BPower

TEAM YOUNG

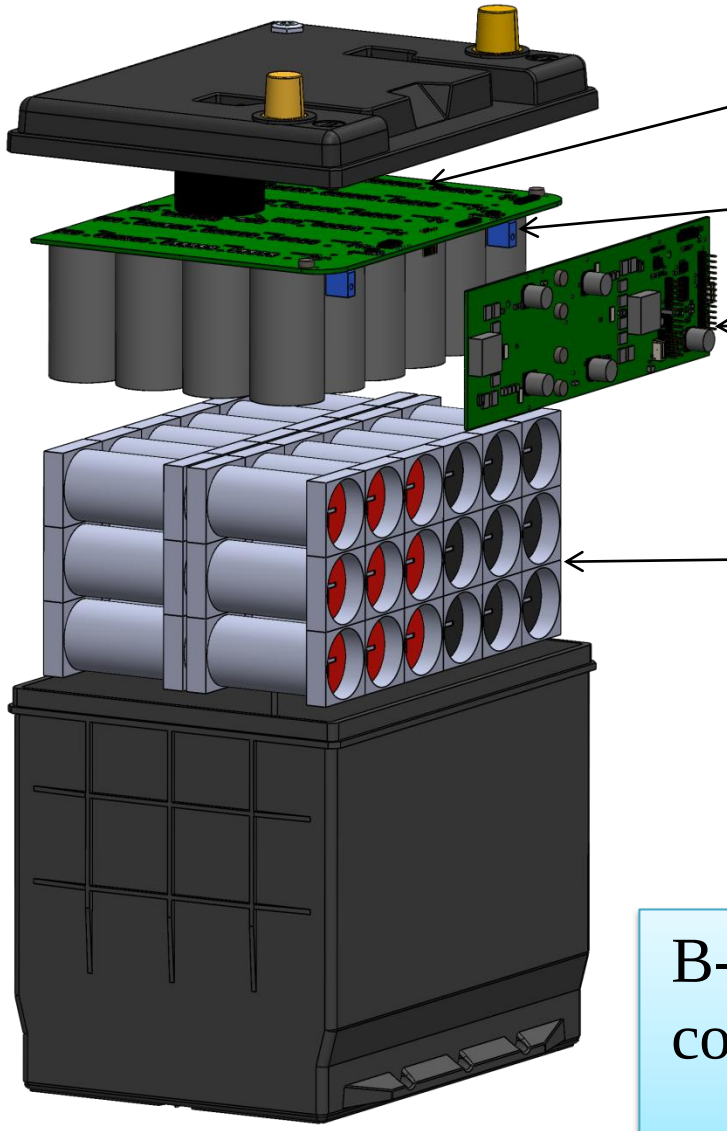
Lasting Battery Power Device(B-Power)

Replacing all the lead-acid batteries

Proprietary inventions:
Intelligent energy storage system (I750087)
Energy regulation system (I830498)
Only B-Power can be lasting.

Team Young Tech

B-Power Structure



Supercapacitor Board

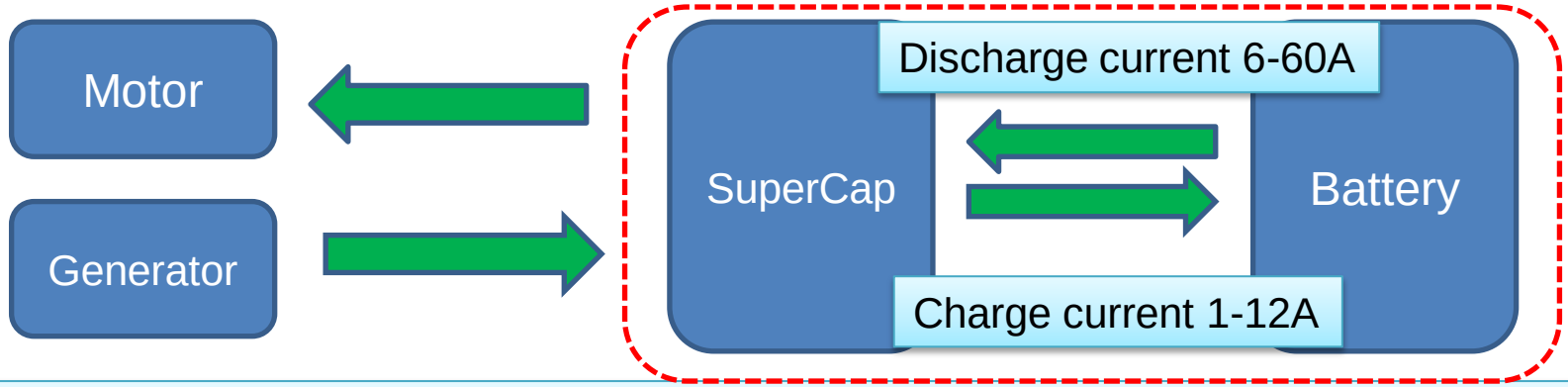
Supercapacitors

Charging/Discharging Electronic Control Board

LiFe/Li-Battery

B-Power is composed of electronic control system, super capacitor set, and LiFe/Li-battery pack.

