USER MANUAL

BOBINE - WATTMAN

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PLEASE READ THIS USER MANUAL CAREFULLY FIRST!

We thank you for choosing a PESS ENERGY product and we hope that you will find complete satisfaction in the daily use of your device.

If despite this manual you encounter any misunderstandings of use or situations that have not been mentioned in this document, we invite you to contact us directly by email at contact@pessenergy.com or by phone at +334 91 58 86 74.

Please read carefully all instructions in this manual. Observe all warnings and information contained herein. PESS ENERGY cannot be held responsible for any damage or prejudice caused by an improper use.

This user manual is applicable for our Powerbank BOBINE and WATTMAN (hereinafter referred to as "the device"). Differences between models are identified in this document, where they exist.

In order to continuously improve our products and ensure customer satisfaction, we reserve the right to make technical changes to the device without prior notice.

For more information about our company and products, you can find us on our official website www.pessenergy.com.

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I. GENERAL SAFETY INSTRUCTIONS

- This device generates an electrical current in a private network, under the responsibility of the user. Only qualified personnel can use this device
- For optimal and safe operation of the device, please follow the required specifications on the power of your devices to be powered
- Equipment with a cumulative continuous power of more than 3000 W (BOBINE 3 kW); 3600 W (BOBINE 4 kW)/ 6000 W (WATTMAN) should not be connected to the device
- Please follow carefully the operating procedure for the device (see §IV.2 "Getting Started") when you want to disconnect the AC or DC terminals
- Isolated Neutral (IT) regime. Before use, the device must be grounded using a ground stake (not sold with the device). Be sure to follow local requirements and applicable regulations to install the device
- The device should be stored with a charge above 95%, at a temperature between -20 °C and +50 °C, in a dry, ventilated, clean area and out of direct sunlight
- The photovoltaic (PV) input is a maximum of 4000 W (BOBINE 3 kW); 5000 W (BOBINE 4 kW)/6000 W (WATTMAN) (MPPT from 120 to 450 V – 500 Voc)
- When not in use, the device must be switched off by pressing the "POWER" button (see §IV.4 "Switching off the device")
- Do not force the use of the device when it is completely discharged
- The battery disconnect switch (also marked "Emergency stop" on the device, see diagrams in the appendices) should only be used in the following cases:
    - Emission of smoke and/or fire from the device (use if possible only)
    - Long-term device storage (greater than 3 months)
    - Procedure for restarting the device (in the case of a long-term or cold storage)
- It is forbidden to connect electrical equipment to the output of the device while charging on the mains (risk of INPUT and network overload)
- It is forbidden to cause a short circuit on an input or output of the device
- It is forbidden to connect 2 output sockets together
- It is forbidden to connect an output socket to the charging socket of the device
- It is forbidden to connect an output socket to a PV input socket of the device
- It is forbidden to open the device (risk of electric shock, loss of manufacturer's warranty). Only repairers authorized by PESS ENERGY are able to carry out repairs. If any errors remain after service, please return your device to the authorized PESS ENERGY repair center or the retailer that sold it to you
- It is forbidden to cover the device (except for the use of the specific rain cover, provided for this purpose and sold by PESS ENERGY)
- It is forbidden to expose the device in the rain (except for the use of the specific rain cover, provided for this purpose and sold by PESS ENERGY)
- When in use, the device must be kept out of direct sunlight
- It is forbidden to use the handlebars (see diagrams in appendices) of the device as a lifting point
- The device must be handled with care
- The device should be lifted only using its handles

II. IMPORTANT ENVIRONMENTAL INFORMATION

- This device should not be disposed of in the garbage/with other waste to prevent possible damage to the environment or human health. Please contact the retailer who sold it to in order to recycle it responsibly and safely;
- The cardboard and wood pallet packaging that protects the device during transport is recyclable. It should be disposed of in the appropriate containers provided for this purpose. Other plastic waste should be disposed of in the garbage.

III. DEVICE OVERVIEW

This device is a mobile power unit, combining inverter, solar charger and battery discharge functions to provide uninterrupted power supply. Its LCD display allows user control of the device's functions and easy access to information such as battery charge status, temperature, error messages or the device's input and output powers.

