



PRODUCT CATALOG

Innovative mounting system
for installing solar panels on flat roof



Three good reasons to choose

SUN BALLAST[®]

01

REDUCES INSTALLATION TIME BY UP TO 70%

Sun Ballast structures perform both the support function and anchoring ballasts of the photovoltaic modules.

No holes in the cover and nothing to assemble, therefore cost per kW cut.

02

NO HOLES IN COVER

Sun Ballast blocks are quick and easy to install precisely because it is not necessary to drill holes to fix them to the roof.

This not only makes it possible to obtain **installation in a short time** but also preserve the characteristics of the **supporting roof**.

03

FREE TECHNICAL ASSISTANCE

Sun Ballast Technical Department offers **free of charge**: the technical drawing of the photovoltaic system, the bill of materials, wind calculation and system stability checks.

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SUN BALLAST®

Basic srl, is a leading Italian company in the production of structures and accessories for photovoltaic systems. Since 2012 it has offered a valid alternative to traditional systems on the market, presenting an innovative product: Sun Ballast, the support structure for photovoltaic modules on a flat roof.

The products of the Sun Ballast range are born from years of direct experience of the same creators, who, clashing with the real problems of installation and assistance, were pushed to search for solutions new, placing itself as a prerogative to create a system capable of combining safety and practicality, to the purpose of facilitating and harmonizing Designers, Installers and Maintenance Technicians.

Basic SRL supplies its products to small and large companies in Italy and throughout Europe with very short delivery times and low costs.

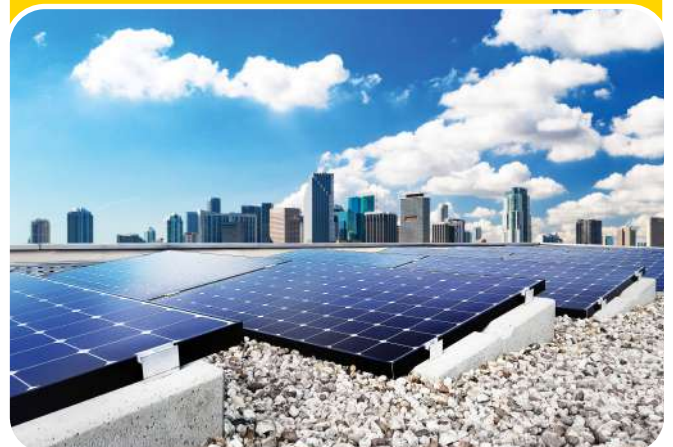
Sun Ballast, Innovative, efficient and modular, is the ideal support for photovoltaic panels on flat roofs, clay, asphalt and pavements with a maximum slope of 5°. It can be easily adapted to panels of any size and type.

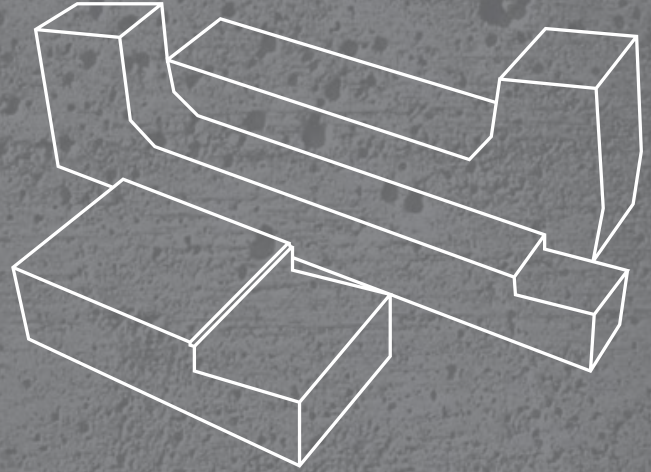
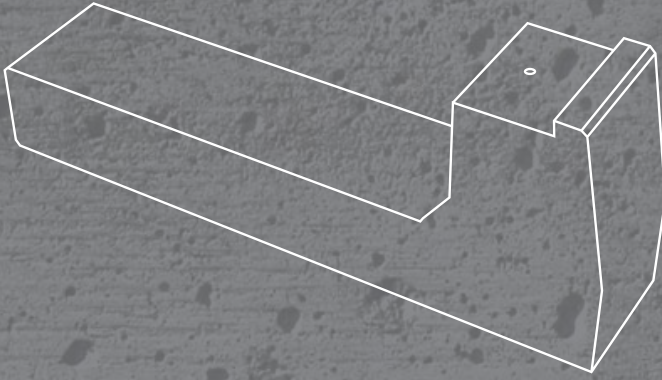
With the appearance of a wedge, Sun Ballast is structured as a single piece, not only as a support but also as a ballast for the panel.

