



# Türkiye's Lithium-Ion Battery Cell and Energy Storage System Manufacturer



# KONTROLMATİK TECHNOLOGIES GROUP STRUCTURE

We know industrial processes, power plants and transportation infrastructure very well, and we implement projects that will speed up operations, increase efficiency and reduce carbon footprint. Accordingly, we develop sustainable technologies for a carbon-neutral and livable future with our subsidiaries.



## Kontrolmatik Technologies Energy and Engineering Inc.

Kontrolmatik is a system integrator and technology provider that offers end-to-end digital solutions for the energy, industrial process, mining and transportation sectors. In 2022, Kontrolmatik ranked 28th in the "World's Largest System Integrators" list published by "Control Engineering Magazine", making it one of the youngest companies on the industry's most prestigious list. In the years coming, the Company aims to further increase this success and become one of the top ten companies worldwide.



## Pomega Energy Storage Technologies Inc.

Pomega Energy Storage Technologies, a subsidiary of Kontrolmatik, is a manufacturer of Lithium-Ion (LFP) Battery Cells and Energy Storage Systems. Pomega Energy Storage Technologies Factory is built on approximately 100,000 m<sup>2</sup> in Polatlı, Ankara. The first phase of the plant, of which the groundbreaking was held in 2022, was commissioned in 2023 with a capacity of 500 MWh/year. By the end of 2023, with the commissioning of the additional phase, it is planned to reach a capacity of 1,750 MWh/year and 3,000 MWh/year in 2024.



## Pomega Energy Storage Technologies (U.S.A.)

Pomega Energy Storage Tech. Inc. is a company established to produce lithium-ion battery cells and energy storage systems with an annual capacity of 3 GWh in South Carolina, U.S.A., with a partnership of 50% Kontrolmatik Inc., 10% Pomega Inc. and 7.5% Kontrolmatik Inc.



## Enwair Energy Technologies Inc.

Enwair, which started its activities by developing anode, cathode and polymer materials to produce new generation lithium-ion batteries, continues its R&D studies on battery chemistry, electronics and material structure.



System Integrator  
EPC Solution Provider  
Mobile Energy Solution  
Producer  
R&D Center



Lithium-Ion Battery Cell  
and Energy Storage  
Systems Manufacturer



Electricity Trading and  
Energy Storage Facility  
Investor



IoT  
System Integrator  
Sensor and Device Manufacturer  
Software and System Provider



Satellite Manufacturer  
IoT Communication  
Service Provider



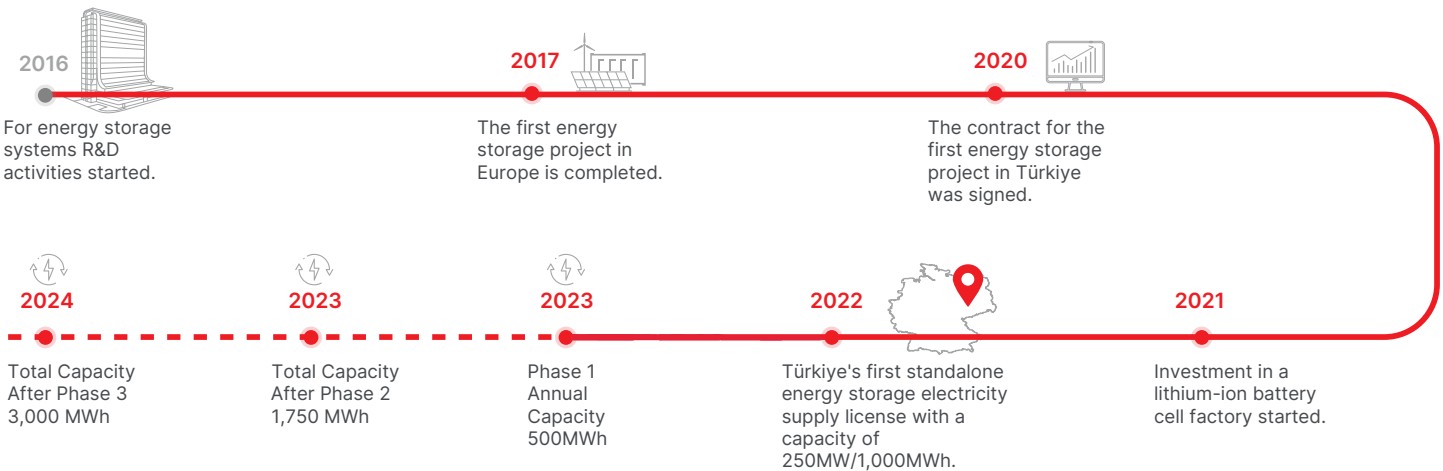


## ENERGY STORAGE TECHNOLOGIES

Pomega Energy Storage Technologies Inc. is one of the subsidiaries of Kontrolmatik and is Türkiye's one and only Lithium-Iron Phosphate battery cell giga factory of the private sector with an area of approximately 100.000 m<sup>2</sup> in Polatlı Organized Industrial Zone, Ankara.

The "Giga Factory", whose 1st phase was commissioned in 2023, will reach a total annual production capacity of 3 GWh when all phases are completed by 2024. With this investment, which will contribute to reducing foreign dependence on energy and support energy supply security, a total net capacity of 3 GWh will be reached in 3 phases, with 500 MWh in the first phase. With the opening of the first phase of the plant, more than 250 jobs will be created, while 600 jobs are targeted with the commissioning of the other phases.