1. General features of the device

- Built-in Pure Sine inverter
- Built-in battery charger
- MPPT: Maximum Power Point Tracking for solar charge
- Noise-free, mobile power transmission
- Compatibility with 230 VAC mains voltage or a 230 VAC generator
- Automatic restart in case of a system error
- Protection against overload, overheating, short circuit
- System Preheat Function

2. Technical characteristics of the device

Technical Data		BOBINE	WATTMAN
Production AC	AC Output	3000 W- 4000 W	6000 W
	Max Power (0.5 sec)	6000 W	12 000 W
	Battery Capacity	5000 Wh	10 000 Wh
	AC Output Voltage	230 VAC ± 5%	
	Frequency	50 Hz	
	Signal Type	Pure Sinus	
	Switching Delays	10 ms (for personal computers) / 20 ms (for PCs) household devices)	
Connections	AC Output Connections	1 mono outlet (16 A)	2 mono outlets (16 A)
		-	1 mono outlet (32 A)
	AC Input Connections (INPUT)	Power Twist NAC3 (20 A)	
	DC Input Connections (SOLAR)	Anderson (50 A)	
Charging	AC Power Supply	230 VAC 50 Hz	
	Max Charging Power Output AC Socket	2800 W (12 A)	3680 W (16 A)
	Charging time (if empty)	< 3 hrs (90%)	< 4 hrs (90%)
Protection	Protection AC	30 mA (16 A) RCD	Inter diff. 30 mA (40 A)
	AC Circuit Breaker	1 x 16 A circuit breaker	2 x 16 A circuit breakers 1 x 32 A circuit breaker
	DC Protection (Battery)	200 A Magnetothermal Fuse / BMS	
	DC (PV) Protection	2 P Magnetothermal Fuse – 40 A / 40 A DC Circuit Breaker	
Battery	Battery storage	24 V Rated	48 V Nominal
	Battery Chemistry	Li-Ion NMC	
Solar Panels	Max. PV power	4000 W (BOBINE 3 kW) – 5000 W (BOBINE 4 kW)	6000 W
	MPP Voltage Range	120 VDC – 450 VDC	
	Max. Input Voltage	450 VDC	
	Max PV Current	40 A	
Operating times	Operating time at 300 W	> 16 hrs	> 32 hrs
	Operating time at 500 W	> 9 hrs	> 9 hrs
	Operating time at 1000 W	> 4 hrs	> 9 hrs
	Operating time at 2000 W	> 2 hrs	> 4,5 hrs
	Operating time at 3000 W	> 1 hr	> 2 hrs
	Operating time at 4000 W	-	> 1 hr
Temperature Ranges	Charging Temperature [(1)]	-20 °C ~ +45 °C (-4 °F ~ +113 °F)	
	Operating Temperature [(2)]	-10 °C ~ +45 °C (14 °F ~ +113 °F)	
	Storage Temperature	-20 °C ~ +50 °C (-4 °F ~ +122 °F)	
	Grounding	Ground Stake	
	Dimensions (H x L x D)	62 x 46 x 42 cm	68 x 53 x 64 cm
	Net Weight	55 kg	90 kg
	Yield	90 – 93%	
	Certifications	CE - UN 38.3	
	Environment	IP22 – IK07	
	Manufacturer's warranty	2 years	

[(1)]Between -20 °C and +5 °C (41 °F ~ +122 °F)*, the device does not charge but activates its preheating system. Please follow the procedure for starting the device once the minimum temperature of 5°C has been reached.*

[(2)] Refer to §IV.2 for instructions on how to start up the device according to the cases identified.

3. Basic System Architecture

The following illustration shows the basic functions of the device, which can be used as an electrical power source and/or solar power generator.

Contact PESS ENERGY for other possible system configurations, depending on your needs. This device can power all types of home or business devices, including motor-driven devices such as LED or HMI lamps, hobs, refrigerators, air conditioner, etc.

IV. SETTING UP THE DEVICE AND USING IT

1. Before powering on

- Make sure that the air intakes (see diagrams in appendices) of the device are not obstructed
- Connect the device to ground using a ground stake (not included)
- The device can be operated standing up or lying on the front side (the sockets facing the sky)

2. Getting Started

1) Press the "Lightboard" button on the front of the device. The information "ChgMos – ON" should be displayed in green. In this case, you can proceed to step 2).

