Versatile Compatibility

Scenarios	Description	Energy Demand	Configuration	Inverter Power (kW)				
				15/20	25/30	50	80/100	125
Large Residential	Villa, Community	25 kWh	STACK100-5s					
Small Commercial	Small office, Shop, Community	50 kWh	STACK100-10s					
		70 kWh	STACK100-14s					
		100 kWh	2*STACK100-10s					
Medium Commercial	Farm, Restaurant	150 kWh	2*STACK100-15s					
		200 kWh	3*STACK100-14s					
Large Commercial	Supermarket, Hotel	300 kWh	4* STACK100-15s					
		400 kWh	6*STACK100-13s					
Industrial	Factory, Warehouse	500 kWh	7* STACK100-14s					

Note: The darker the color in the table, the higher the recommendation.

solis	GOODWE	GROWATT	Deye	SOLINTEG	Solplanet
SINENG	SINEXCEL	SOSEN LED DRIVER	ATESS	KOSTAL	...

Note: Due to space limitations only a selection of compatible inverter brands are shown here.
Please refer to the Dyness Compatibility List for more details.

Limited Space? No Problem

Under stairs **Equipment room** **Warehouse**

Large Energy? Solved

Big House 20~50kWh **School** 300~500kWh **Farm** 300~800kWh **Charing station** 500~900kWh

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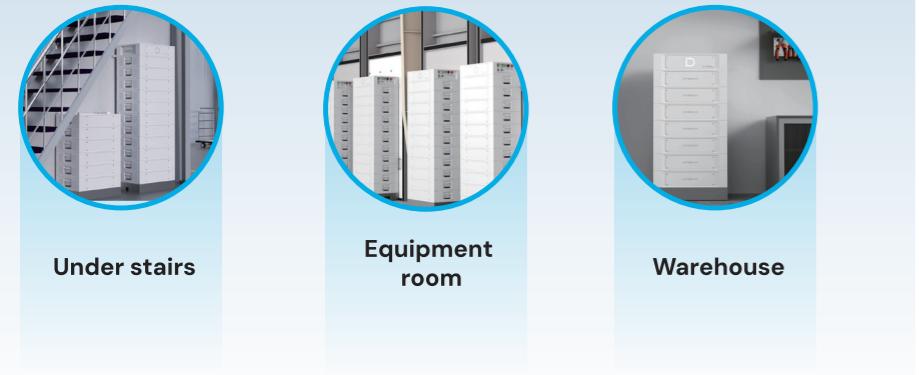
DYNESS

STACK100&
STACK100 Pro

Innovative HV Stackable
Battery Solution

Model	STACK100	STACK100 Pro
Battery Type	LiFePO₄	
Module Voltage/Capacity	51.2V/100Ah	
Module Number per Stack	3~15 Modules	
Cluster Number per System	Max 12 clusters in Parallel	
System Energy Range	15.36~76.8kWh	
Operating Voltage	134~864V	
Recommended Charge/ Discharge Current	50A (0.5C)	
Max.Charge/ Discharge Current	100A (1C)	
Peak Discharge Current (2min, 25°C)	125A(1.25C)	
Depth of Discharge	95%	
Communication	CAN/RS485	
Cycle Life [1]	≥8000 cycles	
Charge Temp. Range	0°C~55°C/-20°C~55°C(with heating function)	
Discharge Temp. Range	-20~55°C	
Single Module Weight	47kg	55kg
Single Cluster Dimension [W*D*H] (mm)[2]	590*390*(233+133*n)	657*460*(292+191*n)
Protection Level	IP20	IP66
Safety Protection	Aerosol fire extinguisher	Aerosol fire extinguisher, Temperature sensor, Pressure Relief Valve, Aerogel pad between battery cells[3], Fireproof protection for the module[3]
Installation method	Wire free stack-up	
User Interface	Built-in WIFI module + APP, LED	
Cooling method	Fan cooling	Natural cooling
Battery Module Name	S51100	S51100 pro
Certification & Safety Standard	CE-EMC/CE-RED/62619/63056/62477/62040/UN38.3/VED2510	
Compatible Inverters	Solis/GoodWe/Growatt/DEYE/Solinteg ect.	

[1] Test conditions: 0.2C Charging& Discharging. @25℃, 95% DOD，70%EOL
[2] "n" stands for the number of battery modules
[3] Aerogel pad between battery cells and Fireproof protection for the module are optional

Effortless Installation, Higher Space Utlization

Save Space & Labor

STACK100 Series

Traditional Solutions
- Multi cables
- Complicated assembly
- Fixed rack

0 wiring Plug&Play

One cluster installation in
30 min
Under the stairs
Warehouse
Limited spaces...

