

# Liquid Cooled Energy Storage Charging Solution

400kW Charging power/ 6 Charging Connectors/ 350kWh Battery Energy Storage Charger

The energy storage charging system employs LFP battery for energy storage and through the local and cloud EMS, it helps balance the power supply and demand between the grid, battery, EV charging and renewable energy access. Full liquid cooled solution for battery groups can realize the 1P discharge performance to meet the limit AC grid power but high power charging ability with cost efficiency and space saving. It carries significant values in grid peak load shaving, renewable energy resource access and grid power capacity expansion with battery discharge power to grid.

## Solution Value

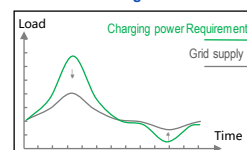
- Grid peak load shaving
- Grid capacity expansion
- Backup power supply by B2G
- New energy convenient access
- HPC with limit grid power
- Off grid still keep charging

## Solution Feature

- Full electric safety design with the total electric insulation between the grid, battery, EV and solar power input
- Highly compatible and flexible change for different configurations
- All in one design for small footprint and easy move
- Full liquid cooled 1P battery discharge performance lower the cost and size of capacity-power
- Fully liquid cooled power module can get extremely low noise 60dB

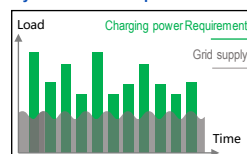


### Peak Load Shifting



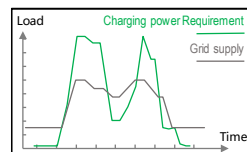
Charge in off-peak hours and discharge in peak hours, achieving peak-valley arbitrage and save electricity costs

### Dynamic Power Expansion



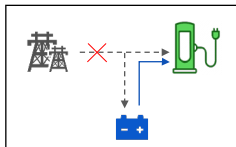
For intermittent high-power loads, the battery system can support the dynamic power expansion and stable the grid power requirement

### Cost Save



Participate in demand side management and obtain government subsidies; Reduce peak power and save basic electricity bills

### Off Grid-Power Backup



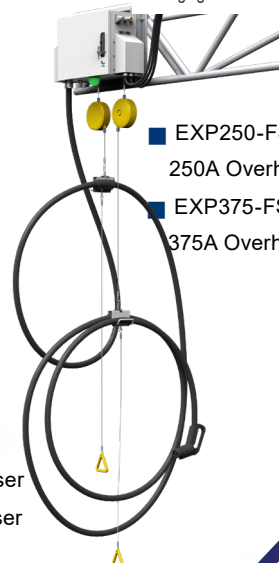
When the grid power off, the battery system can keep power supply for EV Charging still



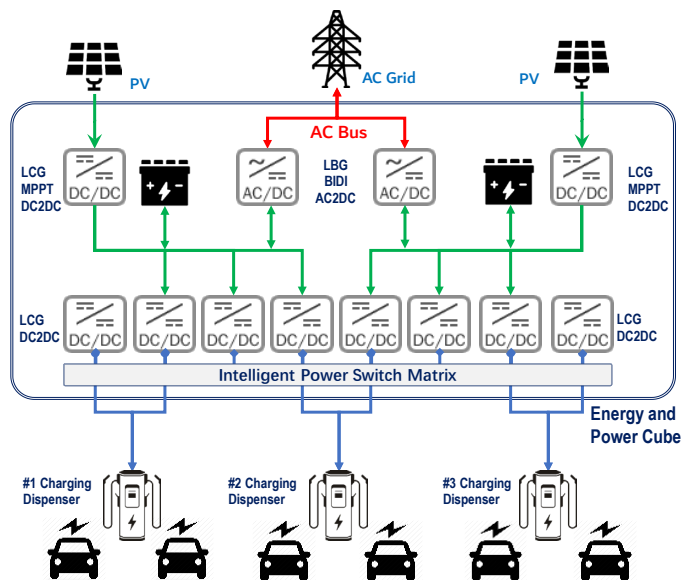
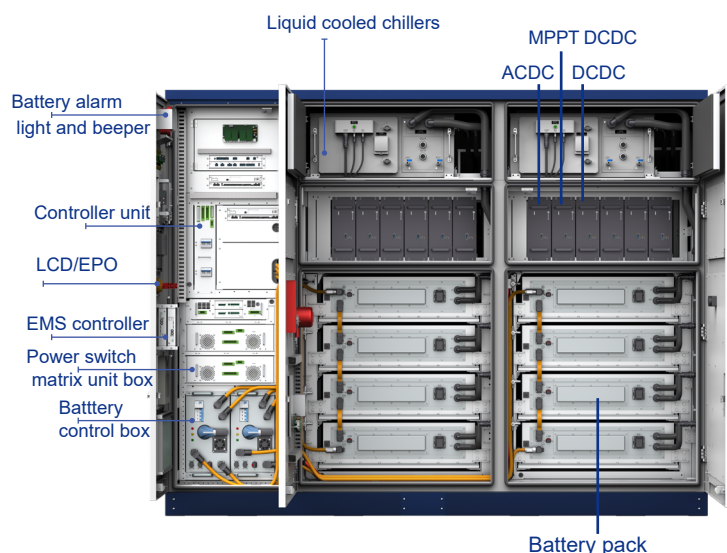
■ IHEBS470K7G-350LL3C  
470kW/350kWh Energy Cube



