

SOLROOF INTEGRATED PHOTOVOLTAIC ROOF

MODULAR INTEGRATED PHOTOVOLTAIC PANEL FIT VOLT

ABOUT THE PRODUCT & SAMPLE DESIGN FILE CONTENT

PANEL LENGHT: 2040 MM

ABOUT COMPANY

BP2 Sp.z o.o. is a manufacturer of complete roofing solutions, existing on the market for 25 years, having four integrated, technologically advanced production plants in Poland and Romania. BP2 operates in Poland, Slovakia, the Czech Republic, Hungary, Belarus, Lithuania, Germany, Austria, Serbia, Bulgaria, and Romania.

The company offers comprehensive supplies for investment construction, including structural trapezoidal sheets, SKRIN® and LINEA® facade cassettes, Core PIR®, Core PUR® and Core WOOL® sandwich panels, dedicated roof flashings and accessories, and INGURI® gutter systems. BP2 offer includes modular metal roof tiles available as part of the MODULAR SERIES, compact products that include the COMPACT SERIES, classic cut-to-size roof sheets from the CLASSIC SERIES, the LAMBDA 2.0® roof panel and FIT 1 and FIT 2 Roof and Facade Panels as well as SOLROOF Integrated Fotovoltaic Roof Panels Series - FIT VOLT.

ABOUT DESIGN FILE

This file includes exemplary application of the Integrated Photovoltaic Panel FIT VOLT-2040mm. The user may use the prepared design sheets as presented below:

- projections, sections, elevations and 3D views with descriptions, the number of sheets depends on the information contained in the product and is included in sheets (Fig. Sk-01 to sk-09)
- lists of elements (with assigned shared parameters) of the element
- presented mechanism of use parametric object of the 3D model of the product
- made element of the 2D component of the product object
- presented mechanism of using the parametric object of the 2D component of the product.

In the exemplary design file presenting the use of the product, there is also a separate Integrated Photovoltaic Panel FIT VOLT-2040mm in the 2D and 3D versions.

ABOUT PRODUCT

The **SOLROOF** integrated photovoltaic roof is a new quality that, as the first on the market, offers architects unlimited design possibilities, roofers easy and quick installation, and the investor a unique visual effect, efficiency and safety of use. We achieve this by using one product, one assembly, one warranty and one service. **SOLROOF** is an innovative system that was created in response to the growing demand for clean energy. It is the only such complete photovoltaic system on the market, fully integrated with the steel roofing. Proprietary solutions allow for unique aesthetics of the roof and the use of various forms and shapes, which is not possible to achieve in the case of a traditional photovoltaic installation. The combination of **FIT** sheet metal panels and integrated **FIT VOLT** photovoltaic panels creates a coherent, harmonious coverage surface.

BENEFITS OF USING SOLROOF - INTEGRATED SOLAR ROOF PANELS

Uncompromising aesthetics in harmony with nature (Attractive appearance, Consistency of form, Green steel, EU production), One guarantee (One system, One assembly, One guarantee, One service), Innovations that maximize efficiency, ensure comfort and safety (Maximum efficiency , Safety of installation and use, Comfort of use, High durability), Comprehensive support (Government funding, Insurance, SOLROOF Hub, SOLROOF Care.

APPLICATION

Large areas, varying degrees of inclination. Utility architecture. Residential. Slope Angle ≥ 15°.

TECHNICAL SPECIFICATIONA

Number of cells:	36
Rated power [W]:	175
Open-circuit voltage [V]:	24
Seam Height:	22
Effective Width (mm):	527
Total Width (mm):	558
Thickness of Steel Sheet (mm):	0.5
Sheet Lenght (mm):	2040
Sheets length when dividing (mm):	30
Roof angles [°]:	≥15



COLOURS

Product available only in PV coating (Dark Grey Colour)