B-Power Structure



B-Power is composed of charging/discharging electronic control system, super capacitor set, and LiFe/Li battery pack. It lets the starting(DCR) and voltage-stabilized(ACR) capability of itself be disconnected with the battery volume. The roles of super capacitor and battery are separated and independent. This is why it is also called the hybrid battery. The patent of the B-Power has been granted in Taiwan (I750087)。Right now, the relative patents are also pending in USA, China, Japan, Germany, UK, France, Canada, Italy, Korea, Australia, Spain, and Holland.

The super capacitor set can discharge very big current instantly, and this discharged current can be made use of starting the combustion engine. In addition, the designed low ACR of the super capacitor set can offer better voltage-stabilized capability than the traditional lead battery. Besides, even though battery is paralleled with the super capacitor set, there is the electronic charging and discharging control system between them. Thus, the battery will not participate the engine starting process, and can be protected behind. The battery is only charged and discharged at controlled currents. Therefore, the battery pack can maintain its life(70% left) as long as that of the single cell, normally 2,000-2,500 cycles.

B-Power Advantage

1. B-Power contains no lead and toxic material, the part numbers are simple, the weights of those part numbers are all light, and it is easy to make a replacement of all the lead battery by sizes and CCA values.
2. The low and stable ACR strongly intensifies the circuit noise filtering capability, and can stabilize the circuit voltage in the vehicles. Compared with the same CCA lead acid battery, this stabilized voltage will enhance the horsepower and torque of the vehicles, and consequently the vehicles' performance can not only be improved but also it can save around 10% gasoline as well as diesel in average.
3. In case, the volume of the Li-battery in B-Power is too low, roughly 10% or less left, the B-Power will automatically and completely shut down itself. After this moment, if the driver wants to start the vehicle again, he can just push the button switch to turn it on again. The B-Power will be activated again, and it will be ready to start the vehicle in 2 or above minutes.
4. The charging/discharging environmental temperature limits of B-Power are between -20℃ and 60℃, and the above temperature range will be extended to -40℃ and 80℃ with heat insulation branket. The DCR and capacitance of super capacitors of the B-Power is not susceptible to temperature, and they have only 5% or less change between. -40℃ and 60℃ discharging temp.. In addition, the long-term stable DCR(+100% Max.) and capacitance(-20% Max.) of the B-Power can maintain its engine starting capability at CCA value throughout its designed lifespan.
5. B-Power is also combined with the function of the deep-cycled battery. Its discharging depth is 90%, and the average discharging current is over 50A. Therefore, the B-Power can be used in the applications of EV car, hybrid car, jack, and so on.
6. When short happens, the charging/discharging system of B-Power can not only greatly decrease the damage of the device, but also can protect itself from short impact. This is why the B-Power can be called the safest battery.

5+5 Year Extended Warranty Policy

1. Except the excluded car patterns, all the M/S-BPowers will be given the 5 years warranty without any limitation at the purchasing moment.
2. M-BPower users can only pay 20% of the most updated part number's tag prices within the using limitation of 15%AH/day.set to get an extended 5 years warranty before the effective warranty mature date. It means that users only need to pay the full price of a M-BPower every 25 years. Besides, the 5 more years warranty can normally be purchased again and again till forever.
3. S-BPower users can only pay 25% of the most updated part number's tag prices within the using limitation of 20%AH/day.set to get an extended 5 years warranty before the effective warranty mature date. It means that users only need to pay the full price of a S-BPower every 20 years. Besides, the 5 more years warranty can normally be purchased again and again till forever.
4. Within the warranty period, the user of M or S can trade the old B-Power part number for a new one of the same type without any limitation. He will get the rebate of 50% the original price to turn in the unneeded B-Power, and pay 100% to get a new one. That means the user only needs to buy one B-Power, and it can be used forever even though he needs to replace his car.
5. The ecosystem of the B-Power from selling off to being recycled will be automatically formed a closed system. All the B-Power will be fully used, repaired, and carefully scraped by TY system without government intervention. The B-Power can benefit all stakeholders in this system, and truly match Circular economy and carbon-free principle to save the Earth resource and keep our planet clean. We believe that the B-Power is the best battery in the world.

B-Power is the safest battery

1. Generally speaking, when the short circuit happens in a vehicle, the current may over 1,000A. The over 90% volume of the lead-battery is stored between 12 and 12.8V, and the Lithium Iron battery is stored between 12.8 and 14.4V. Thus, the short current will almost maintain at 1,000A until the volume depletion. This phenomenon may bring the serious damage to the car as well as the battery.
2. The B-Power is via super capacitors to supply electric power. The super capacitors can only store max. 5,000AS energy. In addition, this small energy is evenly distributed between 0 and 13V. Once the short circuit happens, the short current of 1,000A can only appear at the beginning. Then the current will be decreasing rapidly along with voltage dropping. Besides, the whole short process can only last below 5 seconds, so that the caused damage is much less in comparison.
3. Despite of that, super capacitors can withstand over 2,000A short current, and the B-Power charging/discharging system can only supply max. 40 or 60A current. Once the super capacitors voltage is lower than 1V, The MCU of the B-Power will stop intermittently the current supply. This design can further curtail the short damage to the device as well as super capacitors.
4. In case the charging/discharging system malfunctions and the current is over the set current, the PTC fuse installed will break the circuit of the power supply in one second. Thus, at the short happening the B-Power can not only greatly decrease the damage of the device, but also can protect itself from short impact. This is why the B-Power can be called the safest battery.

