Lithium Iron, LiFePO4

EGYO-HHVS

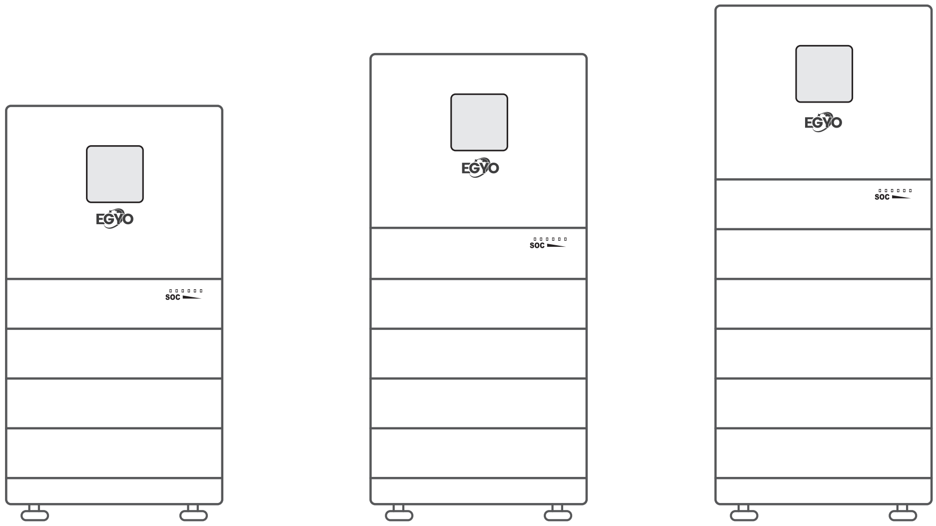
Household high-voltage stacked energy storage system

EGYO-HHVS Series

EGYO-HHVS is an integrated solar battery system that stores energy from solar production, is a perfect match for residential solar systems and ideal for smart energy management and back-up optimisation. It offers a wide capacity range from 15kWh to 25kWh, providing comprehensive energy storage options to meet demanding system requirements. The stackable self-detecting modules make the system especially simple to install and maintain. Meanwhile, the reliable lithium iron phosphate (LFP) cell technology ensures maximum safety and a longer life cycle.

- Control System
- Hybrid Inverter
- High-Voltage
- Stackable
- UL Certified LiFPO4 Batteries
- 15-year Design Life