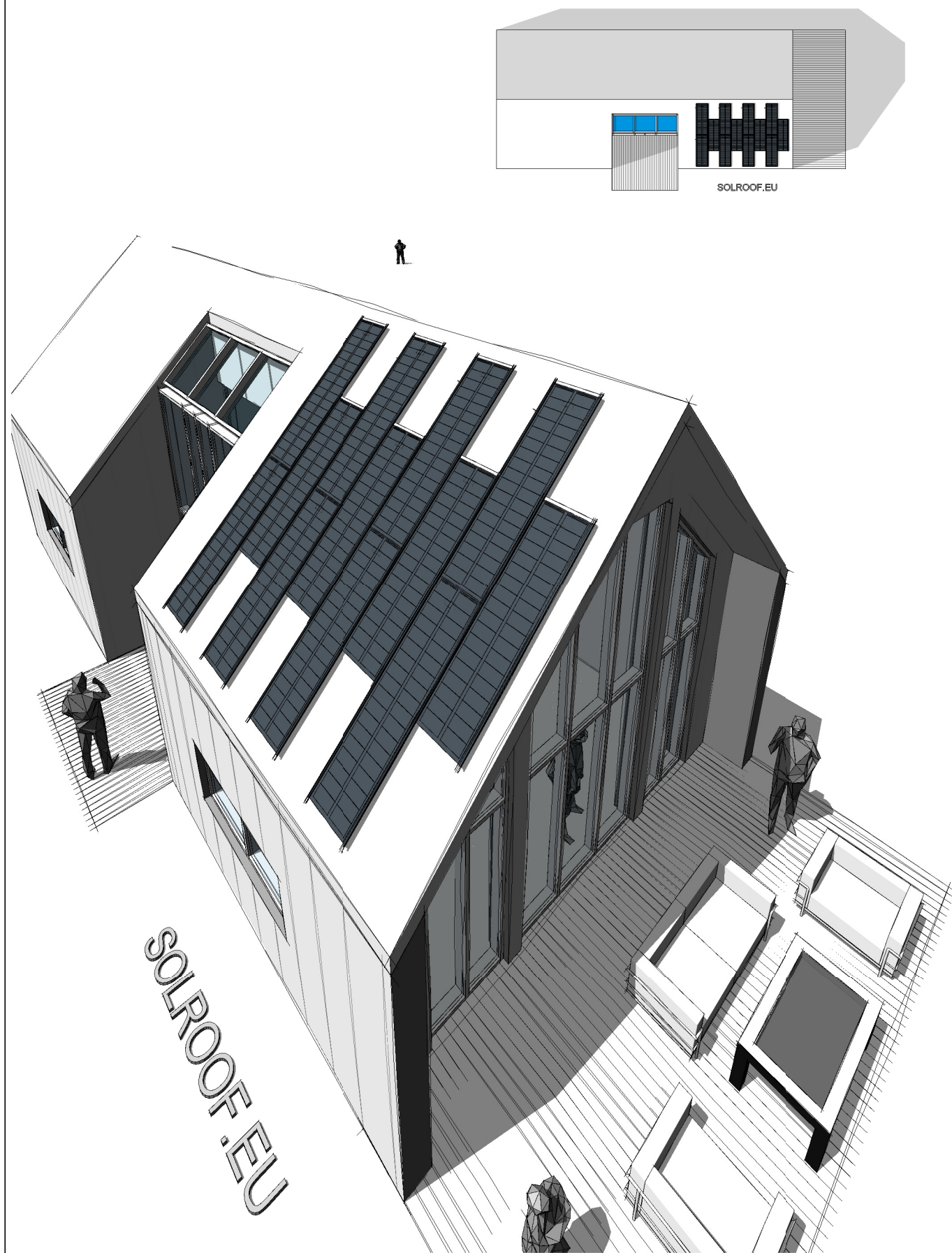
NFORMATION COMPLIANCE

The validity of the parameters should be verified with the current information on the manufacturer's website: <https://www.bp2.pl/en>

ATTENTION!

For each of the objects, you can change the existing or assign any new parameter depending on your individual needs, or use the proposed parameters and lists as in this sample design file.

FIT VOLT
LENGHT: 2040 MM



SOLROOF INTEGRATED PHOTOVOLTAIC ROOF

MODULAR INTEGRATED PHOTOVOLTAIC PANEL FIT VOLT

PANEL LENGHT: 2040 MM

HOW TO USE SAMPLE DESIGN FILE

INTRODUCTION

This Sample file is an example of a product application.
Due to the specificity of the product that is presented in design file named Sample file, it takes into account other products in BP2 offer due to the fact of the assembly method or location. (File contains an example of Integrated Photovoltaic Panel FIT VOLT-2040mm).

FILE SCOPE

This Sample file consists a basic content that Autodesk offers us when it comes to Revit applications after installing the application. So the basic layout of the project file with default views, Sections or Elevations. Default file - with basic architectural template that this Sample file was created.
The file has been enriched with parametric elements by Blachprofil2®.EU based on BIM, both - 2D & 3D elements.

FILE CONTENT

In the file, we can find an example of how to use both: 2D & 3D product Component / Object.
On the basis of an example of a steel structure a fragment of the use of the product is shown. Among other things, We created 3D Views, Plann Views, Details & Sections showing how they may be used in practice from the Designer's Point of View.

In addition, thanks to the shared parameters assigned to Product Elements, it was possible to schedule information about the model and create basic lists.
Trapezoidal sheet objects (3D model) was made as a parametric a curtain wall panel, with a constant vertical and horizontal division, which places the objects in the appropriate position. The remaining parameters are controlled through shared parameters.

This method allowed for the optimal use of parameters essential for easy, fast and accurate preparation of documentation and summaries.
Trapezoidal metal Sheet objects (2D component) as well as 3D object - Both were made as a parametric familys with variable parameters attached. Each of them can have assigned an additional independent parameters.

All descriptions / notes are fully modifiable so it is possible to individually adapt them to your needs.
Assigned information to each object as "families" are taken from shared parameters including: sizes, quantities, materials etc. Some information can be assigned manually to.

IDEA

The idea was to provide - on one hand - product in BIM technology that can be use in Revit platform to atchive design expectation and share information, and on the other hand, introduce BP2 product in a simple way.
This file is to constitute the optimal design flexibility by enabling use of elements depending on the needs of one of the selected options (2D or 3D) depending on the way chosen by the designer.

