

# TCS<sup>®</sup>

## *Lithium Battery*

Stable | Secure | Powerful





TCS BATTERY

✓ TCS Sales Network

✓ Global Sales Network

# TCS BATTERY

## For better life



**6 Million**  
KVAH / Year



**400 Thousand**  
Square meters



Enterprise  
Official Website



Alibaba  
International Site



Factory Panorama

# CATALOGUE

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## PRODUCT CERTIFICATION

Our products have passed CE, UN38.3, CQC, ISO and other certifications, and obtained the access qualification of European Union, European Free Trade Area and other international markets, providing technical support and guarantee for expanding the international market.



## COMPANY PROFILE

TCS battery established in 1995 is one of the earliest battery brands in China which comprehensive high-tech enterprise specializing in the advanced battery research, development, production and marketing. Our products are widely used in UPS, residents energy storage, industrial and commercial ESS, electric tools, forklifts, golf cart, AGV, electric bicycles and motorcycles etc..

TCS battery keeps growing during the passed 30 years, the production base covers an area of more than 400,000 square meters, we have more than 3000 employs with a complete set of modern standard factory buildings, office buildings and employee apartment buildings. TCS battery has advanced battery production line and technology, continuously introduce the world's leading automatic assembly welding, automatic wrap machine and other equipment to strengthen our brand advantage. Our monthly output is up to 2,000,000 batteries and the total annual production capacity is over 6 million KVA.





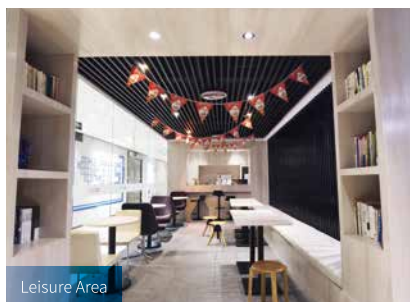
Reception



Office area



Conference room



Leisure Area



Laboratory

**TCS<sup>®</sup> | SONGLI BATTERY**

In recent years, TCS has been led by the global trend of carbon peak and carbon neutrality, in order to rapidly form economies of scale and participate in market competition, the company has made rapid development of the overall economy through technological transformation, technological development, joint venture cooperation, mergers and acquisitions.

The company has formed a group operation mode with Hong Kong Songli Group as the core, Xiamen Songli New Energy Technology Co., Ltd., Xiamen Songli Import and Export Co., Ltd., and Jinjiang Songli Battery Co., Ltd. as subsidiaries, Also invested and cooperated with several battery enterprises. Through these to control (participating) companies and integrate market resources.

Facing the market and striving hard, we has formed a large enterprise from scratch and grown from small to large, gradually developing and growing into one of the large battery manufacturing companies in China. We passed ISO9001, ISO14001, UL1642, UL1973 and other certifications. Experienced in battery production, perfect innovation system, good customer relationship and reliable before-sales, sales and after-sales service, with stable and excellent distributors in local and abroad market, business has expanded to more than 100 countries and regions in all over the world.



## PROCESS FLOW

Mix Material	1
Coating	2
Calendering	3
Auto Cutting	4
Welding	5
Auto Winding	6
Bottom Welding	7
Roll Slot	8
Battery Baking	9
Electrolyte Injection	10
Formation And Capacity Grading	11
Sorting And Matching Group	12

