SMI GRUP

Solar Mechanics Industry

Short Deadline
High Quality

"15 Years of Experience"

SMI GRUP

PRODUCT CATALOGUE

-Land Solar Systems
-Rooftop Solar Systems
-Solar Carport
-Agricultural Irrigation Solar Energy Systems
-Tracker Solar Energy Systems
-Mobile Solar Energy Systems

www.smigrup.com

Solar Montage Systems

LAND SOLAR SYSTEMS

Material
Galvanised Steel

Use
-Installation
-On Concrete
-Core Drilling

Compatibility
It is made in accordance with the sizes of all solarpanels.

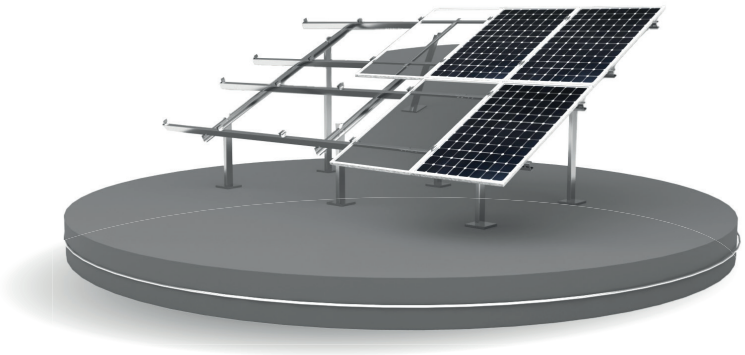
Anchor plate is welded to the bottom of the pillar group as indicated in the statics.

It consists of components such as Pillar, Beam, Purlin, Crossbeam, Buttress, Rafter.

Production is made in accordance with the static project sent by

Desired sections are obtained with Rollform and Press Brakes.

These are the strategies used when the terrain structure (loose ground or unsuitable land) makes driving unsafe. It is possible to install the system at any angle. Assembly stands, which typically consist of C profiles, utilize special fasteners.



Light Type

Part Name	Material	General Dimensions	Thickness (mm)	Lenght
BACK PILLAR	S355	ACCORDİNG TO THE STATİC PROJECT	3	ACCORDİNG TO THE STATİC PROJECT
FRONT PILLAR	S355		3	
BEAM	S355		2	
PURLIN	S355		2	
CROSSBEAM	S355		1,5	
BUTTRESS	S355		1,5	
PURLİN COMBİNATİON	S355		2	
MOUSE CLAMP	S355	SMI STD.	3	SMI STD.

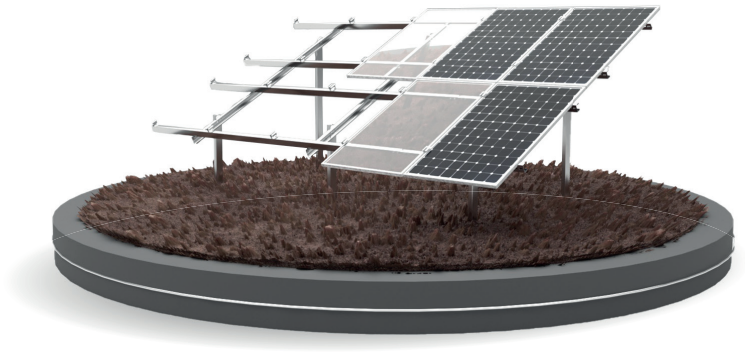
Designed based on:

Snow Load
μ=0.75 kN/m2,

Wind Speed
Vb0 = 28 m/s,

Earthquake Data
Ss=0,514 ve S1=0,136

Pillar lengths, axis distance and table angles are determined according to the static project.