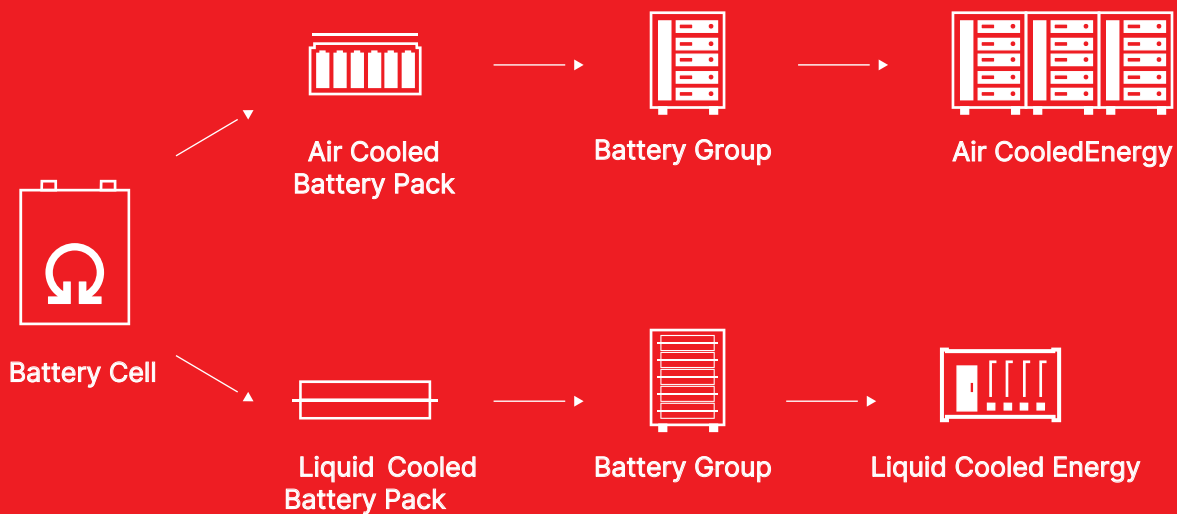
Pomega Energy Storage Technologies Inc. meets the increasing demand of the industry by producing Lithium Iron Phosphate battery cells, battery packs and energy storage systems. These products are the best solutions for power plants, national grids, factories, house applications, automotive and areas demanding high-power.



# THE FUTURE OF ENERGY; POMEGA



Pomega Energy Storage Technologies manufactures Lithium-Iron Phosphate (LiFePO<sub>4</sub>) prismatic battery cell and battery pack as well as all kind of end-to-end energy storage solutions at its giga factory in Polatlı, Ankara. This value-added product range can be used from power plants to national grids, manufacturing plants, home applications, electric ground vehicles and marine vessels.



Cabinet-type, utility scale and residential type energy storage systems, electric and mobile vehicle charging support systems, hybrid renewable storage containers and stationary energy storage products provide energy storage solutions to grid operators, electricity market components, industrial customers and companies operating e-charging stations.



**TÜRKİYE, THE COUNTRY WITH THE NEVER ENDING SUNLIGHT  
THANKS TO SOLAR ENERGY STORAGE TECHNOLOGIES**

With Pomega's solar energy storage technology, solar energy can now be stored and used at any time. Solar remains as the energy source of our country 24/7 and never sets!



# TÜRKİYE'S LITHIUM-ION BATTERY CELL GIGA FACTORY

- + Built on an area of approximately 100,000 m<sup>2</sup> in Polatlı, Ankara
- + "Giga Factory" with sustainable infrastructure targeting "carbon neutral, circular economy, LEED GOLD certificate"
- + Rooftop solar power plants, rain harvesting, waste heat recovery systems and more
- + **Safe and environmentally friendly technology: Lithium-Iron Phosphate (LiFePO<sub>4</sub>)**
- + Mass production with 3 GWh annual capacity as of 2024
- + More than 250 jobs in the first phase and 600 jobs in total when full capacity is reached



# END TO END ENERGY STORAGE SYSTEM PROVIDER

POMEGA ENERGY STORAGE TECHNOLOGIES

Pomega Energy Storage Technologies are integrated energy storage systems that enable the energy generated from the selected energy source at the preferred time to be stored in Lithium-Ion batteries and reused when necessary.

The main purpose of Pomega Energy Storage Systems for power grids is to convert electrical energy into a form to be stored, store it and transfer it back to the grid as electrical energy when needed. Pomega is installed with control and management systems to support a safe and smooth operation process. The aim is not only to provide regional control, but also coordinated control of the system throughout the national grid.

Pomega controls charging/discharging times and daily routines with its self-developed energy management system (EMS) to increase revenue in energy trading and ensure system security. optimization by learning.





# FOR POWER PLANTS ENERGY STORAGE



Easy Integration



Modular



Mobile Plug



Play Remote Control



High Efficiency



Multitasking

Renewable power plants cannot carry the base load in national grids due to their variable and unpredictable generation profiles. Therefore, their contribution to national grids is limited. With energy storage systems, excess energy can be stored and reused at any time, thus making the production profiles of power plants predictable.

In a world where carbon emissions are aiming to be reduced, "Energy Storage Systems" offer unique opportunities to sustain renewable energy-based generation and ensure that fewer fossil fuel-based power generation plants are needed on the grid.







# APPLICATIONS

- + Peak shaving
- + Load shifting
- + Reserve capacity allocation
- + Load variation control
- + Primary and secondary frequency control
- + Arbitrage
- + Black-Start
- + Uninterrupted power supply
- + Transition power
- + Power factor correction







# FOR INDUSTRIAL PLANTS ENERGY STORAGE



Energy storage plays an important role in the transition to a carbon-neutral and self-sufficient economy. It is a unique option for selecting and optimizing the energy source used in production facilities. Energy Storage Systems provide the opportunity to control energy consumption to prevent the effects of variable energy prices in different industries. These systems provide alternative solutions to balance energy grids and save on energy costs, as well as increase energy efficiency and integrate more renewable energy sources into the grid. In addition to that, optimizing and making energy costs predictable helps increase the competitiveness of industrial facilities in domestic and international markets.







