

## **APPLICATIONS**

Company Background	01
Professional Power Solution Provider	
Client End	03
Solar Energy Storage	
Energy Storage Power Station	
Generation-Side End	<b>07</b>
Generation-Side Energy Storage	
Integrated PV Energy Storage Station	
Transmission & Distribution	09
Power Station ESS Solutions	
Grid Station Area ESS Solutions	
Microgrid	11
Solar Energy BESS Charging Station	
BESS	14
4 Have been at Land Danielation	

1 Hour Impact Load Regulation

24 Hours Profile Construction Side

# Professional Power Solution Provider

Gas generator

Diesel generator

**BESS** 

Solar componets

Hybrid generator(Solar+DG+BESS)

Micro Grid

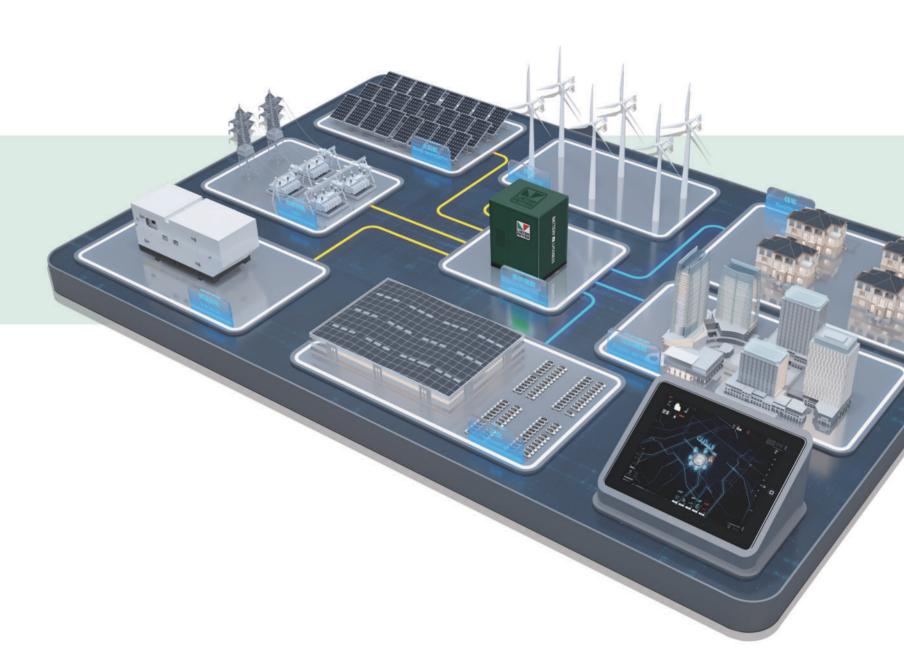
#### **COMPANY BACKGROUND**

Lister Petter is committed to developing new and innovative solutions to provide cleaner energy. By utilizing emerging technologies alongside our more traditional methods, we aim to meet the ever-changing power demands of the world and drive towards zero carbon emissions.









#### **CLIENT END**



#### Overview

The Lister Petter string energy storage system can provide customers with peak-to-valley arbitrage mode and backup power guarantees, as well as dynamic capacity expansion. This system can be applied to household energy storage, large industrial and commercial settings, 5G base stations, micro-grids, virtual power plants, and other livelihood areas. It helps customers reduce electricity costs, provides emergency protection, and promotes green energy for the benefit of all.





