



Operator's Manual BOC



Machine Type	BOC7
Version	2
Date	01/2024
Language	[en-US]

California Proposition 65 Warning



⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



⚠ WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.



⚠ WARNING

Cancer and Reproductive Harm
www.P65Warnings.ca.gov



⚠ WARNING

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WASH HANDS AFTER HANDLING.



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EU Declaration of Conformity

Manufacturer

Delta-Q Technologies Corp., 100 - 3577 Gilmore Way, Burnaby, B.C., V5G 0B3, Canada
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BOC7
Product type	Battery Charger
Function of product	Charging the battery

Directives and standards

We hereby declare that this product complies with the relevant provisions and requirements of the following directives and standards:
2014/35/EU (LVD) • 2014/30/EU (EMC) • 2011/65/EU (RoHS2) + EU 2015/863 (RoHS3)
EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021
EN 60335-2-29:2021 + A1:2021 • EN 55014-1:2017 + A11:2020 • EN 61000-3-2:2014
EN IEC 61000-3-2:2019 + A1:2021 • EN 61000-3-3:2013 + A1:2019 + A2:2021
EN 61000-6-2:2005 + AC:2005 • EN IEC 61000-6-2:2019
EN 61000-6-3:2007 + A1:2011 + AC:2012 • EN IEC 61000-6-3:2021

EU Importer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, 85084 Reichertshofen (DE)

Burnaby (CA), 08.11.2023

DocuSigned by:

Steve Blaine
352B9BE5EA5840D...
Executive Vice President, Engineering & Quality



UK Declaration of Conformity

Manufacturer

Delta-Q Technologies Corp., 100 - 3577 Gilmore Way, Burnaby, B.C., V5G 0B3, Canada
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	BOC7
Product type	Battery Charger
Function of product	Charging the battery

Directives and standards

We hereby declare that this product complies with the relevant provisions and requirements of the following directives and standards:
SI 2016 No. 1101 (LVD) • SI 2016 No. 1091 (EMC) • SI 2012 No. 3032 (RoHS)
EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021
EN 60335-2-29:2021 +A1:2021 • EN 55014-1:2017 + A11:2020 • EN 61000-3-2:2014
EN IEC 61000-3-2:2019 + A1:2021 • EN 61000-3-3:2013 + A1:2019 + A2:2021
EN 61000-6-2:2005 + AC:2005 • EN IEC 61000-6-2:2019
EN 61000-6-3:2007 + A1:2011 + AC:2012 • EN IEC 61000-6-3:2021

UK Importer

Andy Williams (Operations Manager), Wacker Neuson Ltd, WN Place, Beacon Way, Stafford ST18 0DG (GB)

Burnaby (CA), 08.11.2023

DocuSigned by:

Steve Blaine 352B9BE5EA5840D...
Executive Vice President, Engineering & Quality



2 Foreword

2.1 Introduction

This operator's manual contains important information and procedures for the safe, proper and economical operation of this machine. Careful reading, understanding and observing it helps to avoid hazards, reduce repair costs and downtimes and thus increase the availability and service life of the machine.

This operator's manual is not a manual for extensive maintenance or repair work. Such work must be carried out by the service partner or by technically trained personnel. The machine must be operated and maintained in accordance with the instructions in this operator's manual. Improper operation or maintenance can cause hazards.

Defective machine parts must be replaced immediately!

The manufacturer is always available to answer questions about operation or maintenance.

2.2 Storage Location of the Operator's Manual

This operator's manual must be kept in the immediate vicinity of the machine and accessible to personnel at all times.

If a second copy of this operator's manual is lost or required, the following options are available for obtaining a replacement:

- Contact the service partner

2.2.1 Understanding These Instructions

This section helps to understand the operator's manual and the illustrations used therein.

Target group

People working with this machine must be regularly trained with regard to the dangers and risks occurring when using this machine.

This operator's manual is aimed at:

- Operating personnel:
 - These people have been instructed in working with the machine and about possible dangers and risks arising due to improper behavior.
- Technically trained personnel:
 - These people have a professional training as well as additional knowledge and experience. They are capable of assessing the tasks assigned to them and recognizing any possible risks and dangers.

Explanation of symbols

Symbol	Explanation
1., 2., 3...	Indicates an activity. The sequence of the steps must be observed.
⇒	Indicates a result or an intermediate result of an action.
✓	Indicates prerequisites that must be established for the activity.

Symbol	Explanation
•	Indicates a list, e.g. if several components are named one after the other.
-	Indicates a sub-list, e.g. if components consist of further components
Ⓘ	Identifies a position, usually a component or control element, in a graphic. The numbering may be sequential or in Roman numerals.
1; A	Indicates the naming of components in explanatory texts. It is identical with the adjacent positions in the illustrations.
	Indicates a direction of movement or different positions for switches.
▶	Indicates the avoidance of hazards in warning notices.
[▶52]	Indicates a cross-reference in tables. Here e.g. reference to page 52

2.2.1.1 Explanation of symbols

The symbols used in the operator's manual are explained below. The symbols are used exclusively in warning or environmental instructions or information. Warnings must always be observed to protect the operator and third parties from personal injury and damage to property.



Symbol for warnings

This symbol marks general warnings. It is used to alert you of possible hazards, e.g. risks of injury or accidents.



Symbol for indications of technical damage

This symbol is a warning symbol that indicates a danger of technical damage. It is used to indicate situations where damage to the machine or third-party property may occur.



