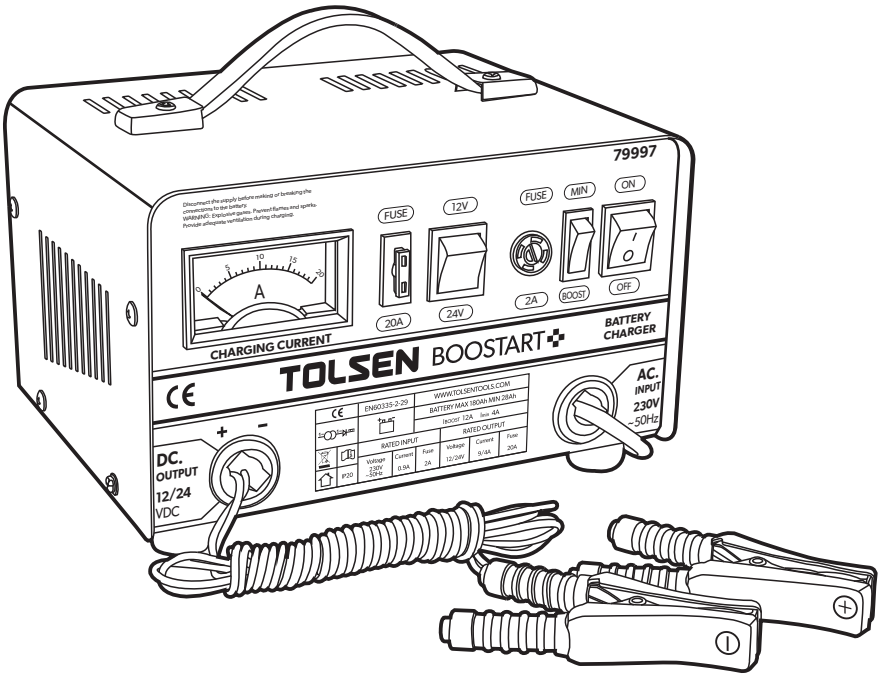
TOLSEN

79997
BATTERY CHARGER

INSTRUCTION MANUAL 12/24VDC



SAVE THIS MANUAL !
You will need this manual for safety instructions, operating procedures and warranty.
Put it and the original sales receipt in a safe dry place for future reference.

IMPORTANT SAFETY INFORMATION

1. Please spare a few minutes to study the direction before using the product for the first time.
2. It is imperative to wear goggles and gloves when charging the battery! There is a high risk of injury from the corrosive acid.
3. To prevent sparking due to electrostatic discharge, never wear clothes made of synthetic materials when charging the battery.
4. **Danger!** Explosive gases-avoid flames and sparks, make sure the garage or room well ventilated when charging.
5. The charge contains components such as the switch and fuse that may cause arcing and sparking. Make sure the garage or room is well ventilated.
6. The charger is designed for 12V and 24V lead acid batteries.
7. Never use the appliance to charge non-rechargeable battery or defective batteries.
8. For indoor use, or do not expose to rain.
9. Do not place the charger on heated surface.
10. Keep the ventilation slots free of dirt.
11. Do not charge several batteries simultaneously.
12. Do not short-circuit the charging clamps.
13. The power supply cable and the charging leads have to be in perfect condition.
14. Keep children away from the battery and the charger.
15. **Danger!** An acute risk of explosion exists if there is a pungent smell of gas. Disconnect the charging clamps, ventilate the room immediately and thoroughly, have the battery inspected by a customer service workshop.
16. Never use the cable for any purpose other than its intended ones. Do not carry the appliance by its cable and never pull on the cable to remove the plug from the socket-outletI. Protect the cable from heat, oil and sharp edges.
17. Indicate the polarity correctly, the anode is red or + sign, the cathode is black or - sign.
18. **Caution!** Battery acid is corrosive. If any acid is splashed on your skin or clothes, wash off immediately and consult a doctor if necessary.
19. If the fuse along side the charging current indicator becomes defective, replace it with a fuse of identical amperage.
20. Keep the terminals clean and protect them from corrosion.
21. This charger is not suitable for maintenance-free batteries.
22. Always disconnect the appliance from the power maintenance work.

