PHOTOVOLTAIC POOF





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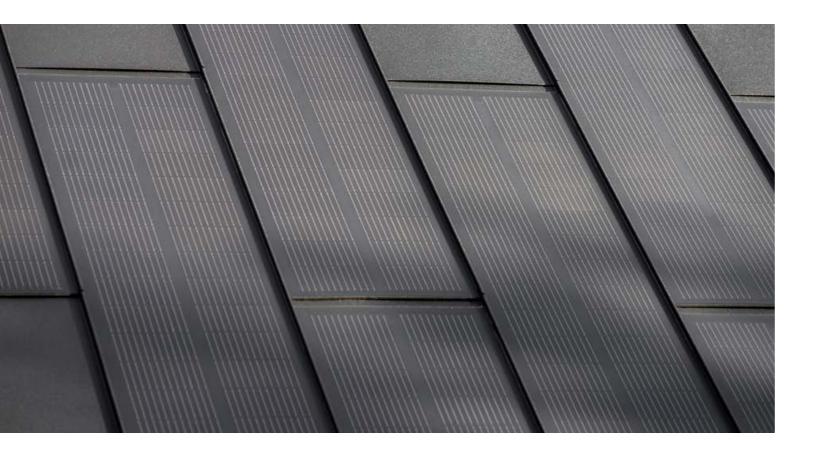
06. WHAT IS A STEEL PHOTOVOLTAIC ROOF?

08. ONE INTEGRATED SYSTEM





WHAT IS A STEEL PHOTOVOLTAIC ROOF?



FIT VOLT

This is a complete photovoltaic system fully integrated into the steel roofing. The proprietary solutions allow for unique roof aesthetics and the use of different forms and shapes that are not possible with a traditional photovoltaic installation. The main supplier of electrical components such as inverters or optimisers is SolarEdge. The aesthetics of the integrated SOLROOF system are complemented by dedicated flashings that enhance the quality of the finish and the comfort of installation. In addition, on your special request, you can purchase the SOLROOF system including installation by our authorised team and you will receive a single guarantee on all components of the system. The 2-in-1 SOLROOF steel roof is made of low-carbon XCarb® steel from ArcelorMittal. This reduces the carbon footprint and minimises the environmental impact.

The SOLROOF photovoltaic steel roof is a new quality that offers unlimited design possibilities for architects, easy and fast installation for roofers, and exceptional visual effect, efficiency and operational safety for investors. And you get all this with one complete system, one installation, one warranty and one service.

The design of the SOLROOF integrated photovoltaic system is the subject of an invention filed with the Polish Patent Office and the European Patent Office.



— A photovoltaic roof, should be designed in such a way that it is not only responsible for energy production, but also ensures airtightness, protects the house from the weather and provides a complete solution.

With SOLROOF, you get a BIPV system - integrated photovoltaics with steel cladding (FIT and FIT VOLT panels). In addition, we fit the roof with flashings, a steel gutter system and PV installation components (optimisers, inverter, cabling) of high quality.



Your roof looks coherent and has a 2-in-1 function-protecting the house and producing energy. Thanks to the low-carbon steel XCarb* - SOLROOF means a smaller carbon footprint for the environment.

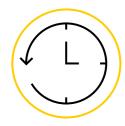






ONE SYSTEM - ONE INSTALLATION

— The 2in1 roof is fully installed by authorised SOLROOF roofers and installers. Installation is similar to that of conventional snap-on roof panels.



SHORTER INSTALLATION TIME = **LOWER INSTALLATION COSTS**

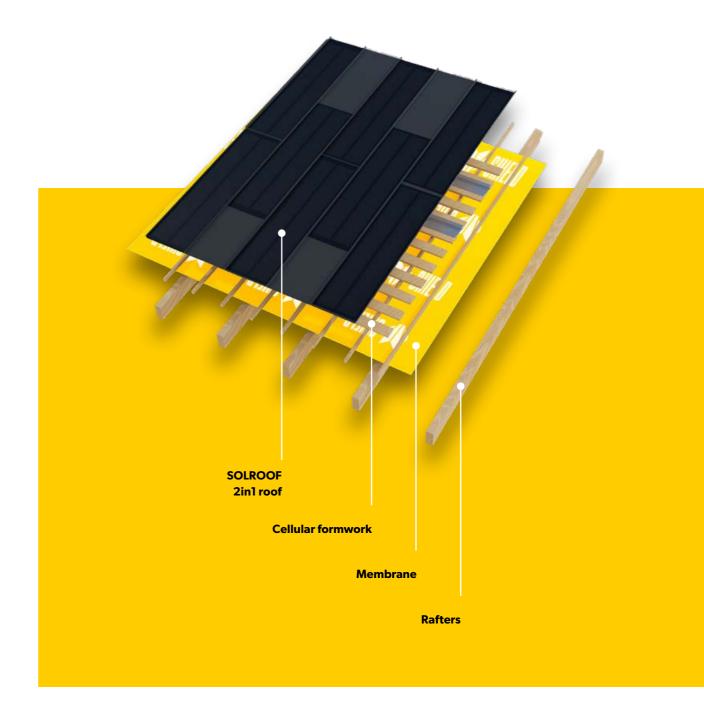
The customer not only gains on the time of installation, but also reduces the costs resulting from the installation work.



