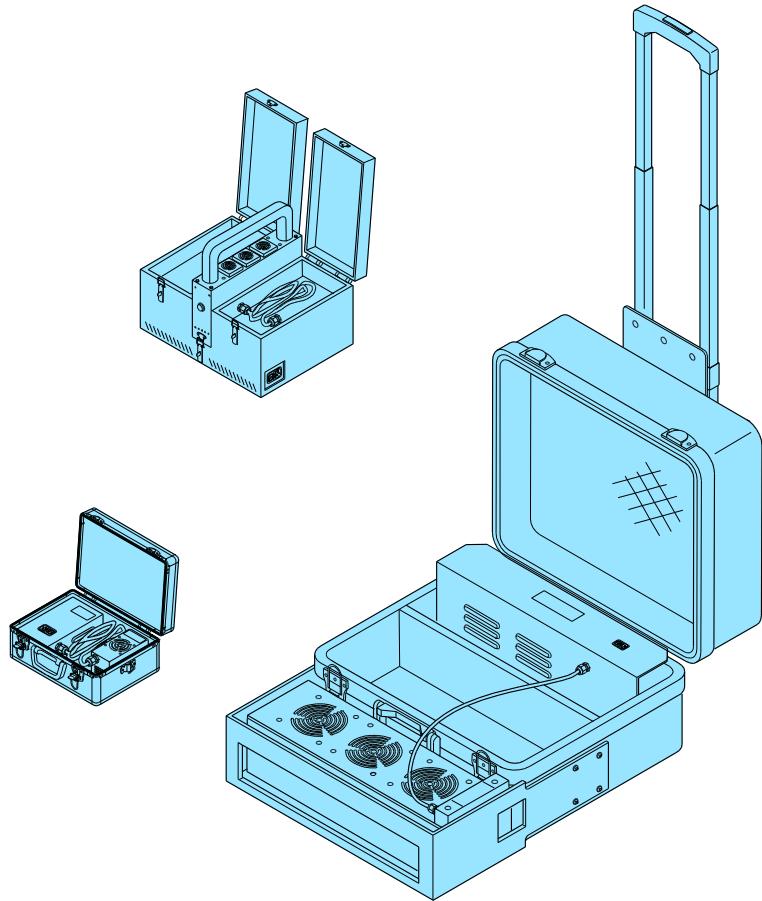


SMELT

ECO LED UV dryer



User manual

Preface

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Terms and conditions

Refer to the terms and conditions document for the terms and conditions of this product.

Table of contents

1	About this document	5
1.1	Purpose of this document	5
1.2	Language.....	5
1.3	Illustrations	5
1.4	Typographical conventions	5
1.5	How to use this document and the related documents	5
1.6	Icons and signal words used in the document.....	5
2	Safety	6
2.1	Intended use	6
2.2	User qualification	6
2.2.1	Operation of the device.....	6
2.2.2	Maintenance of the device	6
2.3	Safety symbols on the device	6
2.4	Liability.....	6
2.4.1	Liability of the manufacturer	6
2.4.2	Liability of the user	7
2.5	Safety instructions.....	7
2.5.1	General safety instructions.....	7
2.5.2	Safety instructions for operation.....	7
2.5.3	Safety instructions for maintenance	8
2.6	Personal Protective Equipment (PPE).....	8
2.7	Radiation hazard.....	8
2.8	Electrical requirements	8
2.9	Dispose of the device.....	8
3	Description.....	9
3.1	Identification of the device.....	9
3.2	Model types	9
3.3	Overviews	10
3.3.1	Overview of the Handheld 100.....	10
3.3.2	Overview of the Handheld 300.....	11
3.3.3	Overview of the Mobile suitcase.....	12
4	Operation.....	13
4.1	Irradiate a floor with the Handheld 100.....	13
4.1.1	Open the case	13
4.1.2	Prepare the device for use	13
4.1.3	Irradiate the floor.....	13

4.1.4	Finish	14
4.2	Irradiate a floor with the Handheld 300.....	14
4.2.1	Open the case	14
4.2.2	Prepare the device.....	14
4.2.3	Irradiate the floor.....	15
4.2.4	Finish	15
4.3	Irradiate a floor with the Mobile suitcase	15
4.3.1	Open the case	15
4.3.2	Prepare the device.....	16
4.3.3	Irradiate the floor.....	16
4.3.4	Finish	17
5	Maintenance	18
5.1	Preventive maintenance schedule	18
5.2	Troubleshooting table	18
5.3	Maintenance procedures.....	18
5.3.1	Do an inspection before use	18
5.3.2	Clean the device	18
5.3.3	Clean the lamp.....	19
5.3.4	Replace the fuse.....	19
6	Technical data	20
6.1	General specifications.....	20
6.1.1	Lamp unit.....	20
6.1.2	Drive	20
6.2	Dimensions	20
6.3	Standards	20

1 About this document

1.1 Purpose of this document

This manual contains the information that is necessary for a professional user to do the tasks that follow:

- Operation
- Simple maintenance

1.2 Language

The original instructions of this document are composed in English. All other language versions are translations of the original instructions.

1.3 Illustrations

The illustrations in this document show the typical devices with relevant details. Minor differences between the illustrations and your device are possible but do not have an effect on the comprehensibility of this document. The illustrations are for instruction and description only.

