



LAMILUX Flat Roof Access Hatch

120V Comfort Swing - Instruction manual USA / Canada

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1. GENERAL INFORMATION

1.1 Information regarding this instruction manual

This instruction manual enables safe and efficient handling of the "LAMILUX Flat Roof Access Hatch Comfort Swing", hereinafter referred to as roof access hatch.








The instruction manual is an integral part of the roof access hatch and shall be kept within close proximity of the roof access hatch and be available to the staff/user at any time. The staff/user is required to have thoroughly read and understood this instruction manual before commencing any work. Basic requirement for safe working is compliance with all safety instructions and operating instructions specified in this instruction manual. Furthermore, the regional accident prevention regulations and general safety rules for the place of operation of the roof access hatch shall apply. Illustrations in this instruction manual are intended for basic understanding and may differ from the actual version of the roof access hatch.

1.2 Instructions for use

The pages of the instruction manual are numbered consecutively. A table of contents was included after the cover page for faster retrieval of the individual sections. In case the instruction manual contains basic or additional information regarding a topic in another section, cross-references are applied to inform the user of this instruction manual accordingly. All illustrations and drawings in this instruction manual serve the general visualization and may differ from the actual dimensions in order to ensure better depiction of the facts. They may differ slightly from the actual version of the roof access hatch.

1.3 Explanation of symbols

Warning instructions in the instruction manual are additionally marked with warning symbols. The following warning symbols are used in this instruction manual.

Symbols	Meaning
	General warning notice
	Danger from electric power
	Danger from suspended load
	Risk of falling
	Risk of electric shock
	Danger of environmental pollution
	Keep off! No Climbing!


Symbols	Meaning
	Danger of crushing
	Danger of pinching
	Hot surface
	Read the instruction
	Advice text ...

1.4 Warning notices

The warning notices used in this instruction manual are preceded by signal words indicating the level of risk.

In addition, the warning symbol indicates the type of risk.

The following warning notices are used in this instruction manual:

	⚠ DANGER Danger to life! Consequences for failure to comply with ... >> Cautionary note
---	--

A warning notice of this risk level indicates an imminent dangerous situation.

If this dangerous situation is not prevented, it may cause death or severest injuries.

The instructions in this warning instruction may be complied with, to prevent danger to life or severest


injuries to people.

	⚠ WARNING Risk of injury! Consequences for failure to comply with ... >> Cautionary note
---	---

A warning notice of this risk level indicates a possible dangerous situation.

If this dangerous situation is not prevented, it may cause death or severe injuries.


The instructions in this warning notice may be complied with, to prevent danger to life or severe injuries to people.

	⚠ CAUTION Personal injury caused by ... Consequences for failure to comply with ... >> Cautionary note
---	---

A warning notice of this risk level indicates a possible dangerous situation.

If this dangerous situation is not prevented, it may cause small or moderate injuries.

The instructions in this warning notice shall be complied with, to prevent injuries to people.


	NOTICE Damage to property caused by ... Consequences for failure to comply with ... >> Cautionary note
---	---

A warning instruction of this risk level indicates a possible damage to property.

If this dangerous situation is not prevented, it may cause damages to property.

The instructions in this warning notice may be

complied with, to prevent damage to property.

	SAFETY INSTRUCTIONS
	Advice text ...

An advice indicates additional information, which are important for subsequent handling or facilitate the described working step.

1.5 Limitation of liability

All information and advice in this instruction manual were compiled based on the applicable standards and regulations, the state of the art of technology, as well as our many years of know-how and experience.


We reserve the right to technical modifications in the course of an update of the roof access hatches subject to this instruction manual. No claims are to be asserted from the information, illustrations and descriptions in this instruction manual.

The manufacturer does not assume any liability for damages or operational malfunctions caused by:

- failure to comply with this instruction manual,
- improper use,
- deployment of unqualified or insufficiently qualified staff,
- use of unauthorized equipment,
- faulty connection,
- preceding suppliers which are not part of the scope of delivery and services,
- failure to use original spare parts and component parts,
- technical modifications and reconstructions, if this was not agreed on with LAMILUX Heinrich Strunz GmbH,
- failure to perform the required maintenance work,
- performance of welding work at the roof access hatch.

LAMILUX Heinrich Strunz GmbH assumes liability,

while excluding any further claims, for any mistakes or omissions on their part, in the scope of the warranty obligations incorporated in the contract. Claims for damages, irrespective of the legal basis, are excluded.

	SAFETY INSTRUCTIONS
	The operator of the LAMILUX Flat Roof Access Hatch Comfort is advised to conclude a service contract with LAMILUX Heinrich Strunz GmbH. This ensures that regular maintenance work at the roof access hatch is carried out by our service staff and necessary wear and spare parts are available without long delivery times.

1.6 Copyright protection


All documents are protected under copyright law. Disclosure and reproduction of documents, or parts of documents and the use of their content is not permitted, unless expressly approved. Violations are liable to prosecution and oblige to pay claims for damages.

We reserve all rights to exercise industrial property rights.

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1.7 Spare parts

	⚠ WARNING
	<p>Risk of injury!</p> <p>Wrong or faulty spare parts may cause damages to or lead to malfunctions or a complete breakdown of the machine and endanger safety.</p> <p>>>Only use original spare parts provided by the manufacturer.</p>

1.8 Customer service

Please do not hesitate to contact the customer service of the company LAMILUX Heinrich Strunz GmbH, if you have any technical questions regarding the LAMILUX Flat Roof Access Hatch Comfort Swing.

Please provide the following information with your request:

- Flat Roof Access Hatch Comfort Swing
- Year of manufacture
- Product N°

The required information can be found on the type plate of the LAMILUX Flat Roof Access Hatch Comfort Swing.

1.9 Manufacturer details

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2. SAFETY

2.1 General Information

This chapter gives important information on all safety aspects, to provide optimum protection from risks during assembly and a safe and faultless operation.

	<p>⚠ WARNING</p> <p>Danger in case of failure to comply with these safety instructions!</p> <p>Failure to comply with the safety instructions and operating instructions specified in this instruction manual may cause significant risks.</p> <p>>> Please make sure to observe the warning notices and instructions at all times.</p>
---	---

2.2 Responsibilities during assembly and operation

During assembly of the roof access hatch the lead contractor is subject to the statutory provisions on industrial safety.

In addition to the industrial safety information in this instruction manual, the applicable safety, accident prevention and environmental protection regulations for the assembly and operation of the LAMILUX Flat Roof Access Hatch may be complied with.

The following points are to be observed:

- Get information on the applicable health and safety regulations and prepare a risk assessment to identify additional risks, which may arise from the specific working conditions at the installation site for the roof access hatch. These have to be implemented in the form of a working instruction for the assembly and operation of the roof access hatch.
- Danger zones created by the installation of the roof access hatch (e.g. proximity to the roof edge etc.) have to be secured.
- It is required to check at all times during the assembly and operation time of the roof access hatch, whether the prepared operational instructions comply with the current state of regulations and, if necessary, to update them accordingly.
- It is furthermore required to clearly regulate and define responsibilities of the staff regarding installation, operation, service and cleaning.
- Make sure, that all people handling the roof access hatch have read and understood the instruction manual. Furthermore, the staff has to be trained and informed about the risks on a regular basis.
- Ensure safety and risk-conscious handling of the roof access hatch in compliance with the instruction manual.
- Make the instruction manual and all further documents available to the staff at all times.
- Provide personal protective equipment to the staff.

The operator is furthermore responsible to ensu-

re a flawless condition of the roof access hatch at all times.

In this respect, the operator may observe ...

- that the cleaning and service intervals specified in this instruction manual are complied with.
- all safety devices are being checked for functionality and completeness on a regular basis.

2.3 Staff requirements

2.3.1 Qualification of the staff

	⚠ WARNING
	Risk of injury due to insufficient qualification! Improper handling may lead to significant damages to persons and property. >> All activities may only be carried out by qualified staff.


This instruction manual specifies the following qualifications for the different areas of responsibility:

- Instructed person
received instructions from the operator regarding the tasks assigned and possible risks caused by improper behavior.
- Qualified staff
as a result of his/her professional training, know-how and experience, as well as knowledge of the relevant provisions, he/she is able to complete the tasks assigned to him/her and identify and avoid potential risks.
- Qualified electrician
as a result of his/her professional training, know-how and experience, as well as knowledge of the relevant standards and provisions, he/she is able to complete work on electric systems and identify and avoid potential risks.