Emergent starting design

1. Normally when the lead battery is unused for a while, its volume will be naturally discharging itself, and the battery will also be degrading continuously. For example, the lights in the car sometimes are forgotten to be switched off, and the battery will be drained. Furthermore, if the generator in the car malfunctions, the battery will also be drained. These phenomena all may cause the lead battery damage.
2. The B-Power designed can detect its battery volume all the time. When the volume is low, say around 10% or less left, it will shut down itself completely to preserve the left energy.
3. When the user wants to start the engine then, he must first shut down the car, close the car doors, turn off all the unnecessary electricity consuming devices, like headlights, audio, air-con, and so on, and then push the button switch to activate the B-Power again. The B-Power will make use of the left battery volume to charge the super capacitors, and then the super capacitors can be ready to start the engine in 2 or above minutes.
4. Cars, generators, agricultural machineries, engineering machineries and so on, their B-Powers can be switched off or started at any circumstances.

Shut down at volume low.

Pushing button in 5 seconds, it will start blinking until green light, and then is ready to start.

Comparison among M-BPower and lead acid batteries

Motorcycle battery	B-Power	Lead Acid	AGM	Lithium Iron
Warranty (year)	M: 25	<= 1	<= 1	<= 2
Starting	☆☆☆☆☆	☆	☆☆☆☆	☆☆
Voltage-Stabilized	☆☆☆☆☆	☆☆	☆☆☆☆	☆
Heat Resistant	☆☆☆☆☆	☆☆☆	☆	☆☆☆☆
AVE. Weight	30%	100%	100%	40%
AVE. Life(years)	≧20	2	4	3
Over Charge	non sensitive	sensitive	sensitive	sensitive
Over Discharge	non sensitive	sensitive	sensitive	sensitive
Idle	Good & can start	NG	NG	NG
Environment	Friendly	lead pollution	lead pollution	Friendly
Deep Cycle Discharge	☆☆☆☆☆	☆	☆☆☆	☆☆☆☆
Cost(X5L)	USD 8/Y	USD 16/Y	X	USD 31/Y
Cost(T7B/X7A)	USD 8/Y	USD 16/Y	X	USD 31/Y
Cost(X9/X12)	USD 9/Y	USD 31/Y	USD 19/Y	USD 47/Y
Cost(X14/X16/X24)	USD 11/Y	USD 39/Y	USD 31/Y	USD 53/Y

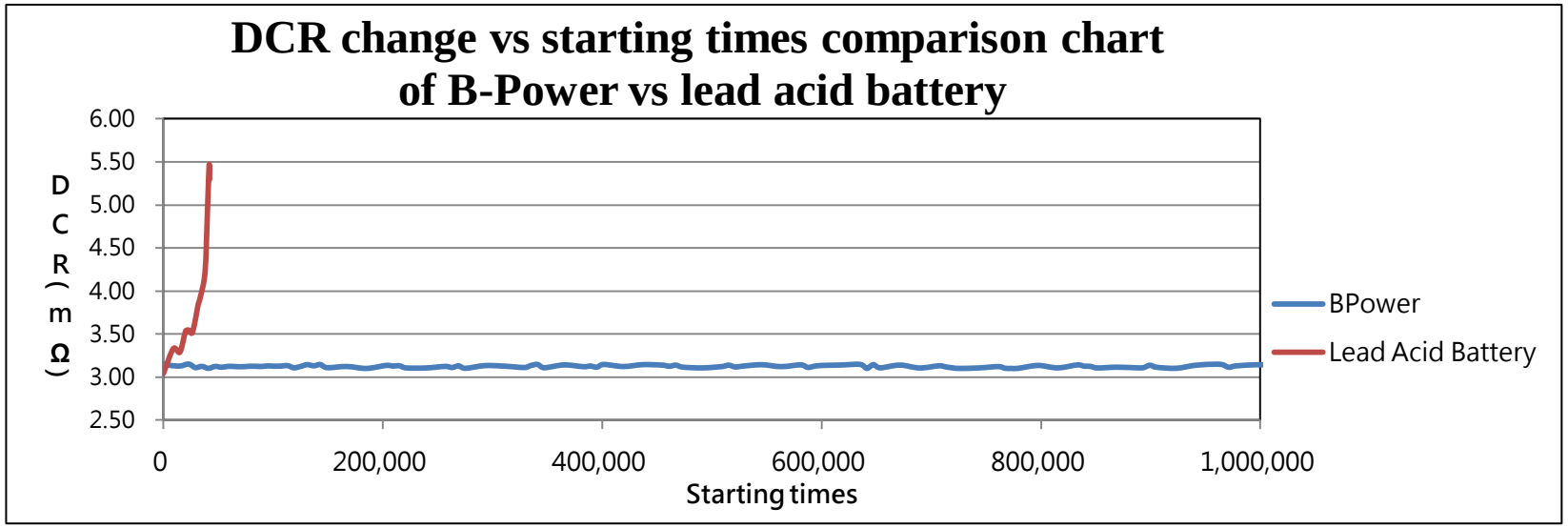
Comparison among S-BPower and lead acid batteries