1.4 Typographical conventions

- Metric units of measurement are used. If necessary, the document shows imperial or other units of measurement between parentheses () .
- The steps in procedures have numbers (123) if the sequence is important.
- The sub-steps with letters (abc) are used if the sequence is important.
- The lists and steps with bullets (•) are used if the sequence is not important.
- Items in illustrations are indicated with capital letters (ABC).

1.5 How to use this document and the related documents

1. Make sure that you know the structure and contents of this document.
2. Read the safety chapter in detail and make sure that you know all the instructions.
3. Do the steps in the procedures fully and in the correct sequence.
4. Keep the document in a safe area for future use. The document is part of the device.

1.6 Icons and signal words used in the document

Signal word	Description	Icon
Warning	Obey the instruction. If not, this can cause personal injury.	
Caution	Obey the instruction. If not, this can lead to damage to the machine, to equipment, or to property.	
Note	A note gives more data, to make it easier to perform the steps, for example.	

2 Safety

2.1 Intended use

The ECO LED UV dryer is a device to cure floor coatings or floor oils quickly. Only use the device in conjunction with UV drying oil suitable for drying with LED technology. Refer to the technical data of the oil supplier.

Do not use the ECO LED UV dryer for any other purpose or other items than the above-mentioned.

The ECO LED UV dryer is not a household appliance. It is for professional use only.

Throughout the document, the ECO LED UV dryer is called the device.

2.2 User qualification

2.2.1 Operation of the device

Although the device is easy to use and no training is required, it is only intended for professional users that have experience in working with UV dryers.

If you do not have experience in this field, SMELT advises to get a training in how to use the device correctly. If you require a training, please contact SMELT Machinery.

2.2.2 Maintenance of the device

Cleaning and inspection can be carried out by the professional user that has experience in working with UV dryers.

The replacement of the fuse may only be carried out by an authorized and trained installation engineer. For other corrective maintenance, contact the supplier or manufacturer.

2.3 Safety symbols on the device

Icon	Description
	UV radiation hazard. Do not shine the UV LED light into the eyes of you, or another person or living being. Wear protective glasses.

2.4 Liability

2.4.1 Liability of the manufacturer

The device is designed and made according to the various applicable directives. It is CE certified for general machine safety and TÜV certified for radiation safety. Moreover, no pre-heating is necessary, so the device is ozone free.

SMELT Machinery will not be liable for any costs, damages, or personal injuries if the costs, damages, or personal injuries are caused by:

- Improper use of the device or other connected equipment;
- Failure to obey and observe the instructions on the device, in this document and possible other related documents;
- The use of damaged or dirty equipment;
- The use of the device in an unsafe environment;
- Unauthorised modifications or repairs to the device;
- Non-regular external forces, such as falling, extrusion, collision, immersion in water or other fluids, or strike.

2.4.2 Liability of the user

Local regulations for the use of the device can vary by country. It is the responsibility of the user to make sure that the device is only used in compliance with the applicable local regulations.

Damage caused by incorrect connection, installation, misuse, or maintenance is not covered under the warranty. In such cases, the warranty becomes void.

- Obey the safety instructions. Refer to section 2.5.
- Only use the device for its intended use. Refer to section 2.1.
- Use a grounded socket to avoid damage by electricity leakage.
- Use a grounded rubber extension cord with a single plug and connector of professional quality. The quality must be the equal or higher than the quality of the power cable.
- Do not put objects on the device.
- Do not immerse the device, the power cable, the plug, or the equipment in water.
- Do not drop the device.
- Do not expose the device to moisture, liquids, cold, or heat.
- Do not modify the device.
- Do not use damaged, dirty, or wet equipment or cables.
- Do not use a timer or remote controller to operate the device.
- Do not repair the device or its parts yourself. Contact your supplier.
- Clean the device and its parts regularly. Refer to section 5.1. Not cleaning the unit can lead to wear which in turn affects the lifespan and may result in dangerous situations.

2.5 Safety instructions

2.5.1 General safety instructions

- Stay alert and use common sense when you use the device.
- Keep the device, the power cable, and equipment away from children.
- Make sure that the device and equipment are in a safe condition for use. Do not use the device or the equipment when it is damaged, dirty, dusty, wet, or no longer functions properly.
- Although the device is safe, wear PPE. Refer to section 2.6.
- Only use equipment of high quality and compliant to industry standards and local regulations.
- Use an extension cord that is long enough to cover the complete surface that you want to irradiate. Avoid tension to the extension cord and the power cable.
- Do not touch the device with wet or damp hands.
- Put the power cable completely in the connector and socket. Prevent electrical hazards, such as possible fire, electric shock, or short circuit.
- Do not cover the ventilation holes of the cooling fan.
- Do not aim the UV LED light into the eyes and skin of you, or another person or living being.
- Do not look into the light when the lamp is on.
- Do not touch the light when the lamp is on.
- Do not touch the lamp. The lamp can be hot. Avoid contamination of the lens.
- Do not pull the device, the power cable, or the extension cord to remove the plug from the socket.

