

# Battery Charger

## Instruction Manual

**Original Instructions**



Doc. no.: 15977026\_A\_en  
Date of release: 2020.03.19

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# 1 About this manual

## Instruction Manuals

Struers equipment must only be used in connection with and as described in the instruction manual supplied with the equipment.



### Note

Read the instruction manual carefully before use.



### Note

If you wish to view specific information in detail, see the online version of this manual.

## 2 Safety

### 2.1 Battery Charger safety precautions



#### 2.1.1 Read carefully before use

Ignoring this information and mishandling of the equipment can lead to severe bodily injuries and material damage.

#### Battery Charger

1. The operator must be familiar with using the equipment as described in the Instruction Manual.
2. The equipment must not come into contact with water or dust.
3. To prevent overheating do not cover the equipment when it is in use.
4. Only use the battery charger with the battery pack supplied by Struers.
5. Do not remove the cover of the battery charger. Service must be carried out by qualified personnel under instructions from Struers.
6. If the battery charger is mounted in a vehicle it must only be used when the vehicle is stationary.
7. The carrying case must not come into contact with oil, grease, etc. as this may damage the case.

## 3 Getting started

### 3.1 Device description

- The battery charger is a device for charging rechargeable Li-Ion batteries.
- The equipment can be connected directly from the electrical power supply.
- When the battery pack is inserted in the machine, the equipment can be connected directly to the electrical power supply through the battery charger.

## 4 Transport

### Air transport

**Note**

Contact your transportation provider for information on local carriage restrictions.  
See the IATA website for further information.

### Battery pack

See the Instruction Manual for this unit.

## 5 Storage

**Note**

Struers recommends that all original packaging and fittings are kept for future use.

- Disconnect the unit from the electrical power supply.
- Remove any accessories.
- Clean and dry the unit before storage.
- Place the machine and accessories in their original packaging.

### Battery Pack

Operating environment 0 to 45°C/32 to 113°F

Transport and storage -20 to +55°C/°F

- For more detailed information, see the section **Technical data**.

## 6 Installation



### WARNING

Struers equipment must only be used in connection with and as described in the instruction manual supplied with the equipment.

### 6.1 Power supply



### Note

The equipment is shipped with 2 types of electrical power cables. If the plug supplied on these cables is not approved in your country, the plug must be replaced with an approved plug.

#### The European Schuko plug

The 2-pin plug (European Schuko) is for use on single-phase electrical power connections.



The leads must be connected as follows:

Yellow/Green

Earth (ground)

Brown

Line (live)

Blue

Neutral

#### The North American NEMA 5-15P plug

The 2-pin plug (North American NEMA 5-15P) is for use on single-phase electrical power connections.



The leads must be connected as follows:

Green

Earth (ground)

Black

Line (live)

### 6.1.1 Connecting the battery charger

When the battery pack is inserted in the machine, the equipment can be connected directly to the electrical power supply through the battery charger.



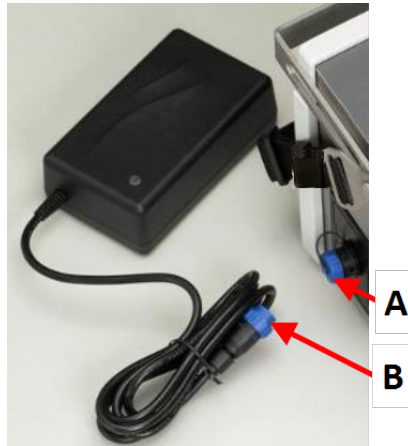
#### CAUTION

Always connect the battery charger to the battery pack before you connect the battery charger to the electrical power supply.

#### Connecting the equipment to the electrical power supply

You can connect the equipment to the electrical power supply:

1. Make sure that the battery pack is inserted in the machine.
2. Unscrew the cover covering the socket. (A)
3. Insert the plug from the battery charger into the socket. (B)
4. Connect the battery charger to the electrical power supply.



### 6.1.2 Charging the battery



#### CAUTION

Always connect the battery charger to the battery pack before you connect the battery charger to the electrical power supply.

1. Connect the battery charger to the battery pack.
2. Connect the battery charger to the electrical power supply.

The LED turns green when charging is complete.



#### Note

If you need to check the battery level, connect the battery to the charger or the machine.

**Battery status indicator**

LED indicator	Charging level	Status
Orange	20% - 0%	Maximum charge current (2 A).
Yellow	60% - 21%	The battery is charged 80 - 95 %. The charger is in timer mode and the current is less than maximum. Charging will continue for a set amount of time up to 4 hours.
Green	61% - 100%	The battery is charged 95 - 100%. Charging has stopped.

## 7 Maintenance and service - Battery Charger

Proper maintenance is required to achieve the maximum up-time and operating lifetime of the machine. Maintenance is important in ensuring continued safe operation of your machine.

The maintenance procedures described in this section must be carried out by skilled or trained personnel.

### **Safety Related Parts of the Control System (SRP/CS)**

For specific safety related parts, see the section "Safety Related Parts of the Control System (SRP/CS)" in the section "Technical data" in this manual.

### **Technical questions and spare parts**

If you have technical questions or when you order spare parts, state serial number and voltage/frequency. The serial number and the voltage are stated on the type plate of the machine.

## 7.1 General cleaning

To ensure a longer lifetime for your unit, Struers strongly recommends regular cleaning.



**Hint**

Do not use a dry cloth as the surfaces are not scratch resistant.

**Hint**

Grease and oil can be removed with ethanol or isopropanol.

**Hint**

Do not use acetone, benzol or similar solvents.

**If the unit is not to be used for a longer period of time**

- Clean the unit thoroughly.

## 7.2 Disposal



Equipment marked with a WEEE symbol contains electrical and electronic components and must not be disposed of as general waste.

Contact your local authorities for information on the correct method of disposal in accordance with national legislation.

For disposal of consumables and recirculation fluid, follow local regulations.

# 8 Technical data

## 8.1 Technical data - Battery Charger

Input voltage	90-264 VAC
Line frequency	47-63 Hz
Max. output power	60 W
Switch frequency, approx.	40 kHz

## 8 Technical data

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Leakage current with mains disconnection	< 200 $\mu$ A (10-14C: < 500 $\mu$ A)
Temperature range	-10 - +40 °C (14 - 40 °F)
Ripple	< 100 mV p-p (10-14C: < 200 mV)
Efficiency (at 100% load)	> 81%
Protection	Mains fuse. Automatically resettable fuse protects charger against wrong polarity
Insulation class	I (2040LI) - II (2041LI, 2042LI)