## Implementations

- + Load shifting
- + Uninterrupted power supply
- + Self-consumption control
- + Backup power
- + Grid resilience





# ENERGY STORAGE FOR CHARGING STATIONS



As electric vehicles become more prevalent in our lives, the need for charging stations also increases. In addition to help reducing initial investment costs, Energy Storage Systems allow projects to be realized faster particularly in the areas where charging stations will be installed is insufficient.

Energy storage systems are being installed alongside solar power plants to have a more reliable and sustainable infrastructure for charging stations. Thanks to this approach, the installation of charging stations could be realized with a decentralized, flexible and independent way.





## IMPLEMENTATIONS

- + Demand control
- + Peak shaving
- + Load shifting
- + Uninterrupted power supply
- + Backup power
- + Grid resilience services





# STAND ALONE ENERGY STORAGE FACILITY



As the contribution of renewable energy power plants continues to increase regularly, grid-scale energy storage facilities contribute to the creation of a more stable and sustainable national grid by storing this energy and distributing it when needed. Combining hardware, software, installation and service integration, these systems will also reduce lifecycle costs and provide reliable energy for both the national grid and new power plant investments.

Designed to provide low-cost, high-density and grid-scale solutions, Energy Storage Facilities offer the solutions required by grids with fully integrated battery modules, inverters, battery and energy management systems that can be monitored and controlled remotely 24/7.





## IMPLEMENTATIONS

- + Load shifting
- + Reserve capacity allocation
- + Load change control
- + Primary and secondary frequency
- + Uninterrupted power supply
- + Grid balancing
- + Arbitrage
- + Transition power
- + Power factor correction





## ALL-IN-ONE RESIDENTIAL TYPE ENERGY STORAGE



We believe that everyone has the right to use renewable energy in their homes and with our solutions, we offer people the right to choose their energy source. Using residential energy storage systems combined with solar or wind power plants and connected to the grid allows a home to store excess generated energy for its own use or to sell back to the grid. The system can then be automatically recharged from the grid during off-peak hours and benefit from cheaper tariffs while doing so.

This installation provides the user with "energy independence" while creating a more flexible energy system, increasing renewable energy opportunities and helping to decarbonize the grid.





## FEATURES

- + Single integrated package with inverter and battery
- + Advanced energy Management
- + On-Grid and Off-Grid applications
- + Reliable and trouble-free technology
- + Elegant design
- + Easy installation and operation
- + Increasable capacity



# LFP BATTERY CELLS



PLFP-100



PLFP-150



PLFP-302

Model	PLFP-100	PLFP-150	PLFP-302
Nominal Capacity	100Ah	150Ah	302Ah
Nominal Voltage	3.2V	3.2V	3.2V
Limited Voltage in Charge	3.65V	3.65V	3.65V
Final Voltage Discharge (>0°C)	2.50V	2.50V	2.50V
Final Voltage Discharge (≤0°C)	2.00V	2.00V	2.00V
Discharge Temperature	-15~50°C	-15~50°C	-15~50°C
Charge Temperature	0~50°C	0~50°C	0~50°C
Storage Temperature	-10~60°C	-10~60°C	-10~60°C
Standard Charge/Discharge Current (25°C)	0.5C / 0.5C	0.5C / 0.5C	0.5C / 0.5C
Max. Continuous Charge/Discharge Current	1C / 1C	1C / 1C	0.5C / 1C
Max. Pulse (30s) Charge/Discharge Current	2C / 2C		2C / 2C
ACR (25°C, 15%SOC,1KHz)	≤0.6mΩ	≤0.6mΩ	≤0.3mΩ
DCR (25°C, 50%SOC,100A/10s)	≤2.0mΩ	≤2.0mΩ	≤0.6mΩ
Capacity Retention (25°C, 100%SOC, 30days)	≥95%	≥95%	≥95%
Capacity Retention (60°C, 100%SOC, 7days)	≥95%	≥95%	≥95%
Residual Capacity Loss	≤4%/month (50% SOC ,25°C)	≤4%/month (50% SOC ,25°C)	≤4%/month (50% SOC ,25°C)
Cycle Life (*)	≥5000	≥5000	≥5000
Calendar Life	≥10 Year	≥10 Year	≥10 Year
End of Life	<80%	<80%	<80%
Recommended Range of SOC	10% - 90%	10% - 90%	10% - 90%
<b>Mechanical Properties</b>			
Humidity Range	0-85%RH (non-condensing)	0-85%RH (non-condensing)	0-85%RH (non-condensing)
Altitude	<4500m	<4500m	<4500m
Case	Prismatic - Aluminium	Prismatic - Aluminium	Prismatic - Aluminium
Width	173.9 ± 0.5 mm	173.9 ± 0.5 mm	173.5 ± 1.0 mm
Depth	48.6 ± 0.5 mm	48.6 ± 0.5 mm	72.0 ± 1.0 mm
Height (No Pole)	115.6 ± 0.5 mm	166.6 ± 0.5 mm	204.5 ± 1.0 mm
Height (Including Pole)	119.4 ± 0.5 mm	170.4 ± 0.5 mm	208.8 ± 1.0 mm
Weight	2.0 ± 0.1 kg	2.90 ± 0.1 kg	5.49 ± 0.3 kg