Sun Ballast is structured not only to be the ideal support solution for photovoltaic panels, but also to act as ballast for the panel.



STANDARD SYSTEM





The system does not provide for the use of aluminum profiles or other accessories that involve a preassembly phase, its simplicity is the main feature from which the numerous technical and economic advantages of Sun Ballast derive.

With Sun Ballast, laying and installation times are reduced by up to 70% compared to traditional solutions on the market.

It is a modular system both in terms of inclinations and wight. The existing Sun Ballast models are: 5°, 10°, 10°.2, models that allow you to lay the modules in the various possible combinations: horizontal, vertical or east-west for example.

The weight modulation is done thanks to the possibility of doubling the weights by coupling them or by inserting additional weights, this gives the big advantage of going to insert the weights only in the most suitable areas without unnecessarily loading the roof and in order to satisfy the verification of resistance to wind actions.

Basic srl is able to offer a free consultancy service in the preventive evaluation phase, to help its customers and / or designers to orient themselves towards a considered choice, making available and comparing their own technical skills on the subject.

CONNECT SYSTEM



EAST-WEST SYSTEM



THE IDEAL SOLUTION FOR FLAT ROOF





PRODUCT DESCRIPTION

RESISTANT MATERIALS

The main material of Sun Ballast is concrete. With this type of material it is possible to obtain a durable product thanks to low wear over time and also has the ability to withstand even the most intense perturbations and different climatic conditions.

In addition to the structure, the assembly of Sun Ballast is also simple and immediate, it can be easily placed at the base of the solar panel without the need for additional elements or holes in the roof that could damage the surface or affect its waterproofing.



LOW COSTS

The installation costs of photovoltaic panels are generally high also due to the presence of various accessories and junction elements. Sun Ballast, thanks to the minimal structure and the materials of which it is constituted, does not involve the use of additional accessories for assembly, which, in many cases, has a higher cost than that of the support product itself.

With Sun Ballast it will no longer be necessary to change the mounting platform of the panels or add elements but it will be enough to adapt the modular characteristics of Sun Ballast to the type of panel.



SIMPLICITY AND SPEED OF INSTALLATION

The Sun Ballast structures are a revolutionary alternative to the classic structures made of aluminum which are generally composed of a multitude of components to be assembled.

Our structures come with a single block of concrete that is simply placed on the roof, there is nothing to assemble and no fixing holes to drill. It is in fact a system that is very simple to use, in fact it is enough just to lay the sheath on the roof, place the pre-drilled ballast fitted with the M8 bushing on it, and finally position the panels which will be fixed using central and terminals. A few simple steps that effectively reduce installation and maintenance times.



A SUCCESS IN LINE WITH THE TIMES

The success of the Sun Ballast is evident and the sales figures confirm it. The reasons for these excellent performances?

Reliability, safety and efficiency, but these are just some of the reasons that push installers and retailers from all over the world, to buy this product. In fact, another feature that distinguishes Sun Ballast is that the company also takes care of applying small precautions to make the product with a low environmental impact.



