

TOMMATECH

GmbH

GERMAN-based company ●●●

LiFePO₄ BATTERY Catalog





 Garching – Munich Manufacturing Center / Germany



 Antalya Manufacturing Center / Türkiye

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About Us

TommaTech® aims to promote the use of solar energy by pioneering new technologies in order to meet the world's energy needs through clean resources, support a sustainable future, contribute to the global economy, and leave a livable environment for future generations.

Vision – Mission

As a reliable, innovative, and competitive organization, TommaTech® provides solar energy equipment and solutions targeting all segments of society and the economy, with the ultimate goal of adding value to homes and workplaces while protecting the environment, without compromising on quality and customer satisfaction.

From our headquarters in Garching, Germany, we export reliable solar energy equipment and solutions to more than 60 countries worldwide at competitive prices.

Our products are regularly tested by independent testing organizations and are manufactured in compliance with ISO and IEC standards.



SOMPO



2014

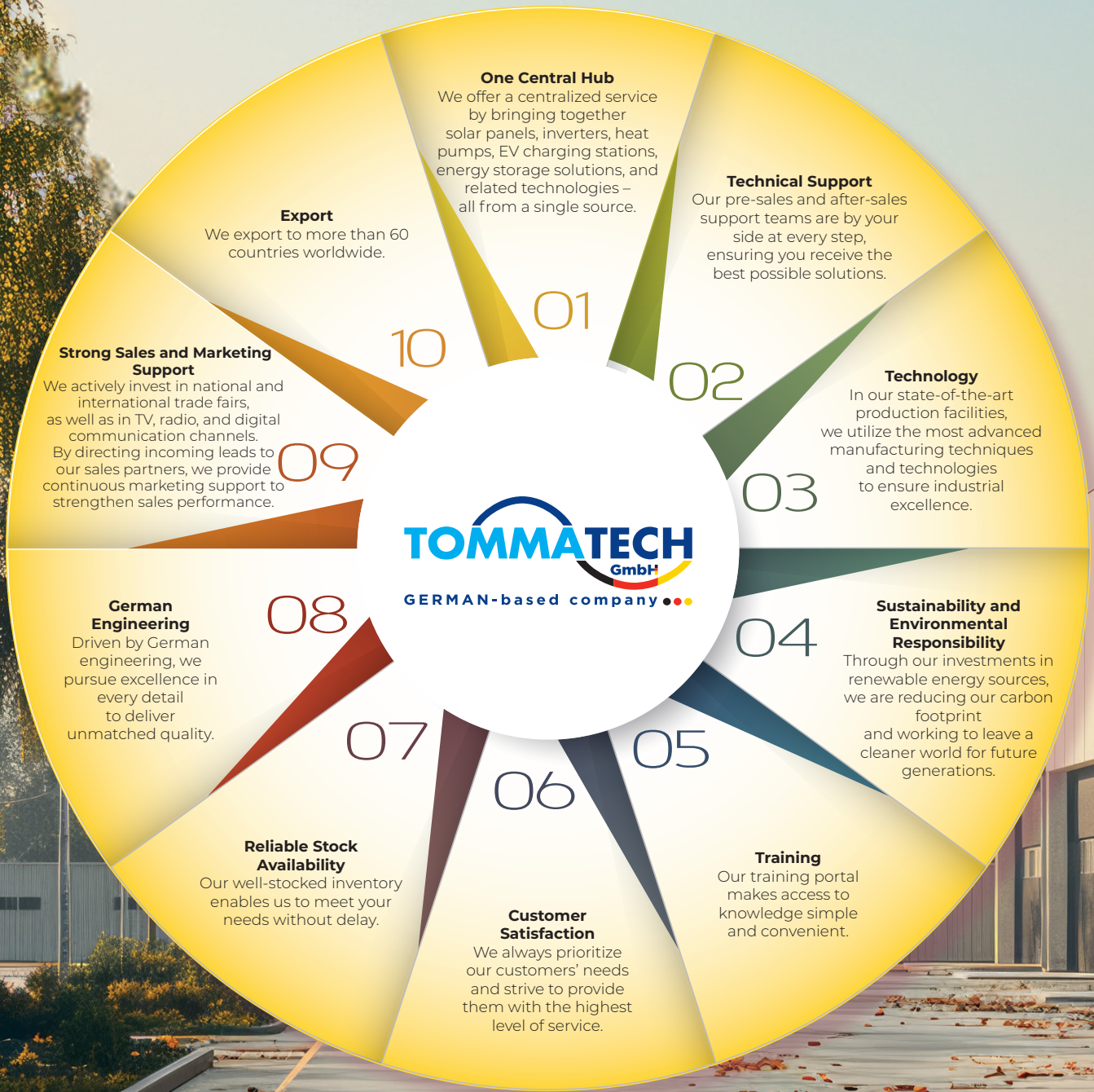


60+



2





With TommaTech
you are in control



New Technology

Advantages of Lithium-Ion Batteries

Lead-Acid

LiFePO₄ Battery



**3-Year
Battery
Life**



**Up to
10-Year
Battery
Life**

- 3–4 times longer service life
- Reduces overall battery investment costs
- Environmentally friendly
- Reduces spare parts requirements



**Frequent
Maintenance**



**Zero
Maintenance**

- No need for regular distilled water or electrolyte refilling
- No labor or maintenance costs
- No frequent battery replacement



**2-Year
Warranty**



**5-Year
Warranty**

- Extended warranty
- Durable and reliable



Fast Charging

If you operate a large fleet running 24/7, fast charging will provide significant advantages

Excellent fast-charging efficiency:

Thanks to the intelligent charging algorithm implemented by the BMS, lithium-ion batteries experience lower energy losses during charge/discharge cycles compared to other battery types (Battery Management System). This is particularly advantageous for applications involving large-scale energy storage.



Continuous Power

Extremely high energy density.

Lithium-ion batteries store more energy than other battery types of the same size.

Result: High performance and high efficiency



Eliminate the Need for a Dedicated Charging Area and Frequent Battery Replacement

- Minimizes the need to purchase, store, and maintain spare batteries