   If the information "DchgMos – ON" is displayed in red on the display, put the battery disconnect switch in the "0" position and then follow the instructions given below according to the scenarios that may be encountered:

   - Below -10°C, plug the device into the mains to activate the preheating system or place the device in a warmer environment. After about twenty minutes, check by pressing the "Lightboard" button again (about 3 seconds, for a data reset). If this works, then set the battery disconnect switch to "I". The product can be used and you can move on to the next step.

   IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

   - Above +45 °C, place the device in a cooler area, out of the sun until the device drops to temperature. Check by pressing the "Lightboard" button again (about 3 seconds, for a data reset)

   IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

   - If the data "ChgMos – OFF" and/or "DchgMos – OFF" is displayed in red on the display but the temperature is good (between +5 °C and +45 °C), check by pressing the "Lightboard" button again (about 3 seconds, for a data reset)

   IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

   - Make sure the battery disconnect switch is set to "I"

2) Make sure all circuit breakers are in the up or "ON" position
3) Continue to start the device by pressing the "POWER" button on the top of the device. The boot sequence can take up to 10 seconds.

When the "POWER" button lights up, the device is ready for use. If necessary, check the circuit breakers.

Connect your devices to the AC sockets of the device, making sure beforehand that the specific maximum powers of your equipment do not exceed the power of the device.

3. Device Usage

For the duration of the device's use, monitor the device's charge levels and remaining time of use so that you are not surprised by the device's shutdown and anticipate its recharging.

The device automatically manages its cooling.

WARNING! DO NOT CONNECT TOO MANY DEVICES AT THE SAME TIME, WHICH WILL LEAD IT TO OVERLOADED AND FAULTY.

In the event of exposure to excessively extreme temperatures, beyond the ranges specified in §III.2 "Technical characteristics of the device", the device will stop to safety.

4. Shutting down the device

1) Turn off the device by pressing the "POWER" button on the top of the device. The white light on it then goes out
2) Unplug all your equipment

WARNING! THE BATTERY DISCONNECT SWITCH MUST BE HELD IN THE "I" POSITION. IT SHOULD ONLY BE SET TO "0" IN THE SPECIAL CASES MENTIONED IN §I "GENERAL SAFETY INSTRUCTIONS"; TRANSPORT AND SHUTDOWN OF THE DEVICE IS EXCLUDED. MISUSE AND INAPPROPRIATE USE OF IT MAY CAUSE THE DEVICE TO MALFUNCTION.

5. Charging the device from the mains

1) Press the "Lightboard" button on the front of the device. The information "ChgMos – ON" and "DchgMos – ON" should be displayed in green. In this case, you can proceed to step 2).
   If the information "ChgMos – OFF" and/or "DchgMos – OFF" is displayed in red on the display, position the battery disconnect switch in the "0" position and then follow the instructions given below according to the possible scenarios:
   - If the temperature is below 5°C, plug the device into the mains to activate the preheating system. After about twenty minutes, check by pressing the "Lightboard" button again (about 3 seconds, for a data reset). If this works, then set the battery disconnect switch to "I". The product can be used and you can move on to the next step.

   IF THE PROBLEM REMAINS, CONTACT PESS ENERGY
   - If the temperature is above +45°C, place the device in a cooler area, away from the sun until the device drops to temperature. Check by pressing the "Lightboard" button again (about 3 seconds, for a data reset)

   IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

- If the data "ChgMos – OFF" and/or "DchgMos – OFF" is displayed in red on the display but the temperature is good (between +5 °C and 45 °C), check by pressing the "Lightboard" button again (about 3 seconds, for a data reset)

IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

- Make sure the battery disconnect switch is set to "I"

2) Make sure all circuit breakers are in the up or "ON" position
3) FIRST CONNECT THE CABLE TO THE "INPUT AC" CHARGING PORT OF THE DEVICE AND THEN THE SOCKET TO THE MAINS (230 VAC, 16 A SOCKET) USING ONLY THE CABLE SUPPLIED WITH IT (see diagrams in the appendices). The device starts charging automatically.