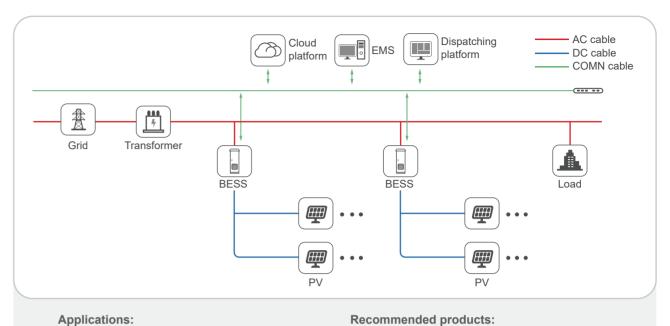


Self-consumption

Time-of-use optimisation

Reduce electricity costs

#### Solar Energy Storage



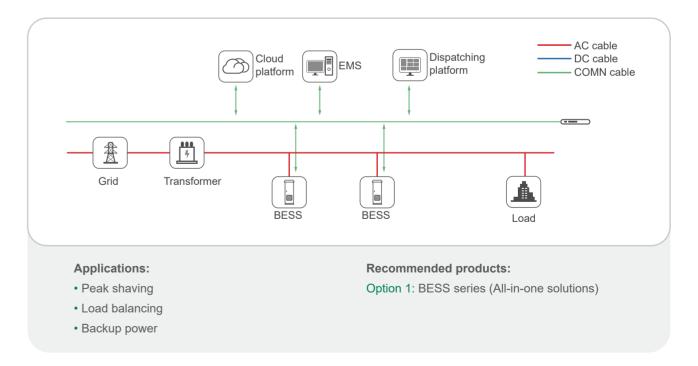
#### · Electricity for remote areas Residential

- Commercial and industrial electricity
- Electricity for public places

#### Recommended products:

Option 1: BESS series (All-in-one solutions)

#### • Energy Storage Power Station



#### **GENERATION-SIDE END**



#### Overview

Energy storage plants play an important role on the generation side by providing a buffer between electricity generation and consumption. They allow excess energy to be stored when demand is low and released when demand is high, which can help improve the efficiency and reliability of power generation. It can also help mitigate the impact of intermittent renewable energy sources such as wind and solar. By storing excess energy generated during periods of high production, energy storage power plants ensure a consistent supply of electricity when these sources are not producing.



Load shifting

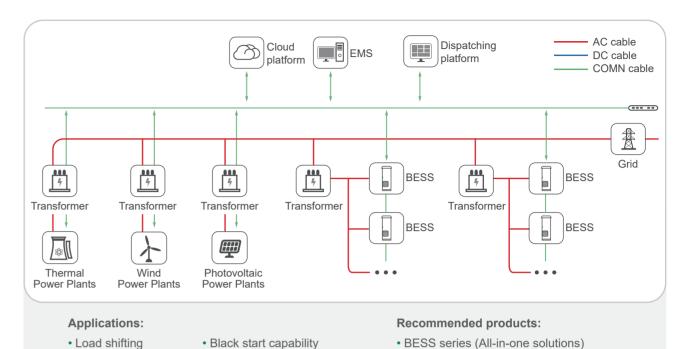


Renewable energy integration



Capacity stability

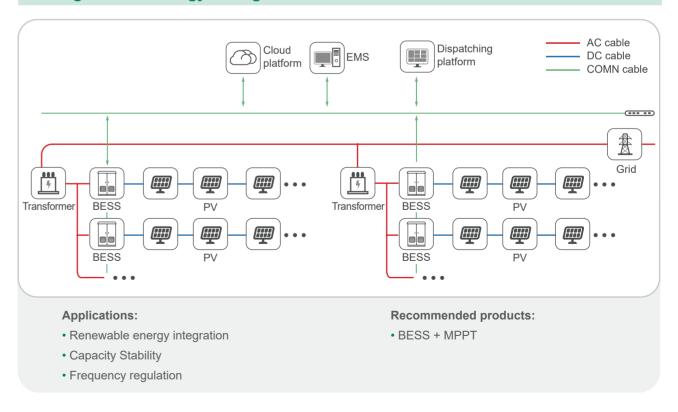
#### • Generation-Side Energy Storage



#### • Integrated PV Energy Storage Station

Renewable energy integration

Capacity StabilityFrequency regulation



#### **TRANSMISSION & DISTRIBUTION END**



#### Overview

A grid-scale energy storage plant plays a crucial role in improving the reliability and stability of the electricity grid. These power plants store excess energy during periods of low demand and release it during periods of high demand, helping to balance supply and demand on the grid. This capability reduces the need for expensive and less efficient peaking power plants, which are typically used only during periods of high demand.

