



PURE SINE WAVE UPS WITH WALL MOUNT LITHIUM BATTERY COMBO

Cutting the Cord on Traditional Backup Power: Innovative Tech
Redefines Reliability



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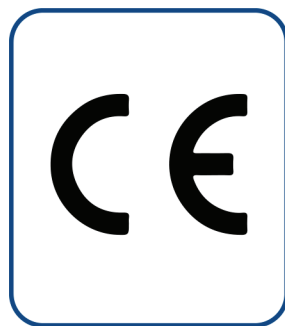
INTRODUCTION



Powering Your Peace of Mind: Why a Lithium Battery and UPS Combo is the Ultimate Backup Duo

In today's tech-driven world, power outages are more than just an inconvenience. They can disrupt work, halt entertainment, and even compromise critical processes. That's where the humble Uninterruptible Power Supply (UPS) comes in, providing a vital lifeline during those dreaded blackouts. But what if you could boost your UPS's capabilities and enjoy even greater peace of mind? Enter the Lithium Battery and UPS Combo, a game-changer in the backup power game.

Su-vastika's Certifications



Superior Lithium Battery Technology

The Pure Sine Wave UPS with Lithium Battery harnesses the power of advanced lithium battery technology to provide a range of benefits over traditional lead-acid batteries.



- **Unmatched Backup Capacity:** Su-vastika's Lithium battery can replace a 150Ah Tubular lead-acid battery, providing significantly longer backup times.
- **Wall mount, No Trolley required:** The Pure Sine Wave UPS with Lithium Battery can be easily mounted on the wall and does not require a trolley to place batteries, saving lots of space. The plastic trolley gets broken over time, and it is very difficult to water the Tubular battery through the plastic trolley
- **Exceptional Lifespan:** Lithium batteries boast a lifespan of 7 to 10 years, three times that of Tubular lead-acid batteries.
- **Rapid Charging:** Lithium batteries can be charged in 4 to 5 hours, compared to the 15 hours required for tubular lead-acid batteries.
- **Reduced Charging Costs:** Lithium batteries consume 20-30% less energy during charging, saving you money on electricity bills. Lithium does not draw electricity once fully charged but Tubular battery keeps taking the power after getting 100% charged in the form

of trickle charging which is a big wastage of power.

- **Advanced Battery Management System (BMS):** The integrated BMS ensures optimal battery performance, safety, and longevity.

The Battery Management System controls the battery performance by controlling each cell equalization in the Lithium battery. It has protection for controlling the Lithium battery's Overload, Short circuit, Low battery, and High battery control. Another big Highlight is its sleep mode, which activates when the Lithium battery goes into a low battery cut-off. As we have seen, the Tubular battery goes into deep discharge when the low battery happens in case power is not restored within 1 to 2 days, a major challenge for the Inverter installers.

In Lithium battery BMS, it goes into sleep mode, which saves the power discharge from the Lithium battery, so after the low battery shuts down, it can sustain for more than one month.

Comprehensive Protection Features

The Pure Sine Wave UPS with Lithium Battery incorporates protection features to safeguard your valuable equipment and investment.

- **High-Voltage and Low-Voltage Protection:** Prevents damage from voltage fluctuations.
- **Overload Protection:** Shields against excessive power demands.
- **Short-Circuit Protection:** Safeguards the battery and connected devices from short circuits.

Difference between Tubular and Lithium battery

The Capacity of the battery in Lithium vs tubular battery: Tubular battery comes in a C20 Capacity sticker or the Solar battery comes in a C10 capacity sticker. The Lithium battery comes in a C1 capacity package.

- **Clean technology vs Polluted technology:** People using Tubular batteries in their homes and offices are breathing Lead fumes because the Tubular Lead Acid batteries emit lead-based fumes, which are very harmful to the people inhaling them. Lithium batteries do not emit any toxic fumes or pollution.
- **Depth of Discharge in Tubular Vs Lithium battery:** The depth of discharge we can take out from a tubular deep discharge battery is 50%, whereas, from the lithium battery, the DOD (Depth of Discharge) can be 98% as this is C1 Battery compared to the tubular battery, which is C20 battery capacity.
- **The power bill for charging comparison of Lithium battery:** Tubular battery will take more electricity for charging 6 stage as compared to Lithium simple charging..
- **Space and weight of Tubular Vs Lithium-ion battery:** The comparison between Tubular and lithium batteries is again a shocking revelation as a 150 Ah tubular battery is 65 Kgs of weight, and you need two people to carry the

battery and install it in an office or home whereas the Lithium battery of 1KW is just 10 Kgs of weight which any one person can install in the home and offices. Space saving is another factor as there is no need to install a trolley, and it's wall mountable and one-sixth of the size of a Tubular lead Acid battery.