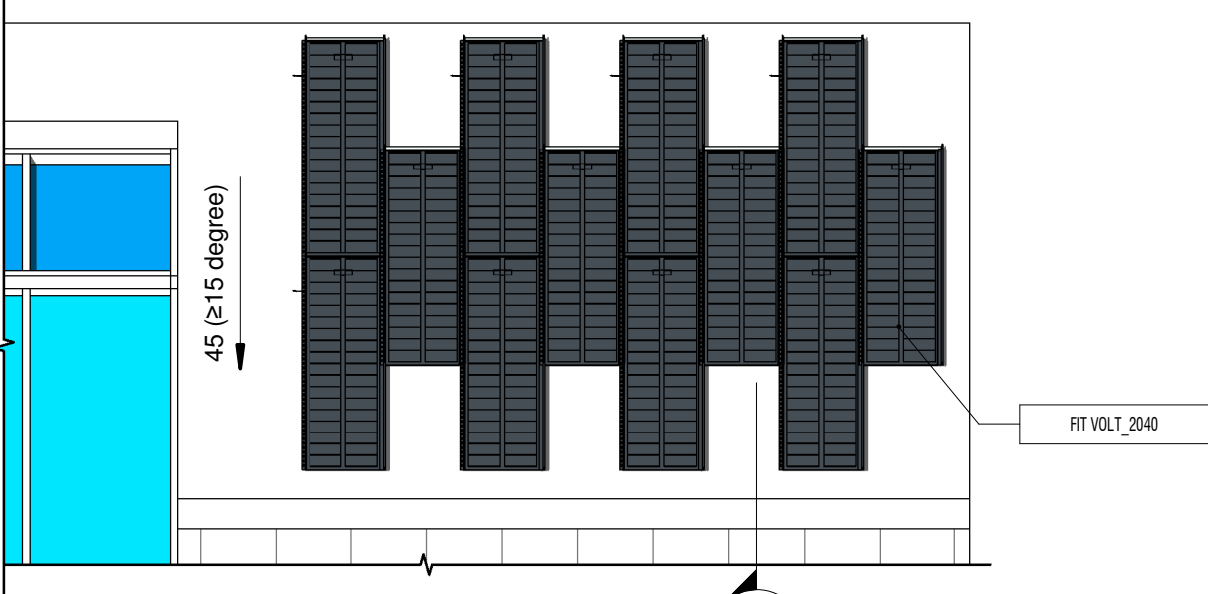
.rvt and .rfa file

Project File and both 2D and 3D objects in this file were created in the Revit 2019 Version, therefore, they can be used in the Revit 2019 Version or higher.

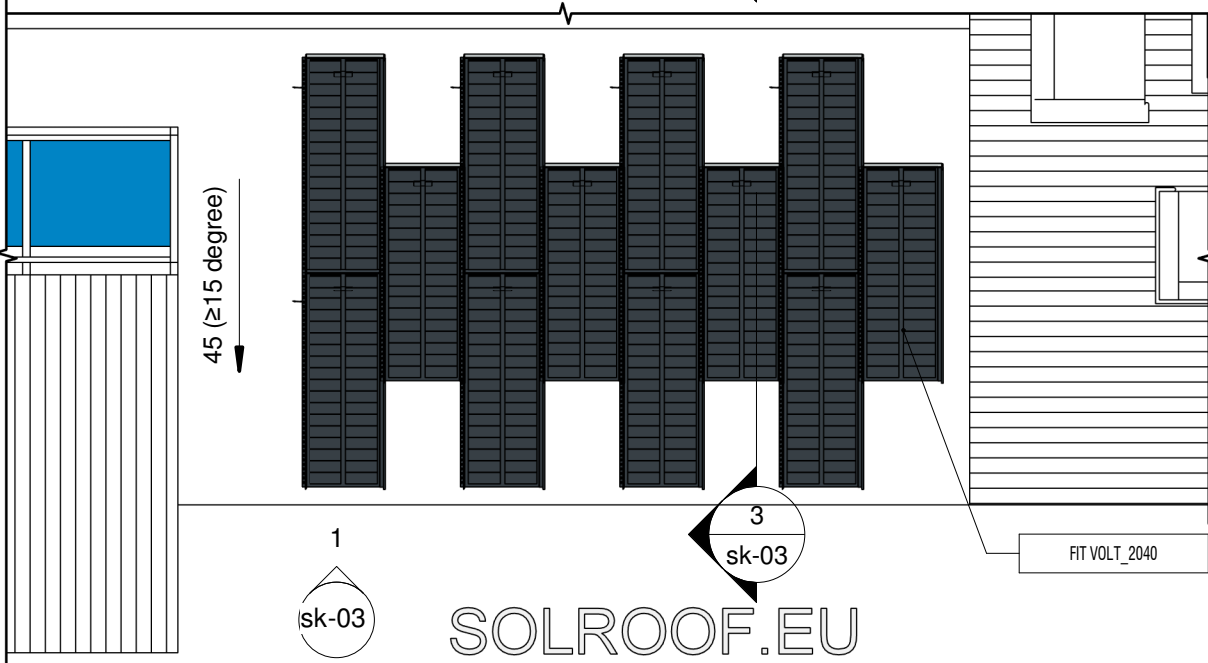
INFORMATION COMPLIANCE

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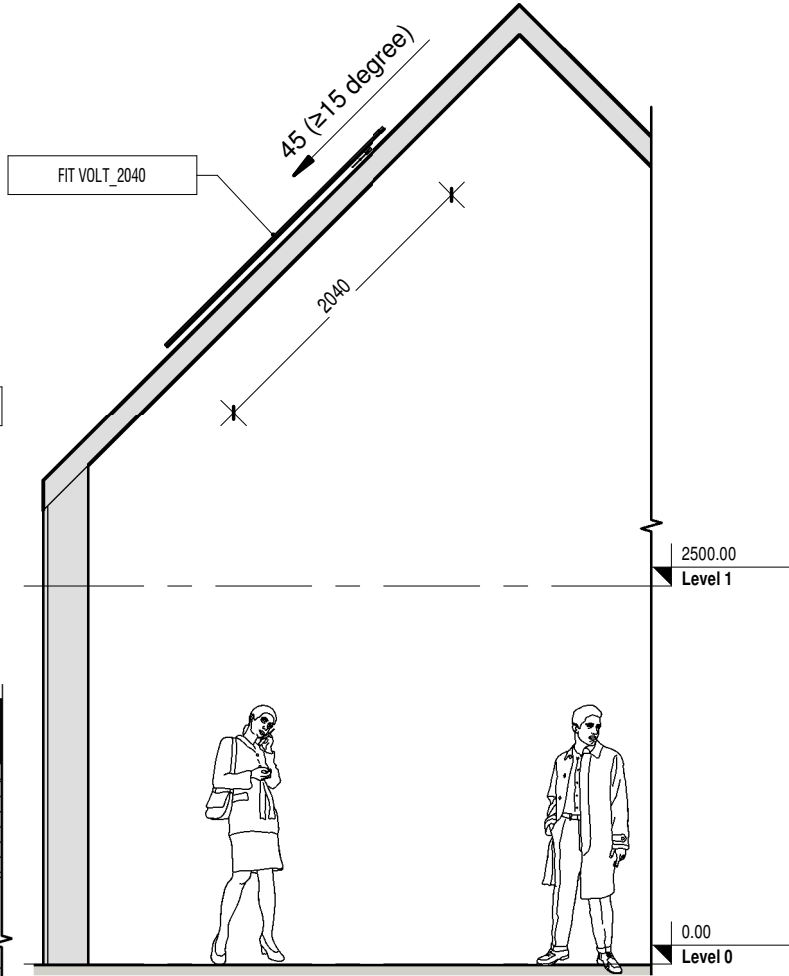
FIT VOLT
LENGHT: 2040 MM