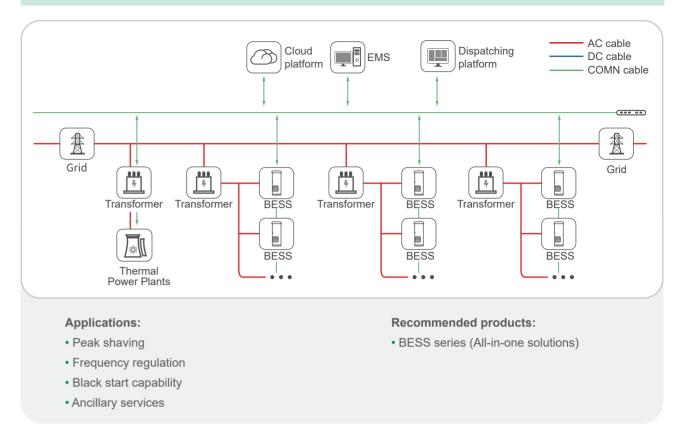




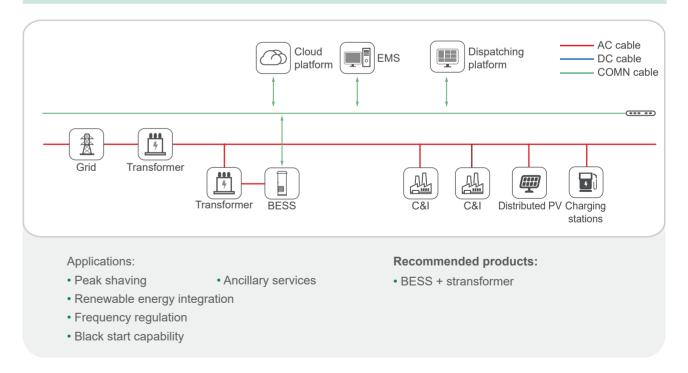
Black start capability

Ancillary services

#### Power Station ESS Solutions



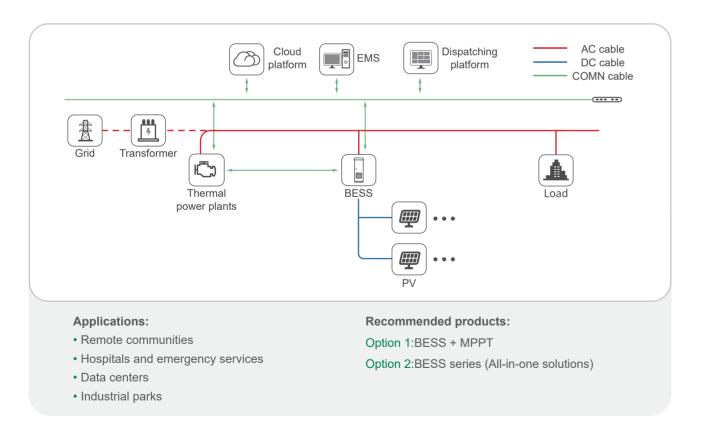
#### Grid Station Area ESS Solutions



#### **MICROGRID ESS**



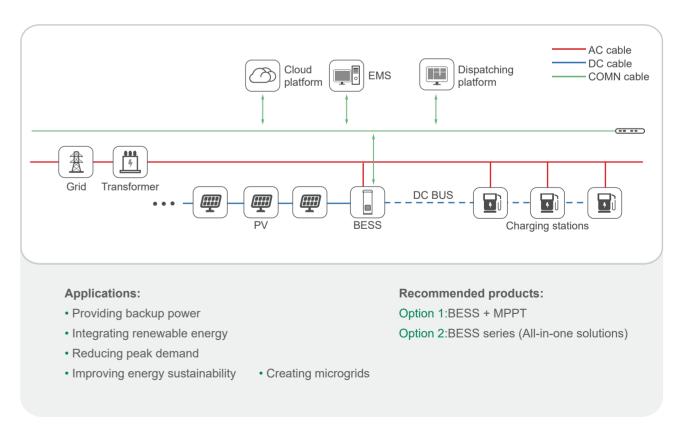
#### Microgrid ESS



#### **SOLAR ENERGY BESS CHARGING STATION**



#### • Solar Energy BESS Charging Station



### **Demonstrations**



**Energy Storage Power Station** 

Providing backup power

400kW / 800kWh

#### **Energy Storage Power Station**

Peak shaving Load balancing Backup Power

1.20MW / 2.4mWh





Energy Storage Power Station
Reducing peak demand

200kW / 400kWh

#### Generation-Side Energy Storage

Load shifting Capacity Stability Frequency regulation

150kW / 300kWh



## **BESS**

#### **Hybrid Commercial and Industrial ESS**

#### Features

- All-in-one design with a high degree of integration.
- Modular design with optional modules of different sizes.
- Support for grid-connected and off-grid operation