The qualified electrician is trained for the specific place of operation, he/she is working at and has knowledge of the locally applicable standards and provisions.

Only persons who are expected to complete their work in a reliable manner are admitted as members of the staff. Persons whose responsiveness is influenced by e.g. drugs, alcohol or medication are not permitted.

Assembly and operational tasks may only be delegated to staff being educated, trained or instructed or in the course of the general training, if continuous supervision of an experienced person is ensured!


	SAFETY INSTRUCTIONS
	The applicable regulations regarding age and profession shall be complied with, when selecting staff for the assembly and operation location.

2.3.2 Unauthorized persons

	⚠ WARNING
	Risk for and caused by unauthorized persons! Unauthorized persons, who do not fulfill the described requirements, are not aware of the risks in the working area. >> Unauthorized persons are to be kept away from the working area. >> In case of doubt, persons shall be approached and sent away from the working area. >> Work shall be interrupted during the presence of unauthorized persons in the working area.

2.3.3 Instruction

Assembly staff and users shall receive regular instruction from the relevant person in charge (person in charge for construction, operator etc.).


	SAFETY INSTRUCTIONS
	For better monitoring, the instruction conducted shall be recorded, with a signature of the participants confirming receipt of the instruction.

2.4 Intended use

The LAMILUX Flat Roof Access Hatch Comfort Swing may be used as exit opening on flat roofs. Furthermore, it can be used for daily ventilation.

Closing and opening is always conducted via a control unit with enabling function, which is to be positioned within range of vision of the element. The control panel provided in combination with a key switch without self-hold, is the only control unit to be used. Furthermore, the roof access hatch shall be the only point of access to the corresponding roof area (in order to ensure, that during operation no person can access the danger zone from outside, without being noticed by the user). If there are several access possibilities to the roof area, a risk assessment must be made for each case. This ensures that the roof access hatch can be operated safely.

A further or additional use is considered as improper use.

	<table><tr><th data-bbox="729 95 1023 140">⚠ WARNING</th></tr><tr><td data-bbox="729 140 1023 564"><p>Risk of improper use</p><p>Every use beyond the intended use and/or different use of the LAMILUX Flat Roof Access Hatch Comfort Swing may lead to dangerous situations.</p><p>>> Only use the LAMILUX Flat Roof Access Hatch Comfort Swing properly.</p><p>>> All information in this instruction manual shall be observed.</p></td></tr></table>	⚠ WARNING	<p>Risk of improper use</p> <p>Every use beyond the intended use and/or different use of the LAMILUX Flat Roof Access Hatch Comfort Swing may lead to dangerous situations.</p> <p>>> Only use the LAMILUX Flat Roof Access Hatch Comfort Swing properly.</p> <p>>> All information in this instruction manual shall be observed.</p>
⚠ WARNING			
<p>Risk of improper use</p> <p>Every use beyond the intended use and/or different use of the LAMILUX Flat Roof Access Hatch Comfort Swing may lead to dangerous situations.</p> <p>>> Only use the LAMILUX Flat Roof Access Hatch Comfort Swing properly.</p> <p>>> All information in this instruction manual shall be observed.</p>			

All claims for damages arising from improper use are excluded.

The operator alone bears the risk.

2.5 Demarcation of the danger zone

The danger zone of the roof access hatch consists of the following areas with an additional safety distance of 500mm to each side:


- G1: Area vertically below the ceiling opening
- G2: Main and ancillary closing edges of the cover
- G3: Roof area located below the traversal range of the hatch (closed up to the maximum opening angle)

Fall protection measures (e.g. railing) shall be installed on the opener side and opposite the entrance/exit side. The safety distances specified in DIN EN 349 regarding fixed roof installations (railing, wall) shall be complied with.

Depending on the staircase used for access, a handrail in the exit area is recommended.


2.6 Specific risks

2.6.1 Electronics

	<p>⚠ DANGER</p> <p>Danger from electric power!</p> <p>Danger to life in the event of contact with live cables or components!</p> <p>>> Work on electronic equipment may only be carried out by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations.</p> <p>>> Defects discovered on electronic systems/assemblies/equipment shall be fixed immediately. In case there is an acute risk until the defect is fixed, the system, the assembly and/or equipment shall not be used in the defect state.</p> <p>>> Parts on which inspection, service or maintenance work is carried out, may be disconnected from power, if required, and secured against reconnection.</p> <p>Please check the disconnected parts for disconnected power first, then ground and short-circuit them and isolate adjacent live parts!</p>
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	<p>>> In case working on live parts is necessary, a second person may be asked for support and to operate the main switch for power release in case of emergency. Working areas shall be closed off with a red-white safety chain and a warning sign. Only use voltage-isolated tools!</p> <p>>> Fuses shall not be repaired or bypassed. Only use original fuses with prescribed current!</p>
--	--

2.6.2 Mechanics

	<p>⚠ WARNING</p> <p>Danger of crushing!</p> <p>Risk of injury during opening and closing of the roof access hatch.</p> <p>>> Keep out of the danger zone during opening and closing of the system</p> <p>>> Do not intervene with moving parts.</p> <p>>> Do not disable the sensor</p>
---	---

2.7 Risk of falling

	<p>⚠ WARNING</p> <p>Risk of falling!</p> <p>There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.</p> <p>>> Do not step to the falling edge</p> <p>>> Put barriers around danger zones</p> <p>>> Wear your personal protective equipment</p>
---	---

2.8 Personal protective equipment

	⚠ WARNING
	Risk of injury when wearing wrong or no protective equipment! It is required to wear personal protective equipment during work to minimize health risks. >> The protective equipment required for the corresponding work shall be worn at all times. >> Instructions attached in the working area regarding personal protective equipment, shall be complied with.

The following protective equipment shall be worn for all works carried out at the roof access hatch:

	Safety helmet to protect the head from falling objects or from banging your head
	Safety shoes with steel cap

When completing specific work, additional special protective equipment is required. This is specifically referred to in the relevant chapters. The following protective equipment shall be worn when carrying out specific work at the roof access hatch:

	Safety gloves to protect from injuries
	Harness to protect from falling

2.9 Safety devices


	⚠ WARNING
	Risks caused by missing or non-functioning safety devices! Missing or non-functioning safety devices may cause severe injuries. >> Roof access hatch shall only be operated if all safety devices are installed and functioning.

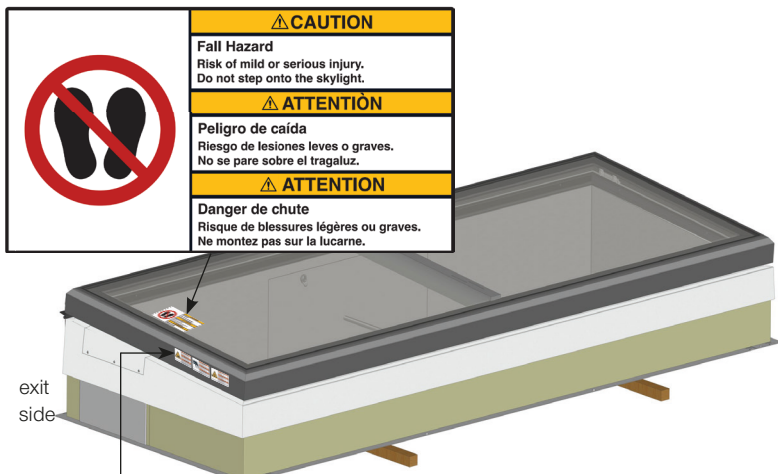
The LAMILUX Roof access hatch Comfort Swing was manufactured in compliance with the applicable legal requirements of the European Union.

The requirements specified in the standard DIN EN 12978 "Doors And Gates - Safety Devices For Power Operated Doors And Gates" have been complied with. Nevertheless, the roof access hatch may involve risks, if it is used incorrectly or if it is being operated in improper condition.

Danger zones that cannot be excluded as a result of construction may, if applicable, be indicated with warning signs at the roof access hatch and in the health and safety instructions of the instruction manual.

