



INSTALLATION MANUAL

HeliosBox Version EW 2.5

For information, please contact

info@helioslite.com

T. +33 9 81 73 92 76

Date: December 2023

Revision number: 2.5

Language: English (original version)

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1 Preface

1.1 General Information

Welcome to the HeliosBox Installation Guide!

Congratulations on your purchase of the innovative HeliosBox, a cutting-edge structure designed specifically for photovoltaic systems. This comprehensive guide will walk you through the installation process, ensuring a smooth and hassle-free setup of your HeliosBox structures.

HeliosBox is a truly remarkable product, offering unparalleled portability, lightweight construction, and cost-effective functionality. Its unique design allows for easy assembly of few steel parts, while providing the flexibility to customize the ballast weight using a variety of materials, such as gravel or sand, according to your preference.

Designed to accommodate a large range of framed panels, the HeliosBox is compatible with panel widths ranging between 0.95 to 1.2 meters and lengths ranging from 1.5 to 2.4 meters. Whether you're setting up a ground-mounted solar plant or a rooftop installation, the HeliosBox offers versatile options, allowing you to achieve maximum compactness and efficiency.

With the ability to be ballasted in an east-west or south tilt configuration, the HeliosBox is suitable for various geographical locations and terrains. It can effortlessly adapt to slopes of up to 5% on rooftops, ensuring optimal performance regardless of the installation environment.

This installation manual has been carefully written to provide you with step-by-step instructions, detailed illustrations, and helpful tips to simplify your installation process. From the initial setup to the final adjustments, we will guide you through each stage, ensuring that you have a clear understanding of the installation requirements.

Whether you're a seasoned professional or a first-time installer, this guide aims to empower you with the knowledge and confidence needed to successfully install your HeliosBox. Rest assured that our customer support team is always available to assist you should you have any questions or require further assistance.

Thank you for choosing HeliosBox structures. Let's dive into the installation process and unlock the full potential of your photovoltaic system!

1.2 Liability Statement

Please read the following liability statement carefully before proceeding with the installation of HeliosBox structures. By using this installation manual and installing this product, you acknowledge and agree to the terms and conditions outlined below:

Installation Responsibility:

HeliosBox structures have been designed to be installed by trained professional solar installers. These structures may also be installed by residents in their own homes, without the need for professional expertise. However, it is important to exercise caution and follow the instructions provided in this

guide carefully. The installer assumes full responsibility for the installation process and any associated risks.

Compliance with Local Regulations:

Before installing HeliosBox structures, it is essential to ensure compliance with all local building codes, regulations, and safety guidelines. The installer is responsible for verifying that the installation meets all applicable requirements and obtaining any necessary permits or approvals.

Product Use and Limitations:

The HeliosBox product is intended solely for use as a structure for photovoltaic systems. It is important to strictly follow the manufacturer's guidelines and recommendations for the use of the HeliosBox. Any misuse, unauthorized modifications, or exceeding the recommended load limits may result in property damage, personal injury, or other hazards, and the installer assumes full responsibility for such actions.

Risk of Installation:

The installation of the HeliosBox may involve working at heights and handling heavy materials. It is essential to take appropriate safety precautions, including using personal protective equipment and following safe work practices. The installer assumes all risks associated with the installation process and should always exercise caution.

Warranty Limitations:

The HeliosBox may come with a warranty provided by the manufacturer. It is important to review and understand the warranty terms and conditions. Any warranty claims or issues related to the HeliosBox should be directed to the manufacturer or authorized representatives according to their specified procedures.

Indemnification:

The installer agrees to indemnify and hold harmless the manufacturer, distributor, and seller of the HeliosBox from any claims, damages, liabilities, or expenses arising out of or related to the installation, use, or maintenance of the product.

It is crucial to carefully review all safety precautions, instructions, and warnings provided in the installation guide before commencing the installation process. Failure to comply with these instructions may result in property damage, personal injury, or other risks. The installer assumes all liability associated with the installation and use of the HeliosBox.

By proceeding with the installation, you confirm that you have read, understood, and accepted the liability statement outlined above. If you do not agree with any part of this statement, please refrain from installing the HeliosBox and seek professional assistance.

Conventions Used:

This manual uses the following hierarchy of danger, warning and caution notices, and notes to convey safety and noteworthy information.

Danger Notices



DANGER

Dangers indicate a hazardous situation which, if not avoided, will result in death or serious injury.

Warning Notices



WARNING

Warnings indicate hazardous situation which, if not avoided, could result in death or serious injury.

Caution Notices



CAUTION

Cautions indicate a hazardous situation which, if not avoided, could result in minor or moderate injury.

Notes



NOTE

Notes indicate items that are important to know about, but they are not as serious as danger, warning, or caution notices.

2 Important Safety Considerations

This section describes important safety instructions for the installation of HeliosBox structures. Make sure you read, follow and save these instructions. These instructions do not intend to cover every safety eventuality and do not replace any local or site-specific safety procedures. There is a potential for death, injury and/or equipment damage when installing, commissioning, and maintaining HeliosBox structures. Ensuring your safety and the safety of others is of paramount importance when installing this product. Please carefully review and adhere to the following safety guidelines throughout the installation process:

2.1 Installation Recommendations and Conditions of Use





Install this product according to the following recommendations:

a. Personal Protective Equipment (PPE):

Always wear appropriate personal protective equipment, including safety glasses, work gloves, and sturdy footwear. PPE provide protection against potential hazards and minimize the risk of injury. Use proper lifting techniques when handling heavy components. Use proper equipment to protect against bodily injury.



WARNING

			
Hard hat	Safety goggles	Appropriate shoes	Gloves

b. Work Area Preparation:

Ensure the work area is clear of any obstacles, debris, or tripping hazards. Maintain a tidy and organized workspace to prevent accidents or injuries.

