

# C&I Energy Storage Solutions



## LOW COST & HIGH RETURNS

- **All-in-One Design:** Simplifies transportation, installation, and maintenance, saving time and costs.
- **Pre-Assembled Units:** Factory pre-assembly minimizes on-site work, reducing installation efforts and costs.
- **Cost Savings:** Significant reduction in shipping, installation, and maintenance costs.
- **Stable, Low-Cost Power:** Provides reliable and affordable electricity, maximizing long term returns on your investment.

## HIGH EFFICIENCY & FLEXIBILITY

- **Seamless Power Integration:** Easily connects to solar and diesel generators for uninterrupted, low-cost power 24/7.
- **Optimized Cooling System:** Intelligent A/C cooling boosts efficiency and extends battery cycle life.
- **Scalable Design:** Modular architecture supports multi-parallel connections, enabling easy system expansion as your needs grow.

## STRINGENT SAFETY REGULATIONS & HIGH RELIABILITY

- **Comprehensive Safety Protection:** Four layers of safety safeguards with independent systems for enhanced protection.
- **Long-Term Durability:** 10,000+ cycles lithium batteries ensure the longest service life for your Energy Storage System (ESS).
- **Advanced Intelligent Management:** Over-charge, over-discharge, overload, over-temperature, low-temperature, and short-circuit protections for peace of mind.

## SMART & MANAGEABLE

- **Intelligent Management Systems:** Energy Management System (EMS) and Battery Management System (BMS) provide easy, visual energy control.
- **Real-Time Monitoring:** Fast fault detection and pre-alarms enable quick response to issues, minimizing downtime.
- **Battery Consistency:** Intelligent battery balancing technology ensures uniform performance throughout the battery's life, optimizing returns.



## APPLICATION

- Solar + Storage for applications with uninterrupted power supply.
- Solar + Storage + Genset for Off-grid applications with cheap power supply.
- Peak load shifting for TOU (Peak-to-Valley) tariff arbitrage to saving electricity cost.
- Peak shaving for reduce demand charge.
- Backup power.

## TECHNICAL DATA

Product Model	CO30K-50E	CO50K-100E	CO100K-215E	CO150K-300E
Electrical Parameter				
Nominal AC Power	30 kW	50 kW	100 kW	150 kW
Grid Type	3W+N			
Nominal Grid Voltage	400 Vac			
Nominal Grid Voltage Range	360 Vac - 440 Vac			
Nominal Grid Frequency	50 Hz / 60 Hz			
Nominal Grid Frequency Range	45 Hz - 55 Hz / 55 Hz - 65 Hz			
Rated AC Output Current	43.5 A	72 A	152 A	200A
Max. THD of Current	<3% (at nominal power)			
Battery Parameter				
Cell Chemistry	Lithium Iron Phosphate (LFP)			
Battery Voltage	512 Vdc	358 Vdc	768 Vdc	563 Vdc
Battery Ampere Hour Capacity	100 Ah	280 Ah	280 Ah	560 Ah
Battery Energy Capacity	51.2 kWh	100 kWh	215 kWh	315 kWh
Duration @ Rated Power	2 hrs			
Cycle Life	6000+ cycles	10000+ cycles	10000+ cycles	10000+ cycles
Calendar Life	15+ years	20+ years		
Compliance	IEC62619,UL9540A,UL1973,UN38.3			
Mechanical Parameter				
Monitoring System	Energy Management System			
Cooling Method	Air-Conditioner			
Fire Fighting System	Yes			
Noise Emission	≤75dB			
Communication Interfaces	Ethernet, RS485			
Operating Temperature Range	-20°C to 50°C (>45°C derating)			
Allowable Relative Humidity Range	0 - 95 % (non-condensing)			
Degree of Protection	IP54			
Max. Working Altitude	3000 m			
Dimensions (W*D*H)	800x1200x2100 mm	1000x1450x2100 mm	1738x1250x2330 mm	*
Weight	800 kg	1200 kg	2400 kg	*
Solar Parameter (optional)				
Max. PV Input Power	38.4 kW	60 kW	120 kW	240 kW
Max. PV Input Voltage	850 Vdc		900Vdc	
MPPT Voltage Range	200 Vdc - 800 Vdc		200 Vdc - 850 Vdc	
Number of MPPT	1	2	1	2
Number PV Input of Per MPPT	2	2	4	4
Max. Current Per PV Input	32 A	25 A	60 A	60 A

\*The size and weight will be customised according to the requirements.