





#### WELCOME TO



Arunoday Energy Systems was founded with the vision of providing energy-efficient Solar Energy solutions worldwide.

While building a vast portfolio in Solar Energy over the past years, we were also able to build expertise in innovation and expand our R&D team to offer a diversified catalogue with over products to our clients and partners all over the India.

Utilizing our brand value and manufacturing technologies, we have been expanding our product categories beyond Solar, with one mission to improve the lives of humanity worldwide.

Now, we are moving towards promoting sustainable practices that will help citizens and businesses lower their carbon footprint, and become a global leader in providing energy efficient systems – including solar panels, inverters, battery packs, and power stations.







#### 2023

Start new business in renewable energy



Solar energy is energy derived from sunlight. Whether you realise it or not, the sun already powers our planet, providing the necessary energy to keep the Earth's ecosystem alive and thriving. The amount of sunlight that reaches the earth's atmosphere is enough to power all our needs.

According to the US Department of Energy, 173000 terawatts of solar energy strike the earth continuously, which is more than 10000 times the world's total energy use. The sun is a free, sustainable, clean resource we can utilise in place of conventional electricity to power our day-to-day lives. Solar energy can be used to provide heat, light, and other electricity-dependent needs in residential and commercial buildings.

# <text>

Solar panels are made of highly excitable, conductive materials. When the sun's rays hit the solar panels, the reaction creates direct current (DC) electricity. Do they work even on overcast days? Absolutely, since the sun's rays can still penetrate clouds and reach solar panels.

Since most homes and businesses use alternating current (AC) electricity, your solar-generated DC energy will pass through an inverter to become AC electricity. This energy can be rationed into load for everyday essential appliance use, the rest stored into a battery, reverted back into a grid – entirely dependent on your choice and solar power system goals.

Solar panels enable humanity to maximise solar energy – a free, clean, energy resource. This is a major step in lowering carbon footprint and eventually achieving net-zero. Arunoday Energy Systems catalogue aims to promote clean energy access with energy supplies at the best prices, and contributing to economic growth by pushing for energy savings.





# WHY SOLAR ENERGY IS IMPORTANT?

There's a reason why so many homeowners and businesses are turning to solar power. The benefits are undeniable, and not just for individuals, but for the planet as a whole. Here are just a few of the many reasons that support the importance of solar energy.

#### **IT'S GOOD FOR THE ENVIRONMENT**

The difference between solar energy and conventional electricity is that solar energy does not rely on the use of fossil fuels, does not pollute air or water, and does not contribute to global warming, making it the preferable option for many. Solar energy works with the earth's natural resources, whereas conventional electricity depletes or harms them.

#### IT'S A RELIABLE, COST-EFFECTIVE ENERGY SOURCE

The sun is a renewable energy source. Fossil fuels will eventually run out, but sunlight won't. For that reason, solar energy is highly reliable. And unlike fossil fuels which are expensive to mine and utilize, it doesn't cost anything to receive sunlight. A one-time installation of solar equipment is all that's needed to reap the benefits.

#### IT SAVES YOU MONEY IN THE LONG RUN

Though the cost of installing solar panels or a solar electric system has decreased in recent years, some may still find the initial investment in solar energy to be intimidating. However, the key is remembering that installation is a one-time event, whereas paying for conventional electricity is a frequent, ongoing, and an expensive obligation, especially as electric rates continue to rise.

#### IT PROMOTES ENERGY INDEPENDENCE

Energy independence means not having to rely on the power grid. With no other means of powering your home, you could run into a variety of issues in the event of bad weather or damage to power lines. Using solar energy, especially when paired with a backup battery system, allows you to not be tied to unreliable power grids when you need energy most.

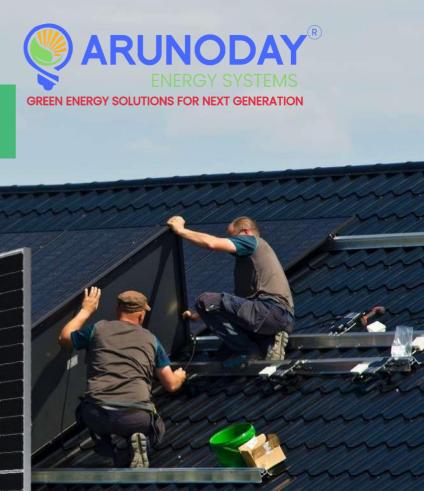








# **Solar Panels**



Arunoday energy Systems Solar Panels are engineered for a positive power tolerance, ensuring that they will always produce more power, equal to or greater than their rated power.

