



THE FUTURE
OF LITHIUM ION
BATTERIES

www.shido-batteries.com



THE HEART OF YOUR MOTORCYCLE

Lithium Ion batteries are the life force of your engine. **SHIDO batteries** offer Japanese quality plus the latest battery technology. Lithium Ion batteries reduce gasoline consumption thanks to a more robust spark from the spark plug, and due to their low internal resistance, the battery can provide a more rapid start capability. SHIDO has the largest selection of aftermarket batteries.

Our Lithium and Lead-acid **SHIDO Chargers** are developed in conjunction with our battery products. Using SHIDO chargers guarantees a maximum battery life.





LITHIUM ION BATTERY

SHIDO Lithium batteries have 4 cells LiFePO4 (Lithium Iron Phosphate) of 3.2 volts connected in series in order to reach an OCV of 12.8 volts. A perfect voltage to use as a starter battery for motorcycles. The electronic Battery Management System or BMS spread the charge and discharge regularly over the four cells. Thanks to its low internal resistance a SHIDO Lithium battery can generate a very high starting current with a small capacity. This starting power delivers a powerful and quick start of the vehicle.



ADVANTAGES OF A SHIDO BATTERY

- ▶ **Superb** cranking capacity.
- ▶ Up to **75% lighter** than Lead-acid batteries.
- ▶ Long **capacity retention**.
- ▶ Lower self discharge: **Longer shelf life**.
- ▶ Excellent **cycle life**: more than 1200 cycles.
- ▶ More economical.
- ▶ Drop-in replacement.
- ▶ Less fuel consumption.
- ▶ **Super-fast** recharge.
- ▶ **Safe** in use.
- ▶ **No maintenance**.
- ▶ **Stable** discharge voltage.
- ▶ No pollution, no lead and no acid.
- ▶ Capacity indicator.
- ▶ IP68 **waterproof**.

COMPATIBLE CHARGERS

- ▶ DC 1.0.
- ▶ DC 4.0.



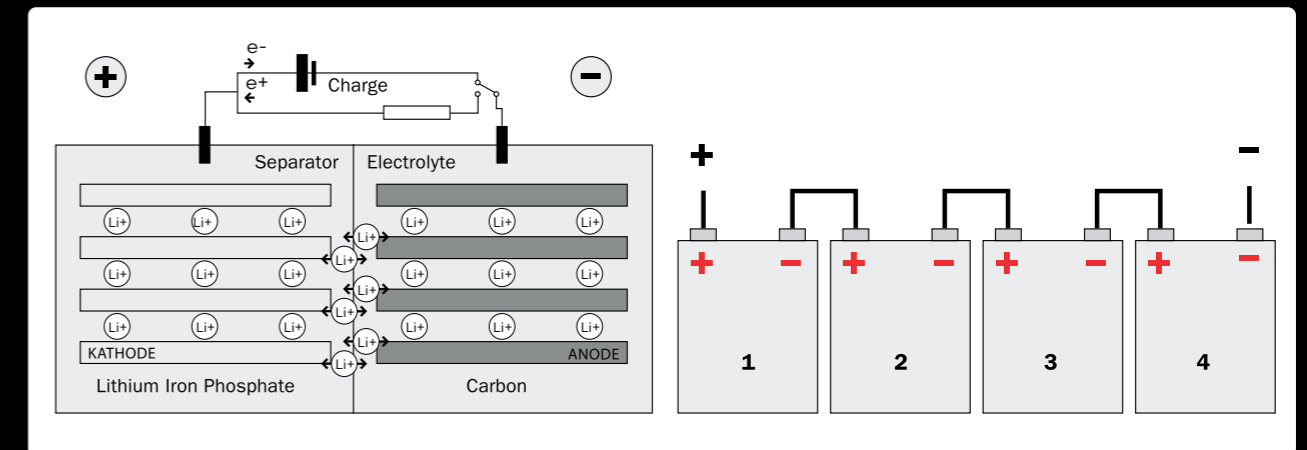
FOR NUMEROUS CONSUMERS & HIGH ENERGY DEMANDS AS WELL AS EXTREMELY POWER-DRAINING SITUATIONS.





HOW DOES IT WORK LITHIUM ION BATTERIES

4 cells LiFePO4 (Lithium Ferro Phosphate) 3.2 Volt in series - OCV is 12.8 volts.



