

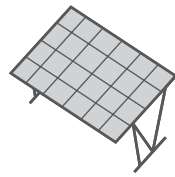
PENSILSOLE SOLAR POWER





S O L A R C A R P O R T

PENSILSOLE SOLAR POWER



Pensilsole Solar Power is a two-car solar carport equipped with an integrated 6.08 kW photovoltaic system with energy storage. Pensilsole Solar Power offers a highly efficient storage system designed for domestic security. The solar pergola Eclettica adopts a hybrid inverter to which it is possible to connect an external 5 kW lithium-iron-phosphate battery pack capable of guaranteeing 10,000 discharge and charge cycles while maintaining a residual capacity of 70%, a reduced hazard in the event of house fires, and environmentally friendly technology. The system includes 16 high-efficiency 120-cell half-cut 380 W monocrystalline photovoltaic panels. The panels are manufactured by the Bisol company. This system allows electricity to be consumed directly during daylight hours, to be stored for use at night, and finally, to exchange the excess energy produced into the grid.



5

REASONS TO CHOOSE PENSILSOLE SOLAR POWER

SOLAR CARPORT FOR TWO PARKING SPACES



1 6.08 KW PHOTOVOLTAIC KIT WITH ENERGY STORAGE

Pensilsole Solar Power offers a storage system that includes 16 high-efficiency monocrystalline photovoltaic panels with 120 half-cut 380 W cells produced by the Bisol company, a hybrid inverter and an external 5 kW lithium-iron-phosphate battery pack.



2 QUICK INSTALLATION TIME

Pensilsole Solar Power is installed quickly, as the structural components are delivered pre-assembled. Quick attachment of PV panels on Pensilsole is ensured by specific accessories that are included in the delivery. The load-bearing structures have reinforced concrete bases with a grit finish, so they do not require foundations: this means opening a construction site that is easy to set up and manage, a simplified permitting process, and no need for soil remediation work at the end of the system's life. Versions with steel plates to be attached to an existing or prepared foundation with appropriate excavation at the installation site are also available.



3 ADAPTABILITY

The structures are easily adaptable to new needs that may arise over time: since they are modular, it is always possible to attach and join a new canopy through a special system of gutters and downspouts; in addition, it is always possible to replace the photovoltaic panels with higher-performance models, even if they have different dimensions.



4 CUSTOMIZATION

The structures are customizable in size and finish. Upon request, they can be equipped with advertising banners.

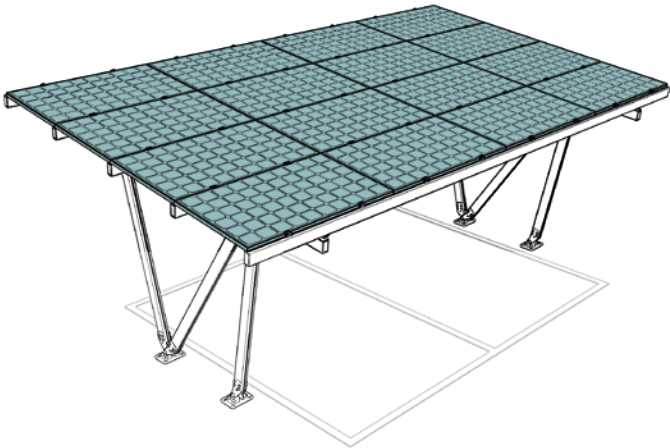
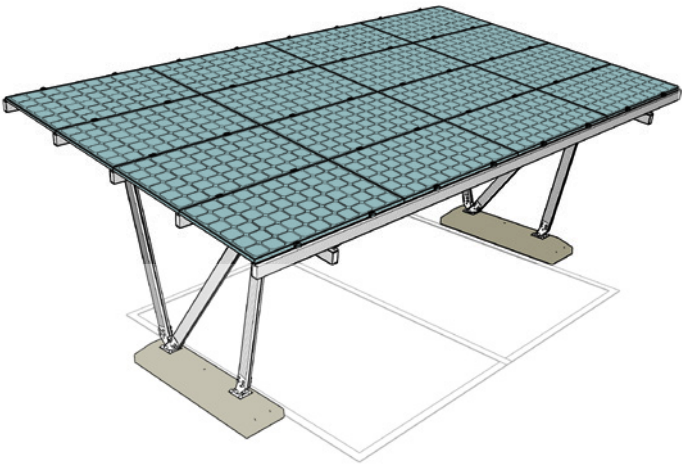