23. Wear acid-proof safety gloves and goggles whenever you connect up and charge the battery and whenever you fill in acid or top up with distilled water.Have repairs carried our only by a qualified electrician.
24. Disposal : disposal of unwanted batteries only via automotive workshops, special battery collection stations or special waste collection centers. Ask your local authorities for details.
25. Disconnect the supply before making or breaking the connections to the battery. If the power cord is damaged, it must be replaced by the manufacturer or its service agent or similarly qualified person in order to avoid a hazard.
26. The cathode of battery charger not connected to the chassis of vehicle has to be connected first. The anode is to be corrected to that of the battery. And then connected to the main supply.After charging, disconnect the battery charger from supply mains. Then remove the chassis and andote connection in this order.
27. Motor vehicle manufacturers recommend disconnecting the battery from electric system of the vehicle before charging.
28. Voltage peak may cause damage to electronic components. It is advisable therefore to disconnect the battery from the system when charging.

WARNNING: explosive gases/prevent flames and spark/provide adequate ventilation during charging.

SPECIFICATIONS

CE		EN60335-2-29					
1~ 1~			BATTERY MAX 180Ah MIN 28Ah				
			I_{BOOST} 12A I_{min} 4A				
		RATED INPUT			RATED OUTPUT		
	IP20	Voltage	Current	Fuse	Voltage	Current	Fuse
		230VAC 50Hz	0.9A	2A	12/24VDC	min: 9/4A Boost:12/6A	20A

EN60335-2-29: The standard of battery charger in Europe

1~ 1~ Transformer in single phase—Rectifier

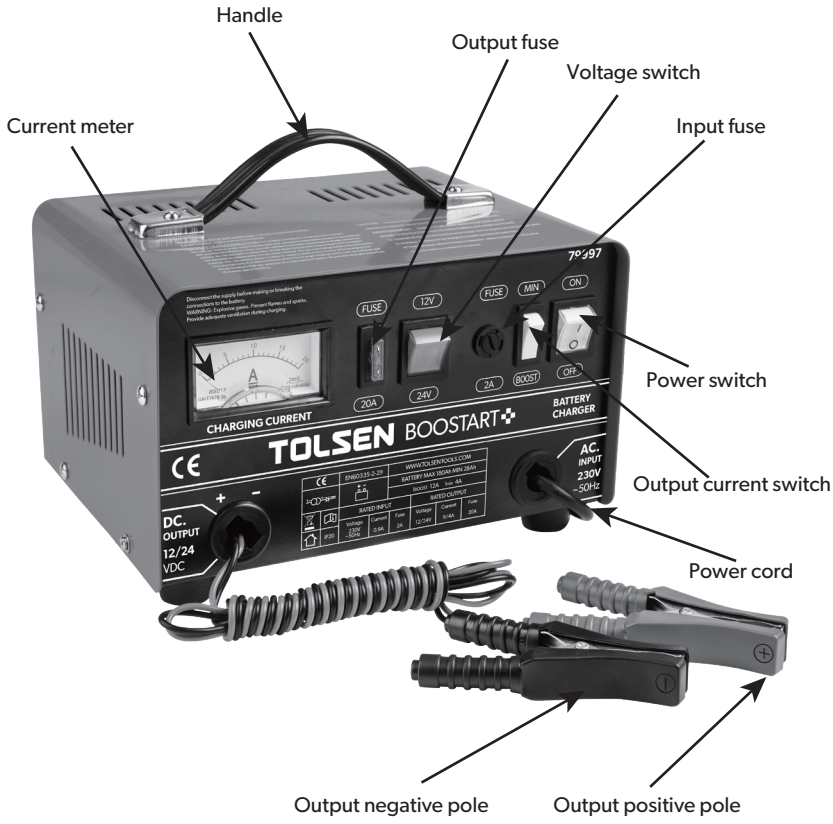
Please read the instruction manual carefully before using

