful cold- and water-resistant dual purpose batteries.

WHERE CAN LITHIUM BATTERIES BE USED?

Lithium batteries can be used in almost all areas of application in which lead-acid, gel or AGM batteries are used:

- Motorhomes
- Boats
- Golf carts
- Buggies
- Solar storage
- UPS/UPS systems

... AND MORE.

ADVANTAGES OF LITHIUM TECHNOLOGY

All the features of this advanced battery technology at a glance:

High cycle stability
More than 4000 cycles at 80% DoD mean lower costs over the operating life.

Long service life
Lithium batteries have a particularly long service life – and require very little maintenance.

Short loading times
Lithium batteries are ready for use again at full power much faster than conventional batteries.

Absolutely safe
$LiFePO_4$ batteries cannot burn or explode due to their chemical composition.

Built-in protection
The battery management system (BMS) protects the battery and allows completely worry-free use.

Extreme heat tolerance
Even at ambient temperatures of over 60°C, the battery performs its service.

Easy to store
$LiFePO_4$ batteries can be stored for more than 6 months thanks to extremely low self-discharge.

Less weight
$LiFePO_4$ batteries weigh only around a third to a quarter of a comparable conventional battery.

Bluetooth function
Monitor the status of your LC-BT or LC-LT battery from your smartphone!

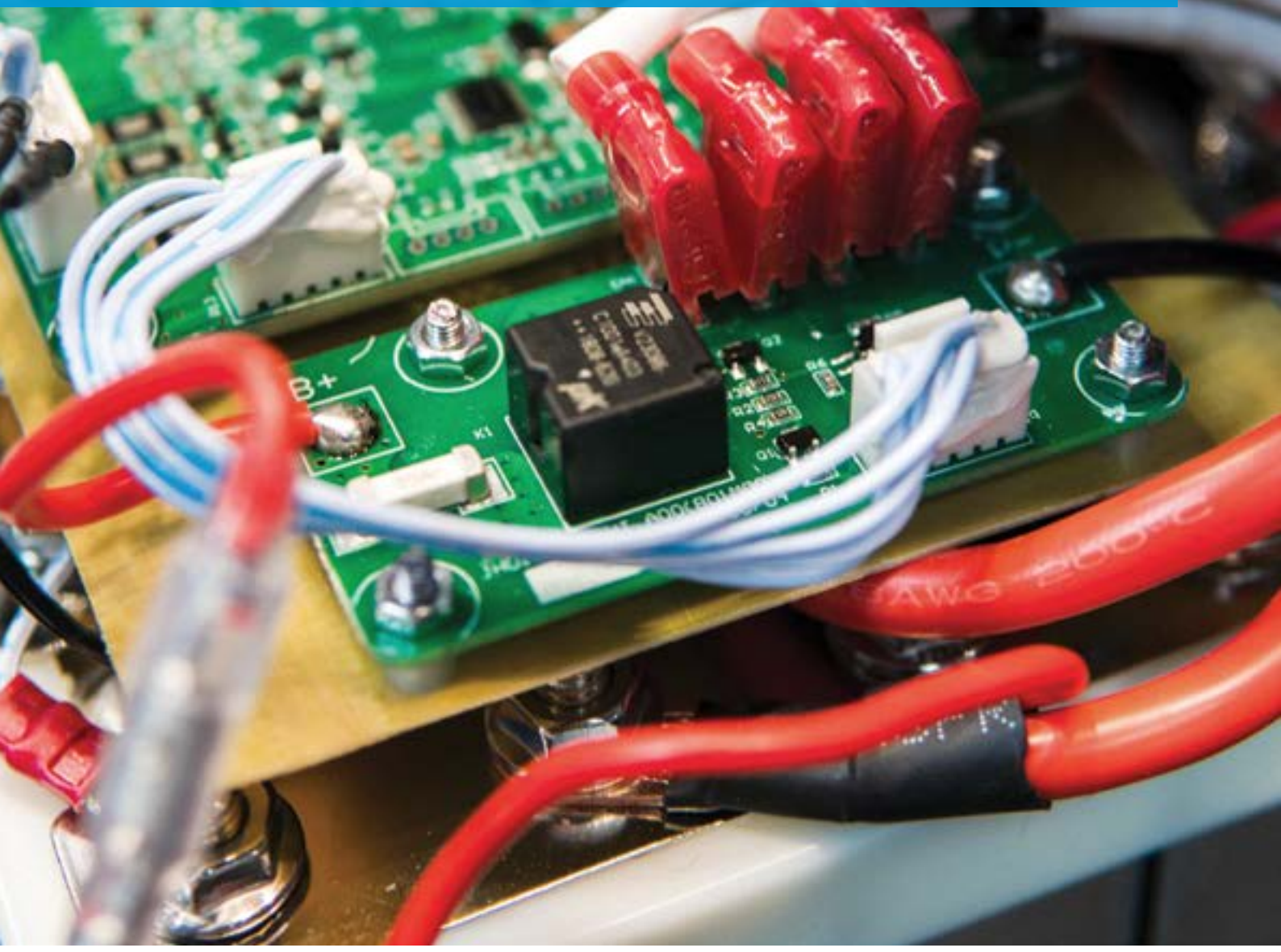
Cold resistance
LC-LT models can also be charged at extremely low temperatures of down to –30°C.

ARE LITHIUM BATTERIES EVEN SAFE AT ALL?

Occasionally we read about electric car fires that are difficult to extinguish, or about smartphone manufacturers having to recall products due to the risk of explosion. The reason for this is the enormous amount of energy that can be stored in the conventional lithium batteries used. If a short circuit occurs due to overheating or mechanical damage, this energy is released very quickly, which can result in a fire or explosion.

It is therefore all the better that all batteries in the ECTIVE LC series are lithium iron phosphate batteries. These differ from conventional lithium batteries in their design and are absolutely safe thanks to their special cell chemistry: fires and explosions are impossible. They are also gas-free, you can install them in any orientation and the integrated Battery Management System (BMS) ensures that your battery is always protected and conserved:

- Overload protection
- Deep discharge protection
- Overvoltage protection
- Active cell balancing
- Charge control
- Temperature protection
- Short-circuit protection



ECTIVE LC

High-quality lithium batteries.

The $LiFePO_4$ supply batteries in the **ECTIVE LC series** offer all the advantages of state-of-the-art lithium batteries. This makes them the perfect option if you want to benefit from the properties of this modern battery technology, but can do without convenience features such as monitoring via app, extreme temperature resistance or a particularly space-saving form factor. With the integrated battery management system, the regular LC models already contatin a lot of innovation and clever technology that protects your battery and allows it to perform optimally.

LC 12L

Capacity: 12 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 151 × 99 × 101 mm
Weight: 1,65 kg

LC 20L

Capacity: 20 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 181 × 76 × 169 mm
Weight: 2,55 kg

LC 35L

Capacity: 35 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 195 × 131 × 171 mm
Weight: 4,80 kg

LC 50L

Capacity: 50 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 197 × 166 × 173 mm
Weight: 6,70 kg

LC 75L

Capacity: 75 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 260 × 168 × 218 mm
Weight: 10,70 kg

LC 80L

Capacity: 80 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 307 × 168 × 221 mm
Weight: 10,40 kg

LC 100

Capacity: 100 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 353 × 175 × 190 mm
Weight: 12,30 kg

LC 100L

Capacity: 100 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 329 × 172 × 223 mm
Weight: 12,80 kg

LC 150L

Capacity: 150 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 485 × 170 × 240 mm
Weight: 20,20 kg

LC 200L

Capacity: 200 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 520 × 267 × 228 mm
Weight: 27,70 kg

LC 260L

Capacity: 260 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 520 × 267 × 228 mm
Weight: 34,20 kg

LC 300L

Capacity: 300 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 520 × 268 × 228 mm
Weight: 37,50 kg

5 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

Technical Specifications

Usable capacity: ca. 100 %
Voltage: 12,8 V
Temperature Range: –20 to 60 °C
Charging temperature: 0 to 45 °C
Warranty: 5 Years

Cycles (30 % DoD): 15000
Cycles (50 % DoD): 6500
Cycles (80 % DoD): 4000
Cycles (100 % DoD): 2000

ECTIVE LC BT

Lithium batteries with Bluetooth function.

The **LC-BT models** of the ECTIVE lithium batteries are even more technically sophisticated than the already innovative LC batteries. Under the hood is a Bluetooth module that ensures that you can keep an eye on all relevant information about your battery from your smartphone at all times. Get the ECTIVE app on your smartphone (available free of charge for Android and iOS) and connect to your lithium battery in a matter of seconds. The Bluetooth technology requires no line of sight and works within a range of several meters. This is particularly practical if you have installed your battery in a hard-to-reach place. In addition to the current charge status and voltage of the battery, the app shows you real-time information on the temperature, the number of cycles and much more. Of course, with an LC-BT model you also benefit from all the advantages and features of the ECTIVE LC series.

LC 20L BT

Capacity: 20 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 180 × 75 × 170 mm
Weight: 3,00 kg

LC 50L BT

Capacity: 50 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 196 × 165 × 175 mm
Weight: 6,80 kg

LC 75L BT

Capacity: 75 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 260 × 168 × 223 mm
Weight: 9,80 kg

LC 80 BT

Capacity: 80 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 278 × 175 × 190 mm
Weight: 10,20 kg

LC 100 BT

Capacity: 100 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 353 × 175 × 190 mm
Weight: 11,20 kg

LC 100L BT

Capacity: 100 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 308 × 169 × 230 mm
Weight: 12,50 kg

LC 150L BT

Capacity: 150 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 485 × 170 × 240 mm
Weight: 20,20 kg

LC 200L BT

Capacity: 200 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 485 × 170 × 240 mm
Weight: 25,20 kg

LC 250L BT

Capacity: 250 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 520 × 268 × 228 mm
Weight: 33,00 kg

LC 300L BT

Capacity: 300 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 520 × 268 × 228 mm
Weight: 37,50 kg

LC 50L BT (24V)

Capacity: 50 Ah
Voltage: 25,6 V
Cycles (DoD 50 %): 6500
Size: 318 × 165 × 215 mm
Weight: 12,30 kg

LC 100L BT (24V)

Capacity: 100 Ah
Voltage: 25,6 V
Cycles (DoD 50 %): 6500
Size: 485 × 170 × 240 mm
Weight: 24,80 kg

LC 150L BT (24V)

Capacity: 150 Ah
Voltage: 25,6 V
Cycles (DoD 50 %): 6500
Size: 520 × 268 × 228 mm
Weight: 37,50 kg

5 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

Technical Specifications

Usable capacity: ca. 100 %
Voltage: 12,8 V / 25,6 V
Temperature Range: –20 to 60 °C
Charging temperature: 0 to 45 °C
Warranty: 5 Years

Cycles (30 % DoD): 15000
Cycles (50 % DoD): 6500
Cycles (80 % DoD): 4000
Cycles (100 % DoD): 2000

ECTIVE LC LT

Lithium batteries with Bluetooth function and cold resistance.

The **ECTIVE LC LT** series is the answer to a problem that primarily affects those who like to travel in winter temperatures, are fans of winter camping or also operate a solar system at colder times of the year. Ordinary lithium batteries can no longer be charged at temperatures below 0°C. The „LT“ in the model name stands for „Low Temperature“ – and that is exactly what these batteries are designed for: for use at particularly low ambient temperatures. These cold-resistant batteries can even be charged at minus 30°C, allowing you to use a high-quality lithium battery in your camper on your next winter trip.

Of course, the LC LT batteries are in no way inferior to our regular lithium batteries. Even the **integrated Bluetooth module** of the BT series is integrated so that you can track how your battery is doing against the sub-zero temperatures from your smartphone!

5 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products‘ quality.

COLD RESISTANCE

The ECTIVE LC-LT models can be reliably charged at temperatures as low as –30°C. This makes them the perfect companion in winter or on your journey through particularly challenging climate zones.

BLUETOOTH-APP

Monitor battery values such as charge level, temperature and number of cycles from your smartphone.

LC 80 LT

Capacity: 80 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 278 × 175 × 190 mm
Weight: 10,20 kg

LC 100 LT

Capacity: 100 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 353 × 175 × 190 mm
Weight: 11,20 kg

LC 100L LT

Capacity: 100 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 318 × 165 × 230 mm
Weight: 12,50 kg

LC 125L LT

Capacity: 125 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 318 × 165 × 230 mm
Weight: 15,00 kg

LC 150 LT

Capacity: 150 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 353 × 175 × 190 mm
Weight: 15,50 kg

LC 200L LT

Capacity: 200 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 485 × 170 × 240 mm
Weight: 25,20 kg

LC 300L LT

Capacity: 300 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 520 × 268 × 228 mm
Weight: 37,50 kg

Technical Specifications

Usable capacity: ca. 100 %
Voltage: 12,8 V / 25,6 V
Temperature Range: –20 to 60 °C
Charging temperature: –30 to 45 °C
Warranty: 5 Years

Cycles (30 % DoD): 15000
Cycles (50 % DoD): 6500
Cycles (80 % DoD): 4000
Cycles (100 % DoD): 2000

ECTIVE LC UNDER SEAT LT

Use the space under the passenger seat.

In addition to weight, saving space also plays an important role in motorhomes. Many manufacturers therefore equip their vehicles with a console under the passenger seat, which offers space for one or even two supply batteries. With the under-seat models of the ECTIVE LC series, the proven quality of the models with $LiFePO_4$ technology is now also available as an **under-seat** battery with compact dimensions. This allows you to make optimum use of the space under the passenger seat and at the same time benefit from the well-known advantages of ECTIVE lithium batteries. The latest generation of under-seat models deliver a particularly high **continuous discharge current of 250 A**, which means that even operating consumers such as coffee machines, induction hobs or air conditioning systems are no longer a problem. Thanks to the integrated BM X battery monitor, the under-seat batteries are also extremely easy and convenient to operate. On the interactive LCD or via Bluetooth from a smartphone.

The suffix 'LT' indicates the low-temperature function of these under-seat batteries: they can be charged down to -30 °C!

LC 150L Under Seat LT

Capacity: 150 Ah
Cycles (DoD 50 %): 6500
Size: 353 × 301 × 152 mm
Weight: 19,0 kg

LC 200L Under Seat LT

Capacity: 200 Ah
Cycles (DoD 50 %): 6500
Size: 353 × 351 × 152 mm
Weight: 21,60 kg

5 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

Technical Specifications

Usable capacity: ca. 100 %
Voltage: 12,8 V
Continuous discharge current: 250 A
Temperature Range: –20 to 60 °C
Charging temperature: –30 to 45 °C

Warranty: 5 Years
Cycles (30 % DoD): 15000
Cycles (50 % DoD): 6500
Cycles (80 % DoD): 4000
Cycles (100 % DoD): 2000

ECTIVE LIVES SUSTAINABILITY

The production of advanced lithium batteries requires rare earths and other precious resources. We therefore strive to design ECTIVE batteries to be as environmentally friendly and sustainable as possible.

For this purpose, we have developed our under seat batteries so that they are 100% repairable and the cells are completely replaceable. In this way, we extend the lifespan of our products and protect our planet‘s resources.

ECTIVE LC SLIM LT

The slim lithium battery with Bluetooth as a space-saving alternative.

If you need to save space in your vehicle but don‘t have a suitable console under the passenger seat to accommodate an LC Under Seat LT battery – don‘t worry! There‘s probably some hard-to-reach storage space or a narrow niche somewhere in your motorhome or boat, for example in the wheel arches or side trim. The **ECTIVE LC Slim LT** lithium batteries were developed for just such places. With their compact form factor, you can install them in places in your vehicle that you were previously unable to use sensibly. This means you can use a lithium battery with all its benefits even where space is limited. At **250 A**, the LC-Slim batteries deliver an extremely high **continuous discharge current** and even operate particularly demanding consumers such as a coffee machine, air conditioning or an induction hob. Incidentally, you can supply DC consumers directly via the corresponding connections.

The latest generation of our slim lithium batteries bears the suffix ‘LT’. This low-temperature function allows safe charging in extreme environments down to -30 °C.

Last but not least, the LC-Slim-LT batteries also have an integrated ECTIVE BM X battery monitor. This always shows all the relevant data for your battery: on the stylish color display or conveniently via Bluetooth on your smartphone.