- Eliminates the cost and storage space required for additional lead-acid batteries
- No gas emissions during charging, no need for a ventilation system, and no hazardous acid leaks

Small Investment, Big Return!

Converting your battery system to lithium-ion may require a higher initial investment. However, high energy density, reduced equipment requirements, and high performance will deliver cost savings in the medium term.



Advantages of LiFePO₄ Batteries:

- ✓ Longer service life reduces overall battery investment costs.
- ✓ Maintenance-free operation saves on labor and maintenance expenses.
- ✓ No gas emissions or acid leakage, reducing the space, equipment, and operating costs required for ventilation systems.
- ✓ Energy savings and reduced downtime increase overall efficiency.

5-Year Cost Comparison to Increase Your Return on Investment

Achieve up to **70%** Savings Within 5 Years

Below is a 5-year cost comparison table comparing TommaTech LiFePO₄ batteries with lead-acid batteries.

Purchases Made Over 5 Years	Cost	Maintenance	Energy Loss	Installation	Transportation
Lead-Acid Battery	5 stacks of coins	5 stacks of coins	5 stacks of coins	5 stacks of coins	5 stacks of coins
TommaTech LiFePO ₄ Battery	1 stack of coins	1 stack of coins	1 stack of coins	1 stack of coins	1 stack of coins

Note: Actual costs may vary depending on local conditions.

TommaTech Batteries, Smart & Integrated Systems

It delivers excellent performance to get the job done and increase your efficiency, resulting in reduced unplanned downtime and more productive operating hours for your business.

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★★ **5** ★★
-YEAR S-
Product
Warranty

1

Durable

TommaTech batteries have an IP65 ingress protection rating. They deliver fast lifting and travel speeds at all discharge levels and in all weather conditions.

2

**4G
Modules**

4G modules are used to remotely monitor battery status such as SOC (State of Charge) and temperature, as well as for diagnostics and remote software updates. Resolve software issues in real time.

3

**Built-in
Protection**

The smart BMS is designed for automatic cell balancing and advanced battery management. LiFePO₄ batteries provide greater thermal and chemical stability.

0

Maintenance

4000+

Cycle Life

10

Design Life
Up to 10 Years

Forklifts

Specially designed, smart, and cost-effective.
Ideal for multi-shift operations.



Pallet Trucks

Durable, stable, and safe. Suitable for various operational applications and increases operating efficiency.