QUICK AND EASY INSTALLATION

The FIT VOLT integrated panels are based on the technology of assembling the FIT roof panels with the well-known and appreciated "click" fastener, so that installation takes place in a similar time to standard roofing.

2|N1 SOLROOF STEEL PHOTOVOLTAIC ROOF





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UNCOMPROMISING AESTHETICS IN HARMONY WITH NATURE

The SOLROOF system has been designed with the highest aesthetic quality in mind for roofing. The FIT VOLT modular integrated photovoltaic panels are a perfect visual match for the FIT modular roof panels, which were developed in line with the idea of minimising the carbon footprint using low-carbon steel.



Attractive design

Aesthetics have been combined with innovative technology and lightweight SOLROOF integrated photovoltaic panels. By using a state-of-the-art solution, we have ruled out unattractive, heavy photovoltaic panels, along with the visible mounting structure and cabling that we are familiar with from standard solutions.

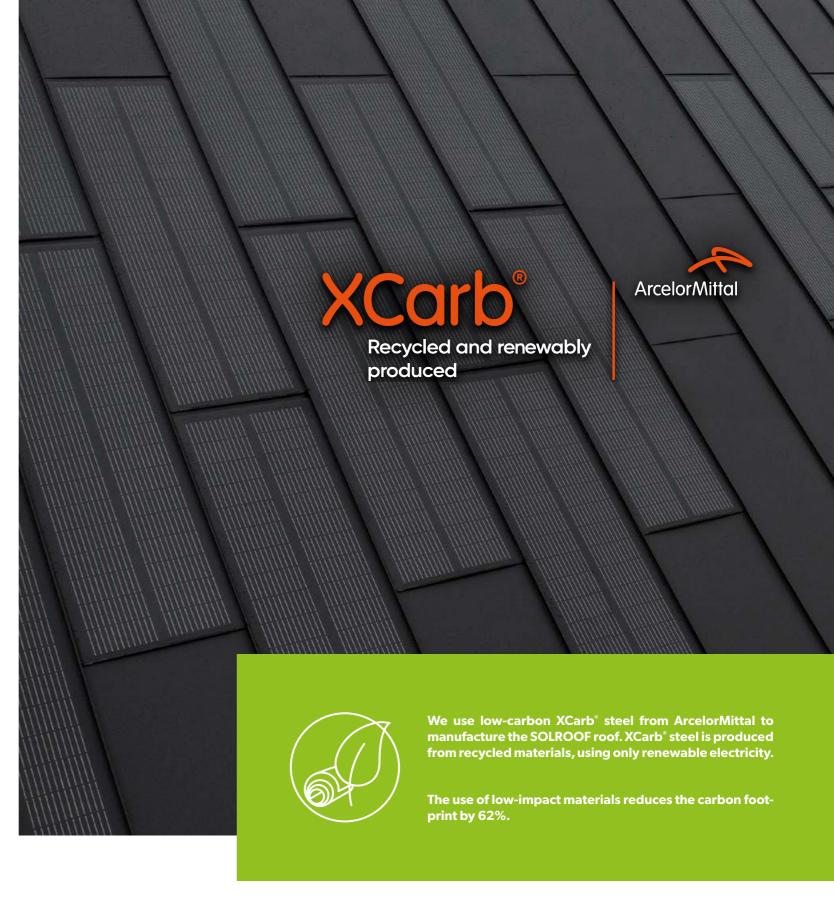
With SOLROOF, the entire roofing surface presents a perfect, undisturbed form.



Consistency of form

The standard silicon structure of the cells can introduce irregularities in blue shades, and the anti-reflective coating can further accentuate colour differences. This is a well-known phenomenon in traditional PV panels.

By using special toughened glass, we achieved a colour match of the surface without sacrificing performance. The shade differences are only slightly visible at a particular light angle.



REDUCTION OF CARBON FOOTPRINT WITH XCarb® STEEL

——— The use of low-impact materials reduces the carbon footprint by around 62% in a project related to Renewable Energy Sources. We use low-carbon XCarb® steel from Arcelor Mittal to manufacture the SOLROOF roof.

 $XCarb^{\circ}$ steel is produced in an electric arc furnace from recycled materials using only renewable electricity, making $XCarb^{\circ}$ steel stand out for its low CO_2 emissions.

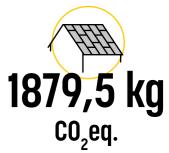
Carbon footprint with XCarb® low carbon steel

Average roof area

Carbon footprint in the production of conventional organic coated sheets











20



CONVENIENCE LIES IN SIMPLICITY

SOLROOF is a complete solution. This means that you not only get a photovoltaic installation, but a fully functional roof from a single manufacturer.

The SOLROOF roof consists of FIT VOLT steel photovoltaic panels, FIT (supplementary) roof panels, flashings, a steel gutter system and photovoltaic installation components (e.g. inverter, cabling, optimisers).



Single guarantee

One system, one installation equals one guarantee, which ensures fewer problems with identifying subcontractors responsible for service or guarantee work.