MOUNTING ANGLE



Because there are no liquids in the SHIDO batteries, any direction installation is permitted, including upside down.

DIMENSIONS

SHIDO Lithium batteries have exactly the same dimensions as the original Lead-acid battery and can be connected easily via universal terminals. Some batteries are provided with spacers to approximate the dimensions of the Lead-acid battery.

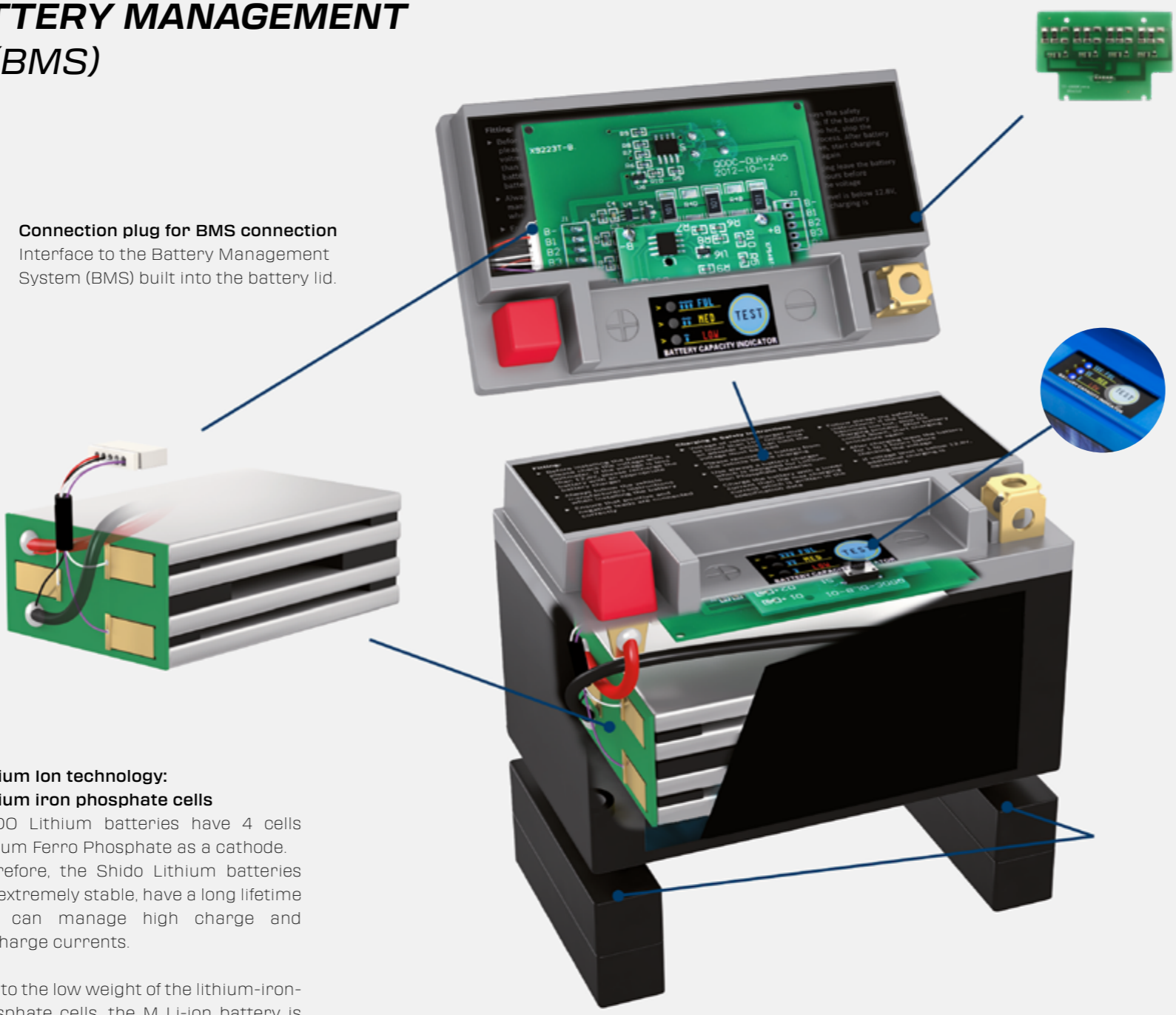
WEIGHT

SHIDO Lithium batteries are on average 3 to 4 times lighter than Lead-acid batteries.