(\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge



# LOW VOLTAGE 19" BATTERY PACKS



PBL-51100



PBT-48100



PBT-48150

Model	PBL-51100	PBT-48100	PBT-48150
Cell Type	LiFePO4 - Prismatic		
Nominal Voltage	51.2V	48V	
Nominal Capacity (*)	100Ah		150Ah
Nominal Energy Capacity	5.12kWh	4.8kWh	7.2kWh
Operating Voltage Range	44V - 56.8V	41.3V - 54.75V	
Maximum Charge Voltage	56.8V	54.75V	
Standard Charge/Discharge Current	50A		75A
Max. Cont. Charge/Discharge Current	100A / 100A		150A / 150A
Limited Charge Current	10A		
Cycle Life (**)	>4000 cycles		
Design Life	>10 years		
Normal Operating Temperature	> 25°C		
Charging Temperature	0~50°C	-15~55°C	
Discharging Temperature	-10~55°C	-20~55°C	
Storage Temperature	-20~55°C	-20~60°C	
Residual Capacity Loss	Per month ≤ 3%		
Warranty	4 years		
<b>Functional Properties</b>			
Communication	CAN, RS485		
Scalability	Max. 15 units in parallel		
Cooling	No	Natural	
Integrated Heater		Yes	
BMS Protections	UV, OV, OC, UT, OT, SC		
LED Indicators	Alarm, Run, SOC		
High Current Protection	Integrated High Current Prot.	External Replaceable Fuse	
Compatible Inverter	Deye, Victron, Growatt, Solis, Schneider, Senergy		
<b>Mechanical Properties</b>			
Protection Level	IP20		
Humidity	5% - 85% RH (non-condensing)		
Altitude	<4500m		
"Dimension (WxDxH) (without connector and handle)"	446x532x160 mm (19 Inches - 3.5U)	446x400x176 mm (19 Inches - 4U)	446x400x220 mm (19 Inches - 5U)
Weight	40±1 kg	45±1 kg	61±1 kg
Power Terminals	Click Connectors	M6 Screw Terminals (16mm2)	

(\*) Test Conditions : 25°C, 0.5C Charge/Discharge

(\*\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge





# HIGH VOLTAGE 19" BATTERIES



PBH-51100



PBH-512100



PBH-768100



PBH-768200

Basic Properties	PBH-51100	PBH-512100	PBH-768100	PBH-768200
Cell Type	LiFePO4 - Prismatic	LiFePO4 - Prismatic		
Nominal Voltage	51.2V	512V	768V	
Nominal Capacity (*)	100Ah	100Ah		200Ah
Nominal Energy Capacity	5.12kWh	51.2kWh	76.8kWh	153.6kWh
Operating Voltage Range	44V - 56.8V	440V - 568V	660V - 852V	
Max. Charge Voltage	56.8V	568V	852V	
Standard Charge/Discharge Current	50A / 50A	50A / 50A		100A / 100A
Max. Cont. Charge/Discharge Current	100A / 100A	100A / 100A		200A / 200A
Limited Charge Current	10A	10A		
Cycle Life (**)	>4000 cycles	>4000 cycles		
Design Life	>10 years	>10 years		
Normal Operating Temperature	25°C	25°C		
Charging Temperature	0~50°C	0~50°C		
Discharging Temperature	-10~55°C	-10~55°C		
Storage Temperature	-20~55°C	-20~50°C		
Residual Capacity Loss	Per month ≤ 3%	Per month ≤ 3%		
Warranty	4 years	4 years		
<b>Functional Properties</b>				
Communication	CAN, RS485	CAN		
Scalability	Max. 16 units in series	Max. 16 units in parallel		Max. 8 units in parallel
Cooling	Fan	Fan		
BMS Protections	UV, OV, OC, UT, OT, SC	UV, OV, OC, UT, OT, SC		
LED Indicators	Alarm, Run, SOC	Alarm, Run, SOC		
Circuit Breaker	No	Integrated to Master BMS Unit		
<b>Mechanical Properties</b>				
Protection Level	IP20	IP20		
Humidity	5% - 85% RH (non-condensing)	5% - 85% RH (non-condensing)		
Altitude	<4500m	<4500m		
Dimension (WxDxH) (without connector and handle)	446x532x160 mm (19 Inches - 3.5U)	630x590x2260 mm (19 Inches - 50U)	1260x590x2260 mm (19 Inches - 50U)	1890x590x2260 mm (19 Inches - 50U)
Weight	40±1 kg	540±10 kg	870±15 kg	1600±30 kg

(\*) Test Conditions : 25°C, 0.5C Charge/Discharge

(\*\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge







# HIGH VOLTAGE DENSE PACK BATTERIES



PBD-51150



PBD-768150

Basic Properties	PBD-51150	PBD-768150
Cell Type	LiFePO4 - Prismatic	LiFePO4 - Prismatic
Nominal Voltage	51.2V	768V
Nominal Capacity (*)	150Ah	150Ah
Nominal Energy Capacity	7.68kWh	115.2kWh
Operating Voltage Range	44V - 56.8V	660V - 852V
Max. Charge Voltage	56.8V	852V
Standard Charge/Discharge Current	75A / 75A	75A / 75A
Max. Cont. Charge/Discharge Current	100A / 100A	100A / 100A
Limited Charge Current	10A	10A
Cycle Life (**)	>4000 cycles	>4000 cycles
Design Life	>10 years	>10 years
Normal Operating Temperature	25°C	25°C
Charging Temperature	0~50°C	0~50°C
Discharging Temperature	-10~55°C	-10~55°C
Storage Temperature	-20~55°C	-20~55°C
Residual Capacity Loss	Per month ≤ 3%	Per month ≤ 3%
Warranty	4 years	4 years
Functional Properties		
Communication	CAN, RS485	CAN
Scalability	Max. 16 units in series	Max. 16 units in parallel
Cooling	Natural	Natural
BMS Protections	UV, OV, OC, UT, OT, SC	UV, OV, OC, UT, OT, SC
LED Indicators	Alarm, Run, SOC	Alarm, Run, SOC
Circuit Breaker	No	Integrated to Master BMS Unit
Mechanical Properties		
Protection Level	IP20	IP20
Humidity	5% - 85% RH (non-condensing)	5% - 85% RH (non-condensing)
Altitude	<4500m	<4500m
Dimension (WxDxH) (without connector and handle)	216x970x193 mm	520x1100x2100 mm
Weight	58±2 kg	1000±20 kg

