SOLAR ENERGY KITS

Self-consumption solutions

SiTecno
Energy Efficiency Innovation

Produce your own FREE energy
Your contribution for a sustainable earth and reduce CO2

SOLUTIONS SUITABLE FOR EVERY CONSUMER

TO REDUCE THE BILL OF ELECTRICITY

Solar photovoltaic is green and environment friendly energy source. Recent years increase in electricity prices leads toward photovoltaic energy. SITECNO GROUP designed solar energy kits. This is tailored solution for on-grid, off-grid and hybrid consumption for homes, businesses and industries. Solar energy generated by the sun is free and abundant. These kits capture this energy for you. Produce your own solar energy and get savings on your electricity consumption up to 100%.

Self-consumption systems

Since each customer has a different demand and consumption of energy curve, we have designed different solutions to fit for every situation and offer a perfect solution based on the solar resource, optimizing efficiency, simplifying monitoring and enabling the highest possible cost savings.
The solar energy kit solutions are grouped into six categories, depending on the relationship between solar output and electricity consumption:

On grid systems:

- Instant self-consumption system with feed in to the grid
- Instant self-consumption system without feed in to the grid
- Solar system hybrid compatible with diesel generator
- Solar system with batteries and compatible with diesel generator

Off grid systems:

- Solar system hybrid with batteries
- Solar system with batteries and compatible with diesel generator

Kit advantages:

- Saving in electricity consumption up to 100%
- Environment friendly noise free own energy production
- EU highest quality components perfectly tailored to each other
- Easy to install and upgrade
- Self installable plug & play system
- Utilise biggest free source of energy the sun
- Very low maintenance

SELF-CONSUMPTION SYSTEMS

A joint project between SITECNO GROUP offers 6 solutions for self-consumption

ON GRID SYSTEMS

1. Instant self-consumption system with feed into the grid

An instant self-consumption system means that consumers have solar system and also connected with grid supply as additional support. During the day, the energy generated by the solar system is consumed, and additional power from the grid.

When the solar system generate more energy than consumption, this surplus energy is injected into the grid according to the legislation. Solar energy will provide the benifit to reduce the electricity bill.

2. Instant self-consumption system without feed into the grid

A self-consumption system without injection into the grid has the same function as the instant self-consumption system, in addition a device Wattmeter to regulate power.

3. Solar hybrid system compatible with diesel generator

Hybrid system with grid supply means consumers consume solar energy and get the additional power from the grid. At the moments there are power failures, power from diesel generator is obtained to maintain the continuous power supply without interruption.

4. Solar hybrid system with batteries compatible with diesel generator

This system is similar to the previous one except that include batteries.

In case of power failure, power consumer will consume either batteries or diesel generator. In this system diesel generator is used to meet energy demand and charge the batteries.

OFF GRID SYSTEMS

1. Off grid system with batteries

An off-grid system is a power generation system with no connection to the electricity grid that provides consumers with energy from the sun. And storage of generated solar energy in to the batteries and allows to use when no solar power productivity.

The facilities are ideal for isolated areas far from the urban core, where there is no grid supply due to the high costs of the power line installations.

2. Off grid hybrid system with batteries compatible with diesel generator

When the off grid photovoltaic system needs additional energy input (e.g. if no sun or at night), the diesel generator is connected.