Car Battery	B-Power	Lead Acid	EFB	AGM	Lithium Iron
Warranty (year)	S: 20	<= 1	<= 1	<= 1	<= 2
Starting	☆☆☆☆☆	☆	☆☆☆	☆☆☆☆	☆☆
Voltage-Stabilized	☆☆☆☆☆	☆☆	☆☆☆	☆☆☆☆	☆
Heat Resistant	☆☆☆☆☆	☆☆☆	☆☆	☆	☆☆☆☆
AVE. Weight	30%	100%	100%	100%	40%
AVE. Life(years)	≧20	2	3	4	3
Over Charge	non sensitive	sensitive	sensitive	sensitive	sensitive
Over Discharge	non sensitive	sensitive	sensitive	sensitive	sensitive
Idle	Good & can start	NG	NG	NG	NG
Environment	Friendly	lead pollution	lead pollution	lead pollution	Friendly
Deep Cycle Discharge	☆☆☆☆☆	☆	☆☆	☆☆☆	☆☆☆☆
Start-Stop System	V	X	V	V	X
Cost(B24/LN1)	USD 28/Y	USD 40/Y	USD 45/Y	USD 53/Y	USD 118/Y
Cost(D23/LN2/LBN3)	USD 34/Y	USD 65/Y	USD 71/Y	USD 63/Y	USD 150/Y
Cost(D31/LN4)	USD 46/Y	USD 81/Y	USD 84/Y	USD 74/Y	USD 171/Y

Comparison among truck S-BPower and lead acid batteries

Truck battery	B-Power	Lead Acid	Lithium Iron
Warranty (year)	S: 20	<= 1	<= 3
Starting	☆☆☆☆☆	☆	☆☆
Voltage-Stabilized	☆☆☆☆☆	☆☆	☆
Heat Resistant	☆☆☆☆☆	☆☆☆	☆☆☆☆
AVE. Weight	20%	100%	40%
AVE. Life(years)	≧20	1.5	3
Over Charge	non sensitive	sensitive	sensitive
Over Discharge	non sensitive	sensitive	sensitive
Idle	Good & can start	NG	NG
Environment	Friendly	lead pollution	Friendly
Deep Cycle Discharge	☆☆☆☆☆	☆	☆☆☆☆
Start-Stop System	V	X	X
Cost(B24->115F51)	USD 53/Y	USD 226/Y	X
Cost(D23->N200L)	USD 68/Y	USD 419/Y	X
Cost(D31->73023)	USD 92/Y	USD 484/Y	USD 645/Y

B-Power Starting Capability



Simulating the car starting and comparing DCR changes between a B-Power and a lead battery, B-Power's is almost no change over 1KK starts. If a car equipped with the start-stop system starts 30 times per day, it is around 10,000 times a year. 1 million times mean that it can last over 100 years. This is why the B-Power is called the lasting battery.

The B-Power designed can rotate the engine for 3 or over starting cycles. The starting resilience makes certain the car starting success. The designed resilience can maintain for a long time, and almost will not degrade at low battery volume or with the discharging temperature change(less than 5% between -40 and 60 ℃). Even though the B-Power is used to the life end, it still maintain 70% the beginning starting resilience. In case the user accidently encounters starting failure, he just needs to wait for 10-20 seconds, and then he can start the car again.

The specification and advantage of M-BPower

Part No.	Voltage	CCA	Volume	Equivalent to Lead Battery Volume	Size(mm)	USD	5 years extended warranty(USD)
M-4X5L	12V	80A	4AH	5AH	113×70×105	210	42
M-6T7B	12V	120A	6AH	9AH	150×68×93	210	42
M-6X9	12V	180A	6AH	9AH	149×85×108	230	46
M-12X12	12V	350A	12AH	18AH	149×85×134	280	56

1. The motorbike M-BPower is light, small, long stand-by period(30-150 days), and few part numbers. It is applicable to all types of motorbikes, including the electric scooters.
2. The super capacitor(2.25V/30℃) of the B-Power may last over 40 years, but the above life year may degrade 40% when they are used in the equator area(+5 ℃). The life of Li-ion battery may have over 60 years at 4mA max. standby waste of X5L, over 35 years at 14mA max. standby waste of T7B/X9, and over 45 years at 14mA max. standby waste of X12. However, all the above life years may degrade 20% when they are used in the equator area(+5 ℃).
3. The X5L size is very good to replace the small battery of electric scooter. Compared with the traditional lead battery, X5L can almost last forever.