5 LIMITED MAINTENANCE

Maintenance of shelters and carports is limited to tightening screws and general cleaning on an annual basis, as the structure is made of anodized or thermosetting polyester powder coated aluminum profiles. Joints and structural nodes are made of surface-treated steel using a hot-dip galvanizing process and subsequent polyester powder surface coating. Aluminum structures are a technological added value, which gives the structural deck strength, elasticity and durability: aluminum does not oxidize, and it is therefore possible to install sunroofs and carports even in dust-saturated atmospheres such as industrial ones or near wetlands or marine areas. At the end of its life, the product allows the transformation of profiles into scrap that will be melted down and processed into new products or profiles for industrial use.

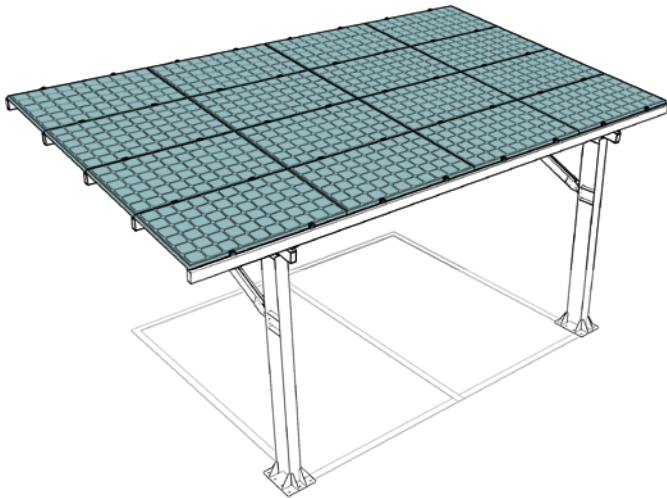
Pensilsole Solar Power can support the photovoltaic system and must be bound to the installation site. The Structure complies with UNI EN 1090 and NTC 2018, while the system complies with the relevant technical standards.

