# BCW-2450

**WATERPROOF BATTERY CHARGER**

# Operating Instructions

Model BCW-2450 | 24V | 50A | BCW Waterproof Chargers



**Durst Industries (Aust.) Pty Ltd | Designed in Australia**

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# Introduction

Read these instructions before using the charger. Keep them with the unit.

The Durst BCW-2450 Waterproof Battery Charger is a heavy-duty 24V 50A automatic battery charger designed for transport, marine, industrial, mining, workshop and field-service applications. Featuring MCU-controlled four-stage charging technology, the BCW-2450 provides fast, efficient and reliable charging for AGM, Gel, flooded, calcium and LiFePO4 batteries.

Designed by Durst Industries Australia, the charger combines high-efficiency switchmode technology, intelligent battery management and a fully sealed waterproof enclosure for dependable operation in demanding environments.

## Model

| Model | Battery system | Charge current | Battery types | Charging |
|---|---|---|---|---|
| **BCW-2450** | 24V | 50A | AGM, Gel, flooded, calcium, LiFePO4 | MCU-controlled four-stage |

## Key features

- 24V 50A waterproof battery charger.
- Multi-chemistry battery compatibility.
- MCU-controlled four-stage charging.
- High-efficiency switchmode design.
- Waterproof industrial enclosure.
- Reverse polarity protection.
- Short-circuit protection.
- Over-voltage protection.
- Over-temperature protection.
- Designed for workshop and field-service applications.

## Perfect for

Transport, automotive, 4WD and off-road, boating and leisure marine, portable power, remote travel, motorsport, recreational vehicles, lifestyle and touring, workshops, fleet maintenance, emergency services, marine and mining.

# Specifications

BCW-2450 technical data.

| Specification | BCW-2450 |
|---|---|
| **Model** | BCW-2450 (BCW Waterproof Chargers) |
| **Product type** | Waterproof battery charger |
| **Battery system** | 24V |
| **Battery compatibility** | AGM, Gel, flooded, calcium and LiFePO4 |
| **Charging technology** | MCU-controlled four-stage charging |
| **Input voltage** | 110 to 230 V AC |
| **Output voltage** | 29.4 V DC |
| **Output current** | 40 to 50A |
| **Rated power** | 2000 W |
| **Applicable battery capacity** | 300 Ah to 400 Ah |
| **Construction** | Waterproof industrial enclosure |
| **Dimensions** | 280 x 160 x 85 mm |
| **Weight** | 4.5 kg |
| **Warranty** | 1 year |

## Built-in protection

| Protection | What it does |
|---|---|
| **Reverse polarity** | Protects the charger if the battery is connected in reverse. |
| **Short-circuit** | Protects the charger and battery if the output is short-circuited. |
| **Over-voltage** | Protects the battery from excessive charging voltage. |
| **Over-temperature** | Protects the charger from overheating. |

# Compatible batteries

The BCW-2450 charges 24V batteries of the following types.

- AGM (Absorbed Glass Mat) batteries
- Gel batteries
- Flooded lead-acid batteries
- Calcium batteries
- LiFePO4 (lithium iron phosphate) batteries

**IMPORTANT:** Charge only 24V batteries of the types listed above. Avoid charging damaged batteries or incorrect battery types.

## Battery capacity

The BCW-2450 suits batteries from 300 Ah to 400 Ah.

## Applications

Transport, marine, industrial, mining, workshop and field-service battery systems.

# Safety and important notices

Follow these notices every time you use the charger.

**WARNING**

Batteries can give off explosive gas while charging. Charge in a well-ventilated area, away from sparks and flames.

