



# Renewable power

Created ready  
to use

Anytime, Anywhere!





# Company Profile

**Istanbul Energy Ltd.** provides intelligent, sustainable and reliable alternatives for energy generation, energy transmission distribution and management. As demand for clean power generation to meet the world's growing energy need increases, Istanbul Energy Ltd. has the answers. We provide an unrivalled range of electrical materials and equipment within domestic and export markets. We offer a complete range of switchgear, transformers, cables, energy storage systems, transmission line structures, renewable energy equipment (solar panels, recyclable batteries, wind turbine support posts, etc, and galvanized steel columns - tubular, octagonal or conical).

**Istanbul Energy Ltd.** possesses years of experience in designing energy efficient and renewable energy solutions, also owns, operates and maintains energy infrastructure powered by wind, and solar. We transform analytical insights obtained from

energy data into sustainable solutions. We help our customers to reduce their energy footprint, recover higher energy efficiencies from energy deployment and replace conventional with renewable energy sources.

**Istanbul Energy Ltd.** offers a long-term relationship based on our experience, knowing and understanding the local markets, clients and a technical and commercial requirement which give the company an advantage over competitors. Our skilled Management Team has profound knowledge of the business, which is reached by constant skills development and expertise of all the staff. We pay extreme attention to details and quality, and are committed to giving our clients the highest level of service possible. Our customers' satisfaction is our top priority and the heart of our business.



# Introduction



Solar



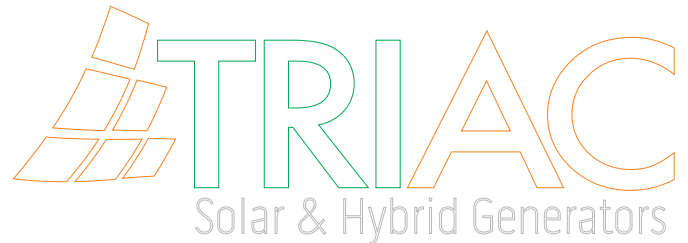
Solar and Gen-set



Solar and Wind



Solar, Wind, Gen-set



The TRIAC is a fully integrated sustainable solar & hybrid electricity generator.

Electricity which is generated from Renewable sources makes the TRIAC a clean and robust power solution.

Generated electricity is stored in self-maintaining deep cycle stationary batteries.

Integrating a Gen-Set is optional on all models. The purpose of this option is for times when demand is higher than electricity generated over a long time periods. The diesel generator automatically starts and fills the gap between demand and generated power, and turns off automatically when input is higher than output or equal.

All the models are delivered fully assembled and after rigorous testing.

Ready for use on demand 24 hours a day.

The TRIAC generator range can power a single home, factory, hospital or entire village, while it has proven to be much more cost effective solution to supplying power compared to diesel generators.

The TRIAC system architecture is designed to be plug & play and withstand high tolerances.

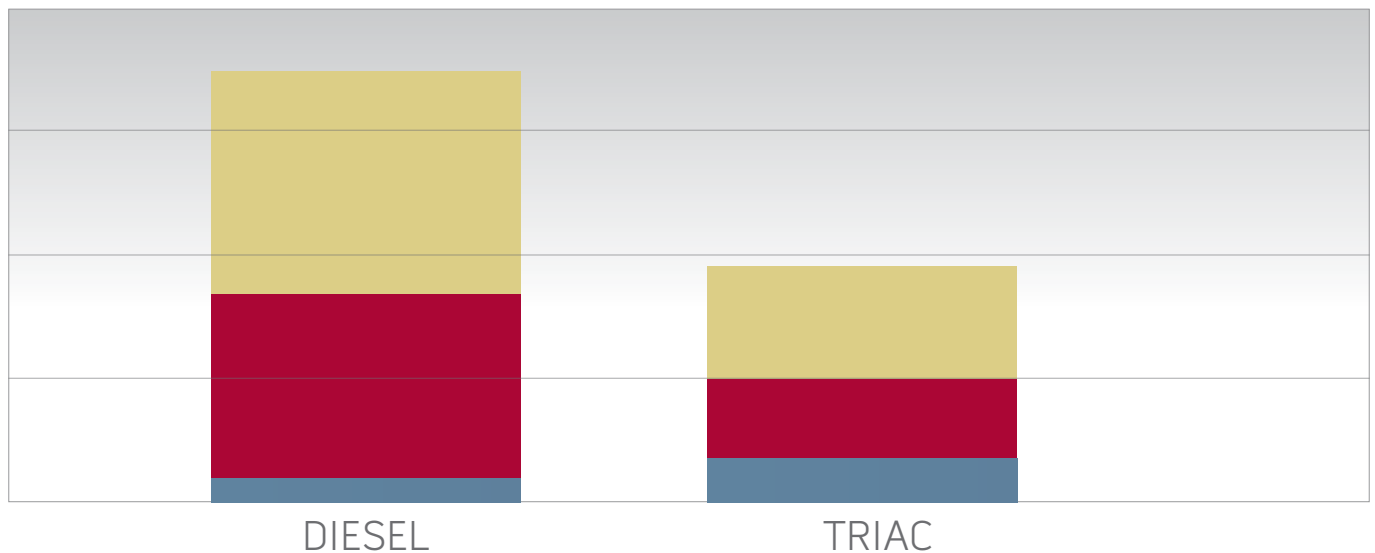
The TRIAC is kind on the environment and operates silently, odorless and smoke free.

# Diesel Vs TRIAC

The TRIAC system has many advantages over Diesel Generators.  
 They are quite to operated require no maintenance.  
 There are no costly repairs as there are no moving parts.  
 Above all the no fuel is required as it is harnessed from the sun and wind.