PENSILSOLE SOLAR POWER
WITH BALLASTS



PENSILSOLE SOLAR POWER
WITH ANCHOR PLATES

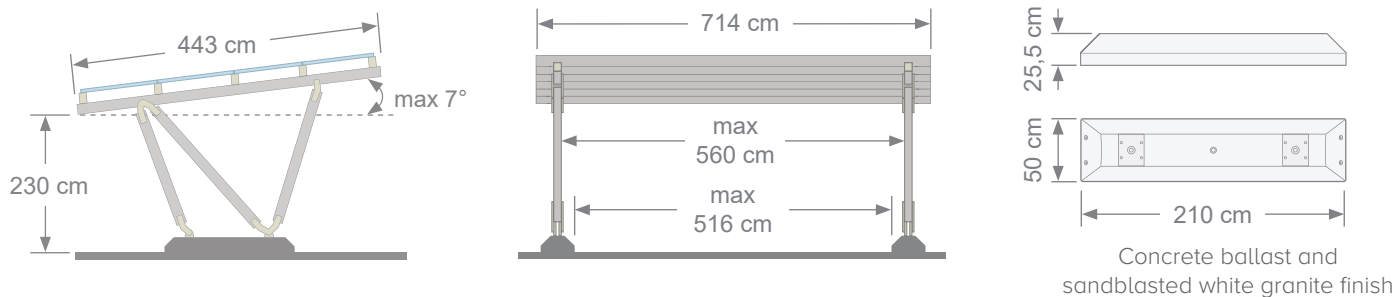
