

Sealed Lead-Acid Battery Used for Electric Moped / Bike

Operational manual

Thank you for your choice and trust on Tianneng battery. We will offer you a complete service.

The battery that the electric moped / bike (E-Moped / E-Bike) adopts is the sealed lead-acid battery. The battery is a new style battery produced according to the mechanical standard of the People's Republic of China "GB/T22199-2008" (Sealed Lead-Acid Battery Used for Electric Moped) and the requirement of the E-Moped / E-Bike manufacturer.

Characteristics of the battery:

The battery is a lean liquid valve sealed type and can be maintained for restoring stored energy capacity. The tiny gas produced during charging is oxidized inside the battery. No acid fog can be seen under normal conditions and only tiny gas is drained out. The battery is featured with large stored energy capacity, less self discharging, high specific energy, long performance life, safe and reliable etc. It is an ideal power type for E-Moped / E-Bike battery.

Loading on the E-bike:

The battery has been charged before leaving the factory. If the battery leaves the factory in a short period of time, the user can use it directly (or loading). If the battery has left the factory for a long period of time (longer than 1 month), in order to compensate the stored energy loss during storage and transportation, the user shall charge the battery before loading it on the E-Moped / E-Bike. The charging method is as follows: Insert the charger in the E-bike into the battery box to connect 220V AC power supply, charge the battery for 4 to 5 hours after the charger light has turned to green.

Battery discharging:

When the rider starts the E-Moped / E-Bike, the battery is on discharging stage. The battery is strictly prohibited to be over discharged. In order to avoid the battery being over discharged, the undermost discharge protection voltage of each battery (12V) is 10.50V.

Battery charging:

The battery shall be charged in time when 70% of the stored energy is discharged or the total continued mileage exceeds 70% of the battery stored energy allowance. The charging method is as follows: The charger shall be depolarized with intelligent control and negative impulse. The charging is divided into three stages. The first stage is at constant current stage, the charging current is 0.18C₂ (A). The second stage is at constant voltage charge stage, the constant voltage is 14.8V for single battery (12V). The third stage is at trickling charge stage, the constant voltage is 13.8V for single battery (12V). Take for example of 36V/10Ah battery unit, the charging current and voltage are shown as follows:

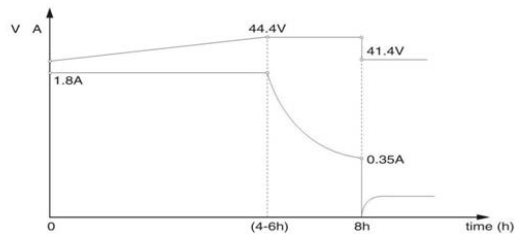
Maintenance method (equalizing charge)

When the battery service life is nearly ended (The stored energy capacity is reduced by 30%), the battery can be maintained to restore the stored energy capacity and increase its service life. The concrete maintenance method is as follows:

1. Remove the sheet cover on the battery;
2. Take off the one-way valve;
3. Fill in the right amount of the make-up fluid or pure water into the battery. The battery is at the pregnant solution state (about 15 - 30mm);
4. With 0.18C₂ (A) electric current, charge the battery by 8 to 10 hours. The voltage of each battery is above 16.2V. The battery is full when the voltage is not changed in 2 hours, then stop charging the battery.
5. After stop charging, the battery is charged by the charger in the E-Moped / E-Bike for one hour again. After the battery stops charging, the redundant electrolyte is removed by the acid sucker, so that the battery is in the lean liquor state. If the electrolyte can not be sucked out, it indicates that the battery is in lean liquor state and some make-up fluid shall be filled in, to turn the battery into the pregnant solution state. The surplus acid solution is sucked out after charging for one hour. It is better to put the battery into a vessel during charging, to avoid the electrolyte spilling out the battery plastic package and pollute the floor.
6. Tighten the check valve (6 pieces) and prevent the electrolyte leakage.
7. Put back the sheet cover. The battery can be loaded on the E-Moped / E-Bike after being wiped clean.

Batteries Model Specification Table

Model	Rated Voltage (V)	Rated Capacity (Ah)	Dimensions. mm				Weight (kg)
			L	b	h	Hmax	
3-DZM-10	6	10	152	50	94	101	1.97
6-DZM-5	12	5	90	69.5	100	105	1.85
6-DZM-7	12	7	152	65	94	99	2.70
6-DZM-9	12	9	152	65	112	118	3.20
6-DZM-10A	12	10	115	90	124	130	3.80
6-DZM-10	12	10	152	99	95	101	4.10
6-DZM-11	12	11	181	54.5	143	148	4.10
6-DZM-12	12	12	152	99	98	103	4.40
6-DZM-14	12	14	152	99	106	110	4.80
8-DZM-8	16	8	151	99	96	103	4.20
8-DZM-10	16	10	151	99	106	110	5.00
8-DZM-14	16	14	201	113	100	105	6.80
6-DZM-16	12	16	152	99	125	128	5.60
6-DZM-17	12	17	181	77	167	167	6.30
6-DZM-18	12	18	251	70	125	125	6.20
6-DZM-20	12	20	181	77	170	175	7.00
8-DZM-20	16	20	250	100	126	128	9.50
6-DZM-24	12	24	175	166	125	125	9.00
6-DZM-24(3hr)	12	24	185	105	128	130	7.70
6-DZM-26	12	26	318	80	118	122	8.80
6-DZM-28	12	28	318	80	126	130	9.40
8-DZM-22	16	22	318	80	126	130	9.40
6-DZM-30	12	30	267	77	170	175	10.10



If the riding period (discharging) is short, the battery needs not to be charged every day. However if the E-Moped / E-Bike is not used for a long period (such as one month or two months), the battery will be discharged completely and needed to be charged fully again so as to maintain the stored energy of the battery and avoid shortening the service life.

Precautions:

1. In order to avoid damaging the battery, the battery shall not be over discharged, charged incompletely or overcharged.
2. The charger in the E-Moped / E-Bike shall be precised adequately, and is stable in voltage and current. It is strictly prohibited to use low quality and cheap charger with poor ageing resistance; otherwise the battery will be damaged.
3. When the E-Moped / E-Bike is not in use, the battery shall be kept well after fully charged, and be charged at least once every month, in order to avoid the pole plates of the battery are sulfated if the battery is not charged for a long period.
4. The battery shall not be put into a sealed vessel; not be put near the naked flame; neither be put into fire nor in water. It is strictly prohibited to be exposed under direct sunshine for a long period.
5. If the battery plastic package is cracked and leaks, the battery shall be replaced.
6. The electrolyte is an acidic solution. If it is splashed on the skin and clothing, it shall be washed immediately by clean water.
7. The battery shall be charged at the ambient temperature of 10 - 30 °C and at the ventilated place. The lower temperature will have an adverse impact on the charging efficiency, even result in sulfating. The higher temperature may cause unstable parameters between the parts of the charger, even create thermal runaway and expand the battery.
8. The battery shall not be experienced short circuit. Do not turn over.
9. The battery shall not be opened by the user except the professional maintenance personnel.