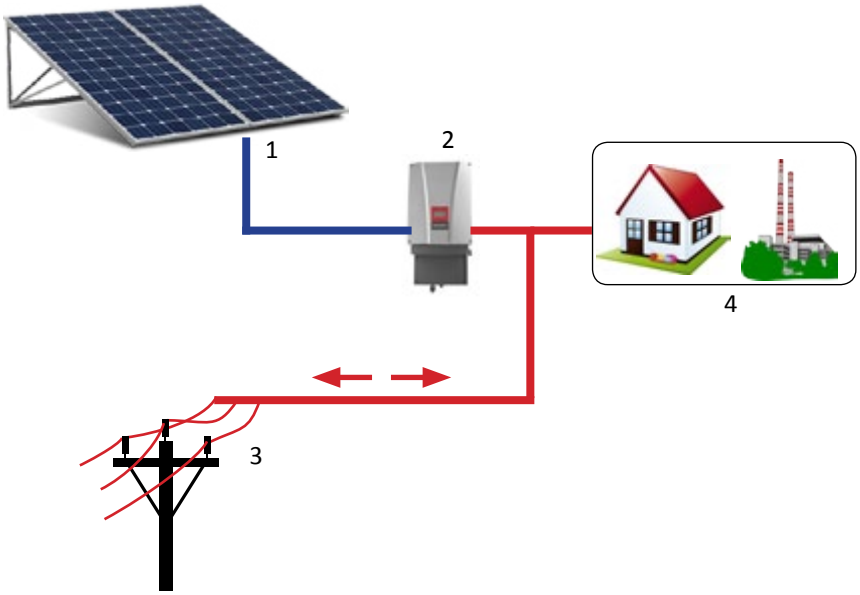
It is ideal for locations without access to the grid, or adverse weather conditions, maintaining constant power supply.

Kit includes:

- Photovoltaic panels
- PV inverters
- Support structure
- Cables with plug&play connectors
- Batteries (with hybrid and off-grid models)
- Monitoring system installation
- Installation Guide
- Tool kit

Some schematic diagrams of different types of installation is included in the next pages

1. Instant self-consumption system with feed into the grid



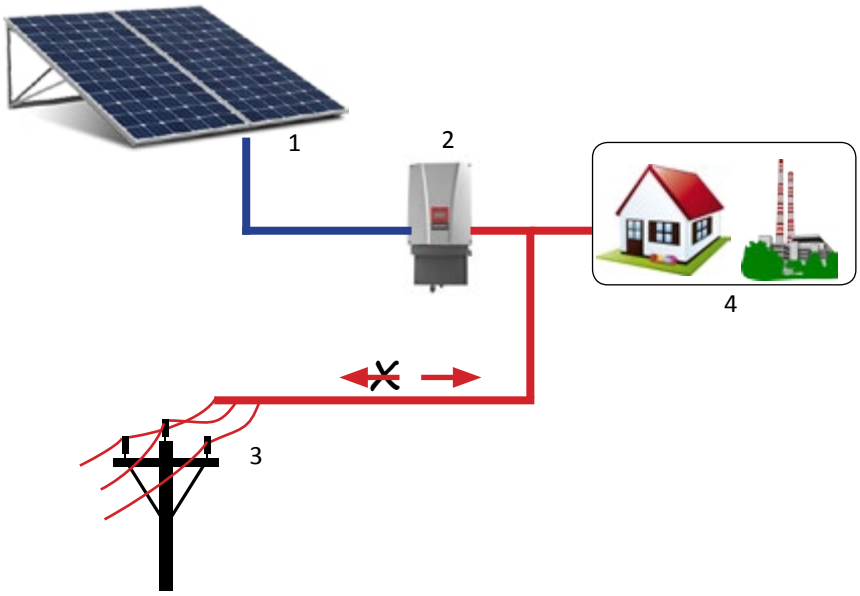
Function of the system

1. Consumers get solar energy produced during the hours of sun from photovoltaic modules. When the solar system produces more energy than it consumes, this energy is injected into the grid network according to the country legislation.

2. When an additional power supply is required (e.g. at night or in adverse weather conditions), this additional energy is obtained from the grid.