2.5.2 Safety instructions for operation

- Do not open the device.
- Only use the device in conjunction with UV drying oil suitable for drying with LED technology. Refer to the technical data of the LED oil supplier.
- Make sure that the cooling fan operates before you start the lamp.
- In case of smoke, remove the power from the device and remove the power cable and/or extension cord from the socket. Keep the doors and windows closed to smother the flames.
- The device may only be used and stored indoors.
- Do not use the device near water, a damp environment, such as a damp basement or a damp garage, or near a swimming pool.

- Do not leave the device unattended when the device is connected to power.
- Check the device after every use of the device. Clean it if dusty or dirty. Refer to section 5.3.2.

2.5.3 Safety instructions for maintenance

- When the device is damaged or does not work properly, always contact the supplier.
- Repairs to electrical appliances should only be performed by professionals that are approved by SMELT Machinery.
- It is dangerous to carry out a repair in which the housing of the appliance has to be opened. The housing protects against exposure to micro-energy.
- Defective parts must only be replaced by original parts. The manufacturer can only guarantee that those original parts meet the safety requirements.
- If a cable is damaged, it may only be replaced by the manufacturer, its service organization, or equivalently qualified persons, in order to avoid dangerous situations.

2.6 Personal Protective Equipment (PPE)

- Wear protective glasses to protect your eyes from possible contact with the bright light of the lamp.
- Wear protective gloves to protect your hands.

2.7 Radiation hazard

The LED lamp radiates UV light. Avoid exposure and contact to skin and eyes.

2.8 Electrical requirements

- The device must always be grounded.
- The electrical connection must comply with national and local regulations.
- The socket and plug must always be accessible.
- Do not bend the power cable and extension cord sharply.
- Do not let the power cable and extension cord touch hot parts.
- Only connect the device to a grounded socket in accordance with the information stated on the type plate on the device. Refer to section 3.1 for information on the type plate.

2.9 Dispose of the device

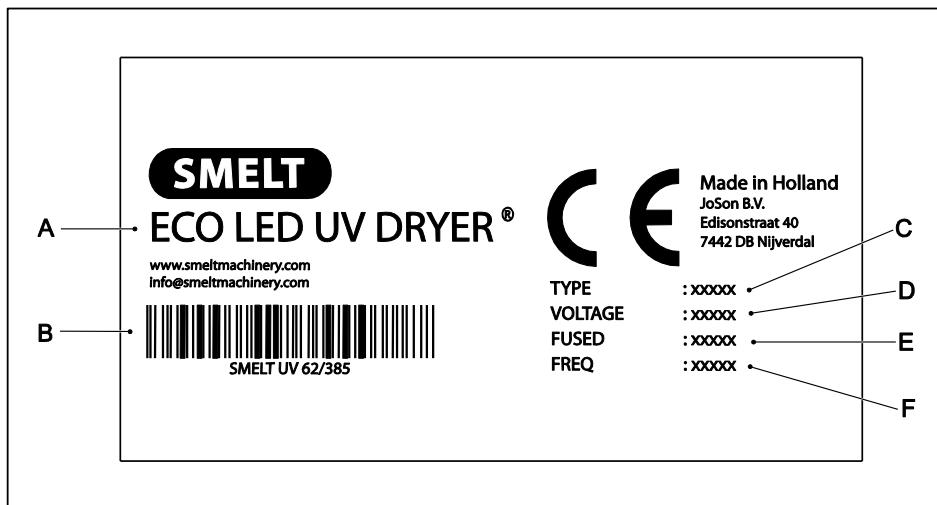
1. If applicable, remove the power cable from the socket.
2. Cut the plug from the cord.
3. Sort the device, its parts, and the packaging for environmentally friendly recycling.
4. Dispose the device and its parts at the relevant waste management division of the designated authority.



Dispose the device and its parts according to local regulations.
Do not dispose of the machine into domestic waste.

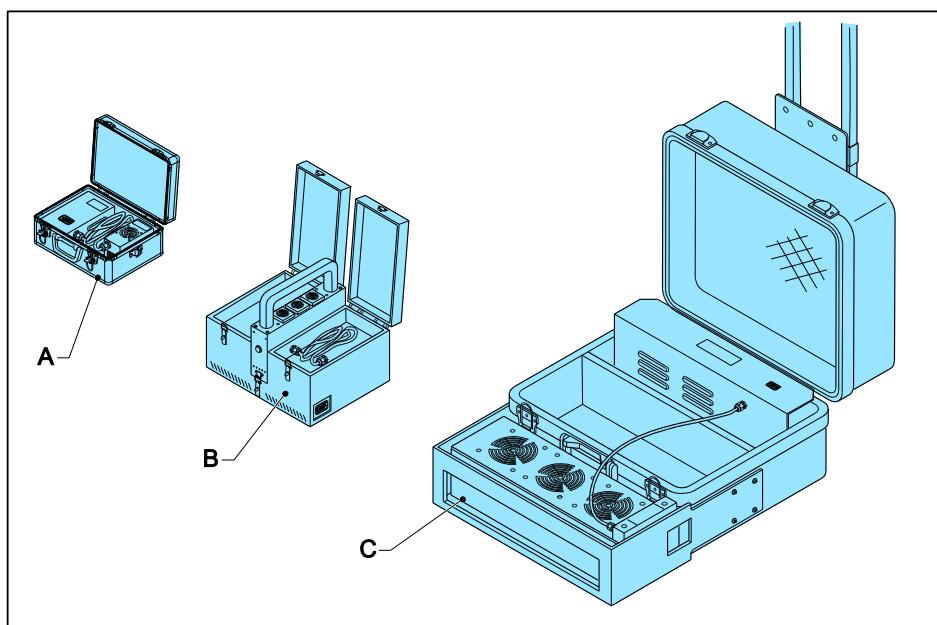
3 Description

3.1 Identification of the device



- A. Device name
- B. Barcode
- C. Model type code
- D. Voltage (VAC)
- E. Fuse (A)
- F. Frequency (Hz)