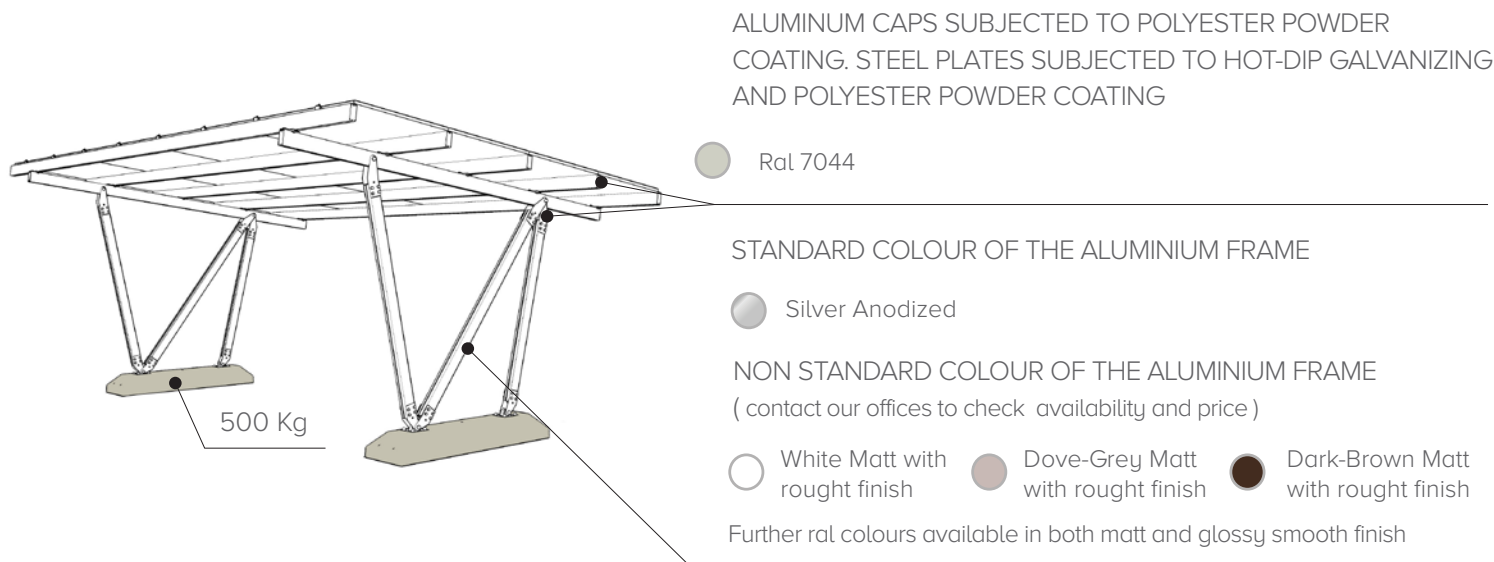
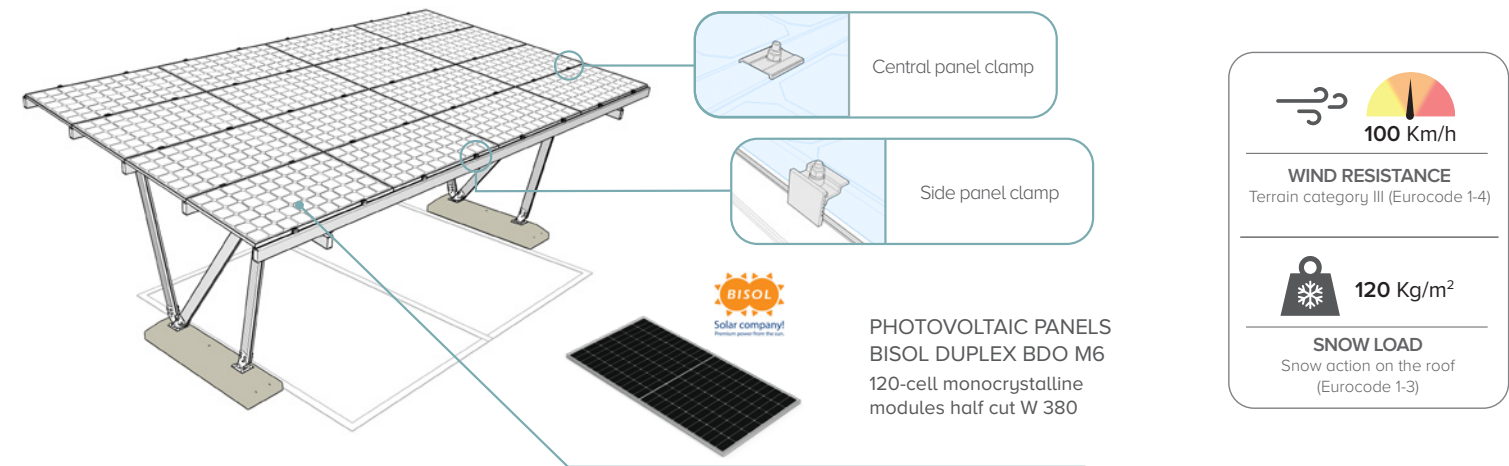
PENSILSOLE SOLAR POWER
CANTILEVER



