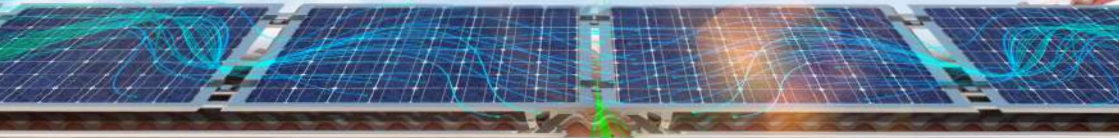


# VESTEL RESIDENTIAL BATTERY SOLUTIONS

ENSURING CONTINUITY



**VESTEL**  
MOBILITY

# VESTEL MOBILITY

Vestel Mobility is a part of Vestel Group which is a renowned global leader in the field of innovation and technology. Vestel Mobility is actively contributing towards the future of transportation and energy transition by specializing in automotive electronics, battery solutions, and electric vehicle (EV) chargers.

In the automotive electronics sector, Vestel Mobility excels in engineering and manufacturing advanced electronic control units (ECUs), EV powertrain components and cockpit electronics such as clusters and infotainment displays.

Vestel Mobility is also a prominent player in the battery solutions arena, producing high-quality battery packages for eBikes, telecom towers, and energy storage systems. These solutions cater to a wide range of residential, commercial, industrial and utility applications.

Furthermore, Vestel Mobility showcases its commitment to promoting sustainable transportation systems by offering a comprehensive range of EV chargers. With both AC and DC options available, Vestel aims to provide seamless and eco-friendly charging infrastructure to support the growing adoption of electric vehicles.



With over 40 years of experience, a vast city-size 1.3 million m<sup>2</sup> industrial complex, 11 offices based around the world, clientele from over 160 countries, a client-orientated mindset, and true R&D, Vestel embodies a legacy of excellence and a commitment to advancing industries at the intersection of innovation and sustainable solutions.



### Exports

160+ countries



### Export Leader of Turkey

for the last 26  
consecutive years



**900+** Customers

**500+** Brands



### Established over

1.3 million m<sup>2</sup>



**20.000+**

Employees



# AVAILABILITY

Vestel Trade	Manisa
Vestel UK	London
Vestel France	Paris
Vestel Germany	Munich
Vestel Iberia	Madrid
Vestel Holland	Rotterdam
Vestel Russia	Moscow
Vestel Central Asia	Almaty
Vestel Romania	Bucharest
Vestel Poland	Warsaw
Vestel Gulf	Dubai
Vestel USA	New York



Headquarter  
Manufacturing Facility





# VESTEL SUSTAINABILITY GOALS



**42%** absolute value reduction in Scope 1 and 2 greenhouse gas emissions.



**30%** reduction in energy intensity (per unit product).



Using **50%** recovered and recycled water.



Reducing the amount of water withdrawn per unit of production by **35%**.



**Zeroing** the amount of waste sent to landfills.



Achieving a female employee ratio of **40%** of the total workforce.



Vestel's vision is to be a technology company creating social and environmental benefits through accessible and smart products that make life easier. We are investing in innovative business models for transition to a net zero emission economy and striving to implement circular models in both our products and operations.

We are developing solutions that meet the needs of the future. We are designing products free from hazardous chemicals, that use recycled and recyclable materials, which are durable, easy to repair as well as energy and water efficient.

We calculate and report our carbon footprint according to the ISO 14064 standard and our water footprint according to the ISO 14046 standard and have these verified by independent third parties. We share our performance transparently through our CDP reports. We aim to reach net zero emissions by 2050, first in our own operations and then throughout our entire value chain. To that end, we aim to switch to technologies that cause less greenhouse gas emissions in production, increase renewable energy investments and manufacture products with high energy efficiency, less water consumption, and resource efficiency benefits.

We aim to strengthen our presence as a global player with our experience, vision, intellectual power, and technological prowess; and we are determined to contribute to a better and livable world, focusing on our environmental, social and governance performance.