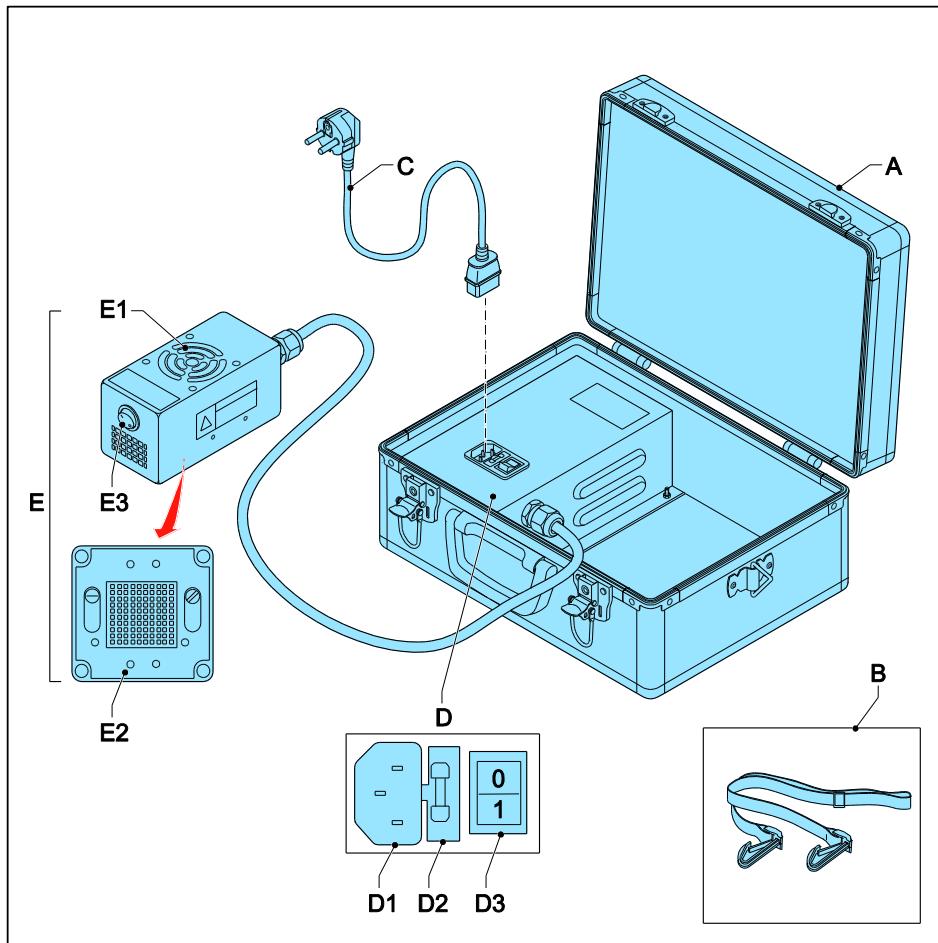
3.2 Model types



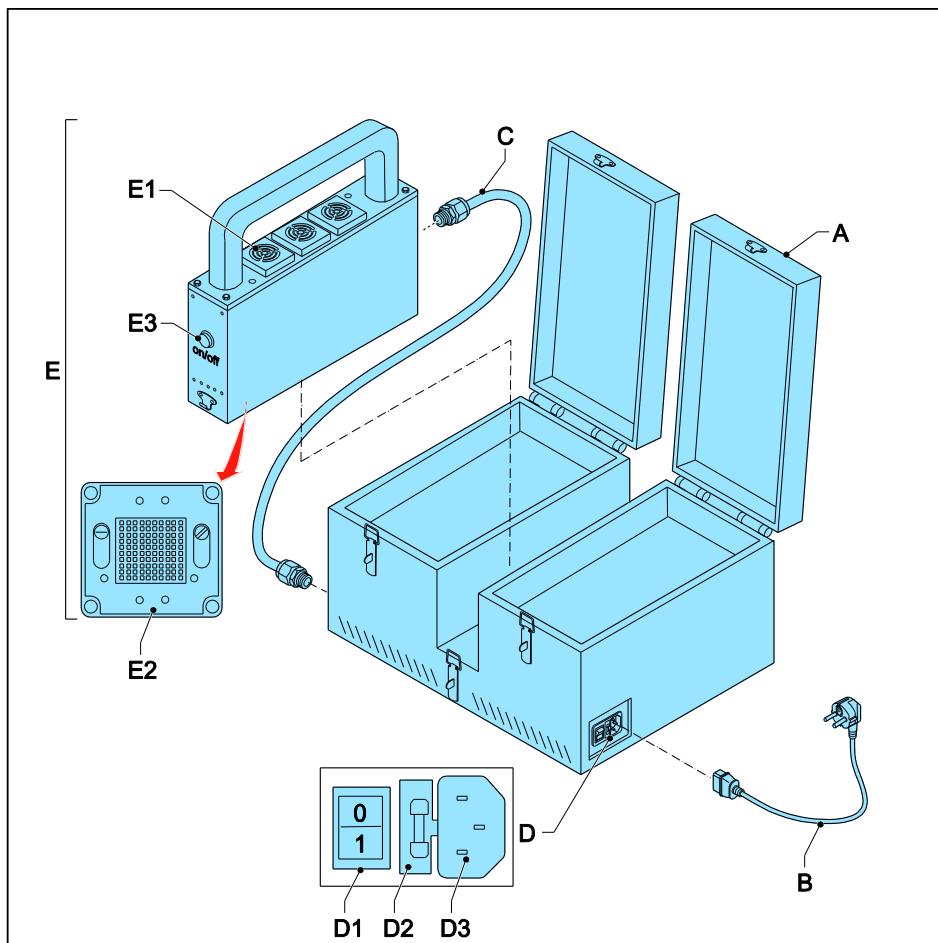
- A. Handheld 100
- B. Handheld 300
- C. Mobile suitcase