Heavy Type

Part Name	Material	General Dimensions	Thickness (mm)	Lenght
BACK PILLAR	S355	ACCORDİNG TO THE STATİC PROJECT	3	ACCORDİNG TO THE STATİC PROJECT
FRONT PILLAR	S355		3	
BEAM	S355		2,5	
PURLIN	S355		2	
CROSSBEAM	S355		1,5	
BUTTRESS	S355		1,5	
PURLİN COMBİNATİON	S355		2	
L Purlin Clip	S355		4	

Designed based on:

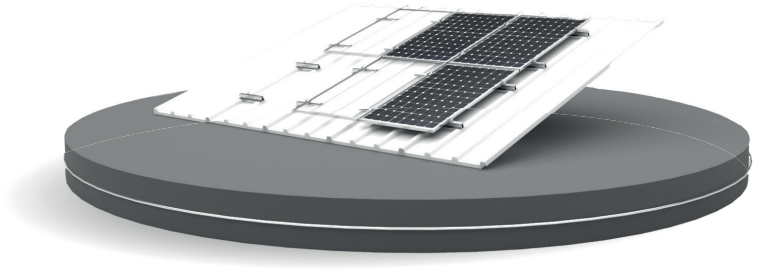
Snow Load
μ=1,55 kN/m2

Wind Speed
Vb0=28 m/s

Earthquake Data
Ss=1,314 ve S1=0,400

Pillar lengths, axis distance and table angles are determined according to the static project.

ROOFTOP SOLAR SYSTEMS



Sandwich Roof

Material
Aluminium
6063-T6

Highness (h)
Variable sizes
between 50-100mm

Use
-Full Size
-Piece

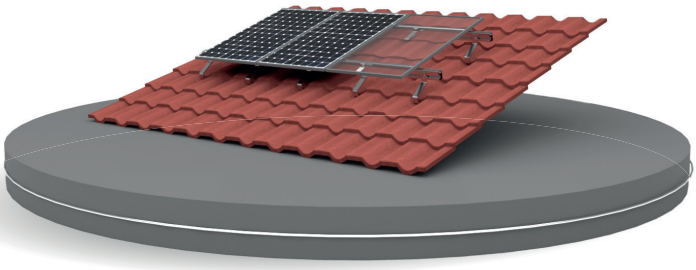
Bolt Compatibility
M8 Bolt Kit

Panel Compatibility
It is made by the
sizes of all
solar panels.

Way of Immobilization
Rooftop screw
Pop rivet
Bulb rivet

They are systems applied and anchored for sandwich panel and trapezoidal sheet covered roofs. Purlin rail profiles can be specified as full length, partial or over-pitch connection profile. There are roof profiles of different heights.

Tiled Roof



Purlin Group Material
Aluminium
6063-T6

Hook Group Material
Galvanised Steel and
Aluminium 6063-T6

Use
Full Size

Place of Use
Tiled Roofs

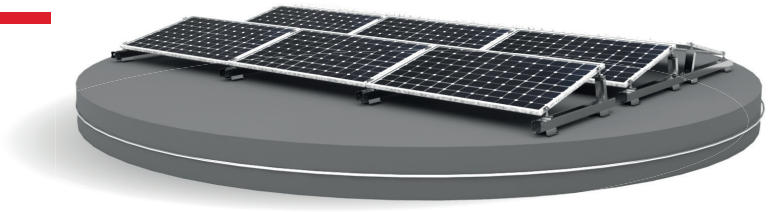
Bolt Compatibility
M8-M10 Bolt

Panel Compatibility
It is made by the
sizes of all
solar panels.

Way of Immobilization
Woodscrew

These are systems that are fastened to the lower roof purlin and may be altered in height using a tile roof hook. Rail profiles on hook can be connected on either the side or the bottom.

Membrane Roof



- Design for EN 16999 Euro Norm
- Placement of East- and West Solarpanel
- Leakproof sealing system with a special design
- Placement of South Solarpanel
- Ballast possibility
- Minimum weight and easily carryable
- It takes up minimum physical sprace
- Compatible with all flat surface
- High strength
- Easy assembling

Heating is used to apply the bonding technique, and assembly is completed. Then, the floor on which the assembly will be installed is cleaned and welded with hot air. The membrane adheres better thanks to a particular roller. Other connections made on the membrane are similar to the roof mounting system.

SOLAR CARPORT

Material
-Galvanised Steel
-Aluminium

Use
-On concrete

Panel Compatibility
It is made in accordance with the sizes of all solar panels..

We can recover our energy deficit by using solar panels to cover the open carport.