Praktische Anschlüsse

- 50-A-Anderson Input/Output
- 12-V-Bordspannungsteckdose für kleine Verbraucher
- USB-C + USB QC 3.0

Integrierter Batteriemonitor

- Informatives Farbdisplay
- Steuerung per App

Technical Specifications

Usable capacity: ca. 100 %
Voltage: 12,8 V
Continuous discharge current: 250 A
Temperature Range: –20 to 60 °C
Charging temperature: –30 to 45 °C

Warranty: 5 Years
Cycles (30 % DoD): 15000
Cycles (50 % DoD): 6500
Cycles (80 % DoD): 4000
Cycles (100 % DoD): 2000

LC 120 Slim LT

Capacity: 120 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 466 × 126 × 290 mm
Weight: 19,90 kg

LC 150 Slim LT

Capacity: 150 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 466 × 126 × 290 mm
Weight: 20,00 kg

LC 200 Slim LT

Capacity: 200 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 466 × 136 × 320 mm
Weight: 25,10 kg

LC 300 Slim LT

Capacity: 300 Ah
Voltage: 12,8 V
Cycles (DoD 50 %): 6500
Size: 466 × 166 × 320 mm
Weight: 32,00 kg

5 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

ECTIVE LIVES SUSTAINABILITY

Our ECTIVE-LC-SLIM-LT batteries are also designed so that they are 100% repairable: the cells can be completely replaced. In this way, we extend the lifespan of our products and protect our planet's resources.

ECTIVE LC MARINE LT

Extremely powerful and robust boat batteries with $LiFePO_4$ technology.

Mit den neuen **ECTIVE LC Marine LT** Lithium-Batterien haben wir unser Sortiment um wahre Alleskönner ergänzt: Dank bewährter $LiFePO_4$-Technologie sind sie absolute Leicht-Weighte und ihr Gehäuse mit **Protection Class IP67** ermöglicht den Einsatz in **extremen Umgebungen**: Vor Staub, Wasser und Korrosion geschützt eignen sich die Marine Batterien – wie der Name vermuten lässt – insbesondere zur Verwendung auf **Booten**, **Yachten** und **Schiffen**.

Genau so überzeugend wie ihr robustes Gehäuse ist das Innenleben unserer Marine LT Batterien: Die besonders hohen **Dauer-entladeströme von up to 300 A** betreiben mühelos stromintensive Verbraucher wie Klimaanlagen, Induktionsherde, Pumpen und Funkgeräte. Und mit äußerst starken **Spitzenentladeströmen von up to 1000 A** lassen sich die Marine LT Batterien bei Bedarf auch als **Starterbatterie** verwenden, selbst für mittlere to große Außenbordmotoren, Innen-bordmotoren, Segelbootantriebe und Jetskis.

Wie alle unserer premium Lithium-Batterien sind auch die Batterien der **ECTIVE LC Marine LT** Serie mit zahlreichen Sicherheits- und Komfort-Features ausgestattet: Von eingebautem **Schutz vor Überhitzung**, **hoher Zyklenfestigkeit**, einem intelligenten **BMS** über **einfache Wartung** und die **Low-Temperature-Funktion** to hin zu bequemer Überwachung der wichtigsten Betriebsparameter per **App**. So kannst du dich vollends auf deine Bootsbatterie verlassen und dich auf die wichtigen Dinge im Leben konzentrieren: Deine Abenteuer auf See.

LC 100 Marine LT

Capacity: 100 Ah
Cycles (DoD 50 %): 6500
Size: 308 × 168 × 211 mm
Weight: 13,50 kg

LC 200 Marine LT

Capacity: 200 Ah
Cycles (DoD 50 %): 6500
Size: 485 × 172 × 232 mm
Weight: 22,50 kg

LC 300 Marine LT

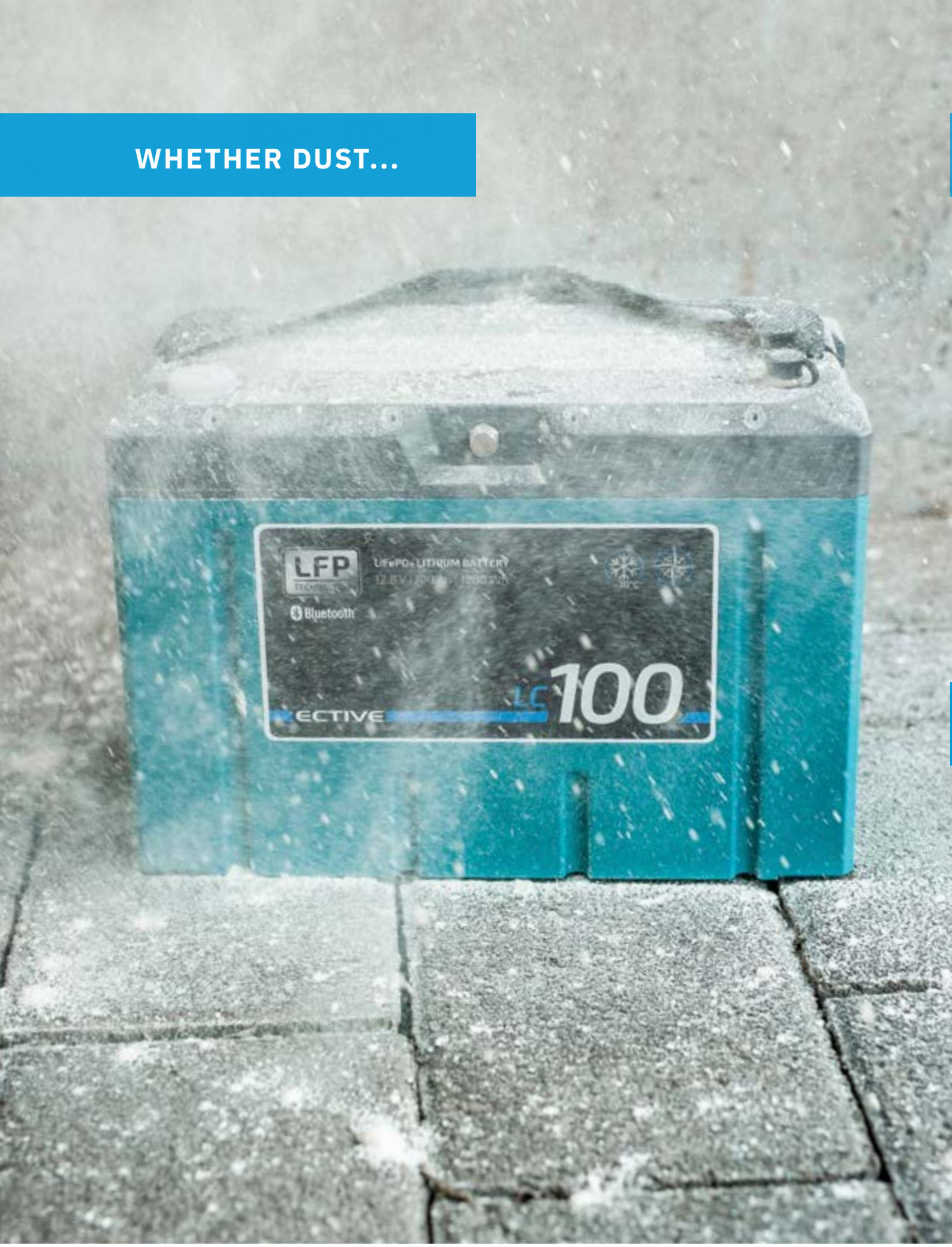
Capacity: 300 Ah
Cycles (DoD 50 %): 6500
Size: 500 × 250 × 230 mm
Weight: 38,00 kg

5 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products‘ quality.

ECTIVE LIVES SUSTAINABILITY

Our ECTIVE LC Marine LT boat batteries are also designed so that they are 100% repairable: the cells can be completely replaced. This is how we extend it Lifetime of our products and protect our planet‘s resources.

WHETHER DUST...



...OR WATER:

WELL PROTECTED THANKS TO IP67.

Features & security features

- Extremely high continuous discharge currents
- Low temperature function: charging down to –30 °C
- Short loading times
- Bluetooth function
- Protection Class IP67: Waterproof, dustproof, & corrosion resistant
- Intelligent BMS
- Overheating & explosion protection
- Long service life & high cycle stability

Technical Specifications

Usable capacity: ca. 100 %
Voltage: 12,8 V
Continuous discharge current: 300 A
Temperature Range: –20 to 60 °C
Charging temperature: –30 to 45 °C
Warranty: 5 Years
Cycles (30 % DoD): 15000
Cycles (50 % DoD): 6500
Cycles (80 % DoD): 4000
Cycles (100 % DoD): 2000

BATTERY ACCESSORIES

Optimize the operation of your supply batteries!

Our **battery accessories** help you to keep your batteries in the best possible condition so they can serve you for as long as possible. Whether it's the **ECTIVE BM X battery monitor**, that is microprocessor-controlled to calculate the battery status, or the **ECTIVE cut-off relay**, that prevents unwanted discharge of your battery, you can always rely on our battery accessories.

Isolating Relay IR 140

S. 126 | Provides reliable protection against discharging your starter battery.

Battery Monitor BM X

S. 128 | nforms you precisely about the status of your battery.

TIMO'S TIP: Two batteries or a single large one?

Should I rather buy one battery with 200 Ah capacity or two batteries with 100 Ah each? From a purely electro-technical point of view, the use of a single battery is generally the better choice. There can be minimal differences „inside" the battery even with two batteries from the same batch due to the production process alone. However, if you consider the question of redundancy or reliability, you are better protected against possible failures with two individual batteries. So there is no clear answer here. Rather, you should make your decision based on how important reliability is to you. But you should also consider the factors of space and weight when making your choice.

ECTIVE CUT-OFF RELAY IR 140

Protect your starter battery from unnoticed discharge.

The **ECTIVE IR 140 cut-off relay** is a clever electronic component that may seem rather inconspicuous but can prevent unpleasant surprises when starting your vehicle. The unwanted – and often unnoticed – discharge of the starter battery.

If you use a supply battery in your camper, you probably charge it via a shore power connection or your solar panels on the roof. On long journeys, however, the vehicle's alternator can also be used to supply power. This component, which is connected to the combustion engine, initially ensures that your starter battery is charged. Excess energy can be fed to the supply battery with an appropriate charger to charge it. However, this poses a problem. Once you have reached your destination or interrupted your journey, the supply battery's reserves will eventually run out because you will be using the coffee machine, TV etc. extensively again. Once the supply battery is exhausted, the starter battery is used to supply your consumers. The next morning comes as a nasty surprise: your vehicle no longer starts. This is exactly the scenario that the IR 140 cut-off relay from ECTIVE prevents. The relay creates an „electrical one-way street", so to speak, which allows the supply battery to charge but prevents the starter battery from discharging. This means you can use your devices without having to worry about a flat starter battery.

- Designed for continuous loads of up to 140 A
- LED display signals the charge of the supply battery
- Complete set including cables and small parts for easy installation

Isolating Relay IR 140

Nominal voltage: 12 V
Switch-on voltage: 13,3 V
Cut-off voltage: 12,8 V
Continuous power: 140 A
Maximum power: 170 A
Dimensions: 67 × 67 × 53 mm

ECTIVE BATTERY MONITOR BM X

Precise information about the status of your battery – also via Bluetooth.

With the new BM X battery monitor, ECTIVE has developed an innovative and extremely versatile display that gives you a complete overview of your battery at all times.

The BM X replaces the previous models in the ECTIVE BM series. It is compatible with batteries of different technologies, voltages and capacities and is now used as a permanently installed display module in some advanced ECTIVE products: for example, in the latest generation of the ECTIVE AccuBox and the space-saving batteries of the ECTIVE LC Slim BT and ECTIVE LC Under Seat BT series.

With its digital color display, the ECTIVE BM X is not only extremely stylish, but also extremely informative. How much juice is left in the battery? Have your solar modules really fully charged the battery? How long will the capacity be sufficient to continue operating your connected loads? The ECTIVE BM X now provides you with the answers to all these questions.

Operating your battery monitor is simple and convenient. Once the BM X has been set up for your battery, it provides you with all the relevant information at all times:

- Battery capacity
- Voltage
- Power
- Power consumption
- Remaining runtime

With the BM X, you are also even safer on the road: if the voltage or capacity falls below a threshold value you have set, the battery monitor sounds an alarm.

Another major advantage of the BM X is the convenient operation via the app. Connect the ECTIVE BM X to your smartphone or tablet via Bluetooth and keep an eye on all battery values at all times.

ECTIVE BM X battery monitor including 500 A shunt and cable

Technical Specifications

Battery voltage range: 10 to 120 V
Battery capacity range: 10 to 1000 Ah
Rated operating current: 500 A

IP protection class: IP20
Dimensions: 115 × 75 × 23 mm
Weight: 0,75 kg

Compatible battery technologies:

Wet **Gel** **AGM** **LFP**

ECTIVE auf YouTube youtube.com/@ective_strom

THE BATTERY MONITOR BM X
for all batteries and capacities

Aleksei explains what the ECTIVE BM X can do and how to use it.


150
AGM
SC 80
ECTIVE
LC 150
LFP
LC 80
LC 100
LC 150

SUPPLY BATTERIES IN THE ECTIVE ECOSYSTEM

Charge batteries and operate devices.

As you can see, the ECTIVE range has supply batteries for every conceivable need and purpose. The big advantage: ECTIVE batteries are perfectly matched to the devices in our other product ranges. In combination with one of our inverters, you can operate your suppliers reliably and safely while using our numerous charging options to recharge your battery efficiently. Whether via a shore connection, while driving with the help of a charging booster or via your solar system using solar energy – with ECTIVE, your power supply is simple and worry-free.

If you are looking for a completely mobile power supply for on-the-go, then take a look at our all-in-one solutions! ECTIVE devices from BlackBox and AccuBox series have powerful lithium batteries and numerous practical features and connections that are integrated into their robust housings. And these power banks are even portable in XXL format!

ECTIVE Keep your batteries fully charged.

CHARGING TECHNOLOGY

Efficient charging of all battery technologies.

S. 144 Multiload PRO


LiFePO4 LITHIUM BATTERY
12.8 V | 80 Ah | 1024 Wh
-30°C
LC 80 L


LFP
LiFePO4 LITHIUM BATTERY
12.8 V | 80 Ah | 1024 Wh
80
ECTIVE

ECTIVE CHARGING TECHNOLOGY

What is important when charging?

Always full batteries

To ensure that you are truly self-sufficient with your motorhome or boat and that the power you need is available at all times, your supply battery must be reliably charged. This is done with a charger that supplies the battery with the necessary energy gently and efficiently. But be careful: different battery technologies require differently coordinated charging processes. Fortunately, the ECTIVE range has the right model for all purposes.

The right charging characteristic

In order to charge a supply battery as quickly as possible but also gently, the charging process should be adapted to the battery technology used. Such a careful charging process is made possible by certain charging characteristics. These regulate how the current is passed on to the battery and at what point during charging. All ECTIVE chargers use intelligent, microprocessor-controlled IUoU charging characteristics in which the charging process runs through appropriately optimized stages. The devices in the **ECTIVE Multiload** and **Proload** series are suitable for use with gel, AGM, wet and calcium batteries. You can set the device to the right technology with a single button. If you are using an advanced LiFePO4 battery, choose a **Multiload LFP**, which is specially designed for use with lithium batteries. The new models in the Multiload Pro series charge both conventional and $LiFePO_4$ batteries reliably and efficiently.

Perfectly protected

All ECTIVE chargers have comprehensive protective functions to ensure your batteries are charged safely. Thanks to state-of-the-art functions such as reverse polarity protection, short-circuit protection, overvoltage protection and overheating protection, you can charge your batteries with peace of mind. The robust housing of the Proload series also offers protection against mechanical influences. In accordance with protection class IP65, these models are also resistant to water jets.

Full speed ahead: With the ECTIVE charging boosters

The **BB Battery Boosters** from ECTIVE allow you to charge your onboard battery while driving: your vehicle's combustion engine drives a generator that supplies the starter battery with power. Our charging boosters use the surplus energy to additionally charge the supply battery. Perfect for long journeys in „Nomad Style". The models in the **SBB** series also have an integrated MPPT solar charge controller. This allows your solar panels to continue charging the battery when you interrupt your journey or when you arrive at your destination!

TIMO'S TIP: The right charging device

My tip for choosing the right battery charger: Make sure you can select the right end-of-charge voltage on the device! This will ensure that your battery is charged effectively and gently. With ECTIVE chargers, you can manually select the technology of your battery. If you are using a lithium battery, make sure your charger also supports this technology. Your battery will thank you with a longer service life.