3.3 Overviews

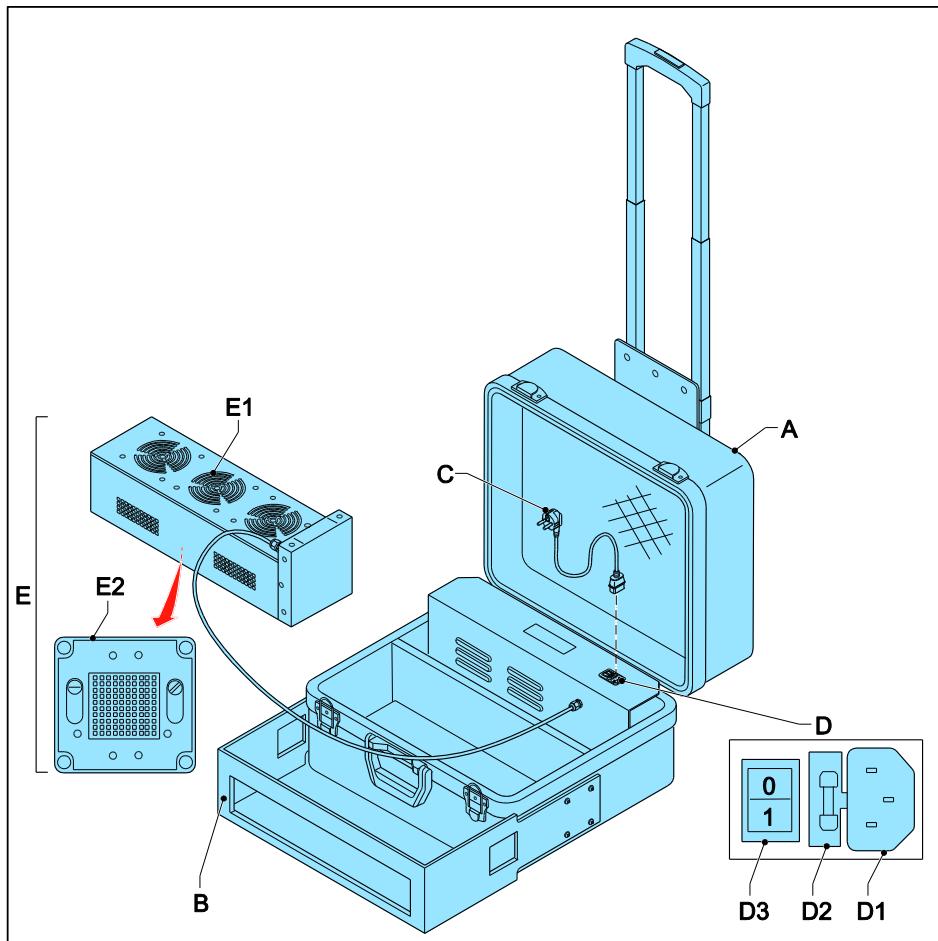
3.3.1 Overview of the Handheld 100



- A. Case
- B. Shoulder strap
- C. Power cable
- D. Drive
 - D1 Connector
 - D2 Fuse holder
 - D3 Power switch
- E. Lamp unit
 - E1 Cooling fan
 - E2 Lamp
 - E3 Lamp switch

3.3.2 Overview of the Handheld 300

- A. Case
- B. Power cable
- C. Unit connection cable
- D. Drive
 - D1 Connector
 - D2 Fuse holder
 - D3 Power switch
- E. Lamp unit
 - E1 Cooling fan
 - E2 Lamp
 - E3 Lamp switch

3.3.3 Overview of the Mobile suitcase

- A. Case
- B. Lamp unit frame
- C. Power cable
- D. Drive
 - D1 Connector
 - D2 Fuse holder
 - D3 Power switch
- E. Lamp unit
 - E1 Cooling fan
 - E2 Lamp

4 Operation

4.1 Irradiate a floor with the Handheld 100

4.1.1 Open the case

5. Put the device on the floor.
6. If the shoulder strap is connected to the case, remove the shoulder strap.
7. Release the latches.
8. Open the case.