1. Photovoltaic modules
2. Inverter
3. Grid
4. Consumption

2. Instant self-consumption system without feed into the grid

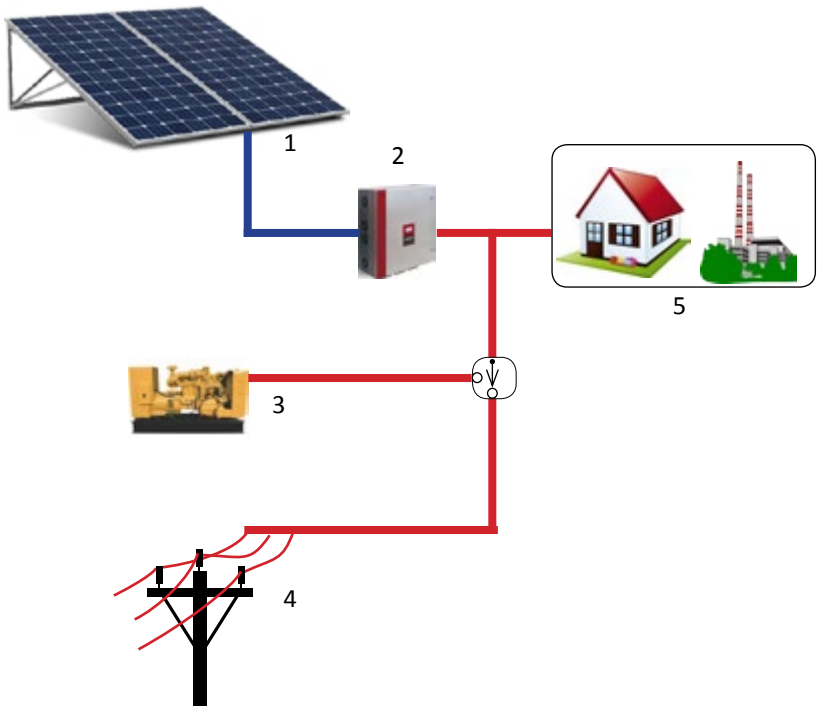


Function of the system

1. This kit functions as in the previous case by adding an electronic device Wattmeter that regulates the power generated by the kit and stop the power to feed into the grid network so that it never exceeds the power demanded, thus preventing the injection of power into the grid.

1. Photovoltaic modules
2. Inverter
3. Grid
4. Consumption

3. Solar hybrid system compatible with diesel generator

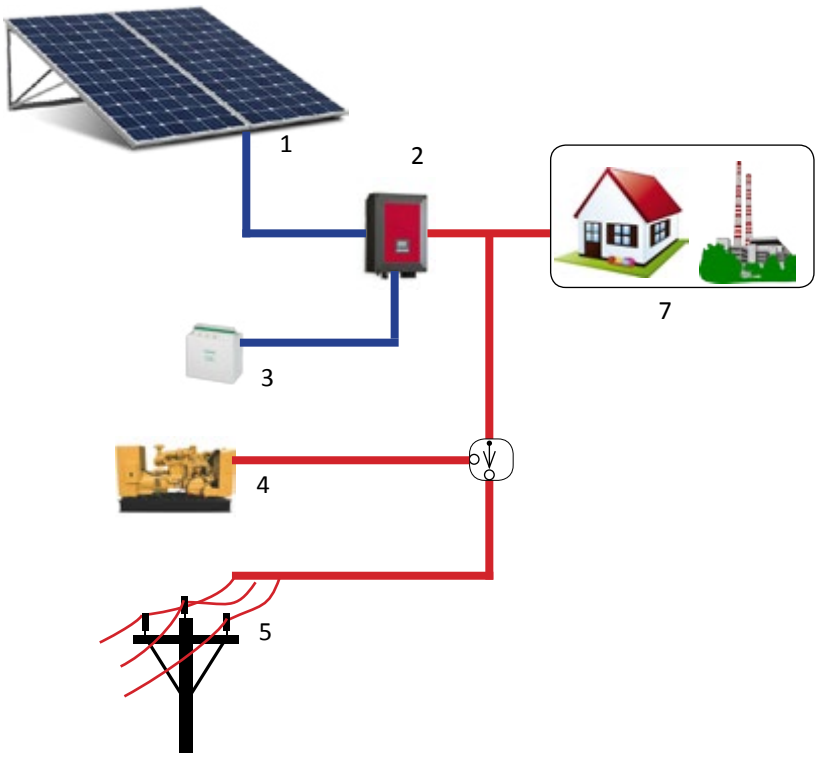


Function of the system

In addition to solar energy when additional energy is required (e.g. at night or in adverse weather conditions), this additional energy is obtained from the grid. In areas where the grid is unstable, it is advisable to have a diesel generator that makes network functions to provide sufficient energy demanded by consumers.