PID Resistance means our solar panels maintain their power efficiency despite high voltages, high temperatures, high humidity, and other potential factors. With advanced glass and cell surface textured design, excellent performance even during overcast days is possible. The 25-year Linear Output Warranty to guarantees that optimal power output will still be achieved even after decades of installation.





**HALF-CUT TECHNOLOGY** 

Unique circuit design to reduce temperature heat spots

#### SIGNIFICANTLY AVOIDING HEAT SPOT

The unique circuit design to reduce the temperature heat spot significantly, so that to reduce the power loss and then increate the output of modules.

**IOWER COST** 



Increasing power generation can reduce the cost per kilowatt-hour

# Anti PID

#### **EXCELLENT PERFORMANCE OF PID RESISTANCE**

The performance of PID resistance (Potential Induced Degradation) passed the standard of TUV Nord.

#### **Solar Panels**



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MECHANICAL	<b>CHARACTERISTICS</b>
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Cell Type	182*91 Mono
No. of Cells	108 (12*9)
Dimensions	D:1722*1134*35mm
Weight	21.50kg
Junction box	IP67/IP68 3diodes
Operating Temperature	-40~+85°C
Qty Per Pallet	31pcs/pallet

#### **ELECTRICAL DATA (STC)**

Peak Power(Pmax)	410.00
Maximum Power Voltage(Vmp)	31.46
Maximum Power Current(Imp)	13.04
Open Circuit Voltage(Voc)	37.45±3%
Short Circuit Current(Isc)	13.85±3%
Module Efficiency(%)	20.97





410W

**1** meter

CABLE

VT-410 SKU 11519

Cell Type	182*91 Mono
No. of Cells	108 (12*9)
Dimensions	D:1722*1134*30mm
Weight	21.50kg
Junction box	IP67/IP68 3diodes
Operating Temperature	-40~+85°C
Qty Per Pallet	37pcs/pallet

#### **ELECTRICAL DATA (STC)**

Peak Power(Pmax)	410.00
Maximum Power Voltage(Vmp)	31.46
Maximum Power Current(Imp)	13.04
Open Circuit Voltage(Voc)	37.45±3%
Short Circuit Current(Isc)	13.85±3%
Module Efficiency(%)	20.97



#### **MECHANICAL CHARACTERISTICS**

Cell Type	182*91 Mono
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Junction box	IP67/IP68 3diodes
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Open Circuit Voltage(Voc)	37.45±3%
Short Circuit Current(Isc)	13.85±3%
Module Efficiency(%)	20.97





SKU 11561



#### MECHANICAL CHARACTERISTICS Cell Type 182\*91 Mono

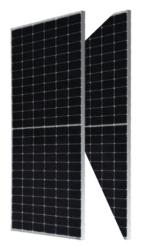
Cell Type	195.91 140110
No. of Cells	108 (12*9)
Dimensions	D:1722*1134*35mm
Weight	21.50kg
Junction box	IP67/IP68 3diodes
Operating Temperature	-40~+85°C
Qty Per Pallet	31pcs/pallet

#### **ELECTRICAL DATA (STC)**

Peak Power(Pmax)	410.00
Maximum Power Voltage(Vmp)	31.46
Maximum Power Current(Imp)	13.04
Open Circuit Voltage(Voc)	37.45±3%
Short Circuit Current(Isc)	13.85±3%
Module Efficiency(%)	20.97

#### **Solar Panels**





#### **450W** VT-450W

SKU 11353

545W

VT-545W SKU 11354

#### **MECHANICAL CHARACTERISTICS**

Cell Type	166*83 Mono
No. of Cells	144 ( 12*12 )
Dimensions	2094*1038*35mm
Weight	23.50kg
Junction box	IP67/IP68 3diodes
Operating Temperature	-40~+85°C
Qty Per Pallet	31pcs/pallet