- **Do not install this product alone in an isolated site**

c. Ladder Safety:

If using a ladder during the installation process, ensure it is in good condition and securely positioned on a level surface. Use proper ladder safety techniques, including maintaining three points of contact and never overreaching.

d. Electrical Safety:

Ensure the power source is disconnected before starting any work. Do not attempt to handle live wires or components unless you are a qualified electrician. If uncertain, consult a qualified professional electrician.

e. Weight and Load Limits:

Follow the manufacturer's guidelines regarding the maximum weight and load limits for the HeliosBox structures. Do not exceed these limits to avoid compromising the structural integrity of the system.

f. Secure Fastenings:

Ensure that all connections, fastenings, and joints are properly secured according to the instructions provided. Loose or inadequately fastened components can lead to instability and potential hazards.

g. Weather Conditions:

Avoid working in adverse weather conditions, such as high winds, heavy rain, or extreme temperatures. Inclement weather can affect stability and increase the risk of accidents. Postpone installation activities until conditions improve.

h. Sharp Edges and Tools:

Be cautious of sharp edges on the HeliosBox components and any tools used during the installation. Handle tools with care and always cut materials away from your body to minimize the risk of cuts or injuries.

i. Material Handling:

When handling materials such as steel sheets or ballast materials, use proper lifting techniques to prevent strain or injury. Seek assistance when necessary and avoid overexertion.

j. Children and Pets:

Keep children and pets away from the installation area to prevent accidents and injuries. Create a safe zone and ensure they are always supervised.

k. Professional Assistance:

If you encounter any difficulties during the installation process or are unsure about any aspect of the procedure, seek professional assistance from a qualified installer or contact the manufacturer's customer support for guidance.

REMEMBER safety should always be your top priority during the installation of the HeliosBox. By adhering to these guidelines and exercising caution, you can ensure a safe and successful installation process.

2.2 HeliosBox Technical Specifications

Structure Type	East-West or South tilt ballasted PV structure for ground mounted solar plants or rooftops having a maximum slope of 5%.
PV Panels Compatibility	Framed panels, Width: 0.95m to 1.2m, Length: 1.5m to 2.4m.
PV Panels Inclination Angle	South tilt: 20° (lower inclination available on request), East-West: 15°
PV Panels Mounting Clip	ARaymond PowAR Snap S+ or ARaymond PowAR Cinch
Structure Material	High corrosion resistance Magnelis-type steel, 100% recyclable
HeliosBox Dimensions (LxWxH)	1150 x 230 x 220 mm
HeliosBox Internal Volume	55L
HeliosBox Maximum Ballast Weight	~ 80kg with gravel (density: 1.5)
Maximum Wind Speed	System compatible with installation in class 4 exposure zones (Vref=28m/s). For flat roof installations on buildings, get access to our professional configurator tool on HeliosLite website to calculate the mass of the ballast required depending on the location of the site and the height of the building.
Maximum Snow Load	≤ 1,200 Pa (correspondant to 1.2m thick layer of fresh snow).
Structure UV Exposure Lifetime	Infinite, no risk of generation of plastic particles under long-term aging.
Material Flammability	Non-flammable metallic structure.
Grounding	ARaymond fixing clips provide group continuity between the frames of the panels and the fixing flanges of the Heliosboxes
Codes and Standards	Structure and ballast weights dimensioned by wind tunnel tests according to the Eurocodes standard EN 1991-1-4. Independent certification by an inspection agency (ETN) for rooftop installations. Structure mechanical resistance verified by laboratory load tests.
Warranties	Corrosion resistance of the structure guaranteed by certificates from steel manufacturer. 30-year guarantee on the mechanical resistance of the structure.

3 Mechanical installation

Before beginning the installation of the HeliosBox, it is important to gather the necessary tools and equipment. Having the right tools on hand will help ensure a smooth and efficient installation process. Here is a list of tools and equipment you may need:

- **Measuring Tape:** Used for taking accurate measurements of the installation area and components.
- **Torque Wrench:** To tighten and secure bolts and nuts during assembly.
- **Safety Equipment:** Always prioritize personal safety. Wear safety glasses, work gloves, and sturdy footwear to protect yourself during the installation process.
- **Ladder or Scaffolding:** Depending on the installation height, you may require a ladder or scaffolding to safely access and work on the rooftop surface of a building.
- **Safety Harness and Fall Protection:** For installations at significant heights, ensure you have the necessary fall protection equipment and use it according to safety guidelines.
- **Ratchet Straps or Tie-Downs:** Useful for securing components or materials during transport or in windy conditions.
- **Cleaning Supplies:** Depending on the surrounding environment, you may need cleaning supplies such as a soft brush, mild detergent, and clean water for panel maintenance.

Please note that the specific tools and equipment required may vary based on the HeliosBox structure model, installation method, and site conditions. Refer to the manufacturer's recommendations and instructions provided with the product for any additional or model-specific tool requirements.

Ensure all tools and equipment are in good working condition before starting the installation. Follow proper safety protocols when using tools and seek professional assistance if you are unsure about the proper usage of any equipment.

Having the necessary tools and equipment readily available will help streamline the installation process and ensure that you have everything you need to successfully assemble HeliosBox structures.

4 Site Assessment

Before proceeding with the installation of the HeliosBox structures, conducting a thorough site assessment is crucial to ensure optimal performance and safety. Consider the following factors during the site assessment:

Available Space:

Measure and assess the available space to determine if it meets the requirements for installing the HeliosBox structures. Consider the dimensions and ensure that there is sufficient area to accommodate the structure, including any required clearances or setbacks as per local regulations.

Orientation:

Evaluate the orientation of the installation area to determine the best positioning for the HeliosBox structures. Ideally, the structure should face south (in the northern hemisphere) or north (in the southern hemisphere) to maximize solar energy production. However, adjustments can be made based on specific site conditions.

Shading Analysis:

Examine the surroundings for any potential sources of shading, such as nearby buildings, trees, or structures. Shading can significantly impact the performance of the photovoltaic panels. Identify and take note of any potential shading patterns throughout the day or year.

Structural Integrity:

Assess the structural integrity of the installation area, especially for rooftop installations. Ensure that the roof or ground surface can support the weight of the HeliosBox complete system, including the ballast weight and photovoltaic panels. Consult a structural engineer if necessary to evaluate the building roof load-bearing capacity.

Ground Conditions:

For ground-mounted installations, evaluate the ground conditions. Ensure that the soil is stable and can support the HeliosBox structures and the required ballast weight. Consider any drainage issues or soil erosion concerns that may affect the stability of the structure.

Regulatory Compliance:

Review and adhere to local regulations, building codes, and permits required for the installation of the HeliosBox structures. Ensure compliance with any zoning restrictions, setback requirements, or other guidelines specific to your area.

Accessibility:

Assess the accessibility of the installation area, both during the installation process and for future maintenance. Ensure that there is adequate space for manoeuvring and transporting the HeliosBox components and solar panels. Consider any potential obstacles or restrictions that may hinder access.

Environmental Factors:

Consider any environmental factors that may affect the installation or long-term performance of the HeliosBox structures. These factors may include extreme weather conditions, exposure to corrosive substances, or proximity to coastal areas.

By conducting a thorough site assessment, you can identify any potential challenges or limitations that may impact the installation and performance of the HeliosBox structures. This assessment will help you make informed decisions and ensure a successful and efficient installation process. If you have any uncertainties or require assistance, consult with a qualified installer, or seek professional advice.