(\*) Test Conditions : 25°C, 0.5C Charge/Discharge

(\*\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge



# HIGH VOLTAGE LIQUID COOLING BATTERIES



PBQ-166300



PBQ-1331300

Basic Properties	PBQ-166300	PBQ-1331300
Cell Type	LiFePO4 - 302Ah - Prismatic	LiFePO4 - 302Ah - Prismatic
Series/Parallel Configuration	1P52S	1P416S
Nominal Voltage	166.4V	1331.2V
Nominal Capacity (*)	302Ah	302Ah
Nominal Energy Capacity	50.252kWh	402.022kWh
Operating Voltage Range	145.6V - 187.2V	1164.8V - 1497.6V
Max. Charge Voltage	187.2V	1497.6V
Standard Charge/Discharge Current	150A / 150A	150A / 150A
Max. Cont. Charge/Discharge Current	150A / 150A	150A / 150A
Limited Charge Current	10A	10A
Cycle Life (**)	>5000 cycles	>5000 cycles
Design Life	>10 years	>10 years
Normal Operating Temperature	25°C	25°C
Operational Temperature	-20~55°C	-20~55°C
Storage Temperature	-20~55°C	-20~55°C
Residual Capacity Loss	Per month ≤ 3%	Per month ≤ 3%
Warranty	4 years	4 years
Functional Properties		
Communication	CAN, RS485	CAN
Scalability	Max. 8 units in series	Max. 16 units in parallel
Cooling	Liquid Cooling	Liquid Cooling
BMS Protections	UV, O, OC, UT, OT, SC	UV, OV, OC, UT, OT, SC
LED Indicators	Alarm, Run, SOC	Alarm, Run, SOC
Circuit Breaker	No	Integrated to Master BMS Unit
Mechanical Properties		
Protection Level	IP67	IP67
Humidity	5% - 85% RH (non-condensing)	5% - 85% RH (non-condensing)
Altitude	<4500m	<4500m
Dimension (WxDxH)	848x1157x244.5 mm	988x1200x2390 mm
Weight	370±10 kg	3400±50 kg

(\*) Test Conditions : 25°C, 0.5C Charge/Discharge

(\*\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge





# RESIDENTIAL SINGLE-PHASE ENERGY STORAGE SYSTEMS



PRESS-510

Inverter Properties	PRESS-505	PRESS-510	PRESS-515	PRESS-520
Max. Efficiency	97.3% (PV-AC), 94.0% (BAT-AC)			
[PV] Max. Power	9000W			
[PV] Max. Voltage	550V			
[PV] MPPT Voltage Range	100V-500V			
[PV] Max. Input Current	15A			
[PV] # of MPPT Trackers	2			
[BATT] Voltage Range	40V-60V			
[BATT] Max. Charge/Discharge Power	5000W			
[BATT] Max. Charge/Discharge Current	120A			
[AC] Nominal Output Power	5000W			
[AC] Nominal Voltage	220V (Single Phase)			
[AC] Voltage Range	150V-300V (Adjustable)			
[AC] Max. Output Current	25A			
[AC] Frequency Range	45Hz-65Hz			
[AC] THDI	<3%			
Interface / Communication	Screen, CAN			
<b>Battery Properties</b>				
Battery Type	LiFePO4			
Nominal Voltage	51.2V			
Operating Voltage Range	44V - 56.8V			
Nominal Capacity	100Ah	200Ah	300Ah	400Ah
Nominal Energy Capacity	5.12kWh	10.24kWh	15.36kWh	20.48kWh
Standard Charge/Discharge Current	50A / 50A	100A / 100A	120A / 120A	120A / 120A
Max. Continuous Output Current	100A	120A	120A	120A
Cycle Life (*)	>5000 cycles			
Design Life	>10 years			
Charging Temperature	0~50°C			
Discharging Temperature	-10~55°C			
Storage Temperature	-20~55°C			
<b>Mechanical Properties</b>				
Protection Level	IP20			
Dimension (WxDxH) (with antenna)	648x239x1282 mm	648x239x1732 mm	648x239x2182 mm	1296x239x1732 mm
Weight	93±3 kg	143±4 kg	193±5 kg	246±6 kg