TECHNICAL SHEETS





5° CONNECT SYSTEM

Art. 23005.CF/.CR/.CRT

Inclination Angle

5°

Module positioning

Horizontal

FRONT BLOCK ART. 23005.CF

Ballast weight	50 lb	Pallet dimensions	47 1/4 x 31 1/2 - H= 21 21/32
Quantity for pallet	40 pieces	Pallet weight	2000 lb

CENTRAL BLOCK ART. 23005.CR

Ballast weight	97 lb	Pallet dimensions	47 1/4 x 31 1/2 - H= 13 25/32
Quantity for pallet	20 pieces	Pallet weight	1940 lb

TERMINAL BLOCK ART. 23005.CRT

Ballast weight	81 lb	Pallet dimensions	47 1/4 x 31 1/2 - H= 16 17/32
Quantity for pallet	32 pieces	Pallet weight	2600 lb

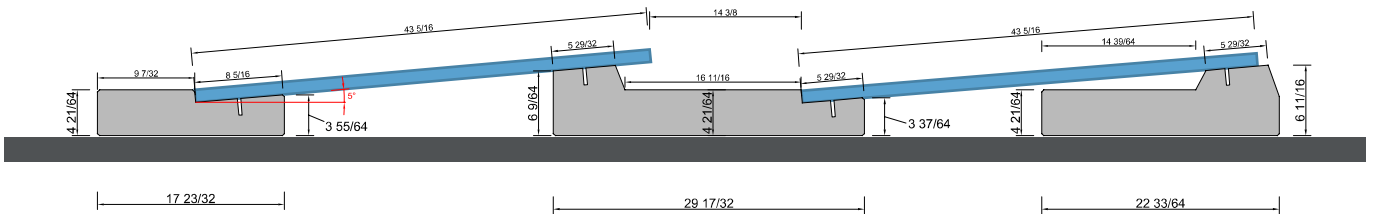


SYSTEM DETAILS

HORIZONTAL PANEL LAYING

SIDE VIEW

Fixed distance between rows of modules



TOP VIEW



Info

- The dimensions shown in the figure are all expressed in centimeters.
- Minimum recommended configuration: 5 rows of 5 panels.
- For short side panel dimensions greater than 1m it is advisable to consult our technical department.
- The torque applied shall refer to the mechanical standard conforming to the bolt in use; with M8 bolts in stainless steel use a torque of 12 - 14 Nm.
- Avoid screwdrivers impulse.
- It's recommended to consult the information indicated in the assembly instructions of the panel manufacturer.
- For any information visit the website www.sunballast.com

10° CONNECT SYSTEM Art. 23010.CF/.CR/.CRT	Inclination Angle	10°
	Module positioning	Horizontal

FRONT BLOCK ART. 23010.CF

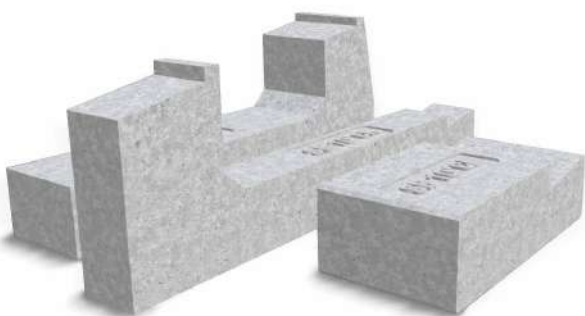
Ballast weight	55 lb	Pallet dimensions	47 1/4 x 31 1/2 - H = 12 63/64
Quantity for pallet	40 pieces	Pallet weight	2200 lb

CENTRAL BLOCK ART. 230010.CR

Ballast weight	99 lb	Pallet dimensions	47 1/4 x 31 1/2 - H = 12 59/64
Quantity for pallet	16 pieces	Pallet weight	1590 lb

TERMINAL BLOCK ART. 230010.CRT

Ballast weight	84 lb	Pallet dimensions	47 1/4 x 31 1/2 - H = 18 1/2
Quantity for pallet	16 pieces	Pallet weight	1345 lb