M-BPower marketing

1. The after market will be the first priority to promote the M-BPower. The regional agents of the motorbike makers and the distributors of lead battery makers will be the following. Once the M-BPower is booming at after market, it will push the front-end makers to pay attention to the M-BPower. Then, the promotion to front-end makers will be much more effective at that moment.
2. The business model of warranty forever and freedom of trading can build up the strong win-win relationship among the marketing channels. The profit of one M-BPower sold is equivalent to four lead-batteries sold. From then on, this customer basically will not leave because of forever warranty, and he will pay the insurance fee once per every five years. The 20% of the selling price insurance payment is equivalent to sell one more traditional battery. This act will last forever. If the M-BPower is sold from front end makers, they can share the insurance fee forever. They not only can increase sale amount and profit, but also strengthen their control power to their marketing channels. Thus, I believe that the M-BPower will be very attractive to them.
3. It is estimated that there are 1-2% present M-BPower users will have need to trade the old M-BPower for a new pattern every year. TY channels give them 50% price rebate to recycle their turn-in M-BPower, and sell them a new one at 100% price. This trading is equivalent to sell two more traditional batteries. In conclusion, this trading policy is flexible and cost-saving to users, and all the stakeholders of M-BPower can be benefitted,

The specification of S-BPower

Part No.	Voltage	CCA	Volume	Equivalent to Lead Battery Volume	Weight (Kg)	Size(mm)	USD	5 years extended warranty(USD)
S-30B20L/R	12V	350A	30AH	46AH	5.0	198×128×200	450	113
S-30B24L/R	12V	575A	30AH	46AH	5.5	238×129×222	540	135
S-40D23L/R	12V	800A	40AH	61AH	6.5	230×173×222	710	178
S-60D31L/R/T	12V	1150A	60AH	92AH	9.0	306×173×222	920	230
S-30LN1	12V	575A	30AH	46AH	5.5	206×174×190	540	135
S-40LN2	12V	800A	40AH	53AH(AGM)	6.5	243×174×190	710	178
S-40LBN3	12V	800A	40AH	53AH(AGM)	6.5	278×174×175	710	178
S-60LN4	12V	1150A	60AH	80AH(AGM)	9.0	315×174×190	920	230

The advantage of S-BPower at 12V application

1.No matter what kinds of lead batteries, like SMF、EFB、AGM, or others, no matter what kinds of fuel used, like gas, gasoline, or diesel in 12V cars, and no matter what kinds of car power system used, like normal, start-stop(day: <= 25A; night: <= 35A), or charge control systems, the S-BPower can replace all the traditional batteries with the same or less CCA values. Besides, the volume of S-BPower times 2 is effectively equal to the lead battery volume(20HR) in the actual use. The S-BPower can also be used in EV cars.

2.When the S-BPower is installed at engine room, its life is estimated over 30 years (2.2V/35 ℃). The life of the S-BPower may be over 45 years(2.2V/30 ℃) if the S-BPower is not installed at engine room. The S-BPower installed at taxi engine room(2.3V/37.5 ℃) will be the worst case, and its life may be shortened to 15 years left. However, all the above life years may degrade 40% when they are used in the equator area(+5 ℃). Besides, the LiFe/Li-battery will last over 35 years under 20mA/10AH standby waste condition, but the above life year may degrade 20% when they are used in the equator area.

3.The super low ACR resistance can supply over 50% better noise filtration in car electric circuits. This voltage stabilization function can always make the automatic transmission car at better condition, and can save the fuel around 10% either gasoline or diesel. In principle, the cost of the S-BPower can be recovered by fuel-saving less than one year.

S-BPower marketing

1. The after market is still the first priority marketing target. We may sell the S-BPower through car stores(>= 1,000Pcs/shop), taxi/rental companies, regional agents of car makers, distributors of lead-battery makers, government sectors, and so on. The yearly need at after market is estimated four times of the front end's, it is worthy to spend resource to cultivate this market. Once the S-BPower becomes a hit at after market, the car maker will hear it, and then will accept the S-BPower much easily.
2. The business model of warranty forever and freedom of trading can also build up the strong win-win relationship among these marketing channels. The profit of one S-BPower sold is equivalent to four traditional or two EFB/AGM batteries sold. From then on, this customer basically will not leave because of forever warranty, and he will also pay the insurance fee once per every five years. This act will last forever. The 25% of the selling price insurance payment is huge to the front end makers, and they can share the accumulated insurance fee forever. They not only can get the extra big sale amount and profit, but also strengthen their control power to their agents. Thus, I believe that the S-BPower will be very popular once they understand our business model.
3. It is estimated that there are 2.5-5% present S-BPower users will have need to trade the old S-BPower for a new pattern every year. When the users change cars, they may have Japanese, American, or European sizes battery different need. We believe that trading the old S-BPower for a new one could be normal in the future. TY channels give them 50% price rebate to recycle their turn-in S-BPower, and sell them a new one at 100% price. This trading is equivalent to sell one to two more traditional batteries. In conclusion, this trading policy is definitely flexible and cost-saving to users, and is lucrative to all the stakeholders of S-BPower.