CHARGERS AND CHARGING BOOSTERS

Optimal charging for your supply batteries.

Proload

S. 138 | Rugged chargers for outdoor use.

Multiload

S. 140 | Lightweight chargers for conventional batteries.

Multiload LFP

S. 142 | Lightweight chargers especially for lithium batteries.

PRO

VALUE FOR MONEY WINNER

Multiload PRO

S. 144 | Efficient charging of all battery technologies.

Charging Boosters

S. 146 | Efficient charging while driving.

ALEKSEI'S ADVICE: The right charging current

My rule of thumb: To keep your battery in service for as long as possible, the charging current (in amperes) should be approx. 10% of the battery capacity (in ampere hours). For a battery with a capacity of 150 Ah, you are on the safe side with a charger that delivers around 15 A.

CHARGING BEHAVIOR OF DIFFERENT BATTERY TECHNOLOGIES

Batteries of different technologies require correspondingly optimized charging characteristics for efficient and gentle charging:

Wet batteries with a final charging voltage of 14.4 to 14.7 V are attractively priced, suitable for small consumers, but wear out quickly when discharged deeply. A memory effect also occurs if they are charged incorrectly.

AGM batteries require a charging voltage of up to 14.8 V and must be charged with the IUoU characteristic curve.

The optimum charging voltage for **gel batteries** is between 14.1 and 14.4 V; they are also charged with an IUoU characteristic curve. The final charging phase is longer than for AGM batteries.

Lithium batteries ($LiFePO_4$) have a final charging voltage of 14.6 V, the charger used must not have a desulphation function. The temperature sensor serves as a charge limiter and prevents charging at temperatures below 0°C, for example. The $LiFePO_4$ characteristic curve charges up to the end-of-charge voltage and then reduces the voltage.

In contrast to conventional devices with W or IU curves, all ECTIVE chargers charge with intelligent IUoU curves. The **Proload** and **Multiload** series chargers are designed for wet, AGM, gel and calcium batteries. Simply press a button to select the charging mode for your battery. For the more demanding lithium batteries, we have developed the **Multiload LFP**, which is perfectly adapted to the special requirements of this advanced battery technology. If you want to remain flexible and be able to charge all these battery types with just one device, choose the **Multiload Pro** series.

The individual models in the series differ in terms of the supported voltage, the rechargeable battery capacity, the exact charging characteristic and the maximum charging current. In general, the greater the charging capacity of the charger, the faster the supply battery is charged.

So no matter which battery technology you use and how big your battery is: with the right ECTIVE charger, you can ensure optimum and gentle charging.

ECTIVE PROLOAD

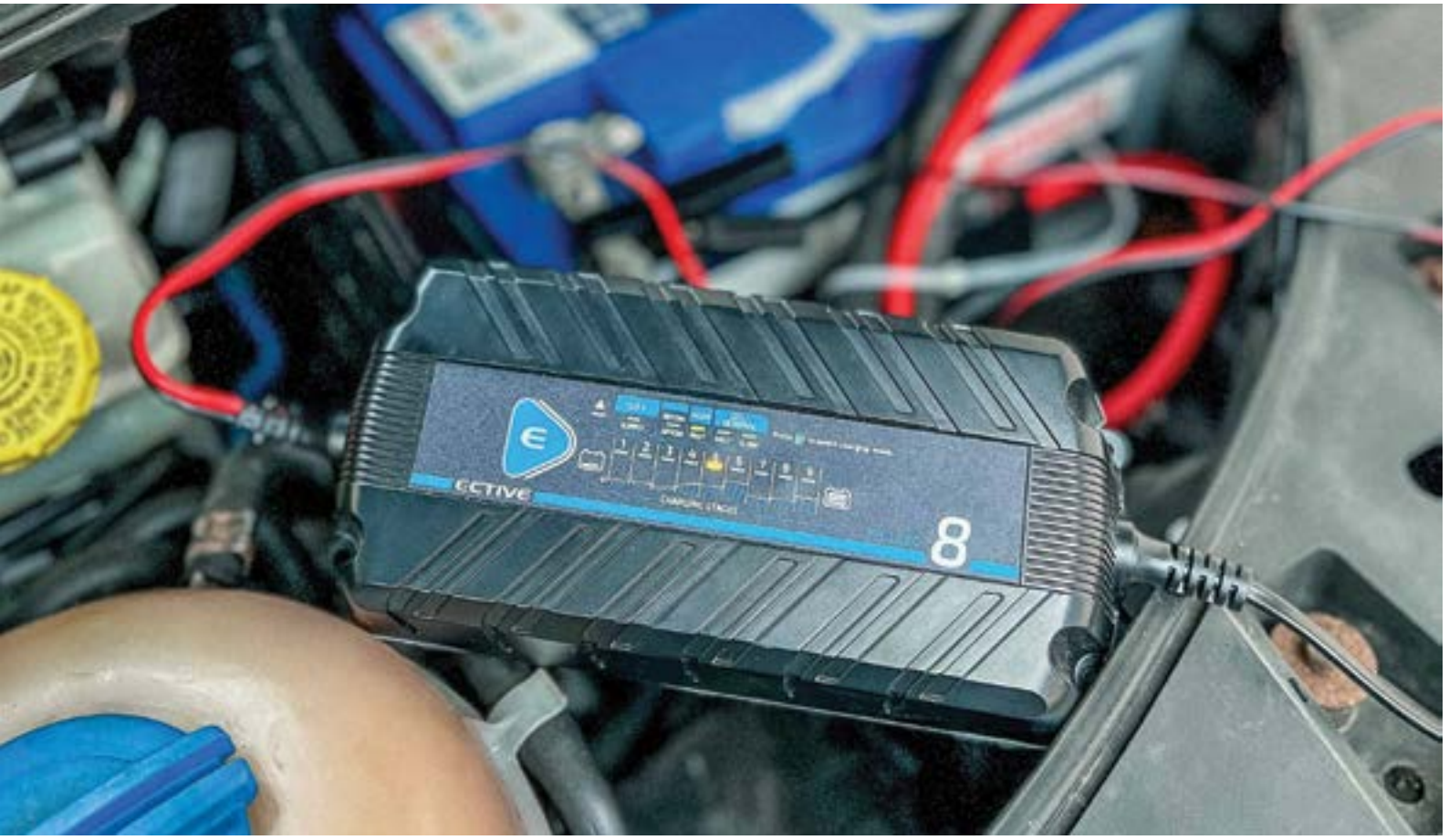
Rugged chargers with 8 or 9 charging levels.

The advanced **Proload chargers** from ECTIVE improve the performance of your batteries and can also extend their service life. With their fully automatic charging stages, Proload chargers are particularly suitable for car batteries, motorcycle batteries, snowmobiles, tractors and boats, among others. The processor-controlled charging characteristic ensures that the battery is always supplied with the correct voltage and current. Various additional and protective functions such as soft start, overvoltage protection, voltage compensation and overheating protection guarantee safe and reliable use. With the practical supply mode, the charger can remain connected to your battery indefinitely or be used as a power supply unit.

The high-quality workmanship means that the charger has a long service life and can even be used outdoors all year round. The integrated LED display, the robust fanless design and the water jet protection (IP65) ensure convenient and easy handling.

Compatible Battery Technologies:

Wet **Gel** **AGM** **Ca** LFP



ECTIVE Proload 4

Output voltage: 6 / 12 V
Max. charging current: 4 A
Battery capacity: 5 – 120 Ah
Charging levels: 8
Dimensions: 177 × 73 × 47 mm
Weight: 0,55 kg

8-stage charging characteristic

1. **Battery test**
2. **Desulphation**
3. **Soft start**
4. **Main charge**
5. **Residual charge**
6. **Analysis**
7. **Trickle charge**
8. **Pulse charge**

ECTIVE Proload 8

Output voltage: 12 V
Max. charging current: 8 A
Battery capacity: 10 – 150 Ah
Charging levels: 9
Dimensions: 203 × 95 × 60 mm
Weight: 0,80 kg

9-stage charging characteristic

1. **Battery test**
2. **Desulphation**
3. **Soft start**
4. **Main charge**
5. **Residual charge**
6. **Recovery**
7. **Analysis**
8. **Trickle charge**
9. **Pulse charge**

Safety Features

- Soft start
- Overvoltage protection
- Reverse polarity protection
- Overload protection
- Overheating protection
- Supply function (changing batteries without interrupting the onboard power supply)
- Protection class IP65 (resistant to water jets)

ECTIVE MULTILOAD

Versatile chargers with 8 charging levels.

ECTIVE Multiload chargers charge your battery with an eight-stage charging process that converts 220-240 V AC to 12 V DC using state-of-the-art switching mode technology. This is a very careful charging process that gives your battery a longer life and better performance compared to using conventional chargers. In addition, the Multiload charger reliably protects your battery from overcharging: it can therefore remain connected to the battery indefinitely.

Unlike conventional chargers, which use heavy transformers to convert the current, the Multiload models use electronic components. This makes the charger lighter and more compact without sacrificing performance.

Compatible Battery Technologies:

Wet **Gel** **AGM** **Ca** LFP

Practical controls

With the button , you can easily choose between the different battery technologies to optimally charge your battery.

With a glance at the integrated charging status display, you are also always informed about which phase of the charging process your battery is in and whether a defect or problem has occurred.

Multiload 5

Output voltage: 12 V
Max. charging current: 5 A
Battery capacity 35-100 Ah
Size: 197 × 116 × 62 mm
Weight: 1,05 kg

Multiload 7

Output voltage: 12 V
Max. charging current: 7 A
Battery capacity 50-140 Ah
Size: 197 × 116 × 62 mm
Weight: 1,05 kg

Multiload 10

Output voltage: 12 V
Max. charging current: 10 A
Battery capacity 70-200 Ah
Size: 197 × 116 × 62 mm
Weight: 1,10 kg

Multiload 12

Output voltage: 12 V
Max. charging current: 12 A
Battery capacity 80-240 Ah
Size: 197 × 116 × 62 mm
Weight: 1,10 kg

Multiload 15

Output voltage: 12 V
Max. charging current: 15 A
Battery capacity 100-300 Ah
Size: 217 × 116 × 62 mm
Weight: 1,28 kg

Multiload 20

Output voltage: 12 V
Max. charging current: 20 A
Battery capacity 134-400 Ah
Size: 217 × 116 × 62 mm
Weight: 1,28 kg

3 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

Safety Features

- Reverse polarity protection
- Short circuit protection
- Protection in case of missing battery connection
- Shutdown protection
- Overvoltage protection
- Overheating protection
- Automatic cooling fan

ECTIVE MULTILOAD LFP

Versatile chargers with 8 charging levels for lithium batteries.

Like the regular ECTIVE Multiload chargers, the **ECTIVE Multiload LFP** models also charge with an eight-stage charging process. However, the efficient and careful charging process is specially designed to supply modern lithium batteries. The intelligent charging system prevents damage to the battery and ensures, for example, that it is only charged at suitable temperatures. The LFP models are in no way inferior to the other Multiload devices in terms of their compactness and comprehensive protective functions, and they also have a helpful status display that keeps you constantly informed about the charging process.

Compatible Battery Technologies:

Wet | Gel | AGM | Ca | **LFP**

Practical controls

Simply use the button to switch the Multiload LFP charger on and off.

With a glance at the integrated charging status display, you are also always informed about which phase of the charging process your battery is in and whether a defect or problem has occurred.

Multiload 5 LFP

Output voltage: 12 V
Max. charging current: 5 A
Battery capacity 10 - 50 Ah
Size: 197 × 116 × 62 mm
Weight: 1,05 kg

Multiload 7 LFP

Output voltage: 12 V
Max. charging current: 7 A
Battery capacity 14 - 70 Ah
Size: 197 × 116 × 62 mm
Weight: 1,05 kg

Multiload 10 LFP

Output voltage: 12 V
Max. charging current: 10 A
Battery capacity 20 - 100 Ah
Size: 197 × 116 × 62 mm
Weight: 1,10 kg

Multiload 12 LFP

Output voltage: 12 V
Max. charging current: 12 A
Battery capacity 24 - 120 Ah
Size: 197 × 116 × 62 mm
Weight: 1,10 kg

Multiload 15 LFP

Output voltage: 12 V
Max. charging current: 15 A
Battery capacity 30 - 150 Ah
Size: 217 × 116 × 62 mm
Weight: 1,28 kg

Multiload 20 LFP

Output voltage: 12 V
Max. charging current: 20 A
Battery capacity 40 - 200 Ah
Size: 217 × 116 × 62 mm
Weight: 1,28 kg

3 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

Safety Features

- Reverse polarity protection
- Short circuit protection
- Protection in case of missing battery connection
- Shutdown protection
- Overvoltage protection
- Overheating protection
- Automatic cooling fan

ECTIVE MULTILOAD PRO

Safe and efficient charging for all battery technologies.

The **ECTIVE Multiload PRO** series chargers have been designed for maximum flexibility. The models reliably supply batteries from a **wide range of technologies**: wet, AGM, gel, SLA and LiFePO4. The high charging capacity and the multi-stage, intelligent charging process mean **short and gentle charging times**.

Both shore power and a generator can be used as a power source, with the Multiload PRO impressing with its **high efficiency** when converting AC to DC (> 80%). Controls on the device also allow manual settings for an absolutely safe and efficient charging process, even when the batteries are connected in parallel or series.

Multiload 37 PRO

Output voltage: 12 / 24 V
Max. charging current:
37,5 / 18,75 A
Battery capacity 35 - 150 Ah
Size: 261 × 160 × 70 mm
Weight: 1,80 kg

Multiload 75 PRO

Output voltage: 12 / 24 V
Max. charging current:
75 / 37,5 A
Battery capacity 75 - 300 Ah
Size: 261 × 160 × 70 mm
Weight: 2,65 kg

Multiload 150 PRO

Output voltage: 12 / 24 V
Max. charging current:
150 / 75 A
Battery capacity 150 - 600 Ah
Size: 307 × 180 × 82 mm
Weight: 4,00 kg

Compatible Battery Technologies:

Wet | **Gel** | **AGM** | **Ca** | **LFP**

3 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products‘ quality.

Security features

- Reverse polarity protection
- Short circuit protection
- Protection in case of missing battery connection
- Shutdown protection
- Surge protection
- Overheating protection
- Automatic cooling fan

You can use the switch on the back of the housing to turn the charger on and easily choose between 12 and 24 V. You can also connect an external battery temperature sensor there, which ensures optimal charging.

You can use DIP switches to select the correct battery charging voltage for your battery. You can also use the adjustment wheel to control the level of the charging current. Status LEDs also inform you whether the Multiload is charging properly.

ECTIVE LADEBOOSTER

Powerful charging converters for charging while driving.

The „**BB**“ in these practical ECTIVE devices stands for „Battery Booster“. This is a special type of battery charger as it allows allow you to fully charge your onboard battery while driving. Whether you are heading for your next destination in a motorhome, caravan or boat, you don‘t have to worry about finding a utility power connection first thing on arrival. Instead, you can use your consumers immediately with a fully charged supply battery.

Fire up the alternator!

The alternator is an electrical generator in your vehicle that is driven by the combustion engine and thus provides electrical power for the starter battery and consumers. Depending on how long you drive and the state of charge, your starter battery will be fully charged at some point. With a charge booster, you ensure that the energy that continues to be generated is not wasted, but can instead be used to charge the supply battery – with maximum precision and efficiency. In this battery-to-battery process, in which the starter battery is used to charge a supply battery, the charge booster permanently monitors both batteries. This means that the starter battery is not discharged and the supply battery is also protected from overcharging. Depending on the charging booster model, a starter battery with 12 or 24 V can be used in combination with supply batteries with 12 or 24 V.

The **ECTIVE SBB** charge boosters also have an integrated MPPT solar charge controller with high efficiency. This means that the supply battery continues to be charged with the help of your solar modules even if you interrupt your journey or have arrived at your destination.