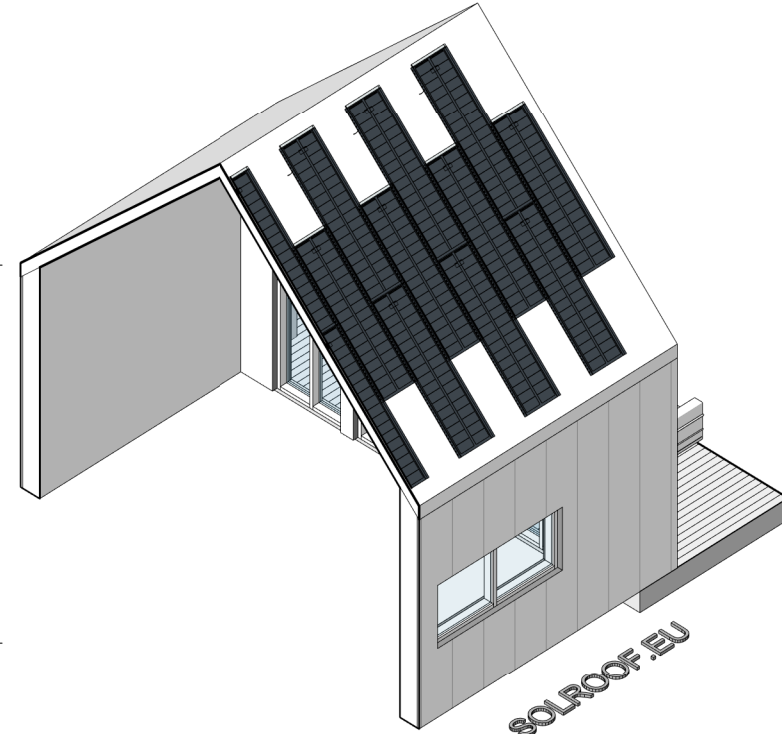
1 FIT VOLT 2040mm - Elevation
1 : 50



2 FIT VOLT 2040mm - Top View
1 : 50



3 FIT VOLT - Section
1 : 50



5 FIT VOLT 2040mm - Aerial View - Section

Tag Legend for:

Integrated Photovoltaic Panel FIT VOLT-2040mm

FIT VOLT_2040

Standard Length (Standard)

Product Name - (Selected Component 2D):
FIT VOLT (2040mm)

Integrated Photovoltaic Panel FIT VOLT-2040mm														
No	Panel Type	Tag	Number of cells	Rated power (W)	Open-circuit voltage (V)	Total Width(mm)	Effective Width (mm)	Metal Sheet Thickness(mm)	Panel Lenght(mm)	Sheets length when dividing (mm)	Seam Height (mm)	Manufacturer	Comments	Product URL
FIT VOLT_2040														
12	SOLROOF Photovoltaic Roof Panel-3D: FIT VOLT-2040mm	FIT VOLT_2040	36	175	24	558.00	527.00	0.50	2040.00	30.00	22.00	BP2 Sp. z o.o.		https://www.solroof.eu

Integrated Modular Photovoltaic Panel FIT VOLT Length 2040mm. This is the latest product in the BP2 brand offer. THE FIRST INTEGRATED PHOTOVOLTAIC ROOF.

The SOLROOF system has been designed with care for the highest quality of roofing aesthetics. Integrated panels

ATTENTION!

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Guided by the saying "less is more", we focused our attention on the advantages of integrated minimalism

SOLROOF photovoltaic system. We want our customers received transparent information on the conditions of use of the SOLROOF system, which resulted in the development of the All in One system. When creating **SOLROOF**, the most important goal was to ensure maximum

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FIT VOLT
LENGHT: 2040 MM



Integrated Photovoltaic Panel FIT VOLT-2040mm - Detailed Schedule														
No	Panel Type	Tag	Number of cells	Rated power (W)	Open-circuit voltage (V)	Total Width(mm)	Effective Width (mm)	Metal Sheet Thickness(mm)	Panel Lenght(mm)	Sheets length when dividing (mm)	Seam Height (mm)	Manufacturer	Comments	Product URL
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1	SOLROOF Photovoltaic Roof Panel-3D: FIT VOLT-2040mm	FIT VOLT_2040	36	175	24	558.00	527.00	0.50	2040.00	30.00	22.00	BP2 Sp. z o.o.		https://www.solroof.eu
1	SOLROOF Photovoltaic Roof Panel-3D: FIT VOLT-2040mm	FIT VOLT_2040	36	175	24	558.00	527.00	0.50	2040.00	30.00	22.00	BP2 Sp. z o.o.		https://www.solroof.eu
1	SOLROOF Photovoltaic Roof Panel-3D: FIT VOLT-2040mm	FIT VOLT_2040	36	175	24	558.00	527.00	0.50	2040.00	30.00	22.00	BP2 Sp. z o.o.		https://www.solroof.eu
1	SOLROOF Photovoltaic Roof Panel-3D: FIT VOLT-2040mm	FIT VOLT_2040	36	175	24	558.00	527.00	0.50	2040.00	30.00	22.00	BP2 Sp. z o.o.		https://www.solroof.eu
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12

Integrated Modular Photovoltaic Panel FIT VOLT Length 2040mm. This is the latest product in the BP2 brand offer. THE FIRST INTEGRATED PHOTOVOLTAIC ROOF.

The **SOLROOF** system has been designed with care for the highest quality of roofing aesthetics. Integrated panels

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FIT VOLT photovoltaic panels are visually perfectly matched to the *FIT* modular roof panels, which were created in accordance with the idea of minimizing the carbon footprint using green steel.