PENSILSOLE SOLAR POWER
WITH BALLASTS

2 PARKING SPACES - 16 SOLAR PANELS

UNI EN 1090 / NTC 2018

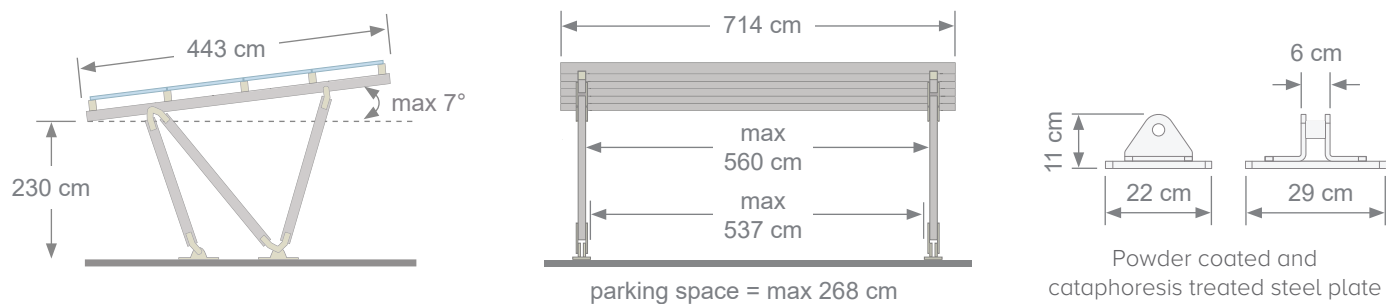
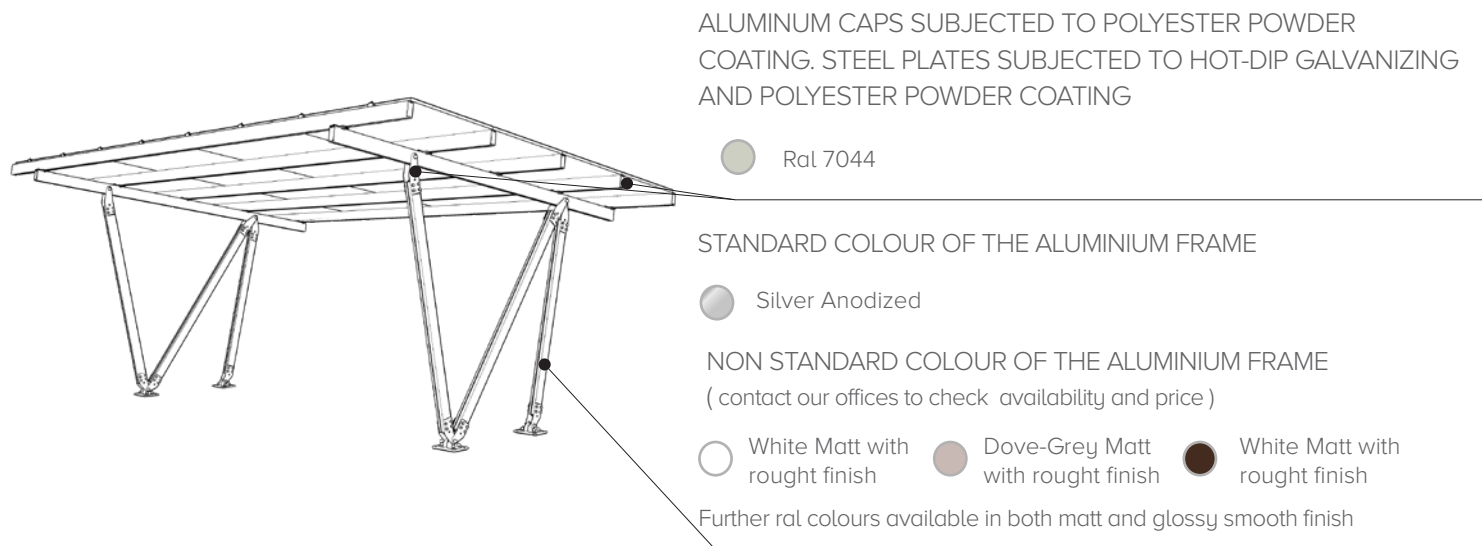
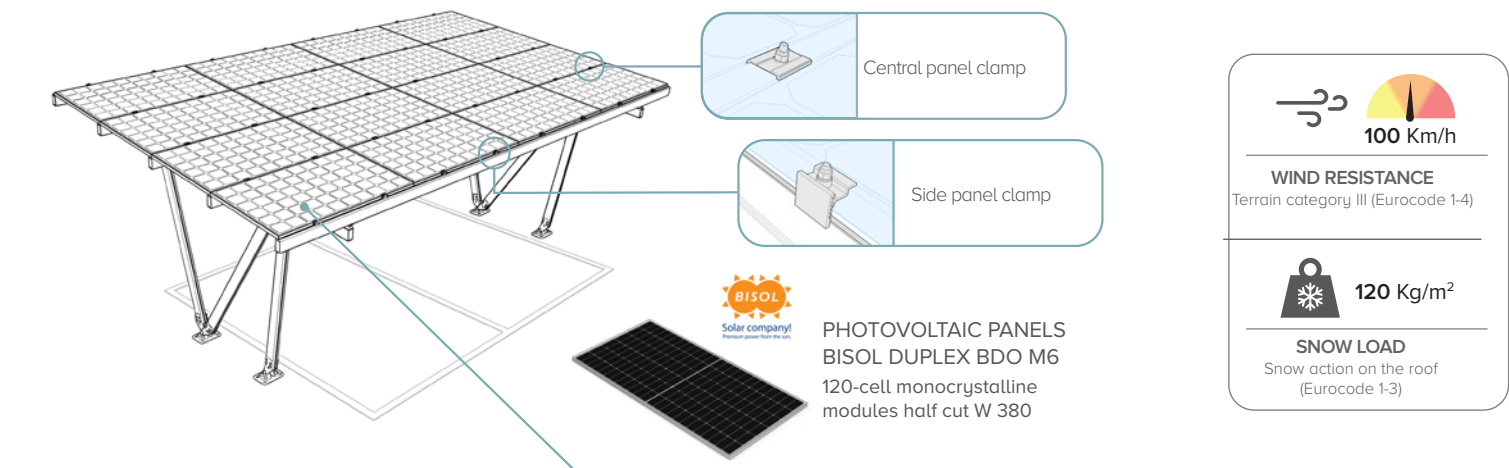