- **There is no BMS inside the Tubular battery to control cell equalization:** One of the major differences is that the tubular battery has no electronic control over the charge-discharge current and equalize each cell attached to the battery in series. Unbalanced cells reduce the life of Tubular battery.
- **Battery life in tubular vs lithium:** The life of the lithium battery in the Inverter/UPS can easily last more than ten years, whereas the life of the Tubular battery will be a maximum of 3 years. So one can easily see the price of Lithium is lower than Tubular.

Overall, if you have an electrical load of up to 300 watts, then a Tubular battery is recommended with the inverter/UPS. If the electrical load is higher than 400 watts, then Lithium Battery is the best, most effective, and environmentally friendly solution for the user.

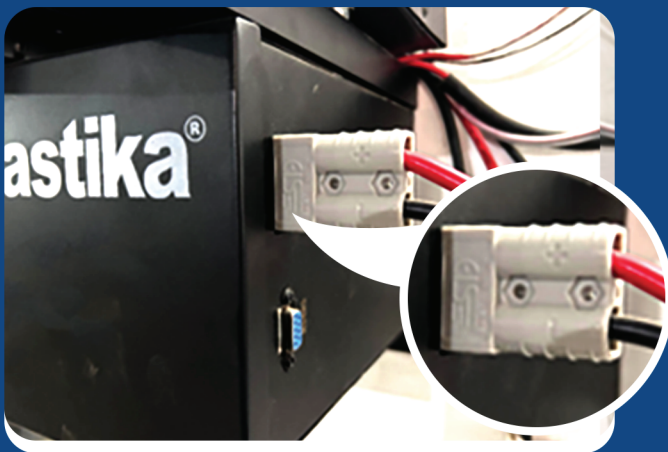


Key Comparison between Lithium and Tubular Batteries

Feature	Lithium Battery	Tubular Battery
Maximum Load Capacity	400 Watt and above: As the Lithium battery is designed to run bigger loads, the C1 battery	100-300 Watt Load: The Tubular battery is made for smaller loads, being a C20 battery.
Lifespan	7 to 10 years	2-3 years
Charging Time	4 to 5 hours	15 hours
High Voltage, Low Voltage, Overload, Short Circuit Protection	Yes	No
Maintenance	No	High
Equalization of Battery Cells	Yes	No
Capacity	C1	C20
BMS	Yes	No
Size and Weight	Weight is 10 Kgs, and size is very small compared to the Tubular battery (1 KW)	65 Kgs (150AH)
MCB for Protection	Yes	No
Indication LED	Yes	No
Battery Connectors	Anderson Connectors	Open Metal Connectors

Anderson Connector vs Tubular battery Terminals

An Anderson-style plug is a moulded, heavy-duty connector for high-current 12V, 24V, 48V, 72V & above. circuits. They are commonly used to create a safe and secure power connection between an Inverter & Lithium Battery. It has the safety MCB and can be switched on and off if you don't want to use it. Su-vastika's Pure Sine Wave UPS and Battery come with the Anderson connector, which ensures that the installation Engineer does not make mistakes while installing the Lithium battery. A tubular battery has a high risk of blast if it is connected improperly. Hence, Lithium Batteries with Anderson connectors are even safer for kids. While installing, the installer sometimes makes the mistake of connecting the opposite connections on the battery, which creates the challenge of the UPS fuse blown, which is eliminated in the Anderson connector.



Lithium Battery with Anderson connector



Tubular Battery with Open Metal Terminals

Digital Warranty:

Su-vastika introduces a revolutionary Bluetooth/ Wi-Fi enabled Digital warranty, seamlessly integrated into its Pure Sine Wave UPS with Lithium Battery. This revolutionary approach eliminates the hassle of physical warranty cards and provides consumers, dealers/distributors with unparalleled peace of mind.