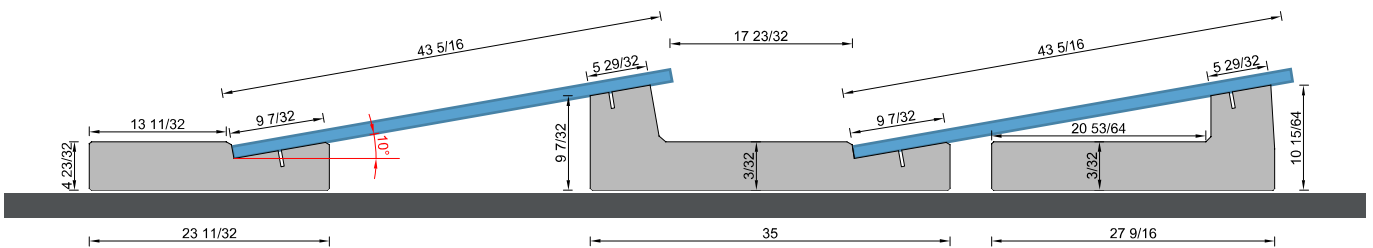


SYSTEM DETAILS

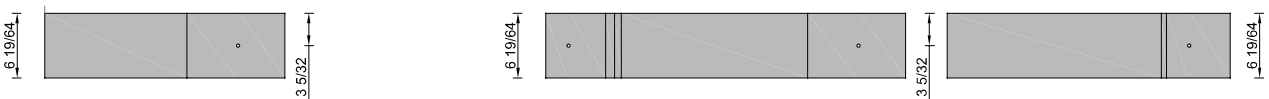
HORIZONTAL PANEL LAYING

SIDE VIEW

Fixed distance between rows of modules



TOP VIEW



Info

- The dimensions shown in the figure are all expressed in centimeters.
- Minimum recommended configuration: 5 rows of 5 panels.
- For short side panel dimensions greater than 1m it is advisable to consult our technical department.
- The torque applied shall refer to the mechanical standard conforming to the bolt in use; with M8 bolts in stainless steel use a torque of 12 - 14 Nm.
- Avoid screwdrivers impulse.
- It's recommended to consult the information indicated in the assembly instructions of the panel manufacturer.
- For any information visit the website www.sunballast.com

BALLAST 5°

Art. 23005



Inclination Angle	5°
Ballast weight	110 lb
Module positioning	Horizontal / Vertical
Quantity for pallet	18 pieces
Pallet dimensions	47 1/4 x 31 1/2 - H = 16 17/32
Pallet weight	1980 lb



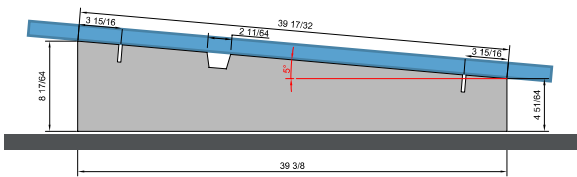
SYSTEM DETAILS

HORIZONTAL PANEL LAYING

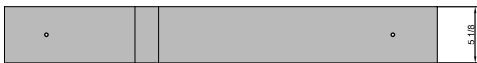
SIDE VIEW

Fixed distance between rows of modules

23 5/8



TOP VIEW

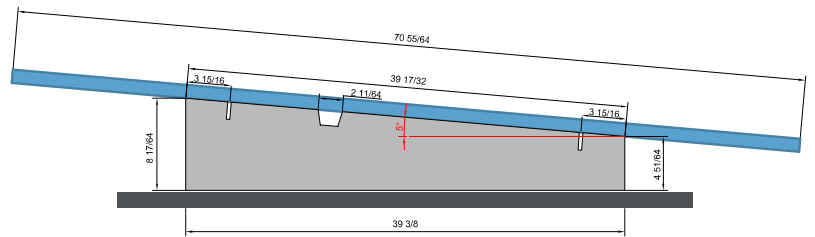


VERTICAL PANEL LAYING

SIDE VIEW

Fixed distance between rows of modules

23 5/8



TOP VIEW

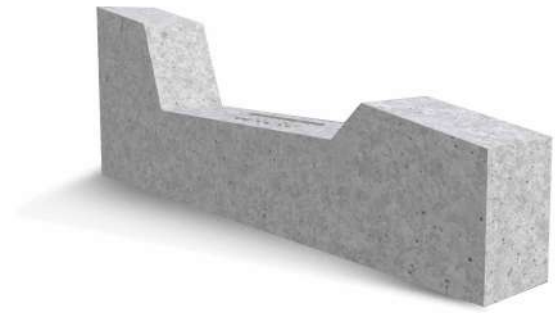


Info

- The torque applied shall refer to the mechanical standard conforming to the bolt in use; with M8 bolts
- in stainless steel use a torque of 12 - 14 Nm.
- Avoid screwdrivers impulse.
- It's recommended to consult the information indicated in the assembly instructions of the panel manufacturer.
- The dimensions shown in the figure are all expressed in centimeters.