- for the module, a period of 12 years
- for the optimiser, a period of 25 vears
- for the inverter, a period of 12 years
- 1 year in case the output of the photovoltaic module falls below 97.5%
- 25 years in case the output of the photovoltaic module falls below 85%
- 30 years for the steel part



Efficient servicing

In the SOLROOF system, the SolarEdge optimisers are located under the VOLT wind braces (routed along the side edges of the roof) and under the inactive - easily removable - FIT steel roof panels. This ensures safe and trouble-free replacement of panels, minimising the risk of damage to adjacent elements and the need to dismantle the entire slope when replacing individual elements.



SOLROOF is installed by our teams of authorised roofers and installers by proven contractors. You get a single guarantee, avoiding the transfer of liability between contractors.

All of these factors have an impact on lead times and installation, the recognition of warranty conditions and, above all, your comfort.



Detailed warranty conditions are set out in the warranty card. The guarantee becomes valid upon registration on the website: www.warranty.solroof.eu

MAXIMUM PERFORMANCE AND SAFETY

— When creating SOLROOF, the most important goal was to ensure maximum efficiency of the system, so the operation of the installation is based on proven SolarEdge solutions such as inverters and optimisers, which are responsible for maximising the operation of the FIT VOLT panels.





Maximum performance

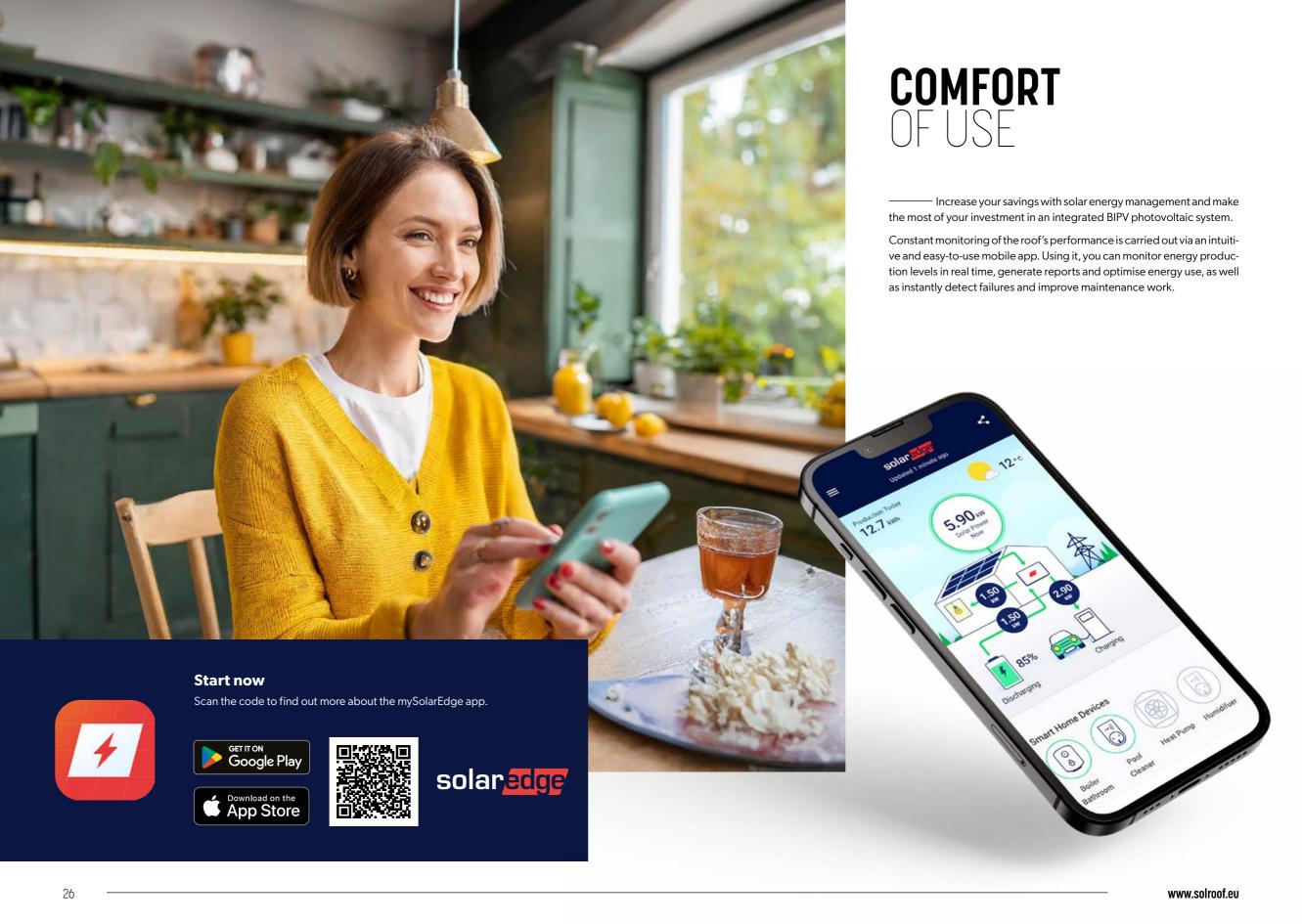
FIT VOLT's integrated photovoltaic panels feature one of the photovoltaic industry's latest HALF CUT technologies. The active part of the FIT VOLT panels has a very good efficiency of 21.1%, with an output of 208 W/m².

