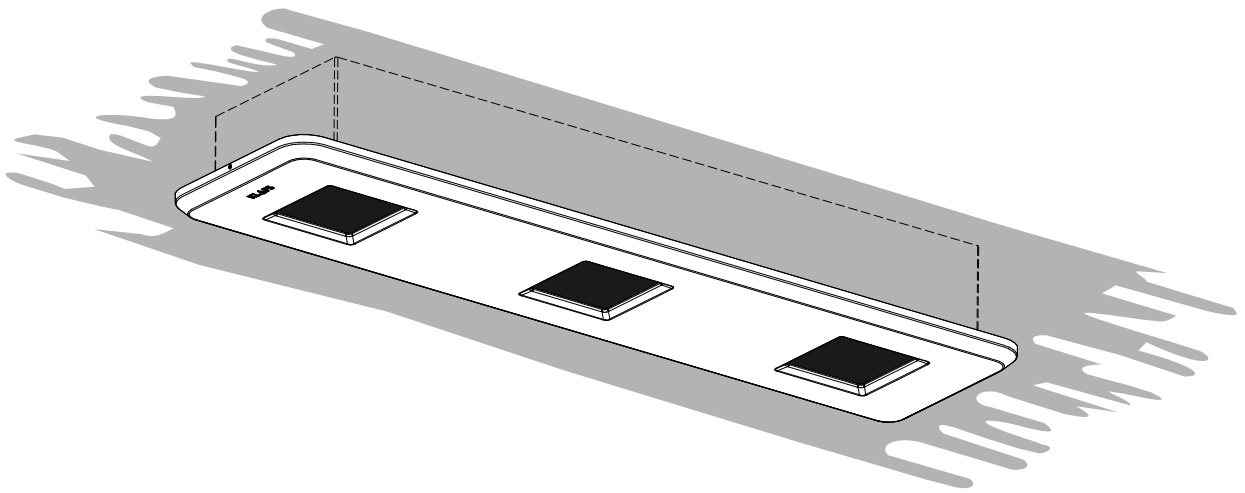


Operating instructions

SONNENWIESE Kollagen

KLAFS
MY SAUNA AND SPA



Preface

Your tanning device is designed and engineered to state of the art technology and is safe to operate. However, the equipment is not free from hazards if operated by untrained persons or persons not briefed or trained in its proper use or if used for other purposes than intended. Therefore the operating instructions and the safety references must be carefully read and understood by each person who is charged with the installation, commissioning, start-up, operation, maintenance or repair of the tanning device. Prior to commissioning the device please have a specialist provide you and/or your staff with a proper training regarding its use. Should contrary to expectations a technical defect occur in your device, please contact the respective Service Department or your Klafs Dealer.

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1. Safety instructions

1.1. Intended use

The device is intended exclusively for simulating light inside buildings. Do not operate the device within highly combustible areas or in drying rooms. The rooms must be well ventilated. If the device is operated in a solarium, ensure the device and the room are kept clean and hygienic at all times. Any other use is not considered to be in accordance with the terms of intended use. The manufacturer is not responsible for damage resulting from other forms of use; the user alone bears this risk. Intended use and operation includes compliance with the requirements for operation, servicing and repair, as specified by the manufacturer. Maintenance, repair and similar work is only to be carried out by KLAFS customer service or by their authorized representatives. The device may only be operated by persons who are familiar with the control system and are aware of the risks involved. The relevant accident prevention regulations and other generally recognized industrial health and safety regulations must be observed. Damage resulting from unapproved changes to the device are excluded from the manufacturer's liability. This applies in particular to damage due to lamps or filter disks not approved by KLAFS.

1.2. Product liability

The user is expressly informed that the device may only be used as intended. The user assumes all liability should the device not be used as intended. Consequently, the manufacturer will not accept any liability in such cases.

1.3. Conduct in emergencies

Unplug the device, or de-energise the device using the main power switch or the fuse, and secure against unintentional power restoration.

1.4. Explanation of the symbols

In these operating instructions, all passages in the text relating to your safety, as well as notices and tips, are marked with the following symbols.

Pass all safety instructions on to other users.



Caution/warning!

This symbol designates an immediate health risk and risk of death. Non-compliance with these notes may result in harmful effects, including life-threatening injuries.




UV radiation


UV radiation can cause damage to eyes and skin. UV radiation sources must therefore only be operated when appropriate measures have been taken to ensure personal safety. Do not look directly into the radiation source and ensure that you are wearing the supplied safety glasses to protect your eyes.



This symbol provides important information regarding the appropriate handling of the device.

Non-compliance with these notes may lead to faults on the device or the surrounding area.

 Under this symbol, you can find tips and useful information. They help you to best use all the functions on your device.

 Different diagrams are referred to in the text. E.g. Fig. 5 item 2 is indicated in the text by the reference (5/2).

1.5. User's position

In front of the device and lying on a lounge underneath the device.

1. Safety instructions

1.6. Prior to commissioning

Carefully read the safety and operating instructions before installing, commissioning and starting up the device. Both KLAFS and standard requirements must be observed.

1.7. Initial device commissioning

Before commissioning, ensure that local safety regulations and all safety instructions are followed.

1.8. Dangers

The following notices regarding UV rays are required on the basis of TÜV certification. The unit is tested according to the standard for sunbeds. With the filters defined by Klafs, the UV proportion is less than that of sunrays in the Mediterranean region.



Warning!

Ultraviolet radiation from the sun or UV devices can cause eye or skin damage, such as skin ageing and possibly skin cancer. These biological effects depend on the kind and amount of exposure to the sun, and also on an individual's skin sensitivity. Skin may show signs of sunburn after repeatedly using the tanning device. Excessive repeated ultraviolet radiation from sunlight or UV devices can lead to premature ageing of the skin and also to an increased risk of skin tumours. The ocular surface of unprotected eyes can become inflamed and in some cases, excessive tanning can damage the retina. Cataracts can occur as a result of unprotected tanning. Particular care should be taken in cases of individual UV sensitivity or when certain medication or cosmetics are used at the same time.

Therefore, it is imperative that the following safety instructions be observed:



Caution!

High-intensity light: Do not look directly into the heater.
Close your eyes when sunbathing and always wear the safety glasses provided.
Remove make-up before using the light-simulation device.
Do not use suntan lotion.
Always remove jewellery before using the light-simulation device.
Do not use the light-simulation device more than once a day.
Recommendations relating to times and intervals are provided with these instructions.
The recommended light-simulation times only apply to the lamp configurations stipulated by the manufacturer.
If you are receiving medical treatment or taking medication, you must seek advice from the medical practitioner who is treating you. Certain medication or cosmetics can increase sensitivity.
If any persistent swelling, sores or pigmented moles on your skin show signs of change, immediately consult the medical practitioner who is treating you.
There should be a minimum of 48 hours between the first two light-simulation sessions.
Lie down when using the device during light-simulation sessions.
Do not sit or stand under the device during light-simulation sessions.

Continued on the next page

1. Safety instructions

1.8. Dangers

Continued



Warning!

Only use the device after seeking medical advice.

Non-users, particularly children, must not be present when the device is switched on.

The device should not be used by persons:

- Under the age of 18
- Who tend to get freckles
- With naturally red hair
- With any atypical discoloured areas of the skin
- Who have more than 16 moles (2 mm or larger in diameter) on their bodies
- Who have atypical moles (atypical moles are asymmetrical moles with a diameter greater than 5 mm that have varying pigmentation and irregular borders; if in doubt, a medical practitioner should be consulted)
- Who suffer from sunburn
- Who do not tan at all in natural sunlight or cannot tan without getting sunburnt
- Who easily get sunburnt in natural sunlight
- Who have had a history of repeated, serious sunburn during their childhood
- Who are suffering or have suffered from skin cancer, or have a predisposition to this
- Whose first-degree relatives have malignant melanoma
- Who are undergoing medical treatment for complaints that are associated with photo-sensitivity
- Who are taking photo-sensitising medication.