Electric Specification



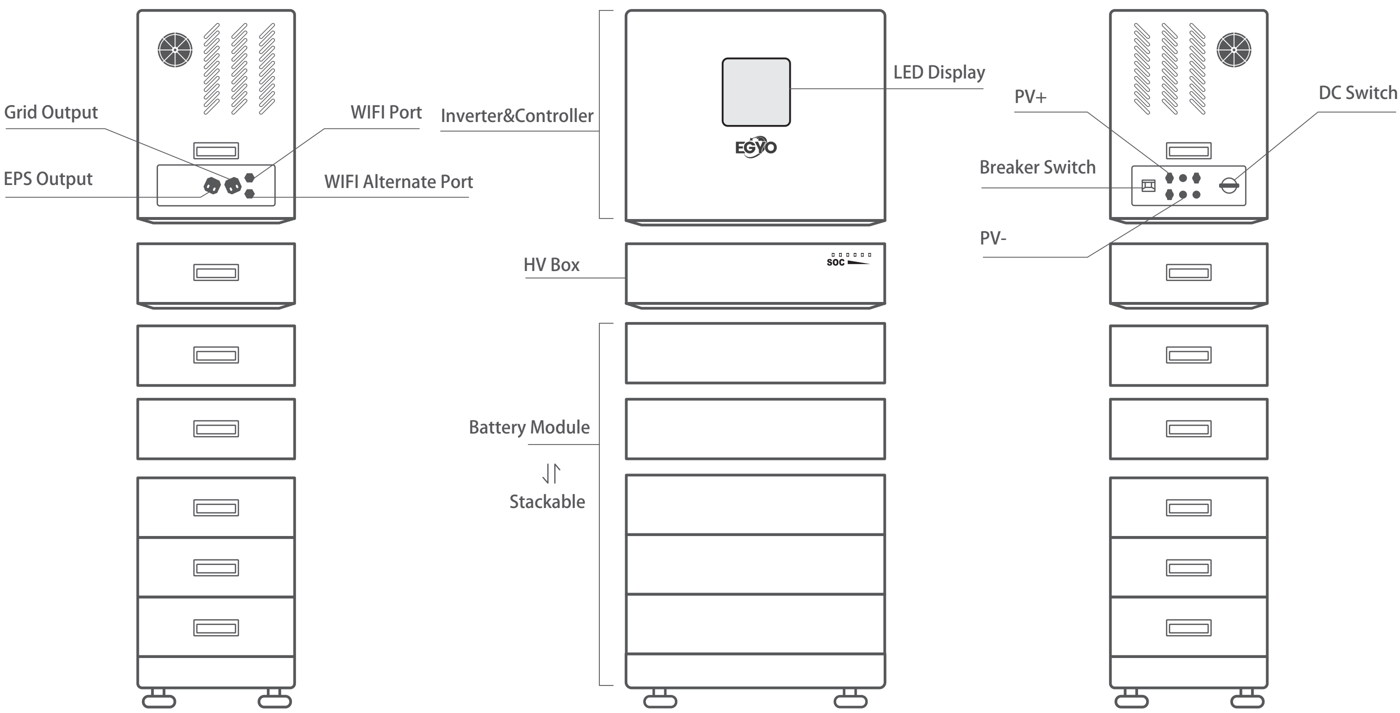
Product Name	EGYO-HHVS 15.36kWh	EGYO-HHVS 20.48kWh	EGYO-HHVS 25.6kWh
Battery Type	Lithium Iron Phosphate (LiFePO4)		
Battery Module	51.2 V 100 Ah 5.12KWh		
Module Number	3 PCS	4 PCS	5 PCS
Norminal Energy	15.36 KWh	20.48 KWh	25.6 KWh
Norminal Grid Voltage(I/O)	380 VAC	380 VAC	380 VAC
Grid Viltage Range	360-440 VAC	360-440 VAC	360-440 VAC
Frequency	50/60 HZ	50/60 HZ	50/60 HZ
Grid Type	400/380 VAC：3L/N/PE		
Max. Constant Power(On grid)	8 KV A	10 KV A	15 KV A
Max. Constant Power(Off grid)	8 KV A	10 KV A	15 KV A
Peak Power(Off grid, 60s)	15 KV A	15 KV A	18 KV A
Max. Constant Current(On grid)	13.5 A output	16.5 A output	25 A output
Max. Constant Current(Off grid)	13.5 A output	16.5 A output	25 A output
Max. PV Input Power	12 KW	15 KW	22.5 KW
Max. PV Input Voltage	1000 VDC	1000 VDC	1000 VDC
PV DC Input Voltage	200 - 850 VDC	200 - 850 VDC	200 - 850 VDC
PV DC MPPT Voltage	200 - 850 VDC	200 - 850 VDC	200 - 850 VDC
MPPTs	2	2	2
Input Connectors per MPPT	1	1	1
Max. Current per MPPT	16 ADC	16 ADC	30 ADC
Max. Short-circuit Current per MPPT	21.2 ADC	21.2 ADC	38 ADC
Allowable DC/AC Ratio	1.7	1.3	1.7
Overcurrent Protection Device	50A Breaker(Optional)		

Output Power Factor Rating	+/- 0.8 to 1		
Charge&Discharge Efficiency	97.5%	97.5%	97.5%
Max. Efficiency	98.2%	98.2%	98%
Customer Interface	LCD Display/Mottcell App		
Internet Connectivity	WiFi/WiFi LAN/4G(System)｜CAN/RS485(Battery Module)		
Protections	Insulation resistance detection, residual current detection, reverse connection protection, anti-islanding protection, AC overcurrent protection, AC short circuit protection, AC overvoltage protection, DC switch, DC surge protection, AC surge protection, DC arc protection (optional)		
Cycle Life	8000 cycles @50% DOD 25°C/77°F		
Warranty	10 Years (5+5)		

