# EnerArk

## *Integrated Outdoor Battery Energy Storage Cabinet*

*Vilion-BESS*
*energy flowing with demand*


- Parallel operation of multiple cabinets
- Supporting DC coupling with solar
- Global installation and application
- CE certificates for the whole system

**5 tiers of safety design** and **water firefighting** for higher safety.

Quickly System response for **grid auxiliary service**.

Accessing of **solar, wind turbine, diesel generator**, etc.

**Parallel connection** of multiple cabinets for larger power & capacity.

Modularized design and **easy & quick O&M** optimize the system utilization.

### Office Park/Community

Peak–load Shifting
TOU Tariff Arbitrage
Electricity Cost Saving
Grid Auxiliary Service

### Solar + Storage + Charging Station

Store Extra Solar Energy
Peak–load Shifting
Electricity Cost Saving
Eco–friendly Solution

### Plaza/Hospital/Hotel

Peak–Shaving
Backup Power
Demand Side Response
Power Quality Optimization
TOU Tariff Arbitrage

### Solar + Storage Microgrid

Backup Power
Store Extra Solar Energy
Distributed Energy Integration
Optimizing The Power
Grid Upgrading

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## *Integrated Outdoor Battery Energy Storage Cabinet*

| Parameters | EnerArk2.0-P30 | EnerArk2.0-P50 | EnerArk2.0-P100 |
|---|---|---|---|
| **Battery Parameters** | | | |
| Cell type & capacity | | $LiFePO_4$ – 280Ah | |
| Battery module type | | 1P20S | |
| System capacity range | 125kWh~215kWh | 125kWh~215kWh | 215kWh |
| **AC Side On-grid Parameters** | | | |
| Grid type | | 3P4W | |
| Charging/discharging power | 30kW | 50kW | 100kW |
| Rated grid voltage | | AC400 (±15%) V | |
| Frequency range | | 50(±5)Hz | |
| Rated AC output current | 43A | 72A | 144A |
| Power factor | | 0.8 (Leading) ~ 0.8 (Lagging) | |
| Harmonics | | ⩽3% (@rated power) | |
| **AC Side Off-grid Parameters** | | | |
| Load type | | 3P4W | |
| Rated output power | 30kW | 50kW | 100kW |
| Rated output voltage | | AC 400V±1% | |
| Rated output frequency | | 50Hz | |
| Frequency accuracy | | 0.2Hz | |
| Rated current | 43A | 72A | 144A |
| **General Parameters** | | | |
| Dimension (W*H*D) | | 1686mm*2093mm*1354mm | |
| Max. weight | | 2500kg | |
| Ingress protection | | IP55 (Battery Cabinet) IP54 (Electrical Cabinet) | |
| Cooling method | | HVAC (Battery compartment) & Forced air cooling (Electrical compartment) | |
| Fire fighting system | | Combustible gas detection + Novec1230 + water fire suppression | |
| Anti-corrosion grade | | C3 | |
| Relative humidity | | 0-95% (non-condensing) | |
| Operating temperature * | | -20℃~50℃ | |
| Operating altitude** | | ＜2000m | |
| Noise emission | | ⩽75dB | |
| Communication interface | | RS485, Ethernet | |
| Communication protocol | | Modbus RTU, Modbus TCP/IP | |
| Warranty | | 5 years, (can be extended to 10 years) | |
| **PV Side Parameters (Optional)** | | | |
| Max. PV input power | 30kW/60kW | 30kW/60kW/90kW/100kW | 30kW/60kW/90kW/120kW |
| MPPT voltage range | 200V~850V | 200V~850V | 200V~850V |
| Number of MPPT | 1/1 | 1/1/2/2 | 1/1/2/2 |
| Number of PV inputs | 1/1 | 1/1/2/2 | 1/1/2/2 |
| Max. input current | 100A/200A | 100A/200A/300A/400A | 100A/200A/300A/400A |

### Certifications

System: CE(IEC61000,IEC62477), IEC62619,UN3480, CEI021(on going),CEI016(on going), VDE2510(on going)
Converter: G99, VDE4105, EN50549, AS/NZS 4777, CE(IEC61000, IEC62477) ,IEC62109, NC RfG, NRS097,VDE4110(on going)
Cell: IEC62619, UL1973, UL1642, UL9540A
PACK: UN38.3

* The system will be derated when the ambient temperature exceeds 45℃.
** The system will be derated when the altitude is between 2000 and 3000m.

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Vilion reserves the right of final interpretation of the above data and reserves the right to change the above data without prior notice.