Notes:

- Radiation exposure should not exceed the personal minimum erythema dose (MED). This means the minimum UV dose that causes a perceptible reddening of the skin. If erythema (reddening of the skin) occurs some hours after exposure, no further exposures should take place. After a week, the exposures specified at the beginning of the exposure plan can be resumed.
- If any unexpected effects occur, such as itching within 48 hours of the first exposure, consult a medical practitioner before any further exposures take place.

Continued on the next page

1. Safety instructions

1.8. Dangers

Continued



Note 1:

The recommended exposure time for the initial test radiation of untanned skin must comply with a dose that does not exceed 100 J/m^2 , weighted in accordance with the action spectrum for UV erythema or based on the result of a test on a limited surface area of the skin. The second and subsequent exposures should last at least 10 minutes.

- The recommended number of exposures within a year should not be exceeded.

Note 2:

As each UV radiation exposure increases the risk of skin cancer, there is no safe upper limit for the annual dose. However, it is recommended that 25 kJ/m^2 not be exceeded, weighted in accordance with the action spectrum for non-melanoma skin cancer and based on the recommended radiation exposure programme.

- Do not use the device, if the timer is defective or if the filter is broken or has been removed.
- Replace the replaceable UV lamp only with lamp types that are specified on the device. Replace UV fluorescent lamps only with lamp types that are marked with an equivalence code that is within the equivalence code range specified and explained on the device.

2. Data for the device user - operation

2.1. Starting a light-simulation session

Note the timetable.

Never use the device if you are sunburnt.

Close your eyes when sunbathing and always wear the safety glasses provided.

People who have had eye-lens surgery must protect their eyes by wearing safety glasses.

Starting:

The device is operated by a switch

1. Operate the switch.
2. Lie down on the lounger.



Caution!

Do not sit or stand under the device during light-simulation sessions.

3. To switch the device off, operate the switch again.
 4. If you do not switch off the device using the switch, it switches off automatically once the safety-time-out feature has elapsed (set ex-works).
- ☞ In order to restart the device, you must allow for a cooling phase of five minutes, then turn the switch off and back on again.

The device is operated by a push button

1. Operate the push button.
2. Lie down on the lounger.



Caution

Do not sit or stand under the unit during tanning sessions.

3. After the unit's internal safety-time-out feature has elapsed (configured ex-works), the device switches off automatically.
- ☞ In order to restart the device, you must allow for a cooling phase of five minutes.

Coin-operated device

1. Insert coins or chips into the coin-operated timer.
2. Lie down on the lounger.



Caution!

Do not sit or stand under the device during light-simulation sessions.

3. Depending on the coin-operated timer used, the device switches on automatically once the lead time has elapsed.
 4. The lamps switch off automatically once the time set on the coin-operated timer has elapsed.
- ☞ In order to restart the device, you must allow for a cooling phase of five minutes.

3. Data for the user - Commissioning

3.1. Important information!

Do not commission faulty devices.

Observe the maximum permissible ambient temperature (max. 35 °C), otherwise the device can overheat and be switched off by the temperature limiter.

Therefore, ensure there is a sufficient fresh-air supply in the room.

Observe hygienic requirements.

Provide eye protection and make sure that they are worn.

Inform users that they should not exceed the maximum duration for a light-simulation session.

Have the installation and operating instructions to hand.

Display the safety instructions and timetable in a clearly visible location in the room.

The device is set to a duration of 20 minutes ex-works.

The maximum time must not be exceeded.

3.2. Prior to commissioning

Carefully read the safety and operating instructions before installing, commissioning and starting up the device.

3.3. Device commissioning

Before commissioning, observe all local safety regulations and safety instructions. The device can be commissioned if the device is completely installed, connected to the power supply and, if required, connected to the coin-operated timer and/or the central control system.

4. Important information for the user - Cleaning

4.1. Cleaning the device



Caution!

Ensure the device and the surrounding area are kept clean and hygienic at all times. Dust deposits decrease the tanning effect.

Do not spray the cleaning agent in your eyes.

Do not spray it on open flames.

Do not drink it. Do not store within children's reach.

Do not pour liquid over the device otherwise humidity may be trapped underneath the covers.

Use cleaning agents according to instructions. Follow the application time recommended by the manufacturer.

Body

1. Clean the exterior of the device with a damp cloth, adding a few drops of washing-up liquid to the water if necessary.
2. Do not use scouring cleaners.
3. Remove stubborn dirt with a soft cloth and a biodegradable cleaning agent (e.g. neutral soap).

Reflectors

1. Use an alcohol-soaked cloth to wipe the reflectors when changing the lamp.

5. Maintenance



Caution!

Always disconnect the device from the power supply.

The user/operator must ensure that the device is always in perfect condition when being operated.

Ensure the technical installation are regularly checked and maintained.

When carrying out repair work or recommissioning, additional measures must be taken, such as providing barriers to stop unauthorized persons accessing the device.

Only authorized persons are allowed to work on the device; please contact your specialized dealer or KLAFS directly.

Do not carry out any procedure that may impair the safety of the device.

Use a safe ladder.

Only order original spare parts from your specialized dealer or directly from KLAFS. No liability can be assumed if any other devices are fitted, other than the original high-intensity lamps or ignition device.

Do not operate the device without device-specific filter disks.

5.1. Opening/adjusting/closing the dust cover

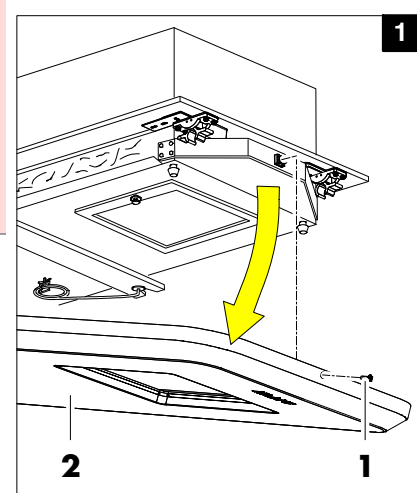


Caution!

Before starting maintenance or repair work, disconnect the device from the power supply.

Opening the dust cover

1. Remove the safety screw (1/1) from the dust cover.
2. Using both hands, lower the dust cover by 90 degrees (1/2).

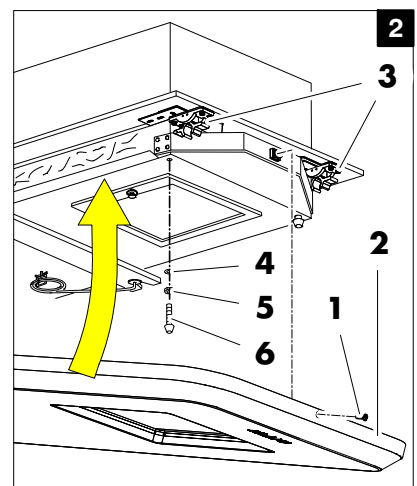


Adjusting the dust cover

1. Screw the two pressure spindles (2/6), the nuts (2/5) and the washers (2/4) supplied into the hole.
2. Check that the dust cover is positioned evenly and readjust it using the two pressure spindles, if necessary. Secure the pressure spindles (2/6) with the nuts (2/5).

Closing the dust cover

1. Push the dust cover (2/2) up with both hands until it locks into both clips (2/3).
2. Tighten the safety screw (2/1) on the dust cover.



5. Maintenance

5.2. Removing/fitting the dust cover



Caution!

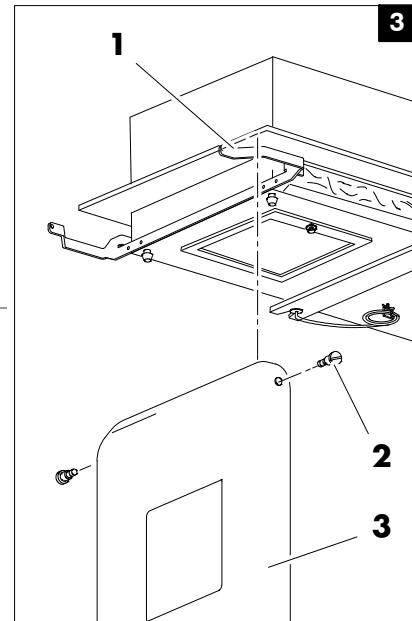
Before starting maintenance or repair work, disconnect the device from the power supply.

