

# MARSTEK VENUS D

4kW 4 MPPT Balcony ESS with 2.5kW AC-Coupling



10  
Years

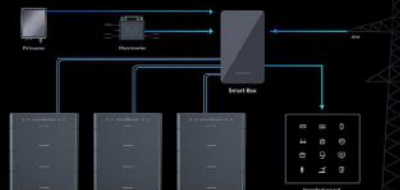
Warranty

-20°C to 60°C

Reliable Power from

Whole-Home  
Backup

With MARSTEK Smart Box



2.5kW  
Backup

Peak at 3.0kW



Plug & Play  
Installation in Just  
5 Minutes



IP65

Waterproof & Dustproof



**MARSTEK VENUS D**

4kW 4MPPT Balcony ESS with 2.5 kW AC-Coupling

2.5kW Hybrid Inverter | 4 MPPT 4kW PV Input | 2.56kWh~15.36kWh



2.5kW

Bidirectional Power



Compatible with Any  
Existing Solar System

Seamlessly Integrate  
with Your Existing Solar Setup



Up to 2.5kW Battery Charging

AI Optimized

TOU Management  
for Cost Savings



Anti Feed-in

With Smart Meter



Sub-30dB

Silent Operation

6000+ Cycles

Long-Lasting LFP Cells



Modular Design | Flexible Expansion

Up to 6 Units  
15.36kWh



# Powerful Balcony Solar Storage System

Plug-and-Play | Max. 4kW PV Input | 8 Solar Panels | 4 MPPT



# AC-Coupled Energy Storage System

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**Plug-and-Play**

**2.5kW Bidirectional On-Grid Power**

**Max. 2.5kW Backup**



# Plug & Play

Installation in Just

**5 Minutes**

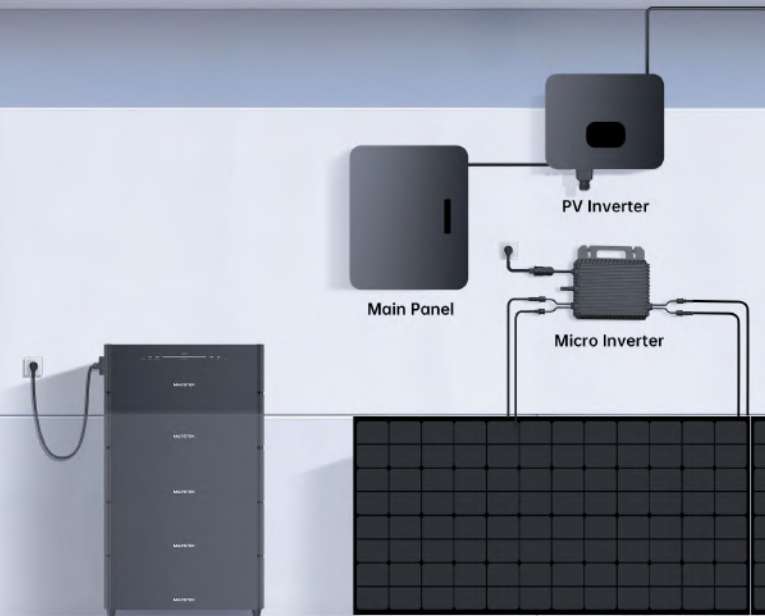


# Compatible with Any Existing Solar System

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## Seamless Integration

No rewiring, no upgrades, just more solar utilization.