## Diesel vs TRIAC cost

■ Initial Investment   ■ Cost Over 5 Years   ■ Cost Over 10 Years



	AC GENSET	TRIAC
Fuel Consumption at 100%	2.7 liters per hour	0 litres
Service Maintenance	360 Hours (15 days)	8.640 Hours (12 Months)
Major Service Maintenance	4320 hours (6months)	43.200 hours (5 years)



# How to choose?



Solar

It's recommended for areas where the solar insolation is higher.  
Clean, quite and economical solution.



Solar and Gen-set

It's recommended for areas where to support your extra consumption then regular, from time to time. The diesel generator automatically starts and fills the gap between demand and generated power from sun.



Solar and Wind

It's a great solution for areas where is windy and have a good solar insolation.



Solar, Wind, Gen-set

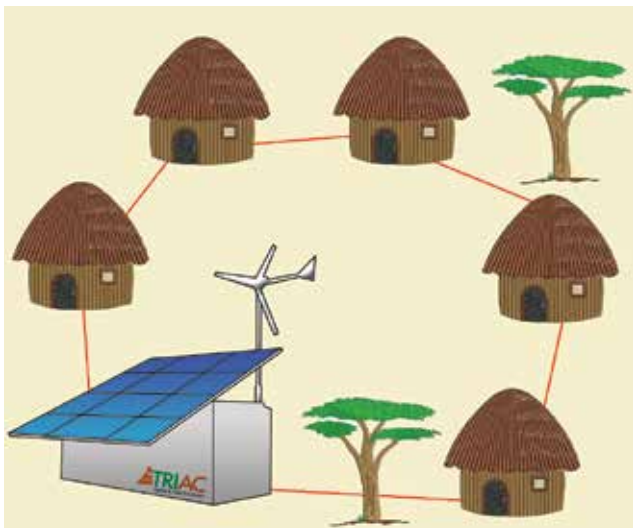
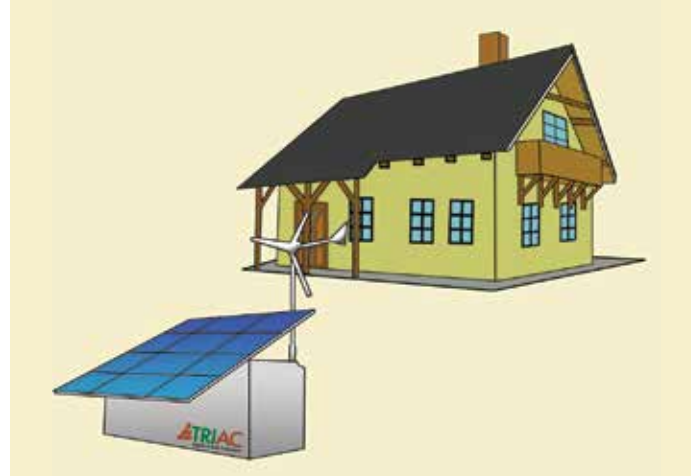
It's a perfect solution where continuous power is required such as hospitals, even with good solar insolation and wind.

The diesel generator automatically starts and fills the gap between demand and generated power from sun.

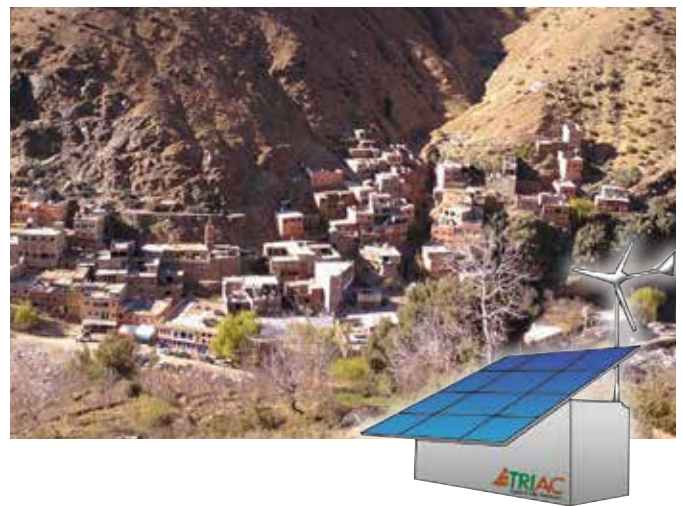
# Applications

## CONSTRUCTION SITES

- Disaster relief
- **Remote Research Stations**
- Remote Resorts, homes and farms
- **Uninterruptible power Systems**



# Applications



- » Agriculture
- » Irrigation
- » Wells
- » Machinery
- » Factories
- » Schools
- » Housing
- » GSM/ Telecommunication stations
- » Submersible pumps for wells
- » Villages