Removing the dust cover

1. Using both hands, lower the dust cover by 90 degrees (3/2).
2. Remove the two screws (3/2) and remove the dust cover.

Fitting the dust cover

1. Align the holes on the dust cover (3/3) with the holes on the angle brackets (3/1).
2. Screw in the screws (3/2).



5. Maintenance

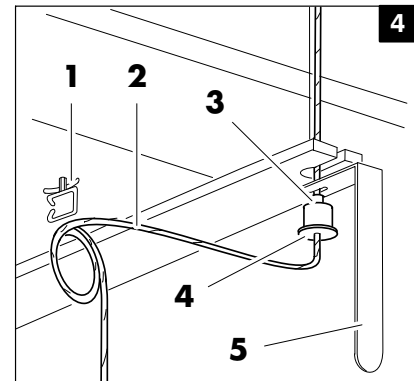
5.3. Moving the device into the maintenance/operating position

**Caution!**

Before starting maintenance or repair work, disconnect the device from the power supply.

Moving the device into the maintenance position

1. Remove the four wire cables (4/2) from the clamp hooks (4/1).
 2. Unwind the four wire cables and let them hang down.
 3. Using the unblocking tool (4/5), press and hold the small flange (4/3) of the wire-cable holder (4/4).
- ☞ The wire-cable holder can be lowered.
4. Place the device in the required position along the wire cables.
 5. Once the maintenance work has been completed, slide the device back into the operating position.

**Moving the device into the operating position**

1. Using the unblocking tool (4/5), push the wire-cable holder (4/4) and thereby the device along the wire cables towards the ceiling.
- ☞ The wire-cable holders will hold themselves in any position.
2. Push the device toward the ceiling until
 - The housing rests flush against the ceiling if it is a concrete ceiling
 - The bracket around the circumference of the housing rests flush against the suspended ceiling if it is a suspended ceiling.
 3. Wind the attachment cables (4/2) together in a loop and fasten them to the lower surface of the housing using the intended clamp hooks (4/1).

5. Maintenance

5.4. Maintenance of the high-intensity lamps



Caution!

Before starting maintenance or repair work, disconnect the device from the power supply.

Opening the dust cover

► Opening/closing the dust cover, see Section 5.1.

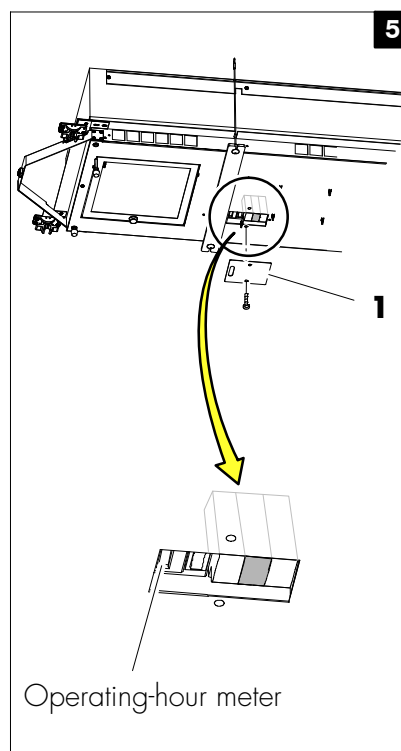
The high-intensity lamps are equipped with a specific glass-filter configuration. The device must not be operated under any circumstance if the filter disks are damaged or missing. Risk of being burnt. Risk of inflammation of the eye caused by ultra-violet radiation.

When immediately turning the high-intensity lamp back on again, depending on type, it does not start instantly or does not reach full power as it requires a cooling phase of approx. 4 minutes.

We recommend replacing the high-intensity lamp after approx. 750 operating hours.

The inspection window (5/1) for the operating-hour meter is located on the underside of the SONNENWIESE.

When replacing the high-intensity lamp, please refer to the equipment manufacturer or your specialized dealer. No liability can be assumed if any other devices are fitted, other than the original high-intensity lamps or ignition device.



One Klafs special collagen filter disk and one transparent filter disk is placed in front of each high-intensity lamp.

Continued on the next page

5. Maintenance

5.4. Maintenance of the high-intensity lamps

Continued

5.4.1 BREAKSAFE

The transparent filter disks (6/3) are secured with a BREAKSAFE device. If one of these transparent filter disks (6/3) breaks, the electric circuit is interrupted and the device can only be restarted once the transparent filter disk (6/3) has been replaced. The Klafs special collagen filter disks (6/4) must be visually inspected.

5.4.2 Changing the high-intensity lamp

Opening the dust cover

♦ Opening/closing the dust cover, see Section 5.1.

Removing the high-intensity lamp

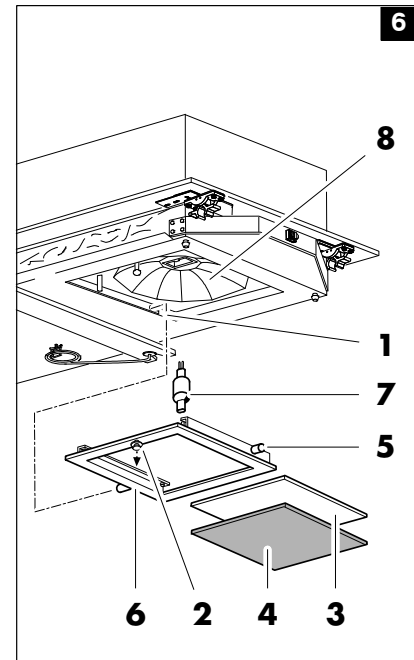
1. Pull the quick-lock (6/2) downwards on the appropriate housing.
- ⓘ Caution! The pane retainer (6/6) lowers by approximately 15 degrees.
2. Hold the pane retainer (6/6) with both hands and lift it slightly towards the device body.
- ⓘ The pins (6/5) slip from their anchorage (6/1).
3. Pull the pane retainer forward with both hands.
4. Hold the high-intensity lamp (6/7) by the rectangular base and remove it from the socket.

Cleaning the reflector

1. Clean the reflector (6/8) using a clean cloth dampened with alcohol.

Installing the high-intensity lamp

1. Hold the new high-intensity lamp (6/7) by the base.
2. Insert the high-intensity lamp into the socket.


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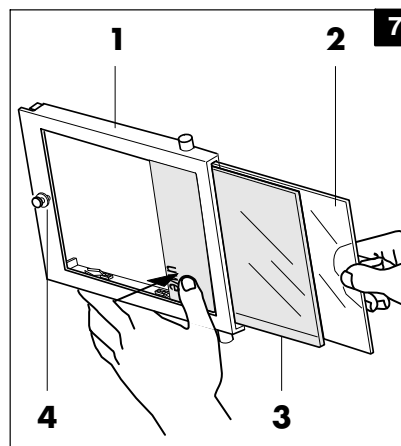
5. Maintenance

5.4. Maintenance of the high-intensity lamps

Continued

Removing the filter disks

1. Hold the pane retainer (7/1) with both hands and lift the filter disks with both thumbs over the respective alignment stops (rivet or angle) on the side opposite the quick-lock (7/4).
2. Pull out the Klafs special collagen filter disk (7/3) and the transparent filter disk (7/2).



Cleaning the filter disks

1. Clean the filter disks with warm water, adding a few drops of washing-up liquid to the water if necessary.
2. Dry the filter disks with a clean cloth.

Fitting the filter disks



Caution!

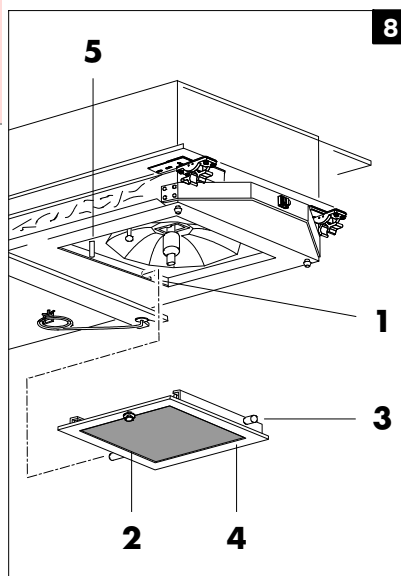
Do not operate the device without filter disks.
The coated side of the Klafs special collagen filter disk faces the lamp.