5 Pre-Installation Preparation

Before commencing the installation of the HeliosBox structures, it is essential to complete a series of pre-installation preparations. These preparations will help ensure a smooth and efficient installation process. Follow the steps below to prepare for the HeliosBox installation:

1. Clear the Installation Area:

Remove any debris, vegetation, or obstacles from the installation area. Clearing the area will provide a clean and safe working environment and prevent any potential damage to the HeliosBox or the photovoltaic panels.

2. Verify Access and Safety:

Ensure that you have safe and unobstructed access to the installation area. Clear pathways and remove any tripping hazards. If the installation involves working at heights, such as rooftop installations, ensure the availability of proper scaffolding or secure ladders for safe access.

3. Organize Materials:

Organize all the HeliosBox components, hardware, and tools in a designated area near the installation site. This will make it easier to access the necessary materials during the installation process and help maintain an organized workflow.

4. Component Verification:

Carefully inspect all HeliosBox components to ensure they are in good condition and free from any defects or damages. Verify that you have all the required components as listed in the assembly instructions. If you notice any discrepancies or issues, contact the manufacturer or supplier for assistance.

5. Review the Assembly Instructions:

Thoroughly review the assembly instructions provided with the HeliosBox product. Familiarize yourself with the steps, diagrams, and any specific guidelines or recommendations outlined in the instructions. This will help you understand the sequence of assembly and any unique considerations for your HeliosBox model.

6. Gather Required Tools and Equipment:

Refer to the tools and equipment section of the manual and ensure you have all the necessary tools and equipment readily available. Check that all tools are in good working condition and have the appropriate sizes and functionalities to complete the assembly process.

7. Secure Permits and Permissions:

If required by local regulations, obtain any necessary permits or permissions for the installation of the HeliosBox structure. This may include building permits, electrical permits, or permissions from homeowner associations or local authorities. Ensure that you have all the necessary documentation in place before proceeding.

By completing these pre-installation preparations, you will be ready to start the installation of the HeliosBox structure with confidence. Taking the time to prepare the installation area, gather materials and tools, and review the instructions will contribute to a smoother installation process and help ensure the successful deployment of the HeliosBox structure.

6 Assembly Instructions

Before starting the assembly, ensure you have completed the pre-installation preparations and have all the necessary tools and components ready.

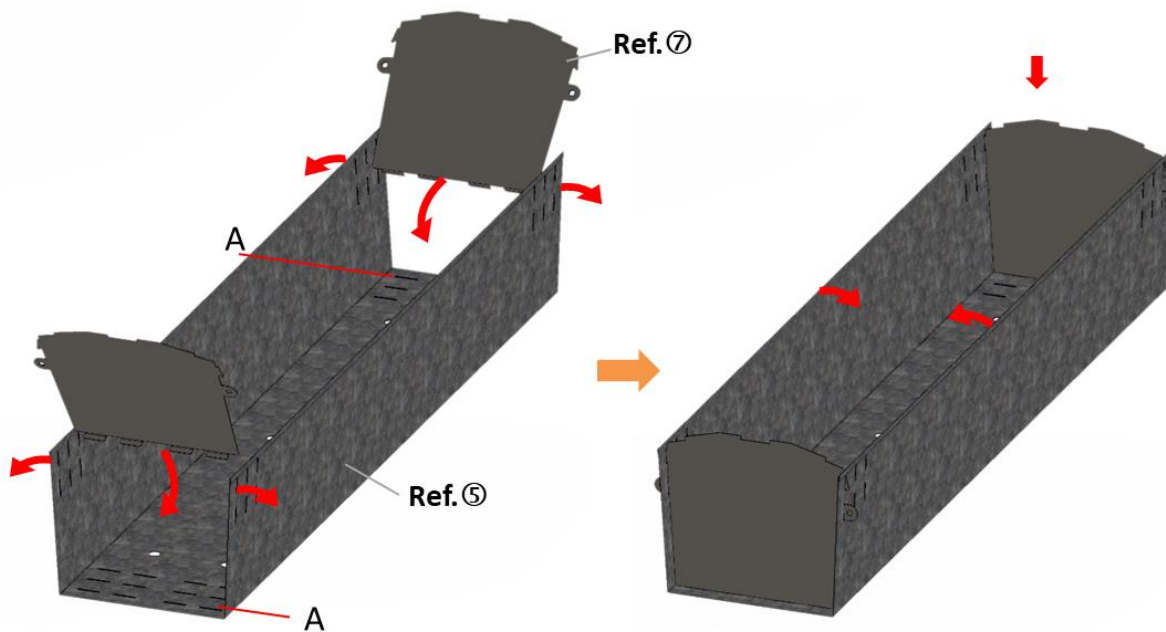
Step 1: Base Assembly

Assembly of End Caps

Lay out the base components, including the steel sheets or frames, on a flat and level surface.

Align the base components according to the desired configuration, ensuring that the width and length match the dimensions specified for your HeliosBox model.

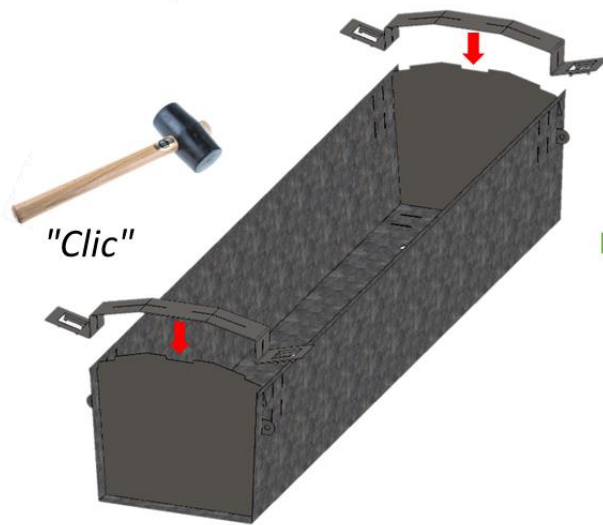
Install the caps into the slots located at the ends of the HeliosBoxes. In this position (A), the spacing between the end caps is 108 cm.