Symbol for environmental information

This symbol indicates environmental information. It is used to warn of possible environmental hazards.



Symbol for information

This symbol indicates information. This information can include tips on operation, for example. It helps to better understand and use the machine.

2.3 Accident Prevention Regulations

In addition to the notes and safety instructions in this operator's manual, the local accident prevention regulations and the national industrial safety regulations apply.

2.4 Contact person

Depending on the country, the contact person is a service partner, a subsidiary or a dealer.

2.5 Limitation of liability

In the event of the following infringements, the manufacturer disclaims any liability for personal injury and damage to property:

- Actions contrary to this operator's manual.
- Non-designated use
- Deployment of untrained personnel.
- Use non-approved spare parts and accessories.
- Improper handling.
- Structural changes of any kind.
- Non-observance of the General Terms and Conditions (GTC).

2.6 Use of the operator's manual

This operator's manual:

- must be regarded as an integral part of the machine and must be kept in a safe place throughout its service life.
- must be passed on to each subsequent owner or operator of this machine.
- applies to various machine types from one product range. For this reason, some illustrations may differ from the appearance of the purchased machine. Variant-dependent components that are not included in the scope of delivery can also be described.

The manufacturer reserves the right to change the information in this operator's manual without notice.

It must be ensured that any changes or additions made by the manufacturer are immediately incorporated into this operator's manual.

Group - Type
BOC7

3 Usage

3.1 Designated use

Designated use also includes observing all notes and safety instructions in this operator's manual and observing the prescribed care and maintenance instructions.

Any other use or use that goes beyond this is considered improper use. The manufacturer shall not be liable or liable for any damage resulting therefrom. The risk is borne solely by the operator.

The machine only:

- Use for charging original rechargeable batteries from the manufacturer.
- Combine and operate with approved components.

3.2 Unintended use

The manufacturer is not liable for personal injury or damage to property resulting from unintended use. The following activities, among others, are not intended:

- Connecting non-permitted components.
- Operating the machine outside the performance data.
- Operation contrary to the notes and safety instructions contained in the operator's manual attached to the machine.

4 Safety

4.1 Safety symbols and signal words

The following symbol identifies safety instructions. It is used for warning against potential personal risk or danger.



⚠ DANGER

DANGER identifies a situation causing death or serious injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury or death.



⚠ WARNING

WARNING identifies a situation that can cause death or serious injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury or death.



⚠ CAUTION

CAUTION identifies a situation that can cause injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury.



NOTICE

INFORMATION identifies a situation that causes damage if it is not observed.

Consequences in case of non-observance.

- Avoidance of damage to property.

4.2 Principle

The machine has been designed and built in accordance with latest state-of-the-art standards and the recognized safety regulations.

Warning! Risk of injury due to improper use.

Improper use can result in danger to life and limb for the operator and third parties or machine and other property damage.

- Read and observe the notes and safety instructions in this operator's manual. Failure to follow these instructions may result in electric shock, fire and/or serious injury, as well as damage to the machine and/or other objects.
- Keep safety instructions and information for the future.

4.3 Structural changes

Warning! Risk of injury due to structural changes.

Unauthorized structural changes to this machine can pose a risk to operators and/or third parties, as well as damage to the machine and/or other property.

- Do not make any structural changes without the manufacturer's written consent.

In particular, a structural change shall be deemed to have occurred:

- When opening of the machine and permanent removal of components.
- Installation of spare parts that do not come from the manufacturer or are not equivalent in design and quality to the original parts.
- Attachment of accessories of any kind that do not originate from the manufacturer.

The manufacturer's liability and warranty are also void in the event of unauthorized structural alterations.

Spare parts or accessories from the manufacturer can be installed or removed safely.

4.4 Responsibility of the operator

The operator is the person who operates this machine himself for commercial or economic purposes or who leaves it to a third party for use/application and bears the legal product responsibility for the protection of personnel or third parties during operation.

- The operator must make the operator's manual accessible to the personnel at all times and ensure that the operator has read and understood the operator's manual.
- The operator's manual must be kept ready to hand at the machine or at the place of use.
- The operator must hand over the operator's manual to any other operator or subsequent owner of the machine.
- The country-specific regulations, standards and directives on accident prevention and environmental protection must also be observed. The operator's manual must be supplemented by further instructions for compliance with operational, official, national or generally applicable safety guidelines.

4.5 Obligations of the operator

- Know and implement applicable health and safety regulations.
- In a risk assessment, identify hazards arising from working conditions at the place of use.
- Create operating instructions for the operation of this machine.
- Regularly check whether the operating instructions correspond to the current status of the regulations.
- Clearly regulate and define responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- Train personnel at regular intervals and inform them about possible dangers.
- Refresh instruction at regular intervals.
- Keep records of the training received and make them available to the competent authority on request.
- Provide personnel with the necessary protective equipment.

4.6 Qualification of staff

Warning! Risk of injury due to misuse.

In the event of misuse, abuse or operation by untrained personnel, there is a risk to the health of the operator and/or third parties, as well as damage or total failure of the machine and/or other property damage.

- The machine may only be commissioned and operated by trained personnel.

In addition, the following requirements apply to the operator:

- Physical and mental suitability.
- Minimum age 18 years.
- No influence on reactivity by drugs, alcohol or medication.
- Familiarity with the safety instructions in this operator's manual.
- Familiarity with the intended use of this machine.
- Instructed in the independent operation of the machine.