2.10 Roof access hatch signs

	SAFETY INSTRUCTIONS
	For the protection of the assembly and operating staff, warning and risk signs may be installed at the roof access hatch. These signs are to be complied with. Defect or illegible warning/risk signs have to be renewed immediately.



⚠ CAUTION
Fall Hazard Risk of mild or serious injury. Do not step onto the skylight.
⚠ ATTENCIÓN
Peligro de caída Riesgo de lesiones leves o graves. No se pare sobre el tragaluz.
⚠ ATTENTION
Danger de chute Risque de blessures légères ou graves. Ne montez pas sur la lucarne.




⚠ WARNING
Fall Hazard Risk of serious or fatal injury. Watch your step.
⚠ ADVERTENCIA
Riesgo de tropiezo Riesgo de lesiones graves o mortales. Tenga cuidado al pisar.
⚠ AVERTISSEMENT
Risque de trébuchement Risque de blessures graves ou mortelles. Faites attention à la marche.



⚠ WARNING
Risk of crushing and amputation Risk of serious or fatal injury. Follow the proper procedure for opening and closing the roof access hatch.
⚠ ADVERTENCIA
Riesgo de aplastamiento y amputación Riesgo de lesiones graves o mortales. Siga el procedimiento correcto para abrir y cerrar la salida al techo.
⚠ AVERTISSEMENT
Risque d'écrasement et d'amputation Risque de blessures graves ou mortelles. Suivez la procédure appropriée pour ouvrir et fermer l'ouverture du toit.



⚠ WARNING
Risk of crushing and amputation Severe injuries can result. Do not touch the skylight or the opening mechanism. Stay away while the skylight is operating.
⚠ ADVERTENCIA
Riesgo de aplastamiento y amputación Se pueden provocar lesiones graves. No toque el tragaluz ni el mecanismo de apertura. Manténgase alejado mientras el tragaluz está funcionando.
⚠ AVERTISSEMENT
Risque d'écrasement et d'amputation Des blessures graves pourraient survenir. Ne touchez pas à la lucarne ou au mécanisme d'ouverture. Restez à distance lorsque la lucarne est en fonction.



⚠ WARNING


Risk of electric shock
Contact may lead to serious or fatal injury.
Opening of the control cabinet
by authorized personnel only.

⚠ ADVERTENCIA

Riesgo de descarga eléctrica
En caso de contacto se pueden provocar lesiones
graves o mortales. Solo personal autorizado puede
abrir el gabinete de control.

⚠ AVERTISSEMENT

Risque de décharge électrique
Un contact peut entraîner des blessures graves ou
mortelles. L'ouverture de l'armoire de commande doit
être effectuée uniquement par du personnel autorisé.



⚠ WARNING

Read and understand operator's manual and all other
safety instructions before using this machine.
Failure to follow operating instructions could result in
death or serious injury.

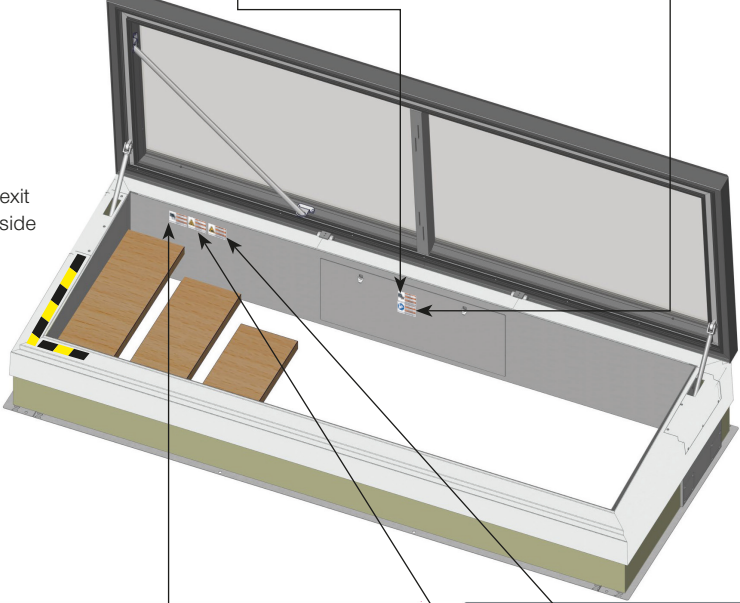
⚠ ADVERTENCIA


Lea y entienda el manual del usuario y todas las
instrucciones de seguridad antes de usar esta máquina.
De no seguir las instrucciones de funcionamiento, se
pueden provocar lesiones graves o la muerte.

⚠ AVERTISSEMENT

Prenez le temps de lire et de comprendre le mode d'emploi
et toutes les directives de sécurité avant d'utiliser cette
machine. Omettre de suivre les directives d'utilisation
pourrait entraîner la mort ou des blessures graves.

exit
side





⚠ WARNING

Risk of crushing and amputation
Risk of serious or fatal injury.
Follow the proper procedure for opening and closing
the roof access hatch.

⚠ ADVERTENCIA

Riesgo de aplastamiento y amputación
Riesgo de lesiones graves o mortales.
Siga el procedimiento correcto para abrir y cerrar la
salida al techo.

⚠ AVERTISSEMENT

Risque d'écrasement et d'amputation
Risque de blessures graves ou mortelles.
Suivez la procédure appropriée pour ouvrir et fermer
l'ouverture du toit.



⚠ WARNING

Risk of crushing and amputation
Severe injuries can result. Do not touch the skylight
or the opening mechanism. Stay away while the
skylight is operating.

⚠ ADVERTENCIA

Riesgo de aplastamiento y amputación
Se pueden provocar lesiones graves. No toque el
tragaluz ni el mecanismo de apertura. Manténgase
alejado mientras el tragaluz está funcionando.

⚠ AVERTISSEMENT

Risque d'écrasement et d'amputation
Des blessures graves pourraient survenir. Ne touchez
pas à la lucarne ou au mécanisme d'ouverture. Restez
à distance lorsque la lucarne est en fonction.



⚠ WARNING

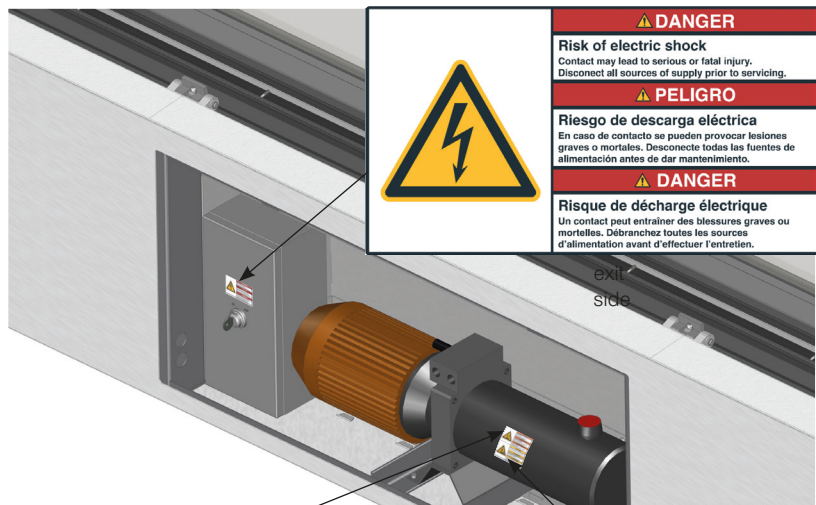
Fall Hazard
Risk of serious or fatal injury.
Watch your step.

⚠ ADVERTENCIA

Riesgo de tropiezo
Riesgo de lesiones graves o mortales.
Tenga cuidado al pisar.

⚠ AVERTISSEMENT

Risque de trébuchement
Risque de blessures graves ou mortelles.
Faites attention à la marche.



⚠ DANGER

Risk of electric shock

Contact may lead to serious or fatal injury.
Disconnect all sources of supply prior to servicing.

⚠ PELIGRO

Riesgo de descarga eléctrica

En caso de contacto se pueden provocar lesiones graves o mortales. Desconecte todas las fuentes de alimentación antes de dar mantenimiento.