(\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge





# RESIDENTIAL THREE-PHASE ENERGY STORAGE SYSTEMS



PRESS-1025

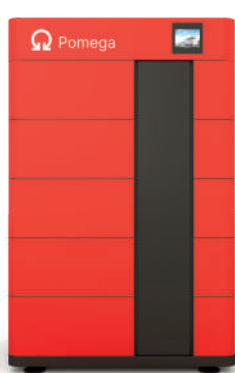
Inverter Properties	PRESS-1210	PRESS-1215	PRESS-1020	PRESS-1025	PRESS-1030	PRESS-1035	PRESS-1040
Max. Efficiency	97% (PV-AC)		97.9% (PV-AC), 98.0% (BAT-AC)				
[PV] Max. Power	13000W		15000W				
[PV] Max. Voltage	800V		1000V				
[PV] MPPT Voltage Range	200V-650V		160V-950V				
[PV] Max. Input Current	26A/13A		20A/30A				
[PV] # of MPPT Trackers	2 (2+1 strings , MPPT)		3 (two strings per MPPT)				
[BATT] Voltage Range	40V-60V		150V-600V				
[BATT] Max. Charge/Discharge Power	10000W / 10000W		15000W / 11300W				
[BATT] Max. Charge/Discharge Current	210A / 210A		50A / 50A				
[AC] Nominal Output Power	10000W		10000W				
[AC] Nominal Voltage	380V/400V, 3W+N+PE		380V/400V/415, 3L+N+PE				
[AC] Max. Output Current	45A		3 * 25A				
[AC] Frequency Range	50/60Hz		45Hz-55Hz / 55Hz-65Hz (Adjustable)				
[AC] THDI	<3% (Rated Power)		<5% (Rated Power)				
Interface / Communication	Screen, CAN		Screen, CAN				
<b>Battery Properties</b>							
Battery Type	LiFePO4						
Nominal Voltage	51.2V	204,8V	256V	307,2	358,4	409,6	
Operating Voltage Range	44V - 56.8V		176V - 227V	220V - 284V	264V - 340V	308V-397V	352V-454V
Nominal Capacity	100Ah		100Ah				
Nominal Energy Capacity	10.24kWh	15.36kWh	20.48kWh	25.60kWh	30.72kWh	35.84kWh	40.96kWh
Standard Charge/Discharge Current	100A	150A	50A				
Max. Continuous Output Current	200A	210A	100A				
Cycle Life (*)	>5000 cycles		>5000 cycles				
Design Life	>10 years		>10 years				
Charging Temperature	0~50°C		0~50°C				
Discharging Temperature	-10~50°C		-10~55°C				
Storage Temperature	-20~55°C		-20~55°C				
<b>Mechanical Properties</b>							
Protection Level	IP65 Inv + IP20 Battery			IP20			
Dimension (WxDxH) (with antenna)	648x239x1005 mm (only battery)	648x239x1455 mm (only battery)	648x445x1585 mm	648x445x1750 mm	648x445x1915 mm	648x445x2080 mm	648x445x2245 mm
Weight	142 ± 3 kg	192 ± 5 kg	241 ± 6 kg	286 ± 7 kg	331 ± 8 kg	376 ± 9 kg	421 ± 10 kg

(\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge





# HIGH VOLTAGE STACKABLE BATTERIES



PBG-256100

Basic Properties	PBG-153100	PBG-204100	PBG-256100	PBG-307100	PBG-358100	PBG-409100
Cell Type	LiFePO4 - Prismatic					
Nominal Voltage	153.6V	204.8V	256V	307.2V	358.4V	409.6V
Operating Voltage Range	132V-170V	176V - 227V	220V - 284V	264V - 340V	308V-397V	352V-454V
Nominal Capacity (*)	100Ah					
Nominal Energy Capacity	15.3kWh	20.4kWh	25.6kWh	30.7kWh	35.8kWh	40.9kWh
Max. Charge Voltage	172V	230V	288V	345V	403V	460V
Standard Charge/Discharge Current	50A / 50A					
Max. Cont. Charge/Discharge Current	100A / 100A					
Limited Charge Current	10A					
Cycle Life (**)	>5000 cycles					
Design Life	>10 years					
Normal Operating Temperature	25°C					
Charging Temperature	0~50°C					
Discharging Temperature	-10~55°C					
Storage Temperature	-20~55°C					
Residual Capacity Loss	Per month ≤ 3%					
Warranty	4 years					
<b>Functional Properties</b>						
Communication	CAN, RS485					
Scalability	Serial Pack Addition					
Cooling	Natural					
BMS Protections	UV, OV, OC, UT, OT, SC					
LED Indicators	Alarm, Run, SOC					
Circuit Breaker	Yes (in the Master BMS unit)					
Compatible Inverter	Deye, Victron, Senergy, Growatt					
<b>Mechanical Properties</b>						
Protection Level	IP20					
Humidity	5% - 85% RH (non-condensing)					
Altitude	<4500m					
Dimension (WxDxH) (without connector and handle)"	648x445x720 mm	648x445x890 mm	648x445x1060 mm	648x445x1230 mm	648x445x1400 mm	648x445x1570 mm
Weight	161 ± 3 kg	211 ± 4 kg	261 ± 5 kg	311 ± 6 kg	361 ± 7 kg	411 ± 8 kg