PENSILSOLE SOLAR POWER

WITH ANCHOR PLATES

2 PARKING SPACES - 16 SOLAR PANELS

UNI EN 1090 / NTC 2018

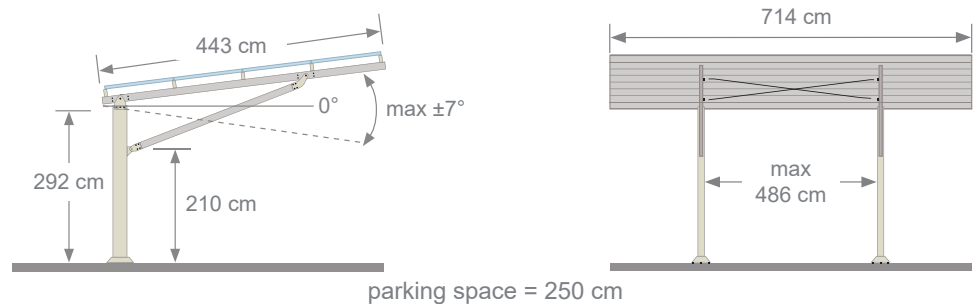
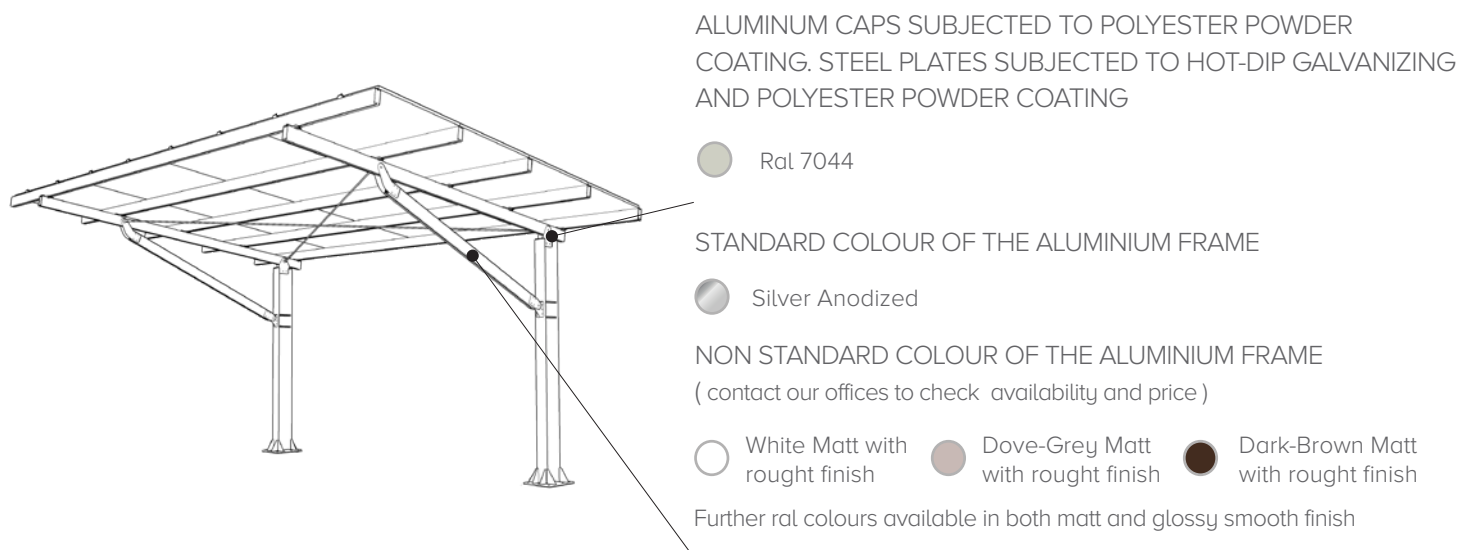
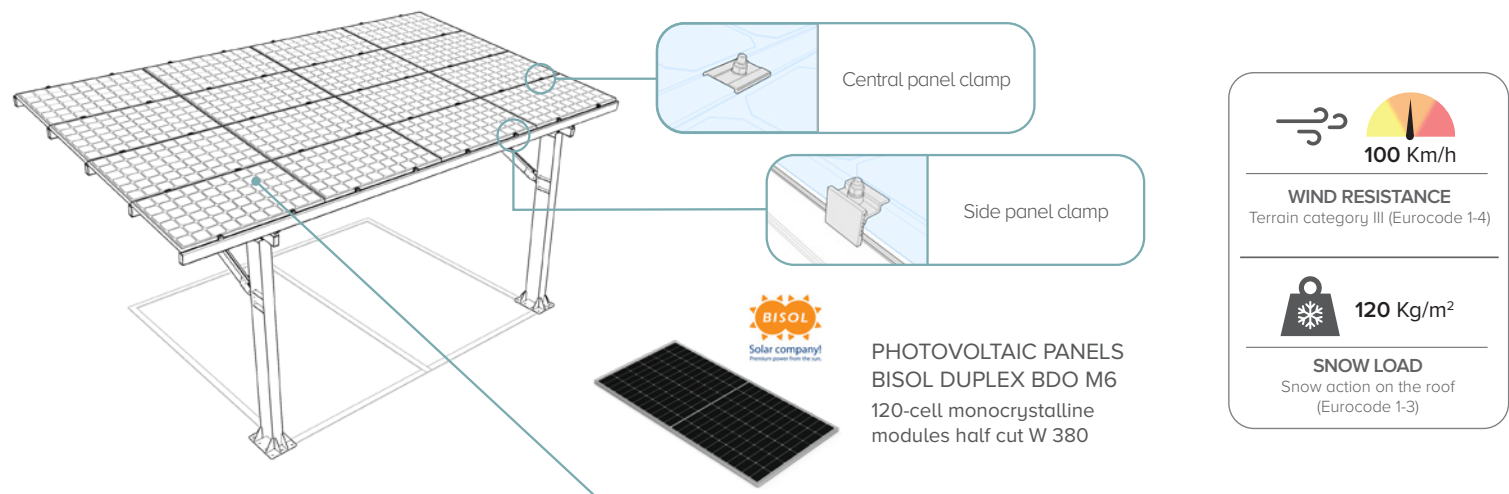