#### **ELECTRICAL DATA (STC)**

Peak Power(Pmax)	450.00
Maximum Power Voltage(Vmp)	41.50
Maximum Power Current(Imp)	10.85
Open Circuit Voltage(Voc)	49.30±3%
Short Circuit Current(Isc)	11.60±3%
Module Efficiency(%)	20.70



#### MECHANICAL CHARACTERISTICS

Cell Type	182*91 Mono
No. of Cells	144 (12*12)
Dimensions	2279*1134*35mm
Weight	28.40kg
Junction box	IP67/IP68 3diodes
Operating Temperature	-40~+85°C
Qty Per Pallet	31pcs/pallet

#### **ELECTRICAL DATA (STC)**

Peak Power(Pmax)	545.00
Maximum Power Voltage(Vm	p) 41.93
Maximum Power Current(Imp	p) 13.00
Open Circuit Voltage(Voc)	49.90±3%
Short Circuit Current(Isc)	13.92±3%
Module Efficiency(%)	21.08



#### 665W VT-665W

SKU 11544

#### MECHANICAL CHARACTERISTICS

Cell Type	210*105 Mono
No. of Cells	132 ( 12*11 )
Dimensions	2384*1303*35mm
Weight	33.90kg
Junction box	IP67/IP68 3diodes
Operating Temperature	-40~+85°C
Qty Per Pallet	31pcs/pallet

#### **ELECTRICAL DATA (STC)**

Peak Power(Pmax)	665.00
Maximum Power Voltage(Vmp)	38.00
Maximum Power Current(Imp)	17.50
Open Circuit Voltage(Voc)	45.80±3%
Short Circuit Current(Isc)	18.58±3%
Module Efficiency(%)	21.40

# **Solar Panels Sets**



Arunoday Energy Systems launches an innovative way to transport our solar panel range: with the usage of especially packed solar panel sets. The sets were designed with homes and small industrial projects in mind, providing a limited number of panels to match customers' requirements. Our state-of-the-art 410W and 450W panels are packed methodically in mini pallets, which can then be easily transported directly on site to provide the exact power and energy required.