Golf Cart

Compared to lead-acid battery systems, it contains no environmentally polluting substances and is designed to deliver trouble-free, stable performance for a more enjoyable driving experience.



Floor Cleaning Machines

In addition to safe and easy operation, it stands out with high performance and low maintenance costs.



Electric Motors and Vehicles

In addition to safe and easy operation, it stands out with high performance and low maintenance costs.



83.2 V 608 Ah

In addition to safe and easy operation, it stands out with high performance and low maintenance costs.



25.6 V 208 Ah

A seamless, effortless solution for pallet trucks and manlifts.



51.2 V 210 Ah

A seamless, effortless solution for pallet trucks and manlifts.



25.6 v 104 Ah

For Walk-Behind Sweepers and Scrubbers



76.8 v 100 Ah

For Walk-Behind Sweepers and Scrubbers



Why TommaTech LiFePO₄ Battery?

5-Year Warranty

Delivers a seamless experience with a 5-year warranty.

4G Module*

Allows you to track product location while also enabling remote monitoring of battery life and cycle status.

Smart Battery Management System (BMS)

With an intelligent and reliable BMS, it delivers better performance and longer battery operating time and service life.

Constant Power Output

LiFePO₄ batteries deliver a stable power output that does not drop unexpectedly like lead-acid batteries.

4,000+ Cycle Life

TommaTech LiFePO₄ batteries last significantly longer than conventional batteries.

Fire Safety

Efficient and environmentally friendly, the built-in aerosol fire extinguisher acts as a rapid suppression system in the event of a fire, providing a safer working environment.

SoC Indicator

Helps you view the battery state of charge and fault information in real time.

IP65 Protection

TommaTech batteries with an IP65 protection rating are resistant to water and dust, ensuring consistent performance in all weather conditions.

Heating Function*

The optional heating function can warm the battery for optimal charging even at low temperatures (down to -20 °C).

Anti-Drive Function

Prevents operation or use of the equipment during charging.

*Optional

Customized Solutions Tailored to Your Needs

Boost the Power of Your Industry - Discover Solutions Tailored to Your Needs!



Original Chargers

TommaTech chargers maximize battery performance and ensure optimal communication between the charger and the battery.



Smart Charging Management

Excellent charging efficiency. Thanks to the intelligent charging algorithm implemented by the BMS, lithium-ion batteries experience lower energy losses during charge/discharge cycles compared to other battery types (Battery Management System). This is especially beneficial when storing large amounts of energy, such as in EVs and solar energy storage systems.

TommaTech's smart BMS ensures battery safety while increasing charging efficiency.

When the battery is at a low voltage, it can be charged at low current to ensure safe operation.

When the battery level drops below 10%, an audible alert is triggered to indicate that charging is required.

-  Overtemperature Protection
-  Short-Circuit Protection
-  Reverse Polarity Protection
-  Overcharge Protection
-  Smart Display
-  Current Limiting Function
-  Automatic Shutdown
-  Overcurrent Protection
-  Overvoltage Protection
-  Timing Protection
-  Wide Voltage Operation
-  Constant Current / Constant Voltage



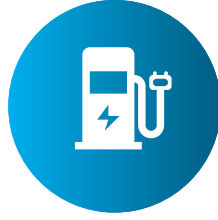
How to Charge Easy and Safe

i Şarj sırasında olası kazalar önlemek için güç kesilir.



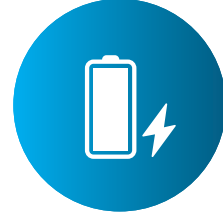
01 Go to the charging station:

Go to the forklift charging station, connect the charging cable, and apply the parking brake.



02 Automatic Monitoring:

It checks the appropriate conditions for charging and automatically starts the charging process.



03 When Fully Charged:

It stops charging when appropriate conditions are met.

Smart Display

When the charger is connected, it displays the battery status.



Where to Charge TommaTech Lithium-Ion Batteries? Convenience

- ✓ Batteries can be charged directly on the vehicle.
No battery replacement or battery storage room is required.
- ✓ The charger can be installed anywhere in the facility to encourage proper charging by the operator.

INFO

Lead-acid batteries require additional spare batteries and a battery storage room for replacement. In addition, they require a dedicated charging room with a ventilation system to prevent harmful gases during charging. This results in additional costs.