BALLAST 10°.V

Art. 23010.V



Inclination Angle	10°
Ballast weight	134 lb
Module positioning	Horizontal / Vertical
Quantity for pallet	18 pieces
Pallet dimensions	47 1/4 x 31 1/2 - H = 24 13/32
Pallet weight	2415 lb

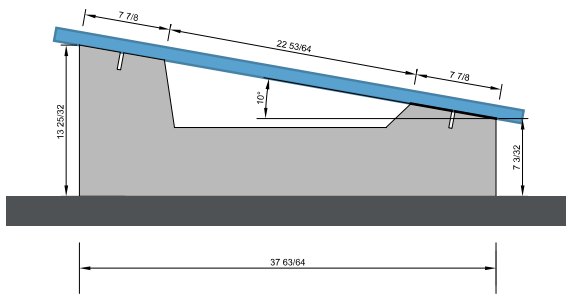


SYSTEM DETAILS

HORIZONTAL PANEL LAYING

SIDE VIEW

Fixed distance between rows of modules



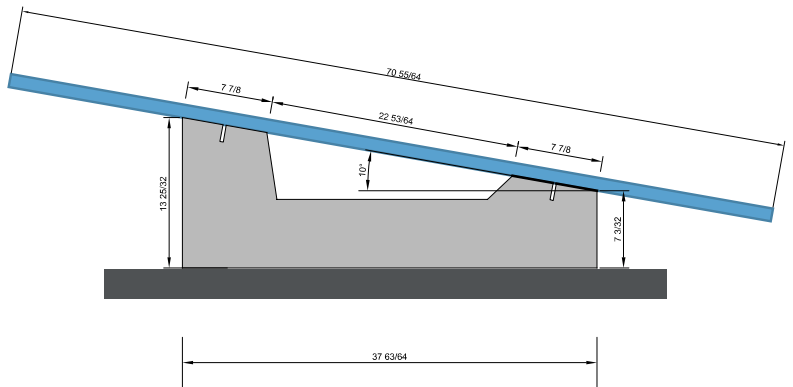
TOP VIEW



VERTICAL PANEL LAYING

SIDE VIEW

Fixed distance between rows of modules



TOP VIEW

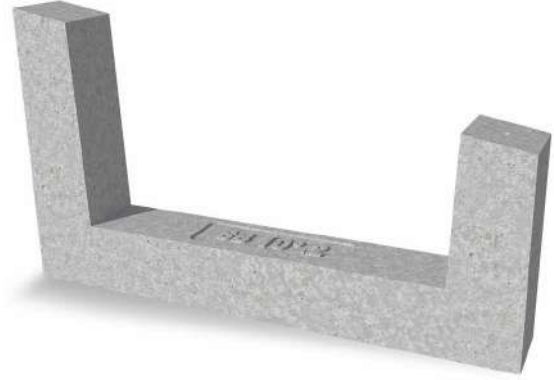


Info

- The torque applied shall refer to the mechanical standard conforming to the bolt in use; with M8 bolts in stainless steel use a torque of 12 - 14 Nm.
- Avoid screwdrivers impulse.
- It's recommended to consult the information indicated in the assembly instructions of the panel manufacturer.
- The dimensions shown in the figure are all expressed in centimeters.

BALLAST 10°.2

Art. 23010.2



Inclination Angle	10°
Ballast weight	139 lb
Module positioning	Horizontal
Quantity for pallet	10 pieces
Pallet dimensions	47 1/4 x 31 1/2 - H= 29 9/64
Pallet weight	1400 lb