In the event of exposure to excessively extreme temperatures, beyond the ranges specified in §III.2 "Technical characteristics of the device", the device will not be able to charge and will move to safety.
Possible scenarios and procedures:

– If the temperature is below 5°C, plug the device into the mains to activate the preheating system. After about twenty minutes, check by pressing the "Lightboard" button again (about 3 seconds, for a data reset).

IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

– If the temperature is above +45°C, place the device in a cooler area, away from the sun until the device drops to temperature. Check by pressing the "Lightboard" button again (about 3 seconds, for a data reset).

IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

– If the data "ChgMos – OFF" and/or "DchgMos – OFF" is displayed in red on the display but the temperature is good (between +5 °C and 45 °C), check by pressing the "Lightboard" button again (about 3 seconds, for a data reset)

IF THE PROBLEM REMAINS, CONTACT PESS ENERGY

WARNING! DO NOT ALLOW THE DEVICE TO CHARGE UNATTENDED

WARNING! WHEN FULLY CHARGED, FIRST UNPLUG THE MAINS OUTLET AND THEN THE CABLE FROM THE DEVICE'S "INPUT AC" CHARGING PORT

6. Charging the device on photovoltaic panels

WARNING! THE PHOTOVOLTAIC SYSTEM MUST BE SIZED WITHIN THE PERMISSIBLE POWER LIMITS OF THE DEVICE, AS SPECIFIED IN §III.2 "TECHNICAL CHARACTERISTICS OF THE DEVICE".

1) Turn the "PV IN" circuit breaker to "OFF" (see diagrams in the appendices) before connecting the PV system
2) Make sure the battery disconnect switch is set in the "I" position

3) Connect your PV system to the device via the Anderson socket (see diagrams in appendices)
4) YOU WILL ONLY BE ABLE TO RAISE THE "PV IN" CIRCUIT BREAKER WHEN YOUR SYSTEM IS CONNECTED (see previous step).

WARNING! DO NOT TAMPER WITH THE ANDERSON OUTLET WHEN THE "PV IN" CIRCUIT BREAKER IS RAISED/SET TO "ON"

Charging starts automatically.

WARNING! DO NOT ALLOW THE DEVICE TO CHARGE UNATTENDED

7. Electrical overload or leakage

In the event of an overload, turn the device off and on again by pressing the "POWER" button. IF NECESSARY, CONTACT PESS ENERGY

In both cases (overload or electrical leakage), the device goes to safety. As soon as possible, you should disconnect all cables (input and output) and check the ground connection of the device and your equipment(s) if necessary.

If the device is working properly, make sure that the equipment plugged into the device does not have any electrical fault or isolation.

Then reset the differential switch.

IF THE DIFFERENTIAL BREAKS AGAIN, CONTACT PESS ENERGY.

IN THE EVENT THAT THE DEVICE DOES NOT COME TO SAFETY, PRESS THE "POWER" BUTTON AND SET THE BATTERY DISCONNECT SWITCH TO "0". ISOLATE THE DEVUCE AND CONTACT PESS ENERGY.

8. Failure Cases

- If the device won't start or shuts down prematurely, check with the retailer who sold it to you
- IF THE DEVICE STARTS TO SMOKE AND WITHOUT ENDANGERING YOURSELF, DISCONNECT ALL CABLES (INPUT AND OUTPUT) AND SET THE BATTERY DISCONNECT SWITCH TO "0". KEEP YOUR DISTANCE FROM THE DEVICE AND NOTIFY THE EMERGENCY SERVICES.

9. Long-term device storage (over than 3 months)

- Store the device with a charge over than 95%.
- Set the battery disconnect switch to "0" to turn off the power
- We recommend storing the device at a temperature between +10 °C and +35 °C, in a dry, ventilated, clean area away from sunlight

10. Transporting the device

- The device can be carried standing up or lying on its front side (the sockets towards the sky)
- The device must be sufficiently secured to the transport vehicle when it is in transit. To do this, use several straps that will have to be positioned on the reinforcements of the device (see "use case illustrations" in the appendices)
- The device must be switched off before being transported by releasing the "POWER" button
- The circuit breakers on the device must be down/in the "OFF" position for the duration of transport
- If you inadvertently press the "Lightboard" button when preparing the device for transport, the screens may remain on/illuminate even though the device is switched off. They will switch off automatically after a few seconds
- Transport and/or shipment of the Product by the User may be subject to the mandatory provisions governing the transport of hazardous materials (lithium-ion batteries contained in equipment - UN3481). For more information, consult the Product's Safety Data Sheet and/or contact your freight forwarder.