- MPPT Solar controller available as an option
- IP54 class fire and explosion-proof housing
- Patented air duct design, intelligent air cooling,
   3-5°C temperature difference of the battery core



#### Applications



Self-Consumption



DG+BESS



Off arid



Micro-grid



Demand Charge



Smooth output

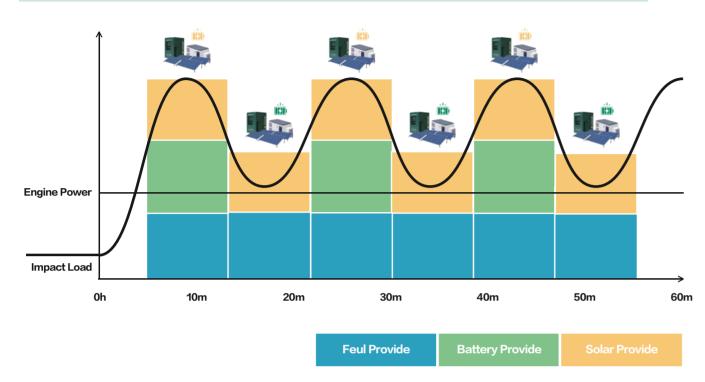


Back Up

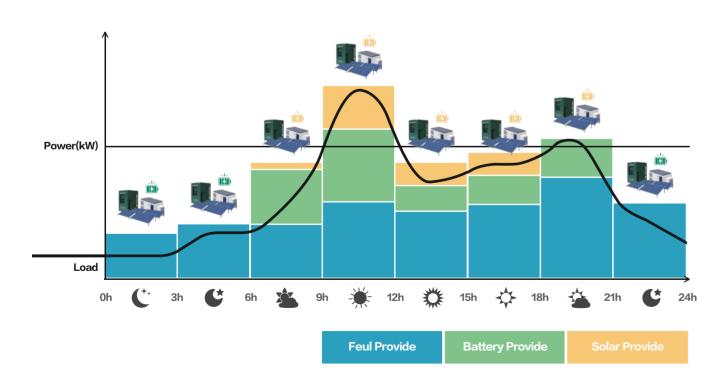


Shaving

#### • 1 Hour Impact Load Regulation



#### • 24 Hours Profile Construction Side



#### Applications



Construction



Leasing



Oil field



Mine



Port



Hospital

#### **Advantages**

Optimized system performance

#### **Quiet Technology**

The perfect choice for noise-sensitive applications and worksites, especially for overnight operation allowing increased productivity.

#### **Energy Management**

50-100% impact load regulation ability improvement (Determined by BESS size)

#### **Cost Savings**

Optimize fuel consumption and reduce the running time of engine. 30-50% fuel will be saved cause Engine will always running at high efficiency.