1. Photovoltaic modules
2. Inverter
3. Diesel generator
4. Grid
5. Consumption

4. Solar hybrid system with batteries compatible with diesel generator

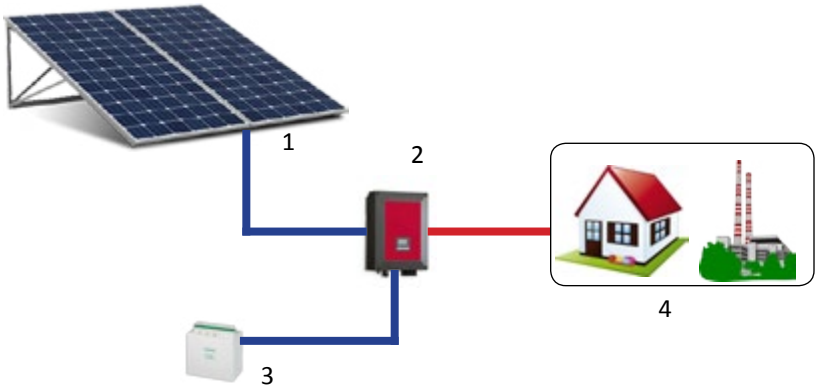


Function of the system

This kit works same as previous except the addition of batteries that provide the kit for energy independence, either from the mains or diesel generator, depending on the battery capacity, in addition to improving the quality of the grid electric supply.

1. Photovoltaic modules
2. Inverters
3. Batteries
4. Diesel generator
5. Grid
6. Consumption

1. Off grid system with batteries



The system is completely independent of any external power supply. You can combine different sources of energy from renewable sources. You can extend or modify the modular system at any time. From SITECNO we offer advice from inception to commissioning the system.

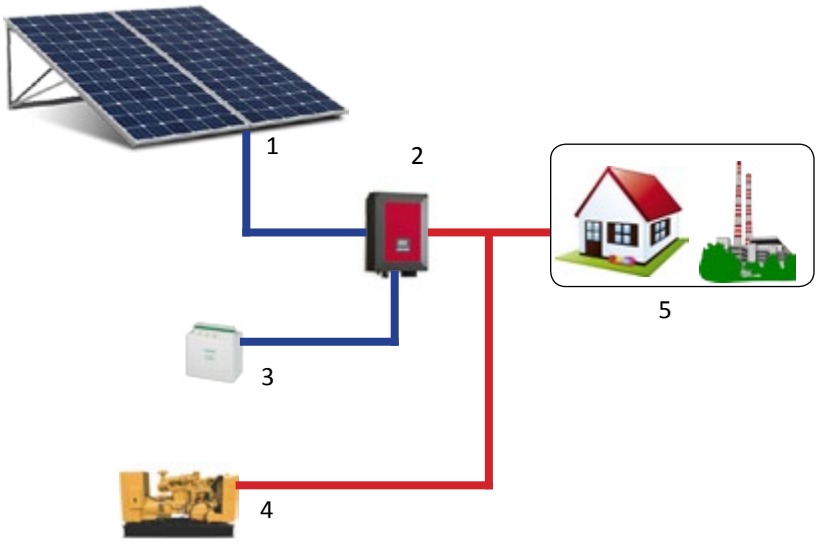
Function of the system

1. The modules capture solar energy that is used by consumers, and the excess energy can be stored in batteries.

2. An integrated computer system manages additional power between generation and consumption, accumulating surplus energy batteries and powering in case it is needed.

1. Photovoltaic system
2. Inverter
3. Batteries
4. Consumption

2. Off grid hybrid system with batteries compatible with diesel generator



Function of the system

This system is same as above with the possibility of incorporating support a diesel generator that provides the energy demanded by consumers as the photovoltaic system and / or batteries are not able to provide the required energy. When the diesel generator works, apart from feeding consumers, the system manager uses the energy of diesel generator to charge the batteries.