ARUNODAY

**ENERGY SYSTEMS** 

# **Solar Panels Sets**

12 pcs

12 pcs





#### 4.92 kW/SET

Half Mono Solar Panel D:1722\*1134\*35MM



SLIM DESIGN

# 410W X 12

Slim Half Mono Solar Panel D:1722\*1134\*30MM



4.92 kW/SET 410W X 12

Half Mono Solar Panel D:1722\*1134\*35MM

1 meter

4.95 kW/SET 450W X 11

D:2094\*1038\*35MM









# **Solar Panels Sets**



#### 6.15 kW/SET 410W X 15

Half Mono Solar Panel Black Frame D:1722\*1134\*35MM SKU 11563







Slim Half Mono Solar Panel D:1722\*1134\*30MM SKU 11551





6.15 kW/SET 410W X 15

Half Mono Solar Panel D:1722\*1134\*35MM SKU 11552

1 meter CABLE

6.30 kW/SET 450W X 14

Half Mono Solar Panel D:2094\*1038\*35MM SKU 11554



15 pcs



DCS









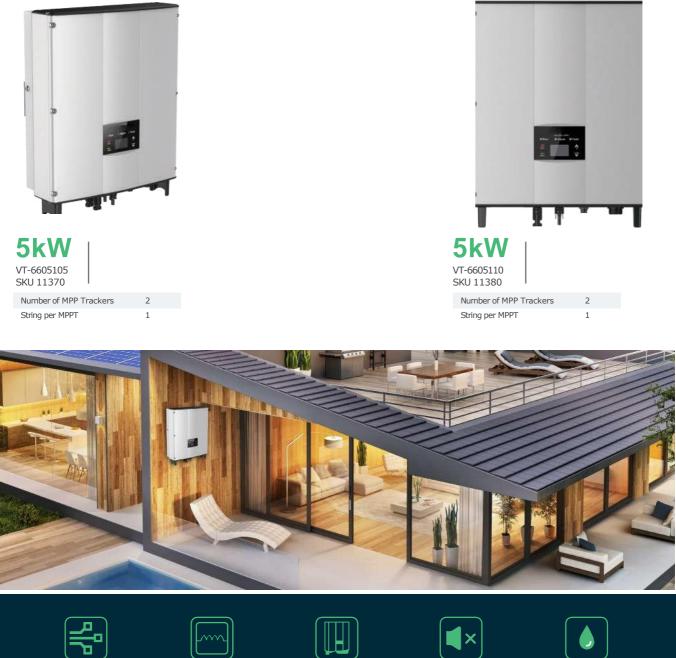
Solar Inverters are devices that convert the direct current (DC) from the solar panels into alternating current (AC) which is used by domestic and commercial appliances. It is one of the most critical components of the solar power system as it converts power from the sun into useful energy and is often referred to as the brain of a solar system. Solar inverters are a crucial part of a solar system since power from the sun cannot be directly used to run electrical appliances. Arunoday Energy Systems range of solar inverters have evolved to become much more smart and intelligent units, performing other functions such as data monitoring, advanced utility controls, energy management, and more.



#### **Single Phase**

#### **On-Grid Solar Inverters**

Typically used in most new houses and small businesses, single-phase on-grid inverters transport electricity via two wires: active and neutral. The electricity from the grid or your solar PV system will only flow through the one active wire, while the neutral wire is connected to the earth at the switchboard. This setup allows you to generate solar power from panels as well as draw power in from the grid to power your homes or offices.













**10kW** 

VT-6610305

SKU 11373

#### **Three Phase**

#### **On-Grid Solar Inverters**

Three-phase power has four wires, three of which are active, in addition to one neutral wire, which is earthed at the switchboard. Three phase electricity is common in both larger homes and businesses, as well as older homes, and allows for smaller and less expensive wiring, and lower voltages.

8kW

SKU 11372

-6608305



5kW VT-6605305 SKU 11371

Number of MPP Trackers

2 String per MPPT 1













#### **Three Phase**

#### **On-Grid Solar Inverters**





### Single Phase

#### **Hybrid Solar Inverters**

Hybrid inverters allows you to generate solar power from panels, draw power from the grid and store excess energy created by the panels into battery packs to be drawn in whenever necessary. The electricity from the grid, solar PV system or the battery will only flow through the one active wire, while the neutral wire is connected to the earth at the switchboard.







Lead-acid/ lithium Battery



Battery revers protection



Zero export function (Integrated)



Smart energy management





#### **Single Phase**

### **Hybrid Solar Inverters**





Number of MPP Trackers2String per MPPT1



High DC/AC

ratio







Easy to install



Support battery customization





Number of MPP Trackers2String per MPPT1



**UPS** function

switch time < 10ms



PV oversize 1.5 times pv oversize



**MPPT channels** 

up to 2 MPPT channels



Multiple inputs support generator & wind turbines



#### Single Phase

# **Hybrid Solar Inverters**









**6kW** SKU 11537

Number of MPP Trackers2String per MPPT1



Colorful touch LCD, IP65 protection degree



DC couple and AC couple to retrofit existing solar system



Max. 16pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel



**6kW** ITALIAN SPECIFICATION SKU 11529



Max. charging/discharging current of 135A



6 time periods for battery charging/discharging



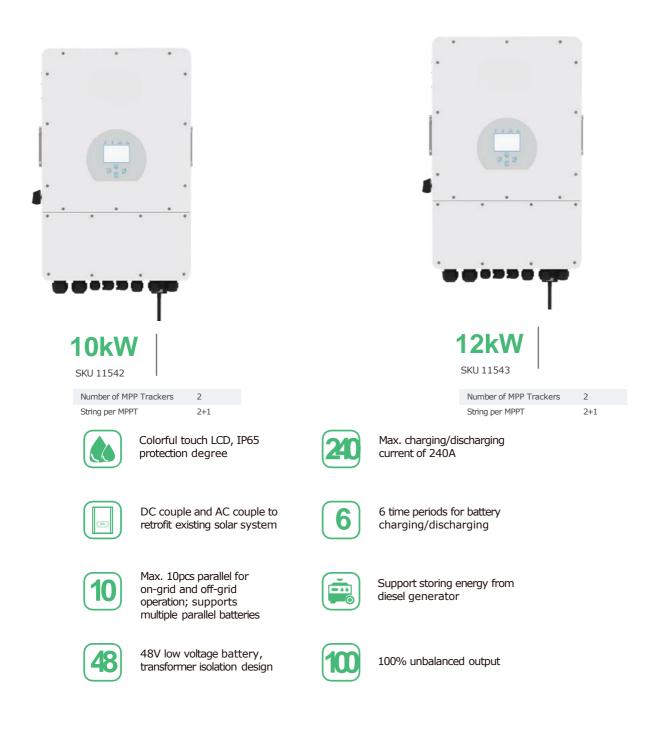
Support storing energy from diesel generator