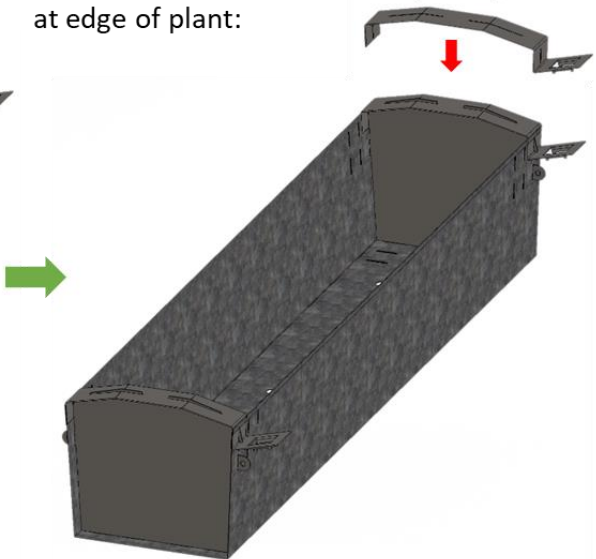
Double-check the alignment and make any necessary adjustments to ensure a square and level base.

Installation of the PV Panel Mount Brackets

Mount double mount brackets (ref ②) in middle of plant:



Mount single mount brackets (ref ①) at edge of plant:

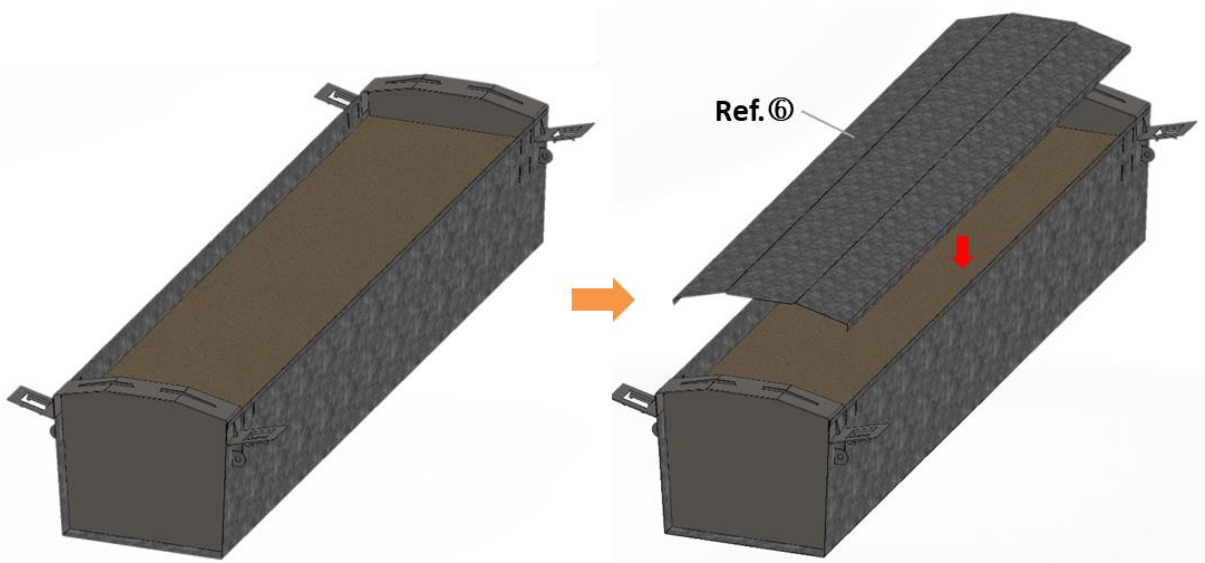


Assemble the panel mount brackets with a mallet: the small side stops of the end caps must protrude through the notches of the side vertical face of the mount brackets.

Step 2: Ballast Placement

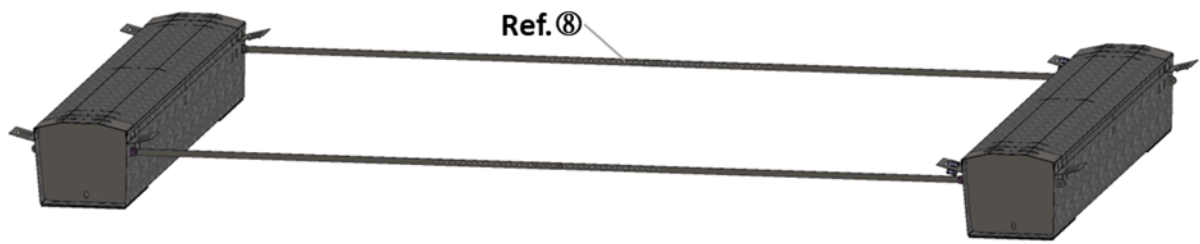
Filling and Closing the Heliosbox (optional)

Verify the density of the ballast material that you are using (such as gravel or sand) and fill each HeliosBox with the amount specified on HeliosLite configurator tool report (refer to section 7 Ballast Weight Guidelines). Carefully fill the base of the HeliosBox structure with the ballast material, ensuring an even distribution throughout the entire length of each box. Add the ballast gradually, periodically checking for proper weight distribution and avoiding overloading any specific area.



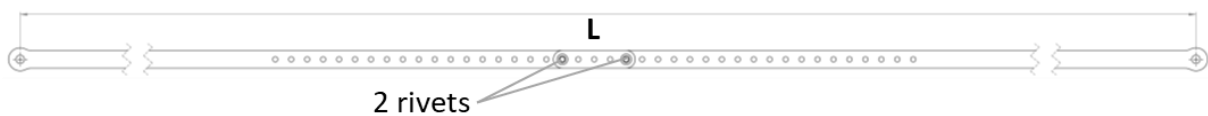
Maximum weight of ballast for filling the internal volume of the HeliosBox completely: Sand: 82kg (density 1.6), Gravel: 77kg (density 1.5), Water: 51kg (density 1).

Triangulation flat ribbons to be installed between each pairs of HeliosBox:



Fix the triangulation flat ribbons with 2 rivets so as to obtain a length L between their end-holes which depends on the width of the frames of the installed PV modules :

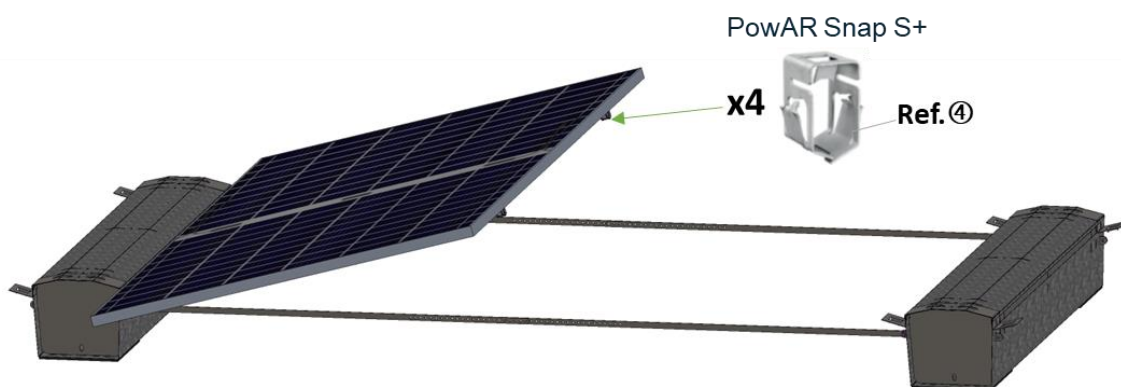
PV module width	L (cm)	PV module width	L (cm)	PV module width	L (cm)
100 cm	≤ 197	106 cm	≤ 209	112 cm	≤ 220
102 cm	≤ 201	108 cm	≤ 212	114 cm	≤ 224
104 cm	≤ 205	110 cm	≤ 216	116 cm	≤ 228