# INNOVATION

VESTEL's approach brings the true meaning of custom design experience and creates the highest level of technology solutions from scratch. VESTEL Battery Solutions R&D team ensures complete client satisfaction by meeting the needs of any project at the highest quality. Combining the latest technology test and simulation tools alongside the design and manufacturing capabilities all in-house.



Fast and Fully Customized Projects by Providing Direct Access to our R&D Team.



R&D Investment Amounting to an Average 80M USD.



7 R&D Centers in 4 Countries.



Among Top 50 Companies in Patent Applications in Europe



# PRODUCTION WITH HIGHEST QUALITY

## TPM Awarded Manufacturing Facility

Awarded for World-Class TPM Achievement

## Auto Grade Production for BMS

Automotive Grade In-house BMS Manufacturing with IATF 16949 Certification at Europe's biggest automated PCB facility.

## Automated Production Lines

Fully automated cell sorting for the best possible cell balancing.

## Laser Welding

Fully automated laser welding technology.

## In-house Accredited Testing Facilities

Vestel Battery Solutions provides the utmost quality products with highest standards of quality with in-house accredited testing facilities for environmental, electrical, software and mechanical tests.



Tracking Real Time



ERP Integration



Real Time Planning



Traceability

# GAIN YOUR INDEPENDENCE FROM THE GRID



# RESIDENTIAL BATTERY SOLUTIONS



Energy  
Independence



Environmental  
Benefits

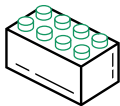


Power Outage  
Protection



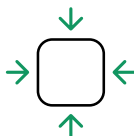






## Plug & Play

Ease of assembly with plug-and-play design without unnecessary cabling



## Compact Design

Slim Design with 16 cm of depth to fit any space



## Anytime Capacity Upgrade

Ease of assembly with plug-and-play design without unnecessary cabling



## Operation at Freezing Temperatures

Ease of assembly with plug-and-play design without unnecessary cabling



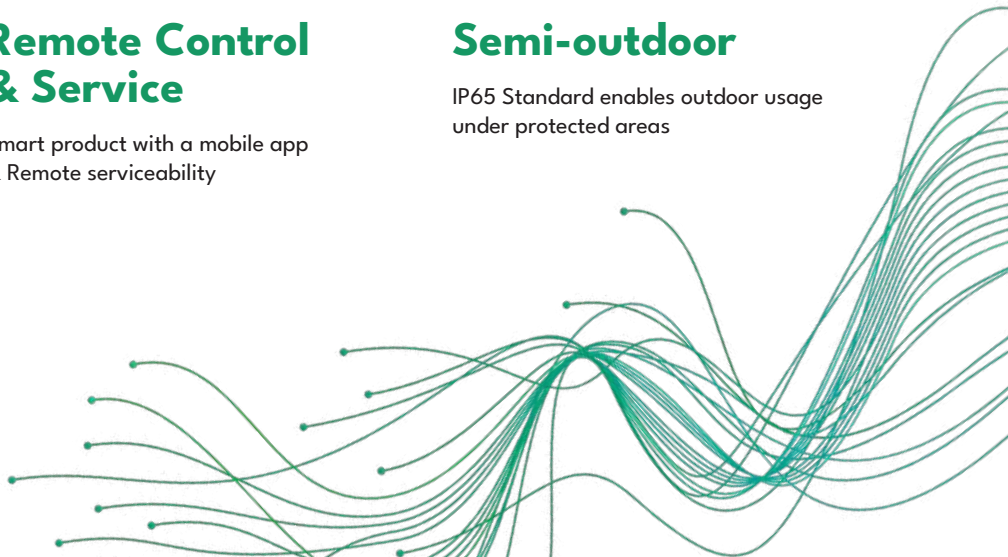
## Remote Control & Service

Smart product with a mobile app & Remote serviceability