FORKLIFT BATTERY



VOLTAGE – CAPACITY	BTR-P-51.2-304Ah	BTR-P-51.2-420Ah	BTR-P-51.2-608Ah	BTR-P-83.2-304Ah	BTR-P-83.2-420Ah	BTR-P-83.2-608Ah
Nominal Voltage [V]	51,2	51,2	51,2	83,2	83,2	83,2
Nominal Capacity [Ah]	304	420	608	304	420	608
Nominal Energy [Wh]	15564	21504	31129	25292	34944	50585
Recommended Charge Current [A]	150	150	150	150	150	150
Maximum Charge Current [A]	200	200	200	200	200	250
Recommended Charge Voltage [V]	56,8	56,8	56,8	92,3	92,3	92,3
Maximum Charge Voltage [V]	58,4	58,4	58,4	94,9	94,9	94,9
Recommended Discharge Current [A]	150	150	150	150	150	150
Continuous Discharge Current [A]	200	200	200	200	200	200
Maximum Discharge Current [A]	250A for 60s,	250A for 60s,	250A for 60s,	250A for 60s,	250A for 60s,	250A for 60s,
Discharge Cut-Off Voltage [V]	450A for 30s	450A for 30s	450A for 30s	450A for 30s	450A for 30s	450A for 30s
Deşarj Kesme Gerilimi [V]	44,8±0.2	44,8±0.2	44,8±0.2	72,8±0.2	72,8±0.2	44,8±0.2
BATTERY / CELL						
Cycle Life	4000					
Gravimetric Energy Density [Wh/kg]	165					
Volumetric Energy Density [Wh/L]	350					
Internal Resistance [mΩ]	0.27-0.40					
STANDARD						
Overcharge Protection	Yes					
Overdischarge Protection	Yes					
Overcurrent Protection	Yes					
Short-Circuit Protection	Yes					
Overtemperature Protection	Yes					
Temperature Sensor	Yes					
Adjustable Charge / Discharge Current	Yes					
Battery Chemistry	LFP Prismatic					
Safety	IEC 61960 / 62133-2 / TS EN 61427-1					
OPERATING CONDITIONS						
Charge Temperature [°C]	0 ~ +60					
Discharge Temperature [°C]	-20 ~ +60					
Storage Temperature [°C]	0 ~ +35					
Humidity (Non-Condensing)	Maximum 85%					
Protection Class	IP65					
Designed Product Life [Years]	>10					
Warranty Period [Years]	5					

*The data and technical specifications stated in this document are for preliminary information purposes only and may vary depending on usage conditions, system design, and environmental conditions.

GOLF CART BATTERY



VOLTAGE – CAPACITY	BTR-P-51.2-105Ah	BTR-P-51.2-210Ah
Nominal Voltage [V]	51,2	51,2
Nominal Capacity [Ah]	105	210
Nominal Energy [Wh]	5376	10752
Recommended Charge Current [A]	52	105
Maximum Charge Current [A]	105	210
Recommended Charge Voltage [V]	56,8	56,8
Maximum Charge Voltage [V]	58,4	58,4
Recommended Discharge Current [A]	52	105
Continuous Discharge Current [A]	105	210
Maximum Discharge Current [A]	200A for 30s	400A for 30s
Discharge Cut-Off Voltage [V]	44,8±0.2	44,8±0.2
BATTERY / CELL		
Cycle Life	4000	
Gravimetric Energy Density [Wh/kg]	165	
Volumetric Energy Density [Wh/L]	350	
Internal Resistance [mΩ]	0.27-0.40	
STANDARD		
Overcharge Protection	Yes	
Overdischarge Protection	Yes	
Overcurrent Protection	Yes	
Short-Circuit Protection	Yes	
Overtemperature Protection	Yes	
Temperature Sensor	Yes	
Adjustable Charge / Discharge Current	Yes	
Battery Chemistry	LFP Prismatic	
Safety	IEC 61960 / 62133-2 / TS EN 61427-1	
OPERATING CONDITIONS		
Charge Temperature [°C]	0 ~ +60	
Discharge Temperature [°C]	-20 ~ +60	
Storage Temperature [°C]	0 ~ +35	
Humidity (Non-Condensing)	Maximum 85%	
Protection Class	IP65	
Designed Product Life [Years]	>10	
Warranty Period [Years]	5	