Caution! When assembling:

The Klafs special collagen filter disk is fitted on the user side, the transparent filter disk is fitted on the lamp side.

Insert the two filter disks as shown in Fig. 6 and Fig. 7.

1. Equip the pane retainer (7/1).
2. Push the filter disks in over the respective alignment stop (rivet or angle).
- ☞ The filter disks latch in.
3. Hang the fully mounted pane retainer (8/4) with the cleaned filter disks into the recesses (8/1) of the housing using the pins (8/3).
4. Swivel the pane retainer in the direction of the housing until the pane retainer is in the closed position.
- ☞ As a result, the pins of the micro switch (8/5) for the BREAKSAFE safety device are pressed down.
5. Press the quick-closure (8/2).
- ☞ The pane retainer is firmly locked into the housing.



Closing the dust cover

- ◆ Opening/closing the dust cover, see Section 5.1.

5. Maintenance

5.5. Filter mats

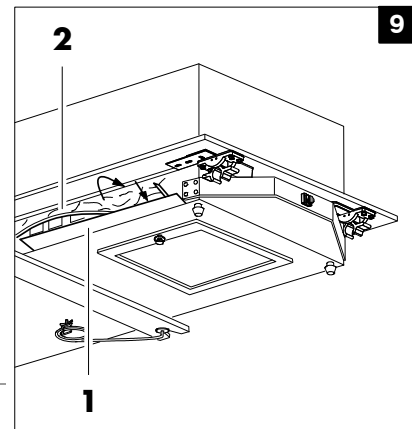
5.5.1 Replacing the filter mats

Air to cool the device is fed into the entrance of the devices through micro filter mats. Lint, hair, dust particles, etc., are filtered out there, so that interior components, such as lamps, only need to be cleaned at longer intervals. These filtered-out particles clog the filter mats after prolonged use and this impairs cooling of the device.

Therefore, regularly replace the filter mats in order to ensure the device does not overheat. Dirt accumulation and operating hours determine the replacement intervals.



Only order original filter mats from your specialized dealer or the equipment manufacturer.
Check the filter mats after every 200 operating hours.
Always disconnect the device from the power supply.



Opening the dust cover

- ◆ Opening/closing the dust cover, see Section 5.1.

Changing the filter mat

1. Remove the filter mat.
2. Take the new filter mat strip (9/2) and feed the long side into the holder (9/1).
3. Fold the filter mat strip against the unit. The filter mat strip is firmly locked into place.

Closing the dust cover

- ◆ Opening/closing the dust cover, see Section 5.1.

5. Maintenance

5.6. Chain of safety features



The device is equipped with a chain of safety features, including a timer switch, a safety-time-out feature, BREAKSAFE and a temperature limiter.

- The internal timer switch (K2/K4) is set ex-works to 20 minutes. After 20 minutes, the device switches off automatically.
The time set on the K4 timer switch must not exceed 20 minutes.
The maximum time of 20 minutes must not be exceeded.
This time must not be extended by the operator under any circumstance, but it can be reduced if desired (see Section 9.2.).
If a coin-operated timer is attached to the device, it must always match the time set on the device-integrated timer switch (K2/K4) (see Section 9.2.3).
 - The safety-timing circuit consists of a timing element (K3), which provides the safety-time-out feature, i.e. after this time period, the device always switches off automatically. The time period for the safety-time-out feature is set to 110% of the time on the timer switch, i.e. the ex-works setting is 22 minutes.
 - The BREAKSAFE safety device switches the device off if a transparent filter disk is broken. The device can be switched on again only after the faulty transparent filter disk has been replaced.
 - The temperature limiter provides temperature monitoring, protecting the tanning unit from excess temperatures.
The temperature-monitoring feature also limits the temperature of the attachment surface to a safe value.
Once the device has cooled down sufficiently, it switches on again automatically.
-

6. Tips for eliminating smaller faults



Warning!

Before starting maintenance or repair work, disconnect the device from the power supply. Repairs must only be carried out by KLAFS or by authorized persons. No safety devices may be dismantled or disabled. Use a safe ladder.

The device is too hot (temperature limiter tripped)

- The filter mat is clogged. Please replace it.
- The fans that are built into the unit for cooling have failed. Please have the unit checked by KLAFS or an organisation authorized by KLAFS.
- The room temperature is too high. Ensure there is a sufficient fresh-air supply in the room.

7. Disposal

Device and lamps



The Solarium and all fluorescent lamps, high-intensity lamps and lighting lamps are hazardous waste material. Do not dispose of it together with domestic refuse. KLAFS, or one of the disposal companies designated by KLAFS, can dispose of the device.

8. Information about light simulation



If used regularly, red light can benefit the complexion. The recommended treatment time is 10 to 20 minutes. To begin with, you should use the device twice a week; this can be increased to three times a week at a later point.

The light-simulations sessions should last at least 8 to 10 weeks overall because skin needs time to improve its structure. Reports describe visible improvements after approximately eight sessions - skin appears smoother, fresher and healthier. Dark circles under the eyes also appear reduced.

Improvements to the complexion are evident usually after a few sessions, but skin that has been badly damaged beforehand needs longer to regenerate. Good results can be seen after about eight sessions. All skin reacts slightly differently, depending on individual characteristics, personal lifestyle and the user's age.

☞ The skin's light-simulated regeneration processes - i.e. changing the skin's structure - are not dependent on skin colour or type.



Please read the instructions carefully.

These specifications refer to a distance of 2 m between the SONNENWIESE and the lounger. The distance may be reduced (up to ≥ 1.6 m).

Please note:

These recommendations refer to the standard lamp configuration as per the operating instructions.

As with natural sunlight, light simulation can, if used incorrectly, cause damage to the eyes and skin, such as premature skin ageing and possible carcinogenic skin irritations.

Certain medication and cosmetics can increase sensitivity.



As the light is very bright, do not look directly into the light source and wear the safety glasses provided to protect your eyes.

The following notices regarding UV rays are required on the basis of TÜV certification. The unit is tested according to the standard for sunbeds. With the filters defined by Klafs, the UV proportion is less than that of sunrays in the Mediterranean region.

9. Specifications only for technicians and Klafs professionals - Installing the equipment



Warning!

The device may only be installed by KLAFS professionals or authorized persons. Installing the device requires at least two persons.
The installation areas must be well ventilated. Danger of overheating.



Warning!

All devices are intended exclusively for light simulation inside buildings. Do not operate the device within highly combustible areas or in drying rooms. The rooms must be well ventilated.

Ensure there is a sufficient fresh-air supply in the room. When determining the installation location, the VDE regulations 0100 parts 701 (bathrooms) and 702 (pools, swimming pools) must be considered. The equipment's protection class is IP X2 (drip-water protection). In swimming pools, it may only be installed outside the safety zones; in bathrooms, only within or beyond safety zone 3.

The assembly is mounted from inside the room in a cavity (suspended ceiling), is mounted directly onto the ceiling, or is freely suspended, maintaining a distance to the ceiling. With suspended or wire-mesh ceilings (Rabitz ceiling), the device is mounted with the wire ropes onto the load-bearing ceiling and then moved using the wire ropes until it is flush against the suspended ceiling. Please contact an expert.

The SLM 8 N Fischer dowels and M8 x 85 eye bolts supplied for fixing the device are suitable for use in concrete only. In the case of other ceiling material, please contact an expert.

The wood-screw eye bolts supplied are only suitable for timber beams with a minimum thickness of 80 mm.

The device weighs approx. 65 kg; the dowel supplied can bear a load rating - in the case of a B25 concrete ceiling - of up to approx. 3.5 kN (350 kg).