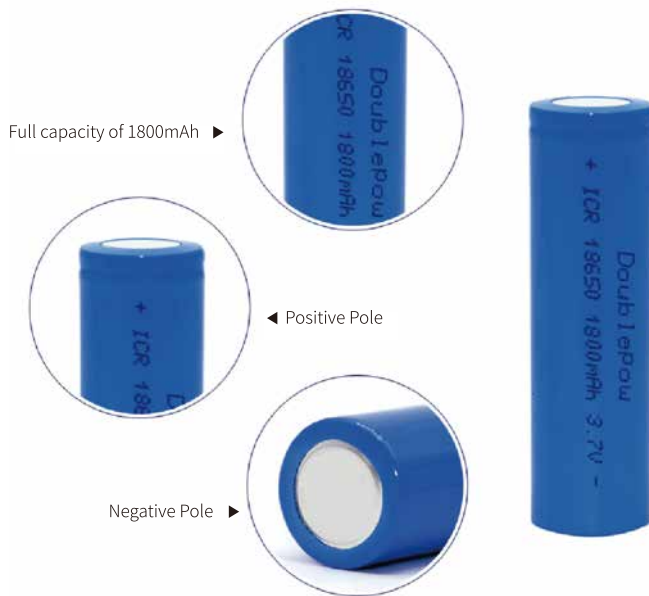






## PRODUCTION PROCESS

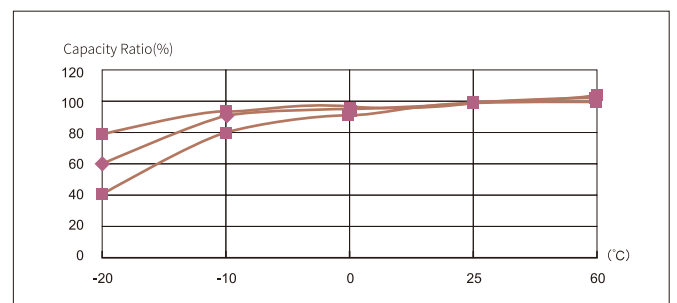
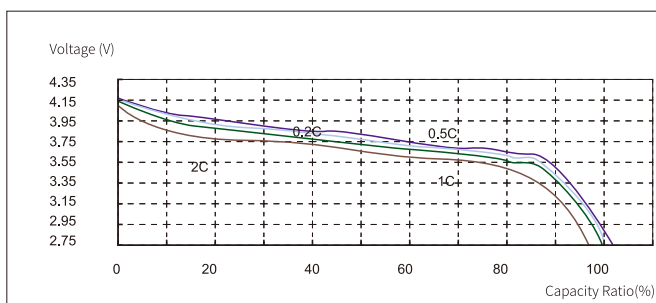
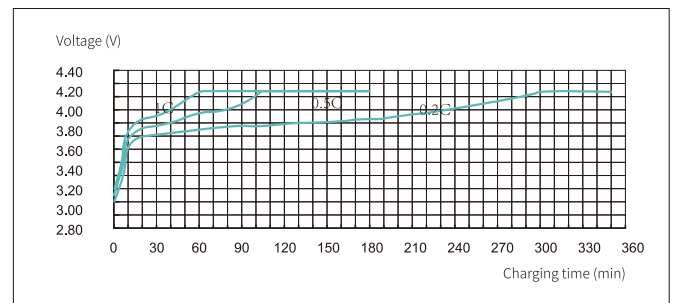
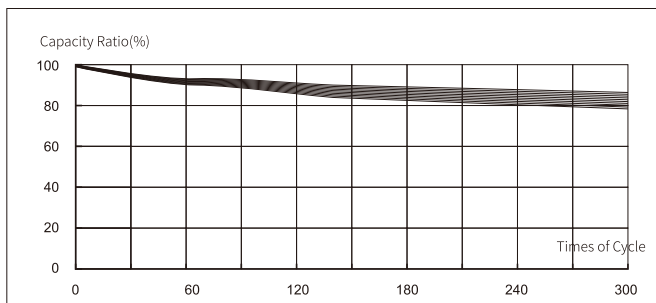




## Capacity Cell 1800/2000/2200/2500mAh

- Adopt high quality imported materials
- Excellent safety performance, energy density up to 150-300wh/kg
- Small size, light weight, can be connected in series or parallel
- RoHS, REACH, FCC, UN38.3, CE, CB, CQC, ISO certified