■ EXP250-FDC 250A Charging Dispenser  
■ EXP375-FDC 375A Charging Dispenser



■ EXP250-FSW-E  
250A Overhead Charging Dispenser  
■ EXP375-FSW-E  
375A Overhead Charging Dispenser



## IHEBS470K7G-350LL3C 470kW/350kWh Energy and Power Cube

AC grid access	AC input voltage	45-65Hz/ 3-phases+(N)+PE / 260Vac-530Vac
	AC max input power	60kW, optional 70kW bidirectional
	AC max output power (optional)	70kW bidirectional power
Electric Vehicle charging	EV Charging point	Max 6 connectors, 3 Dispensers with dual-connectors or 6 single connector dispensers
	EV Charging power	Max 400 kW
	EV Charging power transfer	Power switch between the power module groups to maximize the power efficiency
	EV Charging voltage	150V~1000V
PV access	Access channel	Max 2 channels
	Access power	Max 2 * 40kW MPPT
Metering	AC Grid side	1 AC energy meter, optional MIDI meter
HMI	10" TFT Touch Screen, 2 RGB LED, E-STOP, Batt alarm light and beeper	
Dimension	W * H * D mm = 2800 * 2200 * 1400 mm	Weight: < 7000 kg

### Power Module Configuration

Max 12 power module slots for the configuration	LCG1K0135G-M	DC2DC converter, 40kW/1kV, MPPT support	Max 2 * 40kWp Solar Power input support(optional)
	LCG1K0135G	DC2DC converter, 40kW/1kV	Max 10 * 40kW DC bus discharging power / EV charging power
	LRG1K0100G	AC2DC rectifier, 30kW/1kV	Max 2 * 30kW DC bus charging power
	LBG1K0120G	Bidirectional AC2DC inverter, 35kW/1kV	Max 2 * 35kW AC feedback power(optional)

Charging Dispenser		EXP250-FDC	EXP375-FDC	EXP250-FSW-E	EXP375-FSW-E
DC output	Output charging cable	2	2	1	1
	Output DC voltage range	150V~1000V			
	Max DC output current	2 * 250A	2 * 375A	250A	375A
HMI	Tempered glass protective 7" capacitive Touch Screen LCD, RGB panel LED, E-STOP			Bottom RGB light, optional E-STOP panel	
Metering	DC energy meter, optional MIDI DC meter and Eichrecht certification configuration				
Monitor	OCPP 1.6J, support update to 2.0, P&C, smart charge and power management support , LAN 100M and LTE wireless modem support				
Cable management		Top assembly cable retractors with light bar		Bottom suspension cable retractor	
Payment		RFID, Mobil APP, POS(opt)		Mobil APP	
MBE function support		WEB side Maintenance Backend System enhance the operation and maintenance effectiveness			
Mechanical	Dimension: W * H * D mm	500*1800*260/200kg/IP55/IK10		763*415*240/50kg/IP65/IK10	
Charging connector configuration		2 * CCS, or CCS + NACS		CCS or NACS	
Charging connector capacity		CCS2: 250A/375A, CCS1: 200A/300A, NACS: 200A/250A/300A/380A			
Noise		≤60dB@30°C@rated input and output full power, Max≤65dB			

### 2 \* 175kWh Liquid Cooled Battery Rack

Energy Storage Battery	Two groups 175kWh/285Ah liquid cooled battery rack. Bat volt: 537.6~691.2VDC, 1 P dis/charge, max 1.1P discharge 10 min
High Voltage Control Box	Two Infypower high voltage control box
Battery BMS	Infypower 2 level BMS structure: Battery Pack BSU + High voltage control box BMU
Thermal Management	Two liquid chilling unit with 20kW refrigerating and 2.5kW heating capacity each. Full Infy design and manufacture
Fire suppression system	Completely submerged aerosol fire extinguishing system, water fire interface, emergency fan
Safety Design	Explosion-proof board configuration and fire-proof spread structure design
Envirement Sensor	Water sensor + Temperature sensor + Humidity sensor + Door access seneor + Smoke detector + Variety of combustible gas detector
Protection Class	IP67 Battery pack, IP55 Battery cabinet area
Certification	Full TUV CE and US/CA