4.7 General safety instructions

The safety instructions in this chapter contain the "General safety instructions", which must be listed in the operator's manual in accordance with the applicable standards. It may contain instructions which are not relevant for this machine.

4.7.1 Workplace

Warning! Risk of injury due to unsafe work environment.

Unsafe working environment can cause the machine to tip, roll, slide and fall. People can be injured as a result.

- Before starting work, familiarize yourself with the working environment, e.g. load-bearing capacity of the floor or obstacles in the environment.
- Always secure the machine against tipping, rolling, slipping and falling.

Warning! Risk of injury if distracted by third parties.

Distraction by others can result in loss of machine control. This can seriously injure people and cause damage to property.

- Secure work area to public transport area.
- Keep unauthorized persons and children away when working with this machine.

Warning! Risk of injury due to adverse working conditions.

Cluttered and poorly lit work areas can lead to accidents. People can trip, fall and be seriously injured as a result.

- Keep work area tidy.
- Provide adequate lighting.

4.7.2 Personal safety

Warning! Risk of injury due to physical impairment.

Physical impairment can reduce the ability to react. This can lead to loss of machine control. People can be injured as a result.

- Do not work under the influence of drugs, alcohol or medication.

Warning! Risk of injury to third parties

Bystanders can be seriously injured by incidents in the work area.

- Make sure there are no other people in the danger area.

4.7.3 Handling and use

Warning! Risk of injury from falling loads.

In the event of improper transport or transport with unsuitable lifting gear, loads can fall. People can be hit and seriously injured or killed.

- Do not stay under lifted loads.
- Only use suitable and tested lifting gear and slings with sufficient load-bearing capacity.
- Secure the machine safely to the lifting gear.
- Use appropriate transport method.

Warning! Risk of crushing from swinging loads.

Improper transport can cause loads to swing. People can be hit or crushed by this and be seriously injured or killed.

- Keep a sufficient distance from the lifted loads.
- Secure raised loads against swinging.

Warning! Danger to life due to unauthorized troubleshooting

Unauthorized troubleshooting can lead to unforeseen machine states. People can be injured as a result.

- If faults occur on this machine which are not described in this operator's manual, contact the service partner.
- Do not rectify faults on your own.

Warning! Risk of injury from defective machines or components.

Defective machines or components can lead to unforeseen machine states. People can be injured as a result.

- Handle machines with care.
- Do not start a defective engine.
- Have defective parts replaced before operating the machine.

Warning! Risk of injury due to functionally restricted controls.

Controls that are not fully functional can lead to unforeseen machine states. People can be injured as a result.

- Check the machine's controls for functionality before operation.
- Do not lock, manipulate or alter the machine controls in an inadmissible manner.

Warning! Risk of injury due to unauthorized start-up.

Unauthorized start-up can lead to dangerous situations. Persons involved can be seriously injured as a result.

- Only allow the machine to be operated by authorized personnel.
- Secure unused machines against unauthorized putting into operation.
- After operation, store the machine in a locked, clean, frost-free and dry place that is inaccessible to other people and children.
- Use the machine, accessories, tools etc. in accordance with these instructions.

4.8 Specific charger-related safety instructions

4.8.1 External influences

Warning! Risk of injury from electric shock.

Operating the charger in a wet or damp environment can lead to current leakage. This can seriously injure people and damage the charger.

- Avoid penetration of water into the battery charger.
- Only use the charger indoors and protect it from rain and moisture.
- If operation in a damp environment cannot be avoided, a residual current circuit breaker must be used.

Warning! Risk of fire due to improper charging.

Operating chargers in a flammable environment or near an open flame can result in a fire. This can seriously injure people and cause property damage.

- Do not operate the charger in a flammable environment.
- Do not operate the charger on easily flammable surfaces (e.g. paper, textiles).

Note! Damage to the charger.

Unfavorable external influences can cause damage to the charger.

- Do not subject the battery charger to mechanical shocks.
- Protect the connection cable from any aggressive media (e.g. oil), sharp edges or moving machine parts.
- Do not operate the battery charger in freezing temperatures, [see Technical data on page 35](#).
- Do not expose the charger to heat (e.g. direct sunlight) or fire.

4.8.2 Operational safety

Warning! Risk of injury from electric shock.

Faulty chargers can carry voltage on the surface. This can cause people to suffer an electric shock and be seriously injured.

- Check the cable and plug before using the battery charger.
- Do not operate damaged chargers.
- In case of malfunctions, disconnect the battery charger immediately from the power source.
- The battery charger's plug must fit in the plug receptacle.
- Do not modify the adapter plug in any way.
- Do not use the adapter plug together with grounded machines.
- Avoid any contact with grounded surfaces.

Caution! Risk of fire due to rechargeable battery overheating.

Damaged and incompatible rechargeable batteries can overheat and catch fire when charging. This can cause burns to people and damage to property.

- Charge only approved compatible rechargeable batteries.
- Do not charge damaged rechargeable batteries.

Note! Damage to the charger.

Improper handling can damage the charger.

- Do not open the battery charger yourself, but rather only have it repaired by qualified technically trained personnel who are using original spare parts.
- Charge only approved original rechargeable batteries from the manufacturer.
- After charging is complete, disconnect the battery from the charger.
- Clean the charger with a dry and clean cloth.