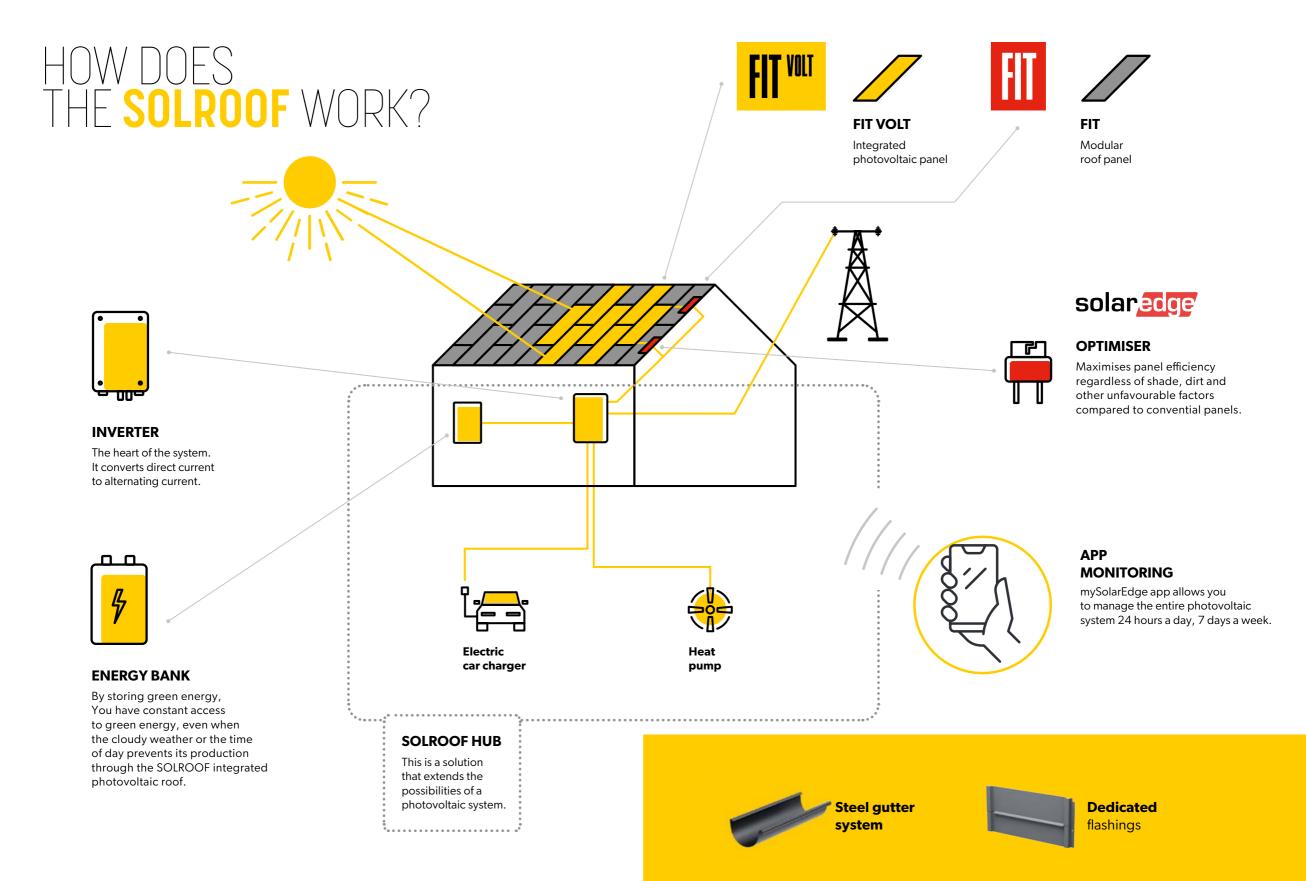
Safety of installation and use

The Safe DC™ function minimises the risks caused by power surges and, in the event of a fault, brings the voltage down to a safe level of 1 volt. All cabling associated with the installation is located under the roof covering in dedicated steel profiles. Optimisers are mounted at the edge of the roof for easy access.











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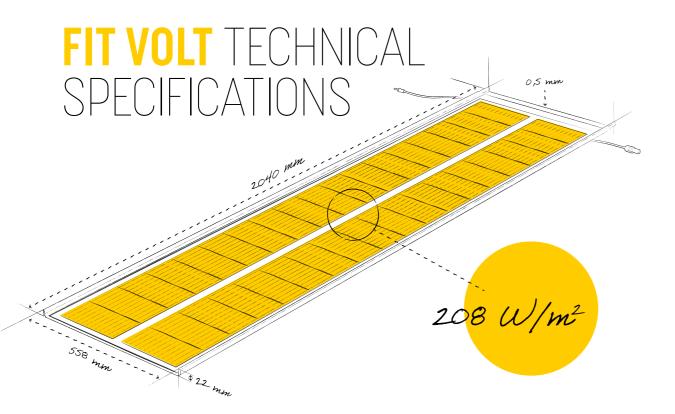
50. HIGH DURABILITY AND FIRE PROTECTION

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Number of cells	36	Cell type	monocrystalline PERC 210mm Half-cut 2x18 cells
Maximum power [W]	165	Connector type	MC4 STAUBLI EVO2, IP67
Maximum power of the active part [W/m²]	208	Idle voltage [V]	24
Seam height [mm]	22	Installation	snap lock (click)
Total width [mm]	558	Effective width [mm]	527
Steel	XCarb [®] ArcelorMittal	Sheet thickness [mm]	0,5
Sheet length [mm]	2040	Overlap length when dividing sheets [mm]	30
Operating temperature range	-40°C / +85°C	J-box rating	IP68
Panel weight	15 kg	Roof inclination	>9°















tested by Fraunhofer Institut

The photovoltaic modules are designed to meet numerous compliance requirements:

IEC 61215-1:2016 (functionality of PV modules), IEC 61730-1:2016 (safety of PV modules), EN 13501-5:2016 BROOF (T1) (fire protection), ISO 9001:2015 (quality management systems).