1. Photovoltaic modules
2. Inverters
3. Batteries
4. Diesel generator
5. Consumption

ON GRID SYSTEMS

Kits compatible with systems:

- Instant self-consumption system with feed in grid (on grid)
- Instant self-consumption system without feed in to the grid (on grid)
- Solar system hybrid with diesel generator (on grid)

Models for power: 750 Wp to 100 KWp

Model	system description	production per day	production per month
SEM-750	Medium power 0.75 kWp, 220V single phase	3.600 Wh	108 KWh
SEM-1000	Medium power 1 kWp, 220V single phase	4.800 Wh	144 kWh
SEM-1500	Medium power 1.5 kWp, 220V single phase	7.200 Wh	216 KWh
SEM-2000	Medium power 2 kWp, 220V single phase	9.600 Wh	288 kWh
SEM-2500	Medium power 2,5 kWp, 220V single phase	12.000 Wh	360 kWh
SEM-3000	Medium power 3 kWp, 220V single phase	14.400 Wh	432 kWh
SEM-3500	Medium power 3,5 kWp, 220V single phase	16.800 Wh	504 kWh
SEM-4000	Medium power 4 kWp, 220V single phase	19.200 Wh	576 kWh
SEM-4500	Medium power 4,5 kWp, 220V single phase	21.600 Wh	648 kWh
SEM-5000	Medium power 5 kWp, 220V single phase	24.000 Wh	720 kWh
SEM-6000	Medium power 6 kWp, 220V single phase	28.800 Wh	864 kWh
SEM-7000	Medium power 7 kWp, 220V single phase	33.600 Wh	1.008 kWh
SEM-8000	Medium power 8 kWp, 220V single phase	38.400 Wh	1.152 kWh
SEM-T9000	High power 9 kWp, 400V three-phase	43.200 Wh	1.296 kWh
SEM-T10000	High power 10 kWp, 400V three-phase	48.000 Wh	1.440 kWh
SEM-T11000	High power 11 kWp, 400V three-phase	52.800 Wh	1.584 kWh
SEM-T12000	High power 12 kWp, 400V three-phase	57.600 Wh	1.728 kWh
SEM-T15000	High power 15 kWp, 400V three-phase	72.000 Wh	2.160 kWh
SEM-T17000	High power 17 kWp, 400V three-phase	81.600 Wh	2.448 kWh
SEM-T20000	High power 20 kWp, 400V three-phase	96.000 Wh	2.880 kWh
SEM-T25000	High power 25 kWp, 400V three-phase	120.000 Wh	3.600 kWh
SEM-T28000	High power 28 kWp, 400V three-phase	134.400 Wh	4.032 kWh
SEM-T30000	High power 30 kWp, 400V three-phase	144.000 Wh	4.320 kWh
SEM-T35000	High power 35 kWp, 400V three-phase	168.000 Wh	5.040 kWh
SEM-T40K	High power 40 kWp, 400V three-phase	192.000 Wh	5.760 kWh
SEM-T45K	High power 45 kWp, 400V three-phase	216.000 Wh	6.480 kWh
SEM-T50K	High power 50 kWp, 400V three-phase	240.000 Wh	7.200 kWh
SEM-T55K	High power 55 kWp, 400V three-phase	264.000 Wh	7.920 kWh
SEM-T60k	High power 60 kWp, 400V three-phase	288.000 Wh	8.640 kWh
SEM-T65k	High power 65 kWp, 400V three-phase	312.000 Wh	9.360 kWh
SEM-T70k	High power 70 kWp, 400V three-phase	336.000 Wh	10.080 kWh
SEM-T75k	High power 75 kWp, 400V three-phase	360.000 Wh	10.800 kWh
SEM-T80k	High power 80 kWp, 400V three-phase	384.000 Wh	11.520 kWh
SEM-T85k	High power 85 kWp, 400V three-phase	408.000 Wh	12.240 kWh
SEM-T90k	High power 90 kWp, 400V three-phase	408.000 Wh	12.240 kWh
SEM-T95k	High power 95 kWp, 400V three-phase	456.000 Wh	13.680 kWh
SEM-T100k	High power 100 kWp, 400V three-phase	480.000 Wh	14.400 kWh

There are two models from 40 KWp to 100 KWp. 1) SEM-40K to SEM-100K without transformer inverter, 2) SEM-40KA to SEM-100KA with transformer inverter.