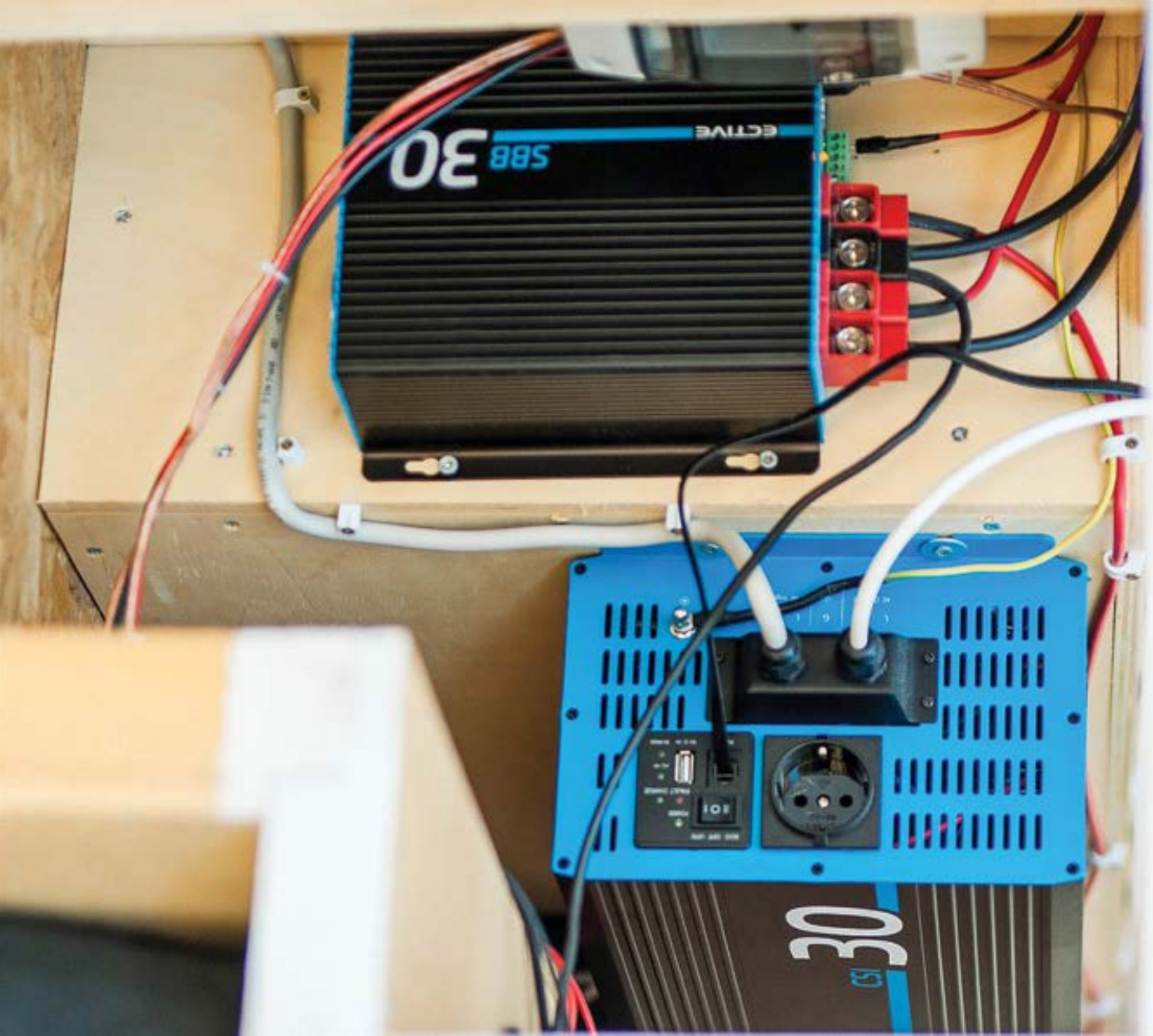
A charging booster is therefore a real must-have, especially for long trips in „nomad style“, giving you even more flexibility and more remote destinations.

Compatible Battery Technologies:

Wet **Gel** **AGM** Ca **LFP**

Technical Specifications

Nominal battery voltage (DC): 12 V
Overvoltage protection: 15,5 V
Own consumption: 24 mA
Activation control input „D+“: 8 to 16 V
Input voltage range Start II: 10,5 to 16 V
Input overvoltage switch-off Start II: 16,5 V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SB8
ACTIVE
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CHARGING WHILE DRIVING

Charge your supply battery while on the road!

A must-have for lithium fans

More and more users and vanlife fans have recognized the immense advantages of lithium batteries and are using this battery technology in their vehicles. A major advantage of these batteries is their low internal resistance, which allows very high charging currents. In principle, this allows the battery to be charged much faster, but alternators can be overtaxed as they are not designed for use with these batteries. The result for vehicles with regulated alternators from the Euro 5 standard upwards: the supply battery is insufficiently charged or not charged at all. The ECTIVE charge booster solves this problem and is therefore indispensable if you use a lithium battery and your vehicle has at least the Euro 5 standard.

But even without a lithium battery, the regulated alternator can cause problems in vehicles with Euro 5 or higher standards, as it automatically reduces its output when the starter battery is fully charged. The ECTIVE charge boosters solve this problem with the help of the connection for the so-called D+ signal. In this way, the charge booster can continue to call up the required power from the alternator and thus fully charge your supply battery.

No line losses thanks to optimal charging characteristic

With the help of a precise charging characteristic, the ECTIVE Battery Booster automatically increases and decreases the voltage to the required values to optimally charge your battery. In addition, the charging booster compensates for line losses and strong voltage fluctuations in the alternator, which often occur in vehicles. Connected consumers in your vehicle are also protected from voltage fluctuations and overvoltage.

The intelligent charging process takes place in three optimized steps (please use factor 2 for 24 V systems):

- During boost charging, charging initially takes place at the maximum current until the battery voltage has reached the constant voltage charging value.
- The current then begins to drop and constant voltage charging mode is started. The charging time in this phase is 2 hours on average, depending on the battery.
- If the battery voltage is above 12.6 volts, constant voltage charging is ended and trickle charging is initiated, which maintains the battery charge without overcharging.

Safety Features

The ECTIVE Battery Boosters are equipped with a variety of safety functions to ensure you don‘t have any nasty surprises with your starter battery or your supply battery:

- Protection against overvoltage or undervoltage of the main battery
- Undervoltage protection of the starter battery
- Overload protection of the B2B charge
- Reverse protection
- Overheating protection
- PV overload protection (for SBB models)
- PV overvoltage protection (for SBB models)

CHARGING BOOSTER WITH SOLAR CHARGE CONTROLLER

Charge your batteries even when the vehicle is stationary – with solar power.

The SBB models:
With integrated solar charge controller

The “S” in the model names of the **SBB Battery Boosters** stands for “Solar”, as these models have an integrated MPPT solar charge controller with a higher efficiency than conventional PWM charge controllers in addition to the range of functions of the BB models. The SBB 30 model processes a solar power of up to 250 watts and generates a charging current of 20 A. The SBB 60 model has a maximum PV output of 430 watts and a charging current of 30 A.

ECTIVE BB CHARGING BOOSTERS

Lade deine Batterien während der Fahrt.

BB 25 12 V to 24 V

Max. charge current Batt. I: 25 A
Supply battery nominal capacity: 45 - 280 Ah
Supply battery Nominal voltage: 24 V
Starter battery Min. rated capacity: 60 Ah
Size: 240 × 190 × 70 mm

BB 30 12 V to 12 V

Max. charge current Batt. I: 30 A
Supply battery nominal capacity: 45 - 280 Ah
Supply battery Nominal voltage: 12 V
Starter battery Min. rated capacity: 60 Ah
Size: 230 × 190 × 70 mm

BB 50 24 V to 24 V

Max. charge current Batt. I: 50 A
Supply battery nominal capacity: 45 - 280 Ah
Supply battery Nominal voltage: 24 V
Starter battery Min. rated capacity: 60 Ah
Size: 240 × 190 × 70 mm

BB 60 12 V to 12 V

Max. charge current Batt. I: 60 A
Supply battery nominal capacity: 90 - 560 Ah
Supply battery Nominal voltage: 12 V
Starter battery Min. rated capacity: 100 Ah
Size: 240 × 190 × 70 mm

BB 60 24 V to 12 V

Max. charge current Batt. I: 60 A
Supply battery nominal capacity: 90 - 560 Ah
Supply battery Nominal voltage: 12 V
Starter battery Min. rated capacity: 100 Ah
Size: 240 × 190 × 70 mm

BB 30 Compact

Max. charge current Batt. I: 30 A
Supply battery nominal capacity: 45 - 280 Ah
Supply battery Nominal voltage: 12 V
Starter battery Min. rated capacity: 60 Ah
Size: 147 × 118 × 41 mm

ECTIVE SBB CHARGING BOOSTERS

Charging boosters with an integrated MPPT solar charge controller.

SBB 25 12 V to 24 V

Max. charge current Batt. I: 25 A
Max. charge current Solar Batt. I: 30 A
Max. solar current 24 A
Max. solar voltage 50 V

Supply battery
nominal capacity: 45 - 280 Ah

Supply battery
Nominal voltage: 24 V

Starter battery
Min. rated capacity: 60 Ah

Size: 240 × 190 × 70 mm

SBB 30 12 V to 12 V

Max. charge current Batt. I: 30 A
Max. charge current Solar Batt. I: 20 A
Max. solar current 15 A
Max. solar voltage 50 V

Supply battery
nominal capacity: 45 - 280 Ah

Supply battery
Nominal voltage: 12 V

Starter battery
Min. rated capacity: 60 Ah

Size: 230 × 190 × 70 mm

SBB 50 24 V to 24 V

Max. charge current Batt. I: 50 A
Max. charge current Solar Batt. I: 30 A
Max. solar current 24 A
Max. solar voltage 50 V

Supply battery
nominal capacity: 90 - 560 Ah

Supply battery
Nominal voltage: 24 V

Starter battery
Min. rated capacity: 100 Ah

Size: 240 × 190 × 70 mm

SBB 60 12 V to 12 V

Max. charge current Batt. I: 60 A
Max. charge current Solar Batt. I: 30 A
Max. solar current 26 A
Max. solar voltage 50 V

Supply battery
nominal capacity: 90 - 560 Ah

Supply battery
Nominal voltage: 12 V

Starter battery
Min. rated capacity: 100 Ah

Size: 240 × 190 × 70 mm

SBB 60 24 V to 12 V

Max. charge current Batt. I: 60 A
Max. charge current Solar Batt. I: 50 A
Max. solar current 40 A
Max. solar voltage 50 V

Supply battery
nominal capacity: 90 - 560 Ah

Supply battery
Nominal voltage: 12 V

Starter battery
Min. rated capacity: 100 Ah

Size: 240 × 190 × 70 mm

CHARGING BOOSTER ACCESSORIES

Optimize your power supply with useful accessories.

Simple installation and useful additional connections

In addition to reliable connections for your starter and supply battery, the battery boosters from ECTIVE also have practical accessory connections. You select the battery technology (lead-acid/AGM/gel or lithium) with a DIP switch. This way, the charge booster knows which charging characteristic your supply battery requires.

The Battery Booster has a connection for the **ECTIVE Charge Monitor** and the external **ECTIVE Bluetooth module**. This means you always have all the relevant information and the charge status of your battery in view on the monitor or your smartphone. There is also a connection for a cable sensor, which enables even more precise measurement of the battery voltage. This helps the Battery Booster to compensate for the voltage loss on the charging cable. Do you use several supply batteries? No problem, because then you connect the connection labeled „Ss-“ to the negative terminal of the first battery and the connection labeled „Ss+“ to the positive terminal of the second or last battery.

You can also connect the **ECTIVE temperature sensor** and connect it to your vehicle‘s main battery. This gives the Battery Booster even more precise values. Or would you like to tap into your vehicle‘s D+ signal? The charge boosters from ECTIVE also offer a suitable connection for this.

ECTIVE CM 1
The stylish ECTIVE CM 1 is very easy to install so that you are always well informed about your power supply.

ECTIVE BT 1
The BT 1 Bluetooth dongle allows you to keep an eye on the values and charge status of your battery from your smart-phone or tablet.

Battery temperature sensor
The sensor enables the most efficient and gentle charging possible based on the current battery temperature.

ECTIVE auf YouTube youtube.com/@ective_strom

CHARGING BOOSTER OR ISOLATING RELAY?

Charging the supply battery in the camper

The choice depends on your own needs and the battery technologies to be charged.

ALEKSEI‘S ADVICE

If you use a **lithium battery** as the supply battery in your vehicle, a charge booster is virtually mandatory, regardless of which Euro standard your vehicle meets. For vehicles with a Euro 5 standard or higher with a regulated alternator, you should also always use a charge booster – regardless of the battery technology.

ECTIVE auf YouTube youtube.com/@ective_strom

CHARGE VINTAGE CARS WHILE DRIVING

You have to pay attention to this!

This is how you can safely charge the supply battery of a classic car using the alternator.

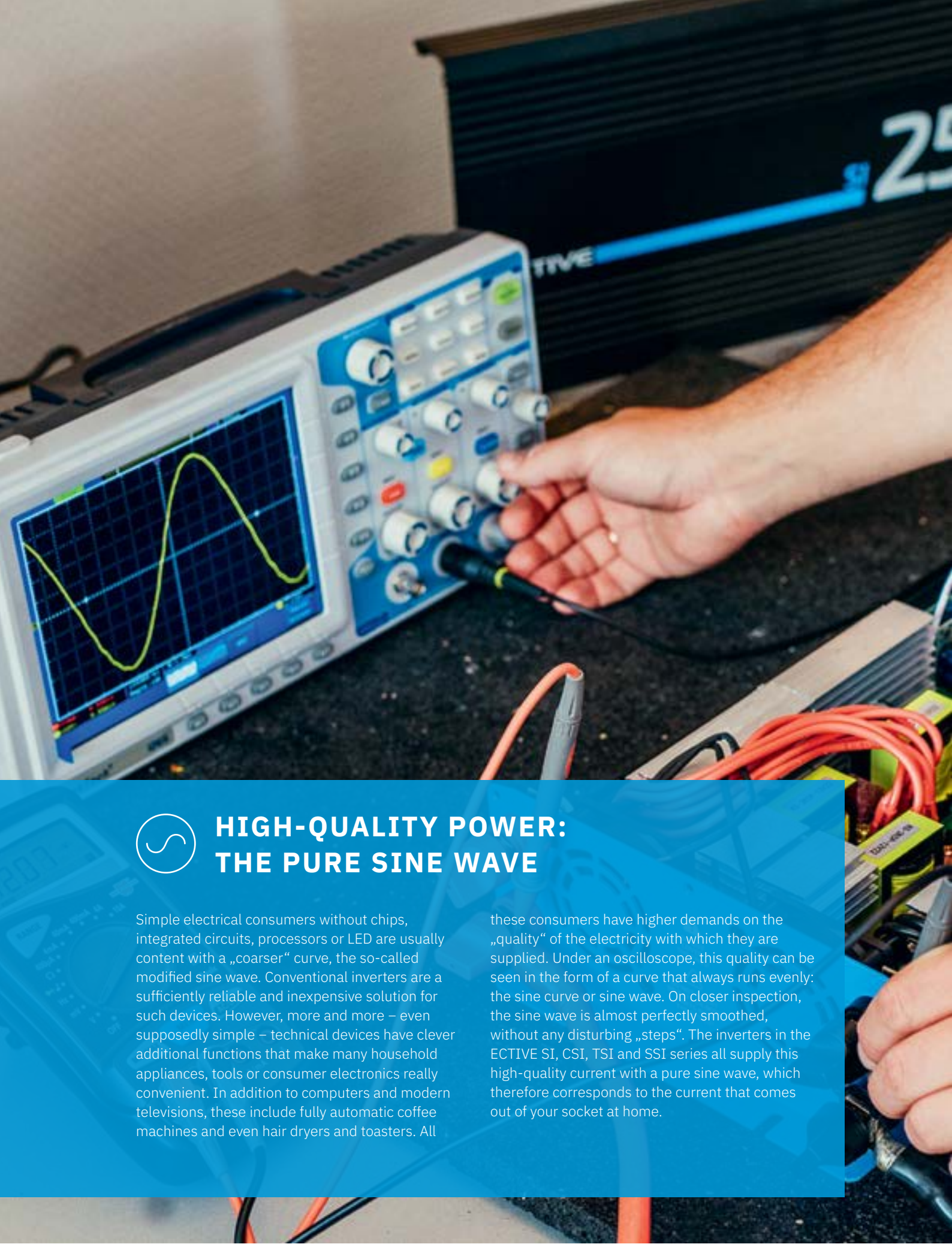
CHARGING TECHNOLOGY IN THE ECTIVE ECOSYSTEM

The battery is charged! Now what?

Regardless of which battery technology you use and regardless of whether you have charged your supply battery with utility power or solar power while stationary or whether it was charged directly while driving using a **battery booster**: The power stored in this way should of course be used as efficiently as possible. And to supply your electrical appliances with the best possible energy, it's best to rely on the versatile **inverters** from ECTIVE. These ensure that your devices get exactly the power they need to function properly and safely.