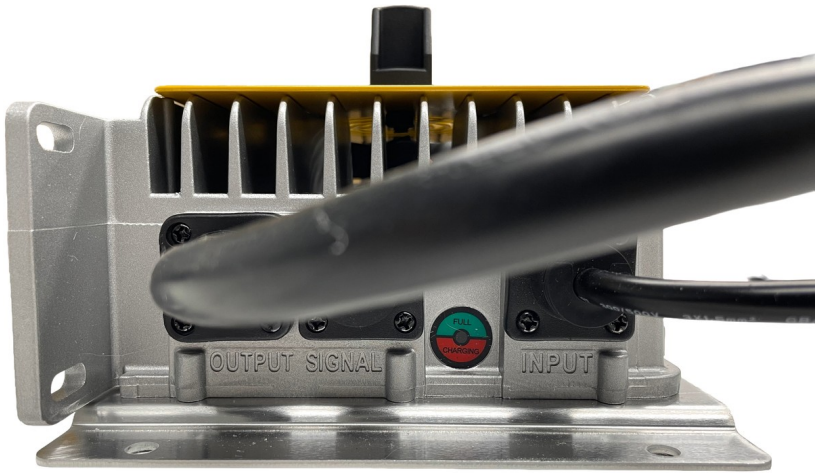
Wear protective goggles and clothing while handling and charging batteries.

The aluminium housing helps dissipate heat and may be hot after long charging at full current. Allow it to cool before handling.

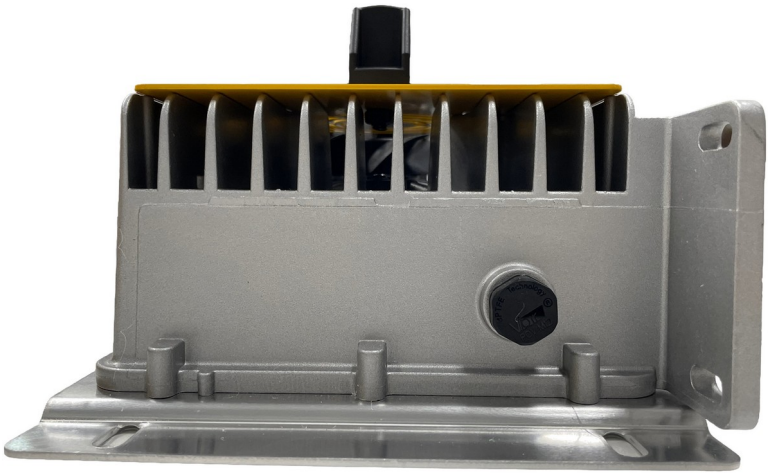
- **Mains supply.** Connect the charger only to a correctly earthed AC supply within its input voltage range.
- **Right battery only.** Charge only the battery types and voltage listed in this manual. Avoid charging damaged batteries.
- **Check the leads.** Do not use the charger if a lead, plug, clamp or connector is damaged.
- **Airflow.** Keep the cooling fan and fins clear. Do not cover the charger while it is working.
- **No modifications.** Do not open or modify the charger. For repairs, contact Durst.

# Know your charger

The charger has a sealed aluminium case with cooling fins, a cooling fan, a mounting base and a charge indicator.




**Charger end view.** Leads and charge indicator.



**Charger end view.** Opposite end and mounting base.

# Operating your charger

Set up once, then let the charger look after the battery.

1. **Place the charger securely.** Use the mounting base to fix it in a well-ventilated place, on a stable surface, with space around it for airflow.
2. **Connect the battery.** Connect the output to the battery: Red (+) to the Positive terminal and Black (-) to the Negative terminal, or plug in the Anderson connector where fitted.
3. **Connect to the mains.** Plug the charger into a suitable AC supply (GPO). Charging is automatic.
4. **Follow the charge.** The MCU-controlled four-stage charging adjusts automatically as the battery charges. The charge indicator shows the charging status.
5. **Finish charging.** When charging is complete, switch off and unplug the mains supply, then disconnect the battery.

**TIP:** Charge the battery in a covered area where possible, and keep the mains plug and socket dry.

# Troubleshooting

If the charger does not work as expected, check this table.

| What you see | What to do |
|---|---|
| **Charger does not start** | Check the mains plug, the GPO and the supply voltage. The charger protects itself if the input voltage is outside its range. |
| **No charge, or the output stops** | Check the leads are on the correct terminals (Red to Positive, Black to Negative) and the connections are clean and tight. Reverse polarity and short-circuit protection stop the output until the fault is cleared. |
| **Charging stops when the charger is hot** | Over-temperature protection has operated. Move the charger to a cooler, well-ventilated place, clear the fan and fins, and let it cool. |
| **Battery never reaches full charge** | The battery may be faulty. Have the battery tested before charging again. |

**NOTE:** For any other issue, contact Durst. Do not open or modify the charger.

# General maintenance

Regular checks keep the charger reliable and your batteries healthy.