## Semi-outdoor

IP65 Standard enables outdoor usage under protected areas



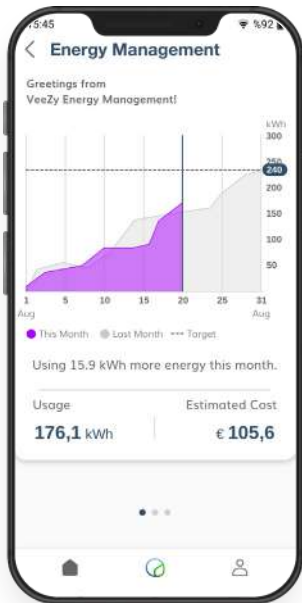


# BILL MANAGEMENT

Lower your utility bills by harnessing and storing energy during low-cost hours for usage in high-rate periods. Furthermore, the Vestel Residential Battery offers a practical way to capitalize on your solar panel installation, enabling you to utilize the energy generated more efficiently.



## Vestel as a Full Solution Supplier



# KEY DESIGN FEATURES



## Expandable Capacity

Modular structure of Vestel Residential Battery Solutions allow to expand capacity of battery systems without replacing their infrastructure. With its high energy density and reliability, it's an ideal choice for various applications to adapt and grow with ease while maintaining a high level of performance and reliability.



## Renewable Integration

Solar PV integration feature allows storing energy generated from renewable sources for later use, ensuring a more efficient and sustainable energy system.



## Durability and Longer Life

With patented innovative on-board charger unit, it prevents unnecessary cycling of the battery, ensuring a longer product life and reducing the need of maintenance.



## Safety Protection

Safety is a key priority for Vestel Residential Battery. With our extensive experience in home electronics, we have integrated advanced security features into our product. The system incorporates with intelligent thermal management, over/under voltage&current protection, ensuring the utmost safety for you.

# KEY DESIGN FEATURES



## Remote Monitoring

Homeowners can remotely access real-time data and alerts, monitor various performance metrics, and perform predictive maintenance and firmware updates, ensuring that the battery system is always up-to-date and operating at peak performance.



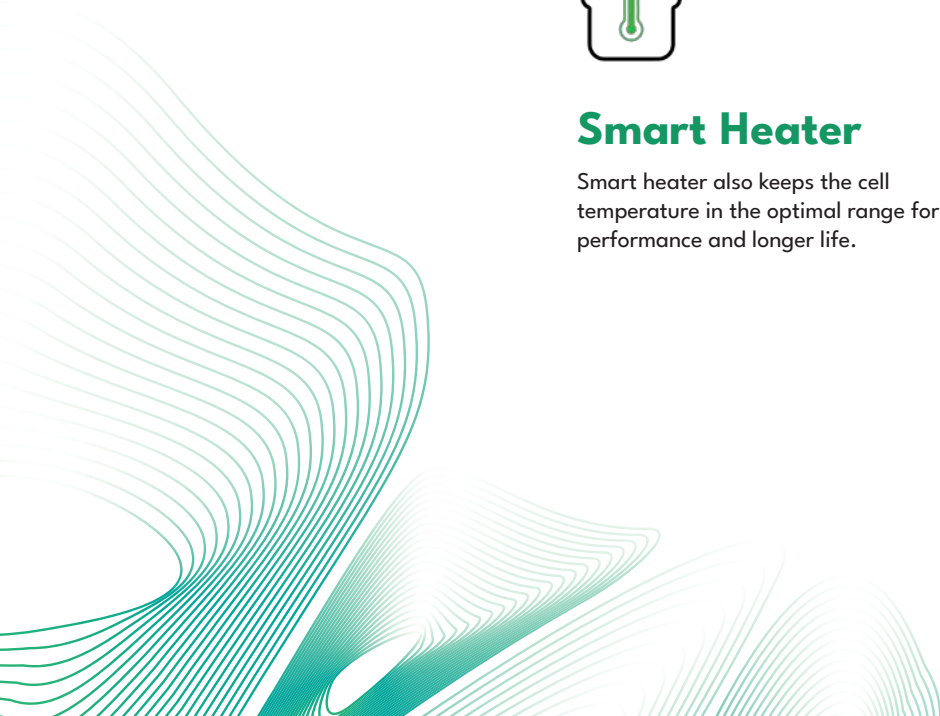
## Modular and Compact Design

The Vestel Residential Battery features a modular and compact design, offering customers the advantage of space-saving and the flexibility to expand capacity based on their future requirements.