4.9 Specific safety instructions when operating electrical appliances

Information! The rated voltage can be found on the type label of the machine.

Power supply for electrical devices of protection classes I and II

Warning! Risk of injury and/or fire.

Improper connection to the power supply can result in electric shock and/or fire. This can seriously injure people and cause property damage.

- Connect the machine to a plug receptacle with 15 A/16 A earth contact and appropriate safety fuse.
- One of the following residual current circuit breakers is required:
 - Standard residual current circuit breaker (pulse current sensitive, type A).
 - AC/DC sensitive residual current circuit breaker (type B).
- Only connect the machine to power supplies if all machine parts are in perfect technical condition. Pay particular attention to the following components:
 - Plugs.
 - Power cable over the entire length.
 - Switch membrane of the on/off switch, if present.
 - Plug receptacles.
- Only connect the machine to power supplies with an intact grounding conductor connection (PE).
- When connected to stationary or mobile generators, at least one of the following safety devices must be provided:
 - Fault current protective switch.
 - ISO guard.
 - IT network.
- Only connect the machine to a grounded power distributor.

Note! Observe the respective national safety guidelines.

Extension cable

Warning! Risk of injury and/or fire.

Unsuitable extension cords can cause electric shock and/or fire. This can seriously injure people and cause property damage.

- Completely unwind extension cords and cable drums before operation.
- Only operate the machine with undamaged and tested extension cables! Damaged or tangled cables increase the risk of electric shock.
- Only use extension cables with grounding conductor and correct grounding conductor connection to plug and coupling (only machines of protection class I), [see Technical data on page 35](#).
- Only use tested extension cables that are suitable for use on construction sites:
 - H05RN-F or preferably – the manufacturer recommends H07RN-F, a SOOW cable or a country-specific equivalent version.
- Immediately replace damaged extension cables (e.g. cracks in the sheath) or loose plugs and couplings.
- Cable drums and multiple plug receptacles must meet the same requirements as extension cables.
- Protect extension cables, multiple plug receptacles sockets, cable drums and connectors from rain, snow or other wet conditions.

Protect power cables

Warning! Risk of injury from electric shock.

Damaged connection cables can lead to electric shock. People can be injured as a result.

- Do not use the power cord to pull or lift the machine.
- Do not pull the plug of the power cable out of the plug receptacle by the cable.
- Protect the power cord from heat, oil and sharp edges.
- If the power cord is damaged or the plug is loose, have the power cord replaced immediately by a service partner.

Protect from moisture

Warning! Risk of injury from electric shock.

A damp environment increases the risk of electric shock. People can be injured as a result.

- When working outdoors, only use cables that are suitable for outdoor use.
- Use a fault current protective switch if it is not possible to avoid working in a damp environment.

Note! Machine damage due to penetrating moisture.

When cleaning the machine with high water pressure, moisture can penetrate and cause damage or total machine failure of the.

- Do not clean the machine with high pressure or steam jet cleaners.

4.10 Service

Warning! Risk of injury from defective machine.

Machines that are not or improperly maintained/repared may have defects that go unnoticed. This can cause personal injury and property damage.

- Observe maintenance intervals according to maintenance plan.
- Only have the machine repaired or serviced by technically trained personnel.
- Have work not listed in the maintenance plan carried out by the service partner.
- Replace worn or damaged machine parts immediately.
- Only use original spare parts and accessories. The operational safety of the machine is thus maintained.
- Carry out maintenance work in a clean and dry environment (e.g. workshop).
- Replace any missing, damaged or illegible safety labels immediately. Safety and information labels contain important information for the protection of the operator.
- Keep the machine clean.

5 Description of the Machine

5.1 Type plates and labels

5.1.1 Type label

A type label is permanently attached to the machine.

Symbols on the type label

Various symbols and markings for national and international approvals can be shown on or next to the nameplate.

5.1.1.1 Labeling on the machine

Type label data

The type label contains information that uniquely identifies this machine. This information is required for ordering spare parts and for technical queries.

Enter the data on the machine in the following table:

Designation	Your details
Serial number	

5.1.2 Safety and information labels

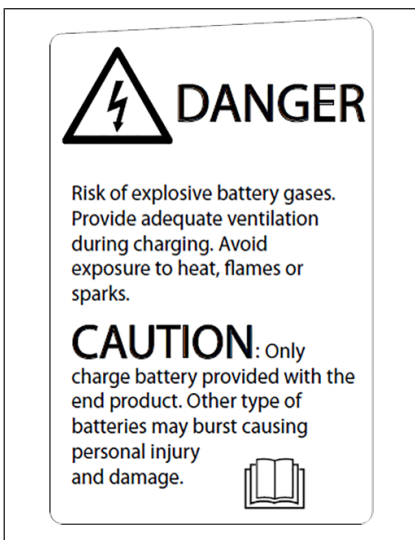
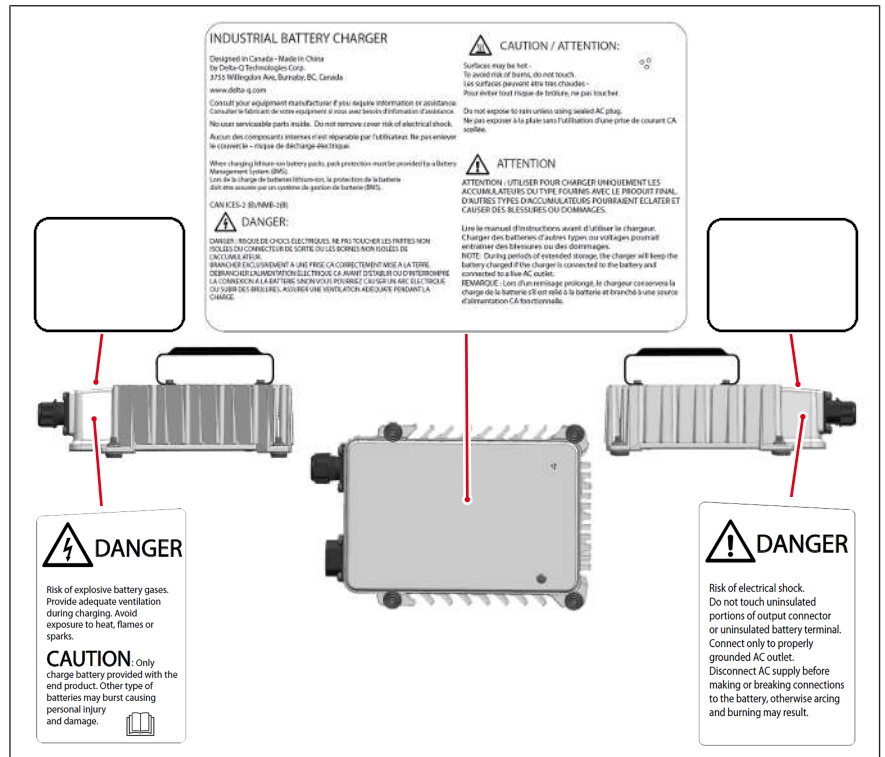


⚠ WARNING

Injury hazard due to missing or damaged labels and signs!

Safety labels contain important information to protect the operator.

- Keep all safety, warning and operating instructions on the machine in a clearly legible condition.
- Replace missing or damaged labels and signs immediately.

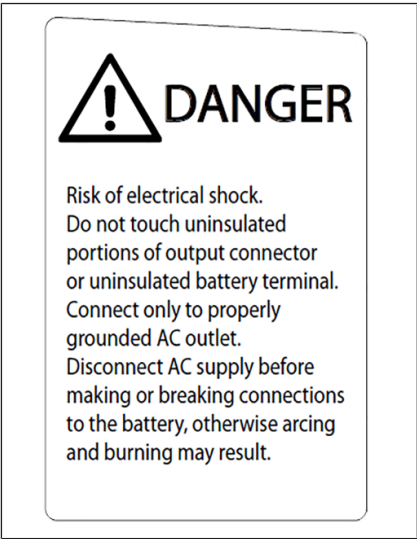


Danger!

Risk of explosive battery gases. Provide adequate ventilation during charging. Avoid exposure to heat, flames or sparks.

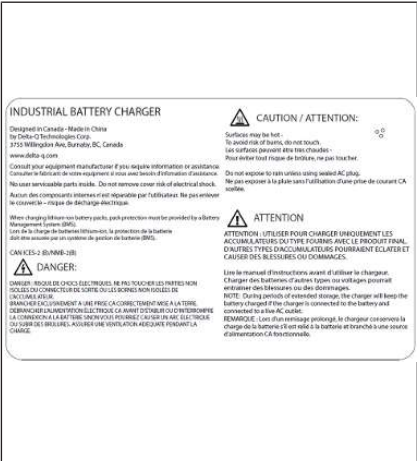
Caution!

Only charge battery provided with the end product. Other type of batteries may burst causing personal injury and damage.



Danger!

Risk of electrical shock. Do not touch uninsulated portions of output connector or uninsulated battery terminal. Connect only to properly grounded AC outlet. Disconnect AC supply before making or breaking connections to the battery, otherwise arcing and burning may result.



Consult your equipment manufacturer if you require information or assistance.

No user serviceable parts inside. Do not remove cover risk of electrical shock.

When charging lithium-ion battery packs, pack protection must be provided by a Battery Management System (BMS).

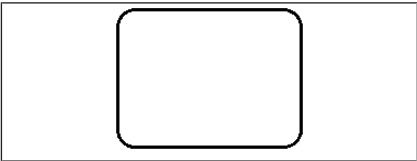
Caution!

Surfaces may be hot. To avoid risk of burns, do not touch.

Do not expose to rain unless using sealed AC plug.

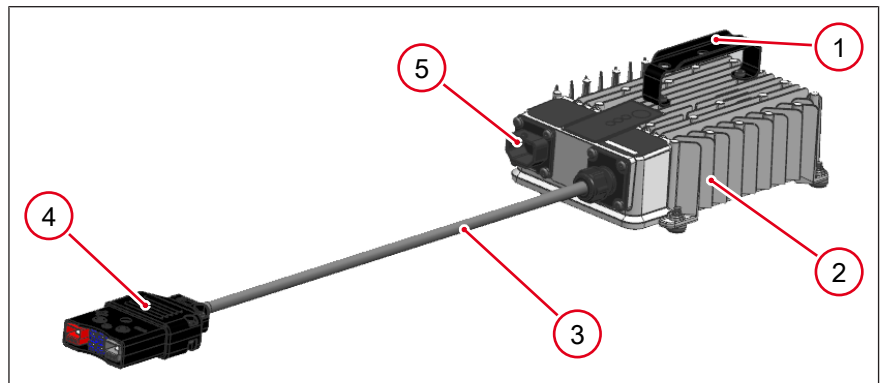
Attention!