ECTIVE
The right power for your devices.
INVERTERS
Maximum power for your devices.
S. 180 The new ECTIVE SSI PRO inverters.


SSI
10
PRO



HIGH-QUALITY POWER: THE PURE SINE WAVE

Simple electrical consumers without chips, integrated circuits, processors or LED are usually content with a „coarser“ curve, the so-called modified sine wave. Conventional inverters are a sufficiently reliable and inexpensive solution for such devices. However, more and more – even supposedly simple – technical devices have clever additional functions that make many household appliances, tools or consumer electronics really convenient. In addition to computers and modern televisions, these include fully automatic coffee machines and even hair dryers and toasters. All these consumers have higher demands on the „quality“ of the electricity with which they are supplied. Under an oscilloscope, this quality can be seen in the form of a curve that always runs evenly: the sine curve or sine wave. On closer inspection, the sine wave is almost perfectly smoothed, without any disturbing „steps“. The inverters in the ECTIVE SI, CSI, TSI and SSI series all supply this high-quality current with a pure sine wave, which therefore corresponds to the current that comes out of your socket at home.

ECTIVE INVERTERS

What does an inverter actually do?

In short, an inverter converts **direct voltage** into **alternating voltage**. As supply batteries and solar modules supply DC voltage, but many larger electrical devices require AC voltage, the purpose of an inverter quickly becomes clear: it allows you to supply your electrical appliances with high-quality power when you are on the move, just like at home from the socket.

In your home, you don't worry about the "**quality**" of the electricity coming out of the wall. You can connect any device that requires electricity without even thinking about it. This is exactly what an inverter allows you to do wherever you previously had to do without it. In motorhomes or boats, you will often only find 12-volt sockets. And in your remote garden shed, there may be no power connection at all.

If you want to use a supply battery for power when you are out and about – and perhaps even charge it with solar power in a cost-effective and environmentally friendly way – you cannot simply connect your TV or coffee machine, as these devices require a standard 230-volt socket.

This is where your inverter comes into play. It converts direct current into alternating current and ensures that the voltage changes from 12 volts to 230 volts, thus providing the "right juice".

This voltage change from 12 to 230 volts is not particularly complicated to begin with. However, in order for the electricity to really flow as "cleanly" and reliably as modern electronic devices require, the current needs a constant frequency of exactly 50 hertz. The inverter converts the previously very rough and step-like curve into a curve with the desired frequency. This ensures the safe and reliable operation of the appliances.

3 YEARS WARRANTY

Our ECTIVE Warranty

We are convinced of the quality of our products! That is why we grant a voluntary manufacturer's warranty of three years on all our inverters in addition to the statutory warranty.

ECTIVE auf YouTube youtube.com/@ective_strom

230 V SOCKET IN THE DIY CAMPER

Why do I need an inverter?

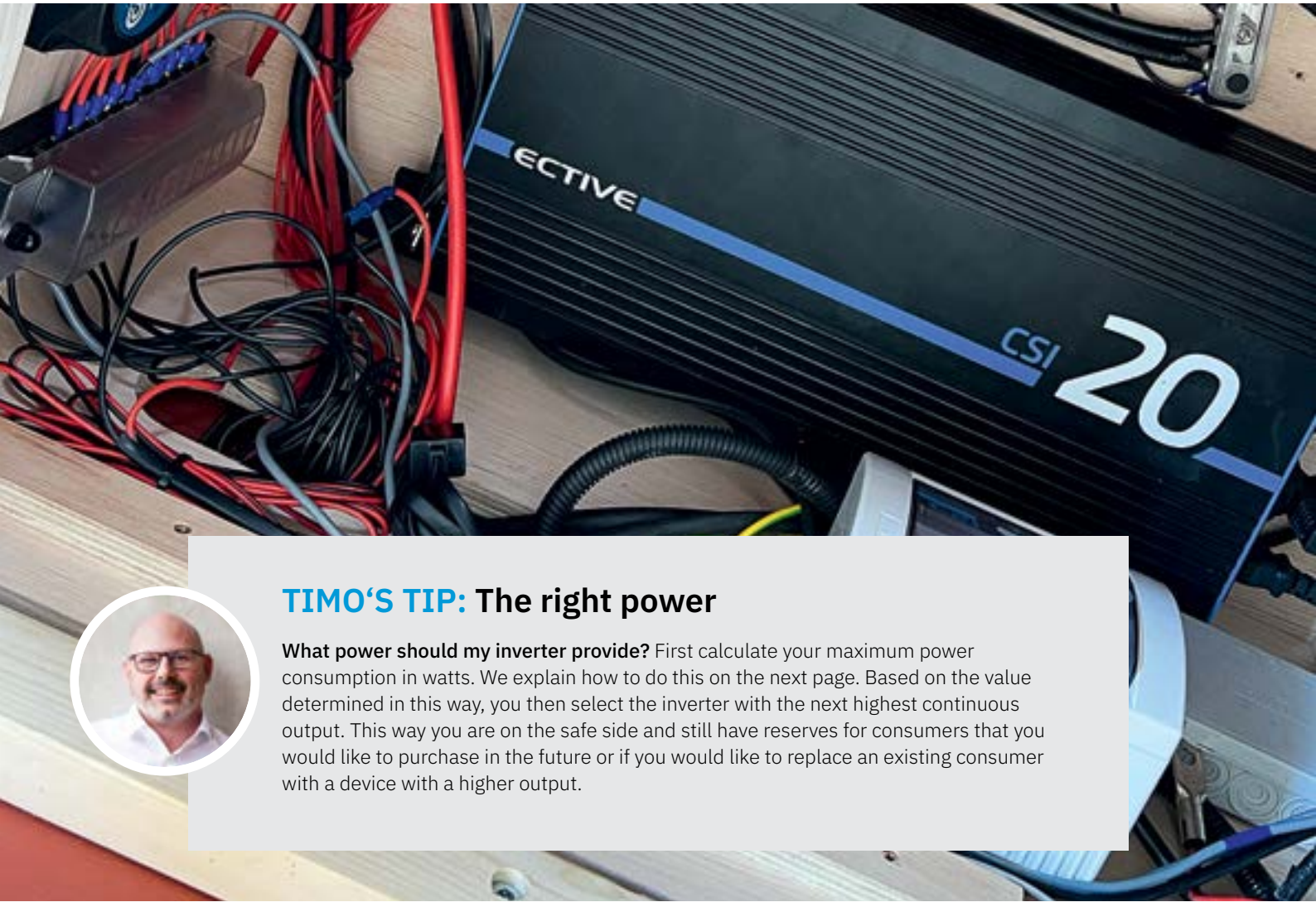
Aleksei explains the heart of a self-sufficient power supply and how an inverter works.

POWER LIKE FROM THE SOCKET

Simple power supply like at home – but on the move.

The ECTIVE product range comprises four regular series of inverters and three „Pro“ series. The series each differ in terms of their extended functions: From the solid basic models of the **SI series**, which reliably supply high-quality alternating current, to the **TSI series**, which are equipped with a mains priority circuit and a bypass function, allowing connection to a generator or the mains. The advanced **CSI series** also features an integrated battery charger for charging utility batteries, while the flagship **SSI series** models also have a built-in MPPT solar charge controller. All ECTIVE inverters are also equipped with useful functions that protect you and your connected devices.

We have newly developed the „**Pro**“ models of the TSI, CSI and SSI series. These devices impress with additional convenience and safety functions, as well as higher charging values.



TIMO‘S TIP: The right power

What power should my inverter provide? First calculate your maximum power consumption in watts. We explain how to do this on the next page. Based on the value determined in this way, you then select the inverter with the next highest continuous output. This way you are on the safe side and still have reserves for consumers that you would like to purchase in the future or if you would like to replace an existing consumer with a device with a higher output.

SI

S. 164 | The entry-level models for high-quality alternating current.

TSI

S. 166 | Inverter with mains and battery priority circuit.

TSI PRO

S. 168 | The “PRO” variant of the TSI inverters.

CSI

S. 170 | Inverter with integrated IUoU charger.

CSI PRO

S. 174 | The “PRO” variant of the CSI inverters.

SSI

S. 176 | Premium inverter with integrated MPPT solar charge controller.

SSI PRO

S. 180 | The “PRO” variant of the SSI inverters.

RC Remote Controls

S. 184 | The right remote control for every inverter.

THE RIGHT INVERTER

Find out which inverter suits your needs.

The right series

When choosing the right device, you should first ask yourself how you want to use your future inverter. This will determine which inverter series is right for you. Are you looking for an inexpensive basic model? Then the **SI series** is made for you. Would you like to connect a generator or the power grid in addition to your supply battery? The **TSI series** offers the corresponding functions. The **CSI series** also allows you to charge your battery directly from these sources. Or would you like to use your inverter in a solar system and not buy a separate solar charge controller? Then the **SSI series** models are the perfect choice. Find out more on the following pages.

The right performance

Once you have decided on a series based on the desired functions, the question arises as to **what power** your future inverter should have in order to select a specific model. How much power your inverter should have depends primarily on the total power of the devices you want to operate with the help of the inverter. To get a realistic power rating, you should take a look at the rating plates and identification labels of your electrical appliances. First add up the power values stated there. Unfortunately, the value determined in this way does not yet provide a conclusive answer. Because now you should pay attention to two other factors, the inrush currents and starting currents.

Inrush and starting currents

Almost all electrical loads require so-called inrush currents during or after being switched on immediately. These can be a multiple of the rated current that your appliance requires during regular operation. A factor of 5 or 10 is not uncommon. Transformers, switching power supplies, electric motors and even modern LED lamps usually have very high inrush currents. Although the duration of the increased current is usually only a few milliseconds, the inverter must have correspondingly higher power reserves for this period. Starting currents, on the other hand, play a role with loads that only achieve their full functionality when they start up properly. Typical examples of this are drills, angle grinders and refrigerators, whose compressors switch on again and again at certain intervals.

You should therefore definitely consider the inrush and starting currents when choosing your inverter.

Compatible Battery Technologies:

Wet **Gel** **AGM** **LFP**

THE SERIES AT A GLANCE

Our inverters offer many practical functions.

Function	SI	TSI	TSI Pro	CSI	CSI Pro	SSI	SSI Pro
Continuous power	300 to 3000 W	500 to 3000 W	1000 to 3000 W	300 to 3000 W	1000 to 3000 W	1000 to 3000 W	1000 to 3000 W
Input voltage	12 / 24 V	12 / 24 V	12 V	12 / 24 V	12 V	12 / 24 V	12 V
Overvoltage protection	✓	✓	✓	✓	✓	✓	✓
Softstart	✓	✓	✓	✓	✓	✓	✓
Reverse polarity protection	✓	✓	✓	✓	✓	✓	✓
Mains priority circuit	✗	✓	✓	✓	✓	✓	✓
Bypass function	✗	✓	✓	✓	✓	✓	✓
Battery charger	✗	✗	✗	✓	✓	✓	✓
MPPT solar charge controller	✗	✗	✗	✗	✗	✓	✓
Network type	IT	IT	TN	IT	TN	IT	TN
Quiet fan	✗	✗	✓	✗	✓	✗	✓

12 V or 24 V?

An inverter must be matched to the voltage value of the energy source, otherwise there is a risk of damage to the device. Accordingly, you will find the models of the regular SI, TSI, CSI and SSI series in two versions: for connection to 12 V or 24 V.

Supply batteries for motor vehicles usually have an output voltage of 12 V: a 12 V inverter is sufficient for these. There are also 24 V batteries or supply systems in which two 12 V batteries are connected together to form a total voltage of 24 V. In these cases, you should use an inverter that is approved for an input voltage of 24 V.

ECTIVE SI INVERTERS

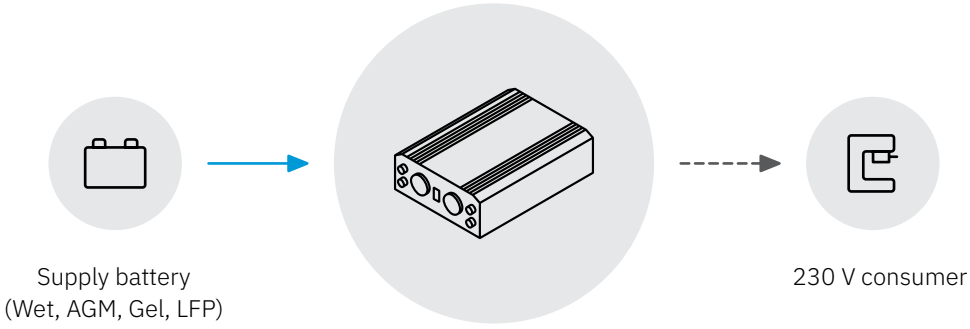
The dependable basic model.

More and more electronic loads are becoming more complex in their design and can no longer be operated with „modified sine wave current“ from inferior inverters. To ensure trouble-free operation, **ECTIVE SI series** inverters supply electricity with an absolutely **pure sine wave** – just like from the socket at home!

Although the SI series is technically the simplest series of ECTIVE inverters, it still offers numerous additional and protective functions, such as a overload protection, short-circuit protection, overvoltage protection and a soft start function.

The individual models in the series differ primarily in their continuous output: from 300 W to 3000 W, there is a suitable device for every requirement. In addition to the 12-volt version, a 24-volt version is also available for most models. This converts either 12 or 24 V direct current input voltage from the supply battery into 230 V alternating current to operate the loads.

How to use your ECTIVE SI inverter:



SI inverter

Functions and properties

- **Pure sine wave**
- **State-of-the-art protection mechanisms**
- **Available with 12 or 24 V input voltage (except SI 3 and SI 5)**
- **USB socket for small devices**
- **Power boost for high starting currents: 2 seconds by 200%, 10 seconds by 150%**
- **3-year manufacturer‘s warranty**

SI 3

Continuous power: 300 W
Voltage: 12 V zu 230 V
Size: 175 × 150 × 55 mm
Weight: 1,3 kg

SI 5

Continuous power: 500 W
Voltage: 12 V zu 230 V
Size: 255 × 150 × 75 mm
Weight: 2,5 kg

SI 10

Continuous power: 1000 W
Voltage: 12 / 24 V zu 230 V
Size: 370 × 150 × 75 mm
Weight: 3,4 kg

SI 15

Continuous power: 1500 W
Voltage: 12 / 24 V zu 230 V
Size: 360 × 220 × 90 mm
Weight: 5,1 kg

SI 20

Continuous power: 2000 W
Voltage: 12 / 24 V zu 230 V
Size: 385 × 220 × 90 mm
Weight: 6,2 kg

SI 25

Continuous power: 2500 W
Voltage: 12 / 24 V zu 230 V
Size: 445 × 220 × 90 mm
Weight: 6,9 kg

SI 30

Continuous power: 3000 W
Voltage: 12 / 24 V zu 230 V
Size: 425 × 220 × 90 mm
Weight: 10,5 kg

3 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

Technical Specifications

Max. power up to 2 s: 2 × Dauerleistung
Max. power up to 10 s: 1,5 × Dauerleistung
Mains frequency: 50 Hz

Efficiency (12 V): up to 90 %
Efficiency (24 V): up to 91 %

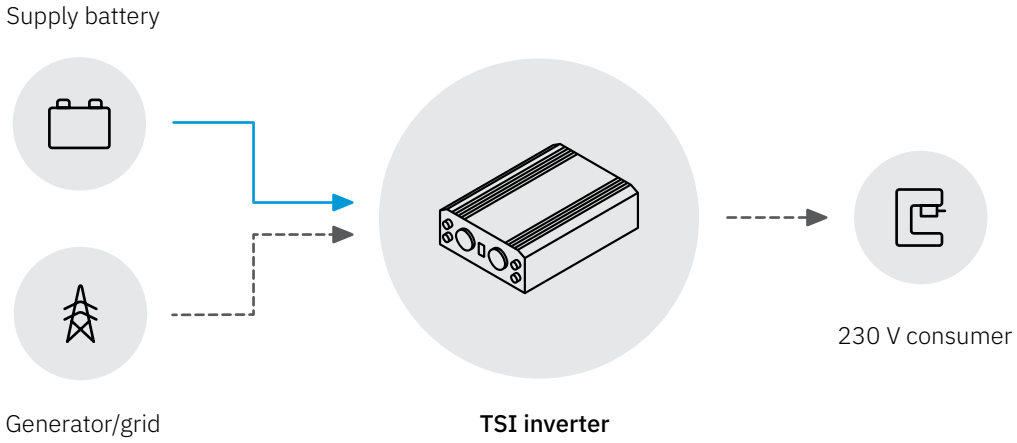
ECTIVE TSI INVERTERS

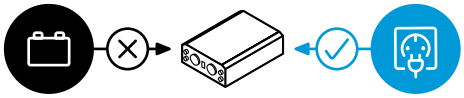
With intelligent mains priority switching and bypass function.