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TRANSPALET BATTERY



VOLTAGE – CAPACITY	BTR-P-25.6-104Ah	BTR-P-25.6-208Ah
Nominal Voltage [V]	25,6	25,6
Nominal Capacity [Ah]	104	208
Nominal Energy [Wh]	2662	5324
Recommended Charge Current [A]	52	104
Maximum Charge Current [A]	104	208
Recommended Charge Voltage [V]	28,4	28,4
Maximum Charge Voltage [V]	29,2	29,2
Recommended Discharge Current [A]	52	104
Continuous Discharge Current [A]	104	208
Maximum Discharge Current [A]	208A for 30s	400A for 30s
Discharge Cut-Off Voltage [V]	22,4±0.2	22,4±0.2
BATTERY / CELL		
Cycle Life	4000	
Gravimetric Energy Density [Wh/kg]	165	
Volumetric Energy Density [Wh/L]	350	
Internal Resistance [mΩ]	0.27-0.40	
STANDARD		
Overcharge Protection	Yes	
Overdischarge Protection	Yes	
Overcurrent Protection	Yes	
Short-Circuit Protection	Yes	
Overtemperature Protection	Yes	
Temperature Sensor	Yes	
Adjustable Charge / Discharge Current	Yes	
Battery Chemistry	LFP Prismatic	
Safety	IEC 61960 / 62133-2 / TS EN 61427-1	
OPERATING CONDITIONS		
Charge Temperature [°C]	0 ~ +60	
Discharge Temperature [°C]	-20 ~ +60	
Storage Temperature [°C]	0 ~ +35	
Humidity (Non-Condensing)	Maximum 85%	
Protection Class	IP65	
Designed Product Life [Years]	>10	
Warranty Period [Years]	5	

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CLEANING MACHINE BATTERY



VOLTAGE – CAPACITY	BTR-P-25.6-104Ah
Nominal Voltage [V]	25,6
Nominal Capacity [Ah]	104
Nominal Energy [Wh]	2662
Recommended Charge Current [A]	52
Maximum Charge Current [A]	104
Recommended Charge Voltage [V]	28,4
Maximum Charge Voltage [V]	29,2
Recommended Discharge Current [A]	52
Continuous Discharge Current [A]	104
Maximum Discharge Current [A]	208A for 30s
Discharge Cut-Off Voltage [V]	22,4±0.2
BATTERY / CELL	
Cycle Life	4000
Gravimetric Energy Density [Wh/kg]	165
Volumetric Energy Density [Wh/L]	350
Internal Resistance [mΩ]	0.27-0.40
STANDARD	
Overcharge Protection	Yes
Overdischarge Protection	Yes
Overcurrent Protection	Yes
Short-Circuit Protection	Yes
Overtemperature Protection	Yes
Temperature Sensor	Yes
Adjustable Charge / Discharge Current	Yes
Battery Chemistry	LFP Prismatic
Safety	IEC 61960 / 62133-2 / TS EN 61427-1
OPERATING CONDITIONS	
Charge Temperature [°C]	0 ~ +60
Discharge Temperature [°C]	-20 ~ +60
Storage Temperature [°C]	0 ~ +35
Humidity (Non-Condensing)	Maximum 85%
Protection Class	IP65
Designed Product Life [Years]	>10
Warranty Period [Years]	5

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MOTOR BATTERY SERIES

76.8V-30AH / 76.8V-42AH / 76.8V-52AH / 76.8V-100AH / 76.8V-280AH / 64V-30AH



- LFP lithium batteries allow parallel connection of up to 16 units without performance loss.
- Long service life with up to 8,000 cycles.
- Aesthetic, compact, and durable metal enclosure design.