Fix the ends of the triangulation flat ribbons to the “ears” of the HeliosBox box end-caps with a pair of M8 stainless steel bolts and safety nuts.

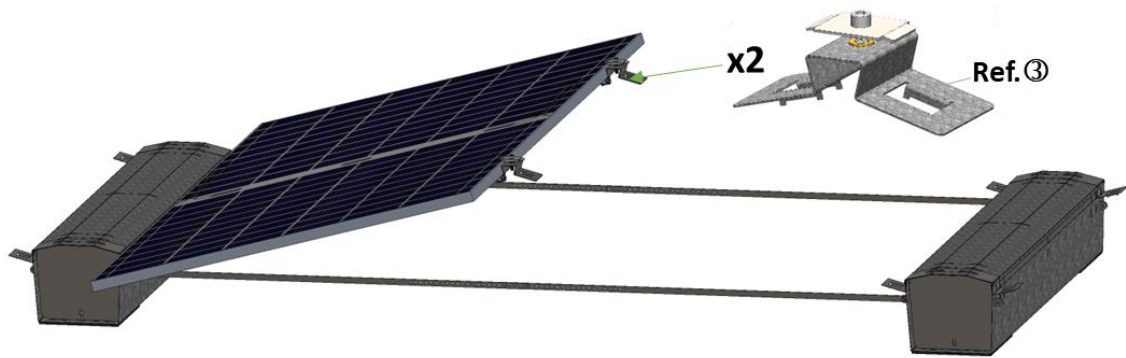
Step 3: Panel Mounting

Installation of the first PV panel.



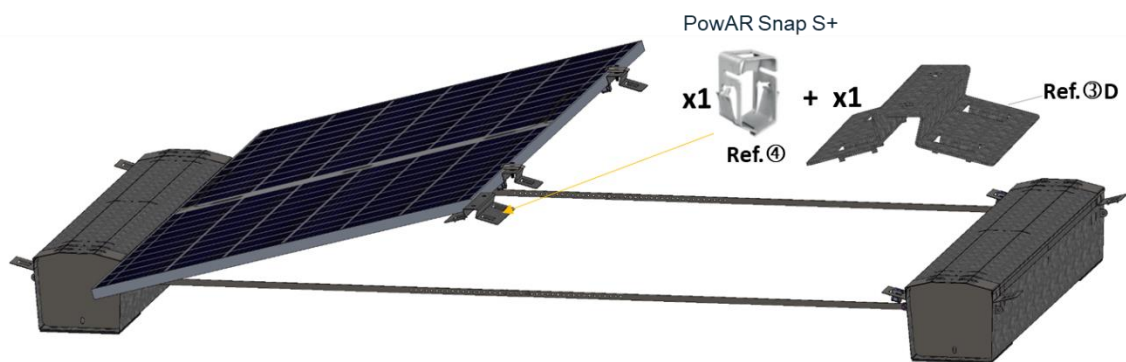
Pre-assemble 4 PowAR Snap S+ clips onto the PV panel before clipping it onto the HeliosBox structure. At the end of this installation step, the top frame of the first PV panel should be supported with a wedge (e.g., a piece of wood) or with a clamp.

Installation of the single fixing clamps



Pre-assemble 2 fixing clamps on the upper edge of the PV panel. The separation distance between the 2 top fixing clamps should be equal to the separation distance between the bottom panel mount brackets.

Installation of the double fixing clamps (required for plants comprising multiple rows)



If the plant comprise multiple rows of HeliosBox structures, add a PowAR Snap S+ clip at a distance of **5cm** from the edge of the PV panel top frame and then mount a double fixing clamp. The double fixing clamp will hang over and provide support for the installation of the next row of HeliosBox structures. The clamp is design to provide a separation distance of 1cm between the rows. This double clamp also provides ground continuity between the rows of structures.

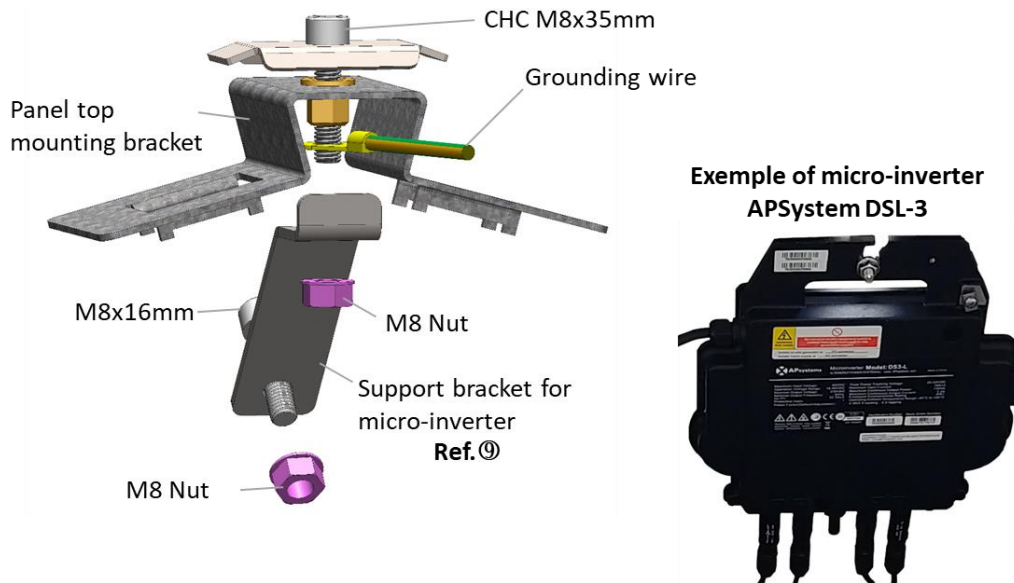
Installation of the second PV panel



Tighten the fastening screws of the 2 upper clamps to the specified torque.