RoHS REACH FC UN38.3 CE CB CQC ISO 9001



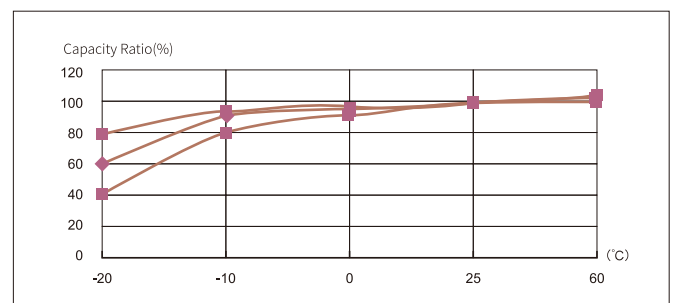
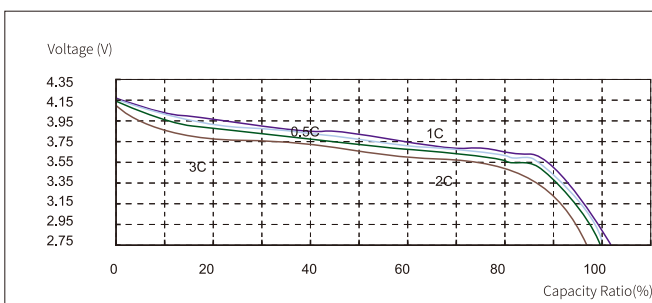
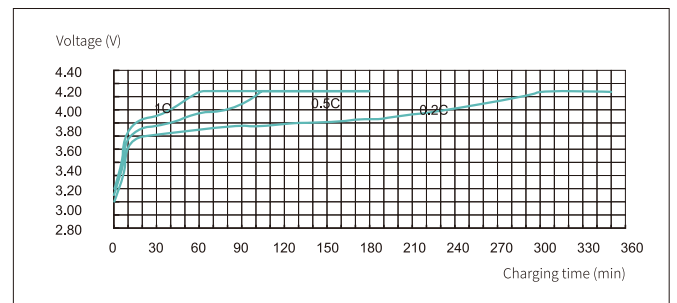
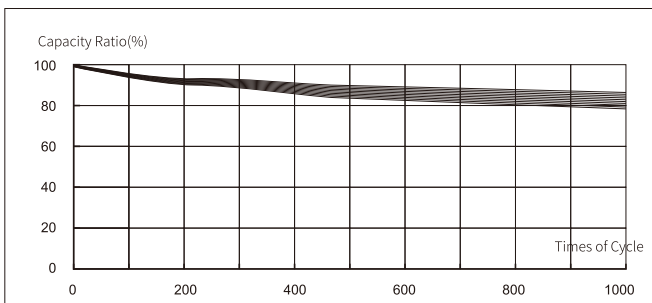




## High Rate Cell 1800/2000/2200/2500mAh

- High rate battery with maximum discharge rate up to 30C and capacity retention rate over 95%
- 5C fast charging system that can charge the battery more than 90% in 12 minutes
- Customized in different capacities and sizes; maximum capacity can reach 10Ah
- RoHS, REACH, FCC, UN38.3, CE, CB, CQC, ISO certified

**RoHS REACH FC UN38.3 CE CB**



\* The above data are for reference only, please refer to the actual object.

# EMERGENCY BATTERIES

Applications :Solar street lights, emergency lights, alarm system, etc.



# EMERGENCY BATTERIES

## Product Description

TCS emergency power supply series are for low-voltage UPS, solar power, portable power tools, home emergency power, electric toy car, medical cart and other applications battery pack. It has obvious advantages in safety, energy density, operating temperature range, service life, environmental protection, etc., with intelligent battery management system, we can provide customers with safe, stable and highly customized power supply guarantee service.