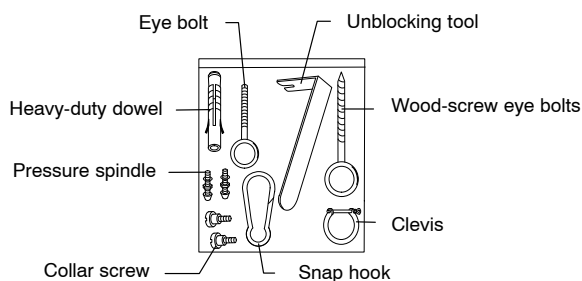
The ceiling must have an appropriate load-bearing capacity.

Ideally, the distance between the lounge surface and the SONNENWIESE should be 2 m. If there is a smaller or larger distance for construction reasons, please ensure that the optimal times are reduced or extended.

No flammable items may be located within the device's cone of light. The ceiling materials must not be combustible. The housing temperature can reach up to 120 °C.

Make sure that the furnishings in the surrounding area are UV resistant. The manufacturer is not liable for any damage which may occur as a result.

Plastic bag



9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.1. Installation and ceiling requirements - Housing assembly

Fitting to the ceiling

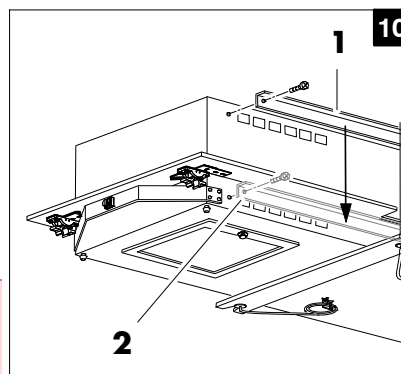
As standard, the device is delivered with the cover plate (10/1) mounted on top. For a ceiling installation, the air-outlet cover plate (10/1) is mounted on top, pointing downwards.

1. Remove the air-outlet cover plate (10/1) and screw the plate back into the bottom bore holes (10/2).



Caution!

The device must always be kept horizontal. Do not tilt it. Switch off all fuses.



Mounting the eye bolts - Suspended ceiling

1. Take the mounting template and saw an opening (1725 mm x 415 mm) into the suspended ceiling where you intend to install the device.
2. Drill four 12-mm-diameter holes into the **load-bearing concrete ceiling** spaced in relation to the cut-out opening as indicated by the four round markings on mounting template. The minimum hole depth must be 60 mm.

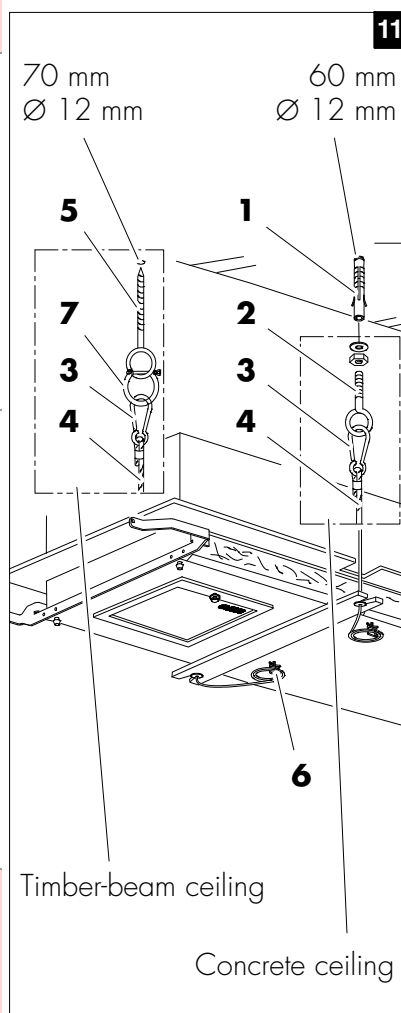
Concrete ceiling

1. Drill four 12-mm-diameter holes into the concrete ceiling at the required assembly location according to the four round markings drawn on the mounting template. The minimum hole depth must be 60 mm. The cut-out (1725 mm x 415 mm) on the mounting template is the size of the housing.
2. Place the four SLM 8 N (11/1) dowels supplied into the holes.
3. Screw in the four eye bolts (11/2) using a washer and an M8 nut for each, as shown in Fig. 10 and tighten the eye bolt against the nut (11/3).



Caution!

It is absolutely essential that the eye bolts (11/2) are tightened against the nut (11/3).



Continued on the next page

9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.1. Installation and ceiling requirements - Housing assembly

Continued

Caution!

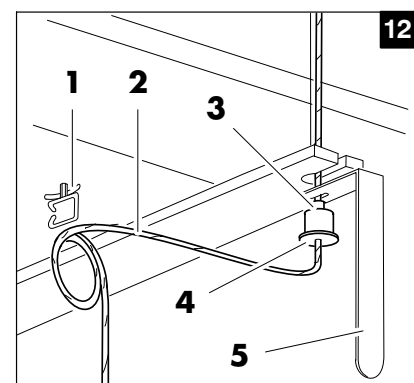
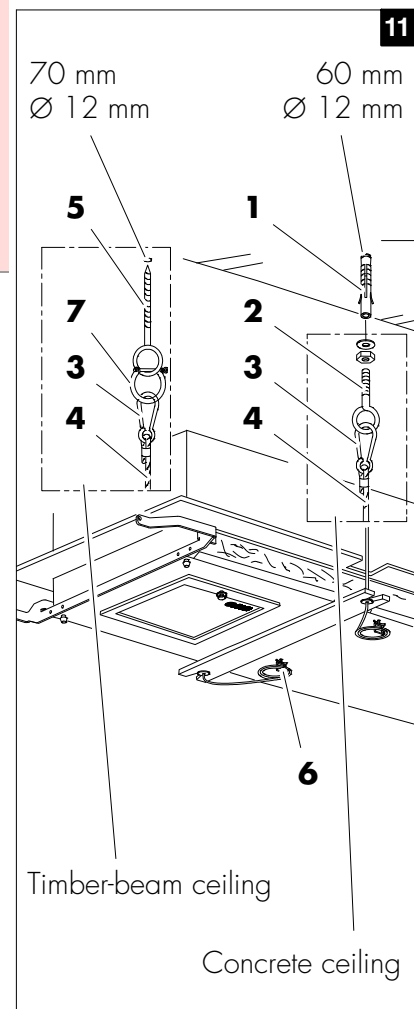
It is absolutely essential that the eye bolts (11/2) are tightened against the nut (11/3).

Timber-beam ceiling

1. Use an 8.5-mm-diameter drill to make four holes in the timber-beam ceiling at the required location, in accordance with the four round markings drawn on the mounting template. The minimum hole depth must be 70 mm. The cut-out (1725 mm x 415 mm) on the mounting template is the size of the housing.
2. Screw the four wood-screw eye bolts (11/5) supplied into the holes up to the thread end.
3. Insert the clevises supplied (11/7) into the wood-screw eye bolts (11/5).

Fitting the device

1. Place a high base (e.g. a table) underneath the fitted eye bolts (11/2) and wood-screw eye bolts (11/5) with clevis (11/7).
2. Work together with a colleague to pick up the device and place it on the high base.
3. Use the four snap hooks (11/3) on the wire cables to hang the device in the eye bolts and wood-screw eye bolts with clevis.
4. If the wire cables (11/4) are too short, unwind additional length from the clamp hook (11/6).
5. Using the unblocking tool (12/5) supplied, press the flange (12/3) against the wire-cable holder (12/4).
6. Push the wire-cable holder (12/4) down.
7. Pull the wire cables through and connect the snap hooks (11/3).