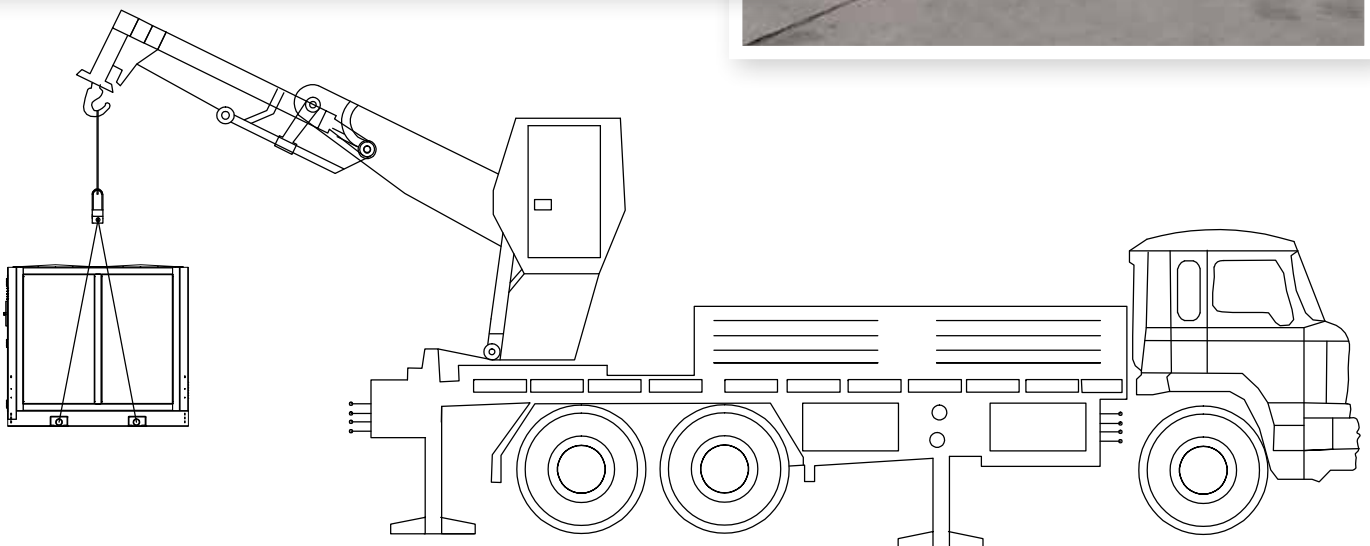
# CONTAINER MODELS

## EASY TRANSPORT

- » Our specially designed containers are able to carry with forklifts or crane.

## EASY INSTALLATION

- » Complete components for easy installation, can be installed within hours by a novice user.
- » Turnkey solution with rapid solar deployment and setup, with virtually easy assembly.
- » Plug & Play installation





# RA.C-S8-i3 RA.C-S8-i6 RA.C-S8-i7



TRIAC		RA.C-S8-i3	RA.C-S8-i6	RA.C-S8-i7
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	785	785	785
	Est. Bank Storage	18,8 kWh	37,7 kWh	37,7 kWh
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	9,6	9,6	9,6
	Number of Panels	8	8	8
	Total Array Watts	1920	1920	1920
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years

**RA.C-S8-i3-W1**  
**RA.C-S8-i6-W2**  
**RA.C-S8-i7-W2**



TRIAC		RA.C-S8-i3-W1	RA.C-S8-i6-W2	RA.C-S8-i7-W2
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	785	785	785
	Est. Bank Storage	18,8 kWh	37,7 kWh	37,7 kWh
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	9,6	9,6	9,6
	Number of Panels	8	8	8
	Total Array Watts	1920	1920	1920
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Wind	Rotor Diameter	1,54 Meters	3,2 Meters	3,2 Meters
	-----	3-Blade Downwind	3-Blade Downwind	3-Blade Downwind
	Peak Output	750W	2400W	2400W
	Manufacturer	Leading Edge	Leading Edge	Leading Edge
	Warranty	2 Years	2 Years	2 Years

# RA.C-S8-i3-W1-G5 RA.C-S8-i6-W2-G5 RA.C-S8-i7-W2-G5



TRIAC		RA.C-S8-i3-W1-G5	RA.C-S8-i6-W2-G5	RA.C-S8-i7-W2-G5
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	785	785	785
	Est. Bank Storage	18,8 kWh	37,7 kWh	37,7 kWh
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
	Manufacturer	-----	-----	-----
Solar	kWh per day	9,6	9,6	9,6
	Number of Panels	8	8	8
	Total Array Watts	1920	1920	1920
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Wind	Rotor Diameter	1,54 Meters	3,2 Meters	3,2 Meters
	Peak Output	750W	2400W	2400W
	Manufacturer	Leading Edge	Leading Edge	Leading Edge
	Warranty	2 Years	2 Years	2 Years
Diesel Generator	Prime Rating	4,20 kW	4,20 kW	4,20 kW
	Amp / Voltage	18 A / 230 V	18 A / 230 V	18 A / 230 V



# RA.C-S8-i3-G5 RA.C-S8-i6-G5 RA.C-S8-i7-G5



TRIAC		RA.C-S8-i3-G5	RA.C-S8-i6-G5	RA.C-S8-i7-G5
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	785	785	785
	Est. Bank Storage	18,8 kWh	37,7 kWh	37,7 kWh
	Type	Lead Acid	Lead Acid	Lead Acid
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	9,6	9,6	9,6
	Number of Panels	8	8	8
	Module Watts Each	240	240	240
	Total Array Watts	1920	1920	1920
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Diesel Generator	Prime Rating	4,20 kW	4,20 kW	4,20 kW
	Amp / Voltage	18 A / 230 V	18 A / 230 V	18 A / 230 V

# RA.C-S12-i3 RA.C-S12-i6 RA.C-S12-i7



TRIAC		RA.C-S12-i3	RA.C-S12-i6	RA.C-S12-i7
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	980	980	980
	Est. Bank Storage	23,5 kWh	47,1 kWh	47,1 kWh
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
	Type	Lead Acid	Lead Acid	Lead Acid
Solar	kWh per day	14,4	14,4	14,4
	Number of Panels	12	12	12
	Module Watts Each	240	240	240
	Total Array Watts	2880	2880	2880
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years

# RA.C-S12-i3-W1 RA.C-S12-i6-W2 RA.C-S12-i7-W2



TRIAC		RA.C-S12-i3-W1	RA.C-S12-i6-W2	RA.C-S12-i7-W2
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	980	980	980
	Est. Bank Storage	23,5 kWh	47,1 kWh	47,1 kWh
	Type	Lead Acid	Lead Acid	Lead Acid
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	14,4	14,4	14,4
	Number of Panels	12	12	12
	Module Watts Each	240	240	240
	Total Array Watts	2880	2880	2880
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Wind	Rotor Diameter	1,54 Meters	3,2 Meters	3,2 Meters
	Peak Output	750W	2400W	2400W
	Manufacturer	Leading Edge	Leading Edge	Leading Edge
	Warranty	2 Years	2 Years	2 Years