WARNING! THE BATTERY DISCONNECT SWITCH MUST BE HELD IN THE "I" POSITION. IT SHOULD ONLY BE SET TO "0" IN THE SPECIAL CASES MENTIONED IN §I "GENERAL SAFETY INSTRUCTIONS"; TRANSPORT AND SHUTDOWN OF THE DEVICE IS EXCLUDED. MISUSE AND INAPPROPRIATE USE OF IT MAY CAUSE THE DEVICE TO MALFUNCTION.

V. WARRANTY REPAIRS AND SERVICE

1. PESS ENERGY Warranty

The devices are guaranteed for a period of 2 years, parts and labour, from the date of their shipment from PESS ENERGY's production site.

2. Repair by PESS ENERGY Authorized Repairers

In the case of repairs by a PESS ENERGY approved repairer:

- Any damage resulting from the use or wear and tear of the device, when repairable
- Any breakdown, not covered by the manufacturer's warranty

The repair is guaranteed (parts and labour) by the repairer for a period of 6 months (without increase in the manufacturer's warranty of the device).

If the damage to the device is too severe and is the result of a misuse (cf. §VI. "In the event of misuse of the device"), PESS ENERGY may carry out the repairs, **at the customer's expense**.

a. Warranty Repairs

Any failure that is not the result of misuse and occurs within 2 years of the date of shipment of the device may be repaired under manufacturer's warranty.

The location of the warranty repair will be decided (see §V.2.d "Table of Intervention Responsibilities" below) based on the analysis of the fault that will be communicated by the customer.

Repairs under manufacturer's warranty (transport, spare parts and labour) are covered by PESS ENERGY.

b. Out-of-Warranty Repairs

Any breakdown occurring beyond the 2 years of the manufacturer's warranty may be repaired by an approved repairer, or if necessary PESS ENERGY, **at the customer's expense,** on the basis of intervention estimates that may be offered to him, before intervention.

c. Warranty Exclusions

PESS ENERGY cannot be held responsible for a defect (breakdown or wear and tear) if it results from improper use of the device. In this case, the repairs and warranty of the device may also be cancelled.

d. End of life of the device

For the disposal of your device at the end of its life, please refer to §II. "Important instructions for the environment".

VI. CASES OF MISUSE OF THE DEVICE

- Opening the device (breaking of the PESS ENERGY warranty strips)
- Shocks, punctures, drops (significant damage to the chassis or trims)
- Water penetration, immersion, humidity over than 95%
- Excessive presence of dust
- Storage out of the temperature range
- Use outside the temperature range
- Short circuit, overload
- Offloaded storage
- Overloading the device's inputs and outputs
- Changing factory computer settings
- Installation of components not approved by the manufacturer
- Use in the event of a use exclusion (see §VII "Usage exclusions")

Improper use of a device will result in a total suspension of the manufacturer's warranty.