Continued on the next page

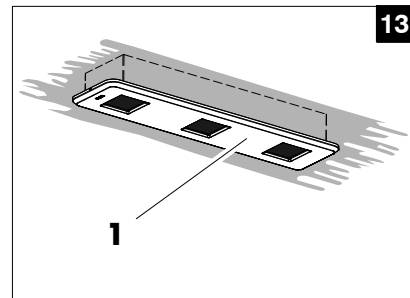
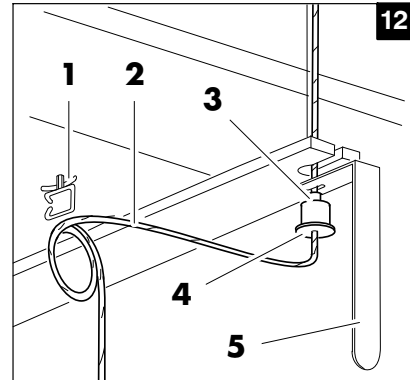
9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.1. Installation and ceiling requirements - Housing assembly

Continued

Adjusting the device's height

1. Using the unblocking tool (12/5), press and hold the flange (12/3) of the wire-cable holder. Push the wire-cable holder (12/4) and thereby the device along the wire cables towards the ceiling.
- ☞ The wire-cable holders will hold themselves in any position.
2. Push the device toward the ceiling until the housing rests flush against a concrete ceiling. If it is a suspended ceiling, the bracket around the circumference of the housing should rest flush against the suspended ceiling.
- ☞ Ideally, the distance between the lounge surface and the dust cover (13/1) should be 2 m.
3. Wind the wire cables (12/2) together in a loop and fasten them to the lower surface of the housing using the intended clamp hooks (12/1).



Fitting the dust cover

- ◆ Fitting the dust cover, see Section 5.2.

Adjusting/closing the dust cover

- ◆ Opening/adjusting/closing the dust cover, see Section 5.1.

9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.2. Electrical connection - Configuration



The connection must only be established by a qualified electrician in accordance with the valid DIN VDE regulations, as well as accident prevention regulations.

9.2.1 Connecting the device

Switch off all fuses.

Arrange the fuse, RCCB switch ≤ 30 mA and main switch on-site according to applicable valid DIN/VDE/EVU regulations.

Fit a separation device in the fixed electrical installation, which is provided with separation from the mains with a contact opening of at least 3 mm on each pole.

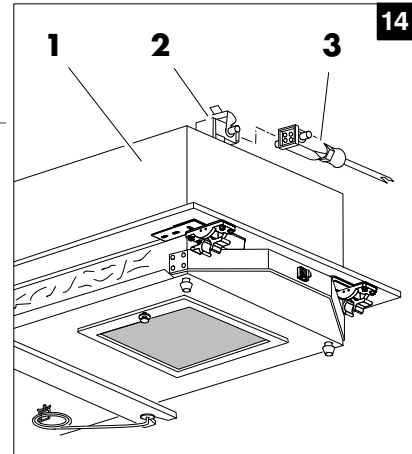
The associated wiring diagram is supplied separately with each device.

The device is supplied with a socket housing with a 4-m cable to connect to the 1 N PE ~ 50 Hz, neutral conductor, grounding conductor and signal cable. Insert the socket housing (14/3) into the pin housing (14/2) mounted on the housing (14/1), and secure the socket housing.

It is controlled by a 230 V switching signal which is supplied by a switch, a push button, an external central control (coin-operated timer) or an external timer.

When using a push button, the toggle switch must be set to "T".

The device is adjusted ex-works for a duration of 20 minutes.



Caution!

The maximum operating time must not be exceeded.

Continued on the next page

9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.2. Electrical connection - Configuration

Continued

9.2.1 Connecting the device

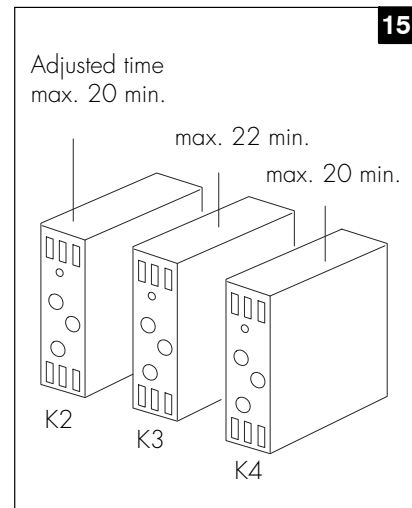
The run-time of the coin-operated timer or external timer switch must match the time set via the K2/K4 time relay on the device (20 minutes). The K3 safety timing relay must then accordingly be set to 22 minutes (always 110 % of the K2/K4 time).

See Section 9.2.3.

The switching signal acts on the coil of the main contactor via a timer switch (K2/K4) and a safety timing relay (K3) via a chain of safety features (safety-time-out feature, temperature limiter, BREAKSAFE).

The switching signal must be active for the duration of light-simulation session.

The unit reacts to the leading edge of the signal only.



Caution!

Please note that when connected using a ≤ 30 mA residual current-operated circuit breaker, current-leakage peaks may occur during ignition; these last only a short time and can only be detected by an oscillograph. If several devices are operated together via a residual current-operated circuit breaker, these peaks may accumulate if the devices are switched on simultaneously and trigger the circuit breaker, although the device(s) are not faulty.

Therefore, never connect more than two devices via a ≤ 30 mA residual current-operated circuit breaker.

Continued on the next page

9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.2. Electrical connection - Configuration

Continued

9.2.2 Setting a shorter operating time


Caution!

Only a qualified electrician may make the adjustment. Disconnect the device from the mains.

If you prefer a shorter time than 20 minutes (device setting ex-works), please set the required time on the timer switch (K2/K4) and on the safety timing relay (K3).

Adjust the K2/K4 timer switch to the required time (max. 20 minutes); then adjust the K3 safety timing relay to 110 % of the time set on the K2 timer switch (e.g. K2/K4 timer switch: 10 minutes, K3 safety timing relay: 11 minutes).

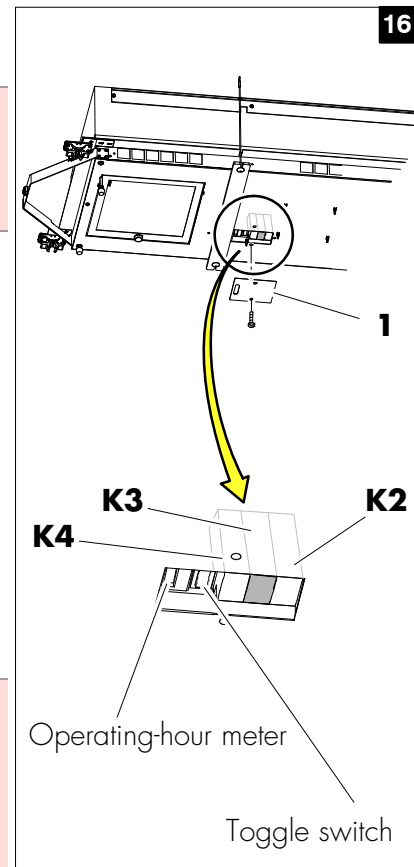
To have access to the K2 timer switch and the K3 safety timing relay, move the device to a comfortable work position (see Section 5.3.) and remove the cover plate (16/1).

Now the K2 timer switch and the K3 safety timing relay are accessible.


Caution!

The maximum time set on the K2/K4 internal device timer switch is 20 minutes.

The time set on the K3 internal safety timing relay must not exceed 22 minutes.


Continued on the next page

9. Specifications only for technicians and Klafs professionals - Installing the equipment

9.2. Electrical connection - Configuration

Continued

9.2.3 Coin-operated timer



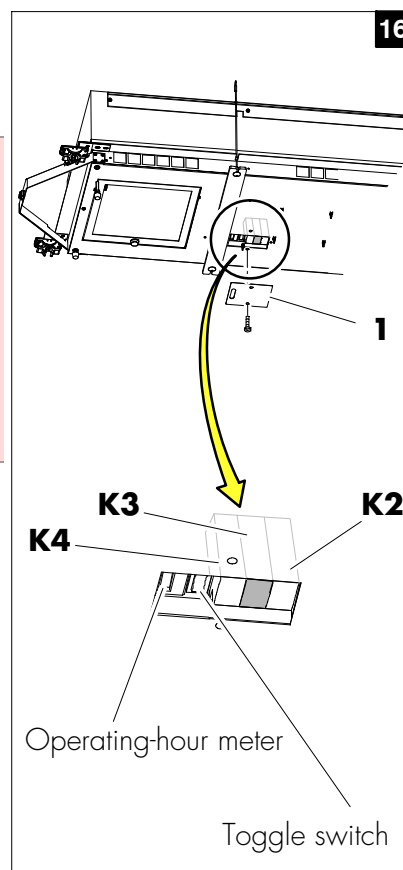
Caution!

