

One Cabinet , One Micro-Grid

STAR Q | 50kW/109kWh

PV+Diesel Generator

All-in-One

On/Off-Grid Operation



STAR Q Product Advantages

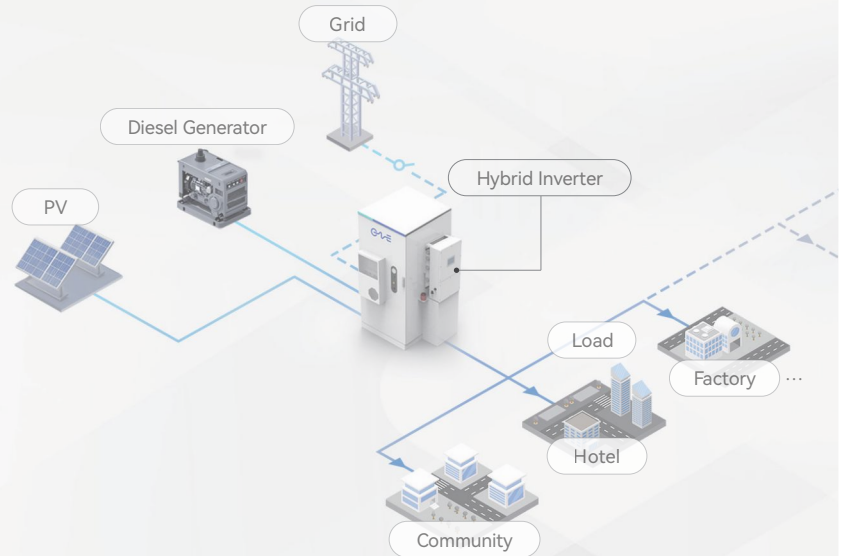
Seamless On/Off-Grid, One Cabinet Forms a Micro-Grid

- Pure off-grid, Power **10 families** a day

*At 10 kWh/d/family (estimated)

- **Adopt the hybrid inverter**
Supports access of multi-power sources:
Diesel generator, PV, Grid...

- **0.02s On/Off-Grid switch**
Uninterrupted Power, always on



CATL 306Ah LFP Battery Cell | Service Life ≥ 15 years

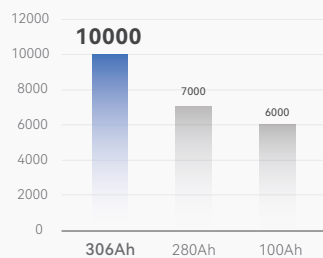
CATL 306Ah LFP



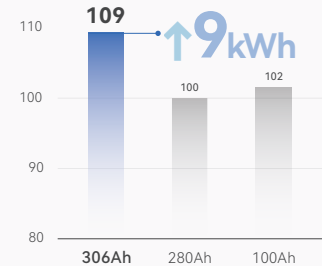
Cycle Life $\geq 10,000$

306Ah: 70%SOH @25°C

Cycle Life

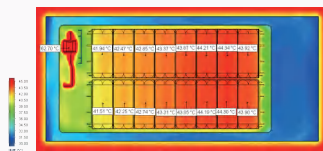


Capacity (kWh)

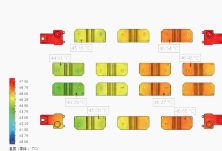


Patented Self-Cooling Rack, Lifecycle Maintenance-Free

- **Air-fin patent**, even heat spread
- **Fanless**, quieter



Thermal simulation diagram of the pack

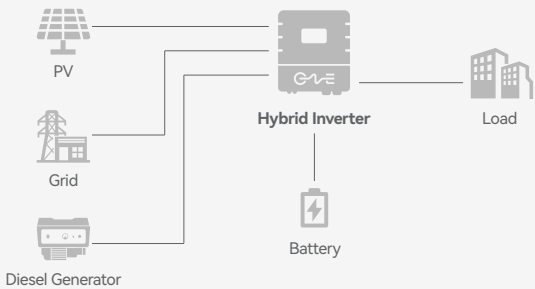


- **IP67 Sealed Protection**
Fully isolate condensate water, dust, etc.



Higher Efficiency, ↓70% Fuel Costs

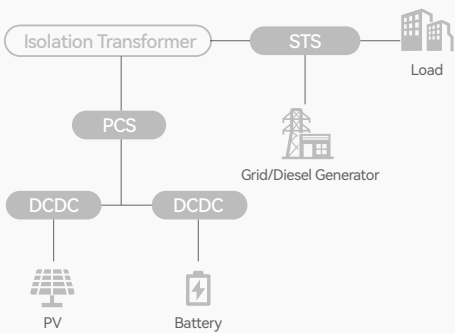
CNTE PV+Diesel Generator+ESS Solution



More Concise Architecture
↑8% Power Generation Efficiency

Optimize Power Quality
↓70% fuel cost

PCS+DCDC Solution



× Complex Architecture

× Efficiency Loss

Support **6** AC in Parallel
Up to **10** Cabinets Expandable



All-in-One

Pre-installation/debugging
Ready For Use
Easy Install, Flexible Deployment

Insulation Detection at start up
Leakage Current Detection in operation

Quadruple Protection

Cell > Pack > Rack > System

Fire-fighting accessories:

- Aerosol sensors
- Pressure/Explosion relief
- Water Firefighting

Before

Over-charge & discharge
Short-circuit & over-load protection

BMS monitor cell temp rise via half-sampling
BMS monitors over/undervoltage real-time

Real-time current collection
Monitoring charge & discharge

Real-time monitoring of smoke and combustible gases

During

Add heat-insulating pads
Prevent heat spread

Short-circuit protection

Short-circuit & over-current protection

Leakage current & insulation detection
Short-circuit protection

Villages

Islands

Small Factories

Hotels

STAR Q Product Specifications



PRODUCT MODEL	STAR Q
BATTERY SPECIFICATIONS	
Battery Type	LFP
Battery Model	306Ah
Energy Capacity	109kWh
Cycle Life (@25°C, 0.5P)	≥10000
P-rate	≤0.5P
Battery Compartment Ingress Protection	IP67
COMMUNICATION (ON/OFF-GRID)	
Rated output power	50kW
Rated Input Voltage (3/N/PE)	380/400Vac
Rated Frequency	50/60Hz
THDi	< 3%
THDu	< 3%
PV INPUT	
MPPT Voltage Range	150 ~ 850Vdc
Maximun Input Power of PV	96kW
MPPT channels/Strings per MPPT channel	4/2
Max Input Current	40/40/40/40A
GENERAL SPECIFICATIONS	
On/Off-Grid Switching Time	< 20ms
Cooling Method	Air Cooling
Operating Temperature Range	-25 ~ 55°C
Relative Humidity	0 ~ 95% (Non-condensation)
Operating Altitude	≤4000m (> 2000m derating)
Ingress Protection	IP54
Dimension (W×D×H)	1272×1356.8×2070mm
Weight	≈1.8T
Compliance	EN 50549-1、EN50549-10、VDE-AR-N 4105、NRS 097-2-1、IEC 61000、IEC 62477、IEC 62619、IEC62109、UN38.3