VII. EXCLUSIONS OF USE

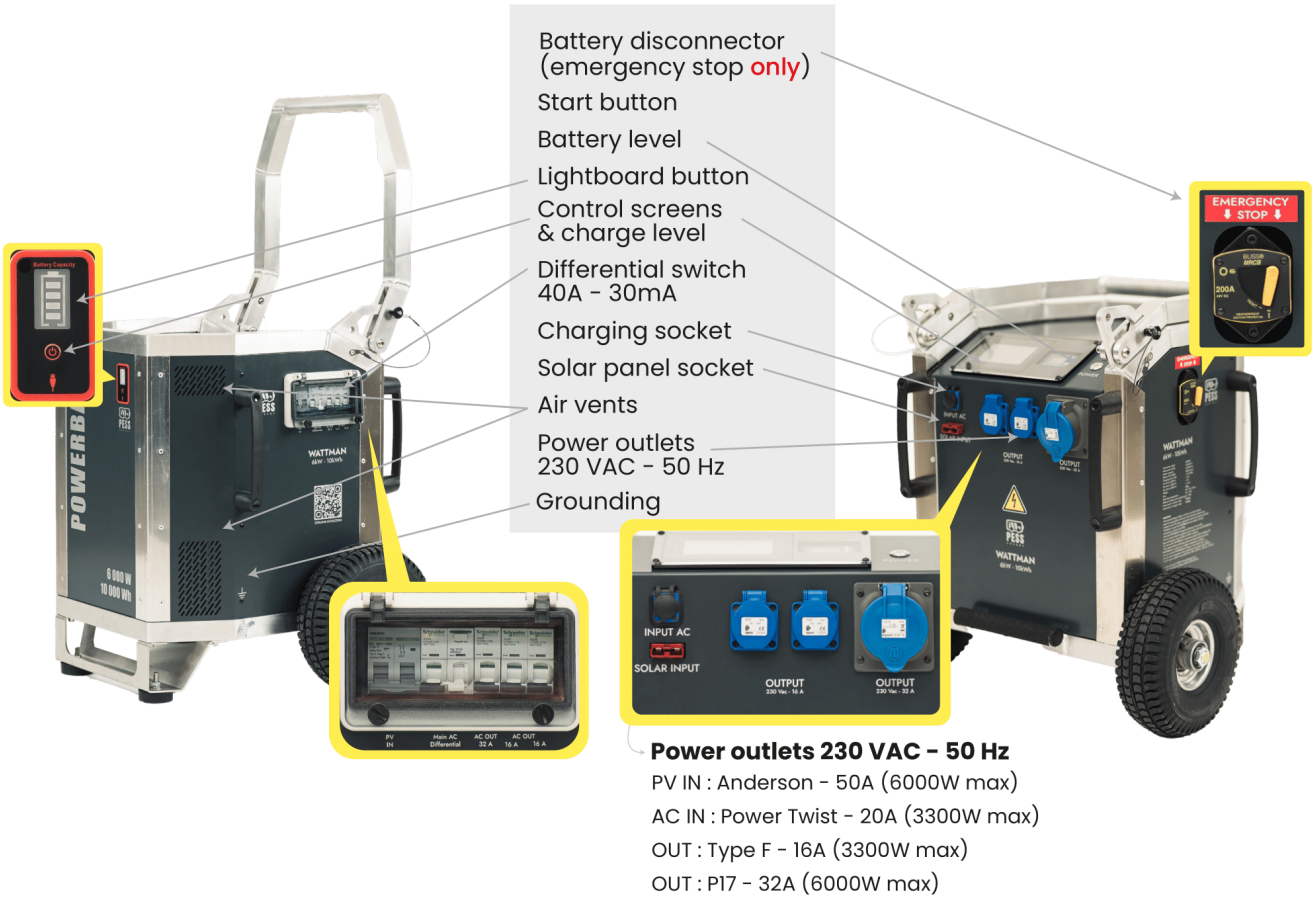
In addition to the "General safety Instructions" given in §I, it is forbidden to:

- Mounting on the device
- Lift the device more than one meter off the ground
- Dropping the device
- Pierce the device
- Insert foreign objects into the device
- Making short circuits in and around the device
- Ignite the device
- Rolling over a person, or on fragile ground with the device
- Spray the device with water or any other liquid, or submerge it
- Store the device outdoors
- Store the device discharged
- Dispose of the device in nature
- Transporting the device in an unsuitable vehicle

APPENDICES

1. BOBINE scheme

2. WATTMAN scheme



Power outlets 230 VAC - 50 Hz

PV IN : Anderson - 50A (6000W max)

AC IN : Power Twist - 20A (3300W max)

OUT : Type F - 16A (3300W max)

OUT : P17 - 32A (6000W max)