The connection must only be established by a qualified electrician in accordance with DIN VDE 0100. Disconnect the device from the mains. Switch interface/coin-operated timer/timer: 230 V 50 Hz, phase position same as supply voltage. See wiring diagram.

The run-time of the coin-operated timer or external timer switch must match the time set via the K2/K4 time relay on the device (20 minutes ex-works). The K3 safety timing relay must then accordingly be set to 22 minutes (110 % of the K2/K4 time). If you prefer a shorter time than 20 minutes (device setting ex-works) on the coin-operated timer, please set the required time on the timer switch (K2/K4) and on the safety timing relay (K3). Adjust the K2/K4 timer switch to the same time as you set for the coin-operated timer and then adjust the K3 safety timing relay to 110 % of the time that you set on the K2/K4 timer switch (e.g. coin-operated timer and K2/K4 timer switch: 10 minutes, K3 safety timing relay: 11 minutes).

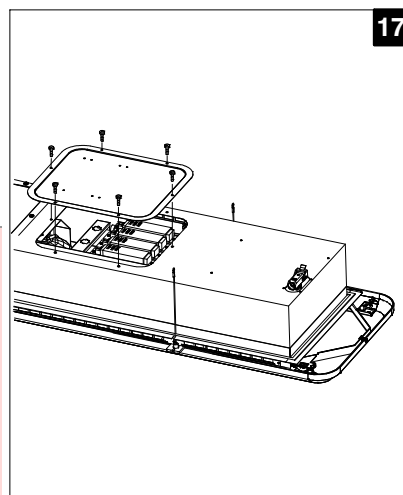
To have access to both timing relays, move the device to a comfortable work position (see Section 5.3.) and remove the cover plate (16/1).

Now the K2/K4 timer relay and the K3 safety timing relay are accessible.



Caution!

The time set on the external coin-operated timer or the external timer switch and the time set on the K2/K4 internal timer switch must not exceed 20 minutes. The time set on the K3 internal safety timing relay must not exceed 22 minutes.



Service chute

There are two service chutes (see Fig. 17) on the back of the SONNENWIESE for carrying out maintenance and repair work.

10. Technical data, wiring diagram, installation plans

Technical data, dimensions

Description			SONNENWIESE
Device type			7824
Power	(W)		2980
Mains connection	(V)		1N PE~50 Hz 230 V
Fuse	(A)		16 A
Weight	(kg)		65
Dimensions:	Length	(mm)	2000
	Width	(mm)	490
	Height	(mm)	230
Safety class			IP 22
Noise emission			≤ 70 dB (A)
Ambient operating temperature			max. 35 °C
Humidity			≤ 90 % rel. humidity, non-condensating

*Subject to technical change.

Lamp assembly	UV type according to EN 60335-2-27
3 x BQ 1177 Z4 C	3

We recommend replacing the high-intensity lamp after approx. 750 operating hours.

Lamp cover

The UV radiation sources are covered with a Klafs special collagen filter disk on the user side and a transparent 316 filter disk on the lamp side.

A highly polished rolled reflector made from electropolished and anodized aluminium is found between the high-intensity lamps and the device carrier.



In order to reduce the UV radiation, the filter discs from Klafs must be used.