## Smart Heater

Smart heater also keeps the cell temperature in the optimal range for high performance and longer life.



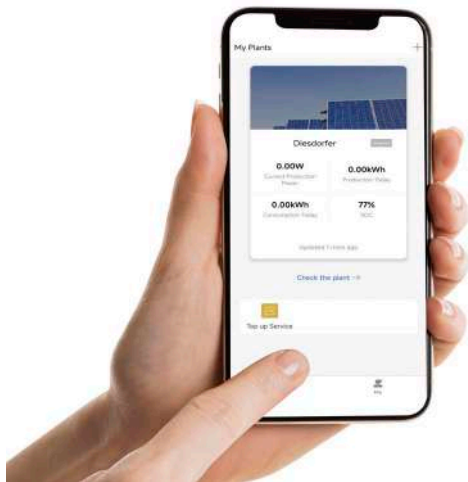
# BATTERY MANAGEMENT APP

Battery Management app allows you to prioritize the energy sources to the main load like PV, battery or grid. Also with the app, you can prioritize of consumptions from the energy resources like main load, battery or grid. You may also define the priority for the resource to charge the battery, from PV or grid. Application has 2 accounts, one for end users to monitor all power battery functionalities, energy production and consumption data and one for installers to easily connect and make the settings of battery

## Mobile App allows users;

- Monitor their energy usage in real-time
- Adjust settings to optimize their battery system's performance
- Receive notifications when their battery is running low or requires maintenance.
- Access historical energy data to identify trends and make informed decisions about energy usage.
- Cost saving by monitoring your energy usage and adjusting settings to optimize performance, homeowners can save money on their energy bills.
- Reduce environmental impact and contribute to a more sustainable future.

## Vestel as a Full Solution Supplier



# ALL IN ONE RBS SYSTEM SPECIFICATIONS

Items	Specifications
<b>INVERTER</b>	
No. of phases	Singla Phase - Three Phase
Protection Class	Class I
Uninterrupted Power Supply (UPS)	Yes
Max. cont. SYSTEM DISCHARGE Power [kW]	15
<b>BATTERY MODULES</b>	
Nominal Voltage [V]	102.4 - 409.6V
Modular System (yes/no)	Yes
Maximum System Capacity [kWh]	30,0
Module Capacity [kWh]	5kWh
Module Weight [kg]	55,0
Max. cont. CHARGE Power [kW]	min. 2.5kW up to 15kW
Max. cont. MODULE DISCHARGE Power [kW]	min. 2.5kW up to 15kW
Operating Temperature	-20°C to +55°C
<b>CERTIFICATIONS</b>	
Thermal Runaway	UL9540A
EMC	IEC/EN 61000-6-1/-2/-3/-4
Inv. Safety	IEC62109-1/-2
Embedded SW	UL1998
Solid-State Devices	UL991
Transport	UN38.3
R-ESS Safety	VDE-AR-E2510-50
Lithium System Safety	IEC62619
GridCodes - VDE-AR-N-4105	Yes
<b>ENERGY MANAGEMENT SYSTEM</b>	
Smart Home Integration	Yes
Other App	Yes
<b>OTHERS</b>	
Remote Firmware Update (OTA) possible	Yes
Max. System Capacity [kWh]	30
IP-Rating	IP65
Installation Type	Wall-mounted
System Dimensions (H*W*D)	840 x 800 x 160 mm (10kWh 2 modules option)
Connectivity Options	WiFi, Ethernet
Supported Protocols	Modbus, RS485, CAN
System Warranty	5 Years