Product Features



Superior Performance



Smart Battery Management System



Long Service Life



Metal Enclosure



Sustainable Energy



High-Temperature Resistance



IP20-IP65 Protection



Scalable Capacity



Communication

VOLTAGE – CAPACITY	BTR-MV-76.8V-30AH	BTR-MV-76.8V-42AH	BTR-MV-76.8V-52AH	BTR-MV-76.8V-100AH	BTR-MV-76.8V-280AH	BTR-MV-64V-30AH
Nominal Voltage [V]	76.8	76.8	76.8	76.8	76.8	64
Nominal Capacity [Ah]	30	42	52	100	280	30
Nominal Energy [Wh]	2304	3225	3840	7680	21504	1920
Recommended Charge Current [A]	15	21	25	50	100	15
Maximum Charge Current [A]	30	35	40	75	140	30
Recommended Charge Voltage [V]	85.2	85.2	85.2	85.2	85.2	85.2
Maximum Charge Voltage [V]	86.4	86.4	86.4	86.4	86.4	86.4
Recommended Discharge Current [A]	15	21	25	50	140	15
Maximum Discharge Current [A]	30	42	52	100	200	30
Discharge Cut-Off Voltage [V]						
BATTERY / CELL						
Cycle Life				4000		
Gravimetric Energy Density [Wh/kg]				165		
Volumetric Energy Density [Wh/L]				350		
Internal Resistance [mΩ]				0.27–0.40		
STANDARD						
Overcharge Protection				Yes		
Overdischarge Protection				Yes		
Overcurrent Protection				Yes		
Short-Circuit Protection				Yes		
Overtemperature Protection				Yes		
Temperature Sensor				Yes		
Adjustable Charge / Discharge Current				Yes		
Battery Chemistry				LFP Prismatic		
Safety				IEC 61960 / 62133-2 / RoHS		
OPERATING CONDITIONS						
Charge Temperature [°C]				0 ~ +60		
Discharge Temperature [°C]				-20 ~ +60		
Storage Temperature [°C]				0 ~ +35		
Humidity (Non-Condensing)				Maximum 85%		
Protection Class				IP65		
Designed Product Life [Years]				8		
Warranty Period [Years]				3		
Dimensions (WxDxH) [mm]	252x311x168	300X178X380	348x345x182	470x520x202,50	651x802x360	420x520x202,50
Weight [kg]	19	14	32	62	145	16
Series Connection				No		
Parallel Connection				No		
Communication				CAN / RS485 / Bluetooth		
Display				LCD		
External Enclosure				Metal Enclosure		