⚠ DANGER

Risque de décharge électrique

Un contact peut entraîner des blessures graves ou mortelles. Débranchez toutes les sources d'alimentation avant d'effectuer l'entretien.



⚠ WARNING

Hot surface

Risk of mild or moderate injury.
Do not touch hot surface.

⚠ ADVERTENCIA

Superficie caliente

Riesgo de lesiones leves o moderadas.
No toque la superficie caliente.

⚠ AVERTISSEMENT

Surface chaude

Risque de blessures légères ou modérée.
Ne touchez pas la surface chaude.



⚠ CAUTION

Dispose of these chemicals correctly
They are dangerous to the environment

⚠ ATENCIÓN

Elimine estas sustancias químicas
de manera correcta.

Son nocivas para el medioambiente.

⚠ ATTENTION

Jetez ces produits chimiques de
façon appropriée.

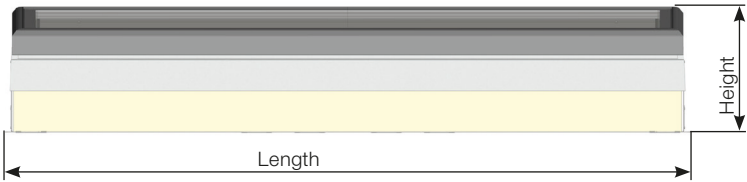
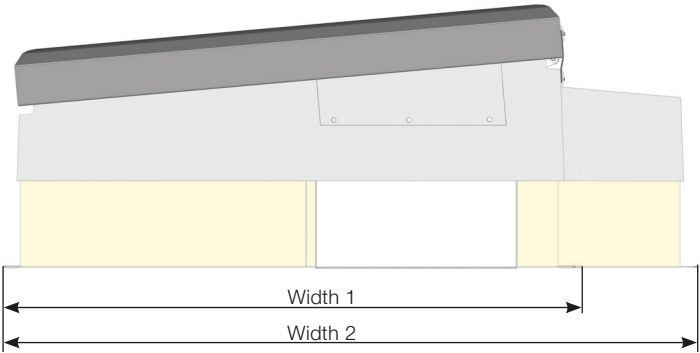
Ils sont nocifs pour l'environnement.

3. TECHNICAL SPECIFICATIONS

3.1 Data sheet

Type	LAMILUX Flat Roof Access Hatch Comfort Swing	
Top roof edge length	3000 / 3500	mm
Top roof edge width	1000	mm
Length	3324 / 3824	mm
Width 1	1324	mm
Width 2	1606	mm
Height (without accessories)	606	mm
Weight (without transport pallet)	approx. 515	kg
Electronics		
Power input	max. 1,36 single-phase	kW
Power consumption	12	A
Line voltage	120	V _{AC}
Power frequency	50	Hz
Control voltage	24	V _{DC}

3.2 Dimension sheet



4. TRANSPORT, ASSEMBLY AND CONNECTION


3.3 Type plate

The type plate can be found on the frame profile (inside).

The type plate specifies the following information:


- Function
- Type/Model
- Serial N°
- Year of manufacture

4.1 Safety

	<div data-bbox="734 368 925 403">⚠ WARNING</div> <div data-bbox="734 411 869 435">Risk of injury!</div> <p>There is risk of injury or even death caused by falling or uncontrolled swinging objects, when carrying heavy loads.</p> <p>>> Do never step under suspended loads.</p> <p>>> The instructions for attachment points are to be complied with.</p> <p>>> Do not attach them to protruding parts of the roof access hatch. Ensure safe fit of the attachment material.</p> <p>>> Do only use authorized lifting devices and attachment material with sufficient load carrying capacity.</p> <p>>> Do not use any defect ropes and/or belts.</p> <p>>> Ropes and belts shall not be put on sharp edges and corners, and not be knotted or twisted.</p>
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	<div data-bbox="734 1241 925 1276">⚠ WARNING</div> <div data-bbox="734 1284 874 1308">Risk of falling!</div> <p>There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.</p>
---	--

	>> Do not step to the falling edge >> Put barriers around danger zones >> Wear your personal protective equipment
--	---

	⚠ WARNING Risk of injury when wearing wrong or no protective equipment!
	It is required to wear personal protective equipment during work to minimize health risks. >> The protective equipment required for the corresponding work shall be worn at all times. >> Instructions attached in the working area regarding personal protective equipment, shall be complied with.


	⚠ WARNING Risk of injury due to insufficient qualification!
	During assembly and maintenance there is risk of injury for the person carrying out work in the danger zone. Faulty assembly or maintenance may cause risks for the later operation. >> Assembly and maintenance work shall only be completed by qualified staff.

4.2 Transport

	NOTICE Damages as a result of improper transport!
	Improper transport may cause significant damages to property. >> Use caution when unloading the packages after delivery as well as during in-company transport and comply with the symbols and instructions on the packaging. >> Remove packing only shortly before assembly. >> Never place the roof access hatch directly on the underground! Place square timbers under the roof access hatch to prevent cutting off the electric cables. >> Do not expose the uninstalled roof access hatch to weather conditions (humidity).

4.2.1 Transport inspection

Check delivery immediately upon receipt for completeness and transport damages.

	SAFETY INSTRUCTIONS
	In case of failure to comply with the following instructions, the insurance obligation of the insurance company may lapse.

In case of any externally visible damages, please proceed as follows:

- If a damage is suspected, receipt may only be confirmed under reservation (e.g. on the shipping documents), detailing the suspected damage.

- For goods delivered in containers, it should be ensured, that the containers and locks or seals were checked by the persons responsible of the shipping company or the carrier. If a container is damaged or the locks and seals are broken, missing or do not correspond to the shipping documents, receipt may only be confirmed under reservation, detailing the suspected damage and damaged or wrong locks and seals are to be kept.
- Ensure claims for compensation against third parties.

Shipping company, other carriers, forwarders, warehouse keepers, customs and port authorities

- shall be invited for a joint inspection,
- asked for confirmation of the damage,
- and be held liable in writing. Furthermore, the damage is to be described in detail.

For externally visible damages, this shall be completed before acceptance of the good; for damages, which are not visible externally, this shall be completed immediately after discovery of these.

- Find out about and comply with the complaint period

i	SAFETY INSTRUCTIONS
	Complain about every defect as soon as it is detected. Claims for compensation may only be asserted within the applicable complaint period.

- Ensure mitigation of existing damages and prevention of further damages.
- Immediately contact the surveyor specified in the insurance documents, who will detect the damage and give advice on ensuring claims for compensation against third parties and on measures to mitigate the damage.
- Do not change the condition of the delivery

and its packaging up to the arrival of the surveyor, unless this is necessary to mitigate or prevent any further damage.

- Inform the insurance company immediately of the insurance claim and submit the complete claim documents at your earliest convenience (at the latest in due time before expiry of any periods of limitation for claims for compensation against third parties) to accelerate the claims settlement.

4.2.2 Packaging/Storage

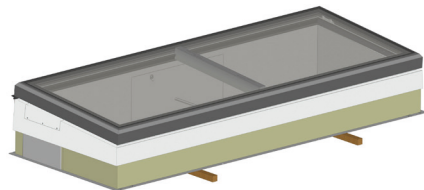
The roof access hatch is pre-assembled to the greatest possible extent and packaged accordingly at the factory.

- The roof access hatch is to be left in the packaging until installation.
- The roof access hatch is to be stored under a cover and in a dry place.

4.2.3 Transport options

To ensure safe transport, the roof access hatch shall remain and be transported on the transport pallet up to the time of assembly on the roof.

Transport may be carried out with a forklift or a crane.





Transport may also be carried out via the fastening eyes on the frame.

4.3 Assembly

Instruction: The assembly is described in detail in the separate installation instructions.

Only the fixing material specified in the installation instructions is approved for assembly. The assembly, connection and start of operation may only be performed by qualified staff. After assembly of the roof access hatch, the initial operation including the safety-technical inspection, shall be completed by an authorized person. The roof access hatch may only be installed with the safety distances specified in DIN EN 349. In this respect, the following safety distances have to be complied with during the largest outreach (corresponds to the open roof access hatch):

- Minimum distance to fixed objects on the roof: 300mm
- In the event of a risk to the torso: 500mm

Depending on the construction and the installation on the roof, a corresponding step might have to be added.