#### **Three Phase**

#### **Hybrid Solar Inverters**

Three-phase power has four wires, three of which are active, in addition to one neutral wire, which is earthed at the switchboard. Three phase electricity is common in both larger homes and businesses, as well as older homes, and allows for smaller and less expensive wiring, and lower voltages.





Having batteries in your solar power system gives you more energy self-sufficiency, and helps you achieve your ROI. We offer different types of safe, reliable battery solutions to meet power storage needs depending on a variety of factors – the solar array size, on-grid or off-grid system, backup power requirements, and overnight energy consumption in kWh. Our batteries are modular and scalable to easily build your target load with each usable capacity. IP65 options are available for a weatherproof performance all year round.

# **Battery Storage Solutions**



# Rack Mounting Lithium Battery



# **Battery Storage Solutions**



#### Indoor

Wall Mounting







#### Weatherproof

#### Wall Mounting





**5.12kWh** VT-48100-W2 SKU 11524





Intelligent BMS monitoring for all-round protection



A-grade LFP cells, ensuring safety of the battery



6000 cycle lifespan with a 10 year warranty



Easy installation with wall-mounted latches

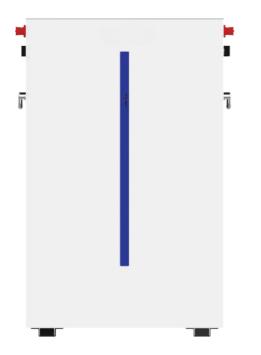
RSP



#### Weatherproof

Wall Mounting







#### Safer

Cobalt Free Lithium Iron Phosphate (LFP) Battery, safety and long lifespan, high efficiency and high-power density. Intelligent BMS, providing complete protection.

#### Reliable

Support high discharge power. IP65, natural cooling, wide temperature range: -20°C to 55°C.

#### • Flexible

Modular design, easy to expand, Max. 32 units in parallel, Max. capacity of 196kWh. Suited to residential and commercial applications for increasing the selfconsumption ratio.

#### Convenient

Battery module auto networking, Automatic IP addressing, easy maintenance, remotely monitoring and upgrade, support USB drive upgrade the firmware.

#### Eco-Friendly

Use environmental protection materials, the whole module non-toxic, pollution-free.

#### Wall-Mounted

Flat design, wall-mounted, saving installation space.

# **Battery Storage**



#### Waterproof

Wall Mounting









	General Parameters	Additional Information
Combination method	15S1P	LiFePO4
Rated capacity	Typical 161Ah minimum 158Ah	0.2°C,@25°C
Rated voltage	48V	
Voltage at end of discharge	42V	Discharge Cut-off voltage
Standard charge current	32A	Charge time : Approx 6h
Limiting current	20A	Software opening



We are dedicated to helping you shift to clean energy – our solar system kits are designed so anyone can easily jumpstart their journey to having a sustainable, solar power system. On-grid and hybrid options are available, so you can either keep your local electric connection or live off-the-grid at your choice. Whether residential, commercial, or industrial, we offer complete solar systems to meet your power needs at your specifications.

# Solar System



# <section-header>

SKU	Product	Specification	Quantity
11549	Half Mono Solar Panel	410W with 1 meter cable	12
11547	Single Phase Hybrid Solar Inverter	5kW	1
11448	LiFePO4 Battery Pack	AT48-100H	1
	Assorted Accessories		

Whether it is installed on a roof or in a remote location, this 5kW Complete Solar Panel System Kit with Battery and Inverter can be easily connected to any electrical system. PV systems generate electricity during the day, which is initially supplied to loads. Hybrid Inverters will then charge the battery with the excess energy. Lastly, the stored energy can be released when needed.