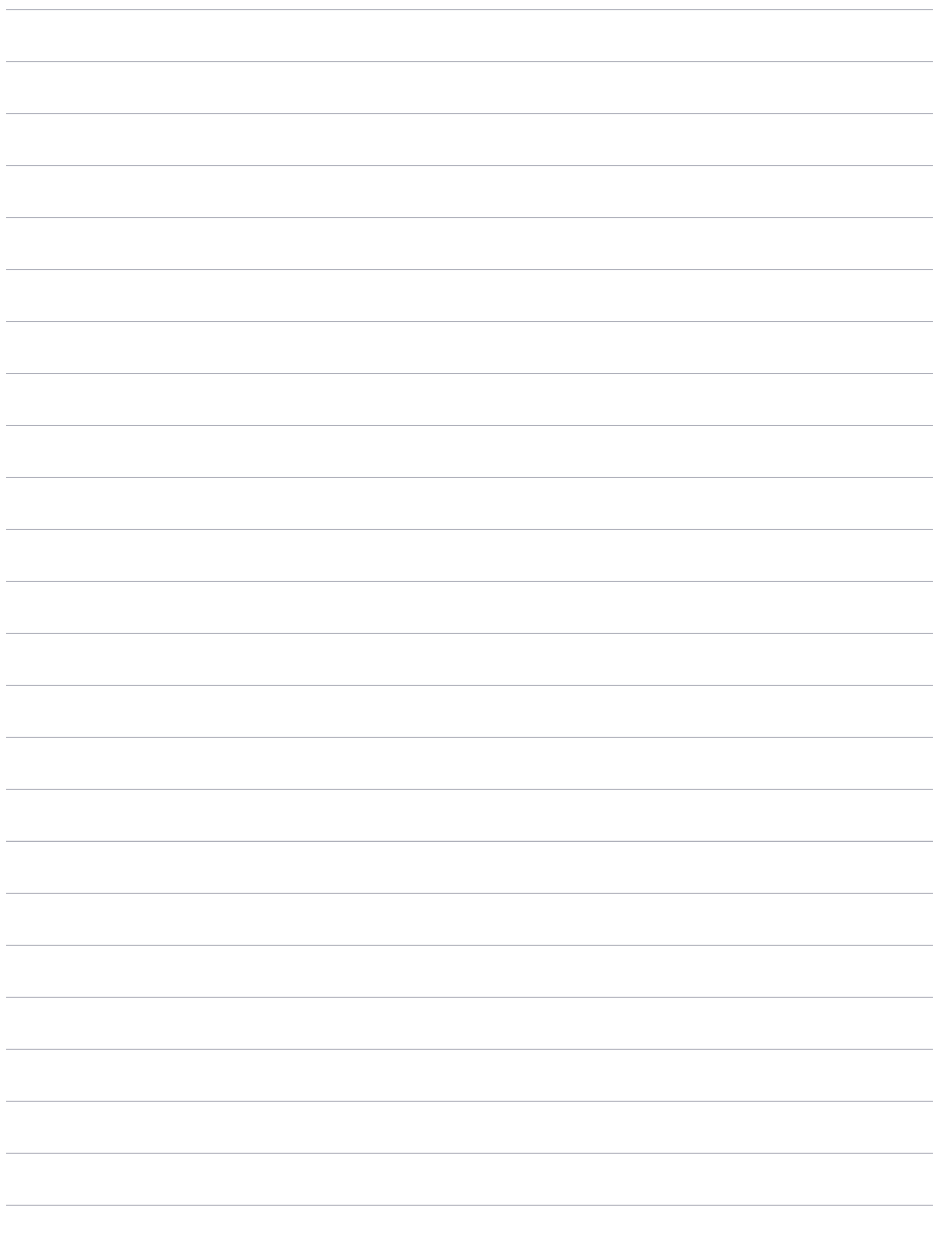














# VESTEL

## MOBILITY

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