LEAD-ACID BATTERY		SHIDO BATTERY		DIFFERENCE
ITEM	Kg	ITEM	Kg	Kg
NB4L-B	1,5	LTX4L-BS LION -S-	0,4	-1,1
NTX7A-BS	2,6	LTX7A-BS LION -S-	0,6	-2,0
NTZ10S	3,2	LTZ10S LION -S-	0,9	-2,3
NB9-B	3,1	LB9-B Q LION -S-	0,6	-2,5
NTX14-BS	4,6	LTX14-BS LION -S-	1,1	-3,5
NTX20-BS	6,7	LTX20L-BS Q LION	1,4	-5,3



LITHIUM ION TECHNOLOGY (LITHIUM IRON PHOSPHATE CELLS) WITH BATTERY MANAGEMENT SYSTEM (BMS)



Connection plug for BMS connection
Interface to the Battery Management System (BMS) built into the battery lid.



Battery lid with voltage tester and Battery Management System (BMS)
balances the voltage level among the cells when charging or discharging.

Divided voltage and current evenly over the 4 cells to provide a uniform charge and discharge. The delivered stable capacity improves the performance and extends the life of the battery.

Charge-status display and recommendations for the first application

Please check the charge status of the battery prior to the first application - even if the charge-status display (push blue button) shows full capacity (three points). To ensure optimum service life, the battery should be fully charged by a micro-processor-controlled battery charger (e.g. SHIDO DC) prior to its first use.

Lithium Ion technology: Lithium iron phosphate cells

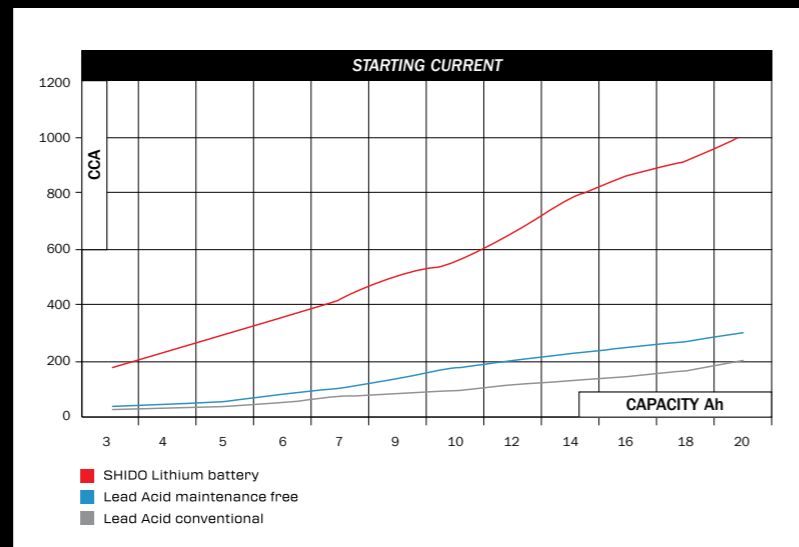
SHIDO Lithium batteries have 4 cells Lithium Ferro Phosphate as a cathode. Therefore, the Shido Lithium batteries are extremely stable, have a long lifetime and can manage high charge and discharge currents.

Due to the low weight of the lithium-iron-phosphate cells, the M Li-ion battery is extremely light. With 4 x 3.2 V and 12.8 V and at least 1,500 cycles it is particularly powerful and deep-cycle resistant. In addition, the M Li-ion can easily and quickly be recharged.

Spacers
ensure a perfect position of the battery.