The **ECTIVE TSI series** inverters are specially optimized for connection to a generator or the power grid. With two extremely useful functions, they extend the corresponding basic models of the SI series: Firstly, the intelligent **grid priority circuit** allows smooth switching between power from the battery and power from the grid. So if the battery runs out of juice, you can simply switch on an external power source and continue to use the running devices in mains operation. On the other hand, the TSI inverters have a **bypass function** that allows you to use them as an uninterruptible power supply (UPS): As long as mains power is available, this is used. However, if it fails, the inverter automatically switches to battery operation within 16 ms. This ensures that all connected loads continue to be supplied with power without interruption.

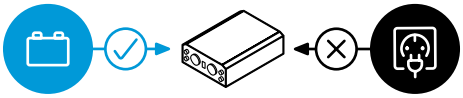
With ECO mode, you operate the inverter in battery priority. This means that the battery supplies all devices with power even though mains or generator power is connected. If the voltage drops to the minimum of 11 V, the inverter automatically switches to mains operation. This mode is perfect for stand-alone operation.

How to use your ECTIVE TSI inverter:





Mains priority circuit (UPS mode)



Battery priority circuit (ECO mode)

TSI 5

Continuous power: 500 W
Voltage: 12 V zu 230 V
Size: 300 × 150 × 75 mm
Weight: 2,6 kg

TSI 10

Continuous power: 1000 W
Voltage: 12 / 24 V zu 230 V
Size: 410 × 150 × 75 mm
Weight: 3,5 kg

TSI 15

Continuous power: 1500 W
Voltage: 12 / 24 V zu 230 V
Size: 390 × 220 × 90 mm
Weight: 5,3 kg

TSI 20

Continuous power: 2000 W
Voltage: 12 / 24 V zu 230 V
Size: 450 × 220 × 90 mm
Weight: 6,4 kg

TSI 25

Continuous power: 2500 W
Voltage: 12 / 24 V zu 230 V
Size: 500 × 220 × 95 mm
Weight: 7,2 kg

TSI 30

Continuous power: 3000 W
Voltage: 12 / 24 V zu 230 V
Size: 500 × 220 × 150 mm
Weight: 10,8 kg

3 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

Technical Specifications

Max. power up to 2 s: 2 × Dauerleistung
Max. power up to 10 s: 1,5 × Dauerleistung
Mains frequency: 50 Hz

Efficiency (12 V): up to 90 %
Efficiency (24 V): up to 91 %
Switch time (UPS): < 16 ms

ECTIVE TSI PRO

With quiet fan and TN network.

Our TSI-PRO inverters offer all the functions and features of the regular TSI models as well as some advanced developments: A **quieter fan** makes operation more pleasant, especially if the inverter is installed in an interior. In addition, all PRO inverters have an **integrated FI circuit breaker with overcurrent protection**, which automatically switches off the system in the event of residual currents and thus protects against potentially life-threatening electric shocks. In contrast to conventional inverters, which usually provide an IT network, our PRO inverters provide a **TN network**. In such a network, personal protection can be achieved by grounding, just like in the usual household network.

TSI 10 PRO

Continuous power: 1000 W
Voltage: 12 V zu 230 V
Size: 335 × 220 × 120 mm
Weight: 4,1 kg

TSI 15 PRO

Continuous power: 1500 W
Voltage: 12 V zu 230 V
Size: 370 × 220 × 120 mm
Weight: 4,7 kg

TSI 20 PRO

Continuous power: 2000 W
Voltage: 12 V zu 230 V
Size: 455 × 220 × 120 mm
Weight: 5,8 kg

TSI 25 PRO

Continuous power: 2500 W
Voltage: 12 V zu 230 V
Size: 485 × 220 × 120 mm
Weight: 6,3 kg

TSI 30 PRO

Continuous power: 3000 W
Voltage: 12 V zu 230 V
Size: 500 × 220 × 150 mm
Weight: 7,8 kg

Technical Specifications

FI circuit breaker with overcurrent protection

Quiet fan

TN network

Max. power up to 2 s: 2 × Continuous performance
Max. power up to 10 s: 1,5 × Continuous performance
Mains frequency: 50 Hz

Efficiency (12 V): up to 90 %
Switch time (UPS): < 16 ms

3 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

ECTIVE CSI INVERTERS

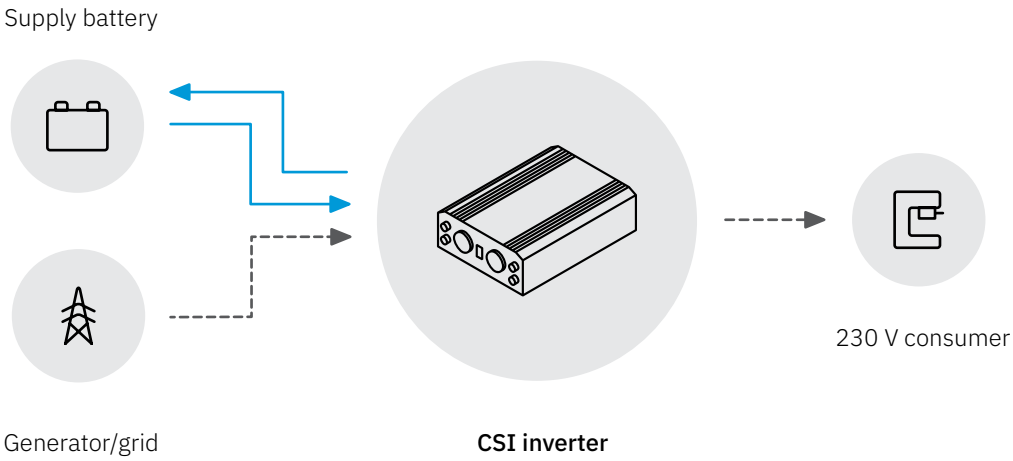
Advanced inverters with integrated charger.

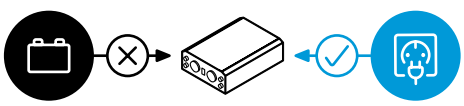
The **ECTIVE CSI inverters** supplement the functions of the SI and TSI series with a powerful, **integrated charger** with IUoU charging characteristic. This allows you to charge your supply battery using the inverter without having to resort to a separate charging station.

This allows you to simply connect your consumers and your battery to your CSI inverter. If you then add mains power or a generator, you can use these power sources to recharge the supply battery. The charger's intelligent IUoU charging technology automatically keeps the voltage and charge level at a constant level. This not only provides you with an uninterrupted power supply, but also a longer battery life.

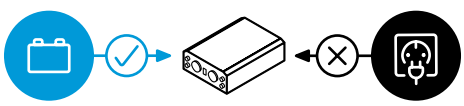
The proven, comprehensive functions of the SI and TSI inverters are also used in the CSI series, so that you can supply your demanding electrical consumers with high-quality alternating current everywhere.

How to use your ECTIVE CSI inverter:





Mains priority circuit (UPS mode)



Battery priority circuit (ECO mode)

CSI 3

Continuous power: 300 W
Voltage: 12 V zu 230 V
Size: 270 × 150 × 55 mm
Weight: 1,7 kg

CSI 5

Continuous power: 500 W
Voltage: 12 V zu 230 V
Size: 355 × 150 × 75 mm
Weight: 2,5 kg

CSI 10

Continuous power: 1000 W
Voltage: 12 / 24 V zu 230 V
Size: 430 × 150 × 75 mm
Weight: 3,4 kg

CSI 15

Continuous power: 1500 W
Voltage: 12 / 24 V zu 230 V
Size: 450 × 220 × 90 mm
Weight: 5,6 kg

CSI 20

Continuous power: 2000 W
Voltage: 12 / 24 V zu 230 V
Size: 480 × 220 × 90 mm
Weight: 6,5 kg

CSI 25

Continuous power: 2500 W
Voltage: 12 / 24 V zu 230 V
Size: 530 × 220 × 90 mm
Weight: 7,3 kg

CSI 30

Continuous power: 3000 W
Voltage: 12 / 24 V zu 230 V
Size: 480 × 220 × 150 mm
Weight: 9,1 kg

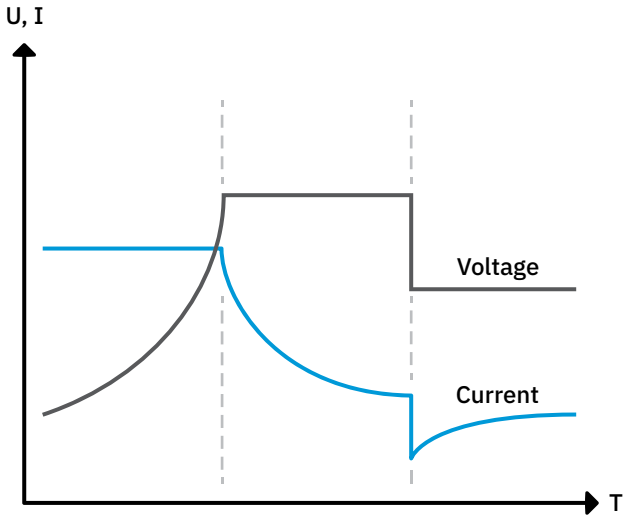
Technical Specifications

Max. power up to 2 s: 2 × Continuous power
Max. power up to 10 s: 1,5 × Continuous power
Max. charge current (12 / 24 V): 10 / 20 A
Mains frequency: 50 Hz
Efficiency (12 V): up to 90 %
Efficiency (24 V): up to 91 %
Switch time (UPS): < 16 ms

3 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

CSI — THE INTEGRATED CHARGER

Efficient and gentle battery charging with IUoU characteristic curve.



The right charging process for all battery technologies

With its maximum charging voltage of 14.4 V, the integrated and intelligent charger of the ECTIVE CSI inverters is suitable for AGM, gel and LiFePo4 batteries (with BMS) as well as standard wet batteries.

Of course, the CSI models also have the functions of the SI and TSI series. These include mains and battery priority switching as well as numerous safety and comfort features.

Compatible Battery Technologies:

Wet **Gel** **AGM** **LFP**

ALEKSEI‘S ADVICE

What you should look out for during installation: When wiring your inverter, make sure that the cable cross-section is sufficient. The corresponding table in the operating instructions for our devices tells you which cables you should use.


ON
OFF
Fault
AC-Charge
5.0V
2.1A

ECTIVE CSI PRO

With even more power and optimised for all battery types.

Just like the TSI-PRO inverters, the **CSI-PRO** models are more pleasant to operate thanks to the **quieter fan** and offer even greater personal protection with the **integrated FI circuit breaker with overcurrent protection** and the output **TN network**. In addition, the CSI-PRO devices have a **more powerful charger** built into them, which can be set up using a DIP switch to suit the type of battery used. The charger works with a charging characteristic optimized for **each battery technology** and ensures that your battery is charged as efficiently and gently as possible.

CSI 10 PRO

Continuous power: 1000 W
Voltage: 12 V zu 230 V
Charging current (charger): 20 A
Size: 380 × 220 × 150 mm
Weight: 5,0 kg

CSI 15 PRO

Continuous power: 1500 W
Voltage: 12 V zu 230 V
Charging current (charger): 30 A
Size: 395 × 220 × 150 mm
Weight: 6,1 kg

CSI 20 PRO

Continuous power: 2000 W
Voltage: 12 V zu 230 V
Charging current (charger): 30 A
Size: 445 × 220 × 150 mm
Weight: 7,4 kg

CSI 25 PRO

Continuous power: 2500 W
Voltage: 12 V zu 230 V
Charging current (charger): 40 A
Size: 515 × 220 × 150 mm
Weight: 8,0 kg

CSI 30 PRO

Continuous power: 3000 W
Voltage: 12 V zu 230 V
Charging current (charger): 40 A
Size: 515 × 220 × 150 mm
Weight: 8,6 kg

Technical Specifications

- FI circuit breaker with overcurrent protection
- Quiet fan
- TN network
- More powerful charger
- Selectable charging characteristic for all battery types

Max. power up to 2 s: 2 × Continuous performance
Max. power up to 10 s: 1,5 × Continuous performance
Mains frequency: 50 Hz

Efficiency (12 V): up to 90 %
Switch time (UPS): < 16 ms

3 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

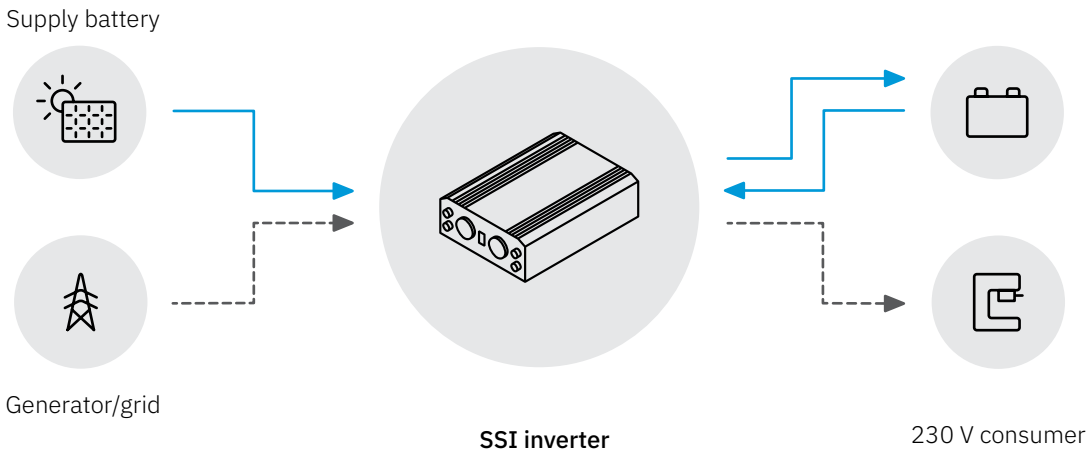
ECTIVE SSI INVERTERS

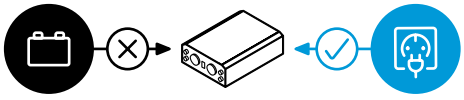
Premium inverter with integrated MPPT solar charge controller.

The **SSI series** undoubtedly offers the flagship models of the ECTIVE inverters. In addition to the functions of the other series, i.e. **mains priority circuit, bypass function** and **integrated charger**, these all-rounders also have an **integrated MPPT solar charge controller**. This makes them the ultimate solution if you are looking for a truly self-sufficient power supply for your electrical appliances. Simply connect your solar system directly to your SSI inverter, which passes on the energy generated to the consumers and automatically charges the connected supply battery. The Max Power Point Tracker (MPPT) ensures that the full power potential of the solar modules is utilised and the battery is always recharged as quickly as possible, while the environmentally friendly **ECO mode** allows you to set devices to rely exclusively on solar energy even when utility or generator power is available. If solar power is no longer available, the SSI inverter automatically switches to grid priority.

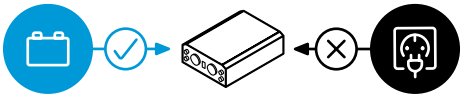
You are also ideally equipped for emergencies with SSI inverters. If the supply battery has discharged too deeply during a prolonged power outage and utility power are then available again, both energy sources simultaneously take care of the rapid recharging to the target voltage value.