# RA.C-S12-i3-W1-G5 RA.C-S12-i6-W2-G5 RA.C-S12-i7-W2-G5



TRIAC		RA.C-S12-i3-W1-G5	RA.C-S12-i6-W2-G5	RA.C-S12-i7-W2-G5
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	980	980	980
	Est. Bank Storage	23,5 kWh	47,1 kWh	47,1 kWh
	Type	Lead Acid	Lead Acid	Lead Acid
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	14,4	14,4	14,4
	Number of Panels	12	12	12
	Module Watts Each	240	240	240
	Total Array Watts	2880	2880	2880
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Wind	Rotor Diameter	1,54 Meters	3,2 Meters	3,2 Meters
	Peak Output	750W	2400W	2400W
	Manufacturer	Leading Edge	Leading Edge	Leading Edge
	Warranty	2 Years	2 Years	2 Years
Diesel Generator	Prime Rating	4,20 kW	4,20 kW	4,20 kW
	Amp	18 A	18 A	18 A
	Voltage	230 V	230 V	230 V
	Frequency	50 Hz	50 Hz	50 Hz
	Tank Capacity	16 L	16 L	16 L

# RA.C-S12-i3-G5 RA.C-S12-i6-G5 RA.C-S12-i7-G5



TRIAC		RA.C-S12-i3-G5	RA.C-S12-i6-G5	RA.C-S12-i7-G5
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	980	980	980
	Est. Bank Storage	23,5 kWh	47,1 kWh	47,1 kWh
	Type	Lead Acid	Lead Acid	Lead Acid
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	14,4	14,4	14,4
	Number of Panels	12	12	12
	Module Watts Each	240	240	240
	Total Array Watts	2880	2880	2880
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Diesel Generator	Prime Rating	4,20 kW	4,20 kW	4,20 kW
	Amp	18 A	18 A	18 A
	Voltage	230 V	230 V	230 V
	Frequency	50 Hz	50 Hz	50 Hz
	Tank Capacity	16 L	16 L	16 L

# RA.C-S16-i3 RA.C-S16-i6 RA.C-S16-i7



TRIAC		RA.C-S16-i3	RA.C-S16-i6	RA.C-S16-i7
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger	True Sinewave Inverter/ Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	1170	1170	1170
	Est. Bank Storage	28,1 kWh	56,2 kWh	56,2 kWh
	Type	Lead Acid	Lead Acid	Lead Acid
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	19,2	19,2	19,2
	Number of Panels	16	16	16
	Module Watts Each	240	240	240
	Total Array Watts	3840	3840	3840
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller MPPT	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years



# RA.C-S16-i3-G5 RA.C-S16-i6-G5 RA.C-S16-i7-G5



TRIAC		RA.C-S16-i3-G5	RA.C-S16-i6-G5	RA.C-S16-i7-G5
Inverter	Rated Output	3000 VA	6000 VA	7000 VA
	Surge	5750 VA	11500 VA	16300 VA
	AC Voltage	230 VAC	230 VAC	230 VAC
	Type	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger	True Sinewave Inverter/Charger
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Battery	Bank in Amp-Hours	1170	1170	1170
	Est. Bank Storage	28,1 kWh	56,2 kWh	56,2 kWh
	Type	Lead Acid	Lead Acid	Lead Acid
	Deep Cycle	1500	1500	1500
	Warranty	3 Years	3 Years	3 Years
Solar	kWh per day	19,2	19,2	19,2
	Number of Panels	16	16	16
	Module Watts Each	240	240	240
	Total Array Watts	3840	3840	3840
	Manufacturer	ZNShine Solar	ZNShine Solar	ZNShine Solar
	Warranty	25 Years	25 Years	25 Years
Charge Controller	Max Amps DC	80	80	80
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Monitoring	Program, manage and monitor entire system	YES	YES	YES
	System configuration wizard	YES	YES	YES
	Up to 1-year of data logging	YES	YES	YES
	Internet-enabled	YES	YES	YES
	SD memory card slot	YES	YES	YES
	Manufacturer	Outback	Outback	Outback
	Warranty	5 Years	5 Years	5 Years
Diesel Generator	Prime Rating	4,20 kW	4,20 kW	4,20 kW
	Amp	18 A	18 A	18 A
	Voltage	230 V	230 V	230 V
	Frequency	50 Hz	50 Hz	50 Hz
	Tank Capacity	16 L	16 L	16 L

# MOBILE MODELS

- » Ready to use mobile renewable power system.
- » 7/24 availability of power
- » Trafficable
- » Easily integrates with wind, diesel generators or grid supply to provide a complete hybrid solution.