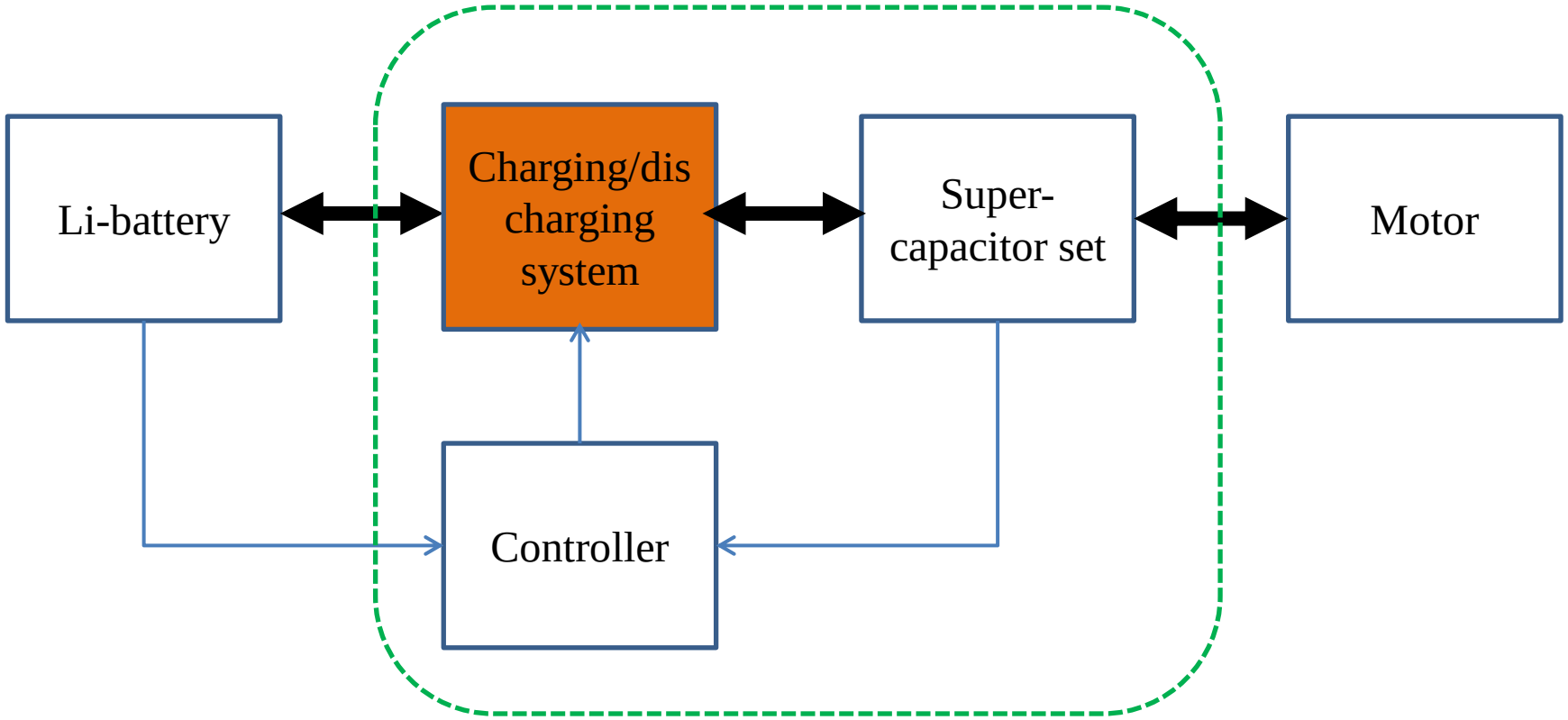
The advantage of S-BPower at 24V application

1. The CCA of 1,170A is enough to start all the 24V trucks which is below or above 43 tons. They are also suitable to be used at electric buses.
2. This S-BPower is suitable to all the generators. In this application, the 12V or 24V chargers are necessary, and will charge the S-BPower at 13.8+/-0.2V, or 27.6+/-0.4V.
3. They can not only start all the 24V vehicles, but also have deep-cycled discharging capability. These S-BPowers all can supply max. 60A current, and this 60A is greater than those discharging currents of the present lead battery(0.2C), AGM (0.3C), and deep-cycled lead battery(0.5C). We believe that the S-BPower can also provide new electronic design frontier in vehicles in the future.
4. The life of S-BPower is estimated over 35 years(2.35V/30 ℃), but the above life year may degrade 40% when they are used in the equator area(+5 ℃). The LiFe/Li-battery will last over 40 years under 20mA/10AH standby waste condition. However, all the above life years may degrade 20% more when they are used in the equator area.
5. The low ACR resistance can supply better noise filtration in truck electric circuits. This voltage stabilization function and light weight can also make the automatic transmission truck at better condition, and can save the fuel around 5-10%. In principle, the cost of the S-BPower can be recovered by fuel-saving less than half year.

S-BPower at 24V marketing

1. The after market of truck is still the first priority. Freight and passenger transportation companies whose batteries needs are big will be the first marketing target, and then the agents of truck, engineering machinery, and ship makers. The government sectors will the following. The lead battery is used in two series at the 24V system application. Those batteries are big and heavy(>= 45Kg), and are suffering overcharging and balance problem during running. These problems result in short life of batteries(<= 1 year). Therefore, the after market is very potential, worthy to promote this market actively. Once the S-BPower is popular at the after market, the lucrative business model absolutely will draw makers' attention.
2. The entire market of generator can be promoted at the same time for big, medium, and small front end makers are everywhere in each country. The competition in generator industry is fierce. Their orders are unstable, and the profit is also thin. Thus, the S-BPower can be introduced much easily. The traditional batteries used in generators not only have many part numbers , but also are heavy. In addition, their life is unpredictable. In conclusion, This is a good market for the S-BPower.