## Product Customization



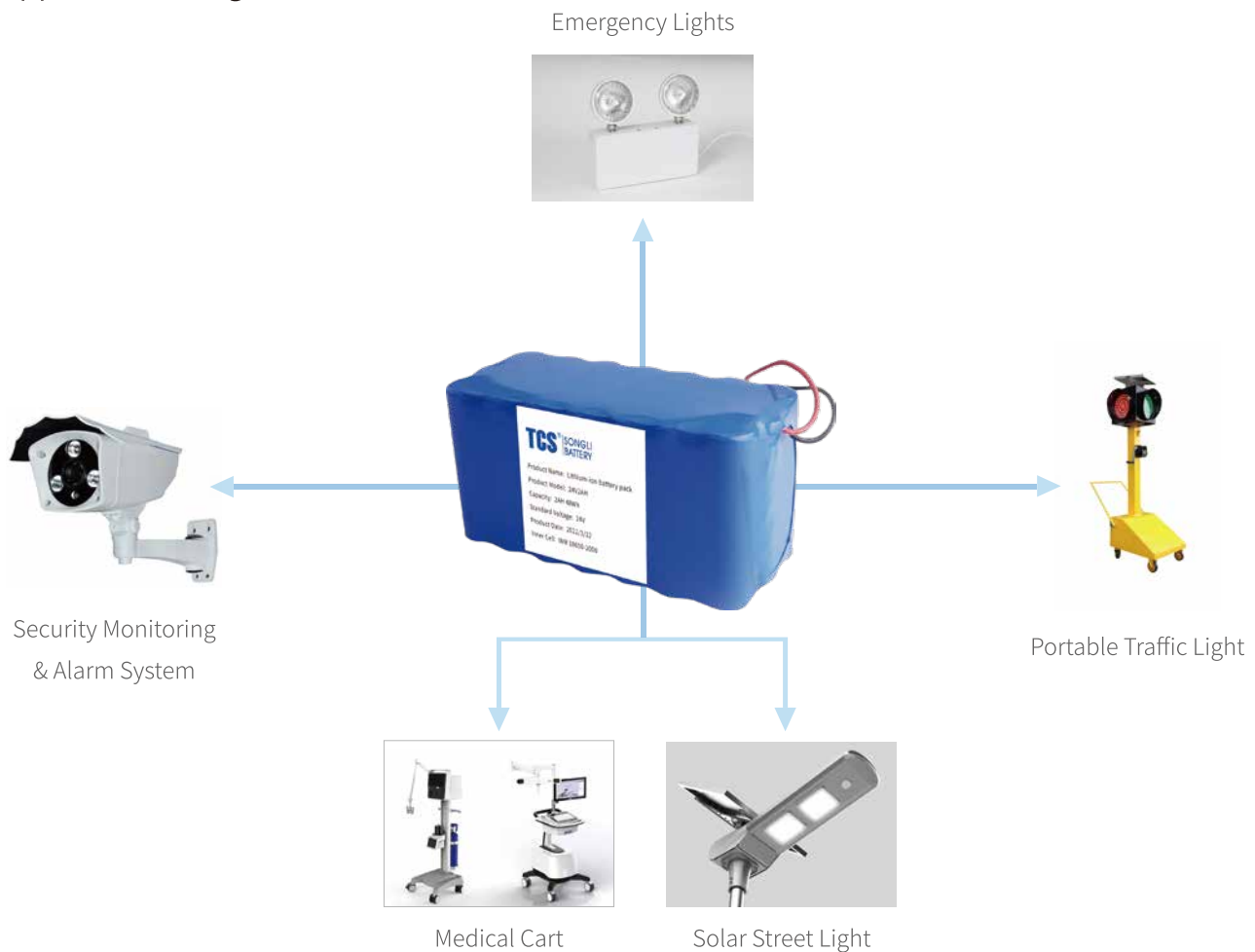
Optional material: LiFePO4/NMC

Voltage range: 3.7V 7.4V 11.1V 14.8V 18.5V 22.2V

3.2V 6.4V 9.6V 12.8V 25.6V

Capacity range: 1.5AH-100AH

## Application Range





# ELECTRIC VEHICLE BATTERIES

Applications: Golf carts, sightseeing carts, forklifts, wheelchairs, etc.



# ELECTRIC VEHICLE BATTERIES

- Product Type: PVC Thermoplastic Film, ABS, Sheet Metal



PVC Thermoplastic Film



ABS



Sheet Metal

- Voltage Range: 12V 24V 36V 48V 60V 72V

## TLB4830



[Number of cells] : 16PCS  
 [Driving range] : 65-80Km  
 [Voltage standard] : 51.2V 30AH  
 [Size] : 180\*170\*282mm  
 [Maximum capacity] : 30AH [Weight] : 13.6kg  
 [Cycle life] : ≥1200 [Charging time] : 3-6hours  
 [Charging port] : Pin port / Anderson port  
 [Application range] :  
 48V (within 1800W) electric motorcycle

## TLB6040



[Number of cells] : 40PCS  
 [Driving range] : 65-80Km  
 [Voltage standard] : 64V 40AH  
 [Size] : 226\*350\*180mm  
 [Maximum capacity] : 40AH [weight] : 22.5kg  
 [Cycle life] : ≥1200 [Charging time] : 3-6hours  
 [Charging port] : Pin port / Anderson port  
 [Application range] :  
 48V (within 1800W) electric motorcycle

- Product Characteristics



**Light weight and small size**  
 Only 1/3 of the weight of traditional lead-acid batteries.



**Large capacity**  
 Single charge range reaches 65-85km



**Long service life**  
 Over 1200 discharges (100% DOD)



Overcurrent protection



Over-voltage device



Overcharge protection



Over discharge protection



Short circuit protection



Temperature control protection



Charge reversal



Balance performance



# PORTABLE POWER

Application: Travel, outdoor activities, rescue and medical, photography.





# PORTABLE POWER

## Product Description

Songli outdoor power supply based on scientific structural design to reduce the size of the product, 40~50% smaller than the competitors' products in the market. Providing a high quality experience for outdoor driving trips, camping, fishing, photography and aerial photography. The product is made of built-in UL approved automotive grade lithium-ion battery, battery management system (BMS), charging management system, power management system, DC module and AC inverter module. It's an all in one portable power supplier.

The battery cell has passed UL, EU safety certification, and gets a IP52 protection level. Anti-sand and dust outdoor, zero noise for tent and house use. Also obtained international certifications such as CE/FCC/ROSH/PSE/UN38.3 and are safe and reliable.