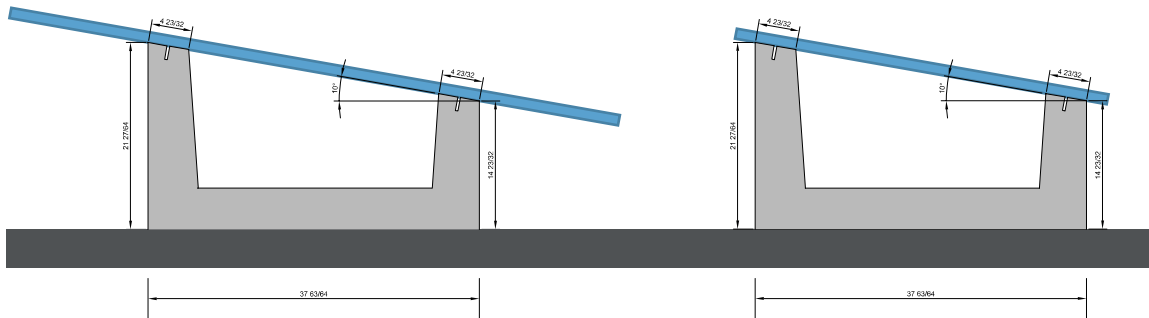
SYSTEM DETAILS

HORIZONTAL PANEL LAYING

SIDE VIEW

Minimum distance recommended between module rows

31 1/2 - 39 3/8



TOP VIEW



Info

- The torque applied shall refer to the mechanical standard conforming to the bolt in use; with M8 bolts in stainless steel use a torque of 12 - 14 Nm.
- Avoid screwdrivers impulse.
- It's recommended to consult the information indicated in the assembly instructions of the panel manufacturer.
- Always follow Sun Ballast assembly instructions.
- The dimensions shown in the figure are all expressed in centimeters.

ACCESSORIES






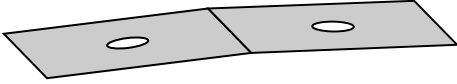
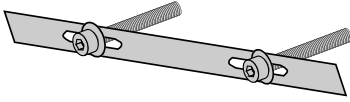
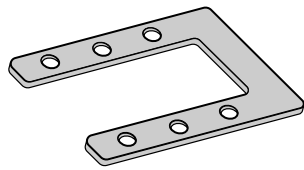

RUBBER MAT

DESCRIPTION OF THE ARTICLE	DETAIL	TYPE OF SHEATH	ARTICLE
Rubber protection sheath 13/64 thick, cut 9 27/32 x 5 29/32 (2 Pieces)		RUBBER	KGN23125


CLAMPS

DESCRIPTION OF THE ARTICLE	DETAIL	ARTICLE
Aluminium central clamp kit with M8 stainless steel screw (10 Pieces)		K23900/U.50
Aluminium terminal clamp kit with M8 stainless steel screw (10 Pieces)		K23920/U.50

BALLAST ACCESSORIES

DESCRIPTION OF THE ARTICLE	DETAIL	ARTICLE
Universal East-West junction plate for ballast		23815
Universal junction plate		K23804
Earthing plate (10 Pieces)		23960
Polyurethane foam 750 ml		SCH750

ADDITIONAL WEIGHT

DETAIL	DESCRIPTION OF THE ARTICLE	ARTICLE	PALLET QUANTITY	PALLET DIMENSIONS	PALLET WEIGHT
	Additional weight 70 lb, universally compatible (30.5x30x17)	23030.CRP	32 Pieces	47 1/4 x 31 1/2	2240 lb

FIELDS OF APPLICATIONS





FIELDS OF APPLICATION

WHERE ARE OUR SYSTEMS INSTALLED?



SHEATHED ROOF

Roof sheathing is often required for industrial sheds. However, sheathed surfaces only allow for **low loads**, so correctly distributing the weight is crucial.

Sheathing helps **protect the roof** the solar panels are installed on and the entire structure from water leaks.

Therefore, all protective and waterproofing properties must always remain intact. Sun Ballast systems **maintain these properties** because they don't require any drilling to be installed.



TILE PAVEMENT ROOF

Solar panels are often installed on terraces and flat roofs. These surfaces are usually tiled and therefore require **extra caution**.

Installing a photovoltaic system without damaging the **tiled surface** is now possible, thanks to Sun Ballast, because its structures don't require any drilling. Moreover, special sheaths **help protect** the roof's or terrace's characteristics.



OUR STRUCTURES CAN BE POSITIONED ON MULTIPLE FLAT ROOF.

From 5 ° to 10 ° it is possible to use our ballasts with the help of special devices such as foams chemicals, preferring lower ballast inclinations to avoid the sliding effect.