	⚠ WARNING
	<p>Risk of falling!</p> <p>There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.</p> <p>>> Do not step to the falling edge</p> <p>>> Put barriers around danger zones</p> <p>>> Wear your personal protective equipment</p>

If the normal ambient light does not illuminate the danger zone sufficiently, additional lighting shall be installed on-site.

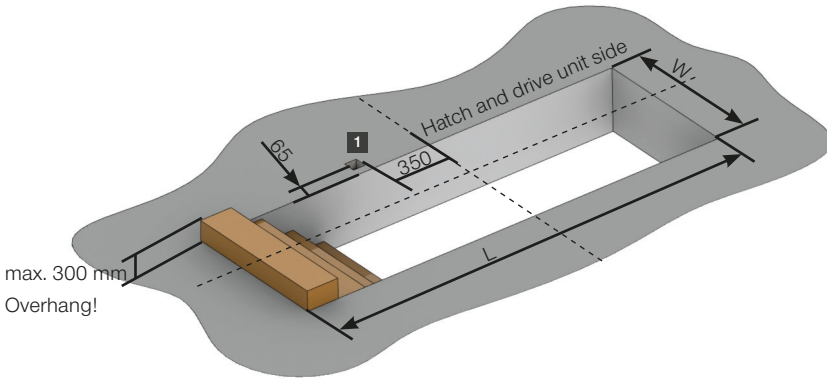
4.3.1 Preparatory work

Before commencing work, a risk analysis may be prepared, to examine systematically how government regulations on occupational health and safety and the accident prevention regulations of the trade associations can be complied with.

Furthermore, in the course of the risk assessment, it shall be examined which risks arise from the operation of the roof access hatch with regard to the assembly location and which technical or organizational measures may have to be taken. There is a risk of injury by shearing and crushing during operation of the roof access hatch.

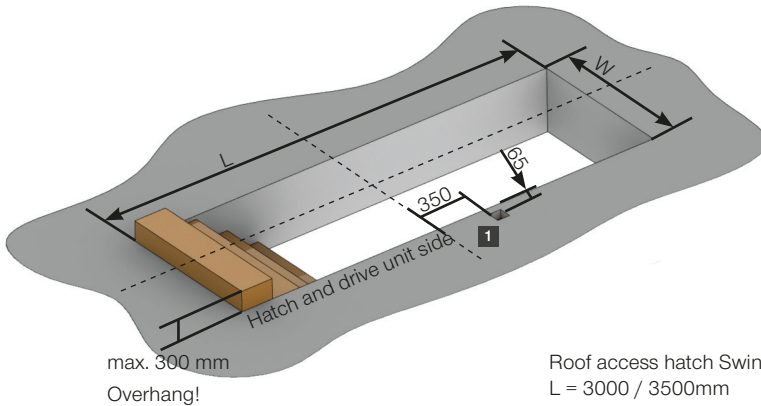
Roof opening

Construction for Flat Roof Access Hatch Comfort Swing opening direction left:



Prepare roof opening according to specifications (see outline above).

Construction for Flat Roof Access Hatch Comfort Swing opening direction right:



Roof access hatch Swing:
L = 3000 / 3500mm
W = 1000mm
1 = cut-outs for connecting cables and/or
connection box

Prepare roof opening according to specifications (see outline above).

Transport and storage at assembly location

Lift the roof access hatch to the roof with appropriate equipment (lifting devices etc.) (see chapter "Transport").



NOTICE

Damages as a result of improper storage at assembly location!

Improper storage at assembly location may cause significant damages to property.

- >> Use caution when unloading the packages after delivery as well as during in-company transport and comply with the symbols and instructions on the packaging.
- >> Remove packing only shortly before assembly.
- >> Never place the roof access hatch directly on the underground! Place square timbers under the roof access hatch to prevent cutting off the electric cables.
- >> Do not expose the uninstalled roof access hatch to weather conditions (humidity).
- >> Store the roof access hatch well ventilated and avoid heat accumulation.
- >> Do not lift the roof access hatch with glass suction cups.

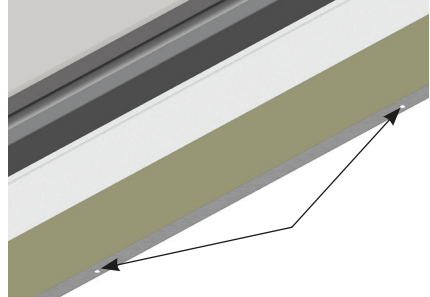
4.3.2 Installation

Place the roof access hatch on the roof opening. The connecting cables from the housing of the power unit may be laid through the opening in the frame and down into the roof junction box. Cutting off the cables shall be avoided.

The floor space for the top unit has to be completely horizontal. Before fixing the roof access hatch,

the hatch sealing between the top unit and the hatch may be checked for circumferential seating. If this is not the case, the malposition may be corrected by adding backing to the support of the roof access hatch. A later correction is not possible!

The pre-assembled limit switch of the roof access hatch is always installed opposite the staircase.



The boreholes for the fixing material are already pre-drilled into the construction of the roof access hatch. Appropriate fixing material to fix the roof access hatch may be selected in compliance with the existing underground. A list of fixing material is to be found in the separate installation instructions.


4.3.3 Connection




⚠ DANGER


**Danger from electric power!
Danger to life in the event of contact with live cables or components!**

- >> Work on electronic equipment may only be carried out by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations.
- >> Before commencing work, the safety rules of electrical engineering shall be followed and complied.


	⚠ WARNING
	<p>Risk of injury from improper installation!</p> <p>Do only carry out connection work as specified in the attached connection plan and on the control unit supplied. Modifications of the circuit or control system may cause severe damage to persons or property.</p> <p>>> The roof access hatches shall under no circumstances perform automatic movements as a result of the type of activation or an additional control system.</p> <p>>> The roof access hatches may exclusively be connected to and operated with the sensor integrated into the control unit.</p> <p>>> Do never connect the drive units directly and without control system to the power supply voltage.</p> <p>>> It is only authorized to use switches without self-hold as operating units for the control system. Switches or any other kind of control unit, which lead to an automatic operation (e.g. thermostats, wind/rain sensor control) are not admissible.</p> <p>>> The operating unit may be installed within view to the roof access hatch.</p>

- The key switch may be installed on staircase level within view to the roof access hatch.
- Only ONE key switch is permitted for operation of the roof access hatch.
- The roof access hatch is operated with 120V AC.
- The connection box, to connect the supply lines of the roof access hatch with the power supply and the key switch, shall be installed to the ceiling connection of the roof access hatch.

	SAFETY INSTRUCTIONS
	To ensure authorized operation of the roof access hatch, it is recommended to use a key switch without self-hold.

	NOTICE
	<p>Malfunctions!</p> <p>Modifications to the connection lines of the drive units may lead to malfunctions or even a total breakdown of the roof access hatch.</p> <p>>> The connection lines of the drive units shall be connected in a connection box on-site. No modifications to the supply lines shall be carried out (shorten/lengthen).</p>


- The roof access hatch may be connected in accordance with the connection plan.
- The connections of the wind and rain detector are specified in the separate instructions provided by the manufacturer

	SAFETY INSTRUCTIONS
	The power supply of the roof access hatch may be executed as separate power circuit.

The following fuses are installed in the control unit of the roof access hatch:

- Automatic circuit breaker B16 for electrical feed 120VAC (labeling F1)
- Safety fuse for SPS supply 24 VDC 100mA slow (labeling F2)
- Safety fuse for valve control and control lines 24 VDC 2.5A slow (labeling F3)

Protection to be installed on-site: RCD (Residual Current Device) with 30mA and in accordance with current standards.


	SAFETY INSTRUCTIONS
	It is NOT permitted to operate the roof access hatch automatically controlled (e.g. Smart Home Control, wind and rain sensors etc.).

Limit switch:

The limit switch indicates to the control unit when the hatch is aligned with the frame.

The limit switch is pre-assembled and is located at the inside of the frame, on the narrow side, opposite the staircase. Before initial operation, it shall be checked, whether the limit switch is properly adjusted and the hatch is aligned with the supporting construction. If this is not the case, the limit switch may be readjusted. For readjustment, the housing of the switch may be moved up or down to the point, where the limit switch is activated and/or pressed by the hatch.