# RA.M-S8-i3



TRIAC		RA.M-S8-i3
Inverter	Rated Output	3000 VA
	Surge	5750 VA
	AC Voltage	230 VAC
	Type	True Sinewave Inverter/Charger
	Manufacturer	Outback
	Warranty	5 Years
Battery	Bank in Amp-Hours	785
	Est. Bank Storage	18,8 kWh
	Type	Lead Acid
	Deep Cycle	1500
	Warranty	3 Years
Solar	kWh per day	9,6
	Number of Panels	8
	Module Watts Each	240
	Total Array Watts	1920
	Manufacturer	ZNShine Solar
	Warranty	25 Years
Charge Controller MPPT	Max Amps DC	80
	Manufacturer	Outback
	Warranty	5 Years
Monitoring	Program, manage and monitor entire system	YES
	System configuration wizard	YES
	Up to 1-year of data logging	YES
	Internet-enabled	YES
	SD memory card slot	YES
	Manufacturer	Outback
	Warranty	5 Years



# RA.M-S8-i3-W1



TRIAC		RA.M-S8-i3-W1
Inverter	Rated Output	3000 VA
	Surge	5750 VA
	AC Voltage	230 VAC
	Type	True Sinewave Inverter/Charger
	Manufacturer	Outback
	Warranty	5 Years
Battery	Bank in Amp-Hours	785
	Est. Bank Storage	18,8 kWh
	Type	Lead Acid
	Deep Cycle	1500
	Warranty	3 Years
Solar	kWh per day	9,6
	Number of Panels	8
	Module Watts Each	240
	Total Array Watts	1920
	Manufacturer	ZNShine Solar
	Warranty	25 Years
Charge Controller	Max Amps DC	80
	Manufacturer	Outback
	Warranty	5 Years
Monitoring	Program, manage and monitor entire system	YES
	System configuration wizard	YES
	Up to 1-year of data logging	YES
	Internet-enabled	YES
	SD memory card slot	YES
	Manufacturer	Outback
	Warranty	5 Years
Wind	Rotor Diameter	1,54 Meters
	Peak Output	750W
	Manufacturer	Leading Edge
	Warranty	2 Years

# RA.M-S8-i3-W1-G5



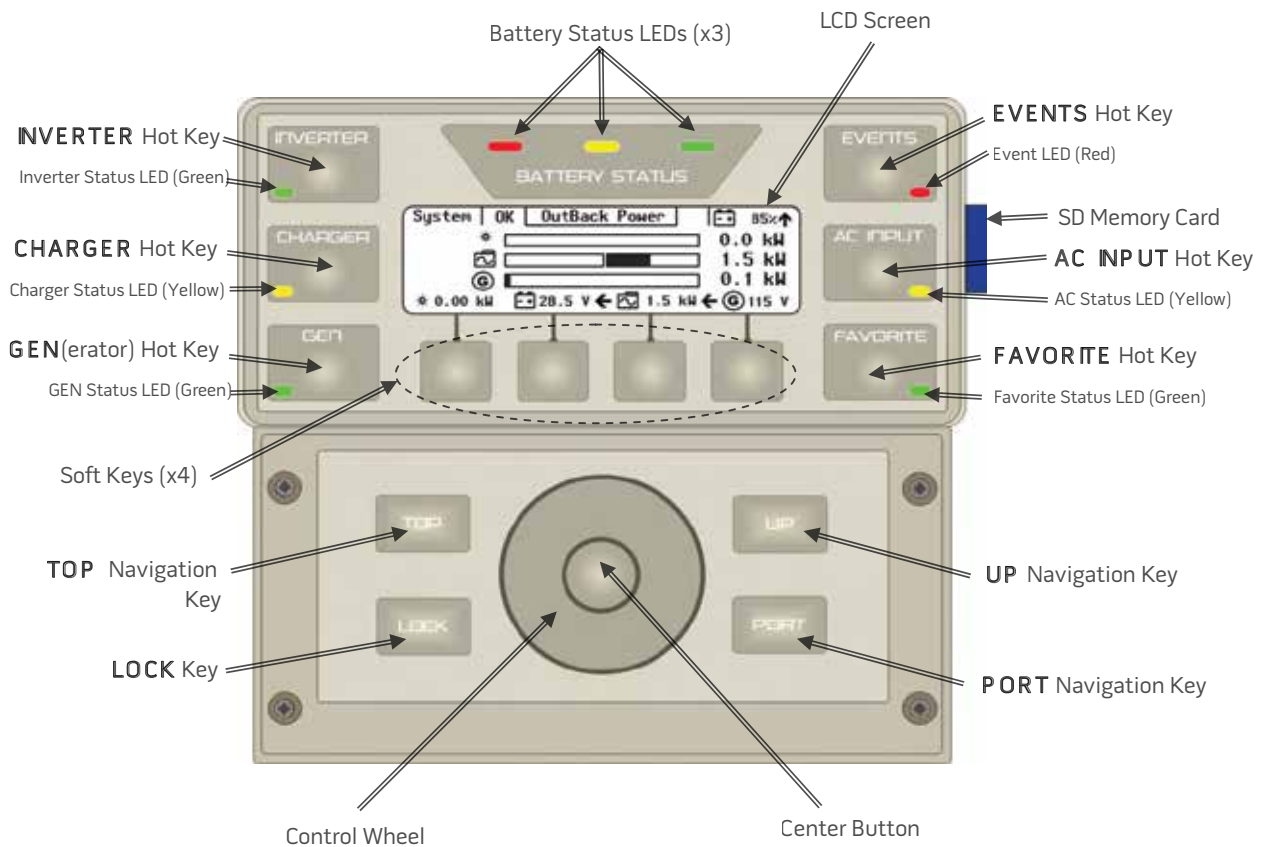
TRIAC		RA.M-S8-i3-W1-G5
Inverter	Rated Output	3000 VA
	Surge	5750 VA
	AC Voltage	230 VAC
	Type	True Sinewave Inverter/Charger
	Manufacturer	Outback
	Warranty	5 Years
Battery	Bank in Amp-Hours	785
	Est. Bank Storage	18,8 kWh
	Type	Lead Acid
	Deep Cycle	1500
	Warranty	3 Years
Solar	kWh per day	9,6
	Number of Panels	8
	Module Watts Each	240
	Total Array Watts	1920
	Manufacturer	ZNShine Solar
	Warranty	25 Years
Charge Controller MPPT	Max Amps DC	80
	Manufacturer	Outback
	Warranty	5 Years
Monitoring	Program, manage and monitor entire system	YES
	System configuration wizard	YES
	Up to 1-year of data logging	YES
	Internet-enabled	YES
	SD memory card slot	YES
	Manufacturer	Outback
	Warranty	5 Years
Wind	Rotor Diameter	1,54 Meters
	Peak Output	750W
	Manufacturer	Leading Edge
	Warranty	2 Years
Diesel Generator	Prime Rating	4,20 kW
	Amp	18 A
	Voltage	230 V
	Frequency	50 Hz
	Tank Capacity	16 L

