



Fully automatic  
**Maintenance Battery  
Charger**  
**6V/12V 750mA**

Part.no. 136403

**Operating Manual**



## PRODUCT DESCRIPTION

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Thank you for choosing Dino KRAFTPAKET 136403 full automatic maintenance battery charger.

This innovative maintenance battery charger is equipped with the latest maintenance charging technology and when batteries are charged with this device, their charging level remains constantly high. This means that you can hold available the largest possible battery capacity, as well as have constant access to sufficient power in order to start your vehicle or boat.

- The device automatically determines battery voltage and charge status, as well as how necessary it is to start maintenance charging. Maintenance charging begins as soon as the battery voltage falls below 13 volts (for 12V batteries), or below 6.5 volts for 6V batteries.
- The device is suitable for keeping attached to your battery for long periods, e.g. over the winter, as the charging process starts and stops automatically. The battery will not be wearied by overcharging nor wearied from lasting in the outgassing stage.
- The attached comfortable connection cable for a fixed installation with the vehicle battery makes operation significantly easier. Actually battery terminals can only be uncovered after considerable time has been spent doing so, and often it is only possible using tools. This is due to the position in which they have been installed, as well as the fact that they are protected against cold. Once the fixed comfortable connection cable has been installed, connecting the charger takes a matter of seconds.
- The item is equipped with protections against potential overloading due to polarity reversal, excessive current due to short-circuiting and temperatures during long periods of excessive work etc.

You can use this device in maintenance charging mode with all 6V and 12V batteries up a capacity of 240 Ah. It is suitable for all types of modern lead-acid batteries, such as AGM, maintenance-free and gel batteries.

### WHAT'S INCLUDED:

- Maintenance battery charger 6/12V 750 mA
- Handy cable with battery clamps
- Comfortable cable with eyelets (for fixed installation in the vehicle)
- Instruction manual

**Please visit [www.dino-kraftpaket.co.uk](http://www.dino-kraftpaket.co.uk) for accessories and spare parts**

## **IMPORTANT SAFETY AND USAGE INSTRUCTIONS WARNINGS**

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- Please read all the instruction manual carefully before using the device.
- Using the device for a purpose other than that intended may damage the battery or electronic system connected.
- Before using the device, always make sure that the battery connected to that device has a minimum voltage of 2 volts.
- Using the device for a purpose other than that intended may cause injury.
- Only use the device for its intended purpose: maintenance charging batteries whose design and technical circumstances (rechargeable batteries) allow it.
- Only use the device in areas where the outdoor temperature is within the range specified.
- Do not charge frozen batteries.
- The act of charging batteries produces flammable gases. This may cause an explosion. Keep sources of ignition and open flames away from the battery and only charge the battery in well-ventilated rooms, or outdoors.
- Only connect the clamps with the battery and the handy cable-plug when the device has been disconnected from the socket (avoids spark formation).
- If an accident occurs involving battery acid, thoroughly wash any affected body parts straight away and consult a doctor. **BATTERY ACID IS CORROSIVE!**
- Please avoid bumping, hitting and dropping the device and always securely place on a horizontal and non-slipping surface during the charging process.
- Please avoid squashing and kinking the cable as this may cause damage.
- Check the device for damage before each use. Never use the device if it is damaged. This may cause electric shocks or injury.
- The charger is protected against jets of water and dust (protection class IP65). Please note: If the device is being used outdoors, please use the appropriate power socket.

Please check from time to time in the maintenance charging process that the power socket has still voltage and no one pull out the power plug from the socket.

## INTENDED USAGE OF THE CHARGER

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Only use this device to maintenance charge of standard and suitably designed 12V/6V batteries which are sufficiently charged. Do so up to a maximum capacity of 240 Ah and with the following types:

- Maintenance-free lead-acid batteries
- Standard or low-maintenance lead-acid batteries, optional CA-CA technology (warning: only fill up the water in the battery after charging)
- Gel batteries
- Absorbent glass mat (AGM) batteries

This device is not intended for commercial use. This device should not be used by individuals with reduced physical or mental abilities, nor should it be used by children. Faults and damage may arise if this device is used improperly and the manufacturer shall not assume any liability whatsoever.