# **Solar System**



# Hybrid

# Solar System 9.97 kWp



LiFePO4 Battery

Hybrid Inverter

Half Mono Solar Panels

SKU	Product	Specification	Quantity
11549	Half Mono Solar Panel	410W with 1 meter cable	24
11542	Three Phase Hybrid Solar Inverter	10kW	1
11447	LiFePO4 Battery Pack	AT48-200H	1
	Assorted Accessories		

With a 10kW solar system, businesses, manufacturing facilities, and offices can operate independently without relying on government power. PV systems generate electricity during the day, which is initially supplied to loads. Hybrid Inverters will then charge the battery with the excess energy. Lastly, the stored energy can be released when needed.

# **Solar System**





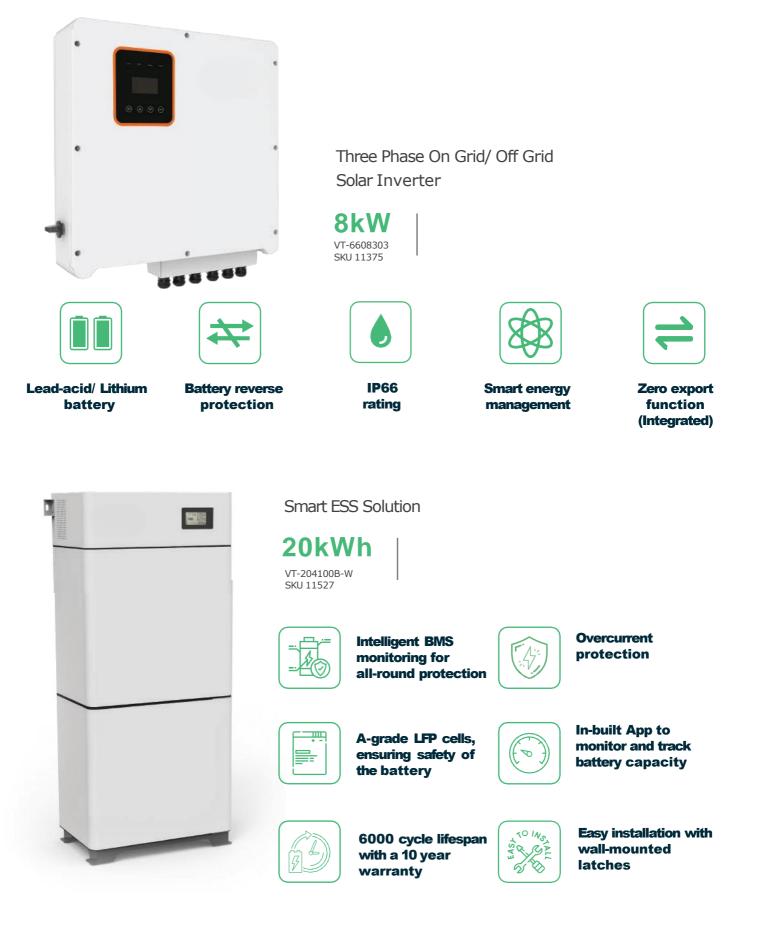
Solar Inverter

Half Mono Solar Panels

SKU	Product	Specification	Quantity
11549	Half Mono Solar Panel	410W with 1 meter cable	12
11370	Single Phase On-Grid Solar Inverter	5kW	1
	Assorted Accessories		

On-Grid PV systems are those that utilize utility (grid) power - whether for utility, commercial, residential or stand-alone buildings. On-grid systems are designed to partially or entirely satisfy a user's energy needs, thereby offsetting utility grid energy demand.

**Light Industrial Solar System** 



#### ARUNODAYENERGYSYSTEMS.COM

ARUNODA

**GREEN ENERGY SOLUTIONS FOR NEXT GENERATION** 

ERGY SYST

### **Solar Accessories**

ENERGY SYSTEMS

#### Compatible with all Solar Systems