GRAVEL ROOF

Tar and gravel roofs help protect buildings from **UV rays**, overheating, and water leaks.

Solar panels can be installed on this type of roof in **two ways**: by placing the structures on the gravel or installing the ballasts under the gravel. With Sun Ballast, both ways ensure a **stable, long-lasting** photovoltaic system.



GREEN ROOF

Green roofs are becoming more popular by the day, as are photovoltaic systems installed on green roofing systems. Green roofs have been shown to **improve the output** of a solar system because the greenery lowers the roof's temperature even during the hottest time of the day, preventing any efficiency loss due to overheating.

Sun Ballast structures don't require any drilling and therefore **are perfect** for green roofs.



GROUND MOUNTED SYSTEMS

As the name suggests, ground-mounted photovoltaic systems **are set up on the ground**; therefore, the weight of the supporting structure is not a limitation. However, other aspects need to be considered.

The terrain on which you install the system is one of them. Therefore, the stress it's exposed to mustn't affect the photovoltaic system over time.



TECHNICAL ASSISTANCE

FREE TECHNICAL SERVICE AT YOUR DISPOSAL

The technical aspect is perhaps the most strategic in the field of photovoltaics because a good one design allows you to arrive on the construction site in prepared manner, with ready-made material e especially aware of what the possible ones are critical issues to manage and the solutions to be adopted.

Precisely because they are aware of the importance of this service, our office has always offered free technical advice to all customers e industry technicians who require support in plant design and installation phase photovoltaic in order to meet the needs of our customers by sharing and proposing to them the most suitable and best solutions from one point from a technical but also an economic point of view, always in compliance with the technical regulations in force.

In addition to the design aspect, we also carry out a valuable work orientation towards customers in order to facilitate the understanding of our systems, to guide customers in the choice of best system to use and therefore facilitate the use of our products making it faster and simple installations.

Sun Ballast technical office consists of a team of professionals including engineers, architects and appraisers and is certainly characterized by the competence and speed of execution of services as we are aware that many times the timing for the development of projects and budgets are very tight. For this reason we deliver our technical reports in a maximum of 24 h.



TECHNICAL DRAWING OF THE PLANT



CALCULATION SIZING



BILL MATERIALS



SIGNED TECHNICAL REPORT BY A QUALIFIED TECHNICIAN



TELEPHONE SUPPORT AND ON SITE

SAFETY

INSTRUCTION

INDICATIONS FOR PLANNING AND SIZING

- Value the need for accessories to enhance the stability of the system according to the wind load, as shown in DM14 01 2008 Circ. 02 February 2009-N 617.
- The crucial factors for the wind load calculation are the speed of reference, that changes according to the area of the plant location (from 1 to 9), the building height, the distance from the roof edges.
- Pay particular attention to installations within 30 km from the coast and/or typically windy.
- The designer and the installer are in charge for the sizing of the plant structure.
- Make sure that the substructure is appropriate in terms of capacity.
- Ask the client the residual bearing capacity available, check that the slab performs the load division and divide the weight of modules + ballast per m², included the area between the rows and the distance from the roof edges.
- For any doubt consult a qualified technician.

TECHNICAL FEATURES:

- Exposure class: XC4 unless otherwise specified
- Strength class: C32/40
- Minimum cement content: 340 kg/m²
- Class of fire resistance C A1 (as established by the Decree of the Italian Ministry of the Interior on the 14th January 1985)
- Maximum depth of water (H₂O) penetration under the pressure 500 kPa: 15 mm
- Medium depth of water (H₂O) penetration under the pressure 500 kPa: 10 mm
- Determination of the tensile/pull-out strength of the buckle M8 embedded in the concrete element through direct tensile test on the bolt M8 which is screwed in the buckle
- Minimum tensile strength of the test at 15 KN (1530 kg) without any slipping of the buckle inserted in the Sun Ballast ballast
- Weight tolerance +/-5%

TECHNICAL REQUIREMENTS DECLARATION

Seat: Via della Costituzione 26-42028
Poviglio (RE)- Italia

Management System: UNI EN ISO
9001:2015 - N°CERTIFICATO: 50 100 3413

Denomination: Ballasts in precast
unreinforced concrete (Inside there is an
iron rod to increase mechanical elasticity)

Article: Sun Ballast (Patented System)

BASIC SRL DECLARES THAT

The production complies with all instructions and procedure of the quality management system certified according to the UNI EN ISO 9001:2015. Any modification to the product covered by this declaration made without the authorisation of the manufacturer shall render this declaration of technical conformity null and void.