COMPLIANCE

Inverter	IEC/EN 62477，EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-4-16, EN61000-4-18, EN61000-4-29
Battery Module	UL1973, UN38.3，IEC62619，CEC，CE
Grid-connection	VDE-AR-N4105, EN 50549-1 G98, CEI 0-21
Emissions	FCC，CE，RCM
Environmental	RoHS Directive 2011/65/EU
Seismic	AC 156, IEEE 693-2005（high）

STRACTURE



Overall Dimension	W637*D387*H1433 mm W25*D15.2*H56.4 in	W637*D387*H1596 mm W25*D15.2*H62.8 in	W637*D387*H1758 mm W25*D15.2*H69.2 in
Total Weight	241.6 Kg	293.4 Kg	345.2 Kg
Module Weight		51.8 Kg	
Others	86.2 Kg	86.2 Kg	110.2 Kg
Installation		Floor	

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-20 ~ 50°C (-4 ~ 122°F)
Recommended Temperature	0 ~ 50°C (32 ~ 122°F)
Operating Humidity（RH）	0~95% non-condensing
Storage Conditions	-20 ~ 30°C (-4 ~ 86°F) 0 ~ 95% RH, non-condensing, SOE: 25 %
Max. Elevation	2000m （6561 ft ）
Enviroment	Indoor
Enclosure IP	IP20
Noise Level@1m	<40db (A) Optimal, <50db (A) Maximum

OPERATING MODE

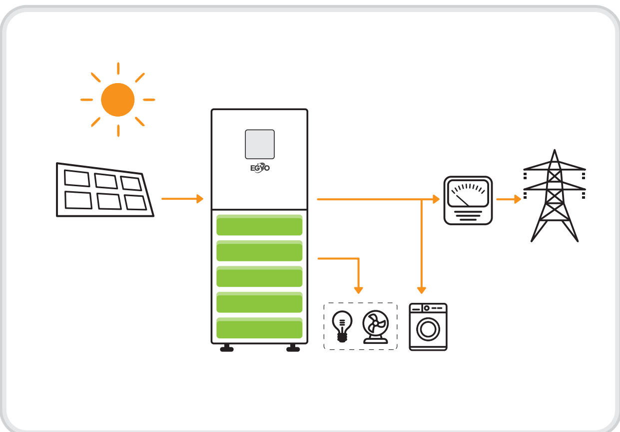
- **Eco-Mode**

Notice: the economic mode can only be selected when local laws and regulations are met, such as: whether to allow the grid to charge the battery, if not, do not use this mode.

It is recommended to use the economic mode in scenarios where there is a large difference between peak and valley electricity prices.

Figure A · During the day · When the electricity bill is at its peak, EGYO-HHVS is given priority to supply power to the load, and the remaining electricity can be sold to the grid.

Figure B · Evening · When the electricity bill is in the trough, the grid can be set to charge the EGYO-HHVS to charge the battery.



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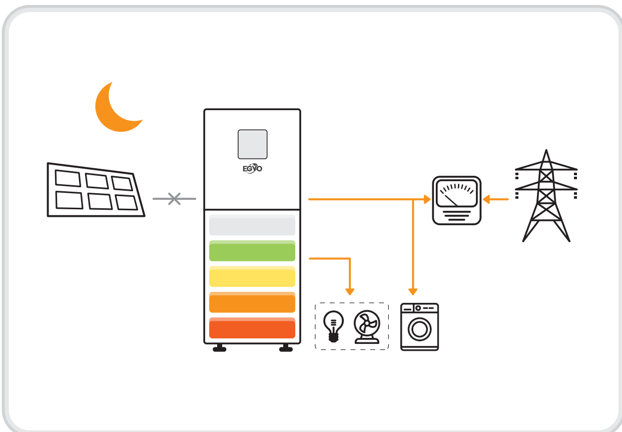


B

• Self Consumption Mode

Notice: priority is given to self-generation and self-use of solar power generation, and the excess power is charged to EGYO-HHVS; when there is no solar power generation at night, EGYO-HHVS is used to supply power to the load; the self-generation and self-use rate of the solar power generation system is increased to save electricity costs.