Using indoors only

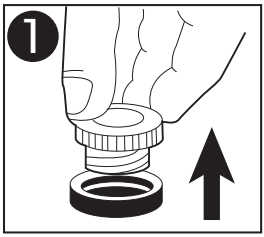
IP20 Level of protection

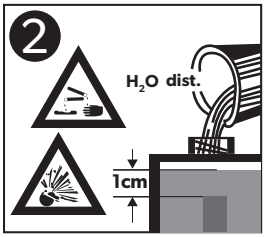
The anode and cathode of battery

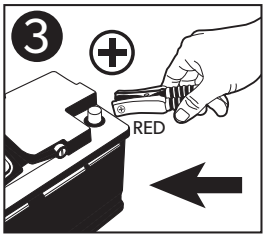
SPECIFICATIONS

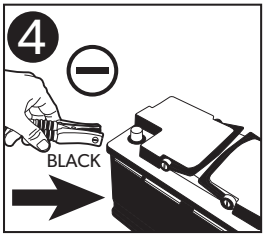


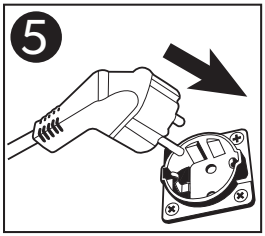
FUNCTION AND USAGE

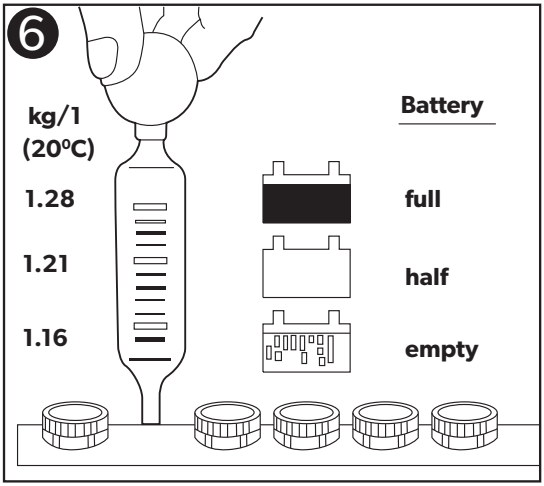


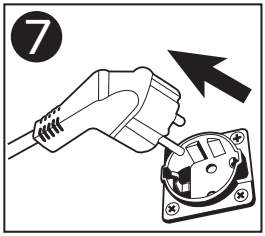


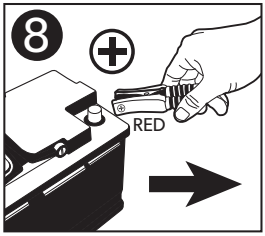


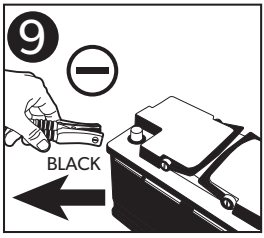


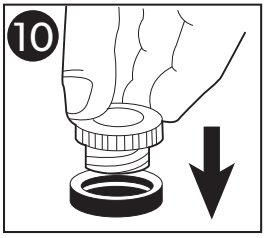


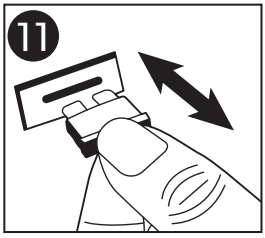












To charge the battery, proceed as follows:

Figure1: undo or remove the battery plug.

Figure2: check the level of acid in your battery. Top up with distilled water if necessary.

Caution! Battery acid is corrosive, wash off acid splashes immediately and thoroughly with plenty of water and consult a doctor if necessary.

Danger! Hazardous electrolytic gas may arise during charging. It is imperative, therefore, to avoid sparking and open flames during charging. Risk of explosion!

Figure 3: First connect the red charging lead to the positive pole of the battery.

Figure 4: Then connect the black charging lead to the negative pole of the battery.

Figure 5: Once the battery is connected to the charger you can connect the charger to a 220-240V/50-60Hz and socket-outlet. It is prohibited to connect the charger to a socket-outlet with any other supply voltage.

Figure 6: The only way to determine the exact condition of the battery(level of charge) is to measure the acid density with an acidimeter.

Please note: gases are released during the charging

Operating as follows:

Acid density values(kg/l at 20℃)

1.28 battery charged

1.21 battery half charged

1.16 battery empty

Figure 7: pull the power plug out or the socket-outlet.

Figure 8: first disconnect the black charging lead from the negative pole of the battery.

Figure 9: then disconnect the red charging lead from the positive pole of the battery.

Figure 10: screw or press the battery plug back in place.

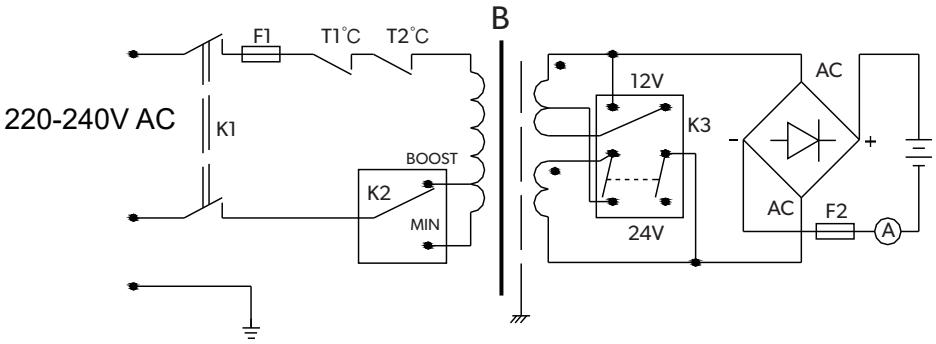
Overload protection

Figure 11: the flat fuse provides protection from polarity reversal and short-circuiting. A defective fuse has to be replaced by one of identical.