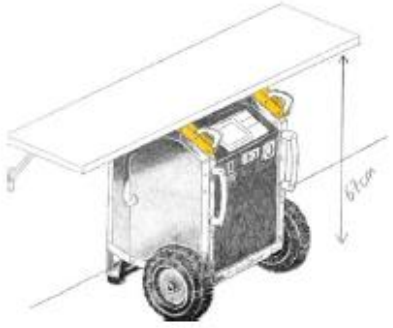
3. Use Case illustrations

Wattman on the move

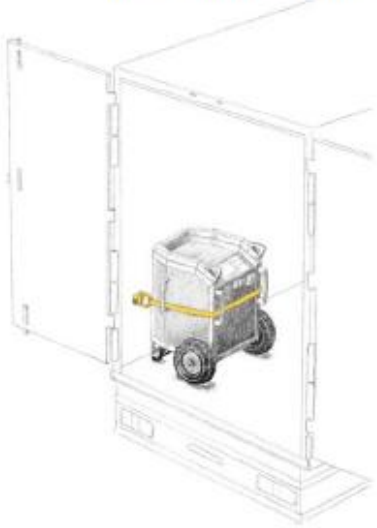
Climbing the stairs with a Wattman

Carrying a Wattman

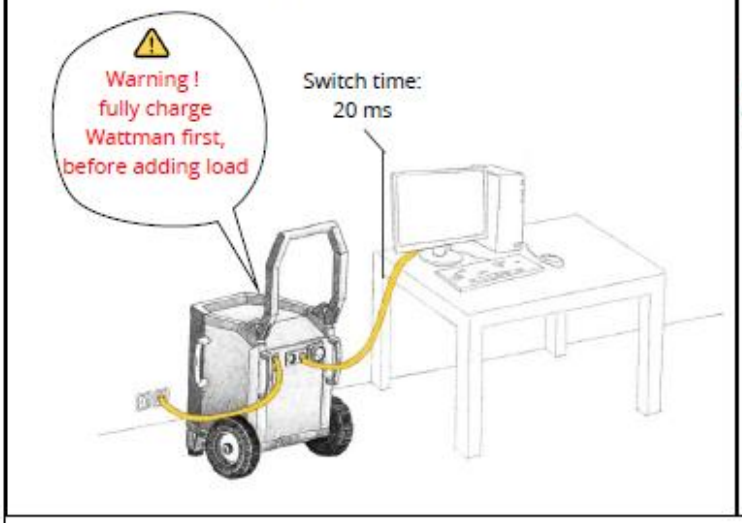
Wattman stored under a shelf



Wattman strapped in a truck

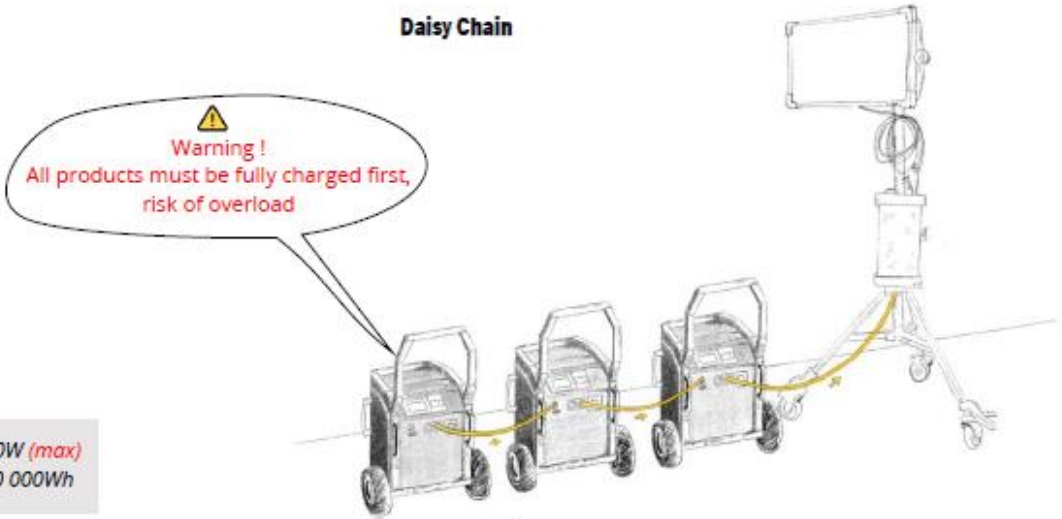


Back-up mode:
In case of grid failure, Wattman takes over



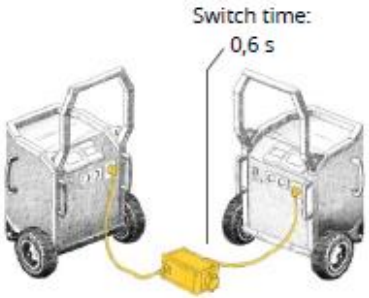
Power

Daisy Chain



Power: 3600W (max)
Capacity: 30 000Wh

Team Work with 2 Wattman

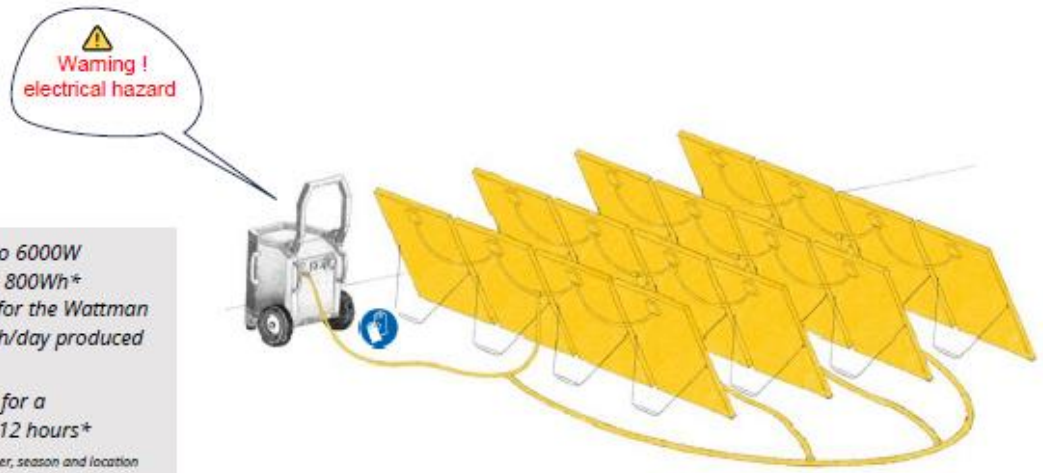


InfiniT Box
Output: 6000W
Capacity: 20 000Wh

Team Work
with 2 different power supplies