Failure to adjust the limit switch properly may cause leakage or damages to the supporting construction.

	NOTICE
	<p>Warning of damages to property!</p> <p>Failure to check or adjust the limit switch may cause damages to the construction or the inventory of the operator.</p> <p>>> Before initial operation, it shall be checked, whether the hatch is aligned with the supporting construction and the limit switch is thereby activated.</p>

5. DESCRIPTION

5.1 Functional description

The roof access hatch is designed as a system with one glass element constituting the opening hatch. The hatch is powered by two synchronous hydraulic cylinders. The opening hatch is folded upwards in a linear movement. The system is controlled by the integrated control unit. The movement will be started by a key switch without self-hold installed on-site, which is to be pressed by the user while ensuring eye contact to the roof access hatch. In addition the exit opening is monitored by a sensor integrated in the roof access hatch, to prevent causing a risk to people walking through. A pre-assembled awning with wind and rain sensor may be added as accessory. It is operated using a switch.


5.2 Control units

The two hydraulic cylinders are connected to a power unit in the inspection opening. The cylinders open and/or close the roof access hatch. The cylinders run synchronous as a result of internal electronics. A separate synchronous control is not required. The two components of the light barrier are installed at the factory and are located at the short sides of the roof access hatch. Receiver and Transmitter of the sensor are installed in alignment with each other. The sensor monitors the walk-through area of the roof access hatch to prevent damages or causing risks to persons, which are within the movement area of the opening hatch. The activated sensor stops the movement and/or prevents it from starting.

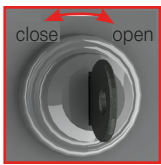
The complete control of the roof access hatch is conducted via the corresponding control unit. The control unit is installed in an external housing. The control unit enables the movement and/or disab

les the movement if the sensor is interrupted.

A key switch without self-hold may be installed on-site to operate the roof access hatch. The roof access hatch may only be operated by instructed persons. The switch has to be positioned at a location, which ensures direct eye contact to the roof access hatch for the user and therefore guarantees additional safety to people.

	SAFETY INSTRUCTIONS
	To ensure authorized operation of the roof access hatch, it is recommended to use a key switch without self-hold.

Operating elements during assembly



After connecting the operating voltage 120V the element (without connecting the control line of the on-site key switch) using the key switch on the control cabinet is opened and can be closed.

The switch cabinet is located behind the inspection cover. The light barrier is active! The monitoring area must not be disturbed.

6. OPERATION

6.1 Safety



⚠ WARNING


Risk of falling!

There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.

>> Do not step to the falling edge.

>> Put barriers around danger zones.

>> Wear your personal protective equipment.




⚠ WARNING

Danger of crushing!

Risk of injury during opening and closing of the roof access hatch.

>> Keep out of the exit area during opening and closing of the system.

>> Do not intervene with moving parts.




⚠ WARNING

Risk of injury!

Risk of injury for third parties during opening and closing of the roof access hatch.

>> Operation of the roof access hatch is only authorized for instructed users.

>> During opening and closing eye contact to the roof access hatch shall be ensured to prevent causing risk to third parties.




⚠ WARNING

Risk of injury when wearing wrong or no protective equipment!

It is required to wear personal protective equipment during work to minimize health risks.

>> The protective equipment required for the corresponding work shall be worn at all times.

>> Instructions attached in the working area regarding personal protective equipment, shall be complied with.

	SAFETY INSTRUCTIONS
	<p>The system is not functional in case of a power outage!</p> <p>The roof access hatch and, if applicable, awning shall be closed in due time in case of an imminent storm.</p>

6.2 Start of operation

Before start of operation, the following steps shall be complied with:

- Check of the electric connections.
- Proper installation of the roof access hatch.
- Check the movements of the opening hatch and if applicable the awning for level of freedom.
- Check whether opening hatch is moving without any mechanical tension.
- Check functionality of the sensor. In order to do so, an obstacle may be placed in the detection area. The drive units shall be stopped immediately and/or should not start at all. A restart may only take place once the obstacle was removed from the detection area!

Safety inspection

After completion of the above checks, a safety approval shall be carried out. The inspecting person certifies compliance with all requirements regarding installation and operation of the roof access hatch. If special conditions prevail at the installation location, which may cause additional risks other than those mentioned in this instruction manual, the inspecting person shall assess the adequacy of additional protective measures taken and the safety of operation.

The safety approval shall only be conducted by authorized and qualified staff (e.g. roofers, architects, fitters). The safety inspection log must be completed (see chapter 10).

The safety approval refers to the operation as roof access hatch.

Handover in a ready-to-use condition

After the functionality and safety inspections, the roof access hatch may be handed over in a ready-to-use condition.

This includes:


- Handover of the safety approval documents
- Installation instructions and instruction manual
- Instruction of the users

6.3 Operation in standard mode

The roof access hatch may be operated with the switch installed on-site.

This means:

- Establish eye contact to the roof access hatch and assess the risk to third parties.
- Ensure that no objects were placed on the hatch or the frame.
- Activate switch for the desired direction of movement (OPEN/CLOSE).

	SAFETY INSTRUCTIONS
	<p>The drive units of the roof access hatch run as long as the switch is pressed.</p> <p>If the switch is no longer pressed the drive units stop immediately (dead man's mode). In contrast to the closing direction, the roof access hatch has no limit switch in opening direction.</p> <p>This end position is terminated acoustically by a change in noise.</p>

If an obstacle appears in the detection area of the sensor, the drive units stop immediately or do not start at all.


In this case:

- Remove the obstacle and reactivate the switch as described above.

Optional: Operate awning with switch


- to open and close press the switch, installed on-site, labeled with OPEN and CLOSE
- make sure that there are no objects in the movement area of the awning
- assess use of awning based on the environmental conditions (weather conditions)


	⚠ WARNING
	<p>Risk of injury!</p> <p>There is risk of injury during operation as a result of restricted view caused by non-transparent glazing or awning.</p> <p>>> Check movement area for freedom before operation</p> <p>>> Ensure that no persons are in the movement area</p>

	SAFETY INSTRUCTIONS
	<p>The profiles are designed in a thermally separate way. However, adverse climate conditions (e.g. high room air humidity and low exterior temperature) may lead to temporary condensation on the aluminum and glass surfaces. This does not constitute a defect. (Also see DIN 4108 Condensation on Surfaces). We recommend regular "shock ventilation" and adequate heating of the rooms, to avoid condensation.</p>

Operation during installation:

Operation may only be carried out by a qualified electrician.

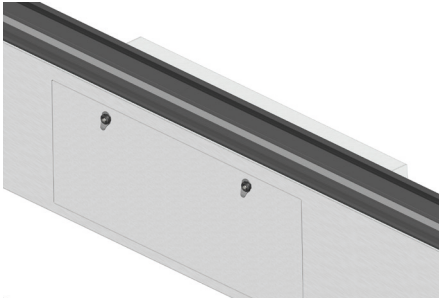
	⚠ DANGER
	<p>Danger from electric power!</p> <p>To operate the emergency switches, the housing of the control unit has to be opened. Live cables or components are not access-protected; there is danger to life!</p> <p>>> Work on electronic equipment may only be carried out by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations.</p>

	⚠ WARNING
	<p>Risk of injury!</p> <p>When opening and closing the roof access hatch in the emergency operation mode, there is an increased risk of injury to third parties, as the drive units are operated without being monitored by the sensor.</p> <p>>> Emergency operation shall only be used if the sensor is defect and the roof access hatch has to be activated to prevent any damages to property.</p> <p>>> The movement area of the roof access hatch shall be secured with appropriate equipment (e.g. barriers etc.).</p> <p>>> The roof window may only be operated with eye contact. If this is not possible, a securing person shall be called to help.</p>

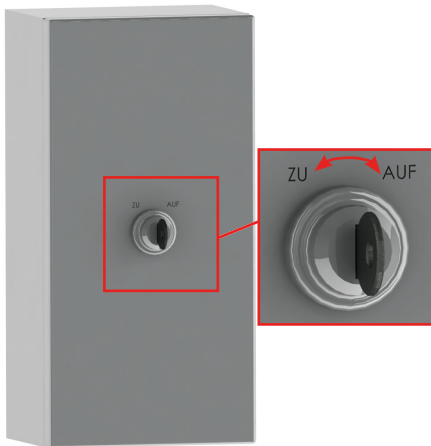
To operate the roof access hatch in emergency operation mode, the following steps may be undertaken:

Operation

- Secure the movement area of the roof access hatch with appropriate equipment (barriers, securing person etc.)
- Open the inspection flap via the snap locks.