# RA.M-S8-i3-G5

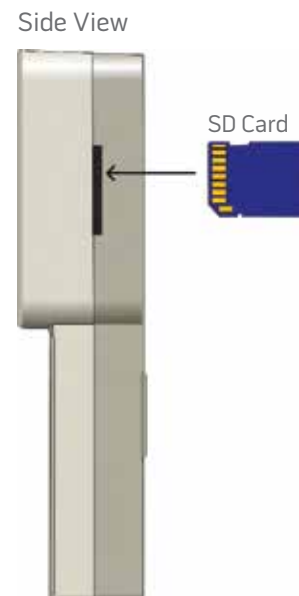


TRIAC		RA.M-S8-i3-G5
Inverter	Rated Output	3000 VA
	Surge	5750 VA
	AC Voltage	230 VAC
	Type	True Sinewave Inverter/Charger
	Manufacturer	Outback
	Warranty	5 Years
Battery	Bank in Amp-Hours	785
	Est. Bank Storage	18,8 kWh
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Charge Controller MPPT	Max Amps DC	80
	Manufacturer	Outback
	Warranty	5 Years
Monitoring	Program, manage and monitor entire system	YES
	System configuration wizard	YES
	Up to 1-year of data logging	YES
	Internet-enabled	YES
	SD memory card slot	YES
	Manufacturer	Outback
	Warranty	5 Years
Diesel Generator	Prime Rating	4,20 kW
	Amp	18 A
	Voltage	230 V
	Frequency	50 Hz
	Tank Capacity	16 L

# Features



- ❖ Program, manage and monitor entire system
- ❖ Intuitive menu structure
- ❖ Easy-to-read graphical display
- ❖ System configuration wizard
- ❖ Internet-enabled
- ❖ Field upgradable
- ❖ Up to 1-year of data logging
- ❖ SD memory card slot



# Features



Generator and Grid seed power if there isn't enough Solar Power for the Loads.

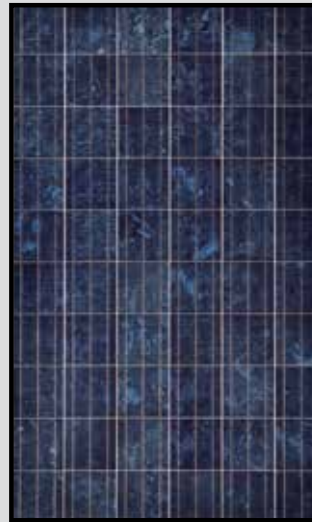


This is the inlet of our TRIAC. It makes very easy to connect Grid/Utility to the system.



# SolarPanel Award Winner

Two months in a row solar modules from ZNSHINE SOLAR achieved top results in the yield measurement of the German Photon magazine. In the July 2011 measurement<sup>1</sup> the ZX250-module with a power of 250 Watt (plus 3 %-tolerance) was ranked first out of all crystalline modules. And again, the result of the August 2011 measurement<sup>2</sup> puts ZNSHINE SOLAR's monocrystalline module on the first place! With constant innovation and quality supervision in all processing steps ZNSHINE SOLAR ensures state-of-the-art and high quality products for an adequate price.



## 250 Watt Polycrystalline Solar Module

ZXP6-250 W is ZNSHINE SOLAR's powerful polycrystalline solar panel with only 60 cells. Versatile and adaptable, with power output ranging from 220 Wp up to 250 Wp, it is perfect for both groundmounted and commercial rooftop systems.

Manufacturer	
1	ZNSHINE PV-Tech Co. Ltd.
1	Upsolar (Shanghai) Co. Ltd.
	Sunerg Solar S.r.l.

<sup>1</sup> See September 2011-issue of the German Photon Profi magazine.

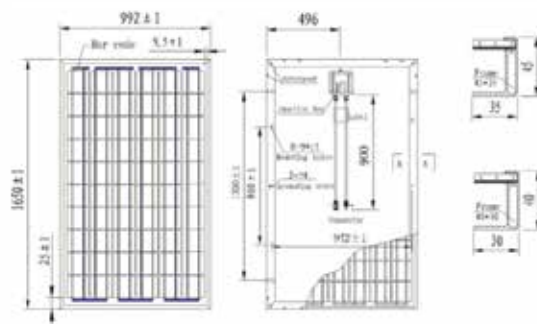
<sup>2</sup> Results will be published in the October 2011-issue of the German Photon Profi.