(\*) Test Conditions : 25°C, 0.5C Charge/Discharge

(\*\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge



# HYBRID INVERTER



PHYB-5K



PHYB-10K-3P

Model	PHYB-5K	PHYB-10K-3P
Max. PV Power	9000W	15000W
Max. PV Voltage	550V	1000V
MPPT Max. Input Current	15A/15A	20A/30A
MPPT Short Circuit	20A/20A	30A/40A
MPPT Voltage Range	70V-500V	160V-950V
# of MPPT Trackers	2	2
String per MPP Tracker	1	1+2
<b>Grid Interface</b>		
Nominal AC Output Power	5000W	10000W
Max. AC Output Apparent Power	5500VA	1100VA
Max. AC Output Power (PF=1)	5500W	11000W
Nominal AC Voltage	220V	380V/400V/415V
AC Voltage Range	150V-300V (Adjustable)	277V-520V(Adjustable)
Max. AC Output Current	25A	3*16.7A
Nominal Grid Frequency	50Hz/60Hz	50Hz/60Hz
Grid Connection	Single phase	Three phase
Power Factor	>0.99 @rated power (0.8 Lead-0.8 Lag)	>0.99 @rated power (0.8 Lead-0.8 Lag)
<b>Battery Interface</b>		
Compatible Battery Type	Lithium-ion/Lead-acid	Lithium-ion/Lead-acid
Battery Voltage Range	40V-60V	200V-600V
Max. Charge/Discharge Power	5000W/5000W	15000W/10500W
Max. Charge/Discharge Current	120A/120A	50A/50A
<b>Backup Interface</b>		
Nominal Output Voltage	230V	380V/400V/415V
Nominal Output Frequency	50Hz/60Hz	50Hz/60Hz
Nominal Output Power	5000W	10000W
Nominal Output Current	21.7A	3*15.2A
<b>General</b>		
Protection Level	IP65	IP65
Operating Temperature Range	-25°C~60°C	-25°C~45°C
Cooling	Natural Cooling	Natural Cooling
Dimensions (W*H*D)	515x485x175 mm	530x550x212 mm
Weight	25Kg	32Kg
<b>HMI &amp; COM</b>		
Communication Interface	RS485/CAN (for BMS), RS485, USB, RS485(Metre) Wifi Opt	RS485/CAN (for BMS), RS485, USB, RS485(Metre) Wifi Opt







# OUTDOOR ENERGY STORAGE SYSTEMS



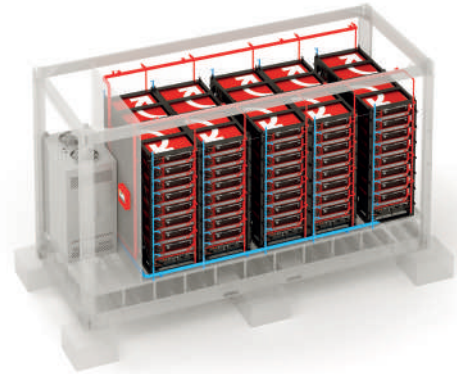
POD-P50B100

Inverter Properties	POD-P50B100
Max. Efficiency	97% (PV-AC)
[PV] Max. Power	65000W
[PV] Max. Voltage	1000V
[PV] MPPT Voltage Range	150V-850V
[PV] Max. Input Current	36A+36A+36A+36A
[PV] # of MPPT Trackers	4 (2+2+2+2 strings)
[BATT] Voltage Range	160V-800V
[BATT] Number of Battery Input	2
[BATT] Max. Charge/Discharge Current	50A+50A / 50A+50A
[AC] Nominal Output Power	50000W
[AC] Peak Output Power	75000W(10sec)
[AC] Nominal Voltage	380V/400V, 3L+N+PE
[AC] Max. Output Current	45A
[AC] Frequency Range	50/60Hz
[AC] THDI	<3% (Rated Power)
Interface/Comm	Screen, CAN
Battery Properties	
Battery Type	LiFePO4
Nominal Voltage	512V
Operating Voltage Range	440V - 568V
Nominal Capacity	200Ah
Nominal Energy Capacity	103.2kWh
Standard Charge/Discharge Current	100A
Max. Continuous Output Current	150A
Cycle Life (*)	>4000 cycles
Design Life	>10 years
Charging Temperature	0~50°C
Discharging Temperature	-10~50°C
Mechanical Properties	
Protection Level	IP65
Dimension (WxDxH)	1674x1450x2450 mm
Weight	1800kg

(\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge



# UTILITY SCALE ENERGY STORAGE SYSTEM



	PESS-C40L-4020	PESS-C32L-3216
<b>Dc Data</b>		
Battery Chemistry	Lithium Ferrous Phosphate	Lithium Ferrous Phosphate
Cycle Life	%80 DOD with 4500 Cycles @0,5 C	%80 DOD with 4500 Cycles @0,5 C
Cell Properties	3,2 V 302 Ah	3,2 V 302 Ah
Cabin Configuration	4160 S	3328 S
Number of Series	10	8
Cabin Nominal Energy Capacity	402 kW	402 kW
Dc Nominal Energy Capacity	4020	3216
Nominal Voltage	1331,2	1331,2
Voltage Range	1164 - 1497	1164 - 1497
Bms Communication Interface	RS485, Ethernet, Can Bus	RS485, Ethernet, Can Bus
Bms Communication Protocol	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
<b>Mechanical Properties</b>		
Dimension (L*w*h)	7000*2700*3500	6000*2700*3500
Weight	<45 T	<38 T
Protection Class	IP54	IP54
Operating Temperature Range	-20 / +40°C	-20 / +40°C
Relative Humidity	0- 95%	0- 95%
Max. Working Height	3000 m	3000 m
Cooling Concept of Dc Cover	HVAC	HVAC
Communication Interface	RS485, Ethernet, GPRS	RS485, Ethernet, GPRS