The equipments comprising the kit are designed according to the following conditions:

Available radiation of 4.75 kWh/m (centre of the Peninsula). Solar generator with optimal orientation (0 ° South) and tilt (25º-35º).

The equipment performance and expected annual energy production depends up on local sun irradiation and weather conditions.

* For countries where feeding into the grid is not allowed by law, SITECNO has designed zero box, that warrants no injection of surplus energy into the grid.

Kits compatible with systems:

- Solar system with batteries and hybrid with diesel generator (on grid)
- Solar system hybrid with batteries (off grid)
- Solar system with batteries and hybrid with diesel generator (off grid)

Models for power: 2,5 kWp to 100 kWp

Model	system description	production per day	P. per month	battery bank
SEM-H2500	basic power 2,5 kWp, 220 single phase	12.000 Wh	360 kWh	5.040 VAH
SEM-H3000	basic power 3 kWp, 220 single phase	14.400 Wh	432 kWh	5.040 VAH
SEM-H3500	basic power 3,5 kWp, 220 single phase	16.800 Wh	504 kWh	5.040 VAH
SEM-H5000	basic power 5 kWp, 220V single phase	24.000 Wh	720 kWh	9.240 VAH
SEM-H5500	basic power 5,5 kWp, 220V single phase	26.400 Wh	792 kWh	9.240 VAH
SEM-H6000	basic power 6 kWp, 220V single phase	28.800 Wh	864 kWh	9.240 VAH
SEM-H6500	basic power 6,5 kWp, 220V single phase	31.200 Wh	936 kWh	9.240 VAH
SEM-H7000	basic power 7 kWp, 230V single phase	33.600 Wh	1.008 kWh	9.240 VAH
SEM-HS7500	basic power 7,5 kWp, 230V three phase	33.600 Wh	1.008 kWh	9.240 VAH
SEM-HT7500	basic power 7,5 kWp, 400V three phase	33.600 Wh	1.008 kWh	9.240 VAH
SEM-HS9000	basic power 9 kWp, 230V three phase	43.200 Wh	1.296 kWh	11.760 VAH
SEM-HT9000	basic power 9 kWp, 400V three phase	43.200 Wh	1.296 kWh	11.760 VAH
SEM-HS10500	basic power 10,5 kWp, 230V three phase	50.400 Wh	1.512 kWh	23.040 VAH
SEM-HT10500	basic power 10,5 kWp, 400V three phase	50.400 Wh	1.512 kWh	23.040 VAH
SEM-HS15000	basic power 15 kWp, 230V three phase	72.000 Wh	2.160 kWh	20.160 VAH
SEM-HT15000	basic power 15 kWp, 400V three phase	72.000 Wh	2.160 kWh	20.160 VAH
SEM-HS16500	basic power 16.5 kWp, 230V three phase	79.200 Wh	2.376 kWh	21.600 VAH
SEM-HT16500	basic power 16.5 kWp, 400V three phase	79.200 Wh	2.376 kWh	21.600 VAH
SEM-HS18000	basic power 18 kWp, 230V three phase	86.400 Wh	2.592 kWh	23.040 VAH
SEM-HT18000	basic power 18 kWp, 400V three phase	86.400 Wh	2.592 kWh	23.040 VAH
SEM-HS19500	basic power 19.5 kWP, 230V three phase	93.600 Wh	2.808 kWh	25.920 VAH
SEM-HT19500	basic power 19.5 kWP, 400V three phase	93.600 Wh	2.808 kWh	25.920 VAH
SEM-HS21000	basic power 21 kWp, 230V three phase	100.800 Wh	3.024 kWh	27.360 VAH
SEM-HT21000	basic power 21 kWp, 400V three phase	100.800 Wh	3.024 kWh	27.360 VAH
SEM-HT25000	basic power 25 kWp, 400V three phase	120.000 Wh	3.600 kWh	32.400 VAH
SEM-HT30000	basic power 30 kWp, 400V three phase	144.000 Wh	4.320 kWh	38.880 VAH
SEM-HT35000	basic power 35 kWp, 400V three phase	168.000 Wh	5.040 kWh	45.360 VAH
SEM-HT40K	High power 40 kWp, 400V three-phase	192.000 Wh	5.760 kWh	50.080 VAH
SEM-HT45K	High power 45 kWp, 400V three-phase	216.000 Wh	6.480 kWh	57.600 VAH
SEM-HT50K	High power 50 kWp, 400V three-phase	240.000 Wh	7.200 kWh	64.800 VAH
SEM-HT55K	High power 55 kWp, 400V three-phase	264.000 Wh	7.920 kWh	72.000 VAH
SEM-HT60k	High power 60 kWp, 400V three-phase	288.000 Wh	8.640 kWh	77.760 VAH
SEM-HT65k	High power 65 kWp, 400V three-phase	312.000 Wh	9.360 kWh	83.520 VAH
SEM-HT70k	High power 70 kWp, 400V three-phase	336.000 Wh	10.080 kWh	60.480 VAH
SEM-HT75k	High power 75 kWp, 400V three-phase	360.000 Wh	10.800 kWh	64.480 VAH
SEM-HT80k	High power 80 kWp, 400V three-phase	384.000 Wh	11.520 kWh	104.000 VAH
SEM-HT85k	High power 85 kWp, 400V three-phase	408.000 Wh	12.240 kWh	318.240 VAH
SEM-HT90k	High power 90 kWp, 400V three-phase	408.000 Wh	12.240 kWh	336.960 VAH
SEM-HT95k	High power 95 kWp, 400V three-phase	456.000 Wh	13.680 kWh	355.680 VAH
SEM-HT100k	High power100 kWp, 400V three-phase	480.000 Wh	14.400 kWh	374.400 VAH