4.1.2 Prepare the device for use

1. Remove the lamp unit (A) from the case.
2. Do an inspection before use. Refer to section 5.3.1.
3. Connect the power cable (B) to the connector of the drive (C).
4. Connect the power cable to the extension cord.

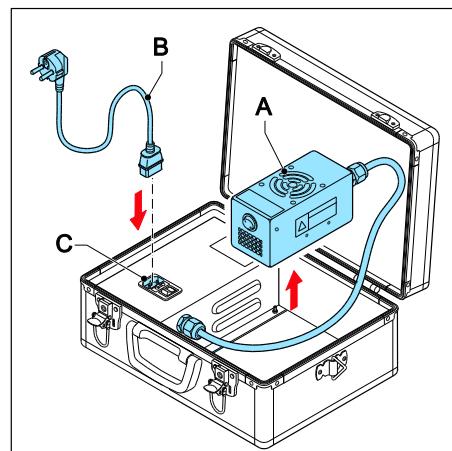
**WARNING**

Make sure that the extension cord is long enough to cover the complete surface that you want to irradiate.

5. Connect the extension cord to the mains socket.

**CAUTION**

Use a grounded socket.



4.1.3 Irradiate the floor

1. Put the power switch in the on position.
The cooling fan starts.

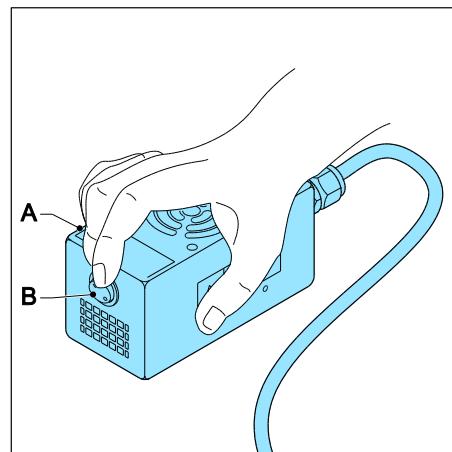
**CAUTION**

Avoid overheating of the lamp unit. Make sure that the cooling fan operates. Do not cover the ventilation holes of the cooling fan.

2. Take the lamp unit (A) and hold it correctly.
3. Put the lamp switch (B) in the on position.
4. Aim the light to the floor. Keep a distance of 20 mm from the floor.

**CAUTION**

Avoid contact between the lamp unit and the floor.



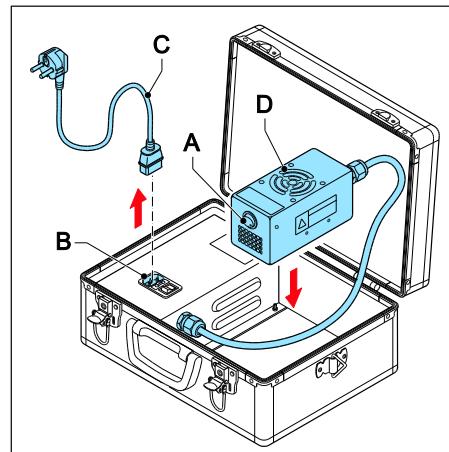
5. Move the lamp unit and case across the floor until the lamp irradiated the complete floor.

**WARNING**

Avoid tension to the cables. Do not pull the lamp unit harshly or in sudden movements away from the case.

4.1.4 Finish

1. Put the lamp switch (A) in the off position.
2. Let the lamp unit cool down for 2 minutes.
3. Put the power switch (B) in the off position.
4. Disconnect the power cable (C) from the extension cord.
5. Disconnect the power cable from the connector of the drive.
6. Put the lamp unit (D) and the power cable in the case.
7. Close the case.
8. Close the latches.



4.2 Irradiate a floor with the Handheld 300

4.2.1 Open the case

1. Put the device on the floor.
2. Release the latches.
3. Open the case.

4.2.2 Prepare the device

1. Remove the lamp unit (A) from the case.
2. Do an inspection before use. Refer to section 5.3.1.
3. Connect the lamp unit to the drive (B). Use the unit connection cable (C).
4. Connect the power cable (D) to the connector of the drive.
5. Connect the power cable to the extension cord.

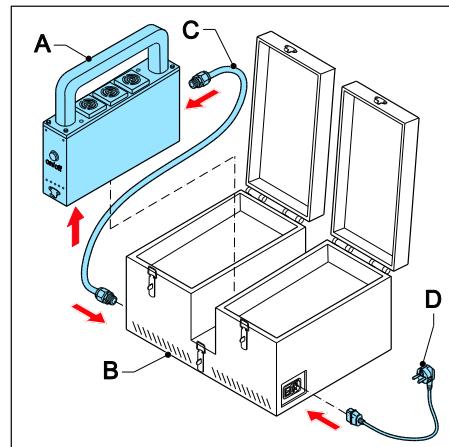


WARNING
Make sure that the extension cord is long enough to cover the complete surface that you want to irradiate.

6. Connect the extension cord to the mains socket.



CAUTION
Use a grounded socket.



4.2.3 Irradiate the floor

1. Put the power switch in the on position.
The cooling fans start.
- CAUTION**

Avoid overheating of the lamp unit. Make sure that the cooling fans operate. Do not cover the ventilation holes of the cooling fans.
2. Take the lamp unit and hold it correctly. Use the handle (A).
3. Put the lamp switch (B) in the on position.
4. Aim the light to the floor. Keep a distance of 20 to 200 mm from the floor.