LiFePO₄ Products



**MODULAR SERIES
LFP LITHIUM BATTERY**
51.2V-100Ah



**MODULAR SERIES
LFP LITHIUM BATTERY**
51.2V-102Ah



**RACK SERIES
LFP LITHIUM BATTERY**
51.2V-102Ah



**MODULAR SERIES
LFP LITHIUM BATTERY**
51.2V-280Ah

**UNINTERRUPTED ENERGY,
UNINTERRUPTED LIFE WITH OUR LITHIUM BATTERIES!**












LFP LITHIUM BATTERY MODULAR

BTR-P-51.2V-102AH / BTR-P-51.2V-102AH-R / BTR-P-51.2V-280AH

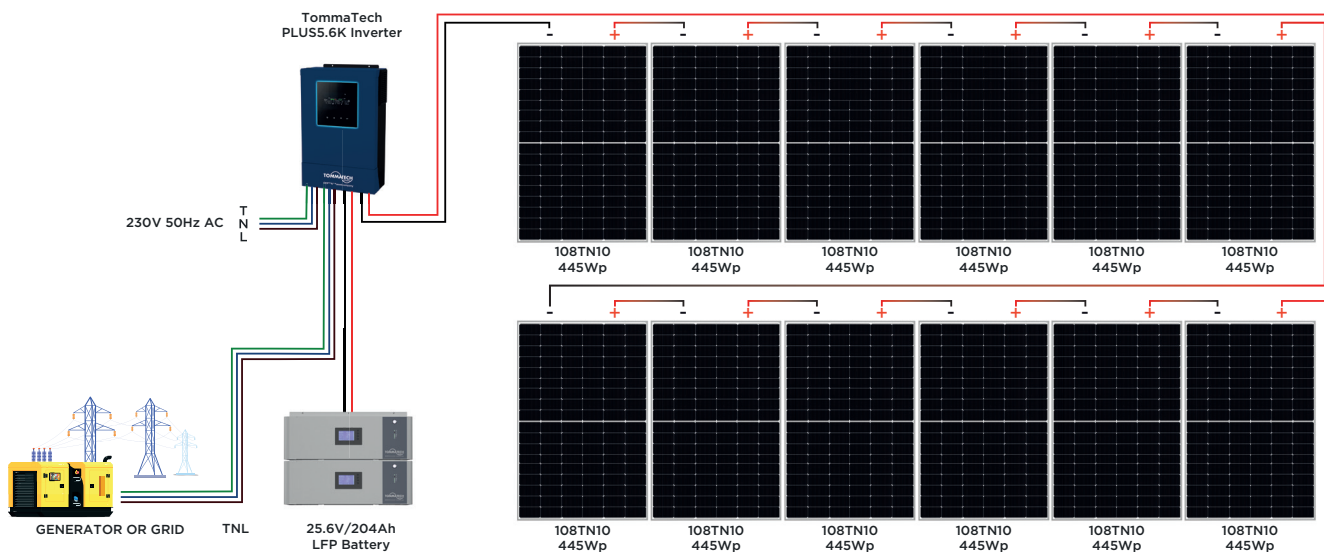


- LFP lithium batteries allow parallel connection of up to 16 units without any loss of performance.
- Long service life with up to 8,000 cycles.
- Aesthetic, compact, and durable metal enclosure design.

Product Features

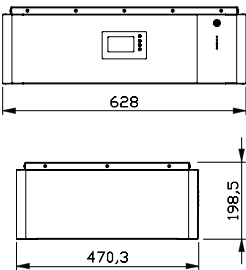
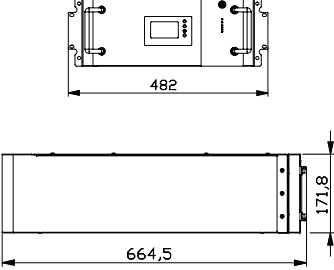
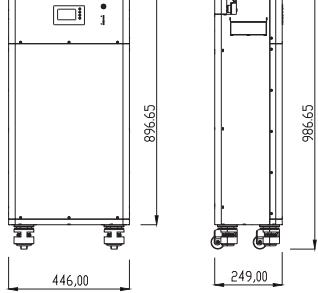
 Superior Performance	 Smart Battery Management System	 Long Service Life	 Metal Enclosure	 Sustainable Energy
 Heat Resistance	 IP20-IP65 Protection	 Scalable Capacity	 Communication	

Connection Diagram



VOLTAGE – CAPACITY	BTR-P-51.2V-102Ah	BTR-P-51.2V-102Ah-R	BTR-P-51.2V-280Ah
Nominal Voltage [V]	51.2		51.2
Nominal Capacity [Ah]	102		280
Nominal Energy [Wh]	5222.4		14336
Recommended Charge Current [A]	50		100
Maximum Charge Current [A]	75		140
Recommended Charge Voltage [V]	56.8		56.8
Maximum Charge Voltage [V]	58.4		58.4
Recommended Discharge Current [A]	50		100
Continuous Discharge Current [A]	50		100
Maximum Discharge Current [A]	75		180A for 30s
Discharge Cut-Off Voltage [V]	44.8±0.2		44.8±0.2
BATTERY / CELL			
Cycle Life	8000		6000
Gravimetric Energy Density [Wh/kg]	165		165
Volumetric Energy Density [Wh/L]	350		350
Internal Resistance [mΩ]	0.27-0.40		0.1-0.15
STANDARD			
Overcharge Protection	Yes		
Overdischarge Protection	Yes		
Overcurrent Protection	Yes		
Short-Circuit Protection	Yes		
Overtemperature Protection	Yes		
Temperature Sensor	Yes		
Adjustable Charge / Discharge Current	Yes		
Battery Chemistry	LFP Prismatic		
Safety	IEC 61960 / 62133-2 / RoHS		
OPERATING CONDITIONS			
Charge Temperature [°C]	0 ~ +60		
Discharge Temperature [°C]	-20 ~ +60		
Storage Temperature [°C]	0 ~ +35		
Humidity (Non-Condensing)	Maximum 85%		
Protection Class	IP20-IP65		
Designed Product Life [Years]	>15		
Warranty Period [Years]	5		