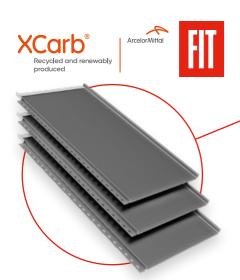
_____ www.solroof.eu

STRUCTURE OF THE FIT VOLT PANEL

The FIT VOLT integrated photovoltaic panel is based on a valued and proven solution - the FIT steel roof panel.

The technology for creating glass-glass-based panels has been upgraded to glass-steel technology by using a steel base in the FIT VOLT panel.

The steel base is connected via a proprietary VOLT LINK solution with high-efficiency monocrystalline cells. VOLT LINK technology ensures adequate tightness between the steel base and the cells, as well as the flexibility required for proper thermal operation under temperature changes. Thanks to the irregular surface of the colourless binder, adhesion at the steel-glass interface is increased.



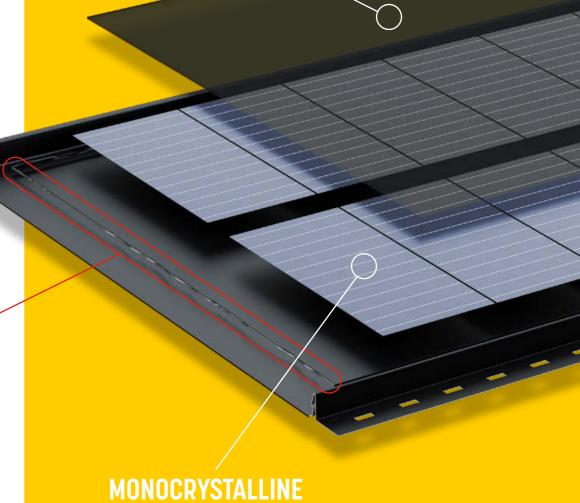
MODULAR ROOF PA-NEL

The low-carbon XCarb® steel from ArcelorMittal used for the FIT VOLT panel not only contributes to reducing the carbon footprint of the environment, but also has an impact on the durability of the integrated photovoltaic panels.



VOLT LINK

The **VOLT LINK** technology registered as an invention takes the form of a robust and flexible bond. It is used to connect the PV cells to the steel base of the FIT VOLT integrated photovoltaic panel.



TEMPERED

GLASS

The design of the SOLROOF integrated photovoltaic system is the subject of an invention filed with the Polish Patent Office and the European Patent Office.

PHOTOVOLTAIC CELLS



COMMON SOLUTIONS - FULL COMPATIBILITY

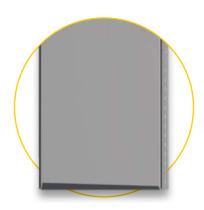
— With the SOLROOF system, all cabling is aesthetically placed under the roofing - there is no need to disturb existing ventilation ducts and stacks. With this solution, the installation and the installation itself are much safer than standard photovoltaic panels. The aesthetics of the integrated SOLROOF system are complemented by dedicated flashings that enhance the quality of the finish and the comfort of installation.

FIT VOLT was developed with roofers in mind. It has all the features appreciated in the traditional FIT modular panel. The two products can be freely combined to create a uniform and aesthetically pleasing roof surface.



EASY LINK

Proprietary solution - involves cutting a corner of the ribs to avoid overlapping three layers of sheet metal at the joining point. In addition, the specially shaped profile of the outermost ribs allows the sheets to fit together perfectly without any visible longitudinal joints.

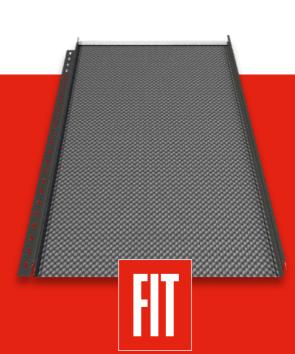


BEND LOCK

That is, by tucking the panel up against the eaves section of the roof, it masks and protects the cut edge and eliminates the need for screws. In addition, the BEND LOCK bottom fold is cut at an angle, which makes it easier to guide and join the panels along their length.

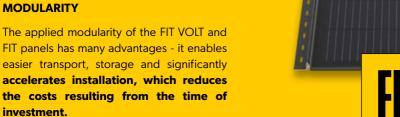


The FIT VOLT and FIT panels are connected via a snap lock, so that the panels can be removed safely if necessary.



MOLLET

MOLLET [O] technology consists of microprofiling of the surface, which gives a 3D effect and bridges the height differences between the FIT VOLT and FIT panels.





SOLROOF SYSTEM COMPONENTS

——— Dedicated SOLROOF system components protect the integrated photovoltaic roof from wind forces and roof leakage. They are made from sheets having the same palette of coatings and colours as the FIT and FIT VOLT panels we manufacture, thus guaranteeing an aesthetically pleasing fit.