HIGHER STARTING POWER

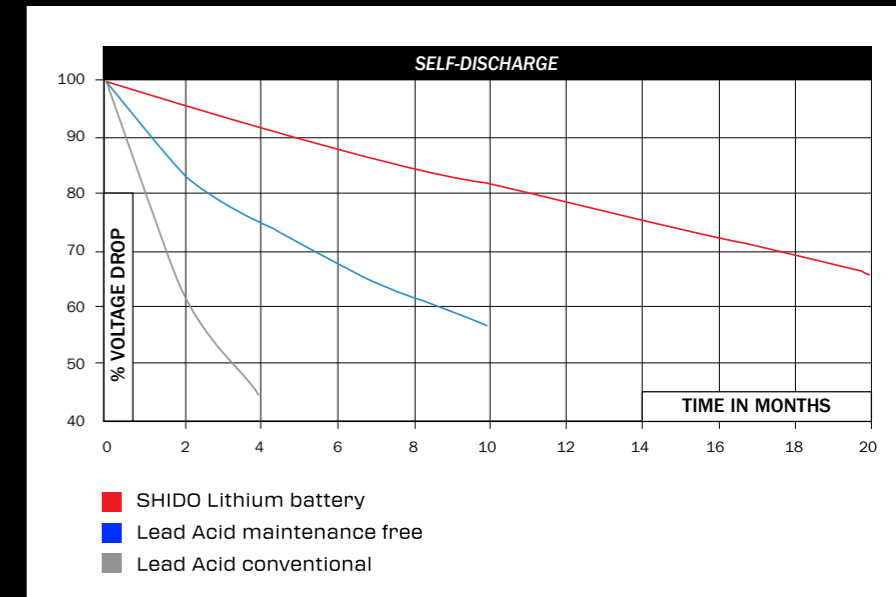
The starter needs sufficient starting current (CCA) to start. Depending on the necessary starting current a Lead-acid battery requires a higher capacity to be able to generate this current. SHIDO Lithium batteries generate a similar or greater starting power than a comparable Lead-acid battery with a smaller battery capacity. This is because the internal resistance of a Lithium battery is about three times less than a Lead-acid battery. As a result, the maximum discharge current is 3 times higher than for a Lead-acid battery. A higher starting current guarantees a smoother start.



LOW SELF-DISCHARGE

A Lead-acid battery loses voltage relatively quickly through self-discharge when not using the motorcycle. After a winter the battery doesn't have sufficient capacity left to rotate the starter.

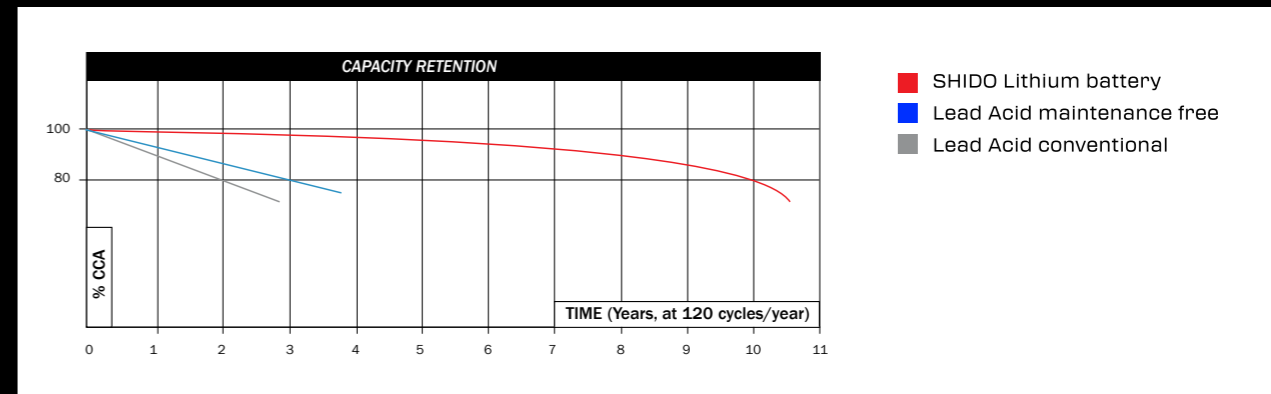
This self-discharge is very low for a SHIDO Lithium battery. Even after 2 year not using your motorcycle you still can start the engine. *Note: Hidden power consumers such as alarm systems can discharge the battery much faster than only through the self-discharge.*



LEAD-ACID BATTERY			SHIDO LITHIUM ION BATTERY			DIFFERENCE
TYPE	CAPACITY	STARTING CAPACITY	TYPE	CAPACITY	STARTING CAPACITY	CCA %
	Ah	CCA		Ah	CCA	
NB4L-B	4	56	LTX4L-BS LION	1,6	95	+ 70 %
NTX7A-BS	6	105	LTX7A-BS LION	2,4	150	+ 43 %
NTZ10S	8,6	190	LTZ10S LION	4	240	+ 26 %
NB9-B	9	130	LB9-B Q LION	3	180	+ 38 %
NTX14-BS	12	200	LTX14-BS LION	4	240	+ 20 %