PHYSICAL FEATURES

BTR-P-51.2V-102Ah	BTR-P-51.2V-102Ah-R	BTR-P-51.2V-280Ah
		










PB MODULAR BATTERY SERIES

51,2V 100Ah LFP BATARYA

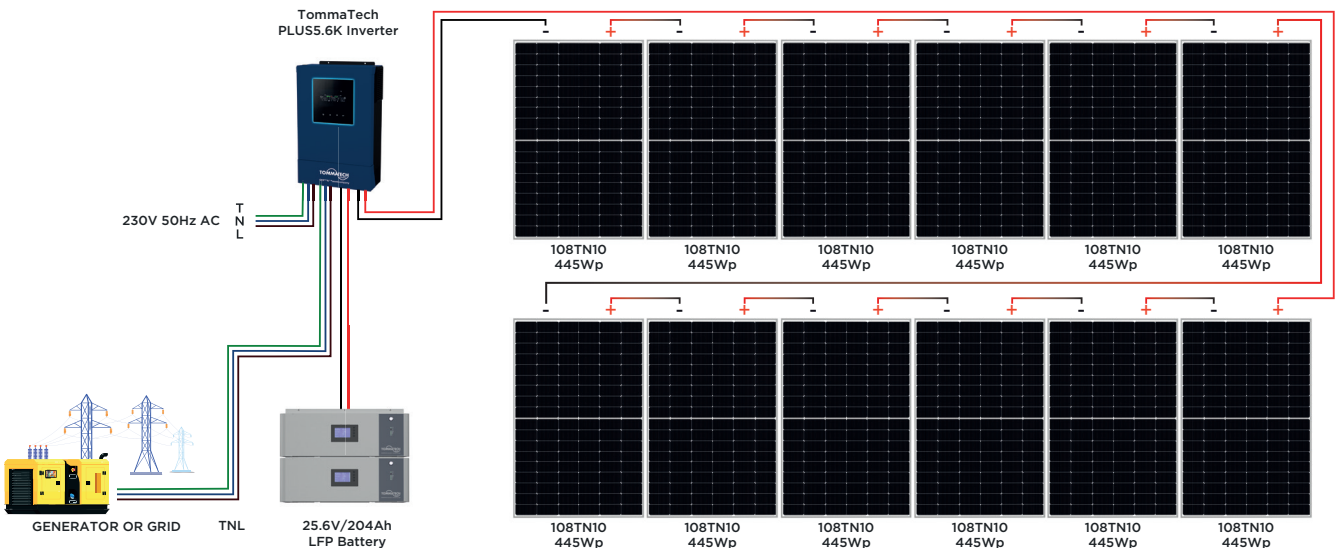


- LFP lithium batteries allow parallel connection of up to 16 units without any performance loss.
- Long service life with up to 8,000 cycles.
- Aesthetic, compact, and durable metal enclosure design.

Product Features

 Superior Performance	 Smart Battery Management System	 Long Service Life	 Metal Enclosure	 Sustainable Energy
 Heat Resistance	 IP20-IP65 Protection	 Scalable Capacity	 Communication	

Connection Diagram



MAIN PARAMETERS		BTR-P-PB-51.2V-100AH
attery Chemistry		LiFePO4
Capacity ^[1]		100 Ah
Scalability		Up to 32 units can be connected in parallel.
Nominal Voltage		51.2 V
Operating Voltage		44.8 V ~ 57.6 V
Nominal Energy ^[1]		5.12 kWh
Charge Current ^[2]	Max. Continuous	50 A
	Peak	75 A (10 s)
Discharge Current ^[2]	Max. Continuous	120 A
	Peak	150 A (10 s)
OTHER PARAMETERS		
Recommended Depth of Discharge		80% DoD
Dimensions (W × H × D)		370 × 548 × 140 mm (without mounting plate)
Approximate Weight		39 kg
LED Indicator		LED (State of Charge, Operation, Protection) & Buzzer
Enclosure IP Protection Class		IP21
Operating Temperature		Charge: 0–55 °C / Discharge: –20–55 °C
Storage Temperature		0–35°C
Relative Humidity		95% (non-condensing)
Altitude		≤ 3000 m
Cycle Life		≤ 6000 (25°C±2°C, 0.2C/0.2C, 80%DOD, 70%EOL)
Installation		Wall-mounted, stackable installation
Communication		CAN2.0, RS485, Bluetooth, APP
Warranty Period ^[3]		5 Years
Energy Efficiency (or Energy Throughput) ^[3]		8 MWh
Certification		UN38.3, MSDS



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