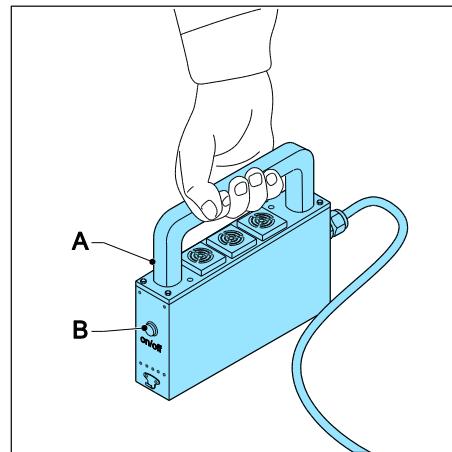
CAUTION

Avoid contact between the lamp unit and the floor.

5. Move the lamp unit and case across the floor until the lamp irradiated the complete floor.

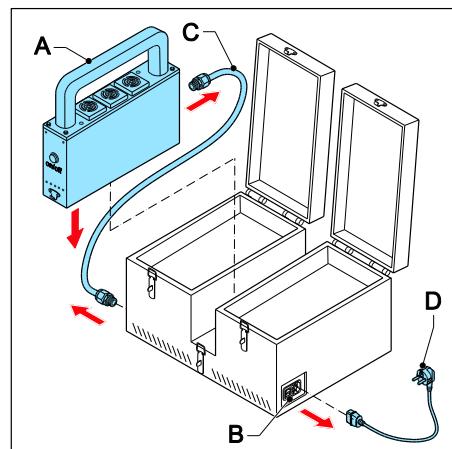
WARNING

Avoid tension to the cables. Do not pull the lamp unit harshly or in sudden movements away from the case.



4.2.4 Finish

1. Put the lamp switch in the off position.
2. Let the lamp unit cool down for 2 minutes.
3. Put the power switch in the off position.
4. Disconnect the power cable from the extension cord.
5. Disconnect the power cable from the connector of the drive.
6. Put the lamp unit and the cables in the case.
7. Close the case.
8. Close the latches.



4.3 Irradiate a floor with the Mobile suitcase

4.3.1 Open the case

1. Put the device on the floor.
2. Release the latches.
3. Open the case.

4.3.2 Prepare the device

1. Do an inspection before use. Refer to section 5.3.1.
2. Remove the lamp unit (B) from the case, and put it gently in the lamp unit frame (A).

**CAUTION**

Hold the lamp unit correctly, as shown in the illustration. Avoid tension to the unit connection cable (C).

3. Connect the power cable (D) to the connector of the drive.
4. Connect the power cable to the extension cord.

**WARNING**

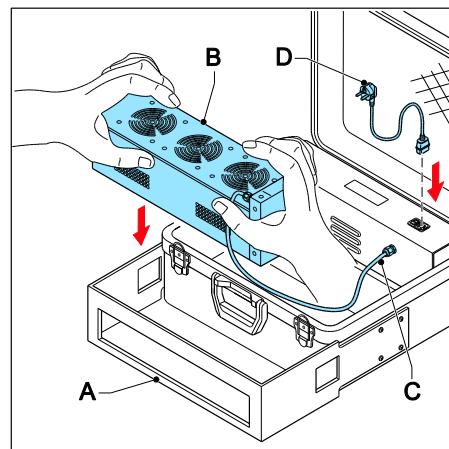
Make sure that the extension cord is long enough to cover the complete surface that you want to irradiate.

5. Connect the extension cord to the mains socket.

**CAUTION**

Use a grounded socket.

6. Unfold the trolley handle.



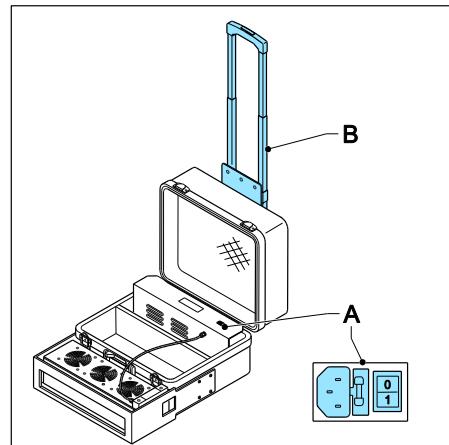
4.3.3 Irradiate the floor

1. Put the power switch (A) in the on position.
The cooling fans and the lamps start.

**CAUTION**

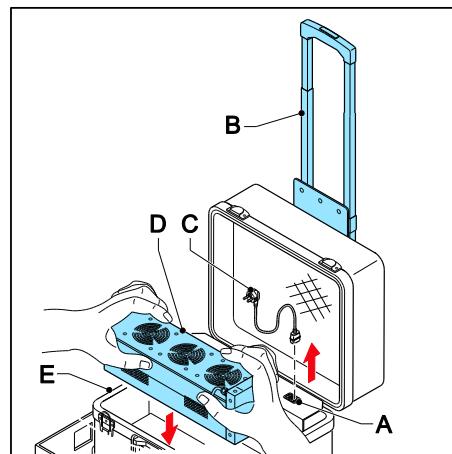
Avoid overheating of the lamp unit. Make sure that the cooling fans operate. Do not cover the ventilation holes of the cooling fans.