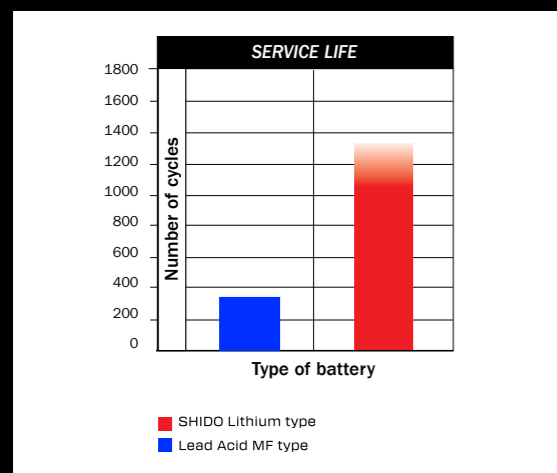
CAPACITY RETENTION

Typically for a Lead-acid battery is the decrease of capacity in the course of time. A new Lead-acid battery has a higher starting power than a battery pack that is already several years old. The starting current of a SHIDO Lithium remains all his life at a high level which guarantees you a smooth start for a very long time. It is generally assumed that a battery must have at least 80% of its original capacity to be able to start the engine.



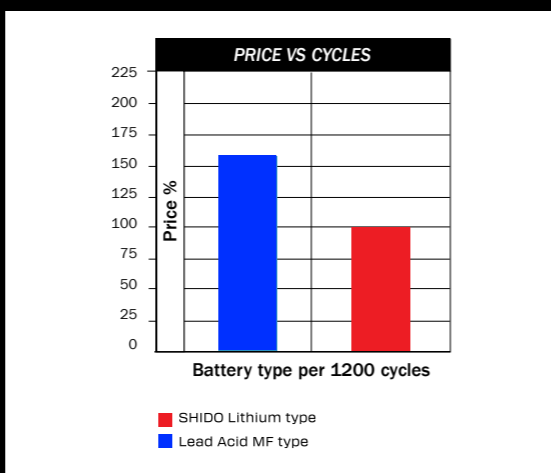
LONGER LIFE SPAN

The service life of a battery is determined by the number of charge and discharge cycles. This is approximately 350 cycles for Lead-acid batteries and about 1200 cycles for SHIDO Lithium (25% DOD or depth of discharge).



MORE ECONOMICAL

Over its entire lifetime a Lithium battery shows to be economical, in average about 2/3 the price of a Lead-acid battery.



SAFETY

A SHIDO Lithium battery is completely maintenance-free, the composition LiFePO4 cannot explode and does not contain substances hazardous to the environment. All SHIDO Lithium batteries are IP68 waterproof.

SHIDO Lithium batteries cannot leak and may be installed in any position, even upside down.





OUR RIDES

Whether you're cruising on the highway or conquering rugged terrain, our Lithium Ion batteries are your ideal companion. Engineered to fit a wide range of motorcycle models, you can trust in their compatibility with your ride.

Say goodbye to those frustrating engine struggles. Our Lithium Ion batteries deliver a powerful, consistent charge that ensures your engine fires up effortlessly, giving you the confidence to hit the road without hesitation.



HIGH PERFORMANCE (HP) BATTERY

HP HIGH PERFORMANCE

The black Lithium Motorcycle High Performance (HP) Battery has much higher capacity and cranking power for the same dimensions as the standard Lithium ion range. This starting power delivers a powerful and quick start of the engine.

MOST IMPORTANT USP'S

- ▶ **Unique** Motorcycle Battery.
- ▶ **Higher** start capacity.
- ▶ **Quicker** (cold) starts.
- ▶ **Lighter** than Lead-acid batteries.
- ▶ More **peace of mind**: extra consumers on your motorcycle will not drain the battery quickly.

COMPATIBLE CHARGERS

- ▶ DC 1.0.
- ▶ DC 4.0.



- ▶ **Up to 166%** Higher Start Capacity
- ▶ **2000+** Charging cycles
- ▶ **65%** Lighter than Lead-acid batteries
- ▶ **6** Minutes charging capability

LIGHTEST BATTERY
WITH LOADS OF
CRANKING POWER



SHIDO HP BATTERY DATA

With the High Performance battery series, SHIDO wants to offer the most powerful MC Lithium start batteries on the market. No other brand offers an equal capacity for the below dimensions.