NOTE: During periods of extended storage, the charger will keep the battery charged if the charger is connected to the battery and connected to a live AC outlet.



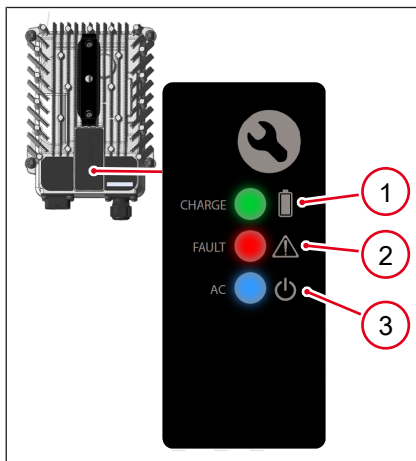
Type label.

5.2 Components



- | | |
|---|---|
| 1 | Handle |
| 2 | Cooling fins |
| 3 | Power cable of the rechargeable battery |
| 4 | Plug of the rechargeable battery |
| 5 | Connection IEC plug for connecting to the mains |

5.3 Control elements



- | | |
|---|--------------------------------|
| 1 | Control light Charge condition |
| 2 | Control light Fault |
| 3 | Control light Operation |

6 Transportation

6.1 Safety instructions for transport



⚠ CAUTION

Danger of burns due to hot surface!

Surfaces can become hot during operation and cause burns.

- ▶ Allow the battery charger to cool down after use.



NOTICE

Damage of the cable!

Improper handling may result in malfunctions and material damage.

- ▶ Do not use the cable as a transport aid or transport lock.

6.2 Prerequisites and preparations



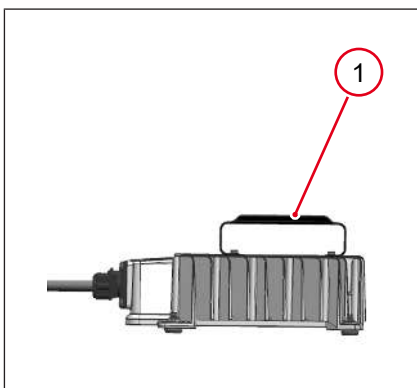
⚠ WARNING

Improper handling may result in injury or serious material damage.

- ▶ Please read and follow all safety instructions in this operator's manual.

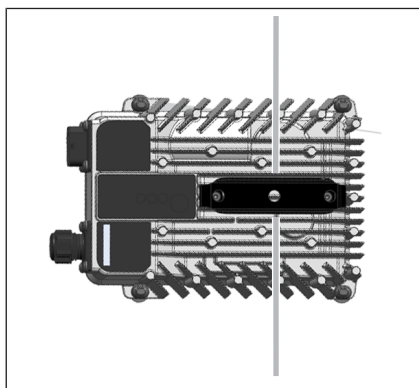
1. Unplug the rechargeable battery.
2. Disconnect battery charger from power supply.
3. Do not bend connection cable and supply cable.
4. Wind up the cables.

6.3 Lifting the machine



1. Lift the machine by the carrying handle **1**.
2. Carefully load the machine into or onto a stable and stable means of transport.

6.4 Lashing the machine



- Tie down the machine as shown.
- ⇒ The machine is secured.

7 Commissioning

7.1 Safety instructions for operation



⚠ WARNING

Improper handling may result in injury or serious material damage.

- ▶ Please read and follow all safety instructions in this operator's manual.



⚠ CAUTION

Danger of burns due to hot surface!

Surfaces can become hot during operation and cause burns.

- ▶ Allow the battery charger to cool down after use.

7.2 Tests before commissioning



Information

Further information and detailed descriptions, [see Maintenance on page 30](#).

Perform the following checks:

- Check machine and components for damage.
 - Do not put the damaged machine into operation. Damages and defects must be repaired immediately.
- Check control elements for functionality.
- Check power and extension cables for damage.

Check mains supply

- Check whether the power supply or building site distributor has the correct operating voltage (see type label of the machine or Technical data).
- Check whether the power supply or building site distributor is fused in accordance with the applicable national standards and directives.

7.3 Putting into operation



NOTICE

Damage to the machine or the accumulator.

Connections and contact area of the accumulator must be clean and dry.

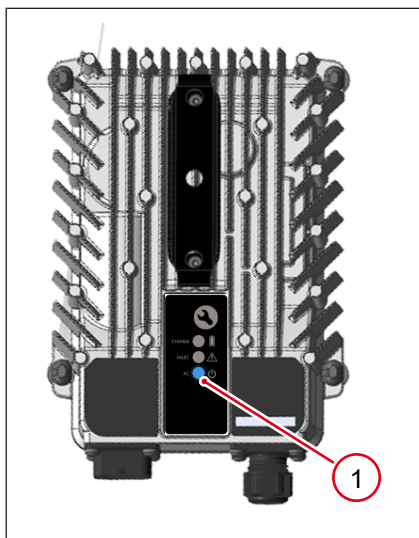


NOTICE

Information on charge indicator!

Battery charger: Observe control lights. All control lights light up briefly until only the control light Operation lights up blue.

Rechargeable battery: Observe the number of illuminated control lights on the rechargeable battery. Control lights indicate the current charge status of the rechargeable battery, [see Operation on page 28](#).