How to use your ECTIVE SSI inverter:





Mains priority circuit (UPS mode)



Battery priority circuit (ECO mode)

SSI 10

Continuous power: 1000 W
Voltage: 12 / 24 V zu 230 V
Size: 380 × 220 × 150 mm
Weight: 5,8 kg

SSI 15

Continuous power: 1500 W
Voltage: 12 / 24 V zu 230 V
Size: 450 × 220 × 150 mm
Weight: 6,8 kg

SSI 20

Continuous power: 2000 W
Voltage: 12 / 24 V zu 230 V
Size: 500 × 220 × 150 mm
Weight: 7,9 kg

SSI 25

Continuous power: 2500 W
Voltage: 12 / 24 V zu 230 V
Size: 520 × 220 × 150 mm
Weight: 8,5 kg

SSI 30

Continuous power: 3000 W
Voltage: 12 / 24 V zu 230 V
Size: 500 × 220 × 150 mm
Weight: 9,7 kg

3 YEARS WARRANTY **Our ECTIVE Warranty** — Because we are convinced of our products' quality.

Technical Specifications

Max. power up to 2 s: 2 × continuous power
Max. power up to 10 s: 1,5 × continuous power
Max. charging current (12 / 24 V): 10 / 20 A
Mains frequency: 50 Hz
Efficiency (12 V): up to 92%
Efficiency (24 V): up to 93%
Switching time (UPS): < 16 ms

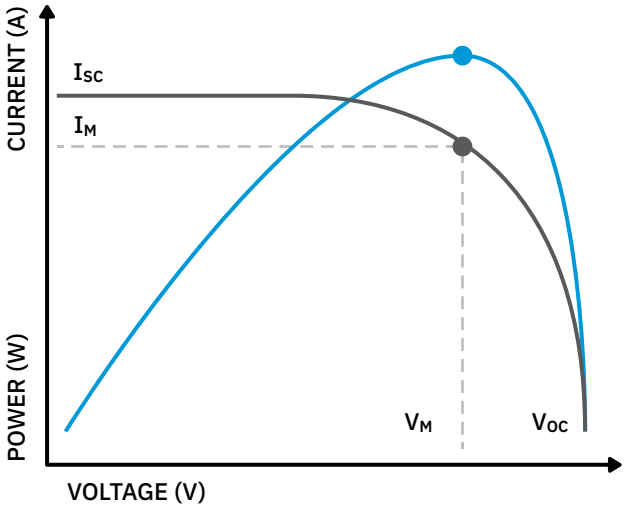
Efficiency solar charge controller: 97%
Solar input voltage: 15 to 70 V
Max. solar input power: 550 W
MPPT-Charging current (max.): 20 A
Charging voltage: 10,5 to 14,4 V
USB output: 5 V / 1 A

SSI — THE MPPT SOLAR CHARGE CONTROLLER

Power your devices and charge your batteries with solar power.

Maximum efficiency in all situations

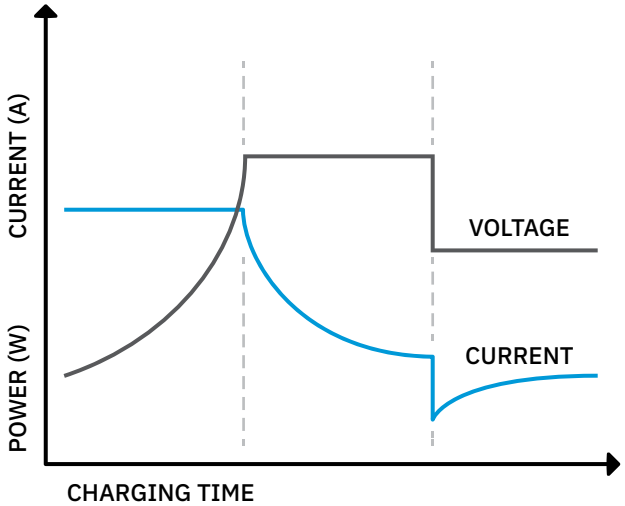
All ECTIVE SSI inverters have an integrated MPPT solar charge controller that allows you to utilize the maximum possible output of your solar modules. In contrast to conventional PWM charge controllers, the full potential of your solar modules is utilized, completely independent of the difference between battery and module voltage. The internal microprocessor constantly determines the most efficient operating point so that your batteries are charged at the highest efficiency.



This is how it works: Simply connect modules with an input voltage of up to 70 V and the MPPT charge controller of your ECTIVE SSI inverter will charge the connected batteries. The MPPT charging current depends on your SSI model – the SSI 25 Pro and SSI 30 Pro models charge with up to 40 A! With sufficient sunlight, this ensures that the batteries are always fully charged.

Functions and properties

- **Charger with IUoU characteristic**
- **Pure sine wave**
- **State-of-the-art protection mechanisms**
- **Available with 12 or 24 V input voltage**
- **USB socket for small devices**
- **Power boost for high starting currents: 2 seconds by 200%, 10 seconds by 150%**
- **3-year manufacturer‘s warranty**



ECTIVE SSI PRO

With powerful charger and solar charge controller.

The devices in the ECTIVE **SSI-PRO** series are absolute top-class inverters. They combine the numerous functions and features of the SSI series with all the additional advantages of the PRO series:

The **quiet fan** for operation without disturbing noises, as well as the highest level of protection thanks to the **FI circuit breaker with overcurrent protection** and **TN network** make it comfortable and extremely safe to use. In addition, the charger built into the SSI PRO and the integrated charge controller are even more powerful than in the regular version. You select the **battery technology** used using the DIP switch and both the charger and the charge controller charge with a corresponding optimized charging characteristic.

SSI 10 PRO

Continuous power: 1000 W
Voltage: 12 V zu 230 V
Charging current (charger): 20 A
Charging current (MPPT): 40 A
Size: 405 × 220 × 150 mm
Weight: 6,0 kg

SSI 15 PRO

Continuous power: 1500 W
Voltage: 12 V zu 230 V
Charging current (charger): 30 A
Charging current (MPPT): 40 A
Size: 430 × 220 × 150 mm
Weight: 7,0 kg

SSI 20 PRO

Continuous power: 2000 W
Voltage: 12 V zu 230 V
Charging current (charger): 30 A
Charging current (MPPT): 40 A
Size: 475 × 220 × 150 mm
Weight: 8,3 kg

SSI 25 PRO

Continuous power: 2500 W
Voltage: 12 V zu 230 V
Charging current (charger): 40 A
Charging current (MPPT): 40 A
Size: 515 × 220 × 150 mm
Weight: 8,9 kg

SSI 30 PRO

Continuous power: 3000 W
Voltage: 12 V zu 230 V
Charging current (charger): 40 A
Charging current (MPPT): 40 A
Size: 515 × 220 × 150 mm
Weight: 9,3 kg

Technical Specifications

FI circuit breaker with overcurrent protection

Quiet fan

TN network

More powerful charger

Selectable charging characteristic for all battery types

Max. power up to 2 s: 2 × Continuous performance
Max. power up to 10 s: 1,5 × Continuous performance
Mains frequency: 50 Hz
Efficiency (12 V): up to 92 %
Switch time (UPS): < 16 ms

Efficiency Solar charge controller: 97 %
Solar input voltage: 15 to 70 V
Max solar input power: 550 W
Charging voltage: 10,5 to 14,4 V
USB output: 5 V / 1 A

3 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

ALL-ROUND PROTECTION AND COMFORT

Simple operation and safe operation.

ECTIVE products are designed to make your everyday life easier. That's why we make sure our inverters are easy to operate and that you and your connected devices are optimally protected.

The **ECTIVE RC remote control** is ideal for convenient operation, allowing you to switch your inverter on and off and monitor important values. Another particularly practical feature is the **USB port**, which you can use to charge smaller consumers such as smartphones or tablets directly on the inverter.

Our inverters also have state-of-the-art **safety functions** to ensure that the connected consumer battery is not deeply discharged and the consumers are protected from voltage fluctuations. This means you can rely on the operation of your devices with absolute peace of mind and comfort.

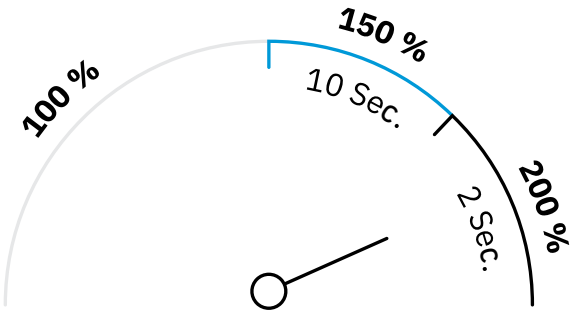
The „Pro" models also have an integrated **RCD**, which switches off the circuit in the event of residual currents and thus protects against life-threatening electric shocks. In the **TN grid** output by these inverters, personal protection can also be implemented by earthing the system as in the familiar domestic grid.

Safety Features

The following features of the ECTIVE inverters protect the user, devices and battery during operation:

- **Overvoltage and undervoltage protection**
  Switches the inverter off automatically if the set values are exceeded or undercut, prevents damage to the inverter and deep discharge of the supply batteries.
- **Reverse polarity protection**
  Immediately blows the inverter fuse if the battery cables are swapped.
- **Soft start**
  Limits the power required when the inverter is switched on, thus reducing the load on the batteries and preventing fuse failures.
- **Overload protection**
  Ensures automatic switch-off of the inverter in the event of excessive power consumption by the loads
- **Overheating protection**
  Switches the inverter off immediately at internal temperatures above 75°C.
- **Short-circuit fuse**
  Immediately shuts down the inverter in the event of a short circuit on a load.
- **Warning signals**
  In the event of a fault, the inverter alerts you to the underlying problem by means of acoustic signals and an LED warning light. This enables you to rectify the fault quickly and safely.
- **RCD ("Pro" models)**
  Switches the circuit off automatically in the event of fault currents.

Leistung, wenn es drauf ankommt



Integrated protective circuits, durable power electronics and intelligent microprocessor control guarantee a high overload capacity. With your ECTIVE inverter, you can therefore use loads with high starting currents or short-term high peak consumption safely and without restrictions.

150% Power for 10 seconds
200% Power for 2 seconds

ECTIVE RC REMOTE CONTROLS

Die passende Fernbedienung für jeden Wechselrichter.

The practical wired **ECTIVE RC Remote Controls** allow you to conveniently monitor and switch your inverter on and off. Please note that the **RC 1** to **RC 4** remote controls are only compatible with conventional SI, TSI, CSI or SSI devices (without the „PRO“ suffix). If you want to install an ECTIVE PRO inverter, use the **RC PRO remote control**.

RC 1

for ECTIVE
SI Inverters

RC 2

for ECTIVE
TSI Inverters

RC 3

for ECTIVE
CSI Inverters

RC 4

for ECTIVE
SSI Inverters

RC PRO

for all ECTIVE
„PRO“ Inverters

Feature	RC 1	RC 2	RC 3	RC 4	RC PRO
Charge level indicator	✓	✓	✓	✓	✓
On/off switch	✓	✓	✓	✓	✓
Power/standby display	✓	✓	✓	✓	✓
Instantaneous consumption display	✓	✓	✓	✓	✓
Battery operation display	✓	✓	✓	✓	✓
Eco mode	✓	✓	✓	✓	✓
Error display	✓	✓	✓	✓	✓
Mains priority circuit display	✗	✓	✓	✓	✓
Shore power display	✗	✓	✓	✓	✓
Charge-over-charger indicator	✗	✗	✓	✓	✓
MPPT solar charge controller display	✗	✗	✗	✓	✓

Technical Specifications

Size: 100 × 70 × 31 mm **Connection:** RJ12 (inkl. Kabel) **Weight:** 0,2 kg


ECTIVE
ECTIVE

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HELP WITH BATTERY SELECTION

This is how the inverter and battery fit together!

Whether it's a van, boat or allotment, make sure your battery and inverter are compatible with each other!

INVERTERS IN THE ECTIVE ECOSYSTEM

Expand your setup with useful components provided by ECTIVE.

As you can see, the various inverters from ECTIVE offer a wide range of functions. In particular, the versatile models of the TSI, CSI and SSI series can take over the tasks of other devices. So it's entirely up to you to decide whether you want a convenient combination product such as an SSI inverter for your power supply, or whether you want to put together your own set-up from separate components, such as our chargers or MPPT charge controllers. In any case, all ECTIVE products are perfectly coordinated so you can implement your desired power supply easily, efficiently and safely.


ECTIVE
Power supply on the go.
ALL-IN-ONE
Absolute self sufficiency. Everywhere. Any time.
S. 198 The rugged, powerful ECTIVE AccuBox.


MAIN SWITCH
PORTABLE POWER SUPPLY
LiFePO4 Battery | 3000 W | 2560 Wh | 200 Ah
ACCU BOX 200s
ECTIVE

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ECTIVE BLACKBOX

The ultra-mobile power bank.

Our mobile lithium power pack for your self-sufficient adventures.

ECTIVE ACCUBOX

The mobile power station for absolute self-sufficiency.

The portable all-in-one power station for everyone who simply wants to provide themselves with self-sufficient power on the go.

ALL-IN-ONE SOLUTIONS

Self-sufficient power supply: anywhere and at any time.

Where there's a will, there's a way – true to this motto, our two series of mobile all-in-one solutions provide your electrical devices with self-sufficient power.

Two products for mobile, independent power supply

Think of the ECTIVE BlackBox and AccuBox as a giant power bank with many more connections and uses. While you can carry your BlackBox anywhere, the AccuBoxes offer more power and are ideal for outdoor power supply. In general, the larger the battery capacity, the longer the self-sufficient power supply will work and the heavier the all-in-one device will be.

Numerous connection options

With your BlackBox or AccuBox, you can supply a wide variety of devices with power. The 230 V sockets supply power to demanding appliances such as televisions or fridges. USB ports and 12 V connections are available for smaller devices. In emergencies, your all-in-one device can even be used as a jump-start for your vehicle.

Various charging options are available to ensure that your BlackBox or AccuBox supplies reliable power: You can charge your all-in-one device conveniently via a mains socket, an on-board power socket or with your solar system.

ECTIVE BlackBox

P. 194 | Lightweight and portable: Optimal power supply for camping, traveling by bike or backpack and outdoor photo shoots.

ECTIVE AccuBox

P. 198 | Robust and powerful: Perfect for outdoor activities, long-term power supply for many devices or as a replacement for your supply battery.

THE RIGHT ALL-IN-ONE DEVICE

Find out whether you should go for the BlackBox or AccuBox.

Which all-in-one device is right for me?

The decision between **AccuBox** and **BlackBox** depends on whether you have to carry your All-in-One device yourself or can transport it, as well as on the battery capacity required.

The **BlackBox 5** is the right choice when **camping with a rucksack**. It weighs only 8.5 kg and is easy to carry. This model is also suitable for festivals and vacations. If you are traveling by bike or car, the larger BlackBoxes are also an option.

On **vacation with a motorhome or caravan**, one of the larger **AccuBoxes** is the convincing choice: they can be charged via the land socket or via the solar module on the roof and supplement the built-in supply battery or replace it completely.

A large **AccuBox** is particularly useful in places like **allotment gardens**. There it supplies several small consumers with electricity for many days and weeks.

Professionals such as photographers who need a particularly mobile power supply for **outdoor photo shoots or video shoots** in remote locations, for example, will find the portable **BlackBox** the solution to their needs. However, if many devices need to be supplied with power over a long period of time, the powerful **AccuBox** is the better alternative.

USE SOLAR ENERGY FOR MAXIMUM SELF-SUFFICIENCY

Charge your all-in-one device cheaply and environmentally friendly with solar power! If you want to be particularly mobile, our portable solar modules are just the thing for you.

For the ECTIVE BlackBox, you can use solar modules with an output of up to 200 Wp and an input voltage of 12 to 30 V to charge the box with solar energy.

Our AccuBox models even allow charging with up to 700 Wp and support an input voltage of up to 90 V.

ECTIVE BLACKBOX

The portable power supply for travelling.

Whether it‘s a camping trip, excursion or outdoor photo shoot, you can easily power all your electrical appliances with your **ECTIVE BlackBox**. With its versatile connections, the BlackBox reliably powers end devices such as laptops, televisions and kitchen appliances. Thanks to the USB ports, charging smartphones, digital cameras and other small consumers is no problem either. You can even start your car with the BlackBox. The integrated battery management system also protects the built-in battery so that your BlackBox has a long service life and performs reliably. The ECTIVE BlackBox is available in three sizes. The individual models differ technically in terms of their capacity, continuous output and peak output. The devices become larger and heavier with increasing capacity. Fortunately, the compact design and lightweight integrated **$LiFePO_4$ batteries** mean that even the larger models are perfect companions for travelling.