	Distributed Air Cooled B	BESS System	
Model	LP50BESS	LP100BESS	LP200BESS
	AC Output	İ	
AC Voltage Range	230-400VAC +/-2%	230-400VAC +/-2%	230-400VAC +/-2%
Frequency Range	50Hz +/-0.5%	50Hz +/-0.5%	50Hz +/-0.5%
Stored Battery Power	50.4kWh	107kWh	215kWh
Invertor Rated Power	35kW	50kW	100kW
Continuous Power @25° C	35kW	50kW	100kW
Maximum Feed Through Current	3*63A	3*90A	3*180A
	AC Output - Inv	vertor	
AC Voltage Range	190-300VDC	600-850VDC	630-900VDC
Input Frequency	50Hz/60Hz ± 2.5Hz	50Hz/60Hz ± 2.5Hz	50Hz/60Hz ± 2.5Hz
Maximum Feed Through Current	3*63A	3*90A	3*180A
Weight	35kg	40kg	50kg
Dimension(mm)	480(W)*173(H)*550(D)	480(W)*176(H)*620(D)	480(W)*176(H)*620(D)
	Connection	s	
Input	1*32A(3 phases)	1*63A(3 phases)	1*125A(3 phases)
Output	2*32A(3 phases) 1*63A(3 phases)	2*63A(3 phases) 1*125A(3 phases)	1*63A(3 phases) 2*125A(3 phases)
	Battery		
Charging & Discharging Cycle Efficiency	0.5	0.5	0.5
Cellular specification	314Ah 51.2V	280Ah 51.2V	280Ah 51.2V
Usable Capacity	16kWh	14.3kWh	14.3kWh
Norminal Output	8kW	7.15kW	7.15kW
Norminal Voltage	51.2VDC	51.2VDC	51.2VDC
Efficiency	95%	95%	95%
Battery Managment System	Yes	Yes	Yes
Active Balancing System	Yes	Yes	Yes
Voltage Range	48.8-57.6V	48.8-57.6V	48.8-57.6V
Communication Interfaces	RS485/CAN	RS485/CAN	RS485/CAN
Life Span Cycle	5000 (+25℃, 0.5C)	5000 (+25℃, 0.5C)	5000 (+25℃, 0.5C)
Life Span Cycle Weight	5000 (+25℃, 0.5C) 103±1.5kg	5000 (+25℃, 0.5C) 103±1.5kg	5000 (+25℃, 0.5C) 103±1.5kg
	, , ,	, , ,	103 ± 1.5kg
Weight	103±1.5kg 753.1(L)*476.0(W)*230.0(H)	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H)	103 ± 1.5kg
Weight Dimension(mm)	103±1.5kg 753.1(L)*476.0(W)*230.0(H) General Da	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H)	103±1.5kg 753.1(L)*476.0(W)*230.0(H
Weight Dimension(mm)  Dimension(mm)	103±1.5kg 753.1(L)*476.0(W)*230.0(H) General Da 1350(W)*1500(H)*1100(D)	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H) ta 1810(W)*1800(H)*1100+300(D)	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H 1810(W)*2250(H)*1100+300(
Weight Dimension(mm)	103±1.5kg 753.1(L)*476.0(W)*230.0(H) General Da	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H)	103±1.5kg 753.1(L)*476.0(W)*230.0(H
Weight Dimension(mm)  Dimension(mm)	103±1.5kg 753.1(L)*476.0(W)*230.0(H) General Da 1350(W)*1500(H)*1100(D) 1116kg	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H) ta 1810(W)*1800(H)*1100+300(D) 1987kg	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H) 1810(W)*2250(H)*1100+300(
Weight Dimension(mm)  Dimension(mm)	103±1.5kg 753.1(L)*476.0(W)*230.0(H) General Da 1350(W)*1500(H)*1100(D)	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H) ta 1810(W)*1800(H)*1100+300(D) 1987kg	103 ± 1.5kg 753.1(L)*476.0(W)*230.0(H) 1810(W)*2250(H)*1100+300(