NOTES: The structure requires a foundation system for anchoring to the ground.

PENSILSOLE SOLAR POWER
CANTILEVER

2 PARKING SPACES - 16 SOLAR PANELS

UNI EN 1090 / NTC 2018



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KIT SOLAR POWER FOR THE PENSILSOLE STRUCTURES - Version 6,08 kW

COMPONENTS INCLUDED IN THE PRICE LIST:

1 HYBRID PHOTOVOLTAIC INVERTER

- Hybrid photovoltaic inverter with integrated 3 kW battery manager
- Rated power 5 kW
- Zero grid emission function
- Integrated back-up function
- Integrated energy master
- RS485 communication interface
- Smart control System
- Graphic display
- IP 65 degree of protection
- Integrated DC disconnect switch
- Counterparts and mounting accessories included
- Weight 22.5 kg
- Measurement (H*W*D) 482mm*503mm*183mm
- 10 years warranty



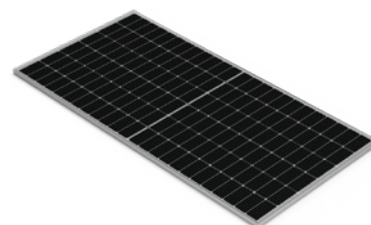
2 4G EXTERNAL INVERTER KIT FOR REMOTE CONTROL

- 4G KIT for single-phase inverters Lite series Hybrid and three-phase inverters
- Mobile network data traffic prepaid for 10 years
- Integrated antenna
- Software APP for basic access fee to monitoring platform included
- Weight 300 gr.
- Measurement (H*W*D) 89mm*105mm*65mm
- 10 year warranty



3 N°16 PHOTOVOLTAIC PANELS

- 120-cell half-cut monocrystalline modules 380 W
- 85 % linear power output warranty until the end of the 25th calendar year
- Power output the first year of operation 97%
- Weight 20.5 kg
- Measurement (H*W*S) 1,770mm*1,050mm*35mm
- 15 year warranty



4 OPTIONAL - ADDITIONAL 5 kWh BATTERY PACK

- Lithium iron phosphate technology battery pack
- Cables interconnecting with Inverter
- Accessories for connection to panel
- Weight 53kg
- Measurement (H*W*D) 460mm*520mm*183mm
- 10 years warranty