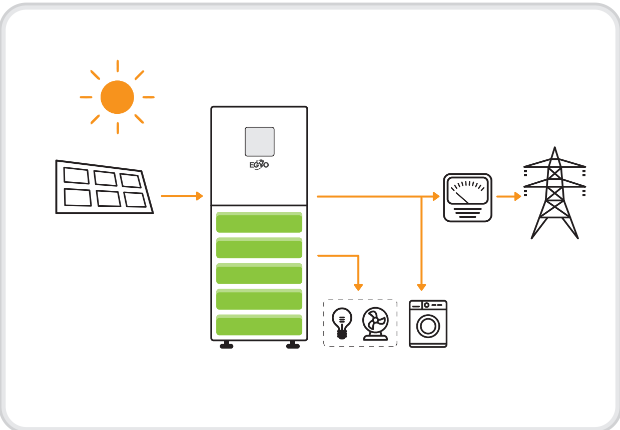
Figure A · When the power generated by the photovoltaic system is sufficient, the power generated in the photovoltaic system is given priority to supply power to the load, the excess power is charged to the EGYO-HHVS, and the remaining power is sold to the grid.

Figure B, C · When the power generated by the photovoltaic system is insufficient or the photovoltaic system does not generate power, the battery power is given priority to supply power to the load. If the battery power is insufficient, the load is powered by the grid.

Figure D · When the power of EGYO-HHVS is exhausted, the power generated by the photovoltaic system will be used first to supply power to the load.

Figure E · When neither the photovoltaic system nor the EGYO-HHVS can supply power, the grid supplies power to the load to form a bypass output.

Figure F · When the grid fails to supply power and the Back-up function is turned off, the electricity generated by the photovoltaic system supplies power to the load, and the excess electricity charges the battery.



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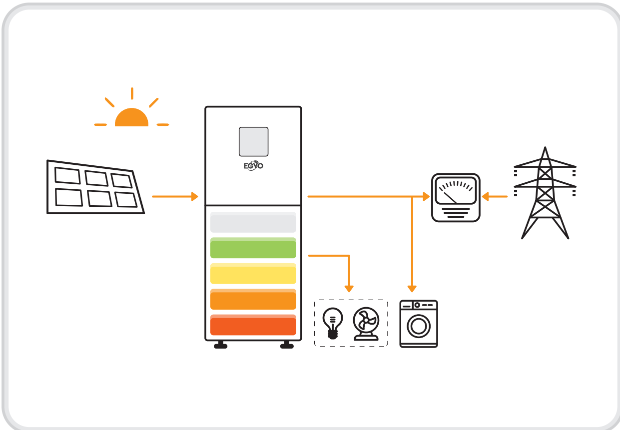

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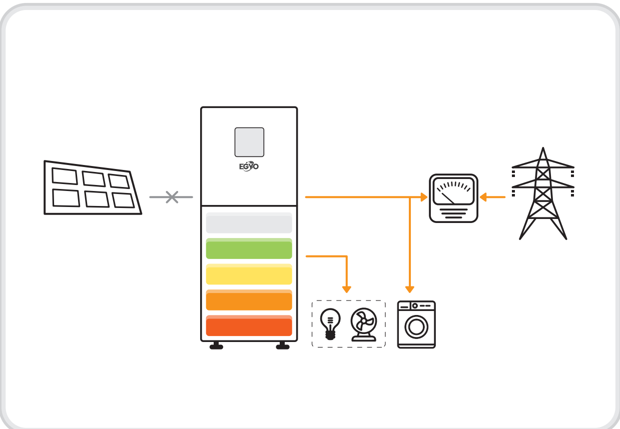