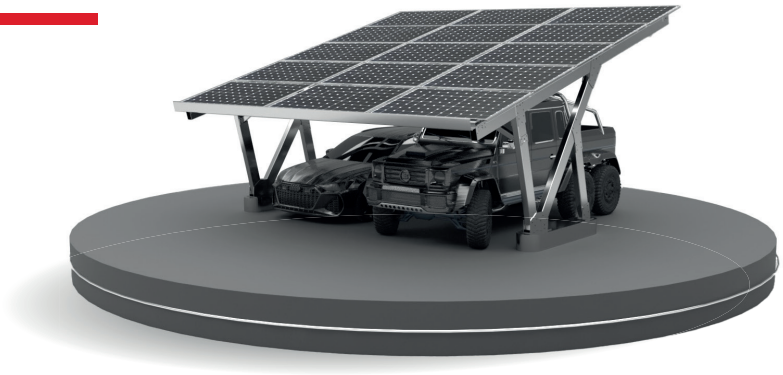
The carport systems of various sizes that we manufacture protect automobiles from weather disasters while also generating power and earning an income for the investor.

Our company offers a diverse choice of items for use in a detached house, university, hospitals, shopping center and open parking lot.

Prototype, which we designed for the trading areas, is now ready to generate electricity for your factory's garden. With the technologies we've provided you, you can track the manufacturing of any solar panel and let your clients park their automobiles more conveniently. You can also offer charging opportunity to your customer vehicles simultaneously.

In the summer, our carport solution provides shade for your vehicles, and in the fall, spring, and winter, it protects vehicles and drivers from rain.

Solar Carport



- It consists of components such as Pillar, Beam, Purlin, Crossbeam, Buttress, Rafter.
- Production is made in accordance with the static project or pleacement of panel.
- It will be packed and sent as ready to assemble.
- It can be painted, galvanised or both.
- Maximum Strength.
- It is simple to put together and has a screw connection.
- It features a unique design that provides for future mounting options.
- Long Lifetime
- Several design option
- Advantaged space use
- High safety
- Advertising support opportunity

Compatible solar panel dimensions	**There is a fit design for each solar panel.**
Fixing on the ground	**Drilling core, reinforced concrete, anchor**
Raw materials used for system	**Pillar / Beam / Purlin / Crossbeam: ST52 and/or Structural Steel** **Rails and clips : Aluminium 6063-T66** **Fasteners : Galvinesed and/or Rustproof**

Static Calculation Norms

TS498 Design Loads for Buildings

TS500 Requirements for Design and Construction of Reinforced Concrete Structures
Valid concrete-based calculations)
Construction and Calculation Rules of Steel Structures

TDY-2007 Principles on Buildings To Be Built in Earthquake Areas

TRACKER

Material
Galvanised Steel

Use
-Installations
-On concrete
-Core Drilling

Panel Compatibility
It is made in accordance with the sizes of all solar panels..

Protection
Protection against wind
Protection against snow

Trackback
3% increase in production with trackback algorithm

Comparing
Up to **21%** more energy production compared to stationary systems

Provides the angular position needed for sunlight to fall on each panel at the most efficient angle.

For these operations, it makes calculations to provide the highest power over a dozen pre-created mathematical algorithms with variables such as the GPS coordinate of the land, local time, settlement geometry.

Solar tracking system software has a smart design interface that can easily assign location information to each tracker row in all fields with different terrain structures.

Tracker

Quick and Easy Installation
With its innovative and flexible design, it simplifies installation and saves time. The low number of parts makes labor, material and production costs economical.

Smart Sun Tracking
It continuously monitors the sun in an active controlled manner with a single installation in all kinds of fields, with it's dynamic tracking algorithm.

Superior Design
With ball joint, it adapts to the natural terrain of the field with high tolerances. The automatic position change feature protects the panels from possible damage by bringing them to the predetermined position in adverse weather conditions.

Advantages of "SMI GRUP" Tracker

- Expert staff, where you can always get support
- Customer specific solutions
- Backtracking

Privilege of "SMI GRUP" Tracker

- Axix structure is suitable for differend land features
- Quick and easy installation
- Maintance-free
- Suitable design for repair
- Remote trailable

(NOVATES)
MOBILE SOLAR SYSTEMS

Capacity
There are different capacities.
(from 4 kw to 20 kw)

Mobility
This is a transportable unit that is delivered to the specified area and set up in 2 or 3 minutes.