SHIDO LION Item	LION Approx. Weight (KG)	LION Battery CA	HP Cap (Ah)	LION Energy (Wh)	Dimensions		
					L	W	H
LTZ10S HP LION -S-	1,1	360	6,0	72	150	87	93
LTZ7S HP LION -S-	0,62	180	4,0	48	113	69	105
LTX12 HP LION -S-	1,16	360	6,0	72	150	87	130
LTX14 HP LION -S-	1,18	360	6,0	72	150	87	145
LTX9 HP LION -S-	1,12	360	6,0	72	150	87	105
LT12B HP LION -S-	1,23	360	6,0	72	150	65	130
LTX12S HP LION -S-	1,1	360	6,0	72	150	87	110
LTX14S HP LION -S-	1,1	360	6,0	72	150	87	110
LTX20 Q HP LION -S-	1,92	720	12,0	144	175	87	155
LTX5S HP LION -S-	0,63	210	3	36	113	69	85

TARGET CUSTOMERS

☑ Customers who are looking for the lightest battery with the capacity of a Lead-acid battery, and the cranking power that exceeds OE lithium batteries specifications.

For example motorcycles that comes standard with a Lithium battery that get drained too easy because the motorcycle has extra consumers, like an alarm.

☑ Customers with a sports bike looking for the lightest battery with loads of cranking power for instant starts.

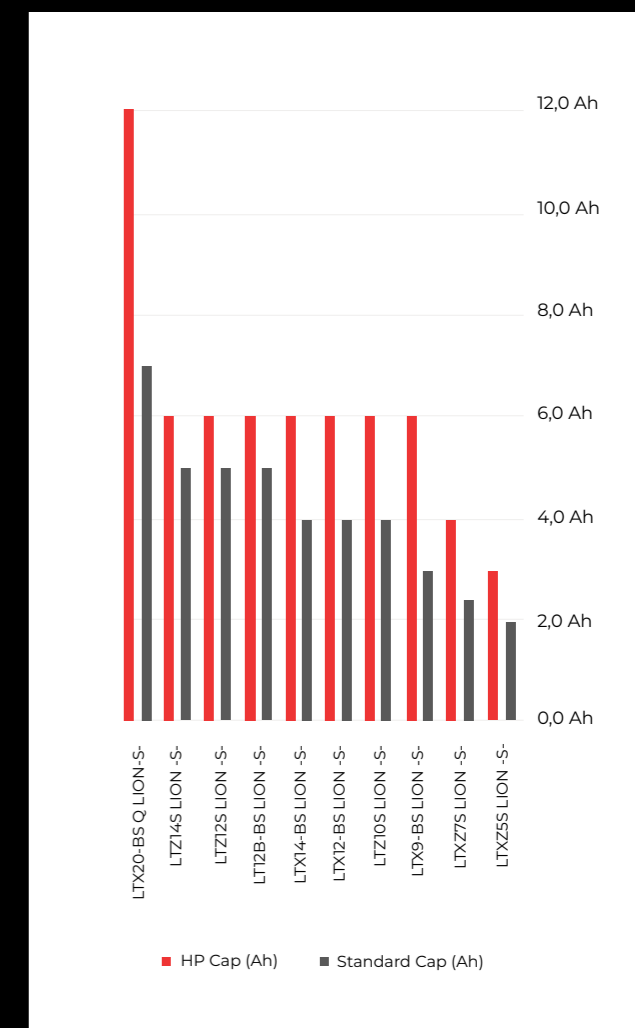


SHIDO STRANDARD VS. SHIDO HP

A Lead-acid battery loses voltage relatively quickly through self-discharge when not using the motorcycle. After a winter the battery doesn't have sufficient capacity left to rotate the starter.

This self-discharge is very low for a SHIDO Lithium battery. Even after 2 year of not using your motorcycle you still can start the engine.

Note: Hidden power consumers such as alarm systems can discharge the battery much faster than only through the self-discharge.





DUAL BATTERY CHARGERS

Lithium batteries offer an excellent level of performance. For the best results, they must be charged correctly. To accommodate this need in the market we developed our own SHIDO battery chargers, suited for motorcycle and powersport applications. SHIDO dual battery chargers come with a unique and optimized algorithm, which allows for a safe charge of both Lithium LiFePO4 and Lead-acid batteries.