- Need crane
- Need specified space
- Concrete base

Flexible Expansion and Investment

Single cluster	Max.12 clusters
15-76kWh	**921kWh**

Mixed use of new & old batteries within **3** years

ESS Demand:150kWh

VS

Dyness Solution:152kWh
X2

Traditional Solution:200kWh
X2 — Non-essential cost

Fast Charge and Discharge

Max Charge/Discharge Current: 100A

1C Rate

Higher C-Rate is Better Choice for
1. Short-term backup
2. With larger solar system
3. VPP Applications:
   - Ancillary services
   - Arbitrage
   - Dynamic tariff
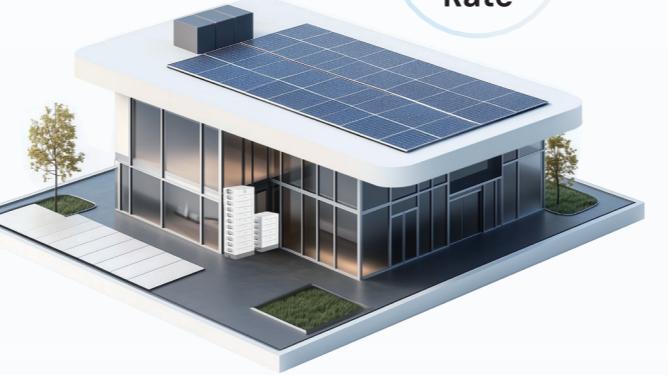
Strong Cell-balance Ability

100%
SOC Jump
Before | After
More precise battery SOC

Over Charged
Before | After
Higher cell uniformity

Over Discharged
Before | After
Battery longer lifespan under better conditions

Capacity Wasted
Before | After
Battery capacity fully used
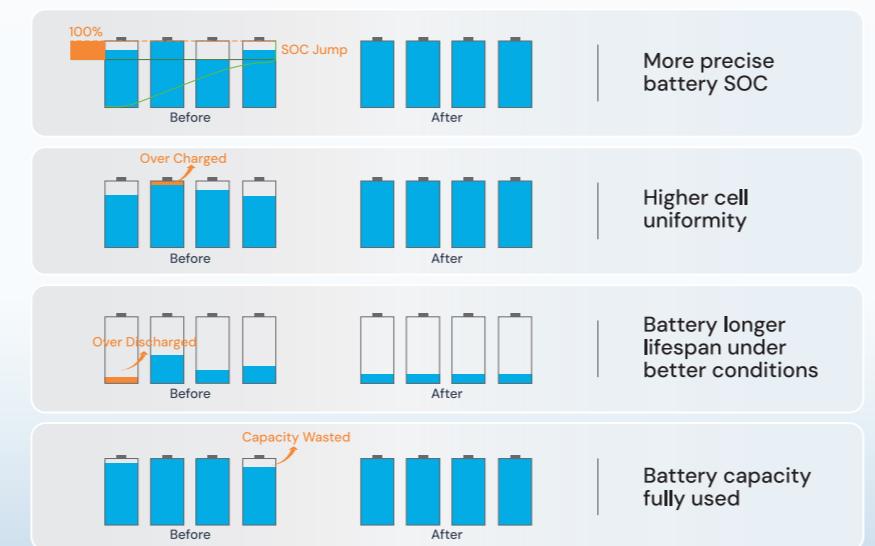
Easier Maintenance

The BMS maintenance panel[1] is positioned at the front of the stacked modules, allowing for inspection and maintenance without battery disassembly.

[1] Only the STACK100 is pre-configured with a front maintenance access panel

Balanced Cooling

STACK100	STACK100 Pro
Fan cooling	Natural cooling

Air out
Air in
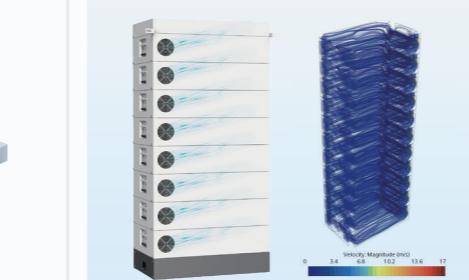
Module internal temperature difference **<3°C**

1-Click denoise operation **<55dB**

Low failure rate Easier maintenance

Smart thermal management
- Prevent local overheating → Decrease bucket effect → Better performance
- Ballance internal temperature → Increase battery uniformity → Prolong battery life-span

Good cell uniformity within 3 years | 8000+ Cycles/10Y | 1C Charge/Discharge

Extreme Performance in Diverse Environments

Defying freezing cold of -20°C
-20°C[2]

Withstood the scorching sun of 55°C
55°C

IP66 protection, waterproof and dustproof
IP66[3]
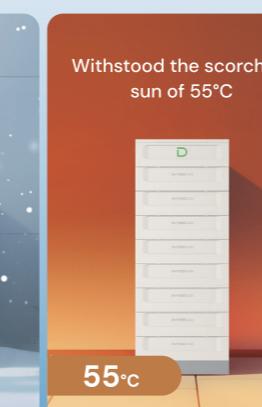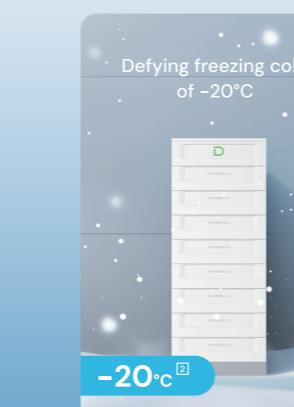
[2] Heating function is optional for STACK100 and STACK100 Pro
[3] IP66 protection applies to STACK100 Pro

More Secure, More Reliable

5-layer safety protection[1]

DC Breaker

- Aerosol fire extinguisher
- Temperature probe
- Pressure relief valve
- Aerogel pad between batteries(optional)
- Fireproof protection for the module(optional)

[1] This feature is specific to the STACK100 Pro. The STACK100 primarily utilizes aerosol fire extinguishers for fire protection

Real-time Monitoring

- Battery SOC
- Battery charge and discharge status
- Standby
- Communication failure between batteries or communication failure between lamp board and BMS
- System protection

Smart Management

- Battery system real-time running data
- Battery system real-time operation status
- Battery system historical data
- Battery cell voltage and balance
- Module temperature
- One-click OTA function
- ...