10. Technical data, wiring diagram, installation plans

Wiring diagram

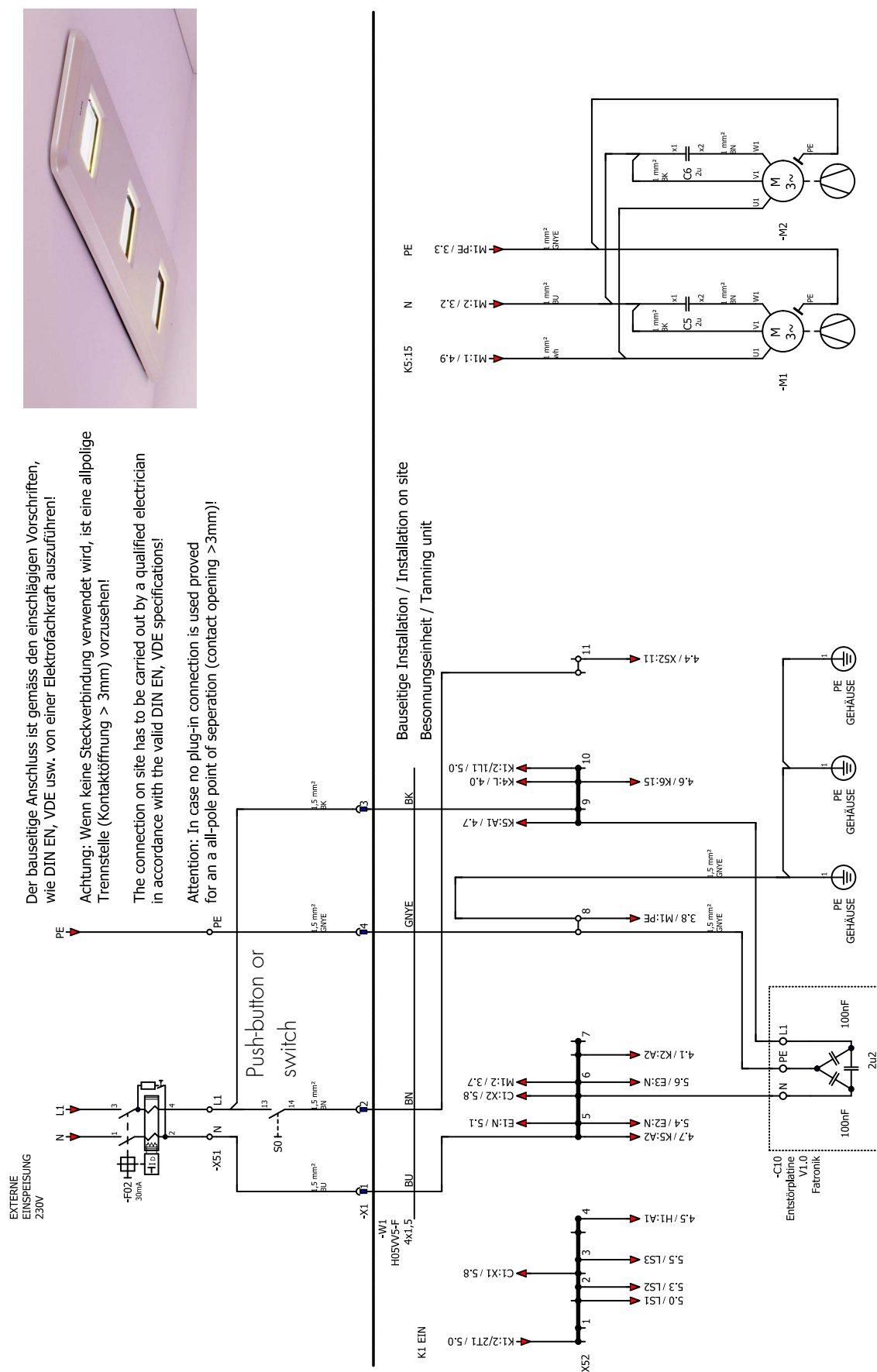


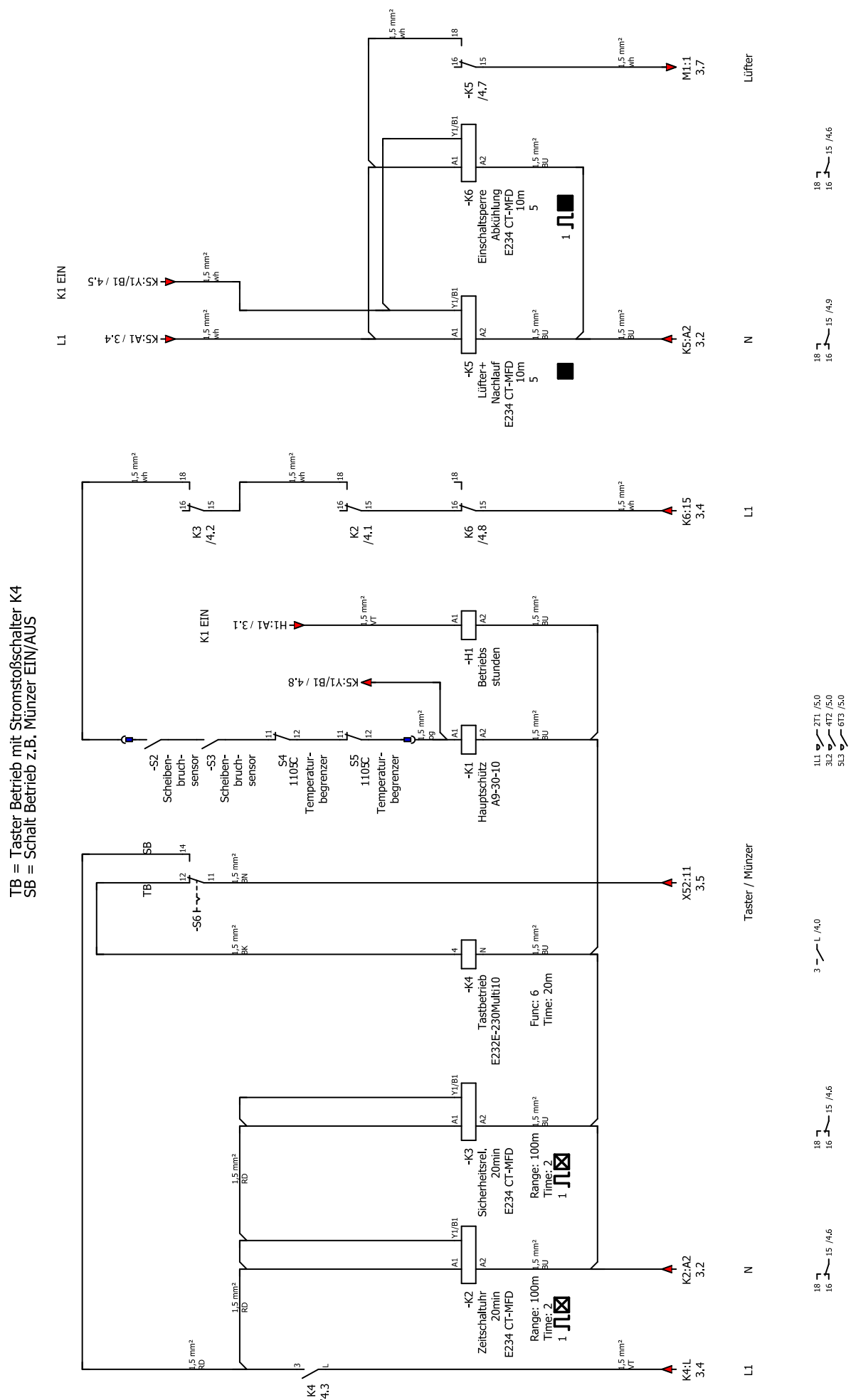
Der bauseitige Anschluss ist gemäss den einschlägigen Vorschriften, wie DIN EN, VDE usw. von einer Elektrofachkraft auszuführen!

Achtung: Wenn keine Steckverbindung verwendet wird, ist eine allpolige Trennstelle (Kontaktöffnung > 3mm) vorzusehen!

The connection on site has to be carried out by a qualified electrician in accordance with the valid DIN EN, VDE specifications!

Attention: In case no plug-in connection is used proved for an all-pole point of separation (contact opening > 3mm)!

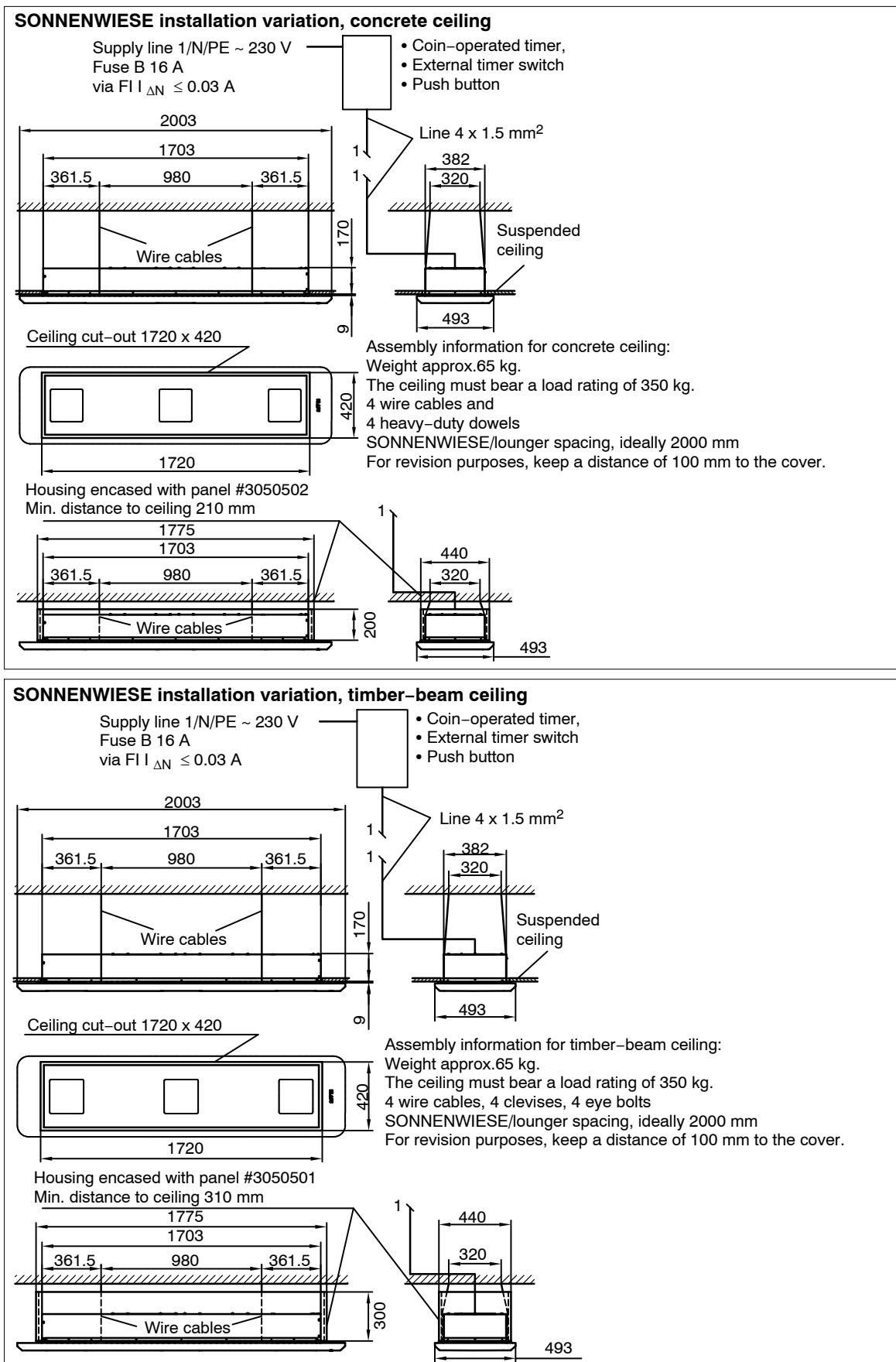






10. Technical data, wiring diagram, installation plans

Installation plans for concrete ceiling, timber-beam ceiling



11. Addresses

**Wherever you are: KLAFS is near you.
We provide expert service.**

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Accessories/Spare parts Tel. +49 791 501-310

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many accessories in
our online shop at
www.klafs.de

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