The gutter system, ridge tiles and flashings are an integral part of any properly executed roofing. Following the lead of roofing experts, we have developed flashings that will noticeably simplify and speed up the work and help to avoid technical errors. Complete range of flashings and accessories available at **www.solroof.eu**



FIT VOLT panel

FIT VOLT is an integrated photovoltaic panel whose technical basis is the FIT modular roof panel. In this way, we can be sure that both products fit well together and provide a complete solution.



FIT panel

The FIT Modular Roof Panel, although using modern solutions, is a nod to history. The design is reminiscent of the classic roofs of many years ago, in which the sheets, like the FIT panels, were joined alternately to create a unique visual effect.



Steel gutter system

Complete guttering system - all system components have been designed to fit correctly and make the system easy and quick to install. The shape and depth of the gutters ensure effective drainage even during heavy and prolonged rainfall.



Guide for optimizers

A dedicated treatment mounted underneath the VOLT wind brace, allows for safe installation and easy access to the SolarEdge optimisers and convenient routing of their cabling. Reduces accessibility for rodents, which increases the security of cable routes For high security, the entire SOLROOF installation is made of galvanised steel.



VOLT cable duct

Mounted between the formwork, a dedicated flashing for FIT VOLT panels. It facilitates the convenient and secure installation of connecting cables for the SOLROOF system. Reduces accessibility for rodents and martens, which increases the quality of cable route protection. Thanks to a clever tapering at one end, its design allows the flashings to be conveniently connected together along the formwork. To ensure the safety of the entire installation, the flashing is a grounding point; it is made of galvanised steel.



VOLT ventilated ridge

A vented ridge is a flashing that crowns the roof covering at the ridge. It is dedicated to the SOLROOF roofing system. Its function is to seal as well as aesthetically finish the roof ridge. The greatest advantage of the ventilated ridge is the factory-made perforation on the front wall, which allows ventilation of both the roofing and the attic, providing additional cooling for the photovoltaic installation.



VOLT wind brace

A flashing dedicated to SOLROOF system products that is aesthetically pleasing due to the invisible screws on its surface. Wrapping the top element of the wind brace makes it easier to install on the edge of the panel - in addition to protecting it from the wind, it allows the wiring to be hidden. In addition, it is equipped with mounting recesses that mark its mounting points on the wind brace board - the mounting screws are not visible, providing an elegant finish to the roof. The treatment is available in right and left-hand versions.



SOLAREDGE Inverters

The inverters available in our offer are dedicated to home photovoltaic installations. The inverter manages energy production, electric vehicle charging and other smart electrical devices. The products come from a renowned manufacturer - SolarEdge. SolarEdge Home Wave - Without the ability to work with energy storage. It is available in single and three-phase versions. SolarEdge Home Hub - Inverter with the ability to work with energy storage and install a backup option - provides uninterrupted access to stored electricity even in the event of an external network failure (off-grid type). It is available in single and three-phase versions. SolarEdge Home Short String - Inverter dedicated to small photovoltaic installations with short strings. Does not support energy storage. It is available in a three-phase version.



SOLAREDGE optimiser

With SolarEdge optimisers, you can enjoy maximum panel efficiency regardless of falling shadows or dirt, which in traditional photovoltaic panels reduce the efficiency of the entire installation. The Safe DCTM function minimises the risks caused by power surges and lowers the operating temperature of the panels, extending their life. All cabling associated with the installation is located under the roof covering in dedicated steel profiles.



SOLAREDGE DHW controller

The SolarEdge Home DHW Controller is an advanced solution, perfectly integrated into the SolarEdge Home ecosystem. Automatically adjusts the output of the heater to the available photovoltaic energy (up to 5.0 kW). Wireless communication with the inverter via the SolarEdge Home network reduces cabling and simplifies installation. It has a built-in power consumption meter in the water tank. Wall mounting is simple. The product is suitable for resistive loads and can be optimised with an optional temperature sensor.



SOLAREDGE wireless network module

The SolarEdge Home Network module is a solution that simplifies the installation process with wireless technology. It eliminates the difficulties associated with a wired infrastructure, enabling the inverter and system equipment to be connected easily and quickly. Simple plug-and-play installation and automatic device detection via the SetApp make the whole process easy. This module is based on reliable mesh network technology, ensuring reliability even in harsh environments.



SOLAREDGE direct metering unit

SolarEdge Home The direct metering unit accurately reads energy export/import, production and consumption with an accuracy of 1%. With built-in current transformers, installation is quick and simplified. Easy installation via the SolarEdge Home network enables communication with the inverter or RS485. Supports export/import limits and SolarEdge Smart Energy solutions. Connection of up to 65 A per phase in single and three-phase connections.



SOLAREDGE energy storage

State-of-the-art energy storage on the DC side provides exceptional system performance and more energy for storage and backup power. It integrates seamlessly with the SolarEdge Home ecosystem via the SolarEdge Home Network, creating integrated support and simplifying logistics processes. The SafeDCTM function enhances safety through rapid disconnection. The device meets the stringent UL standard for fire safety.