Step 4: Mounting of Micro-Inverter (optional)

A specific mounting bracket (ref 9) may be used for a mounting micro-inverter (such as APSystem DSL-3 or equivalent models) directly under one of the top panel fixing clamp.



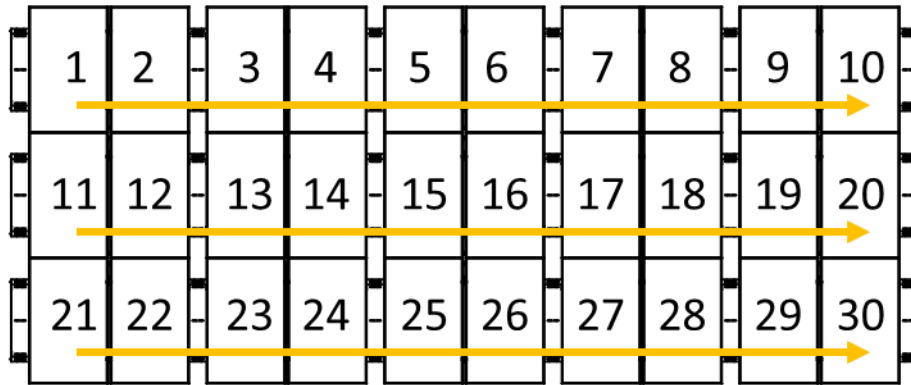
Example of electrical connection of 2 panels to an APSystem DSL-3 micro-inverter.



Step 5: Final Checks and Adjustments

- Perform a thorough visual inspection of the entire HeliosBox structure to ensure all components are properly installed and tightened.
- Check for any loose fasteners or connections and tighten them as necessary.
- Verify that the HeliosBox is level and stable and adjust the ballast if needed to ensure proper weight distribution.
- Inspect the panel alignment and verify that no mounting clips are missing.

When installing a solar plant comprising multiple rows of HeliosBox structures, we recommend proceeding forward with the installation of the each row in order using the following sequence:







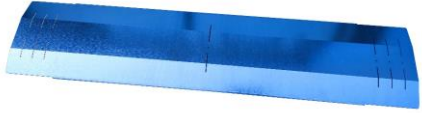




Congratulations! You have successfully assembled the HeliosBox structure. However, it is important to note that these instructions provide a general overview, and specific details may vary depending on your HeliosBox model. Always refer to the manufacturer's provided assembly instructions for your specific model to ensure proper assembly and optimal performance.



ATTENTION: Follow all safety guidelines and local regulations during the assembly process. If you encounter any difficulties or have questions, consult the manufacturer's support resources, or seek assistance from a qualified professional.

7 List of Part References

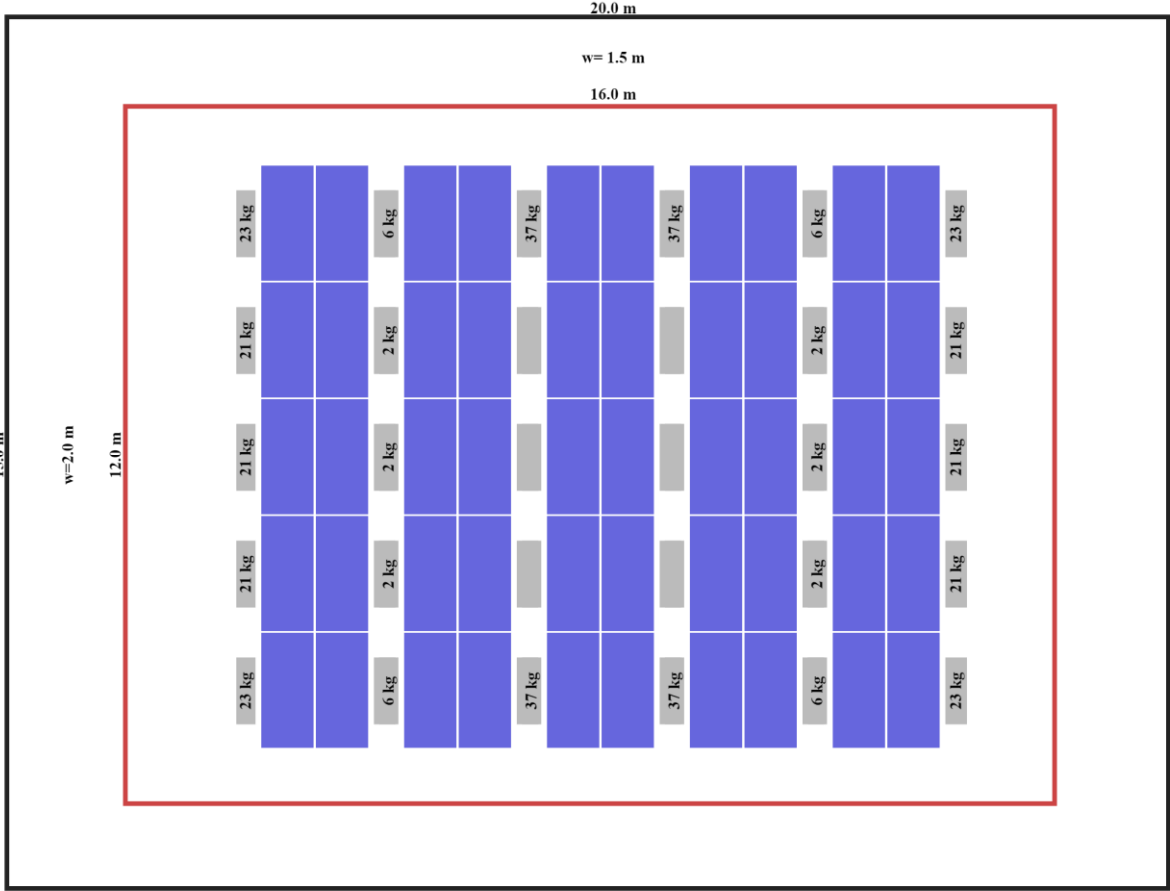
Référence	Schéma de la pièce	Référence Fabricant ou EAN	Description
1		3760391750140	Bride de fixation simple de panneaux sur capot
2		3760391750102	Bride de fixation double de panneaux sur capot
3		3760391750195	2 Brides supérieures de fixation de panneau avec une platine et vis inox M8x35
3D		3760391750218	1 Bride supérieure double de fixation de panneau
4		3760391750188	1 fixation de panneau PowAR-SnapS+ 252387000
5		3760391750034	Caisson principal
6		3760391750133	Couvercle de fermeture du caisson principal
7		3760391750003	Capot de fermeture latérale du caisson
8		3760391750263	Barre de liaison comprenant 2 demi-plats en métal + 2 Rivets Inox D4.8x10 + 2 Vis InoxM8X20 + 2 Écrous à Embase Crantée M8

8 Ballast Weight Guidelines

Recommendations for ballasting for ground installations:

HeliosLite has developed an online configurator tool which can be used to calculate the minimum amount of ballast weight which need to be inserted inside each HeliosBox depending on the site location and environment. Please contact your distributor or HeliosLite to get access to this online configurator tool.