A Smart and Convenient Warranty Solution:

Su-vastika's Digital Warranty aligns with the actual usage of the Inverter. The warranty period starts only when the Inverter is connected to the Battery and pauses when the Battery is disconnected. This intelligent system ensures that warranty coverage is accurately tailored to the product's usage cycle.

Su-vastika Pure Sine Wave UPS with Lithium Battery is a Bluetooth-enabled device that shows you the real-time digital warranty of UPS.

Parameters to focus on for buying Inverter/UPS

- **Power output:** Determine the power requirements of the appliances and devices you want to run during an outage.
- **Battery capacity:** It determines how long the inverter can provide backup power.
- **Waveform:** Pure sine wave inverters are recommended for normal and sensitive appliances, which prevent breakage and reduce maintenance costs.
- **Charging time:** A faster charging time will ensure your battery is ready for the next power outage.
- **Bidirectional technology:** It has a microcontroller or microprocessor based technology for charging and discharging an inverter.
- **Isolation transformer:** It is an essential parameter before buying an inverter as it helps the life of the inverter and is a vital parameter to consider before buying an inverter.

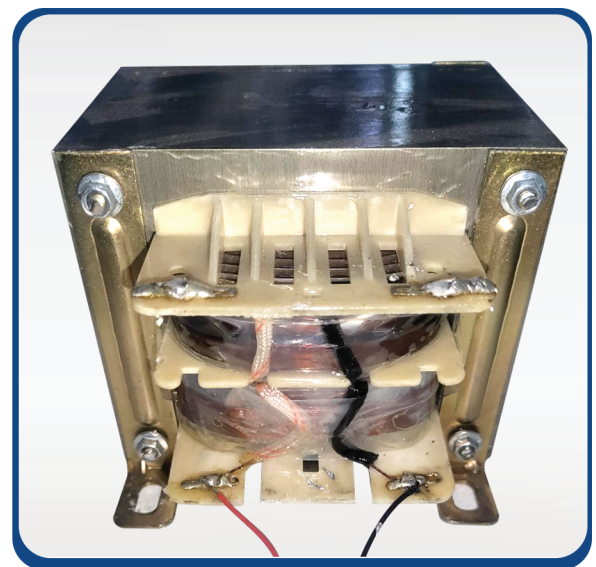
IoT-based technology means Bluetooth and a built-in Wi-fi facility to monitor all the inverter/UPS parameters

What is an Isolation transformer & its importance?

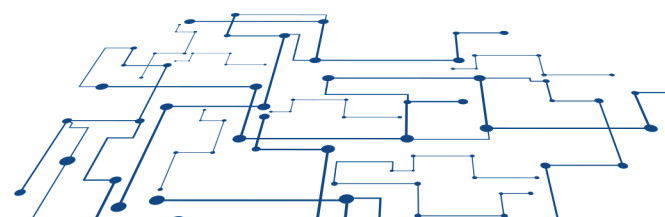
Isolation, also called galvanic isolation, implies that no direct path exists for the current to flow from the source to the load. An isolation transformer provides isolation between the electrical devices and the source powering these devices. In other words, the output power circuit is electrically and physically isolated from the input power circuit with an isolation transformer. As a result, the isolation transformer provides safety to the users and the appliances.

An isolation transformer makes working with AC-powered equipment much safer. Embedding an isolation transformer in your UPS/inverter/Lift Inverter/Battery Energy Storage systems/Solar hybrid PCU system makes it a more efficient and safer option for powering sensitive instruments in domestic and industrial settings.

Su-vastika's Pure Sine Wave UPS with Lithium Battery comes with a built-in Isolation transformer.



Isolation Transformer in Su-vastika's Pure Sine Wave Inverter



What's Bi-directional technology in Inverter/UPS

Bi-directional technology is a technology that allows for two-way charging due to its ability to convert from AC to DC and from DC to AC.

A bi-directional technology uses the same PWM (Pulse Width Modulation) based MOSFET (metal-oxide semiconductor field-effect transistor) circuit to charge and discharge the battery.

In the presence of an electricity supply from the grid, it pulls the AC power from the grid and converts it into DC to charge UPS/inverter batteries. When the power supply from the grid disconnects, it takes DC power from the battery and transforms it into AC using the same circuit earlier used for charging.