SOLAREDGE electric car charger

The modern photovoltaic-based charging solution for electric cars offers a number of benefits for homeowners. By using the surplus energy generated by the photovoltaic installation, electricity costs are reduced by powering an electric vehicle. This versatile proposal is suitable for both single-phase and three-phase installations, functioning both indoors and outdoors. The extremely flexible system offers the possibility of smart charging during periods of reduced rates, including at night or during power cuts from the grid.



SOLAREDGE emergency power interface

This advanced home power system automatically provides emergency power during supply interruptions from the mains. It can cover the whole house or selected appliances, giving flexibility of use. It is scalable, allowing for increased power and efficiency. It also integrates with the SolarEdge Home Hub inverter, enabling solar monitoring and storage. It is a solution that provides not only reliability in emergency situations, but also efficient energy management.

SOLROOF ROOF DESIGN-BIM LIBRARY

——— Are you working on a roof project and looking for the most advantageous solution to meet your requirements?

We put a library for designing according to BIM in your hands. With precise models, you will prepare a complete detailed design in 3D much faster and easier.

SOLROOF roof design

Wondering if the choice of SOLROOF requires additional design work to prepare a model of the integrated roof?

We are the ones preparing the additional design of the photovoltaic-integrated roof. We individually carry out the complete design of the sheathing and layout of the integrated FIT VOLT photovoltaic panels and cabling on the basis of the submitted design or technical drawing of the roof.



Revit



AutoCAD



GRAPHISOFT Archicad®



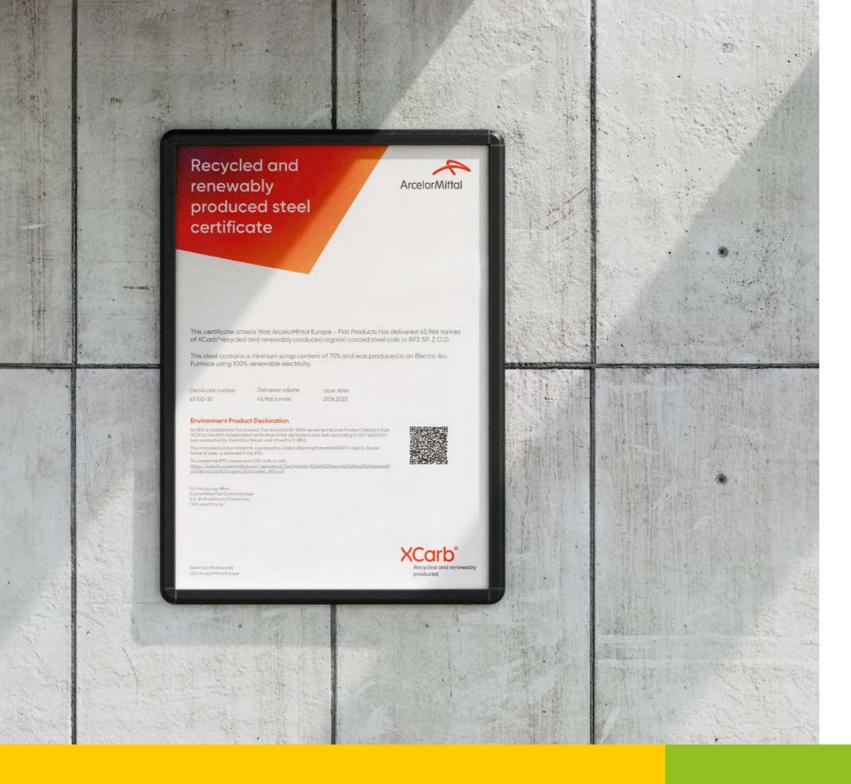
BIM Library

We created the BIM library because we know very well how the right tools can make work easier. As a manufacturer of complex solutions for the construction industry, we meet the needs of designers and architects. With precise models for ArchiCAD, AutoCAD and Revit, the preparation of a complete detailed design will be quick and easy.



Our panel models can be found in the BIM SOLROOF library, created with architects and designers in mind **www.solroof.eu/architekci**





QUALITY CERTIFICATES

——— At SOLROOF, we do not only care about the aesthetics and comfort of the photovoltaic system, but we also continuously prove with successive certifications the competitiveness of our product in terms of safety and quality.



Compliance with standards

The PV modules have been designed to meet numerous compliance requirements:

- IEC 61215-1:2016 (functionality of PV modules),
- IEC 61730-1:2016 (safety of PV modules),
- EN 13501-5:2016 BROOF (T1) (fire protection).
- ISO 9001:2015 (quality management systems).

Our certificates

- Certification of XCarb® recycled steel and renewable production from ArcelorMittal,
- Declaration of conformity with Directive 2014/35/EC,
- Classification report of the FIT VOLT roofing product when exposed to external fire,
- Report on safety tests carried out on BIPV and PV installations from CBOiNT,
- Production quality management certificate with ISO 9001 standard.













HIGH DURABILITY AND FIRE PROTECTION

— The FIT VOLT panels are based on steel-glass technology, i.e. on a well-known and appreciated product - the FIT steel roof panels.



Fire protection

The FIT VOLT panels are also registered as a non-fire-spreading element. The BROOF-T1 test report from the independent testing institute compares the safety levels of SOLROOF BIPV installations and PV installations. It has also been shown that the spread of fire over the surface of the FIT VOLT system does not occur throughout the test.