Rank	Manufacturer	Module type	Cell type	Power [W]	Yield [kWh/kW]		
					July	August	Total
1	ZNSHINE PV-Tech Co. Ltd.	ZX250(48)MS	mono	252,3	117,9	127,9	245,8
1	Upsolar (Shanghai) Co. Ltd.	UP-M220P	poly	219,2	117,9	127,9	245,8
3	Sunerg Solar S.r.l.	XP 60/156-230	poly	226,0	117,2	127,7	245,0
4	REC ASA	Premium 210	poly	212,2	117,2	127,6	244,8
5	Ferrania Solis S.r.l.	AP 60-230	poly	228,8	117,3	127,0	244,3
6	BP Solar International Inc.	BP 3220 T	poly	232,5	114,4	128,9	243,4
7	Solon SE	SOLON Blue 230/07(225)	poly	226,9	116,5	126,6	243,1
8	REC ASA	REC230AE	poly	237,6	117,0	125,9	242,9
9	Kinmac Solar Corp.	KSS-6P6A-230	poly	234,1	116,1	126,2	242,3
10	Axitec GmbH	AC 236P/156-605	poly	232,9	116,1	125,9	242,0
11	Nelumbo spol. s r.o.	NEI 230-3VA	poly	228,5	115,9	125,7	241,6
12	Solar Modules Nederland BV	TC245-MO	mono	246,7	115,5	125,8	241,3
12	ET Solar Industry Ltd.	ET-P660240	poly	236,1	116,1	125,2	241,3
14	KENMEC Mechanical Engineering Co. Ltd	TKSA-23001	poly	235,0	115,9	124,7	240,6
15	Shenzhen Tonray Solar Co. Ltd.	TPS105T-180W	mono	184,8	114,3	126,1	240,4

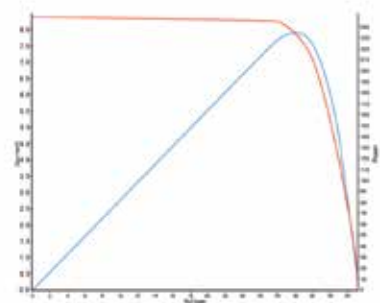


## ZXP6-60/220-250 W

Dimensions of PV module ZXP6-60/220-250 W



I-V Curves of PV module ZXP6-60/220-250 W



Electrical Data	ZXP6-60-220P	ZXP6-60-225P	ZXP6-60-230P	ZXP6-60-235P	ZXP6-60-240P	ZXP6-60-245P	ZXP6-60-250P
Peak Power Watts-P <sub>max</sub> (WP)	220	225	230	235	240	245	250
Power Output Tolerance-P <sub>max</sub> (%)	0 - +3	0 - +3	0 - +3	0 - +3	0 - +3	0 - +3	0 - +3
Maximum Power Voltage-V <sub>max</sub> (V)	28.95	29.15	29.35	29.55	29.75	29.95	30.15
Maximum Power Current-I <sub>max</sub> (A)	7.60	7.72	7.84	7.95	8.07	8.18	8.29
Open Circuit Voltage-V <sub>oc</sub> (V)	36.87	37.04	37.21	37.38	37.55	37.72	37.89
Short Circuit Current-I <sub>sc</sub> (A)	8.13	8.22	8.31	8.39	8.47	8.53	8.73
Module Efficiency η <sub>m</sub> (%)	13.44	13.75	14.05	14.36	14.66	14.97	15.72

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C)

# Deep-Cycle Flooded Batteries

## Premium Line

*Premium batteries...*

*designed for 1600 cycles at 50% DOD*

Renewable energy applications operate under challenging conditions such as fluctuating or extreme temperatures, remote locations and the intermittent nature of solar and wind power generation. Designed with a 10-year battery life, Trojan Battery's Premium Line of flooded deep-cycle batteries is specifically engineered to withstand the rigorous conditions of renewable energy applications. The Premium Line incorporates advanced battery features such as Trojan's DuraGrid™, MaxGuard® XL separator and Alpha Plus® Paste technologies that provide superior performance, rugged durability and exceptionally long life. Our product strategy is focused on one simple objective – manufacture the highest quality battery available in the industry which is why our Premium Line is tested to IEC standards.



 **Trojan.**  
BATTERY COMPANY  
*Clean energy for life.*

# Inverters

## FLEXware 250 System

For applications with a single OutBack FX Series Inverter/Charger and one MX Series ----- Charge Controller. No mounting plate required. Powder-coated aluminum with stainless steel hardware.

### FW250 DC

AC breaker enclosure - secures directly to either end of an FX Series Inverter/Charger. Includes ground bus bar and DC breaker handle guard. Holds up to eight 1 to 80 Amp, one 175 or 250 Amp panel mount breaker and a GFCI AC outlet (not included). Does not use the DCA or ACA for connection to an FX Series Inverter/Charger. (DC current shunt not included).



### FW500-AC

AC breaker enclosure - fits at the AC side of one or two FX Series Inverter/Chargers. Includes ground bus bar and DIN mounting bracket for up to sixteen DIN type breakers (not included) and a GFCI AC outlet (not included). Requires optional FW-ACAs for connection of each FX Series Inverter/Charger.

## FLEXware 1000 Power System

For applications with three or four OutBack FX Series Inverter/Chargers and up to four MX Series ----- Charge Controllers. Uses two FW-MP mounting plates. Powder-coated aluminum with stainless steel hardware.

### FW1000-DC

DC breaker enclosure - fits at the DC side of up to four FX Series Inverter/Chargers. Includes ground bus bar, 1000 Amp DC shunt assembly with negative TBB breaker mounting screws - holds up to eleven 1 to 80 Amp, nine 100 or 125 Amp and six 175 or 250 Amp panel mount breakers (not included). Requires optional DCAs for connection of each FX Series Inverter/Charger.



## FLEXware 500 System

For applications with one or two OutBack FX Series Inverter/Chargers and one or two MX Series ----- Charge controllers. Uses one FW-MP mounting plate. Powder-coated aluminum with stainless steel hardware.

### FW500-DC

DC breaker enclosure - fits at the DC side of one or two FX Series Inverter/Chargers. Includes ground bus bar, 500 Amp DC shunt assembly with negative TBB breaker mounting screws - holds up to eight 1 to 80 Amp, three 100 or 125 Amp and two 175 or 250 Amp panel mount breakers (not included). Requires optional DCAs for connection of each FX Series Inverter/Charger.