# Modular Design

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**2.56kWh**

Per Battery

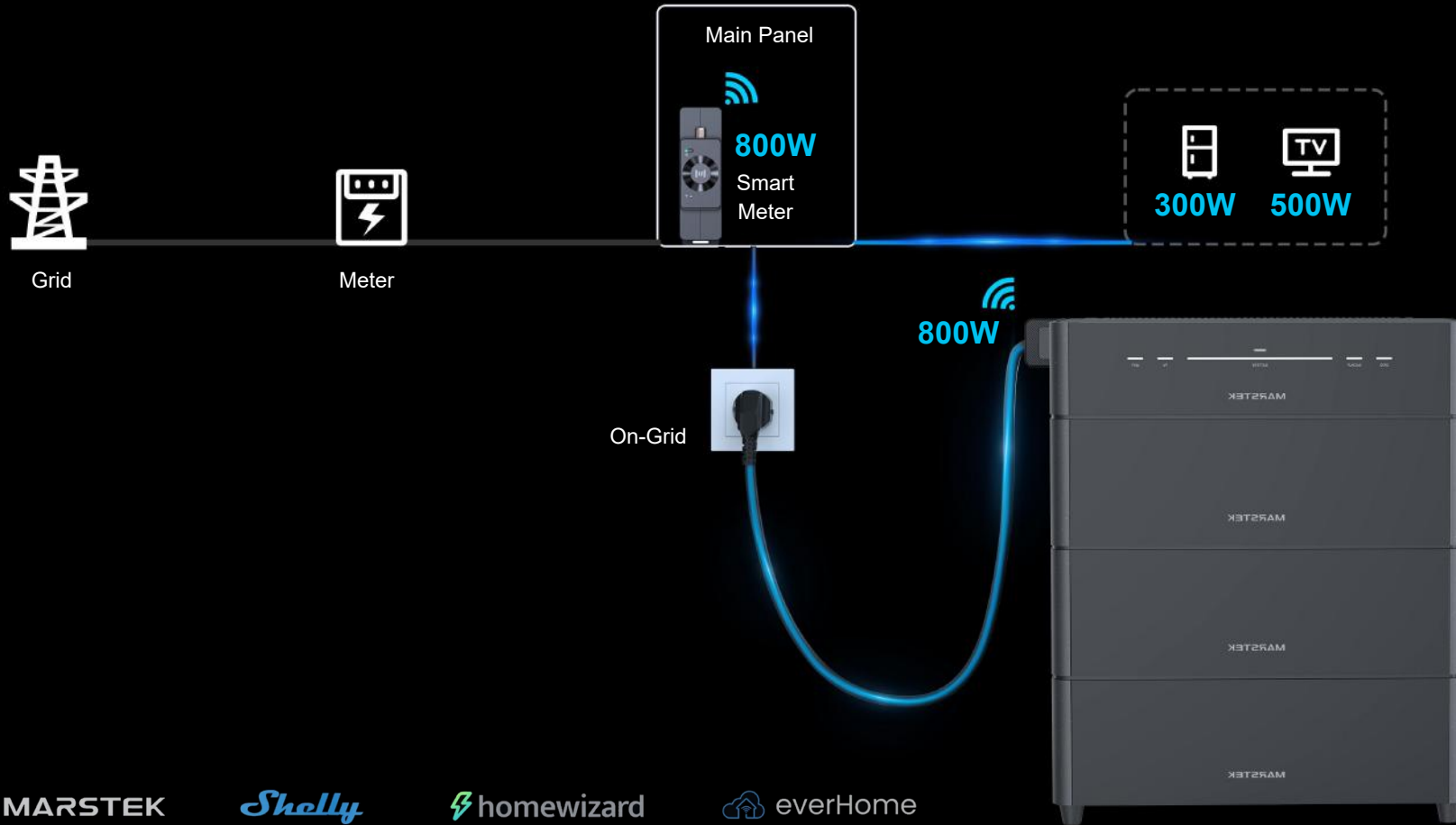
**15.36kWh**

Flexible Expansion up to 6 Units



# Anti Feed-in with Smart Meter

Compatible with **MARSTEK / Shelly / Homewizard / Everhome** Smart Meter



**100%**  
Self-Consumption

MARSTEK

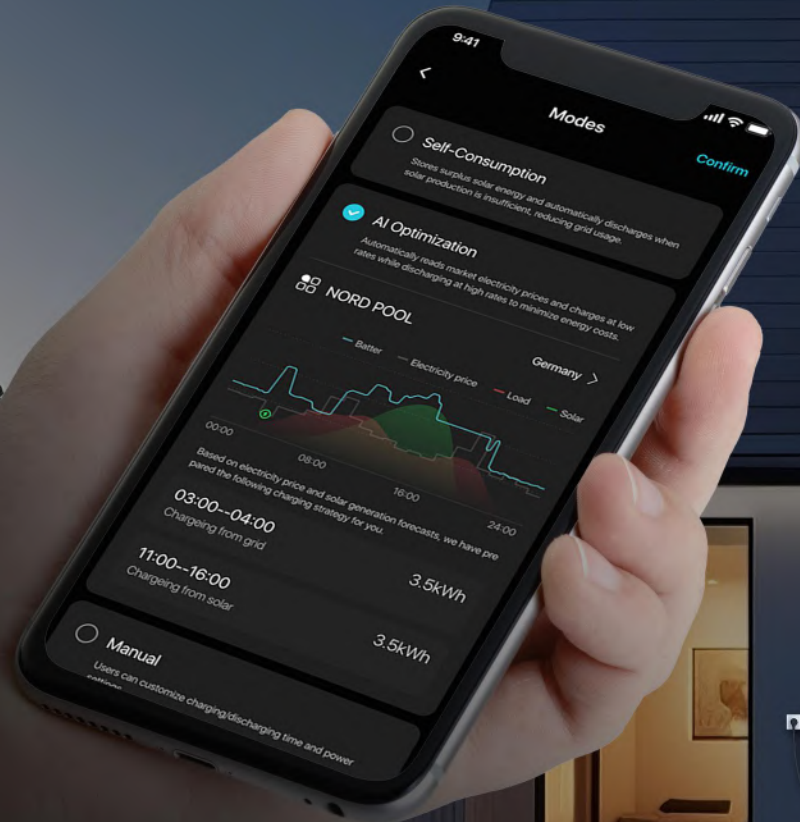
Shelly

homewizard

everHome

# AI Optimization

TOU Management for Cost Savings  
Command with MARSTEK App



A wooden A-frame cabin with a dark metal roof and a chimney. The interior is lit up, showing a living room with a sofa and a coffee table. A solar panel is mounted on the roof, and a battery storage unit is on the deck. The cabin is set in a wooded area with mountains in the background.