D/E-BPower framework



3+3 Year Extended Warranty Policy

1. Except the excluded car patterns, D/E-BPower will be given the 3 years warranty without any limitation at the purchasing moment.
2. Users shall pay the extended warranty fee by daily volume usage

   - 50% of the most updated tag price within the using limitation of 100%AH/day.set.
   - 37.5% of the most updated tag price within the using limitation of 75%AH/day.set.
   - 25% of the most updated tag price within the using limitation of 50%AH/day.set.
   - 12.5% of the most updated tag price within the using limitation of 25%AH/day.set.

   to get an extended 3 years warranty before the effective warranty mature date. Besides, the 3 more years warranty can normally be purchased again and again till forever.
3. The ecosystem of the D/E-BPower from selling off to being recycled will be automatically formed a closed system. All the D/E-BPower will be fully used, repaired, and carefully scraped by TY system without government intervention. The D/E-BPower can benefit all stakeholders in this system, and truly match Circular economy and carbon-free principle to save the Earth resource and keep our planet clean. We believe that the D/E-BPower is the best battery in the world.

D-BPower spec. and advantage

Part No.	V	CCA	Volume	Discharging current	WT(Kg)	Size(mm)	USD	3 years extended warranty(USD)
D-55B24LS/RS/T8	12V	350A	55AH/665WH	48-60A	6	238x133x200	780	100%: 390 75%: 192.5 50%: 195 25%: 97.5
D-120D31L/R/T8	12V	1,150A	120AH/1,440WH	48-60A	11	306x128x200	1,600	100%: 800 75%: 600 50%: 400 25%: 200

1. The D-BPower has 12V deep cycle discharging capabilities. Its pack can be assembled in multiple series, multiple parallels, or multiple series and parallels according to the need of voltage and volume at devices. D-BPower is designed to replace all the deep cycle lead acid batteries.
2. The application of D-BPower may be solar or wind energy storage devices, parking air-con, RV car, truck in north America, yacht, and so on. In case one D-BPower among these application packs is out of function, it can be replaced by a used or new one, and this act will completely not affect itself and other D-BPower life.
3. Each D-BPower has been built-in its own charging and discharging temperature control system. When the inside temperature of D-BPower is below 10 ℃, the heating mechanism will get started. Therefore, the D-BPower can be operated at super low temperature. Basically, the charging and discharging temperature range of D-BPower is between -20 and 60℃. If the electric and energy storage devices are equipped with B-Power, the extra temperature control system is not needed.

E-BPower spec. and application

Part No.	V	CCA	Volume	Discharging current	WT(Kg)	Size(mm)	USD	3 years extended warranty(USD)
E48-30D31T8	48V	350A	30AH/1,440WH	32-62A	11	306×173×222	1,600	100%: 800 75%: 600 50%: 400 25%: 200

1. E-BPower pack can be assembled in multiple series, multiple parallels, or multiple series and parallels to replace the equivalent voltage and volume of Li-battery pack(>= 48V). E-BPower ‘s size can be customized.
2. According to the different application, the E-BPower can be used by single, multiple series and single parallel, single series and multiple parallels, or multiple series and parallels. The application of electric device may be drone, electric scooter, electricity-added bicycle, and electric bicycle, light hybrid car, fork lifter, golf cart, electric motorcycle, hybrid car, electric car, electric bus and so on. In addition, the application of energy storage may be solar power, wind power, and so on.
3. E-BPower is light-weight, small size, and long life. If one or more E-BPowers encounter malfunction or serious volume aging in the E-BPower pack, they can be replaced by new or used E-BPowers. When the voltage or volume of an application are changed, the used E-BPower pack can be taken apart and re-combined with new or used E-BPower according to application need. The usable used E-BPower can be kept and used continuously. This function is unique, and can save cost as well as reduce waste.

Advantages of E-BPower

1. To supply bigger motor starting rush current: The super capacitor set of the new E-BPower has less than 1/4 DCR of Li-battery. Thus, the E-BPower can support at least two times power of the motor based on the same starting voltage drop during its lifetime compared with the traditional structure.
2. To temporarily store recovery power: The super-capacitor set of E-BPower is installed in front of the motor. It can protect the Li-battery behind from the shocks of over charging voltage or/and over charging current, and its discharging voltage is like floating voltage up and down within the set limits(48-50V). Thus, the voltage from 49 to 64.8Vcan be the room for power recovery use. In addition, the Li-battery boost charging system in E-BPower can charge the recovery power at 0.5C constant charging current from super capacitor set to Li-battery. In conclusion, the total recovery power can basically reach 20% of the E-BPower volume in average.
3. To supply extra power for motor's instant acceleration: The energy stored between 28.8 and 49V in the super capacitor set of E-BPower can be used as motor instant acceleration power for 5 seconds. In addition, the Li-battery buck discharging system in E-BPower can discharge its power at 1.0C constant current. Thus, the total power can support the motor which has over 3 times the Li-battery power of E-BPower.