Guided by the saying "less is more", we focused our attention on the advantages of integrated minimalism

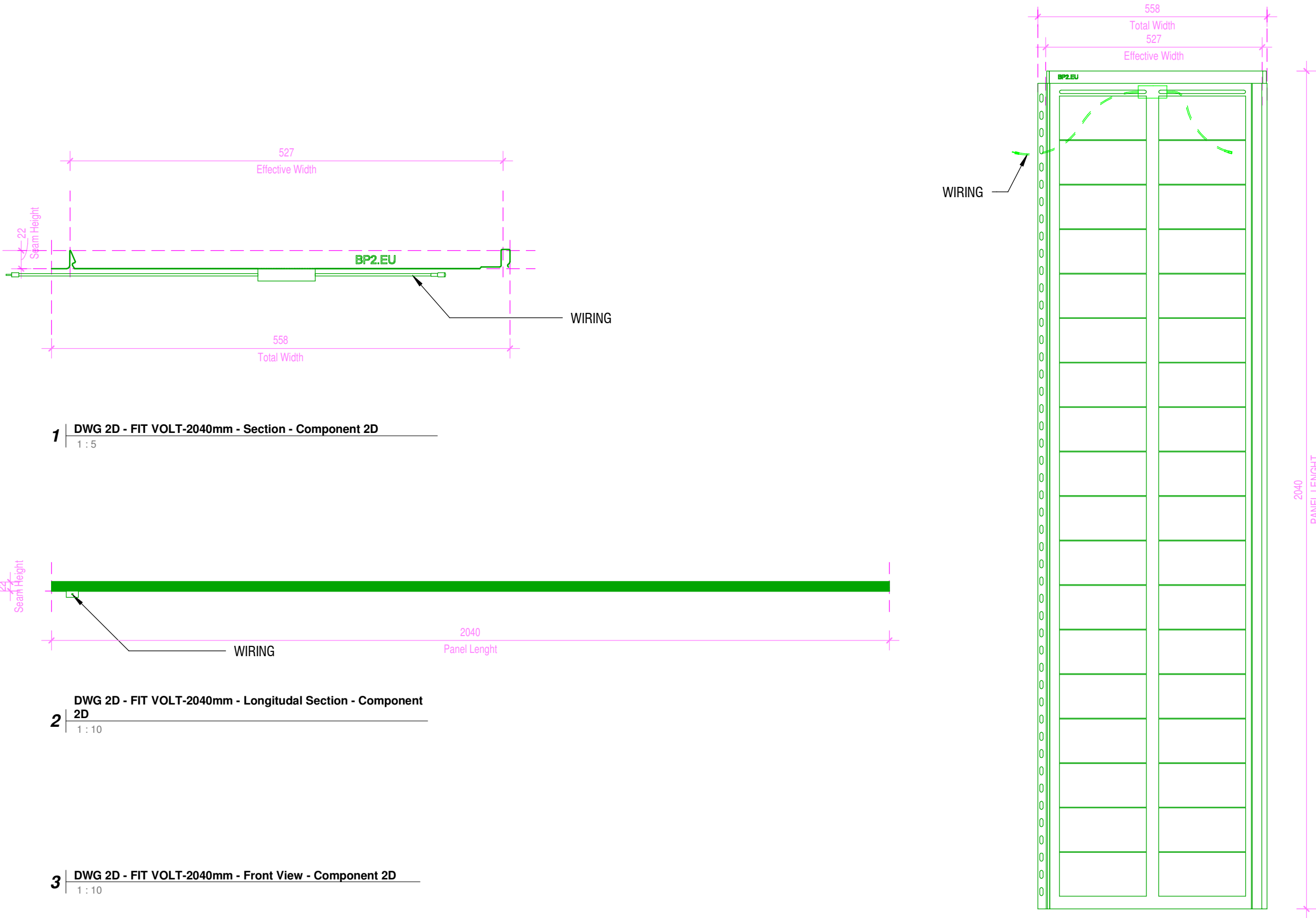
SOLROOF photovoltaic system. We want ours customers received transparent information on the conditions of use of the **SOLROOF** system, which resulted in the development of the All in One system. When creating **SOLROOF**, the most important goal was to ensure maximum

system performance. For this purpose, the operation of the installation is based on proven **SolarEdge** solutions. We care about the comprehensiveness of our solutions, caring for the convenience of our customers. The solutions we propose significantly improve and increase the comfort of using the **SOLROOF** system, extend its capabilities and protect against unforeseen random events.

FIT VOLT

LENGHT: 2040 MM





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FIT VOLT
LENGTH: 2040 MM

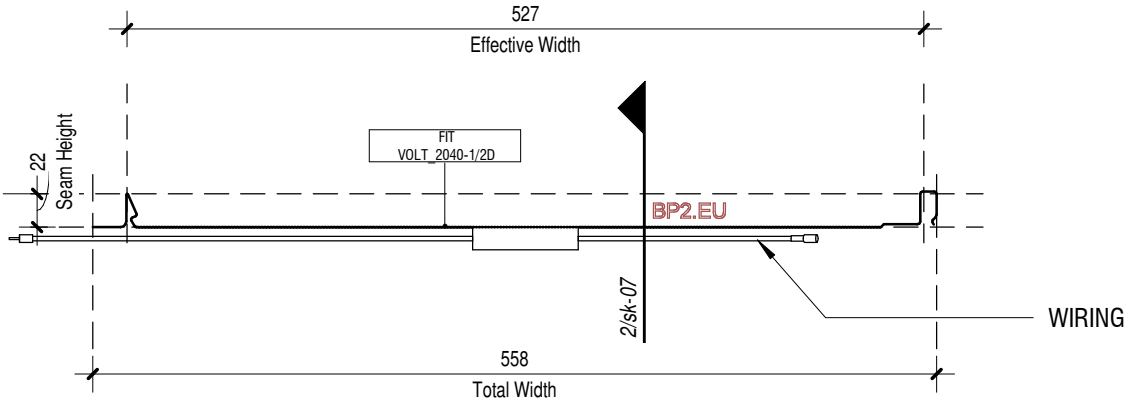
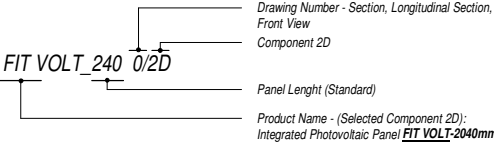
Note

2D component element can be used for a Drafting Views - as an alternative to 3D objects.