2. Move the device across the floor until it irradiated the complete floor. Use the trolley handle (B).



4.3.4 Finish

1. Put the power switch (A) in the off position.
2. Let the lamp unit cool down for 5 minutes.
3. Fold the trolley handle (B).
4. Disconnect the power cable (C) from the extension cord.
5. Remove the lamp unit (D) from the lamp unit frame and put it gently in the case (E).
6. Close the case.
7. Close the latches.



5 Maintenance

5.1 Preventive maintenance schedule

Item	Task	Interval	Refer to section
Complete device and equipment	Inspection	Before use	5.3.1
Complete device	Clean	Monthly, or when dirty or dusty	5.3.2
Lamp	Clean	When contaminated by oil	5.3.3

5.2 Troubleshooting table

Problem	Possible cause	Solution	Refer to section
The drive does not operate	The power cable is not correctly connected	Do a check on the connection of the power cable.	-
	There is no power	Do a check on the electrical distribution box of the mains power supply. A fuse or circuit breaker might be tripped due to leakage current, or overload.	-
	The fuse is defective	Do a check on the condition of the extension cord.	-
	Other causes	Replace the fuse.	5.3.4
The lamp does not give light	The cable between the drive and the lamp unit is disconnected	Contact the supplier.	-
	Other causes	Connect the cable. Make sure that the cable is not damaged.	-

5.3 Maintenance procedures

5.3.1 Do an inspection before use

1. Make sure that the equipment is in the correct condition.
 - a. Make sure that the power socket is reliable, and the grounding is correct.
 - b. Make sure that the extension cord is free from damage and contamination.
2. Do a visual check on the condition of the power cable and unit connection cable. If a cable is damaged, contact the supplier.
3. Do a visual check to see if the drive and lamp unit are free from dust or other contamination. If the device is dirty or dusty, clean the device. Refer to section 5.3.2.

5.3.2 Clean the device

WARNING

Make sure that the power cable is not connected to the drive.



1. If applicable, remove dust from the case, the drive, and the lamp unit. Use a dry cloth.
2. If the drive or lamp unit are dirty, remove the contamination with a slightly damp cloth.
3. If the dirt cannot be removed by a damp cloth, contact the supplier.

CAUTION

Do not try to clean the device yourself. Do not use any cleaning solvents.

**5.3.3 Clean the lamp****WARNING**

Make sure that the power cable is not connected to the drive.



1. When the lamp is contaminated by oil, remove the oil with a cloth and a small amount of industrial alcohol or medical alcohol.

CAUTION

Do not apply force when you clean the lamp.



2. Let the lamp dry before you can use the device again.

5.3.4 Replace the fuse**Note**

This work may only be carried out by an authorized and trained installation engineer.
Only use original parts.

**WARNING**

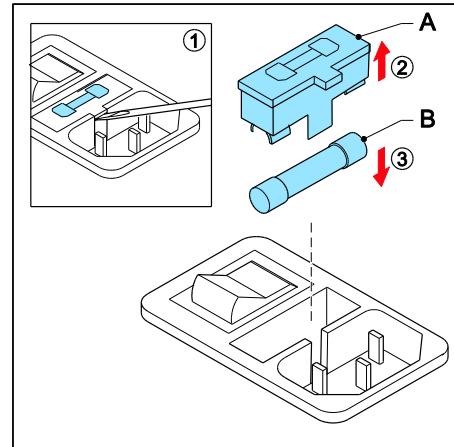
Make sure that the power cable is not connected to the drive.



1. Remove the fuse holder (A). Use a small screwdriver.
2. Remove the fuse (B) from the fuse holder.
3. Put a new fuse in the fuse holder.
4. Put back the fuse holder.

Note

Make sure that the fuse holder is correctly attached to the drive. You must hear a click.



6 Technical data

6.1 General specifications

6.1.1 Lamp unit

Item	Unit	Handheld 100	Handheld 300	Mobile suitcase
Effective radiation area	mm	30 x 30	206 x 30	315 x 30
Recommended radiation height	mm	20	200	-
Illumination	W/cm*2	6	6	6
Number of lamps	-	1	1	6
Radiation distance	mm	3 - 10	3 - 10	3 - 10
Radiation type	-	UV LED	UV LED	UV LED
Irradiation curing	m per minute	25	25	25
Cooling mode	-	Air cooling	Air cooling	Air cooling
Number of fans	-	1	3	3

6.1.2 Drive

Item	Unit	Handheld 100	Handheld 300	Mobile suitcase
Working power (voltage and frequency)	VAC/Hz	100 / 50, 230 / 60	100 / 50, 230 / 60	100 / 50, 230 / 60
Input power	W	150	500	800
Output voltage	-	Constant current	Constant current	Constant current
Power cable	-	On request	On request	On request
Fuse (standard)	A	10	10	10

6.2 Dimensions

Item	Unit	Handheld 100	Handheld 300	Mobile suitcase
Lamp unit (L x W x H)	mm	145 x 65 x 76	230 x 58 x 172	430 x 140 x 85
Case (L x W x H)	mm	320 x 260 x 160	414 x 234 x 207	470 x 290 x 550

6.3 Standards

Item	Certification
Machine safety	CE certified
Electrical safety	CE certified
Radiation safety	TÜV certified