Advantages of E-BPower

4. The IR voltage drop during discharging can be corrected to stabilize the discharging depth: In E-BPower, Li-battery discharges at 1.0C constant current through super capacitor set within 48-49V to supply power. The DCR of Li-battery and discharging time can be calculated at discharging period. Therefore, The IR voltage drop can be corrected, and the discharging depth of the Li-battery can be not affected by the surrounding temperature, Li-battery aging, current using, device using time, and so on. Once the discharging depth of the Li-battery can be stabilized, its charging and discharging life cycles can basically be maintained till 60% volume aging.
5. Each E-BPower will have light signal warming to remind the user to replace his E-BPower by warranty when its Li-battery volume has aged to 50% or less. This replacement can avoid the possible failure of Li-cells in the Li-battery of E-BPower. In addition, each E-BPower is only build-in no more than 40AH Li-battery volume. That is to say, the maximum energy of each series has been limited to 40AH in total multiple parallels. This limited energy can retard the failed Li-cell to catch on fire or explosion caused by the thermal runaway of the current leaking or short circuit.

   When the external short circuit happens to the E-BPower, it will recognize the short circuit and immediately stop supplying the current. Thus, this short circuit will not cause the fire or explosion because it has no constant energy supply. E-BPower will be automatically back to normal only after the short circuit is gone.
6. E-BPower makes use of the withstand voltage of the super-capacitor set to design the mutual voltage adjustment of E-BPowers in series, and mutual volume balance of E-BPowers in parallel automatically. Thus, the E-BPower can be freely assembled by multiple series or/and multiple parallels with new or used E-BPowers according to the voltage or/and volume needs without extra battery management system(BMS).

Advantages of E-BPower

Every E-BPower in multiple series will adjust its voltage automatically to prevent over voltage during charging, and any depleted E-BPower during discharging will bypass itself to continue the discharging process until the device's lower voltage limit hit. Thus, E-BPower in every series will nearly deplete its all volume during discharging. When E-BPower is applied in multiple parallels, all the paralleled E-BPowers within every series will automatically adjust their voltages along with their volumes. Therefore, the discharging order of the E-BPowers will be automatically decided by their voltages, and their volumes all can be used up almost at the same time.

7. The Li-battery in E-BPower is always charged by 0.5C constant current, and discharged by 1.0C constant current. Under these conditions, the temperature of the Li-battery will not exceed 35 ℃ in its whole life time. Thus, the cooling system is not necessary. Besides, E-BPower has been built-in its own charging and discharging temperature control system. When its inside temperature is below 10 ℃, its own heating mechanism starts functioning. Therefore, the E-BPower can be operated at super low temperature. Basically, the charging and discharging temperature range of E-BPower is between -40 and 60℃. In addition to IR correction and floating voltage discharging design, if the electric and energy storage devices are equipped with the pack of E-BPowers, the extra temperature control system is not needed. Furthermore, the heating mechanism in E-BPower consumes very little energy, basically no more than 1% volume.

B-Power Agency Policy

1.Contracted agent: After the contract has been signed, the agent must release order which is no less than the quantity below, and then there are two months excepted period for the agent to do marketing survey and arrangement. After excepted period, the agent shall start releasing the monthly order which is no less than below quantity from the 4th month.

-The 1st 200sets or less order: 50% the recommended retail price.
-200sets/Mon. or above in average : 58% the recommended retail price.

2.Contracted general agent: After the contract has been signed, the sole agent must release order which is no less than the quantity below, and then there are four months excepted period for the agent to do marketing survey and arrangement. After excepted period, the agent shall start releasing the monthly order which is no less than below quantity from the 6th month.

-The 1st 200/400/600/1,000/2,000sets or less order: 50% the recommended retail price.
-USA, 2,000sets/Mon. or above in average : 52% the recommended retail price.
-China, Germany, or Japan, 1,000sets/Mon. or above in average : 52% the recommended retail price.
-UK, France, Italy, Canada, Arabia, or Australia, 600sets/Mon. or above in average: 52% the recommended retail price.
-Spain, Korea, Saudi Arabia, or Holland, 400sets/Mon. or above in average: 52% the recommended retail price.
-Other countries, 200sets/Mon. or above in average : 52% the recommended retail price.

Conclusion

TEAM YOUNG

Owing to the high performance and long life of the B-Power, the unique business model of warranty forever can fulfill the "Circular economy", and this business model can definitely replace the prevail "Linear economy" in the future. This business model should absolutely bring huge impact to the present battery industry and others. The toxic lead-battery has been used for over 160 years since 1859. It is time to be weeded out. The business model of warranty forever will automatically build up a closed system which will sell, recycle, repair and scrape all the B-Powers without dumping. It is really good to the Earth. We believe that the B-Power business model will become the benchmark of worldwide product design and environmental protection.

The B-Power is not only lasting, but also can enhance the vehicle's performance and fuel-saving. Regarding to price-performance ratio, it is absolutely worthy to be applied in all kinds of the combustion engines as well as EV's. Besides, its light weight, small size, fast charging, and long life can definitely bring new mindset to car design in the future.

Despite that, if we can use the B-Power at a full scale in the world, probably we could completely ban the lead-used in the battery industry. In the year 2000, electronic industry promoted the activity of the Green Partner to ban the use of lead and toxic materials to contribute the effort to the global environmental conservation. Now, if we can completely ban the lead used in the battery industry, that would be an another big success in the global environmental conservation. This act will definitely bring the welfare to all the human being.