## Keep it clean

- Unplug the charger and disconnect the battery before cleaning. Wipe it down with a soft, damp cloth.
- Do not use high-pressure water, solvents or harsh chemical cleaners.
- Keep the cooling fan, fan guard and fins clear of dirt and debris.
- Check the mounting base fixings are tight.

## Leads, clamps and connectors

- Before each use, check the leads for cracked or frayed insulation, loose connectors and corrosion.
- Check that clamps or Anderson connectors are clean, grip firmly and make good contact.
- Check the mains lead, plug and cable glands for damage.
- Do not use a damaged lead or connector. Contact Durst for the correct replacement.
- Store the leads neatly after use so they are not crushed or kinked.

## Who should service the charger

- Operators can carry out the external checks in this section.
- Only a qualified person should work on internal parts.
- Do not modify the charger. For repairs, contact Durst.

# Extreme environment maintenance

For mining, marine, construction and any other dusty, wet or hot site. Follow this section in addition to General maintenance.

The BCW-2450 has a sealed, waterproof industrial enclosure built for harsh environments. A little care keeps it that way.

## Water and washdown

- Do not submerge the charger or use a high-pressure washer on it.
- Keep the mains plug and power point dry. The mains plug is not waterproof.
- Keep the cable glands and connectors in good condition, as they keep water out of the case.
- If water gets inside the case, unplug the charger and have it checked by a qualified person before you use it again.

## Dust and heat

- Fine dust, such as iron ore or coal dust, can build up on the fan and fins. Clean them often on dusty sites.
- Never cover or seal the fan or fins to keep dust out.
- In hot conditions, place the charger in the shade where possible, and allow it to cool after long, heavy use.
- Heat, sun, salt and rough handling wear leads and connectors faster. Check them more often.

## Set a maintenance schedule for your site

- Operators set a maintenance schedule that suits their site conditions and use.
- Check and clean more often where there is more dust, salt, water or heat.
- Add the charger to your site plant inspection system and record each check.

**WARRANTY**

Damage caused by misuse, contamination (such as water entering through damaged leads or glands, dust or chemicals), or a lack of maintenance in harsh environments, is not normal use. It is not covered by warranty.

# BCW Waterproof Chargers range

The full BCW range, for comparison. Figures are from the Durst website.

| Model | Battery | Current | Battery types | Input | Dimensions | Weight |
|---|---|---|---|---|---|---|
| **BCW-1225** | 12V | 25A | AGM, Gel, flooded, calcium, LiFePO4 | 180 to 245 V AC | 194 x 124 x 104 mm | 2 kg |
| **BCW-L1225** | 12V | 25A | LiFePO4 | 180 to 265 V AC | 194 x 124 x 104 mm | 2 kg |
| **BCW-1250** | 12V | 50A | AGM, Gel, flooded, calcium, LiFePO4 | 110 to 230 V AC | 280 x 160 x 85 mm | 4.5 kg |
| **BCW-2425** | 24V | 20 to 25A | AGM, Gel, flooded, calcium, LiFePO4 | 110 to 230 V AC | 232 x 127 x 112 mm | 2.58 kg |
| **BCW-2450** | 24V | 40 to 50A | AGM, Gel, flooded, calcium, LiFePO4 | 110 to 230 V AC | 280 x 160 x 85 mm | 4.5 kg |

# Warranty and support

The BCW-2450 carries a 1 year warranty. Keep your proof of purchase.

## Contact Durst

| Contact | Details |
|---|---|
| **Company** | Durst Industries (Aust.) Pty Ltd |
| **Address** | 1/11 Packard Ave, Castle Hill NSW 2154, Australia |
| **Website** | durst.com.au |
| **Email** | sales@durst.com.au |
| **Phone** | +61 2 9660 1755 |

## Your BCW-2450 record

Fill this in and keep it with your proof of purchase.

| Item | Details |
|---|---|
| **Model** | BCW-2450 |
| **Serial number** | |
| **Date of purchase** | |
| **Purchased from** | |

Durst may update this manual without notice. Revised November 2026.