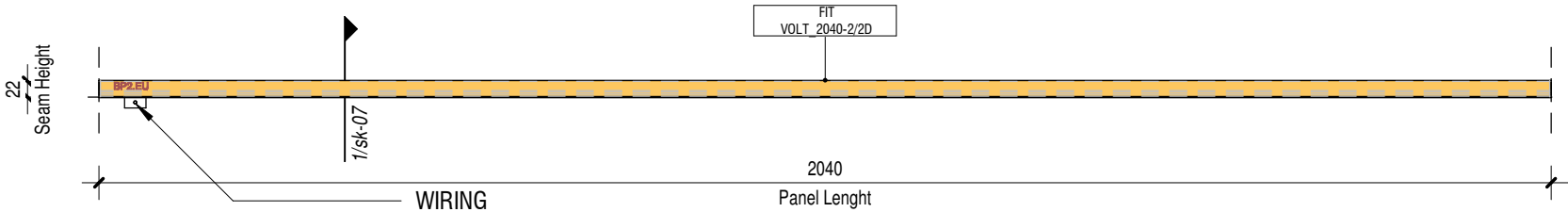
For fast and flexible application, both components can be used with the Repeating Detail tool.

Tags Legend for Integrated Photovoltaic Panel FIT VOLT-2040mm

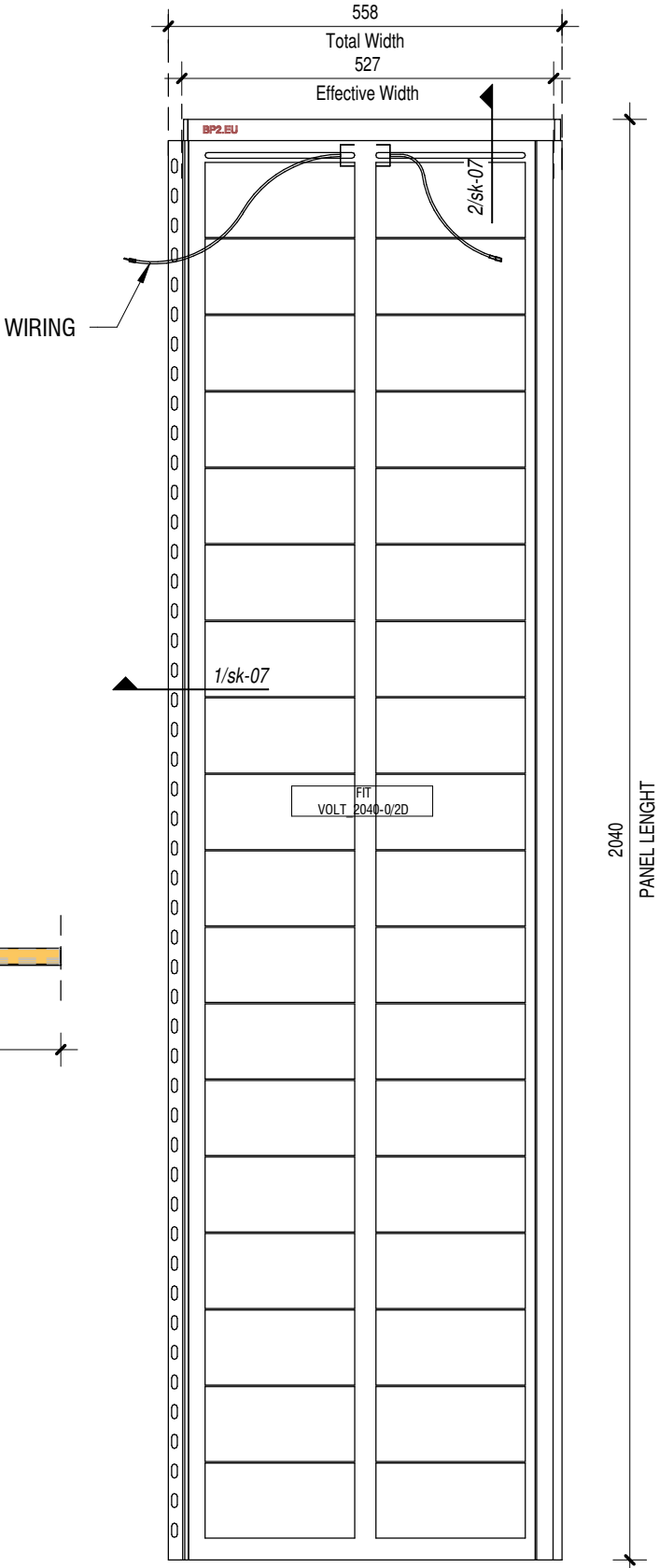
Component 2D:



1 | FIT VOLT - 2040mm - Detail Component (Section)
1 : 5



2 | FIT VOLT - 2040mm - Detail Component (Longitudinal Section)
1 : 10



3 | FIT VOLT - 2040mm - Detail Component (Front View)
1 : 10

Integrated Photovoltaic Panel FIT VOLT-2040mm - 2D Detail Component Schedule							
No	Type	Type Mark	Effective Width (mm)	Total Width(mm)	Seam Height (mm)	Metal Sheet Thickness(mm)	Panel Lenght(mm)
SOLROOF Roof Panel FIT VOLT 2040_Front View-Elevation 2D							
1	SOLROOF Roof Panel FIT VOLT 2040_Front View-Elevation 2D	FIT VOLT_2040-0/2D	527.00	558.00	22.00	0.50	2040.00
SOLROOF Roof Panel FIT VOLT 2040_Longitudinal Section 2D							
1	SOLROOF Roof Panel FIT VOLT 2040_Longitudinal Section 2D	FIT VOLT_2040-2/2D	527.00	558.00	22.00	0.50	1080.00
SOLROOF Roof Panel FIT VOLT 2040_Section 2D							
1	SOLROOF Roof Panel FIT VOLT 2040_Section 2D	FIT VOLT_2040-1/2D	527.00	558.00	22.00	0.50	2040.00

Total:: 3

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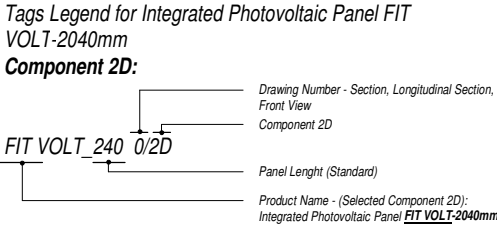
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FIT VOLT
LENGHT: 2040 MM





**TYPES OF SUBSTRATE
FOR MOUNTING THE SOLROOF SYSTEM
FIT VOLT**

OPENWORK FORMWORK WITH A SPACING OF 250 MM SHOULD BE USED IN THE CONSTRUCTION OF THE BASE. THE REQUIRED WIDTH OF THE BOARD IS 120 MM, MINIMUM THICKNESS 25 MM.

CAREFULLY FOLLOW THE GUIDELINES FOR THE SPACING AND WIDTH OF THE BOARDS. DEVIATIONS FROM THE GIVEN PARAMETERS WILL CAUSE COMPLICATIONS IN THE PROPER LOCATION AND INSTALLATION OF THE GUIDES FOR THE ELECTRICAL INSTALLATION.

THE SOLROOF FIT VOLT SYSTEM CAN BE USED ON ROOFS WITH A SLOPE OF AT LEAST 150

ROOF CONSTRUCTION FIG.2 CONTROL OF DIAGONALS

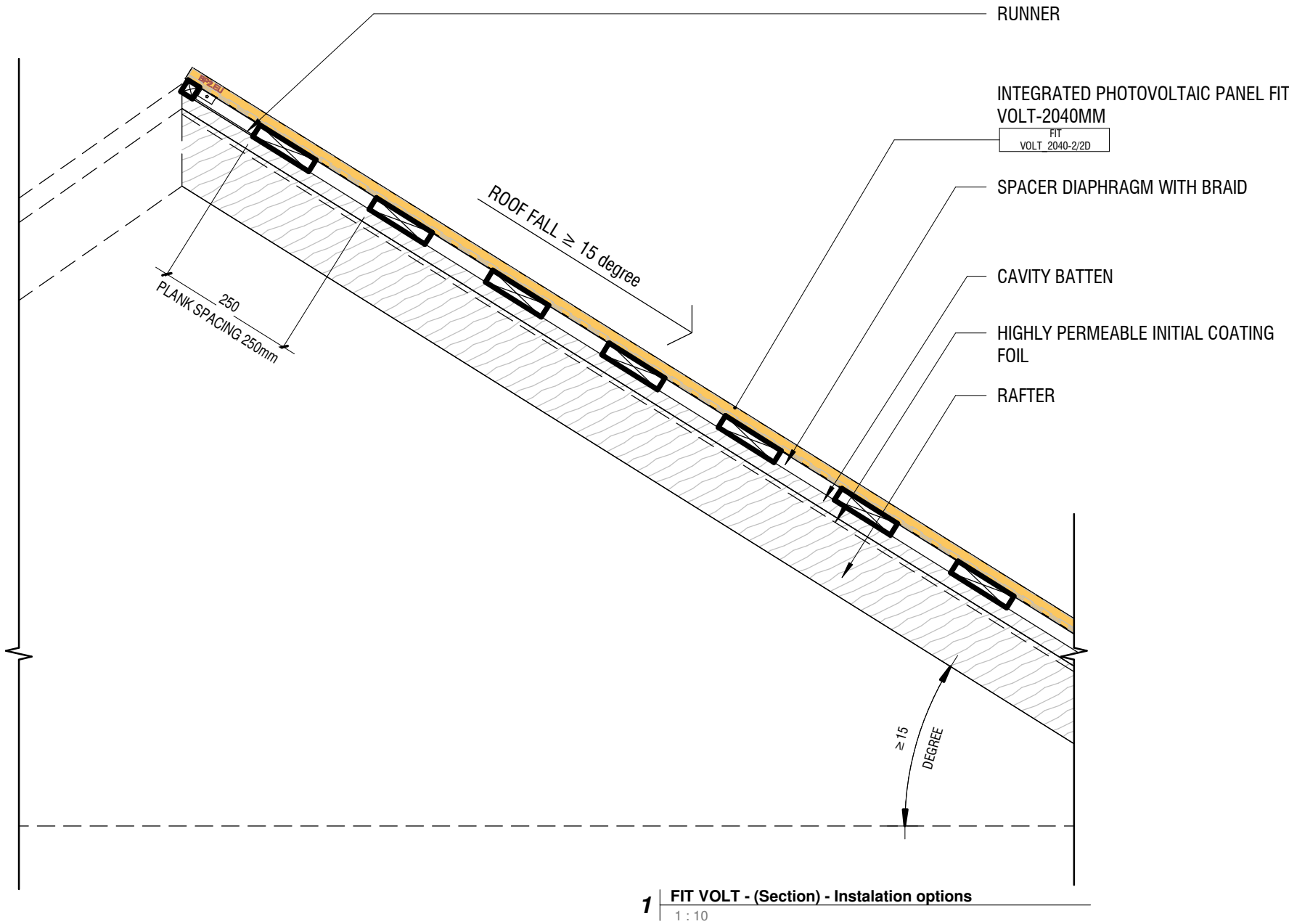
THE SOLROOF FIT VOLT SYSTEM CAN BE USED ON ROOFS WITH SLOPES OF NOT LESS THAN 150.