# Plug-in Off-Grid Micro-Grid

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For example, Summer House, Yacht...

# Sub-30dB

Silent Operation

# IP65

Waterproof & Dustproof

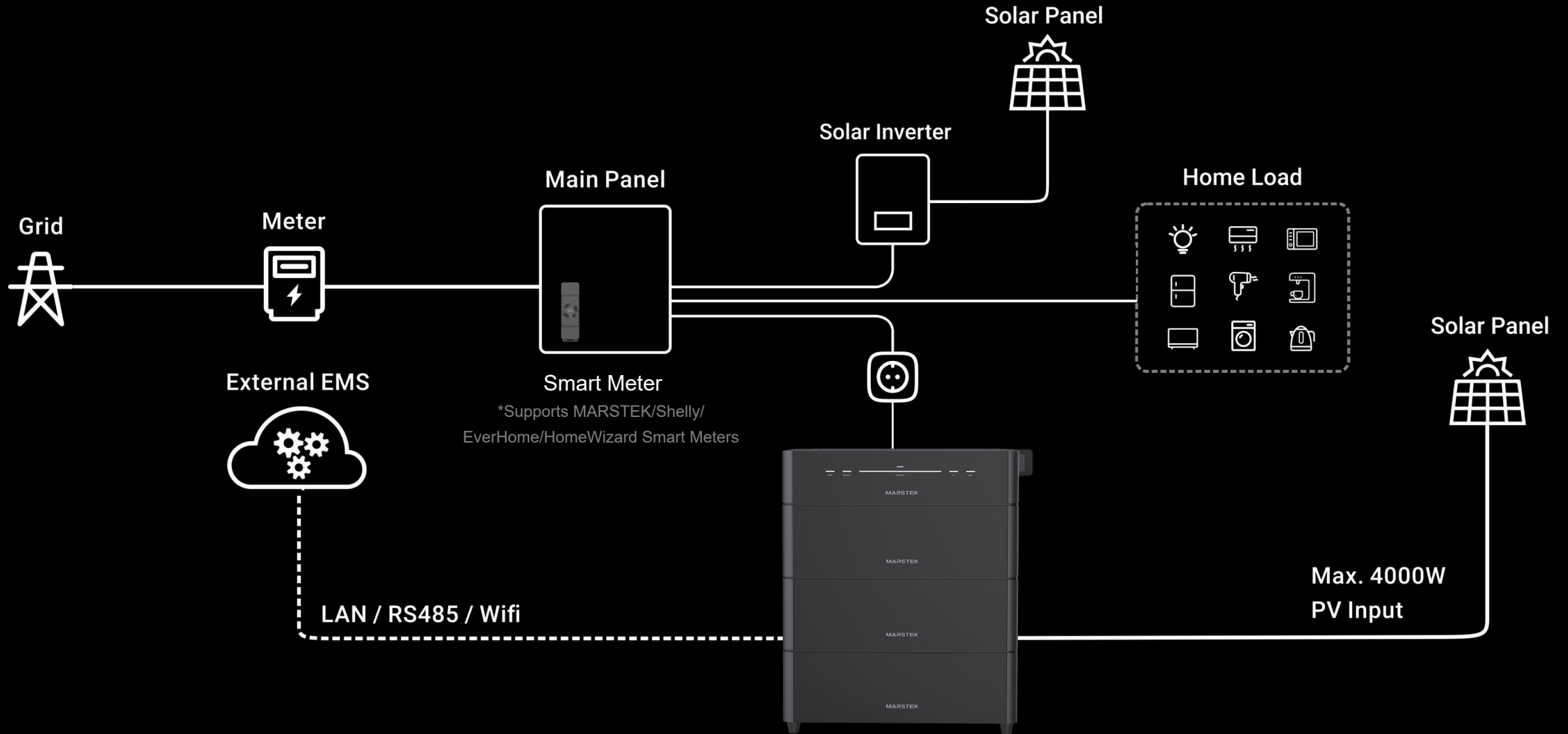


# -20°C

-20°C to 60°C



# Installation & Wiring Layout for MARSTEK VENUS D

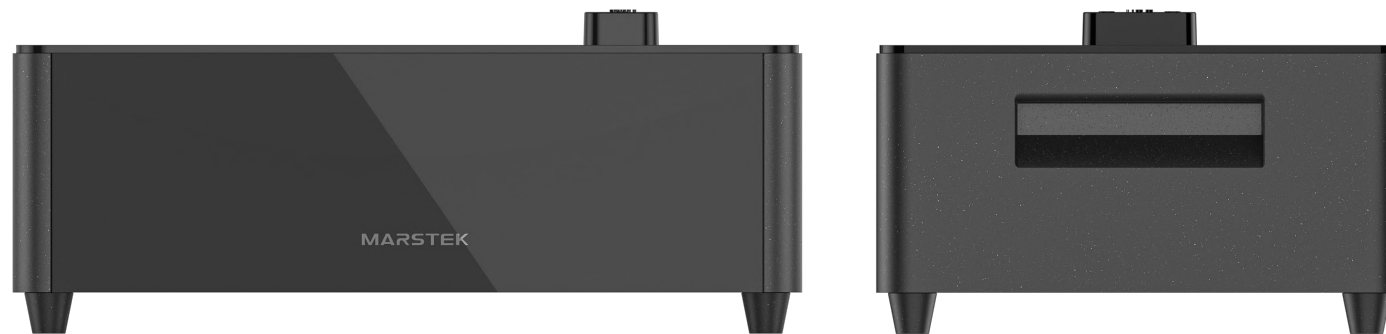


# VENUS D + EBM

4kW 4MPPT Balcony ESS  
with 2.5kW AC-Coupling

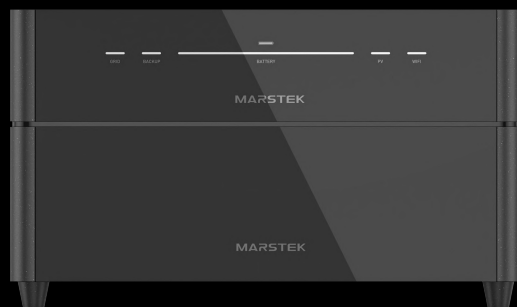


Specification Type	Host Specifications
	Venus-D+EBM
<b>Main Unit Parameters</b>	
Battery Storage Unit (Stack)	MST-E2.5ST-D
Number of Storage Units	0~6 pcs
Total Storage Capacity	2.56~15.36 kWh
<b>PV Input</b>	
Maximum Input Power	4 kW
MPPT Operating Voltage Range	25~55 V
Maximum Input Current (Single Channel)	32 A
Number of MPPTs	4
MPPT Efficiency	99.80%
<b>Backup (Off-Grid)</b>	
Rated Output Power	2.5 kVA
Peak Output Power	3 kVA (10 s)
Rated Output Voltage	230 V
THDu (Linear Load)	<3%
<b>AC Input / Output</b>	
Rated Output Power	0.8 kVA / 2.5kVA
Working Phase	L/N/PE
Rated Grid Voltage / Frequency	230 V / 50 Hz
Rated Grid Output Current	3.48 A / 10.87 A
Power Factor	>0.99 (default), 0.8 lagging...0.8 leading (adjustable)