ADVANTAGES

OF SHIDO LITHIUM ION CHARGERS

- ▶ **Clear split** between Lithium and Lead-acid charging modes.
- ▶ **Upgraded algorithm** for both Lithium and Lead-acid modes.
- ▶ **Battery Recovery** for deeply discharged batteries.
- ▶ **Battery health check** after charging.
- ▶ **Maintaining mode** with 4 hour intervals voltage checks.
- ▶ **Protected** against reverse polarity, overcharging, overcurrent, overheating and short-circuits.
- ▶ **User friendly** detection for reverse polarity, low-voltage or damaged batteries.
- ▶ IP 65, **waterproof**.
- ▶ **Adjusts** for varying A/C line voltage and delivers consistent charging current.



**FOR BOTH LITHIUM
ION & LEAD-ACID
BATTERIES**

DUAL BATTERY CHARGERS

These electronic battery chargers are designed to charge all types of lead batteries, conventional batteries and lithium LiFePO4 batteries of the latest generation. The numerous constructional technologies of currently available batteries require different charging curves to ensure correct and complete charging. These battery chargers extend the lives of your batteries because they charge each battery with the proper charge cycle.

ACCESSOIRES INCLUDED

▶ DC 1.0. & DC 4.0.



▶ DC 8.0.



▶ DC 25.0.



BATTERY COMPATIBILITY



Lead-acid

Lithium



DC 1.0.



DC 4.0.



DC 8.0.



DC 25.0.

Battery Compatibility	Lithium LiFePO4 & Lead-acid	Lithium LiFePO4 & Lead-acid	Lithium LiFePO4 & Lead-acid	Lithium LiFePO4 & Lead-acid
Power supply voltage	220 - 240V	220 - 240V	220 - 240V	220 - 240V
Frequency	50 - 60HZ	50 - 60Hz	50 - 60Hz	50 - 60Hz
Rated current (min-max)	1A	1A - 4A	2 - 8A	5 - 12,5 - 25A
Charging & testing stages	8	7	9	9
Battery voltage	12V	6V - 12V	12V	12V - 24V
Charge capacity	2 Ah - 40Ah	4Ah - 80Ah	5Ah - 160Ah	5Ah - 550Ah
Maintenance capacity	2Ah - 100Ah	4Ah - 120Ah	5Ah - 250Ah	5Ah - 800Ah
IP degree of protection	IP 65	IP 65	IP65	IP20
Size	180 x 80 x 40mm	210 x 87 x 50mm	230 x 100 x 65mm	260 x 130 x 75mm
Weight	0,4 Kg	0,6 Kg	1 Kg	2,5 Kg
Digital screen	No	Yes	Yes	Yes

SHIDO[®] MARINE

Lithium batteries offer an excellent level of performance. For the best results, they must be charged correctly. To accommodate this need in the market we developed our own SHIDO battery chargers, suited for motorcycle and powersport applications. SHIDO dual battery chargers come with a unique and optimized algorithm, which allows for a safe charge of both Lithium LiFePO4 and Lead-acid batteries.



IP68 WATERPROOF

A special sealing between cover & container prevents water seeping in.



NO POLLUTION

- ▶ No lead, no acid on the water
- ▶ No liquids inside
- ▶ Only low impact materials
- ▶ High corrosion resistance



HIGHER START CAPACITY

LEAD-ACID	SHIDO	LEAD-ACID	SHIDO
ITEM	ITEM	START CAPACITY	START CAPACITY
NTX20HL-BS-PW	LTX20L-BS Q LION	310 CCA	420 CCA
NB30CL-B	LIX30L-BS Q LION	385 CCA	540 CCA