### FW1000-AC

AC breaker enclosure - fits at the AC side of up to four FX Series Inverter/Chargers. Includes ground bus bar and two DIN mounting brackets for up to thirty-two DIN type breakers (not included) and two GFCI AC outlets (not included). Requires optional ACAs for connection of each FX Series Inverter/Charger.



# Inverters

With all the hallmark features you've come to expect from the **Radian inverter/charger**, the expanded Radian family includes **four models, seven operating modes** and **two advanced technologies**, all adding up to unmatched performance, reliability, value and system flexibility.



## Radian Series Operating Modes

### Mini Grid OPERATING MODE

Ideal for sites where sufficient renewable energy enables mostly off-grid operation.

### Grid-Tied OPERATING MODE

Ideal for systems in regions with Feed-in-Tariff (FiT), net-metering or other incentive programs. Control use features include grid use timers.

### GridZero OPERATING MODE

Ideal in areas where incentives are subject to change and utility sell-back options may be limited. Control use features include grid use timers.

### Support OPERATING MODE

Ideal for sites with small generators or inadequate grid power. Control use features include system-level high battery transfer (HBX) programming, prioritizing batteries as primary source.

### Backup OPERATING MODE

Ideal for systems where computers and other sensitive loads are present. Control use features include system-level high battery transfer (HBX) programming, prioritizing batteries as primary source.

### UPS OPERATING MODE

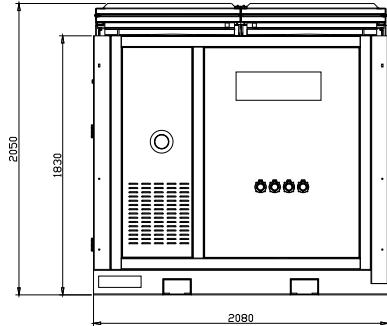
Ideal for commercial applications where uninterrupted power is mission-critical.

### Generator OPERATING MODE

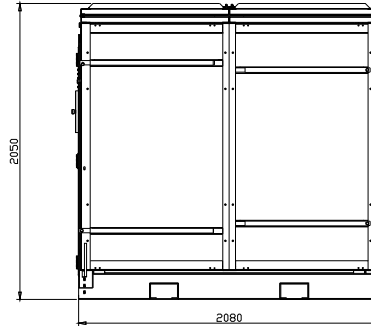
Ideal for systems with undersized or low power quality generators.

# Dimensions

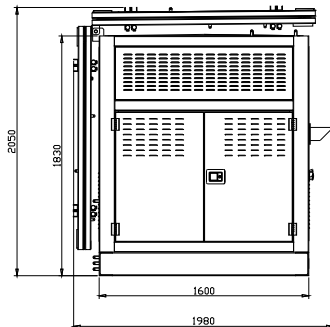
Container Solar & Genset (Side)



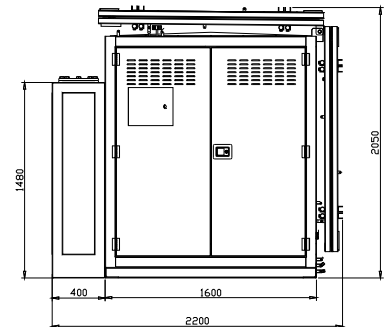
Container Solar (Front)



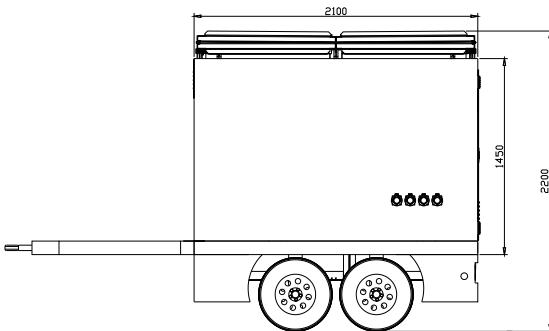
Container Solar & Genset (Back)



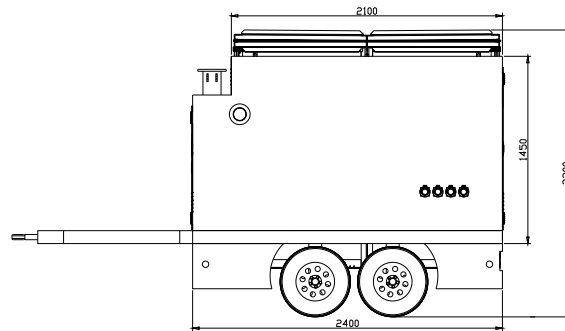
Container Solar & Wind (Side)



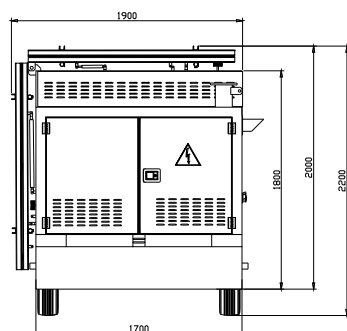
Mobile Solar (Side)



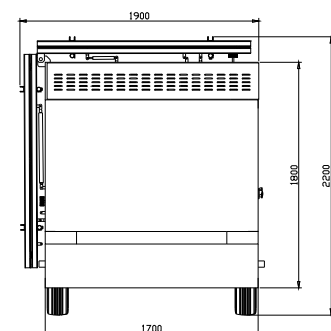
Mobile Solar Wind (Side)



Mobile Solar & Genset (Back)



Mobile Solar (Back)

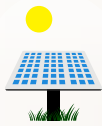






# TRIAC

Solar & Hybrid Generators



istanbul  
energy



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