BEFORE STARTING THE ASSEMBLY, CHECK THE CORRECTNESS OF THE CONSTRUCTION, INCLUDING: DIAGONALS, FLATNESS. THE DISTANCE OF THE FORMWORK FROM THE EAVES SHOULD BE DETERMINED TAKING INTO ACCOUNT THE INSTALLATION OF THE STARTING GUTTER FLASHING. WE USE BOARDS WITH A WIDTH OF 120 MM AND A SPACING OF 250 MM. THE FIRST VOLT GUTTER FROM THE EAVE SIDE SHOULD BE INSTALLED BETWEEN THE EIGHTH AND NINTH BOARD, AND THE NEXT ONES IN EVERY FOURTH SPACE BETWEEN THE BOARDS.

MAINTAINING PROPER CARE IN THE PREPARATION OF THE ROOF STRUCTURE IS OF KEY IMPORTANCE FOR THE AESTHETICS AND FUNCTIONALITY OF THE ROOFING. ERRORS MADE AT THIS STAGE MAY RESULT IN COMPLICATIONS IN THE CORRECT INSTALLATION OF THE ELECTRICAL CIRCUIT. THE SUBSTRATE SHOULD BE MADE IN ACCORDANCE WITH THE RULES OF ROOFING ART.

ATTENTION!

DUE TO THE STRUCTURE OF THE ROOF PANELS, IT IS POSSIBLE THAT THE EFFECT OF THE SO-CALLED "WAVING" OF THE SHEET ON THE COVER. THIS IS A NATURAL PHENOMENON FOR THIS TYPE OF PRODUCT



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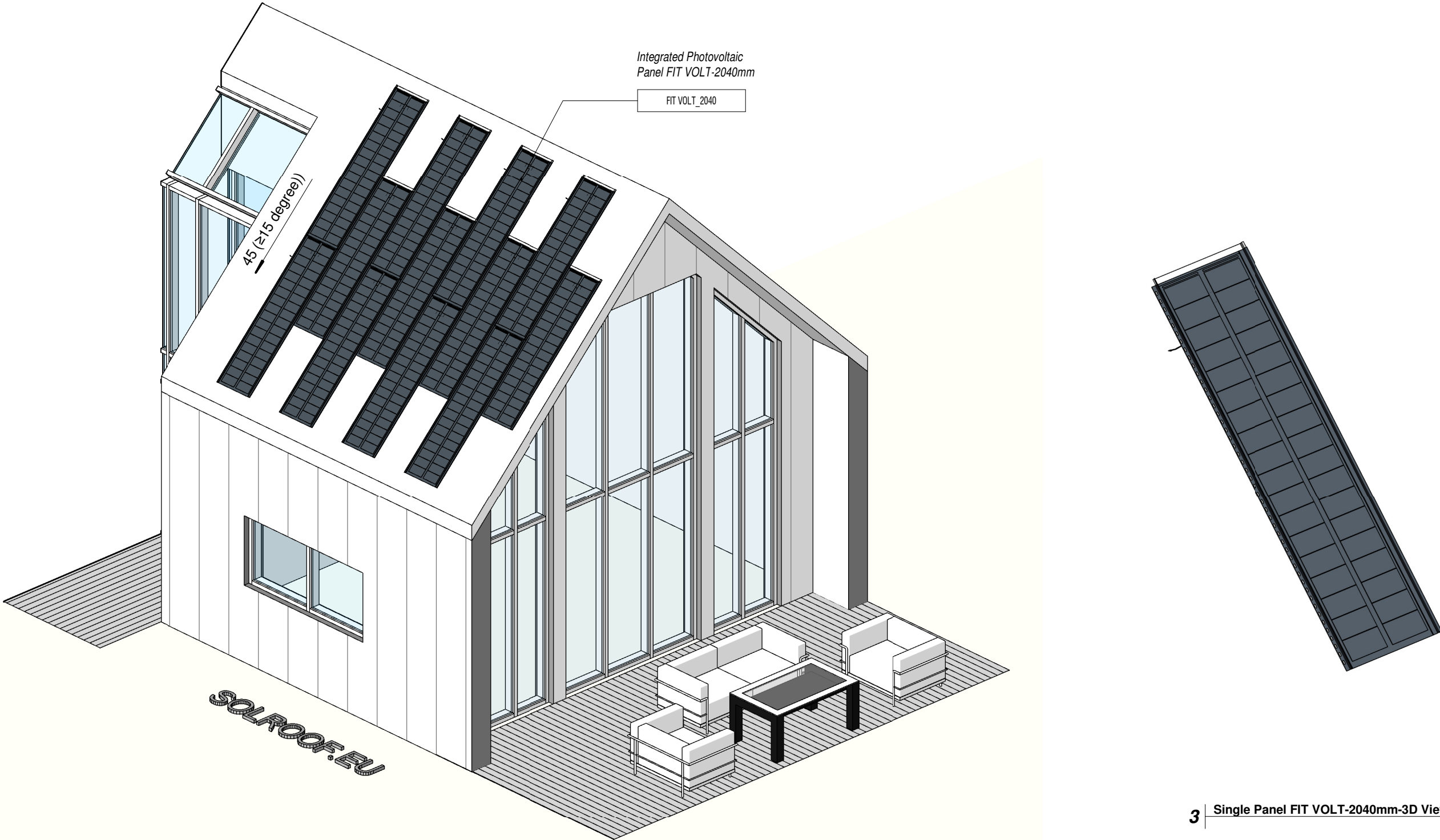
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FIT VOLT
LENGHT: 2040 MM





1 FIT VOLT - 3D View

3 Single Panel FIT VOLT-2040mm-3D View

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