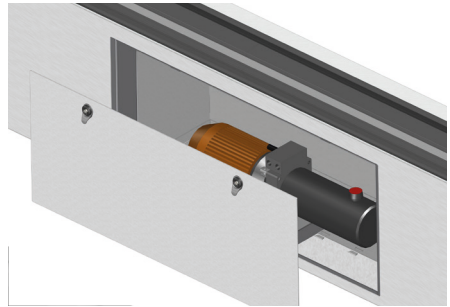


- Move the hatch of the roof access hatch via the key in the switch cabinet.

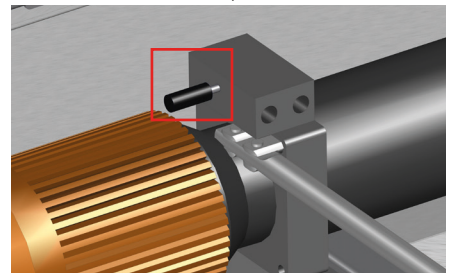


Manual operation in case of power failure or electrical defect:

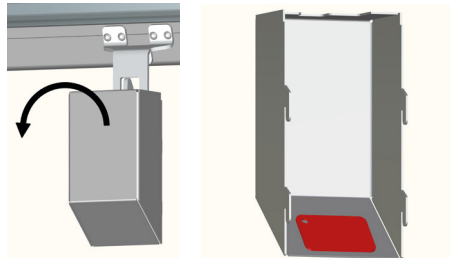
Please proceed as follows to close the roof access hatch manually during power failure or an electrical defect:



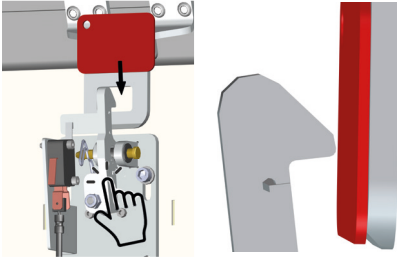
- Open the inspection flap and insert the supplied hand lever
- set the adjustment lever for the direction of movement of the power unit and keep it in position:
 - to the back = close
 - to the front = open



- unlock the locking mechanism before opening the access hatch



7. MAINTENANCE



- Pump with the handle to move the sash



NOTICE

Damage to property!

If the locking mechanism for manual operation of the access hatch is not unlocked beforehand, this may cause damages to the construction or the inventory of the operator.
>> Before opening the access hatch manually, it must be ensured that the locking points are unlocked and that the hatch can be opened freely.

7.1 Safety

Maintenance and service work shall only be carried out by staff, who:

- are, based on their training and qualification, authorized, instructed and qualified.
- are commissioned by the operator of the roof access hatch.


SAFETY INSTRUCTIONS

i

Work on electronic equipment shall only be conducted by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations!


- Maintenance work shall be completed in compliance with the instruction manual.
- During maintenance work, the area of the roof access hatch shall be secured and protected against entry of third parties with barriers.
- Unlock the control system and secure against restart (install a warning sign in compliance with VDE).

	<p>⚠ DANGER</p> <p>Danger from electric power!</p> <p>Danger to life in the event of contact with live cables or components!</p> <p>>> Work on electronic equipment may only be carried out by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations.</p> <p>>> Before commencing work, the safety rules of electrical engineering shall be followed and complied.</p>
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	<p>⚠ WARNING</p> <p>Risk of injury due to insufficient qualification!</p> <p>During assembly and maintenance there is risk of injury for the person carrying out work in the danger zone. Faulty assembly or maintenance may cause risks for the later operation.</p> <p>>> Assembly and maintenance work shall only be completed by qualified staff.</p>
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	<p>⚠ WARNING</p> <p>Risk of injury!</p> <p>Risk of injury for third parties during opening and closing of the roof access hatch.</p> <p>>> Operation of the roof access hatch is only authorized for instructed users.</p>
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	<p>>> During opening and closing eye contact to the roof access hatch shall be ensured to prevent causing risk to third parties.</p>
--	--

	<p>⚠ WARNING</p> <p>Risk of injury when wearing wrong or no protective equipment!</p> <p>It is required to wear personal protective equipment during work to minimize health risks.</p> <p>>> The protective equipment required for the corresponding work shall be worn at all times.</p> <p>>> Instructions attached in the working area regarding personal protective equipment, shall be complied with.</p>
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	<p>Harness to protect from falling</p>
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	<p>⚠ WARNING</p> <p>Risk of falling!</p> <p>There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.</p> <p>>> Do not step to the falling edge</p> <p>>> Put barriers around danger zones</p> <p>>> Wear your personal protective equipment</p>
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⚠ WARNING

Danger of crushing!

Risk of injury during opening and closing of the roof access hatch.

>> Keep out of the exit area during opening and closing of the system.

>> Do not intervene with moving parts.

>> During maintenance work the area of the roof access hatch shall be secured and protected against entry of third parties with barriers.

>> Unlock the control system and secure against restart (install a warning sign in compliance with VDE).


After every maintenance

- It is required to check the safety devices.
- Check unobstructed operation of the roof access hatch.

7.2 Service

Regular service work is required for proper operation of the roof access hatch and its components. The service work shall be completed in compliance with the service plan. In case any defects on the roof access hatch, components or constraints of the operation are detected during the service work:

- Take roof access hatch out of operation.
- Start repair work.



NOTICE

Damage to property!

In case defects or constraints in operation are detected, continued operation may cause significant damages to the roof access hatch.

	>> Do not use the roof access hatch in case of defects or constraints to operation and take it out of operation. >> Immediately start repair work.
--	---

Service plan

Interval *	Service work
at least once a year	Safety inspection of the roof access hatch and all components
	General functional check
	Functional check of the safety devices (sensor)
	Check key switch on the control cabinet for functionality (chapter: Operation)
	Check the linear guidance of the opening hatches for smooth operation and if necessary apply lubricant. Only use acid-free grease for lubrication.
	Moving parts shall be lightly oiled on a regular basis to not affect functionality. Only use acid-free oil.
	Talcum powder may be rubbed on the circumferential lip seal to maintain smoothness of the rubber and prevent freezing in winter.
	Hydraulic components are to be repaired by a technician.

* Service intervals specified are a recommendation!

The intervals are subject to the corresponding prevailing environmental influences (e.g. humidity, temperature).

	SAFETY INSTRUCTIONS
	<p>The profiles are designed in a thermally separate way. However, adverse climate conditions (e.g. high room air humidity and low exterior temperature) may lead to temporary condensation on the aluminum and glass surfaces. This does not constitute a defect. (Also see DIN 4108 Condensation on Surfaces). We recommend regular "shock ventilation" and adequate heating of the rooms, to avoid condensation.</p>

7.3 Repairs

	WARNING
	<p>Risk of injury!</p> <p>Wrong or faulty spare parts may cause damages to or lead to malfunctions or a complete breakdown of the machine and endanger safety.</p> <p>>> Only use original spare parts provided by the manufacturer.</p>

Repair work on the roof access hatch may only be completed by authorized qualified companies.

	SAFETY INSTRUCTIONS
	<p>Please do not hesitate to contact the customer service of the company LAMILUX Heinrich Strunz GmbH, if you have any questions regarding repair work.</p>

7.4 Cleaning

The roof access hatch shall be cleaned on a regular basis (depending on the degree of soiling).

	NOTICE
	<p>Damage to property!</p> <p>Incorrect cleaning and unauthorized detergents may damage the roof access hatch.</p> <p>>> Never use any chemical detergents or solvents.</p> <p>>> Follow the cleaning instructions.</p>

- The glass surfaces may be cleaned with commercially available detergents and glass cleaners.
- The painted surfaces may only be cleaned with mild detergents and with sufficient water using a soft sponge.