#### All in One Series

	Distributed Air Cooled B	BESS System	
Model	LP250BESS	LP350BESS	LP400BESS
	AC Output		
AC Voltage Range	230-400VAC +/-2%	230-400VAC +/-2%	230-400VAC +/-2%
Frequency Range	50Hz +/-0.5%	50Hz +/-0.5%	50Hz +/-0.5%
Stored Battery Power	261kWh	366kWh	430kWh
Invertor Rated Power	125kW	125kW	200kW
Continuous Power @25° C	125kW	125kW	200kW
Maximum Feed Through Current	3*225A	3*225A	3*360A
	AC Output - Inv	vertor	
AC Voltage Range	600-1000VDC	1000-1500VDC	[630-900VDC]*2
Input Frequency	50Hz/60Hz ± 2.5Hz	50Hz/60Hz ± 2.5Hz	[50Hz/60Hz±2.5Hz]*2
Maximum Feed Through Current	3*225A	3*225A	[ 3*180A ]*2
Weight	50kg	115kg	[ 50kg ]*2
Dimension(mm)	520(W)*186(H)*680(L)	750(W)*275(H)*820(D)	960(W)*176(H)*620(D)
	Connection	s	
Input	1*250A Plastic shell breaker	1*315A Plastic shell breaker	1*375A(3 phases)
Output	1*63A(3 phases) 2*125A(3 phases)	2*63A(3 phases) 2*125A(3 phases)	2*63A(3 phases) 【 2*125A(3 phases) 】*2
	Battery		
Charging & Discharging Cycle Efficiency	0.5	0.5	0.5
Cellular specification	314Ah 51.2V	314Ah 51.2V	314Ah 51.2V
Usable Capacity	16kWh	16kWh	16kWh
Norminal Output	8kW	8kW	8kW
Norminal Voltage	51.2VDC	51.2VDC	51.2VDC
Efficiency	95%	95%	95%
Battery Managment System	Yes	Yes	Yes
Active Balancing System	Yes	Yes	Yes
Voltage Range	48.8-57.6V	48.8-57.6V	48.8-57.6V
Communication Interfaces	RS485/CAN	RS485/CAN	RS485/CAN
Life Span Cycle	5000 (+25℃, 0.5C)	5000 (+25℃, 0.5C)	5000 (+25℃, 0.5C)
Weight	103±1.5kg	103 ± 1.5kg	103 ± 1.5kg
Dimension(mm)	753.1(L)*476.0(W)*230.0(H)	753.1(L)*476.0(W)*230.0(H)	753.1(L)*476.0(W)*230.0(H)
	Conord Dat	ha.	
Dimension(mm)	General Dat 1100*1400*2400	a 10-Feet Containers	10-Feet Containers
Weight	2.6T	4T	8.5T
	Compatible Diesel C	Generator	
Rated Power	≤125 kW	≤175 kW	≤200 kW
Rated Voltage	400 / 480V	400 / 480V	400 / 480V
Rated Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz



	Distributed Air Cooled BESS System
Model	LP500BESS
Stored Battery Power	522kWh
	Battery
Cell Type	LFP(LiFePO4)
Pack Capacity	52.25kWh
Pack Rated Voltage	166.4VDC
Cyclic Life	8000(0.5C@90%DOD)
Battery Voltage of Rack	832VDC
Connection of Rack	5S4P
	PCS
Max. Current (AC)	728A
Max. Output Power	600kW
Rated Output Power	500kW
AC Input Voltage Range	380-415Vac
Rated Frequency Range	50/60Hz(±2.5Hz)
PF	1 lagging-1 leading
AC Connection	3W+N+PE
Max. Efficiency	99%
Transformer	NA
Communication	CAN/RS485
Grid-tied Certificates	EN50549,NRS 097, C10/11,VDE4105, G99
Safety & EMC Certificates	IEC61000, IEC62477
	EMS
Display and Monitor	Local screen
Function	Energy management and coordinated control of energy storage system
	General Data
Dimension(mm)	10-Feet Containers
Weight	9T
, and the second	· · · · · · · · · · · · · · · · · · ·
	Compatible Diesel Generator
Rated Power	≤250 kW
Rated Voltage	400 / 480V