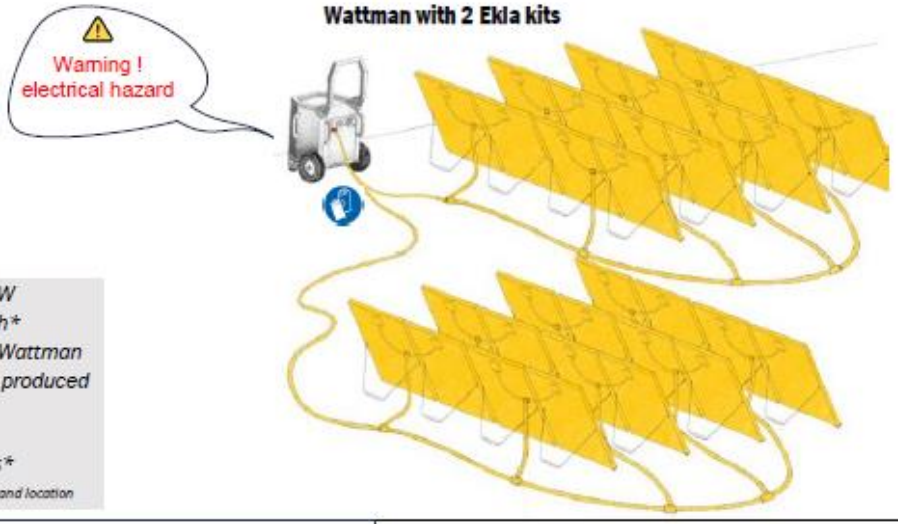
Output: 6000W
Capacity: Add the capacity of the 2 power supplies

Wattman with an Ekla kit



Output: up to 6000W
*Capacity: 18 800Wh**
(10 000 Wh for the Wattman and 8 800Wh/day produced by Ekla)
*Charge time for a Wattman: < 12 hours**
**Depends on weather, season and location*

Wattman with 2 Ekla kits



Output: up to 6000W
*Capacity: 27 000 Wh**
(10 000 Wh for the Wattman and 17 000Wh/day produced by Ekla
*Charge time for a Wattman: < 6 hours**
**Depends on weather, season and location*

Wattman loaded on a domestic socket

Charge: 3,30h = 100%
Charge power: 3600W

6 Wattman loaded on an EV charger