Su-vastika's Pure Sine Wave UPS with Lithium Battery comes with bi-directional technology.

Difference between UPS and Wide UPS Mode

The Wide UPS and UPS feature in our battery inverter/UPS plays an important role in bypassing the Mains Voltage and setting the Pure Sinewave Inverter/UPS for running the Computer and IT loads.

The user can decide which mode to select depending on the Voltage range he wants to choose according to his preference.

Su-vastika's Pure Sine Wave UPS with Lithium Battery provides some settings of UPS, which can be set to wide UPS and narrow UPS mode.

- Wide mode: In Wide UPS mode we can run light and fan type loads.
- Narrow mode: In Narrow UPS mode we can all types of loads including computer loads.

It also provides some settings of UPS, which can be set to wide UPS and narrow UPS mode.

Warranty



Su-vastika's Pure Sine Wave UPS with Wall Mount Lithium Battery Combo comes with 3 years warranty

Peace of Mind for Consumers and Dealers/Distributors

Su-vastika's Bluetooth/Wi-fi enabled Digital Warranty offers a host of benefits for both consumers and dealers/distributors:

Benefits for Consumers	Benefits for Dealers/Distributors
Enjoy hasslefree warranty claims without the need for physical documentation	Simplify warranty processing and eliminate the burden of managing physical warranty cards
Experience peace of mind knowing their warranty coverage is aligned with actual usage	Enhance customer satisfaction with a convenient and transparent warranty solution

Special Features

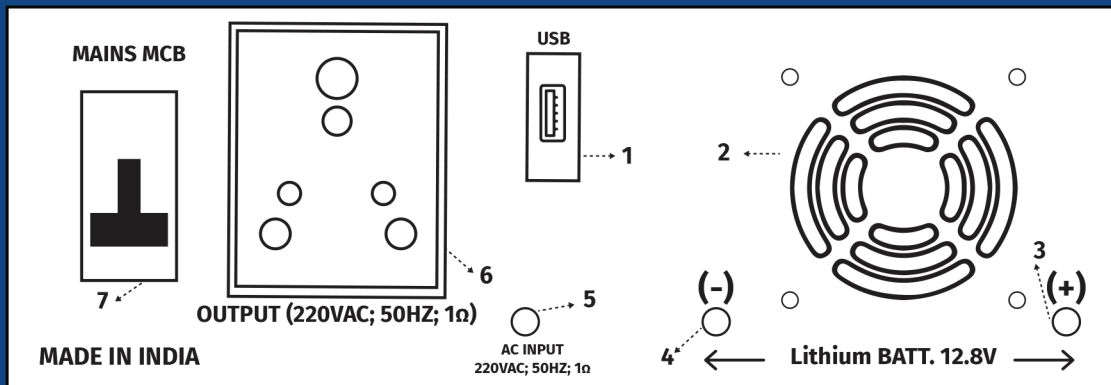


Load Comparison Chart

Load in Wattage (Blub Load)	12V/150Ah Tubular Battery Backup	1024Wh Lithium Battery Backup
400w	2:50 Hours	3:05 Hours
600w	1:30 Hours	1:50 Hours
800w	1:00 Hours	1:20 Hours
1000w	40 Minutes	65 Minutes

Disclaimer: the comparative chart provided is based on testing conducted on branded lead-acid batteries with a C20 rating. Please be aware that there may be up to a 5% variation in measuring time.