This configurator tool will generate a detailed report with a layout of your plant indicating the required amount of ballast weight which need to be included in each HeliosBox as illustrated in this project example:



9 Electrical Connections (if applicable)

The electric connections for the HeliosBox will depend on the specific configuration and electrical requirements of your photovoltaic system. It is crucial to follow electrical safety guidelines and consult a qualified electrician or professional for assistance if you are unsure about the electrical connections. The following instructions provide a general overview of the electric connection process:

- Consult Local Electrical Codes and Regulations:

Before starting any electrical work, familiarize yourself with the local electrical codes and regulations governing the installation of photovoltaic systems. Ensure compliance with these guidelines to ensure the safety and proper functioning of your system.

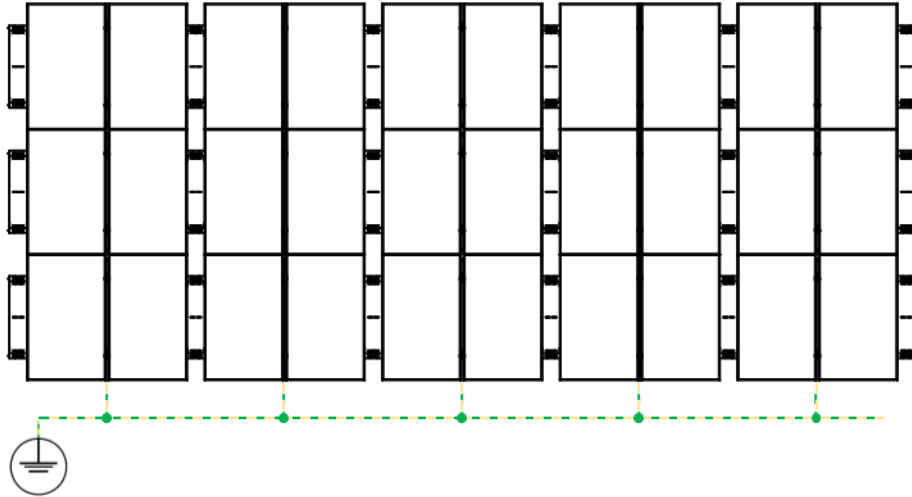
- DC Wiring:

- a. Identify the positive (+) and negative (-) terminals on the photovoltaic panels.
- b. Use appropriate cables and connectors rated for the DC voltage and current of your photovoltaic system. Consult the manufacturer's recommendations for suitable cable sizes and connectors.
- c. Connect the positive (+) terminal of one panel to the negative (-) terminal of the adjacent panel. Continue this series connection until all panels are connected.
- d. Securely fasten the DC wires along the frame of the panels using appropriate metal fastening clips or plastic cable ties. Ensure that the cables are properly secured and protected from damage. Never route a DC cable around an unprotected edge of thin metal sheet part.
- e. Route the DC cables from the panels to the designated connection point or junction box. In order to optimize the plant efficiency, it is important to route separately the East and West oriented PV panels to different MPPT inputs of the inverter.

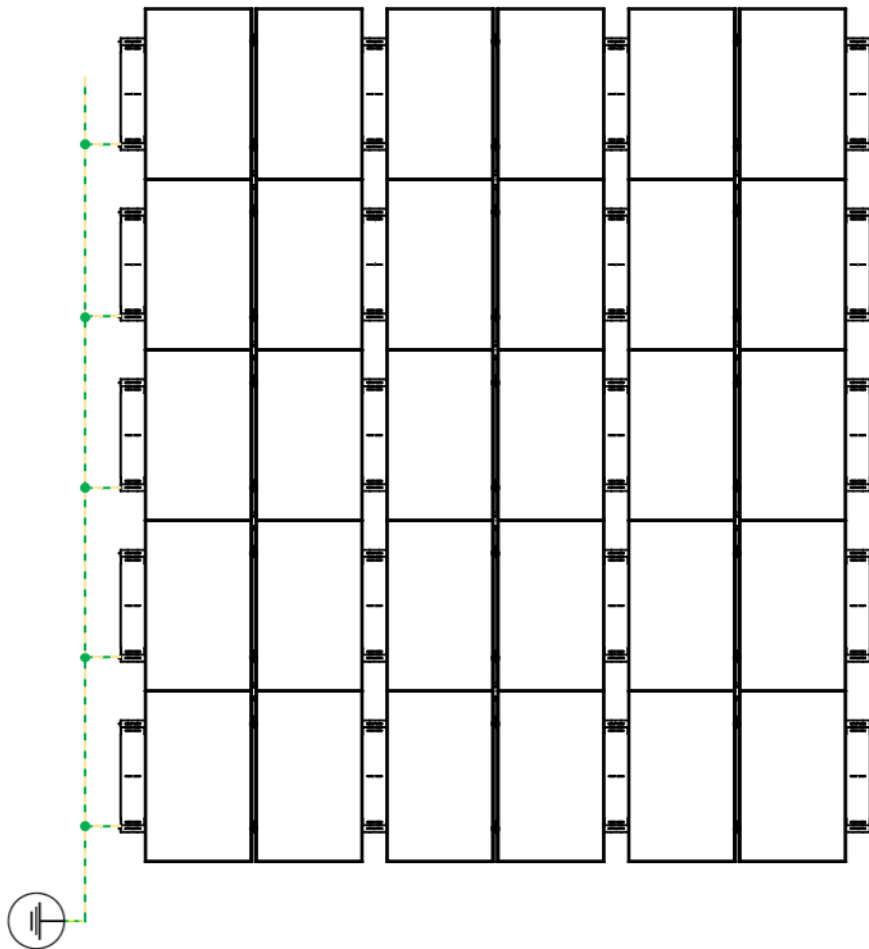
- Grounding:

- a. Proper grounding of the photovoltaic system is essential for safety and compliance with electrical codes. Follow local regulations and consult a qualified electrician for guidance on grounding requirements.
- b. Ground continuity between the panels frames and HeliosBox structures is insured by the ARaymond PowAR Snap S panel mounting clips in a redundant manner. It is not thus not necessary to connect a ground wire to each panel.