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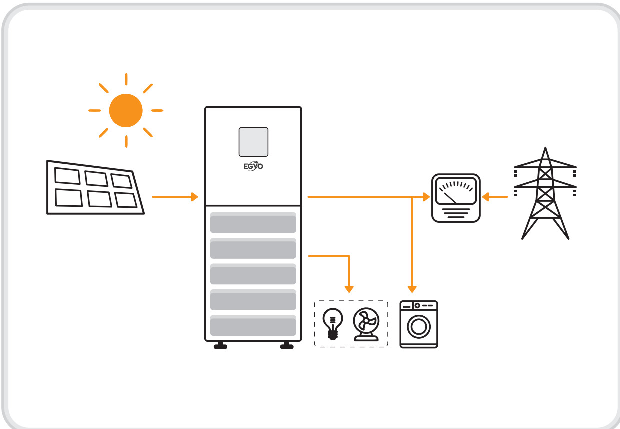

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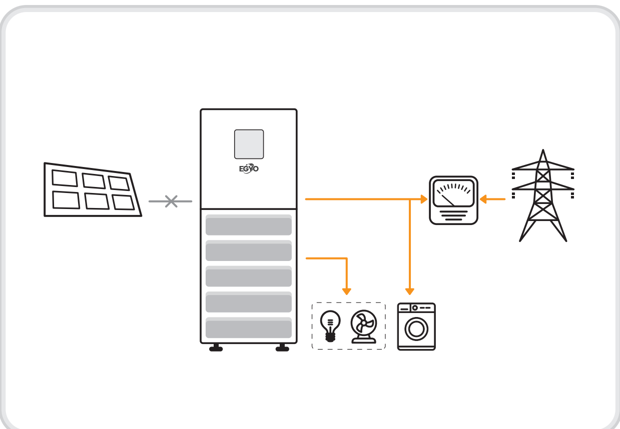

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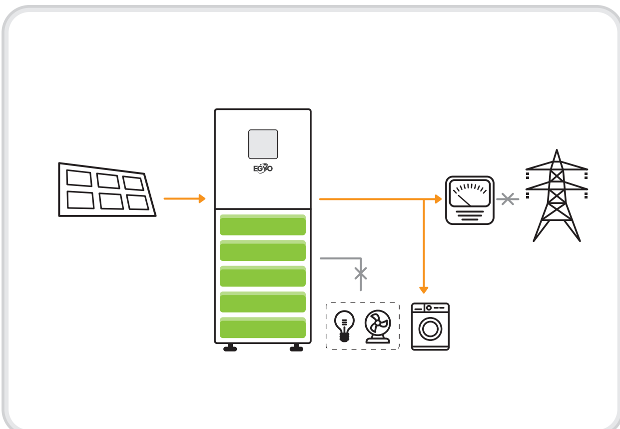


F

• Standby Mode

Notice: the standby mode is mainly applicable to scenarios where the power grid is unstable and has important loads. When the power grid is cut off, the inverter switches to the off-grid working mode to supply power to the load; when the power grid is restored, the inverter working mode switches to grid-connected work.

When sufficient electricity is generated in the PV system:

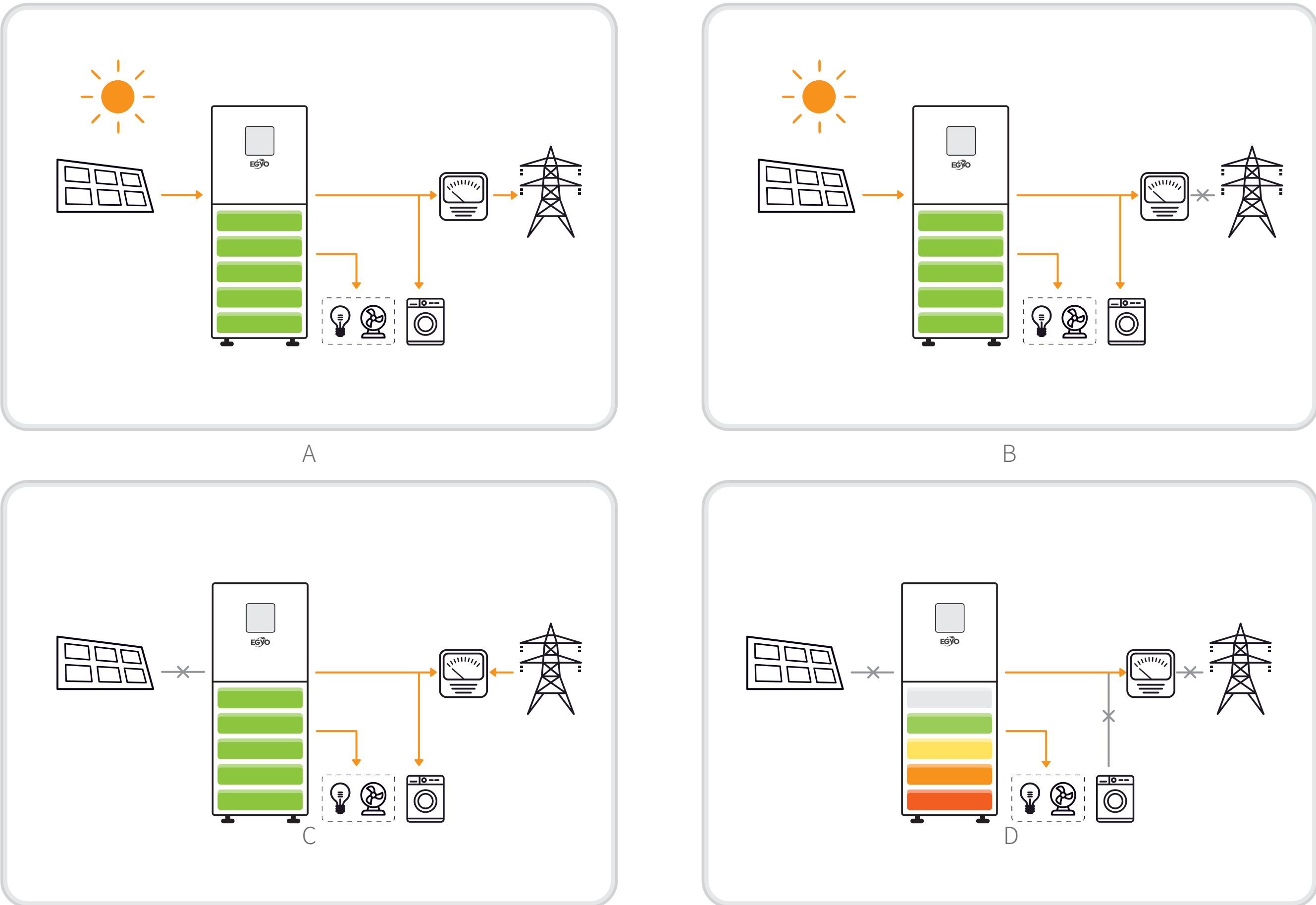
Figure A · When the power grid is normal, the power generated in the photovoltaic system is given priority to charging the battery, the excess power is used by the load, and the remaining power is sold to the grid.

Figure B · When the power grid is abnormal, the power generated in the photovoltaic system is given priority to power the load, and the excess power is used to charge the battery. If the load power is insufficient, it will be supplemented by the battery.

When there is no PV generating electricity in the photovoltaic system:

Figure C · When the grid is normal, the grid can charge the battery and supply power to the load at the same time. (If local laws and regulations do not allow the grid to charge the battery, do not use this scenario.

Figure D · When the power grid is abnormal, the inverter enters the off-grid mode, and the battery supplies power to the load.



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