Back Panel of Pure Sine Wave UPS

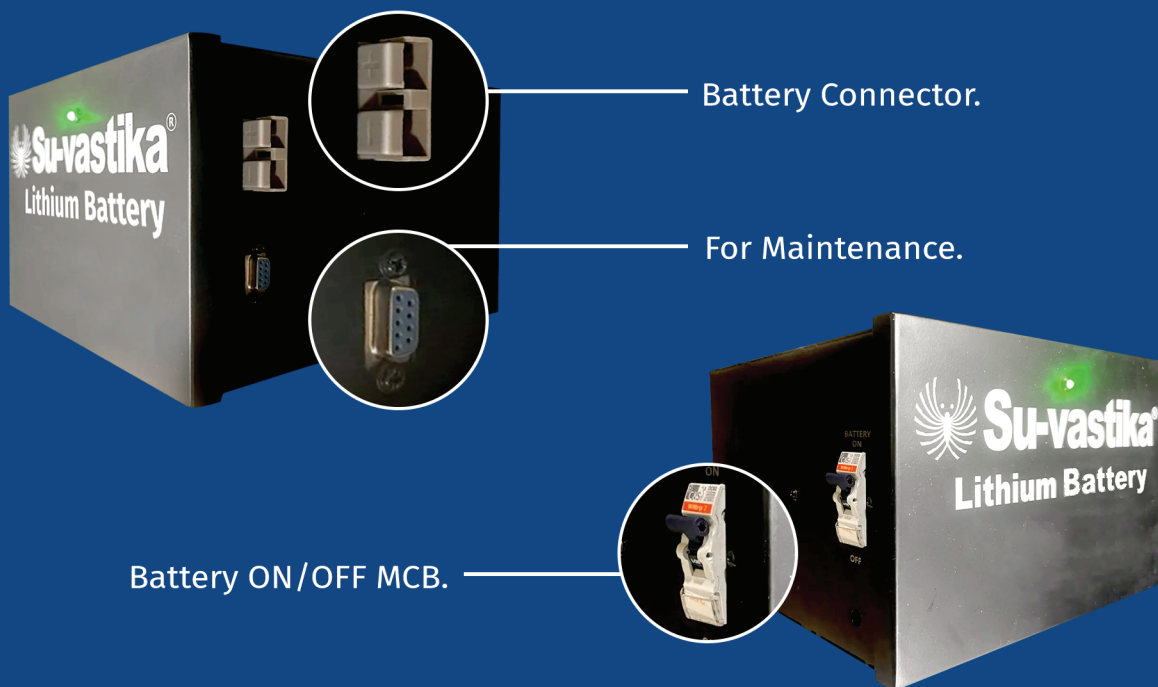


Back Panel of Pure Sine Wave UPS

Rear View Description

1. USB Connector.
2. Cooling Fan.
3. Positive Battery Wire (Red).
4. Negative Battery Wire (Black).
5. 3 Core Mains INPUT Cord. Output Socket.
6. MCB in INPUT

Both side view of Battery Bank



Product Particulars

Model	Inverter	Lithium Battery
PURE SINE WAVE UPS	1050	1024Wh

TECHNICAL SPECIFICATIONS

MODEL NAME	PURE SINE WAVE UPS Li 1050/12.8V WW
DISPLAY TYPE	LED

LED DISPLAY FEATURES

MAINS ON	BACK UP	CHARGE	OVERLOAD	LOW BATTERY	ADS ACTIVE
BATTERY LOW PROTECTION	OVERLOAD PROTECTION	SHORT CIRCUIT PROTECTION	MAINS MCB TRIP PROTECTION	HIGH TEMP. PROTECTION	

VOLTAGE RANGE NARROW WINDOW UPS MODE (App Settable)

Mains A.C Low out	185 ± 10V
Mains A.C Low out recovery	195 ± 10V
Mains A.C High out	265 ± 10V
Mains A.C High out recovery	260 ± 10V

VOLTAGE RANGE WIDE WINDOW W-UPS MODE

Mains A.C Low out	105 ± 10V
Mains A.C Low out recovery	120 ± 10V
Mains A.C High out	280 ± 10V
Mains A.C High out recovery	270 ± 10V

OUTPUT PARAMETERS

Mains Output Frequency	Same as input (45 Hz-55 Hz)
Output Frequency	50.0Hz ± 0.1Hz
Output voltage with full load	200V-220V ± 15V
Overload	Above 100%
Short circuit protection	>200% Load (Few m.sec)
Waveform	Sine wave
Dimension (L X W X H)	300x315x130 (mm)
Weight Net ± 0.5Kg	10.1Kg

BATTERY CHARGING & FEATURES

Charging current	15A
Battery capacity	1024 Wh
Battery Type	Lithium
Dimension (L X W X H)	250x165x230 (mm)
Weight Net ± 0.5Kg	11.8Kg

Embrace the Future of Backup Power

With its superior performance, long lifespan, and advanced features, the Pure Sine Wave UPS with Lithium Battery stands as the pinnacle of modern backup power solutions. Upgrade your home or business with this innovative technology and experience the unwavering reliability and efficiency that only lithium batteries can provide.



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