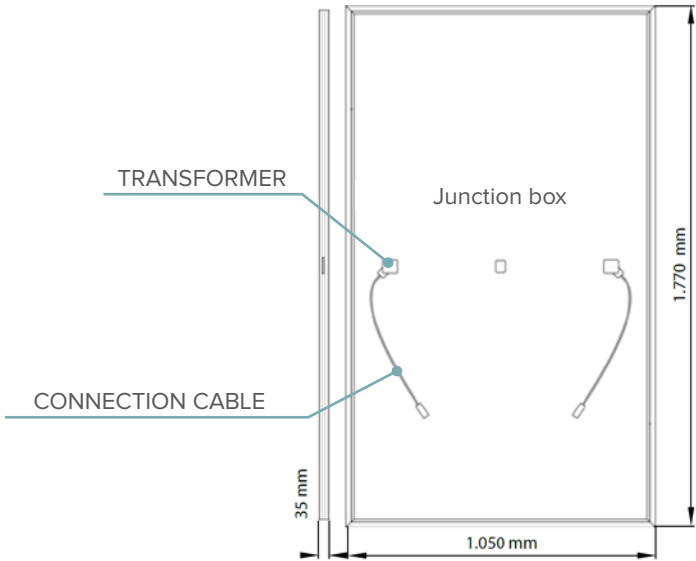




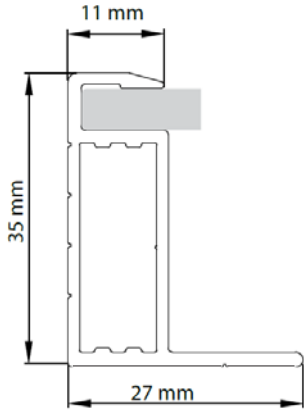
SINGLE PHOTOVOLTAIC PANEL MECHANICAL SPECIFICATIONS	
Length x width x thickness	1.770 x 1.050 x 35 mm
Weight	20,5 kg
Solar cells	120 mono c-Si PERC Half-Cut / 166 x 166 mm
Junction Box / Connectors / IP	3 bypass diodes / MC4 compatible / IP 68
Length of cable	Standard: 1,200 mm On request (for vertical orientation): 300 mm
Frame	Al anodized with drainage holes / fixed rigid corners
Glass	3.2 mm tempered glass with anti-reflective coating / high transparency / low iron content
Certified test load (snow/wind)	5.400 Pa / 2.400 Pa
Resistance	Hailstone / Ø 25 mm / 83 km/h

Tolerances of values +/- 5 %

PANEL DIMENSIONS



FRAME SECTION

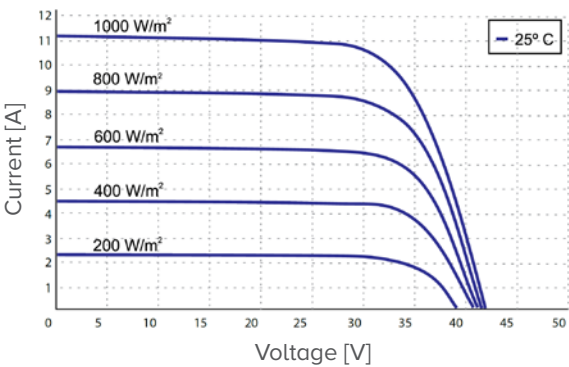


SPECIFIC ELECTRICAL CHARACTERISTICS OF A SINGLE PHOTOVOLTAIC PANEL @ STC (AM1,5, 1.000 W/m2)				
Module type	BDO	370	375	380
Power rating	P _{MPP} [W]	370	375	380
Short-circuit current	I _{sc} [A]	11,35	11,4	11,45
Open circuit voltage	V _{oc} [V]	41,6	41,9	42,1
Current at peak power	I _{MPP} [A]	10,7	10,75	10,85
Voltage at peak power	V _{MPP} [V]	34,6	34,9	35
Module efficiency	η _M [%]	19,9	20,2	20,4
Power tolerance			0/+5W	
Maximum reverse current			20 A	
Insulation class			Class II	

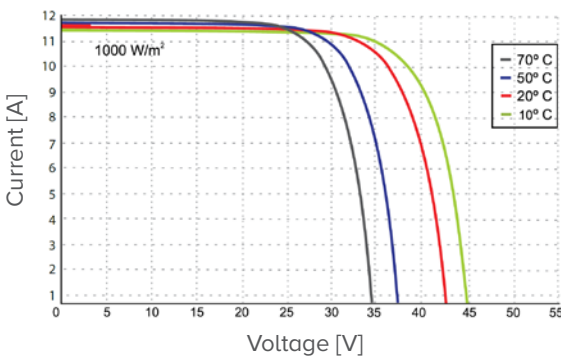
Efficiency at irradiance 200 W/m2 : 99.3 %
of efficiency at STC irradiance or higher.
Tolerance for VOC and ISC: 3 %.

SINGLE PHOTOVOLTAIC PANEL THERMAL SPECIFICATIONS	
Temperature coefficient of current α	+ 0,06 %/°C
Temperature coefficient of current β	- 0,27 %/°C
Temperature coefficient of current γ	- 0,35 %/°C
NOCT	44 ± 2 °C
Temperature range	- 40 °C up to + 85 °C

IRRADIANCE CURVE



VARIOUS CELL TEMPERATURE CURVE



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