## Product Specification



Model	P300	P600	P1000S
Battery Capacity	303Wh / 83200mAh	607Wh / 166400mAh	1016Wh / 274800mAh
AC Output Rate	Rated 350W/Peak 600W	Rated 650W/Peak 1200W	Rated 1000W/Peak 1500W
Output Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
AC 220W Output Interfaces	2	2	2
USB Port	5V, 12W*3	5V, 12W*3	5V, 12W*3
Fast Charge Type-C	PD100W*1(Bidirectional)	PD100W*1(Bidirectional)	PD100W*1(Bidirectional)
DC5521 Output	72W, 12V6A*2	72W, 12V6A*2	72W, 12V6A*2
Car charging time	150W, 12.5V/12A	150W, 12.5V/12A	150W, 12.5V/12A
120W PV charging	≈3hrs	≈6hrs	≈11hrs
Adapter	65W	150W	150W
Product volume	140x175x118mm	267x175x118mm	297x175x118mm
Product weight(NW)	≈3.5 Kg	≈6.2 Kg	≈8.1 Kg
Warranty	24 Months	24 Months	24 Months

## Usage Time P 600

5-7W Smartphone  
50~70 Times



5W LED Light  
≈ 110hrs



25W Outdoor Stereo  
≈ 22hrs



30W Electric Fan  
≈ 18hrs



50W Laptop  
≈ 11hrs



80W Mini Refrigerator  
≈ 6.5hrs



100W Desktop  
≈ 5.5hrs



300W Rice Cooker  
≈ 1.8hrs



\* The above data are for reference only, please refer to the actual object.

A photograph of a server room with multiple rows of server racks. The racks are filled with electronic equipment, and the room is dimly lit with a strong blue hue. The perspective is from the end of a row, looking down its length.

# COMMERCIAL ESS

Application: Medium or Small commercial and industrial, factory, supermarket, etc.

# COMMERCIAL ESS

## Product Description





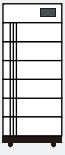
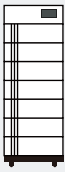

Songli's industrial and commercial energy storage battery cabinets are high-performance LiFePO4 battery systems that focus on small and medium-sized industrial and commercial applications. The systems have obvious advantages in terms of safety, energy density, fast charging, applicable temperature range, service life and environmental protection, and can be used in conjunction with grid-connected and off-grid energy storage inverter systems.

## Product Specification

### FEATURES OF THE HIGH VOLTAGE BATTERY

- Safe and reliable, with perfect protection functions; BMS intelligent protection, new A-grade LiFePO4 batteries with excellent safety performance, metal shell, waterproof and explosion-proof.
- Modular stacking design, easy to expand, up to 8 battery packs can be connected in series.
- Flexible capacity options, 9.6kwh~38.4kwh available.
- Compatible with a wide range of energy storage inverters in the market.
- Supports UPS function, 24-hour uninterrupted power supply, full power continuous output guarantee, safe power usage.
- Energy saving and environmental protection, long life. Battery usage rate up to 95% or more; deep cycle, cycle times greater than 6000 times.
- Multifunctional design with LED display, beautiful appearance, ON/OFF switch to control output.
- Universal wheel design at the bottom, easy to install and place at will.



Parameter table	TLB30S100BL	TLB45S100BL	TLB60S100BL	TLB75S100BL	TLB90S100BL	TLB105S100BL	TLB120S100BL
Module display							
Voltage	96V	144V	192V	240V	288V	336V	384V
Number of modules	2	3	4	5	6	7	8
Capacity	100Ah	100Ah	100Ah	100Ah	100Ah	100Ah	100Ah
Energy	9.6KWh	14.4KWh	19.2KWh	24KWh	28.8KWh	33.6KWh	38.4KWh
Size (±2mm)	574×395×302mm	574×395×470mm	574×395×638mm	574×395×806mm	574×395×974mm	574×395×1142mm	574×395×1310mm
Weight	88kg	127kg	166kg	205kg	244kg	283kg	322kg
Standard charge/discharge current	100A	100A	100A	100A	100A	100A	100A



# TELECOM ESS

Application: Telecom system



# TELECOM ESS

## Product Description

Songli Telecom Energy Storage Battery System is a high-performance LiFePO4 battery system focusing on the application of Telecom energy storage. It can provide photovoltaic complementary, scenery complementary, and micro-grid energy supply modes, as well as new energy supply system solutions for telecom base stations in alpine areas. We provide efficient, stable and reliable backup power for Telecom base stations, and provide power protection for base stations.

## Product Specification

Supports parallel connection of high-voltage battery cabinets with a maximum voltage of 384V and a capacity of 200AH, supporting up to 10 parallel connections;  
Supports LCD screen customization.