8. TROUBLESHOOTING

8.1 Safety




⚠ DANGER

Danger from electric power!

Danger to life in the event of contact with live cables or components!

>> Work on electronic equipment may only be carried out by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations.

>> Before commencing work, the safety rules of electrical engineering shall be followed and complied.




⚠ WARNING

Danger of crushing!

Risk of injury during opening and closing of the roof access hatch.

>> Keep out of the exit area during opening and closing of the system

>> Do not intervene with moving parts.



⚠ WARNING

Risk of injury due to insufficient qualification!

There is risk of injury for the person carrying out work in the danger zone while working on the roof access hatch. Faulty work may cause risks for the later operation.

>> Work on the roof access hatch may only be carried out by qualified staff.



⚠ WARNING


Risk of falling!

There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.

>> Do not step to the falling edge

>> Put barriers around danger zones

>> Wear your personal protective equipment

	⚠ WARNING
	<p>Risk of injury when wearing wrong or no protective equipment!</p> <p>It is required to wear personal protective equipment during work to minimize health risks.</p> <p>>> The protective equipment required for the corresponding work shall be worn at all times.</p> <p>>> Instructions attached in the working area regarding personal protective equipment, shall be complied with.</p>

8.2 Malfunction and troubleshooting

In the event of a malfunction, the table below shall help to identify the cause of the malfunction and to start correction.





Error	Possible cause	Troubleshooting
The roof access hatch does not move	Power supply is disrupted	Check power supply and if applicable reconnect
	Obstacle in the detection area of the sensor	Remove obstacle and resume operation of the roof access hatch
	Sensor is defect	If applicable, close the roof access hatch as described in chapter "Operation". Take roof access hatch out of operation and start repair work.


If the points listed do not solve the problem, please proceed as follows:


- Block manual operation of the roof access hatch
- Start repair work

9. DISASSEMBLY AND DISPOSAL

9.1 Safety

	<div>⚠ DANGER</div> <div>Danger from electric power!</div> <p>Danger to life in the event of contact with live cables or components!</p> <p>>> Work on electronic equipment may only be carried out by a qualified electrician or an instructed person under the guidance and supervision of a qualified electrician and according to the electro-technical regulations.</p> <p>>> Before commencing work, the safety rules of electrical engineering shall be followed and complied.</p>
	<div>⚠ WARNING</div> <div>Risk of injury due to insufficient qualification!</div> <p>During assembly and maintenance there is risk of injury for the person carrying out work in the danger zone. Faulty assembly or maintenance may cause risks for the later operation.</p> <p>>> Assembly and maintenance work shall only be completed by qualified staff.</p>
	<div>⚠ WARNING</div> <div>Danger of crushing!</div> <p>Risk of injury during opening and closing of the roof access hatch.</p> <p>>> Keep out of the exit area during opening and closing of the system</p> <p>>> Do not intervene with moving parts.</p>
	<div>⚠ WARNING</div> <div>Risk of falling!</div> <p>There is a significant risk of injury or even risk of death by falling at the roof access hatch and edges.</p> <p>>> Do not step to the falling edge</p> <p>>> Put barriers around danger zones</p> <p>>> Wear your personal protective equipment</p>


	⚠ WARNING
	<p>Risk of injury when wearing wrong or no protective equipment!</p> <p>It is required to wear personal protective equipment during work to minimize health risks.</p> <p>>> The protective equipment required for the corresponding work shall be worn at all times.</p> <p>>> Instructions attached in the working area regarding personal protective equipment, shall be complied with.</p>

	NOTICE
	<p>Incorrect disposal may damage the environment!</p> <p>Incorrect disposal may lead to environmental damages.</p> <p>>> Electronic waste, electronic components, lubricant and other additives are subject to treatment of hazardous waste and shall only be disposed by authorized specialist companies!</p>

9.2 Disassembly

For disassembly of the roof access hatch, please:

- Disconnect the power supply
- Disconnect electrical connections
- Dismount the roof access hatch
- Remove the roof access hatch

	SAFETY INSTRUCTIONS
	<p>The local municipality or specialist companies for waste disposal will give information on environmentally compatible disposal.</p>

9.3 Disposal

If no agreement regarding redemption or disposal has been concluded the disassembled components may be recycled:

- Scrap all metals
- Recycle plastic elements
- Remaining components may be assorted according to material characteristics and disposed of accordingly.

10. SAFETY INSPECTION LOG

Safety inspection log for the LAMILUX Flat Roof Access Hatch Comfort Swing

The LAMILUX Flat Roof Access Hatch Comfort Swing may only be released for operation after having passed the safety inspection, for which the following requirements have to be fulfilled:

- Completion of all inspections specified in section "Results of the completed inspection" by qualified staff;
- Answer all queries in the section "Results of the completed inspection" with "YES" or a meaningful description;
- The present form, duly completed and signed.

Any operation before completion of this safety inspection shall be prevented efficiently. The inspection may be documented in the present form and submitted to the operator as part of the system documentation. The safety inspection exclusively refers to the operation as roof access hatch and shall be completed in addition to all other inspections required. An authorized person is a person, who is based on his/her qualification, experience and professional activity, qualified to carry out the inspection. The necessary qualification includes in particular sufficient electrotechnical training and appropriate work experience to ensure professional installation of all safety-relevant parts. If you are unsure about safety measures, installation details or the parts required for installation of the roof access hatch, please contact LAMILUX. You will find our address under item 1.9 "Manufacturer's address" in this operating manual.

System operator	Name:	
	Address:	
	Phone:	Email:
Inspector	Name:	
	Address:	
	Phone:	Email:
System information	Address:	
	Exact location	
	LAMILUX order number:	

Results of the completed inspection	check the appropriate box:		Description *
	YES	NO	
Operation is only possible via key switch in the visible area of the roof access hatch.			
The key switch does not have a self-hold function.			
The sensor is functional.			
The limit switch is correctly adjusted.			
The installation is not equipped with automatic operation (Smart Home Control, wind/rain sensors etc. are NOT permitted!).			
The warning notices are properly affixed to the roof access hatch.			
The roof access hatch is the only access to the roof. * *			

*It is possible that neither "Yes" nor "No" is applicable, because the operator still has to comply with the respective point in a later construction phase and this point is therefore no longer part of this safety test. This must be noted by the inspector and the responsibility for fulfilling the requirement passes to the operator.

** If there are several possibilities of access to the roof, suitable measures must be taken to ensure that no persons can stay in the danger zone during operation.

Declaration by the inspector

The safety inspection was carried out in full and all questions listed in the table in section "Results from the completed inspection" were truthfully answered with "YES" or provided with a justification. Furthermore, I am not aware of any additional circumstances, which may now or in future lead to a deviation from the intended use described in the documents (see instruction manual) or may affect the operational safety of the roof access hatch in any other way.

	Place, date:
	Signature examiner:
	Signature operator:

To ensure the safe operation of the roof access hatch, the following points must also be fulfilled:

- The stairs and steps to the roof are correctly designed, constructed and installed according to the local rules and regulations.
- The safety clearances on the roof comply with the local regulations (see chapter 4.3 Installation Operating Instructions).
- Depending on the design of the stairs, a handrail should be installed at the roof access hatch
- The danger area of the roof access hatch is sufficiently illuminated.
- There is a railing around the roof access hatch. If the railing is installed on the roof, protection against both falling and clamping is ensured



Follow all local rules and regulations applicable to this product. Failure to comply with these rules may result in serious injury or death.



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MIROTEC STEEL CONSTRUCTIONS



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RODA LIGHT AND
AIR TECHNOLOGY

The technical data printed in this brochure was accurate when this brochure went to press and is subject to change without notice. Our technical specifications are based on calculations and supplier specifications, or have been determined by independent testing authorities within the scope of applicable standards.

Thermal transmission coefficients for our composite glazing were calculated using the finite element method with reference values in accordance with DIN EN 673 for insulated glass. Based on empirical values and specific characteristics of the plastics, a temperature vector of 15 K was defined as the vector between the outer surfaces of the material. Functional values refer to test specimens and the dimensions used in testing only. We cannot provide any further guarantees of technical values. This particularly applies to changes in installation locations, or if dimensions are re-measured on site.



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