



# One Cabinet , One Micro-Grid

**STAR Q** | 50kW/109kWh

PV+Diesel Generator

All-in-One

On/Off-Grid Operation



aec  power



# STAR Q Product Advantages

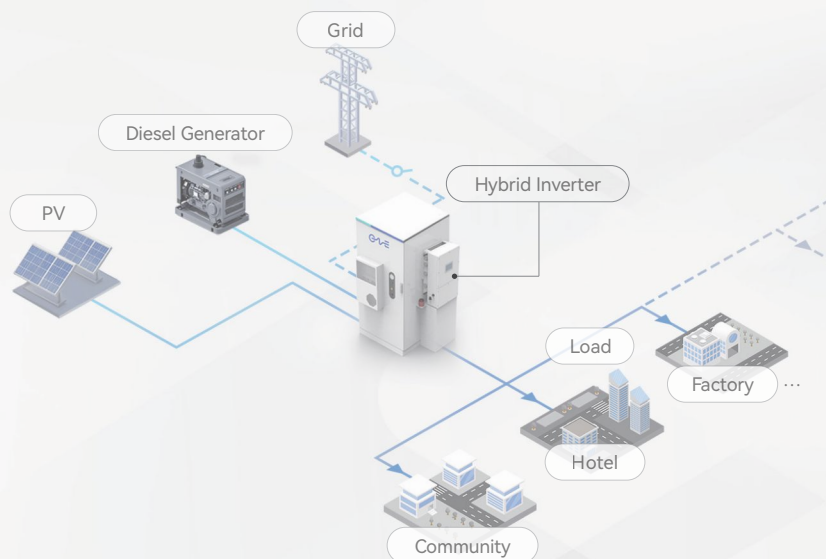
## Seamless On/Off-Grid, One Cabinet Forms a Micro-Grid

- 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 ≥ 15years

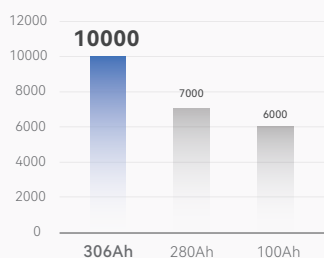
### CATL 306Ah LFP



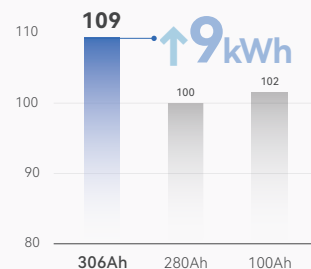
Cycle Life ≥ **10,000**

306Ah: 70%SOH @25°C

### Cycle Life

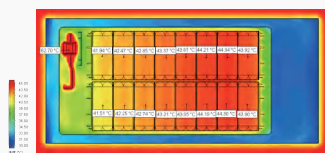


### Capacity (kWh)

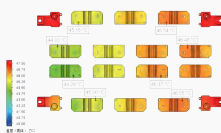


## Patented **Self-Cooling Rack**, Lifecycle **Maintenance-Free**

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



Thermal simulation diagram of the pack



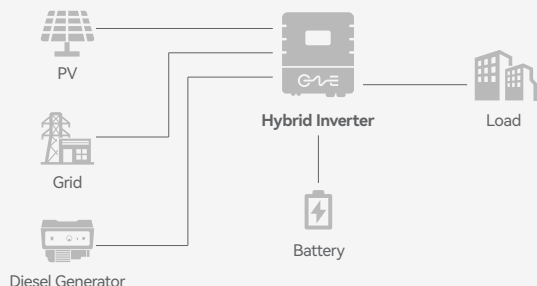
- **IP67 Sealed Protection**  
Fully isolate condensate water, dust, etc.





## Higher Efficiency, ↓70% Fuel Costs

CNTE PV+Diesel Generator+ESS Solution



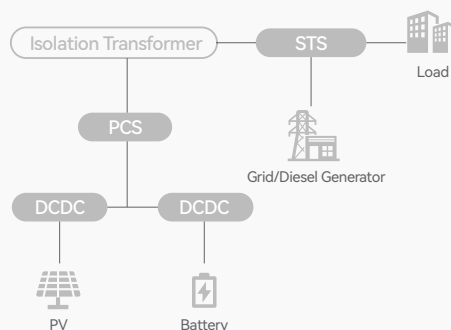
**More Concise Architecture**

↑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

Fire-fighting accessories:



Aerosol



sensors



Pressure/Explosion relief



Water Firefighting

Cell



Pack



Rack



System

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