Operating Costs
Maintenance and operational costs are nearly none.

Chassis Type
There is a strong chassis type and it's suitable for land conditions.

Sunbathing Type
Easy slidable
There is a durable rail systems in harsh conditions.

Grid Type
It works independently of the power grid or reinforced.

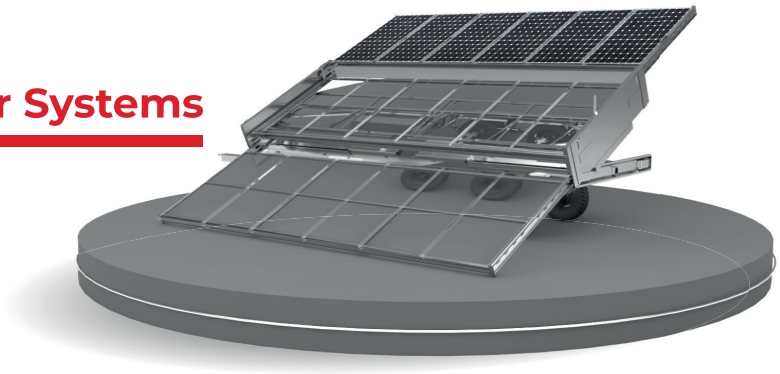
One of the most serious problems confronting modern agriculture is the rising cost of energy and electricity.

Many of our farmers who work in agriculture must pay thousands of lira in diesel and power bills only to irrigate their fields.

Technology and natural variables are merged with long-term research and development to combat these issues, and solar energy is employed in agriculture and produces financial advantage owing to the produced **"SMIGRUP NOVATES"**.

(Novates)

Mobile Solar Systems



Road Condition

Suitable for pulling with tractor or other vehicles. For safety reasons, the reflector and tail lights are mounted in the appropriate place of the vehicle. Reinforced omega guards are available in case of rear-end collision.

Use in Sprinkler System

SSuitable driver control panel is available for operating irrigation pumps. In addition, grid electricity can be produced with the inverter. (optional)

Panel Carrying Feature

Due to its special transport design, electrical losses are at a minimum thanks to the reinforced suspension system while on the road.

Technical Specifications

The scissors that we use in trailers are produced from 1st class spring steel. The carrying capacity of the scissors is 3 tons for 1 axle and 2 scissors are used.

Our axles, which are made of 80x80x8mm profile that we use in the trailers, with 5 bolts and hub momunted on them, are made of ST37 1st class material and the carrying capacity is 3 tons for each. We offer our axles to our customers by passing them through various tests.

Sandblasting is done in SA 2,5 quality. By cutting 40-80M threads on the material surface, better adhesion and adhesion of the paint to the surface is ensured. Paint life is maximum.

Chassis and fixed cassette part are painted with anthracite gray (RAL7016) wet paint. Moving cassettes are painted with yellow (RAL1028) powder paint

Our Business Certificates: ISO 9001 - ISO 14001 - ISO 45001 - ISO 10002 - ISO 50001
Our Production Certificates: ISO 3834 - EN 1090 - Agricultural Crediting Certificate

SMI GRUP

Solar Mechanics Industry

Short Deadline
High Quality

"15 Years of Experience "

540+
MW ESTABLİSHED PROJECT

16+
YEARS OF EXPERİENCE SOLAR SYSTEM CONSTRUCTİON

25+
YEARS OF EXPERİENCE İN STEEL INDUSTRY

15+
EXPORTS BY 15+ COUNTRY

www.smigrup.com

www.smigrup.com
info@smigrup.com

+90 382 266 23 16

Whatsapp
+90 533 028 43 29

Erenler OSB Mahallesi
4. Sokak No:4
Aksaray / TR

OUR CERTIFICATES

- ISO 9001
- ISO 14001
- ISO 45001
- ISO 10002
- ISO 50001
- ISO 3834
- EN 1090