For “Horizontal” plant layouts which are elongated toward the “East-West” direction, we recommend connecting each column of HeliosBoxes to a single grounding line following this grounding diagram:



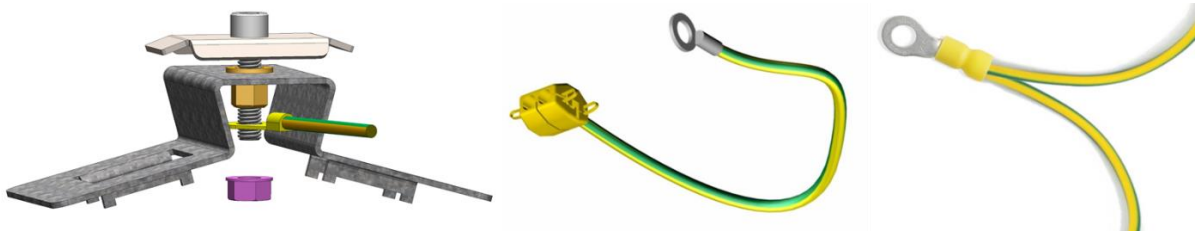
For “Vertical” plant layouts which are elongated toward the “North-South” direction, we recommend connecting each line of HeliosBoxes to a single grounding line following this grounding diagram:



ARaymond Rayvolt grounding clips may be used for connecting the main ground wire directly to the panel frames.



Alternatively, it is possible to connect the main ground wire to the HeliosLite Single or Double panel fastening brackets using standard grounding lugs. In this case, it is important to insure that the main grounding wire remain continuous if one of the grounding lug is temporarily disconnected during a maintenance operation on the plant.



b. Ensure that the photovoltaic panels, inverter, and any metallic components are properly grounded, using grounding conductors and connections as per the electrical codes.

- Monitoring and Protection:

a. Consider installing a monitoring system to track the performance of your photovoltaic system. This can include data loggers, energy meters, or online monitoring platforms.

b. Install appropriate surge protection devices (SPDs) to protect the system against voltage surges and transient events.



ATTENTION: Electrical connections involve working with potentially dangerous voltages. If you are not experienced with electrical work, it is highly recommended to seek the assistance of a qualified electrician or professional for the electric connections of your HeliosBox and photovoltaic system.

10 Maintenance and Cleaning

Regular maintenance of your HeliosBox and photovoltaic system is essential to ensure optimal performance, longevity, and safety. Follow these guidelines to effectively maintain your system:

Regular Visual Inspections:

Perform visual inspections of the HeliosBox structure and photovoltaic panels to check for any signs of damage, wear, or debris accumulation. Look for cracks, loose connections, or any abnormalities that may affect the performance or structural integrity. If any issues are identified, take appropriate action as outlined in the maintenance instructions provided by the manufacturer.

Cleaning:

Regularly clean the photovoltaic panels to remove dirt, dust, and debris that can reduce their efficiency. Use a soft brush or sponge with mild detergent and water to gently clean the surface of the panels. Avoid using abrasive materials or harsh chemicals that may damage the panels. Follow the manufacturer's recommendations for cleaning intervals and methods.

Wiring and Connections:

Inspect the wiring and electrical connections of your photovoltaic system for any signs of damage, corrosion, or loose connections. Ensure all connections are securely fastened and free from debris or moisture. If any issues are found, consult a qualified electrician, or follow the manufacturer's guidelines for corrective actions.

Inverter Maintenance:

Follow the manufacturer's recommendations for inverter maintenance, including regular inspections and cleaning, as well as firmware updates if applicable. Pay attention to any error messages or indicators on the inverter display and take appropriate action if needed. Consult the manufacturer or a qualified professional for any inverter-related maintenance or troubleshooting.

Monitoring and Performance Analysis:

If your system includes monitoring equipment, regularly check the performance data to ensure the system is operating optimally. Monitor the energy production, voltage levels, and any error or fault messages reported by the monitoring system. If any significant deviations or issues are detected, consult the manufacturer or a qualified professional for further analysis and corrective measures.

Safety Checks:

Periodically conduct safety checks, ensuring that all safety features, such as ground fault protection, surge protection devices (SPDs), and disconnect switches, are in proper working condition. Verify that

the grounding connections are secure and intact. If any safety concerns arise, consult a qualified electrician for inspection and necessary repairs.

Professional Inspections:

Consider scheduling periodic professional inspections and maintenance visits by a qualified technician or service provider. They can perform more detailed inspections, electrical testing, and maintenance tasks beyond your regular maintenance routine. This can help identify any potential issues or optimize the performance of your HeliosBox and photovoltaic system.

Record Keeping:

Maintain a record of all maintenance activities, including cleaning dates, inspections, repairs, and any professional services performed. This record will serve as a valuable reference and help track the system's performance and maintenance history.

It is important to note that maintenance requirements may vary depending on your specific HeliosBox model and the components of your photovoltaic system. Always refer to the manufacturer's maintenance instructions and guidelines provided with your HeliosBox for specific maintenance requirements and recommendations.

Regular and proactive maintenance will contribute to the long-term efficiency, reliability, and safety of your HeliosBox and photovoltaic system. By following these maintenance practices, you can maximize the performance and lifespan of your system, ensuring optimal energy production for years to come.

11 Frequently Asked Questions (FAQ)

Is-it possible to fix HeliosBox structures on inclined surfaces such as tilted roofs having a slope greater than 5% ?

Yes using specific fixation brackets. The drain holes which are located at the bottom of HeliosLite main body should not be used for fixing the structures. Please contact HeliosLite or your distributor for further information on this option.

Is-it possible to install HeliosBox structures directly on the ground?

HeliosBox structures are compatible with ground mount installations but the HeliosBox should not be placed in direct contact with soil in order to avoid corrosion issues. HeliosLite can provide specific bracket accessories to mount HeliosBoxes on top of concrete blocks. Please contact HeliosLite or your distributor for further information on this option.

What type of material can be used as ballast weight?

Any non-corrosive loose material may be inserted as ballast weight inside the HeliosBoxes. Please insure that the material is fully dry before closing the HeliosBoxes with their top covers.

Is-it possible to use HeliosBox structures for temporary installations?

Yes, the HeliosBox structures are designed to be easy to move. For long distance project relocations, it is possible to empty and completely disassemble the HeliosBoxes in order to reduce shipping volume. For short distance project relocations, it is possible to simply disamble the solar panels and transport the HeliosBoxes fully assembled with some ballast weight inside.