For more detail description, models with more batteries backup and other options visit www.sitecnosolar.com

Modular system

These systems are modular and flexible and can be installed as per consumer space and requirement. You can ask for additional services as state-of-the-art designing, drawings, engineering and installation of your projects. The solar power kits are designed with collaboration of INGETEAM and SITECNO to meet the need of all kinds of places that require electricity.
Solar kits with modular system can be extended to MW projects.

Solar kit applications:

- Schools
- Hospitals
- Hotels
- Restaurants
- Resorts
- Scout camps
- Gymnasium
- Service centres
- Petrol stations
- Electric vehicle charging stations
- Parking areas
- Gardens
- Multi storey buildings
- Old houses
- Markets
- Shopping malls
- Public service offices
- Administration buildings

SYSTEM WARRANTY:

Solar modules production:	25 years
Module support structure:	25 years
Inverters:	5 years, extendible to 25 years
Battery:	1 year (10 years life)

Quality of Components:

All components in the solar kit are high quality with CE standard and manufactured in EU.

Additional services

-We offer service for extension in installation or relocation of the installed system.
-For replacement parts contact directly SITECNO or our qualified dealer network.

Installation training services

We regularly offer training courses to install the kits and in general for installation of solar projects.

Operation and maintenance services

Sitecno offers a complete and optimal maintenance of your installed solar systems to maximize production. In this way we extend the useful life of the facilities of solar energy kits. (optional maintenance contract)

Monitoring services

By monitoring installed solar system consumer can enjoy the peace of mind that power generated by kit works correctly. We have different monitoring services.

Special solar kits for public welfare projects

SITECNO provide opportunity of customised solar kits for associations, foundations, NGOs, private and public institutions that wish. The projects and their design will be according to customer needs.

Online support & helpline

Tel: +34 938 482 544
service@sitecnosolar.com

A joint project of INGETEAM & SITECNO

Photovoltaic solar energy kits for all electricity consumers

Authorised distributor:

SITECNO Group, C/ Can balmes 1, Zona industrial, Santa Mª. de Palautordera, 08460 Barcelona, Spain.
T: +34 938482544 F: +34 938480439 E: info@sitecnosolar.com www.sitecnosolar.com