Please note: at automatic circuit-breaker interrupts the charging in the event of thermal overloading. The circuit-breaker switches on again automatically after a cooling interval.

SERVICING AND CLEANING

1. Make sure that your battery is always fitted securely in the vehicle.
2. Check that the battery is properly connected to the vehicle's electric system.
3. Keep the battery clean and dry. Apply a little acid-free and acid-resistant grease (Vaseline) to the terminals.
4. The level of acid in non-maintenance-free batteries should be checked about every 4 weeks. Top up with distilled water as necessary.
5. Keep the charger in a dry room. Remove any sighs of corrosion from the charging terminals.



Electric diagram

CE DECLARATION OF CONFORMITY

WE
SUZHOU TOLSEN TOOLS CO.,LTD.
198 HUASHAN ROAD, ZHANGJIAGANG,
JIANGSU, CHINA

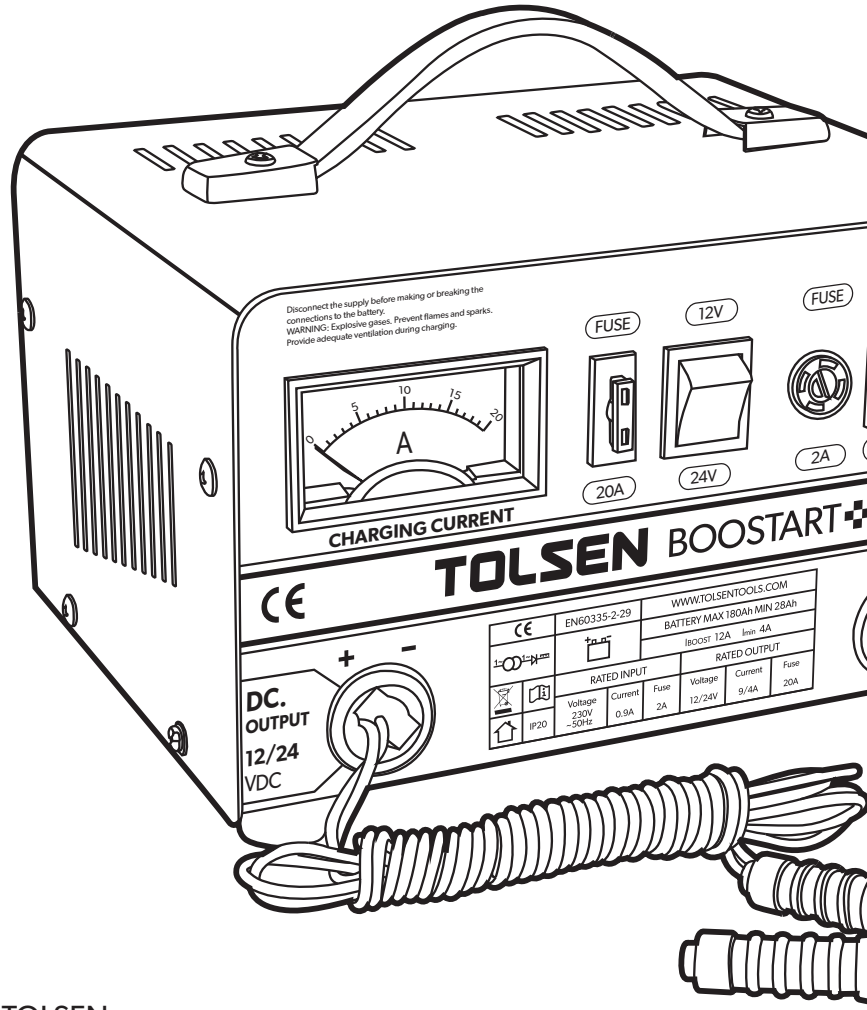
Declare that the product
79997
Battery charger

Complies with the essential health and safety requirements of the following Directices:
Low Voltage Directive 2014/35/EU

Standards and technical specifications referred to:

EN 60335-1:2012+AII+A13+AI+AI4+A2
EN 60335-2-29:2004+A2+AII
EN 62233:2008
AfPS GS 2019:01 PAK
EKI 527-12 Rev. 2

Authorised Signatory and technical file holder
Signed for and on behalf of:
SUZHOU TOLSEN TOOLS CO.,LTD.
198 HUASHAN ROAD, ZHANGJIAGANG,
JIANGSU, CHINA
WANG QING
Group Quality Director
on:07/07/2022



SUZHOU TOLSEN
TOOLS CO.,LTD.

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PRODUCT LINK