- ✓ The charger and rechargeable battery are placed on a dry and clean working area.
- Connect the battery charger to the power source with the supply cable.
 - ⇒ Control light Operation 1 lights up blue.

7

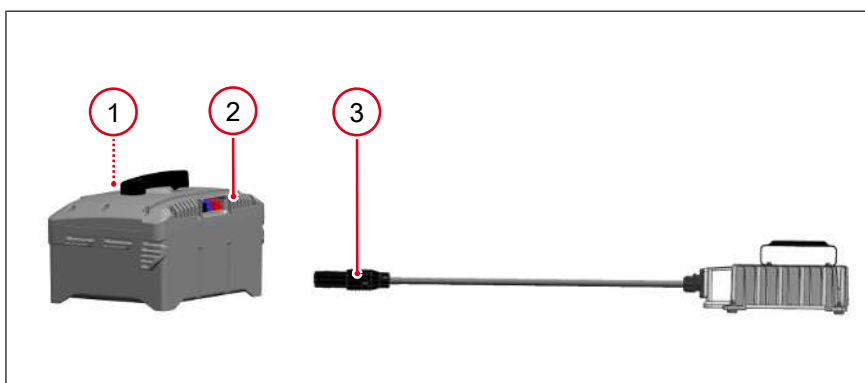
7.3.1 Connecting the rechargeable battery



NOTICE

Note on the charging process!

The charging process is started automatically after connecting the rechargeable battery.



1. Connect rechargeable battery 2 to the battery charger with connection plug 3.
2. Regularly check the charge condition via charge indicator 1, [see Operation on page 28](#).

8 Operation

8.1 Charging the rechargeable battery



NOTICE

Damage to the machine or the accumulator.

Only use chargers and rechargeable batteries from the manufacturer.



Information

Information about charging!

Detailed and illustrated information can be found in the rechargeable battery operator's manual.

1. Place the battery charger and rechargeable battery on a dry and clean working area.
2. Connect the battery charger to the power source.
3. Then connect the rechargeable battery to the battery charger.
4. Check the charge state of battery regularly.
5. If the rechargeable battery is completely charged, unplug the battery from the charger and disconnect the battery charger from the power source.

8.1.1 Check state of charge while charging

Checking the charge condition of the rechargeable battery during charging.

Displaying the state of charge on the rechargeable battery:

- Several LEDs show the charge level.
- A full charge is indicated when all LEDs are lit continuously.
- Only one LED lit indicates the charge level is less than 15%.
- Flashing LEDs indicate charging is in progress.

When the rechargeable battery is fully charged (100 %), the rechargeable battery and the charger switch off. All control lights go out.

A detailed description of the display can be found in the operator's manual for the rechargeable battery.

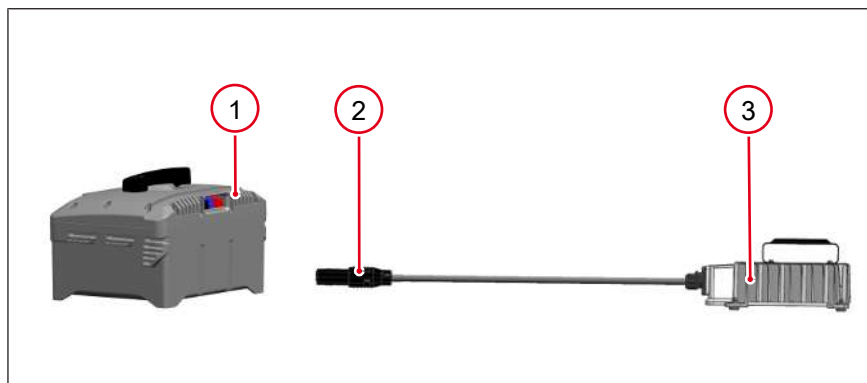
8.2 Putting out of operation



NOTICE

Avoid device damage!

Shut down the charger immediately after charging is complete or in the event of an error.



- ✓ The machine is on a level surface.
- ✓ The rechargeable battery **1** is charged.
- 1. Disconnect connection plug **2**.
- 2. Disconnect the battery charger **3** from the power source.
- ⇒ The machine is out of operation.

9 Maintenance

9.1 Safety instructions for maintenance



⚠ WARNING

Improper handling may result in injury or serious material damage.

- ▶ Please read and follow all safety instructions in this operator's manual.



⚠ WARNING

Risk of fire and explosion when using flammable cleaning agents!

- ▶ Do not clean the machine and components with gasoline or other solvents.



⚠ WARNING

Hazard from electric current.

Risk of injury from electric shock.

- ▶ Switch off the machine.



⚠ WARNING

Danger from electric current.

Risk of injury from electric current in the event of improper work.

- ▶ Repairs and a subsequent safety check may only be performed by a qualified electrician according to the applicable guidelines.



⚠ CAUTION

Danger of burns due to hot surface!

Surfaces can become hot during operation and cause burns.

- ▶ Allow the battery charger to cool down after use.



NOTICE

Damage by penetrating water!

Penetrating water can damage electrical operating elements or machine components.

Penetrating moisture can lead to total failure.

- ▶ Do not clean the machine with high pressure or steam cleaners!
- ▶ Use a cloth to remove water that has entered (e.g. due to rain) the housing and then let the machine dry.
- ▶ Only use dry and clean cloths.