Without LED screen



With LED screen

Model	TLB48-100-CB		TLB48-150-CB		TLB48-200-CB	
Voltage	48V	51.2V	48V	51.2V	48V	51.2V
Nominal Capacity	100Ah	100Ah	150Ah	150Ah	200Ah	200Ah
Energy	4800wh	5120wh	7200wh	7680wh	9600wh	10240wh
Arrangement Method	15S1P	16S1P	15S1P	16S1P	15S1P	16S1P
Size (±2mm)	442*450*133	442*450*133	442*480*177	442*480*177	442*480*222	442*480*222
Weight	43kg	45kg	67kg	68kg	80kg	82kg



# RESIDENTS ESS

Application: Family use, factory, supermarket, school, office, etc.





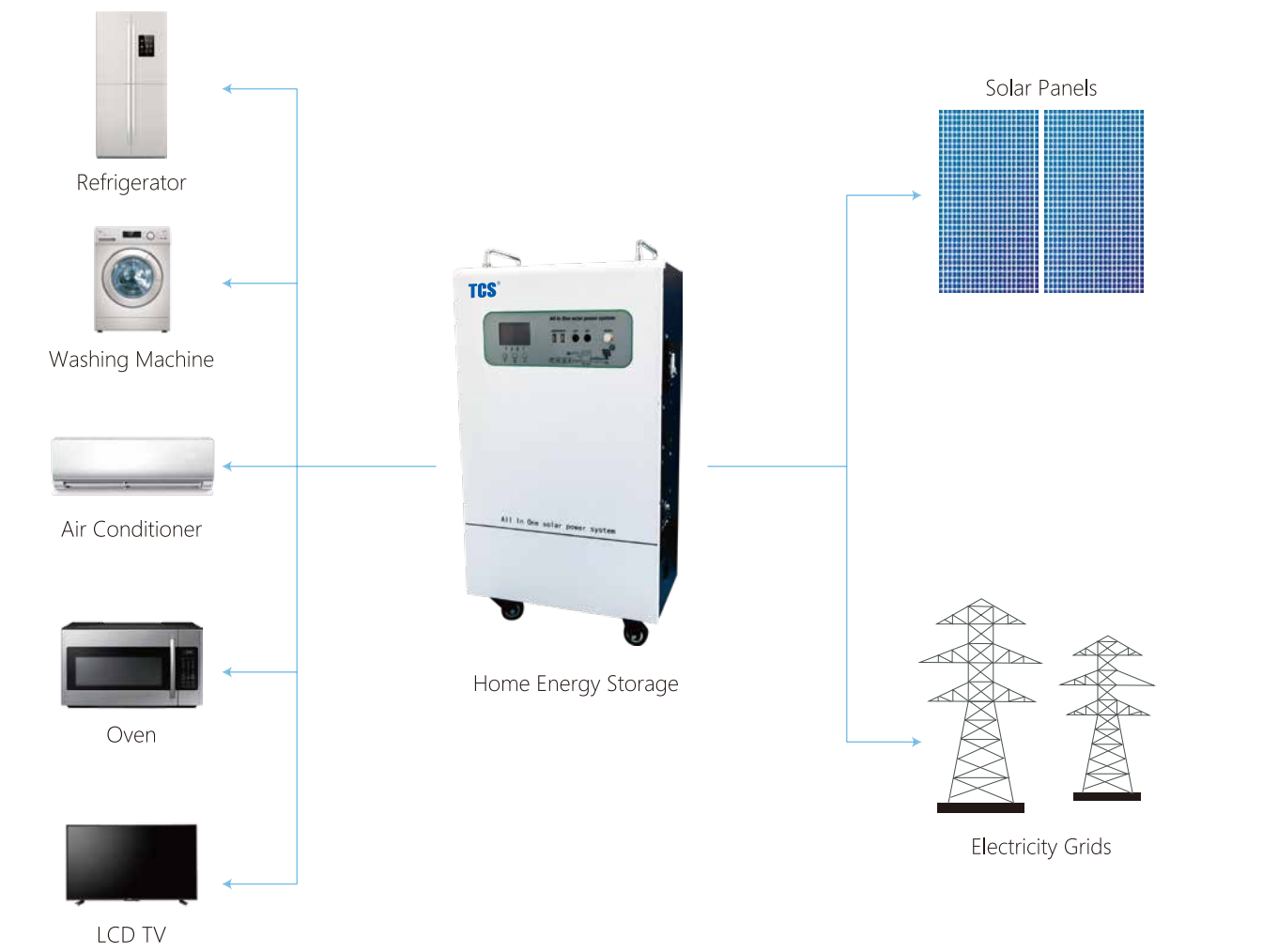
# ENERGY STORAGE ALL-IN-ONE MACHINE

## Product Description

The Home Energy Storage System is a convenient, modular battery design, integrated structure, simple and beautiful, easy to install, easy to operate and maintain, easy to expand, integrating inverter, EMS and UPS management system to create an efficient, safe and intelligent home energy storage system. It not only satisfies all energy needs such as seamless power switching and remote control, but can also be configured for intelligent operation according to electricity consumption habits and peak and valley tariffs, bringing an economical, safe and convenient operating experience to households.

## Product Specification

Model	T5000P	T5000		
Voltage	25.6V	51.2V	51.2V	51.2V
Cell Capacity	184Ah	184Ah	184Ah	184Ah
Energy	4.71kwh	9.42kwh	18.84kwh	28.26kwh
AC Voltage	220V	220V	220V	220V
Size	400*210*730mm	785*510*472mm	785*510*612mm	785*510*752mm
Weight	46.5kg	107.5kg	185.5kg	263.5kg



# WALL-MOUNTED OR RACK ENERGY STORAGE

## Product Description

The Songli Home Energy Storage Series is a high-performance LiFePO4 battery system focused on small and medium-sized home energy storage applications. The system has obvious advantages in terms of safety, energy density, fast charging, temperature range, service life and environmental protection, and can be used seamlessly with grid-connected and off-grid energy storage inverter systems. With stable performance and beautiful design, this product is dedicated to providing a safe and stable green power supply service for every household.

## Product Specification

Integrated structure for home energy storage, simple and beautiful,  
easy to install, easy to operate and maintain, easy to expand.



Model	TLB48-100A-HES		TLB48-100B-HES	TLB48-150A-HES		TLB48-200A-HES	
Voltage	48V	51.2V	51.2V	48V	51.2V	48V	51.2V
Nominal Capacity	100Ah	100Ah	100Ah	150Ah	150Ah	200Ah	200Ah