VERY LOW SELF DISCHARGE



75% LOWER WEIGHT



3 TIMES LONGER CYCLE LIFE



3X SHORTER CHARGING TIME



SHIDO LITHIUM ION DATA SHEET

ITEM	Volt	Capacity	CA	Energy	Dimensions (mm)			Weight	Charging		Lay-out
		Ah	A	Wh	L	W	H	(Kg)	STD	MAX	
LB5L-B LION -S-	12	1,6	95	19	120	60	120	0,4	1	8	
LTX4L-BS LION -S-	12	1,6	95	20	113	70	85	0,57	1	8	
LTX5L-BS LION -S-	12	1,6	95	20	113	70	105	0,61	1	5	
LTM2L LION -S-	12	2	120	24	89	49	90	0,5	1	10	
LTZ5S LION -S-	12	2	120	24	113	69	85	0,61	1	10	
LTX7A-BS LION -S-	12	2,4	150	30	150	87	93	0,77	1,5	12	
LTX7L-BS LION -S-	12	2,4	150	30	113	69	125	0,69	1,5	12	
LTZ7S LION -S-	12	2,4	150	30	113	69	105	0,62	1,5	12	
LB9-B Q LION -S-	12	3	180	36	134	75	134	0,7	1,5	12	
LT7B-BS LION -S-	12	3	180	36	150	65	92	0,69	1,5	15	
LT9B-BS LION -S-	12	3	180	36	150	65	106	0,74	1,5	15	
LTX9-BS LION -S-	12	3	180	36	150	87	105	0,87	1,5	15	
LTZ5S HP LION -S-	12	3	210	36	113	69	85	0,65	1,5	15	
LTZ7S HP LION -S-	12	3	180	36	113	69	105	0,62	1,5	12	
LT12A-BS LION -S-	12	3,5	210	42	150	87	107	0,93	2	18	
LB12AL-A2 Q LION -S-	12	4	240	48	130	75	160	0,9	2	20	
LTX12-BS LION -S-	12	4	240	48	150	87	130	0,99	2	18	
LTX14-BS LION -S-	12	4	240	48	150	87	145	1	2	20	
LTX14AHL-BS Q LI -S-	12	4	240	48	134	75	168	1,1	2	20	
LTX14L-BS LION -S-	12	4	240	48	135	75	145	1	2	20	
LTZ10S LION -S-	12	4	240	48	150	87	93	1	2	20	
LTZ8V LION -S-	12	4,5	270	54	113	69	105	1	2,5	22,5	
LB16AL-A2 LION -S-	12	5	300	60	150	65	144	0,88	2,5	25	
LT12B-BS LION -S-	12	5	300	60	150	65	130	1,18	2,5	25	

ITEM	Volt	Capacity	CA	Energy	Dimensions (mm)			Weight	Charging Current (A)		Lay-out
		Ah	A	Wh	L	W	H	(Kg)	STD	MAX	
LT14B-BS LION -S-	12	5	300	60	150	65	144	1,19	2,5	25	
LTZ12S LION -S-	12	5	300	60	150	87	110	1,12	2,5	25	
LTZ14S LION -S-	12	5	300	60	150	87	110	1,12	2,5	25	
LT12B HP LION -S-	12	6	360	72	150	65	130	1,23	2,5	25	
LTPW16L LION -S-	12	6	360	72	175	100	175	1,4	3	24	
LTX12 HP LION -S-	12	6	360	72	150	87	130	1	2	18	
LTX14 HP LION -S-	12	6	360	72	150	87	145	1,18	2	20	
LTX16-BS LION -S-	12	6	360	72	150	87	164	1,1	3	24	
LTX20CH-BS LION -S-	12	6	360	72	150	87	164	1,3	3	24	
LTX9 HP LION -S-	12	6	360	72	150	87	105	1,12	1,5	15	
LTZ10S HP LION -S-	12	6	360	72	150	87	93	1,1	2	20	
LTZ12S HP LION -S-	12	6	360	72	150	87	110	1,1	2,5	25	
LTZ14S HP LION -S-	12	6	360	72	150	87	110	1,1	2,5	25	
LTX20-BS Q LION -S-	12	7	420	84	175	87	155	1,7	3,5	28	
LTX24HL-BS Q LI -S-	12	7	420	84	175	87	163	1,6	3,5	28	
51913 LION -S-	12	7,5	420	90	180	76	170	1,65	4	28	
LIX30L-BS Q LION -S-	12	8	480	96	167	124	163	1,8	4	32	
LTX20 Q HP LION -S-	12	12	720	144	175	87	155	-	3,5	82	
SLM 420 LION -S-	12	20	720	240	169	131	174	3,8	10	50	

THE PERFECT
COMBINATION



FIND THE RIGHT
BATTERY FOR
YOUR MOTORCYCLE

ON WWW.SHIDO-BATTERIES.COM

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