50 / 60 Hz

Rated Frequency



#### All in One Series

	Distributed Air Cooled BESS System
Model	LP600BESS
Stored Battery Power	627kWh
	Battery
Cell Type	LFP(LiFePO4)
Pack Capacity	52.25kWh
Pack Rated Voltage	166.4VDC
Cyclic Life	8000(0.5C@90%DOD)
Battery Voltage of Rack	832VDC
Connection of Rack	5S4P
	DOS
	PCS
Max. Current (AC)	728A
Max. Output Power	600kW
Rated Output Power	500kW
AC Input Voltage Range	380-415Vac
Rated Frequency Range PF	50/60Hz(±2.5Hz)
AC Connection	1 lagging-1 leading
Max. Efficiency	3W+N+PE 99%
Transformer	99% NA
Communication	CAN/RS485
Grid-tied Certificates	EN50549,NRS 097, C10/11,VDE4105, G99
Safety & EMC Certificates	IEC61000, IEC62477
Cardy & Livio Octanidates	1200 1000, 12002 177
	EMS
Display and Monitor	Local screen
Function	Energy management and coordinated control of energy storage system
	General Data
Dimension(mm)	10-Feet Containers
Weight	10T
TOIST I.	101
	Compatible Diesel Generator
Rated Power	≤300 kW
Rated Voltage	400 / 480V
Rated Frequency	50 / 60 Hz





#### All in One Series

Distribute	ed Air Cooled BESS System
Model	LP1000BESS
Stored Battery Power	1044kWh
	Battery
Rated Output Power@25℃	500kW
Rated Output Voltage	400V@50Hz,3ph
Battery Storage Capacity	1003.5kWh
Operating Temperature Range	-20~50°C(> 45°C derating)
Max altitude	3000m(> 2000m derating)
Cell Type	LFP(LiFePO <sub>4</sub> )
Pack Model	MF51280
Pack Capacity	14.336kWh
Pack Rated Voltage	51.2VDC
Cyclic Life	6000(0.5C@90%DOD)
Charger/Discharge Current	140A(0.5C)
Battery Voltage of Rack	716.8VDC
Connection of Pack	14S5P
	PCS
Battery Voltage Range	600-900VDC
Max. Current (AC)	794A
Max. Output Power	550kW
Rated Output Power	500kW
Rated Voltage	400Vac
Rated Frequency Range	50/60Hz(±2.5Hz)
PF	1 lagging-1 leading
AC Connection	3W+N+PE
Max. Efficiency	98.2%
Transformer	Optional
Communication	CAN/RS485/Ethernet/WIFI
Certificates	CE LVD IEC 62477, CE EMC IEC 61000
	General Data
Dimension(mm)	20' GP
Weight	18T
-	
	patible Diesel Generator
Rated Power	≤500 kW
Rated Voltage	400 / 480V
Rated Frequency	50 / 60 Hz

Dietributed Air Co	oled BESS System
Distributed Air Con	Died DE33 System
Model	LP1500BESS
Stored Battery Power	1520kWh
Bat	tery
Rated Output Power@25°C	500kW
Rated Output Voltage	400V@50Hz,3ph
Battery Storage Capacity	1505.28kWh
Operating Temperature Range	-20~50°C(> 45°C derating)
Max altitude	3000m(> 2000m derating)
Cell Type	LFP(LiFePO <sub>4</sub> )
Pack Model	MF51280
Pack Capacity	14.336kWh
Pack Rated Voltage	51.2VDC
Cyclic Life	6000(0.5C@90%DOD)
Charger/Discharge Current	140A(0.5C)
Battery Voltage of Rack	768VDC
Connection of Pack	15S7P
PO	cs
Battery Voltage Range	600-900VDC
Max. Current (AC)	794A
Max. Output Power	550kW
Rated Output Power	500kW
Rated Voltage	400Vac
Rated Frequency Range PF	50/60Hz(±2.5Hz)
AC Connection	1 lagging-1 leading 3W+N+PE
Max. Efficiency	98.2%
Transformer	Optional
Communication	CAN/RS485/Ethernet/WIFI
Certificates	CE LVD IEC 62477, CE EMC IEC 61000
Gener	al Data
Dimension(mm)	20' GP
Weight	25.3T
Compatible Di	esel Generator
Rated Power	≤725 kW
Rated Voltage	400 / 480V
Rated Frequency	50 / 60 Hz