Energy	4800wh	5120wh	5120wh	7200wh	7680wh	9600wh	10240wh
Arrangement Method	15S1P	16S1P	16S1P	15S1P	16S1P	15S1P	16S1P
Size (±2mm)	442*133*450	442*133*450	600*442*170	442*177*510	442*177*510	442*222*510	442*222*510
Weight	43kg	45kg	50kg	67kg	70kg	80kg	84kg



# SNAP-ON HANDHELD POWER TOOL BATTERIES

## **TLB12-2** 12V2AH

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[Battery Size] : 40\*38\*85MM

[Rated Voltage] : 11.1 V

[Rated Capacity] : 2000mAh

[Charging Voltage] : 12.6V

[Charging Current] :  $\leq 4A$

[Protection Voltage] : 8.25V

[Discharge Current] :  $\leq 20A$

## **TLB21-2** 21V2AH

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[Battery Size] : 105\*75\*60MM

[Rated Voltage] : 18V

[Rated Capacity] : 2000mAh

[Charging Voltage] : 21V

[Charging Current] :  $\leq 2A$

[Protection Voltage] : 14V

[Discharge Current] :  $\leq 20A$





# BACKPACK POWER

## POWER TOOL BATTERIES

### TLB12-40 12V40AH

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[Battery Size] : 260\*175\*75MM

[Rated Voltage] : 11.1 V

[Rated Capacity] : 40000mAh

[Charging Voltage] : 12.6V

[Charging Current] : <5A

[Protection Voltage] : 8.25V

[Discharge Current] : 50A

### TLB48-20 48V20AH

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[Battery Size] : 360\*230\*80MM

[Rated Voltage] : 48V

[Rated Capacity] : 20000mAh

[Charging Voltage] : 54.6V

[Charging Current] : <5A

[Protection Voltage] : 35.75V

[Discharge Current] : 60A





# LEAD ACID REPLACEMENT

POWER TOOL BATTERIES

## TLB12-8 12V8AH

---



[Battery Size] : 150x65x90MM

[Rated Voltage] : 11.1 V

[Rated Capacity] : 6000mAh/8000mAh

[Charging Voltage] : 12.75V

[Charging Current] : <4A

[Protection Voltage] : 8.5V

[Discharge Current] :  $\leq 6A$  ,  $\leq 8A$

## TLB12-16 12V16AH

---



[Battery Size] : 150x65x90MM

[Rated Voltage] : 11.1 V

[Rated Capacity] : 14000mAh/16000mAh

[Charging Voltage] : 12.75V

[Charging Current] : <4A

[Protection Voltage] : 8.5V

[Discharge Current] :  $\leq 14A$  ,  $\leq 16A$





- Long cycle life
- High power
- Less weight
- No Spill
- Fast charging

## START UP SERIES Motorcycle lithium start battery

The lithium iron phosphate starter battery is suitable for conventional motorcycle models in the market. Compared with traditional lead acid battery, it has less weight, smaller volume, stronger star-up performance, more energy and lower emission.