# PORTABLE BATTERIES



Basic Properties	PBK-12100	PBK-12200	PBK-24100
Cell Type	LiFePO4 - Prismatic		
Nominal Voltage	12.8V		25.6V
Operating Voltage Range	11.4V - 14V		22.8V - 28V
Nominal Capacity	100Ah	200Ah	100Ah
Nominal Energy Capacity	1280Wh	2560Wh	2560Wh
Max. Charge Voltage	14.4V		28.8V
Standard Charge/Discharge Current	30A	60A	30A
Max. Cont. Charge/Discharge Current	50A	100A	50A
Residual Capacity	92 % (after 3 months), 83 % (after 6 months)		
Capacity By Temperature	100 % (25°C), 94 % (0°C)		
Cycle Life (**)	>4000 cycles		
Design Life	>10 years		
Normal Operating Temperature	25°C		
Charging Temperature	0~50°C		
Discharging Temperature	-20~55°C		
Storage Temperature	-20~55°C		
Warranty	4 years		
<b>Functional Properties</b>			
Communication	Bluetooth		
BMS Korumaları	UV, OV, OC, UT, OT, SC		
<b>Mechanical Properties</b>			
Battery Case Material	ABS		
Power Terminals	M6 Screw In	M8 Screw In	
Protection Level	IP65		
Humidity	5% - 85% RH (non-condensing)		
Altitude	<4500m		
Dimension (WxDxH)	330x175x220 mm	500x230x210 mm	500x230x210 mm
Weight	10±1 kg	20±1 kg	20±1 kg

(\*) Test Conditions : 25°C, 0.5C Charge/Discharge

(\*\*) Test Conditions : 25°C, 80% DOD, 80% SOH, 0.5C Charge/Discharge



## MOBILITY APPLICATIONS

Long-lasting, trouble-free and reliable vehicle technologies with Pomega Electric Vehicle Batteries specially produced for commercial vehicles and heavy vehicles.

Pomega offers efficient and reliable battery packs with battery management (BMS) and cooling systems for construction equipment, buses, trucks, forklifts, cranes, boats and light commercial applications.

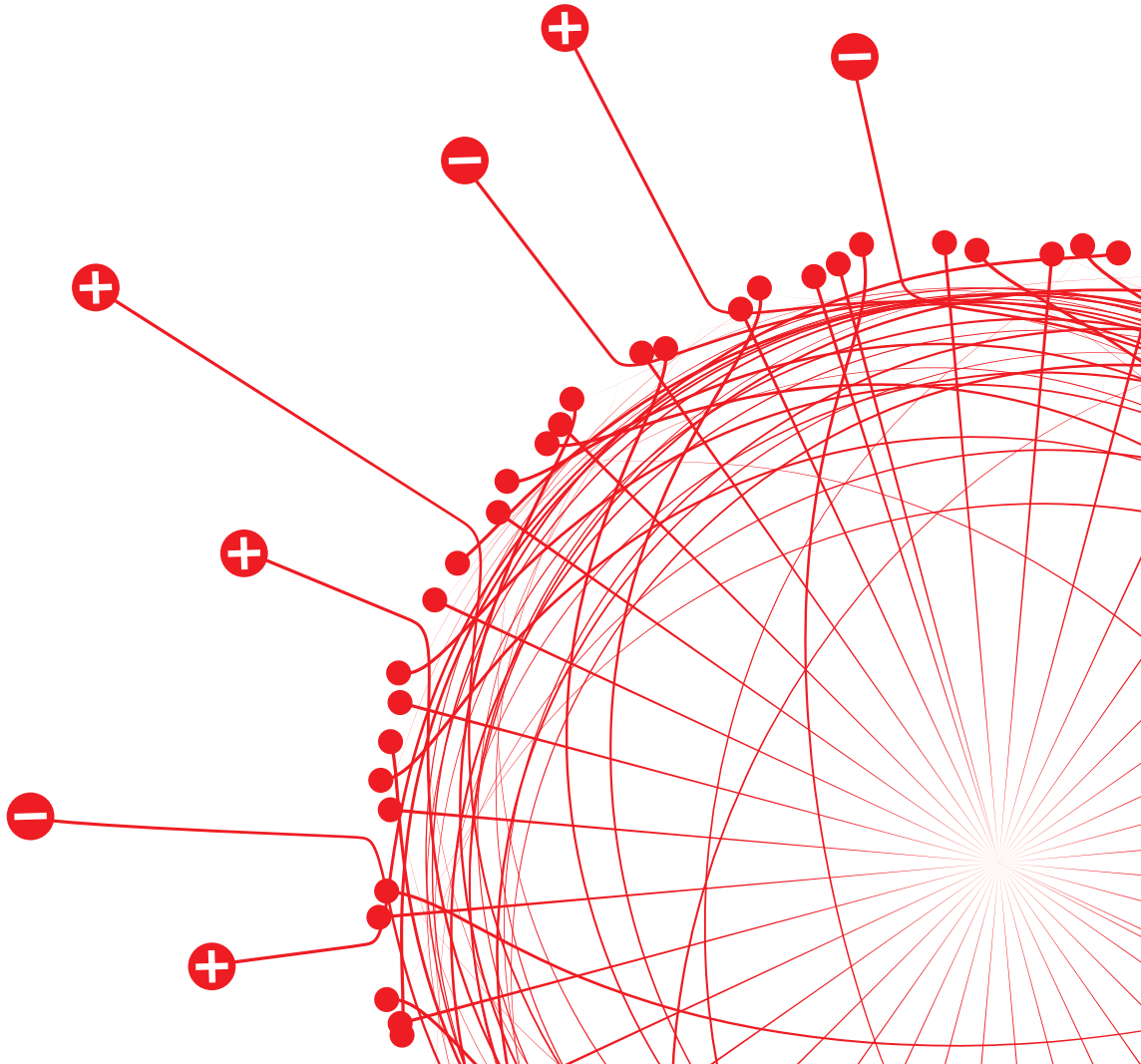




**TÜRKİYE, THE COUNTRY THAT  
HAS THE WIND ON ITS BACK  
THANKS TO WIND ENERGY  
STORAGE TECHNOLOGIES**



With Pomega's wind energy storage technology, wind energy can now be stored and used at any time. Our country has energy whether the wind blows or not, the wind behind Türkiye never stops.



  
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