D	istributed Air Cooled BESS System
Model	LP2000BESS
Stored Battery Power	2280kWh
etered Battery Ferrei	22000000
	Battery
Rated Output Power@25℃	1000kW
Rated Output Voltage	400V@50Hz,3ph
Battery Storage Capacity	2007.04kWh
Operating Temperature Range	-20~50°C(> 45°C derating)
Max altitude	3000m(> 2000m derating)
Cell Type	LFP(LiFePO <sub>4</sub> )
Pack Model	MF51280
Pack Capacity	14.336kWh
Pack Rated Voltage	51.2VDC
Cyclic Life	6000(0.5C@90%DOD)
Charger/Discharge Current	140A(0.5C)
Battery Voltage of Rack	716.8VDC
Connection of Pack	14S10P
	PCS
Battery Voltage Range	600-900VDC
Max. Current (AC)	794A
Max. Output Power	1100kW
Rated Output Power	1000kW
Rated Voltage	400Vac
Rated Frequency Range	50/60Hz(±2.5Hz)
PF	1 lagging-1 leading
AC Connection	3W+N+PE
Max. Efficiency	98.2%
Transformer	Optional
Communication	CAN/RS485/Ethernet/WIFI
Certificates	CE LVD IEC 62477, CE EMC IEC 61000
	General Data
Dimension(mm)	20' GP
Weight	30T
	Compatible Discol Compater
D / 1D	Compatible Diesel Generator
Rated Power	≤1000 kW
Rated Voltage	400 / 480V
Rated Frequency	50 / 60 Hz



#### All in One Series

Dief	tributed Air Cooled BESS System
Disi	Tibuled All Cooled BESS System
Model	LP5000BESS
Stored Battery Power	5015kWh
	Battery
Battery Stack	12*1P416S
Rated Voltage	1331.2VDC
DC Voltage Range	1164.8VDC~1497.6VDC
Charge/Discharge Rate	0.5P
Protection Class	IP54
Loading Capacity   20' GP	1 units
Discharge Temperature Range	-20~50° C(>40°C derating)
Humidity	0~95%(No Condensation)
Max Altitude	≤2000m
Dimension(mm)	2438mm*6058mm*2896mm(ISO 20' HQ
Cell Type	LFP(LiFePO <sub>4</sub> )
Cell Capacity	314Ah
Pack Capacity	104.5 kWh
Pack Rated Voltage	332.8 VDC
Cyclic Life	8000 Times(0.5C@80%DOD)
Battery Voltage of Rack	1331.2 VDC
Rack Capacity  Connection of Pack	417.99 kWh 416S1P
00000.0	
	Cooling System
Battery Cabin	Liquid Cooling
Liquid-cooled unit	60kW
Quantity	1
	Protection Device
Fire Suppressant	Aerosol (CE), water inlet valve reserved
DC Side	Disconnect Switch &Fuse
Sensor	Smoke,temperature,Gas detector
	High-Voltage Box
High-Voltage Box	250A/1500V
Quantity	12
	General Data
Dimension(mm)	40' GP
Weight	44T
Certificates	CE LVD IEC 62477, CE EMC IEC 61000
	Compatible Diesel Generator
Rated Power	≤2500kW
	≤2500kW 400 / 480V