### Less volume and weight:

1/3 of normal lead acid battery.

### Long life span

At least twice life span than lead acid battery.  
Normal use for 5~8 years determined by how it is used

### High/Low-temperature start

Good performance at high & low temperatures.  
(-20°C~50°C)

### Save charging time

Support boost charging and discharging.

### Non-spillable

Acid free, no electrolyte leakage problems.

### Strong start power

Can provide a strong starting current for the vehicle to meet the needs of repeated start.

### Excellent cycle life:

More than 2000 cycles  
(lead acid battery only 300-400 cycles).

1 years







Model	Size(±2mm)			Volts(v)	Weight(±3%kg)	Capacity(Ah)	Polarity	Equal To Lead Battery Capacity(Ah)	Main Replacement Lead Acid Battery Model
	L	W	H						
TLB4A-MF	113	48	85	12.8	0.55	2.2	- +	2-3	YTR4A-BS
TLB4B-MF	113	38	85	12.8	0.55	2.2	- +	2-3	GT4B-5-BS
TLB4L-MF	113	70	85	12.8	0.60	3	- +	3-4	YT4L-BS/ YTZ5S-BS
TLB5L-MF	113	70	105	12.8	0.80	4	- +	4-6	YT5L-BS
TLB5-MF	120	60	130	12.8	0.80	4	- +	4-6	12N5-BS
TLB7-MF	135	75	134	12.8	0.95	4	- +	4-8	12N9-BS
TLB7A-MF	150	87	93	12.8	0.95	4.8	- +	4-8	YT7-BS
TLB7B-MF	150	65	93	12.8	0.80	4.8	+ -	4-8	YT7B-BS
TLB7L-MF	113	70	130	12.8	0.95	4.8	- +	4-8	12N7A-BS
TLB7S-MF	113	70	105	12.8	0.95	4.8	- +	4-8	YT5L-BS
TLB9-MF	150	87	105	12.8	1.20	6	+ -	6-10	YT9-BS
TLB9A-MF	150	69	105	12.8	1.20	6	+ -	6-10	YT9B-BS
TLB9B-MF	135	75	138	12.8	0.95	4.8	+ -	4-8	12N9-BS
TLB10S-MF	150	87	93	12.8	1.20	6.6	+ -	6-10	YT7-BS/YTZ10S-BS
TLB12A-MF	150	87	105	12.8	1.50	8	+ -	7-12	YT9-BS/YTZ12S-BS
TLB12AL-MF	135	80	160	12.8	1.50	8	+ -	7-12	12N14-BS/YB14-BS/YB14L-BS
TLB12-MF	150	87	130	12.8	1.50	8	+ -	7-12	12N12-BS
TLB12S-MF	150	87	110	12.8	1.20	8	+ -	7-12	YT9-BS/YTZ12S-BS
TLB14S-MF	150	87	110	12.8	1.20	8	- +	7-12	YT9-BS/YTZ12S-BS
TLB12B-MF	150	69	130	12.8	1.50	8	+ -	7-12	YT12B-BS
TLB14LA-MF	135	90	165	12.8	1.60	8	- +	8-16	12N14-BS/YB14-BS/YB14L-BS
TLB14-MF	150	87	145	12.8	1.60	8	+ -	8-16	YT14B-BS/YTX16-BS
TLB14L-MF	150	87	145	12.8	1.80	9.6	- +	8-16	YT14B-BS/YTX16-BS
TLB20L-MF	175	87	155	12.8	2.30	13.2	+ -	16-30	YTX20-BS/YTX20L-BS
TLB19BL-MF	182	78	171	12.8	2.30	13.2	- +	16-30	
TLB30L-MF	166	127	175	12.8	3.00	22	- +	30-40	12N30L-BS

\* The above data are for reference only, please refer to the actual object.



XIAMEN SONGLI GROUP LIMITED

XIAMEN SONGLI NEW ENERGY TECHNOLOGY CO.,LTD

XIAMEN SONGLI IMPORT AND EXPORT CO., LTD

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