9.2 Maintenance plan

Maintenance work	daily
Cleaning the machine	•
Visual check for completeness	•
Visual check for damage	•
Check cable for damage	•

9.3 Maintenance work

9.3.1 Carrying out preparations

1. Unplug the rechargeable battery.
2. Place the machine on a level surface.
3. Take the machine out of operation.

9.3.2 Cleaning the machine



NOTICE

Damage by penetrating water!

Penetrating water can damage electrical operating elements or machine components.

Penetrating moisture can lead to total failure.

- ▶ Do not clean the machine with high pressure or steam cleaners!
- ▶ Use a cloth to remove water that has entered (e.g. due to rain) the housing and then let the machine dry.
- ▶ Only use dry and clean cloths.



NOTICE

Information on damage to the components!

Contact service representative if accumulator or charger is damaged.

1. Clean the machine with a dry clean cloth.
2. Check for damage after cleaning.
3. Check cables and plugs for faultless condition.

10 Troubleshooting

10.1 Troubleshooting battery charger



⚠ WARNING

Danger to life due to unauthorized troubleshooting!

- ▶ If faults occur on this machine which are not described in this operator's manual, contact the service partner.
- ▶ Do not rectify faults on your own.

Fault	Possible cause	Remedy
The rechargeable battery is not charged.	Connection plug not connected correctly.	Connect connection plug correctly.
	Supply cable not connected to power source.	Plug supply cable into power source.
	The rechargeable battery is defective.	Contact service partner.
	Battery charger is defective.	
Control light Fault is lit	The rechargeable battery is defective.	Contact service partner.
	Battery charger is defective.	

11 Shutdown

11.1 Temporary decommissioning



Information

Further information and detailed descriptions, [see Maintenance on page 30](#).

In order to avoid possible damage, the following points must be observed:

- Do not store outdoors.
- Store dry and free of dust.
- Do not expose to aggressive substances.
- Protect from direct sunlight.
- Always store the rechargeable battery separately from the charger.

11.2 Final shutdown

11.2.1 Disposal of old electrical and electronic equipment

Disposal of old electrical and electronic equipment

Professional disposal of this machine avoids negative effects on human health and the environment, helps with the targeted treatment of pollutants and makes it possible to recycle valuable raw materials.

For customers in EU countries

This machine is subject to the European directive for old electrical and electronic equipment (Waste Electrical and Electronic Equipment (WEEE)), as well as the corresponding national laws.

The WEEE directive provides the framework for an EU-wide treatment of old electrical equipment.

The machine is marked with the crossed-out garbage bin symbol. This means that you do not dispose of the battery in normal household waste but that it must be disposed of in a separate, environmentally friendly collection facility.

This unit is intended as a professional electrical tool exclusively for commercial use (so-called B2B device according to WEEE directive). In contrast to equipment mainly used in private households (so-called B2C equipment), this machine may therefore not be disposed of in some EU countries, e.g. in Germany, at the collection points of the public waste disposal authorities (e.g. municipal recycling centers). In case of doubt, information on the prescribed disposal route for B2B electrical appliances in the respective country can be obtained from the sales outlet in order to ensure disposal in accordance with the applicable legal regulations.

There are also some notes to follow in the sales contract or in the general Terms and Conditions of the sales location.

For customers in other countries

It is recommended that you do not dispose of the machine in normal household waste but rather in a separate, environmentally friendly collection facility. National laws also may, under certain circumstances, prescribe the separate disposal of electrical and electronic products. Correct disposal of this machine in accordance with current national guidelines must be assured.

12 Technical Data

12.1 General instructions



Information

For system technical reasons, empty columns can be displayed in the technical data, and numbers and letters that written in superscript or subscript may be displayed incorrectly, e.g:

- ▶ Sound power level LWA instead of L_{WA}
- ▶ Sound pressure level LpA instead of L_{pA}
- ▶ Vibration total value ahv instead of a_{hv}
- ▶ Carbon dioxide CO2 instead of CO_2
- ▶ Unit m/s2 instead of m/s^2

12.2 Battery charger

Type	BOC7 US
Type of current (input)	AC
Rated voltage [V]	120 - 240
Rated current [A]	1,30 - 3,50
Rated frequency [Hz]	60
Rated output [kW]	0,35
Type of current (output)	DC
Output current [A]	7,5
Nominal output voltage [V]	36,0
Output voltage range [V]	1,8 - 60,0
Phases [~]	1
Length [mm]	200
Width [mm]	145
Height [mm]	60
Weight [kg]	2
Power cable [mm]	400
Plug	NEMA 5-15P (type B)
Supply cable [mm]	2000
Protection class	I / Protective earthing
Protection type	IP66 *
Storage temperature range [°C]	-20 - +60
Operating temperature range [°C]	0 - +45
* Different protection for: • Rechargeable battery connector plug: IP20	

12.3 Extension cable



WARNING

Hazard from electric current.

Injury from electric shock.

- ▶ Check power cable and extension cable for damage.
- ▶ Only use extension cables whose grounding conductor is connected to the plug and coupling (only for machines of protection class I + III, [see Technical data on page 35](#)).

- Only use permissible extension cables .
- Data on the type designation and voltage of this machine can be found on the type label.
- Refer to the following table for the required wire cross-section of the extension cable:

Type	BOC7 US	
Voltage [V]	120	
Phases [~]	1	
Extension [m]	≤52	≤86
Strand cross section [mm ²]	1,5	2,5