PRODUCT WARRANTY

Basic Srl guarantees the functionality over time of Sun Ballast supports for photovoltaic panels on flat roofs, produced and marketed by the Company itself, for a period of 25 years from the date of purchase.

WARRANTY TERM & CONDITIONS

The Warranty will be operational only if all the following conditions are applied:

1. The system must be fully realized with the range of accessories supplied by Basic:

- Central brace in aluminum
- Terminal brace in aluminum
- Screw for central and terminal brace INOX A2m
- Sheath
- Potential accessories

2. The ballast system shall be installed in a workmanlike manner and in compliance with the specific installation instructions of Basic Srl which are into force at the moment of purchasing and written in the technical specifications and in these assembly instructions.

3. If the ballasted system has been built using materials and components other than those specified in point "1", they must in any case have been marketed by Basic Srl. Any damage due to products not marketed by Basic Srl is excluded from this warranty.

This warranty is provided to the client with every order placed by the client. In the event of damage attributable to the terms stated in this warranty, and excluding any other obligation or reimbursement, Basic Srl:

- Shall provide a replacement product without additional charges. If the product is no longer in production, Basic Srl shall supply an equivalent product of equal value.
- Shall provide directly, through personnel chosen by the same and at its own expense, to restore the original functionality, possibly after an inspection by one of its representatives who will assess and determine the type of intervention required.

EXCLUSIONS

This warranty does not include:

- Damages caused by soil movements, settlement of the structure of the immovable property or movements of the structure.
- Damages caused by an incorrect use or maintenance of the structure, by activities, tampering or changes made by third parties.
- Accidental or voluntary damages, actions of war included
- Damages caused by lightnings
- Damages caused by natural disasters
- Damages derived from a wrong installation
- Damages derived from a wrong dimensioning

Any other obligation or indemnity to be paid by Basic Srl is expressly included, and Basic Srl shall not be held liable for any direct or indirect damage to goods, movable and immovable property, rights or activities of the person guaranteed to third parties..

PROCEDURES

The request for activation of this warranty shall be made in writing and shall be received within 30 days from the date on which the damage becomes evident.

The notice shall be accompanied by an evidence of purchase (copy of the invoice), shall state the details of the declared damages and shall be sent to: info@sunballast.com, to your marketing representative or on our website: <https://www.sunballast.com/staff/>

In any case, the client's rights against its direct seller are not affected, in accordance with the applicable legislation on warranty in the sale of consumer goods art. 1490 of the Italian Civil Code. La presente garanzia è trasferibile a successivi proprietari senza obbligo di preavviso a Basic Srl.

This warranty is transferable to subsequent owners without prior notice from Basic Srl.



ITALIAN COMPANY FOUNDED IN 2012



FREE TECHNICAL CONSULTANCY SERVICE



**ALREADY PRESENT IN THE EUROPEAN MARKET
WITH MORE THAN HUNDRED DISTRIBUTORS**



**HAS PRODUCED AND SUPPLIED
MILLIONS OF BALLASTS ALL OVER THE WORLD THE WORLD**



**FROM 2022
WITH A NEW BRANCH IN FLORIDA**



SUN BALLAST®

was born with the intention to make a **significant contribution** in the **renewable energy** market, which by nature is linked to the **challenge** and the concept of **sustainability**.

The activities carried out and the resources employed have the goal of **finding solutions** where costs, environmental impact and quality of the product are in **complete harmony** and **constantly improving**.

Our hope is to be of help to our customers, thus doing our part in the **improve** life in this beautiful planet.

WWW.SUNBALLAST.COM



CRIBIS
Prime Company



UNI EN ISO 9001: 2015
NRO 50 100 13413

SUN BALLAST[®]

Supporting solar innovation



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