THDi (Total Harmonic Distortion of Current)	<3%
<b>Efficiency</b>	
Battery Side - AC Side Maximum Efficiency	>94.5%
<b>Basic Parameters</b>	
Ambient Temperature Range	-20°C ~ +60°C (Storage: -30°C ~ +85°C)
Relative Humidity	≤95%
IP Rating	IP65
Dimensions	480 × 320 × 105 mm
Weight	17 kg
Cooling Method	Natural Cooling
Maximum Operating Altitude	2000 m
<b>General</b>	
Grid Connector Type	BC05
PV Connector Type	MC4
Off-Grid Socket Type	European Socket
Display	LED
Communication Interfaces	Bluetooth, Wi-Fi, RS-485, Ethernet



## VENUS D + EBM

4kW 4MPPT Balcony ESS  
with 2.5kW AC-Coupling



Model	MST-E2.5ST-D
<b>Battery Storage Parameters</b>	
Rated Voltage	51.2 V (16S)
Capacity	2.56 kWh
Cycle Life	>6000 (25°C)
Battery Cell Type	LiFePO <sub>4</sub>
Depth of Discharge (DoD)	90%
<b>Basic Parameters</b>	
Ambient Temperature Range	-20°C ~ +60°C (Storage: -30°C ~ +85°C)
Relative Humidity	≤95%
IP Rating	IP65
Cooling Method	Natural Cooling
Maximum Operating Altitude	2000 m
Dimensions	480 × 320 × 150 mm
Weight	24.6 kg

# THANKS!

## Contact Us

Mail: [info@marstekenergy.com](mailto:info@marstekenergy.com)

Web: [marstekenergy.com](http://marstekenergy.com)



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