### TECHNICAL DATA

Model:	136403 Dino KRAFTPAKET maintenance battery charger
Specifications:	6V and 12V max. 750 mA
Function:	maintenance charging output between 13V-14.2V / 6.5V-7.1V
Power supply:	100-240 V, 50 Hz
Charging voltage:	Nominal: 6V or 12V (automatic selection)
Minimum operating voltage:	2 volts
Charging current:	max. 750 mA
Ambient temperature for device operation:	-10°C – 40°C
Charger type:	maintenance charger (it is not a fully-fledged charger)
Battery types:	6V and 12 V lead-acid batteries, low-maintenance, maintenance-free, CA-CA, AGM and gel batteries
Recommended battery capacity:	2-240 Ah, only maintenance charging
Protection class:	IP65, protected from jets of water and dust
Protections:	multiple electrical protections against overloading

### **CONNECTING AND DISCONNECTING THE DEVICE TO/FROM THE BATTERY**

WARNING: NEVER CONNECT OR DISCONNECT THE DEVICE WHEN THE PLUG IS IN THE SOCKET. DISCONNECT THE PLUG FROM THE MAINS BEFORE EVERY PROCEDURE

#### **Charging the battery via the terminal clamps**

Connecting and disconnecting the battery with/from the charger via the terminal clamps:

1. Make sure that the device is not connected to a power supply.
2. Now insert the plug of the handy cable (with the clamps attached) into the handy socket of the device. Make sure that the connection is locked.
3. Start by securely connecting the red clamp with the battery "+" terminal. Check the sure contact. Then securely connect the black clamp with the battery "-" terminal. Check the sure contact.
4. Now insert the plug into the socket.
5. The device will now switch on and start the maintenance charging process.
6. If you no longer need to maintenance charge your battery, start by removing the plug from the plug socket. Then remove the black clamp from the battery terminal, followed by the red clamp. Make sure that the clamps do not touch each other.

#### **Charging the battery via the comfortable cable with the 8mm eyelets**

1. Make sure that the device is not connected to a power supply.
2. Make a secure and long-lasting connection between the eyelets and suitable parts of the battery as follows: red eyelet with the plus terminal and black eyelet with the minus terminal.
3. Now insert the plug of the comfortable cable (with the eyelets attached) into the handy jack of the device cable and make sure that the connection is locked.
4. Now insert the plug into the socket.
5. The device will now switch on and start the maintenance charging process.
6. If you no longer need to maintenance charging your battery, start by removing the plug from the plug socket. Then remove the handy cable plug from the jack. Close the socket with the rubber plug and store the free end in the engine compartment, cleanly and securely.

## CHARGING PROCESS

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**WARNING:** Always make sure that all connections are secure and stable. Always make sure that the device is laying stable and cannot slip and fall down.

Protection against polarity reversal: If the clamps or eyelets have not been correctly connected to the battery, this is signalled on the device with a flashing red LED. The plug should then be removed from the power socket and the connection process should be reversed.

Always make sure that there are no electric consumers connected to the battery when the item is maintenance charging. Shut off ignition of the car, lights etc..  
Don't open a battery terminal in modern cars. In modern cars the current to hold the memory in the different electronic units is less than critical for our maintenance charger.

**Please check from time to time that the power socket has still voltage and no one pull out the power plug from the socket.**

### CHARGING PROCESS FOR THE DEVICE

The device can be connected to a standard 6V or 12V car battery / starter battery / motorbike or scooter battery. It starts the fully-automated maintenance battery charging process, including selecting the charging voltage required depending on the type of battery being used (6V/12V) in a fully-automated process.

Charging stage	Minimum charging voltage	Description
Maintenance charging start	Battery with minimum 2 volts (for 6/12 V batteries)	Device automatically enters into maintenance charging mode with max. 750 mA

### LED displays

<b>No LED</b>	No voltage supply. Check wall power socket
Red LED is flashing:	Device is not charging. Check clamps and contacts. Clean any dirty contact. Or: If polarity is reversed (+ with -), the clamps should be connected correctly. Then first disconnect the plug from the power supply and start the connection process from the start as previously described.
Red LED is on:	Device is maintenance charging the vehicle battery
Green LED is flashing:	Battery is over 80% charged and usable for engine start.
Green LED is on:	Battery is fully charged and usable for engine start. The maintenance battery charger stops charging and waits until voltage fall down to 6,5V/13V (6/12V battery). Then automatically starts maintenance charging again. This is running in the background and not visible.

**Spare parts available for this charger can be found by visiting: [www.dino-kraftpaket.co.uk](http://www.dino-kraftpaket.co.uk)**

136304 Spare cable battery clamps with cable and handy connection port

136305 Spare cable eyelets for M8 with cable and handy connection port



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