BlackBox 5

Capacity:
20 Ah (25,6 V) | 512 Wh

Continuous power: 500 W

Charging time: 3,5 h

Size: 250 × 190 × 240 mm

Weight: 8,5 kg

BlackBox 10

Capacity:
40,5 Ah (25,6 V) | 1036,8 Wh

Continuous power: 1000 W

Charging time: 6,2 h

Size: 385 × 190 × 240 mm

Weight: 15,0 kg

BlackBox 15

Capacity:
58,5 Ah (25,6 V) | 1497,6 Wh

Continuous power: 1500 W

Charging time: 8,5 h

Size: 480 × 190 × 240 mm

Weight: 20,0 kg

3 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

Technical properties

Direct current outputs:

4 × USB ports

1 × USB-C port

2 × DC output (DC5521, 12 V / 5 A)

1 × Onboard power socket (12 V / 10 A)

Alternating current output:

2 × 230 V, 50 Hz, pure sine wave

Voltage: 230 V

Max. power up to 2 s: 2 × continuous power

Operating temperature: 0 to 45°C

Cycle life: > 3000

Charge (mains): AC 230 V, 50 Hz, 200 W

Charge (solar): DC 12 to 30 V, max. 200 Wp

BLACKBOX - THE RIGHT CONNECTION

Your BlackBox supplies power to a wide range of devices.

2 × AC 230 VOLT OUTPUTS

Electrical devices such as laptops or kitchen appliances

4 × USB PORTS:

Smartphones, tablets, cameras.
1 × USB-C

1 × ONBOARD POWER SOCKET

Freezers, 12-volt appliances...

2 × DC 12 VOLT OUTPUTS:

LED lamps, laptops...

1 × JUMP STARTER FOR CARS

CHARGING OPTIONS

Solar module, mains socket and onboard power socket

FLEXIBLE CHARGING

Keep your BlackBox charged at all times with these options.

There are several options for charging your BlackBox:

At home, connect the supplied charger to the **mains socket** and the DC/solar charging connection on the back of the BlackBox.

In the garden shed, motorhome or on a boat with solar power, connect the charging cable to the **solar module** and connect it to the charging connection on the back of the BlackBox. An output voltage of 5 to 24 volts direct current and a DC-Male connection are required.

Last but not least, you can also easily charge the BlackBox via your **vehicle's 12-volt socket**. The integrated display keeps you informed about the charging status of your BlackBox at all times.

B.M.S. - Battery Management System

The integrated battery management system effectively protects your BlackBox from various problems and thus enables safe operation. It also helps to protect the installed $LiFePO_4$ battery and extend its service life.

- Short-circuit protection
- Overheating protection
- Overcurrent protection
- Overvoltage protection
- Undervoltage protection
- Overload protection

ECTIVE ACCUBOX

Reliable outdoor power supply.

Whether smartphone, cool box or lighting: with the portable **ECTIVE AccuBox**, you can supply various types of devices with the energy they need during your outdoor activities. The numerous connections of this power bank in XXL format allow you to operate and charge small mobile devices as well as larger, stationary consumers.

The latest generation of the ECTIVE AccuBox is available in three different models. Depending on the model, the **robust housing** contains an environmentally friendly and long-lasting $LiFePO_4$ battery with a capacity of between 1536 and 3840 Wh. All AccuBox models also have an **integrated MPPT charge controller** for charging via solar panel and an **inverter** for converting direct current into alternating current. This allows you to supply even demanding consumers such as electronically controlled kitchen appliances, energy-intensive devices such as a freezer or even sensitive consumer electronics with the necessary, high-quality power.

No matter which AccuBox you choose, and whether you use it as a replacement for the supply battery in your motorhome or leave it in your allotment for a longer period of time: Your ECTIVE AccuBox gives you maximum independence from the fixed power grid.

AccuBox 120 S

Nominal capacity: 120 Ah
Battery capacity: 1536 Wh
Rated power WR: 3000 W
MPPT Charging current: 40 A
Dimensions: 420 × 265 × 390 mm
Weight: 27,1 kg

AccuBox 200 S

Nominal capacity: 200 Ah
Battery capacity: 2560 Wh
Rated power WR: 3000 W
MPPT Charging current: 40 A
Dimensions: 420 × 265 × 410 mm
Weight: 34,4 kg

AccuBox 300 S

Nominal capacity: 300 Ah
Battery capacity: 3840 Wh
Rated power WR: 3000 W
MPPT Charging current: 40 A
Dimensions: 420 × 265 × 430 mm
Weight: 38,6 kg

3 YEARS WARRANTY

Our ECTIVE Warranty — Because we are convinced of our products' quality.

ECTIVE LIVES SUSTAINABILITY

The production of advanced lithium-ion batteries requires rare earths and other precious resources. We therefore strive to design ECTIVE batteries to be as environmentally friendly and sustainable as possible.

For this purpose, we have developed our ECTIVE AccuBox so that it is 100% repairable and the cells are completely replaceable. In this way, we extend the lifespan of our products and protect our planet's resources.

Technical Specifications

Nominal voltage (vattery): 12,8 V
Output voltage (inverter): 230 V
Rated power (inverter), 2 sec.: 6000 W
Rated power (inverter), 10 sec.: 4500 W

Max. solar voltage: 90 V
Max. solar power: 700 Wp
Charge booster charging current: 30 A

ACCUBOX – THE RIGHT CONNECTION

The connections of the AccuBox supply power to a wide variety of devices.

3 × AC 230 VOLT OUTPUTS
Electrical devices such as laptops or kitchen appliances

3 × USB 3.0 | 3 × USB C
Smartphones, tablets, cameras. 1 × USB-C

3 × ONBOARD POWER SOCKETS
Freezers, 12-volt appliances...

DC 12 VOLT OUTPUTS:
DC refrigerators, lamps

DC 12 VOLT OUTPUTS:
DC refrigerators, lamps

WIRELESS CHARGING FUNCTION:
For smartphones with Qi standard

CHARGING OPTIONS

Solar module (integrated MPPT charge controller)
Mains socket (charger supplied)
Alternator (integrated charging booster)

Connection options

You can connect small electronic devices such as smartphones, tablets or MP3 players to the AccuBox via the integrated **onboard power sockets** and **USB ports**.

Several **DC12V Anderson plugs** with 50 A or 175 A make it possible to supply various DC12 V devices such as DC fridges, televisions, lamps and much more with power. The 50 A plugs can be used both as an output for connecting devices and as an input for charging the battery. You can connect large DC consumers to the 175 A connection or use the connection to jump-start your vehicle.

The AccuBoxes have three **230 V AC sockets**, which you can use to connect most AC-powered devices (e.g. computers, modern televisions, coffee machines and much more).

Particularly practical: the **wireless charging module** on the top of the AccuBox allows you to charge your compatible smartphone via inductive charging!

POWER IN; POWER OUT!

For extra flexibility, combine your ECTIVE AccuBox with our portable solar modules. Whether large or small consumers, your AccuBox provides reliable power. Hot tip: The AccuBox powers compatible smartphones directly via inductive charging according to the Qi standard.


ACCU
BOX
200s
ECTIVE

ACCUBOX – FLEXIBLE CHARGING

Mains, alternator or solar energy: this is how you can charge your AccuBox.

Charging options

Every supply battery runs out of juice at some point. Fortunately, ECTIVE AccuBoxes offer three convenient charging options for the battery:

With the AC charger supplied, you can conveniently charge your supply battery from your **home power supply**. If you need even more power, the AccuBox is also compatible with the chargers from the ECTIVE Multiload Pro series.

Thanks to the built-in charging booster, the AccuBox can also be charged via the vehicle's alternator **while travelling**.

You can also easily charge your AccuBox using **solar power**: Connect your solar modules to the AccuBox via the yellow Anderson connection and the integrated solar charge controller will ensure efficient and gentle charging with solar energy.

Charging time

You can find out how long it takes to fully recharge a completely discharged AccuBox in the following overview:

AccuBox 120 S

120 Ah | 12,8 V | 1536 Wh

06:36	02:00	08:48	02:30	04:24
Charger (20 A)	External charger (60 A)	Solar (200 Wp)	Solar (700 Wp)	Alternator (30 A)

AccuBox 200 S

200 Ah | 12,8 V | 2560 Wh

05:30	02:00	14:42	04:12	07:20
Charger (40 A)	External charger (100 A)	Solar (200 Wp)	Solar (700 Wp)	Alternator (30 A)

AccuBox 300 S

300 Ah | 12,8 V | 3840 Wh

08:18	02:00	22:06	06:18	11:00
Charger (40 A)	External charger (150 A)	Solar (200 Wp)	Solar (700 Wp)	Alternator (30 A)

ACCUBOX — CONVENIENT OPERATION

These features make the AccuBox extremely easy and safe to use.

All values at a glance

The models of the latest AccuBox generation have an integrated, precise battery monitor (also available separately as ECTIVE BM X), which monitors all relevant operating values and shows them on a clear display. This means you always have access to all important information, such as charge/discharge, current charge level and remaining runtime. Thanks to the battery monitor's Bluetooth function, you can also easily connect your AccuBox to your smartphone and view all the values on the app.

Optimum safety

In addition to these practical operating options, the AccuBox is equipped with comprehensive safety functions: from the battery management system, which protects the built-in battery, to the RCD circuit breaker for maximum safety during operation. And should there ever be a problem, the 3-year ECTIVE manufacturer's guarantee applies!

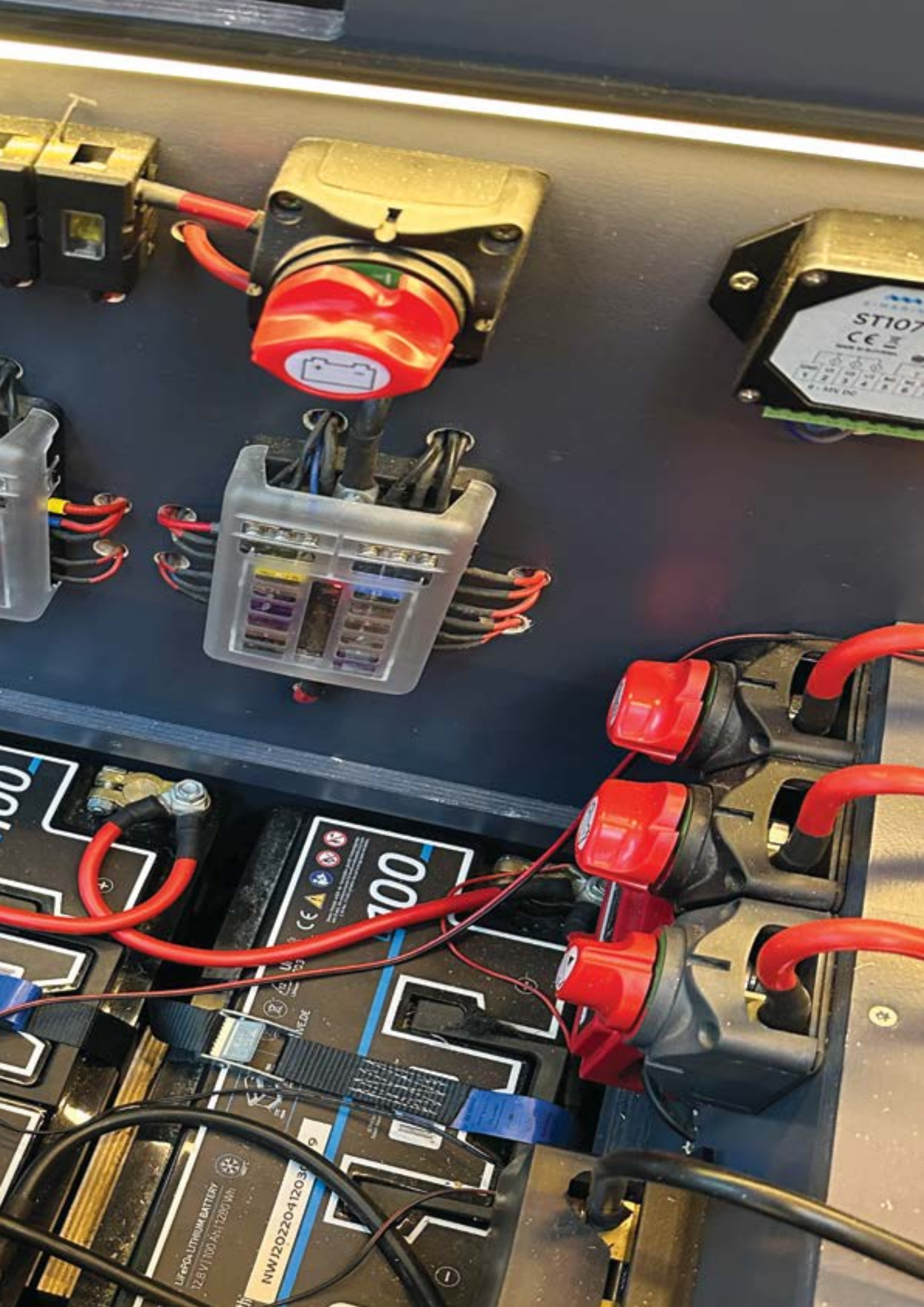

ACCU BOX 120S

ALL-IN-ONE SOLUTIONS IN THE ECTIVE ECOSYSTEM

Absolute independence: electricity anywhere and at any time.

Whether camping, festivals or outdoor projects: The ECTIVE all-in-one solutions give you **maximum flexibility and independence**. All models have integrated inverters and MPPT solar charge controllers so you do not have to purchase these devices separately for operation. What's more, the powerful AccuBox models can even be used as a replacement for the supply battery in your caravan or motorhome. For ultimate independence, combine your mobile all-in-one solution with ECTIVE **solar modules** so you can charge them completely self-sufficiently with solar energy thanks to the integrated MPPT charge controller. You can either use permanently mounted panels, for example on the roof of your camper or boat, or our lightweight, portable modules. With this absolute dream combination, you are truly independent, no matter where your journey takes you.


ECTIVE
All you need for your project.
INSTALLATION MATERIAL
Execute your vision!
With our extensive selection of installation material: ective.de/ausbau


ST107
LiFePO4 LITHIUM BATTERY
12.8 V | 100 Ah | 1280 Wh
NW/20220412030

INSTALLATION MATERIAL

Turn your ideas into reality – with the usual high ECTIVE quality.

ECTIVE offers all the important components for your power supply: solar modules, batteries and complex devices such as charge controllers or inverters. But even with the smallest electrical components, you should pay attention to quality and high-quality workmanship. Are you converting your van into a mobile home? Are you overhauling the power supply in your boat, motorhome or allotment? Then it's best to use ECTIVE's extensive range of **installation materials** for your work. Whether fuses, sockets, adapters or switches: you can find all these small parts in our online shop at **ective.de/ausbau**.

A few example products:

Mini battery disconnector 100 A

Dual USB built-in socket 5 V, 2.4 A

Power distribution bar 6-fold 150A

Anderson connection to tubular cable lugs

Car flat fuse 15A

Anderson plug 175A

Anderson vehicle installation console / on-board power socket

Flat fuse holder (12 ×) 30 A / 32 V

Car installation console 2×USB and on-board power socket

On-board power socket extension cable 3 m

LED charge level indicator 12 / 24 V

OLED voltmeter panel socket 12/24 V

You can find our installation material on

ective.de/ausbau

Solar monitor

Supply battery

Questions about your build?

Don‘t worry – help is nearby!

Do you need help installing or using our products?

We‘ll give you the help you need. Please contact one of our installation partners in your area. They will help you on your way to a mobile power supply.

Find an installation partner now!

ective.de/einbaupartner-finden

ECTIVE FOR B2B CUSTOMERS

Your advantages as a trading partner.

Are you a dealer, reseller or a potential expansion partner and would like to offer your customers high-quality solutions in the field of self-sufficient power supply?

Then become an ECTIVE trading partner and benefit from the advantages:

- **Your own contact person**
- **Discounted dealer purchase prices**
- **Your own merchant account**
- **Customised payment options**
- **Prioritised shipping**

Become a trading partner now!

ective.de/handelspartner-werden

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STAY IN TOUCH!

A few parting words.

Would you like to find out more about ECTIVE and our products? Just visit our **website**!

Would you like to stay up to date or are you looking for inspiration for your next campervan conversion? Follow us on **Instagram**!

You want to stay up to date and get helpful tips on expanding, planning and implementing your mobile power supply? We are constantly publishing new content about self-sufficient power solutions on our **ECTIVE blog**, on **LinkedIn** and on our **YouTube channel**.

Do you have a specific question? Our **customer service team** will be happy to help you. They will provide you with fast, qualified help with any concerns about our products!

Our goal is to make your life easier with our ECTIVE products. Whether you're travelling by camper van, boat or simply with a rucksack. Whether you're travelling, at a festival or on a professional photo shoot, we want you to be able to concentrate fully on your adventure or project. A reliable power supply that runs efficiently and safely in the background gives you peace of mind so you can concentrate on the essentials: Experiencing unforgettable moments and creating priceless memories.

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