The roof sheathing elements, which are also the surface of the photovoltaic module, do not catch fire or melt.



Sustainable production We are following EU directives that seek to create sustainable infrastructure and achieve zero-carbon buildings. **Our production** facility has been awarded an ISO 9001 production quality management certificate.

PRODUCTION IN THE UE

The benefits of local production include adherence to high quality, environmental and social standards. In addition, manufacturing in the EU fosters job creation, strengthens the competitiveness of the industry and enables products to be distributed quickly and efficiently within the community. Local production reflects a commitment to sustainability, contributing to stability and economic prosperity in the European Union.



Production in the EU

The components of the 2-in-1 steel roof are manufactured in the European Union at our Slovakian production plant from top-quality materials.

The plant has been set up to meet stringent requirements and as a result we have been certified to the ISO 9001 standard. Furthermore, thanks to systematic production, our customers receive a complete SOLROOF solution within a short timeframe of up to 3-5 working days.





Modularity

FIT VOLT roof panels, with their modular, ergonomic design, are simpler to transport and install. SOLROOF panels are supplied in sheet-specific crates in lengths: 1.02 m (FIT S) and 2.04 m (FIT L), and other system components in specially numbered and labelled crates.

SOLROOF is a modular solution, which makes it easy to transport, store and assemble, and it is available "off-the-shelf" -delivery of components can take 3-5 days.

A FEW STEPS TO AN INNOVATIVE ROOF

Our order process is intuitive because we care about SOLROOF customers' comfort. You are just a few simple steps away from innovative technology.

Investment implementation stages



1. Design and bidding

You send us your roof project and our SOLROOF specialists prepare a quotation taking into account the layout of the panels on the roof, azimuth, pitch and location of the project.



2. Contract, acceptance of order, verification of site with design, completion of order and delivery to site.

After your acceptance of the offer, we move on to implementation. At this stage, we analyse the building conditions, plan for safe transport and unloading. SOLROOF is a modular solution, available "off-the-shelf" - delivery of components can take 3-5 days.



3. Installation of a photovoltaic roof

Your SOLROOF is installed by a qualified, authorised roofing team. Thanks to the installation technology, the installation goes smoothly and is not noticeably longer than installing standard roofing.



4. Connecting the installation to the network

We care about your safety. The installation is connected to the grid by SOLROOF specialists who are authorised to commission the inverter.



5. Handover of documentation, training

Once the installation work has been completed, you will receive complete documentation from us, which has been reviewed and approved by specialists.

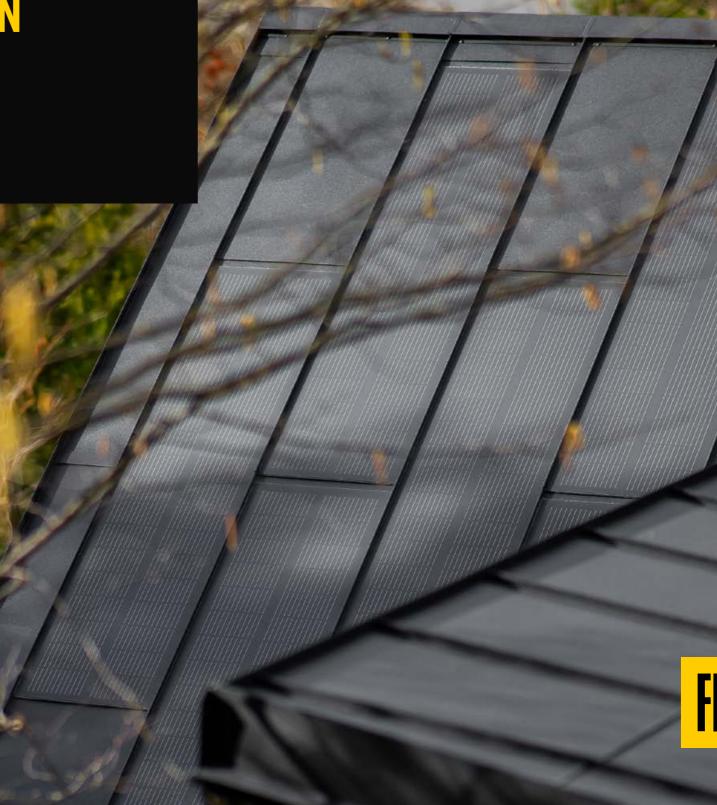


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ADVANTAGES OF SOLROOF

	SOLROOF	OTHER SOLAR ROOFS	CONVENTIONAL PHOTOVOLTAICS
Aesthetic design	-		
No interference with roof sheathing	-	•	
Complete solution from one manufacturer	-		
Single guarantee	-	•	
XCarb® low carbon footprint steel	•		
Single installation	•	-	
Government grants	-	•	•
Easy to service	•		•
Resistance to fire spreading	•		
Glass-steel technology	•		
Off-the-shelf availability	-		

HELPFUL LINKS



SOLROOF website





SOLROOF catalogue





FIT VOLT Installation manual





FIT VOLT product sheet









Realizations - photos and videos





facebook.com/solroof.eu





instagram.com/solroof_eu





linkedin.com/company/bp2eu





youtube.com/@BP2eu



CONTACT **DETAILS**



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www.solroof.eu





Request a quote or complete the calculator yourself



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