User Manual

Manually operated sliding doors

Manually operated sliding doors

User manual for manually operated Sky-Frame sliding doors.

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General information

1. General information

1.1 Information concerning this manual

This manual describes how to use the system safely and efficiently. The manual is a constituent of the system and must be accessible and in close proximity to the system at all times.

The instructions must be read carefully!

The basic prerequisite for safe operation is compliance with all specified safety instructions and instructions in this manual.The illustrations in this manual are intended to provide a basic understanding and may differ from the actual situation.

1.2 Explanation of symbols

Safety instructions:

The safety instructions in this manual are marked with symbols. The safety instructions are preceded by signal words that indicate the level of danger. Adhering to the safety instructions and taking careful action will help to avoid accidents, injuries and damage to property.

⚠WARNING

These symbols indicate a potentially dangerous situation which, if not avoided, can result in death or serious injury.

⚠CAUTION

This combination of symbol and signal word indicates a potentially dangerous situation that could lead to minor injuries if it is not avoided.

NOTE:

This symbol highlights useful tips, recommendations and information for efficient and fault-free operation.

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1.3 Symbols in this manual

The following symbols and highlighting are used in this manual to mark action instructions, result descriptions, lists, references and other elements:

1. Marks step-by-step action instructions.

→ Marks a status or an automatic sequence resulting from an action step.

- Marks lists and list entries with no fixed order.

[→ Page No.] References to chapters in this manual.

1.4 Liability restriction

All information and notes in this manual have been put together taking the applicable standards and regulations, the state of technology, our knowledge and our many years of experience into consideration.

The manufacturer does not accept liability for damage caused by:

- Failure to follow the instructions in the manual
- Failure to use the equipment for its correct purpose
- Making technical modifications
- Using non-approved spare parts

The actual scope of delivery may differ from the information in this manual in the event of customized versions, the use of additional ordering options or because of technical changes.

The obligations agreed in the delivery agreement, the manufacturer his general business terms and conditions and delivery conditions, and the legal regulations that were applicable when the agreement was signed are applicable.

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1.5 Warranty conditions

The warranty conditions are included in the manufacturer’s general business terms and conditions.

1.6 Customer service

If you have questions about your Sky-Frame product please contact your official Sky-Frame partner.

Our employees are also always interested in receiving new information and experiences resulting from the use of the equipment that may be useful for improving our products.

2. Safety

This section provides an overview of all important safety aspects for providing the user with the best possible protection and for ensuring that operation is safe and problem-free.

Failure to observe the action instructions and safety instructions in this manual can lead to considerable danger.

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Safety

2.1 Use for correct purpose

The equipment is exclusively designed and constructed for the intended purpose of use that is described in this document.

The equipment is exclusively intended for installation in a wall opening, and is intended to provide light, ventilation and access.

Correct purpose of use also includes complying with all of the specifications in this manual.

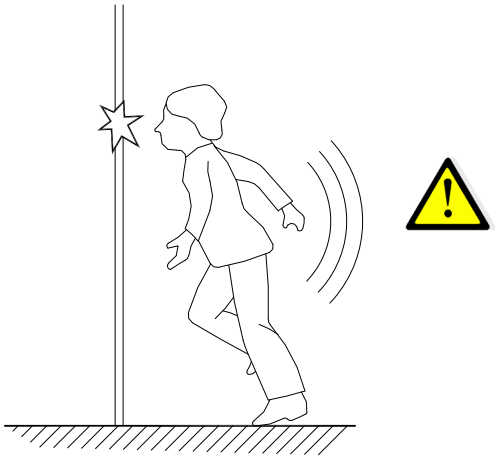
Any other use is considered to be incorrect.

Claims of any kind for damage caused by incorrect use will not be entertained.

2.2 Basic dangers

In order to minimize health hazards and avoid dangerous situations, the safety instructions listed here and in the other chapters of this manual must be followed.

2.2.1 Transparent wall connection



⚠WARNING

Risk of injury from transparent wall connection!

A frameless, closed sliding door may appear invisible and may be overlooked by persons. Walking into the closed door can cause serious injuries.

- In case of doubt, check that the sliding door is open.
- An authorized person must point out the danger to unauthorized persons or persons (including children) who are at risk because of their physical, sensory or mental capabilities or due to lack of experience or awareness.

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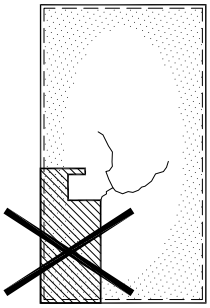
Manually operated sliding doors
Safety

2.2.2 Objects in the vicinity of the door



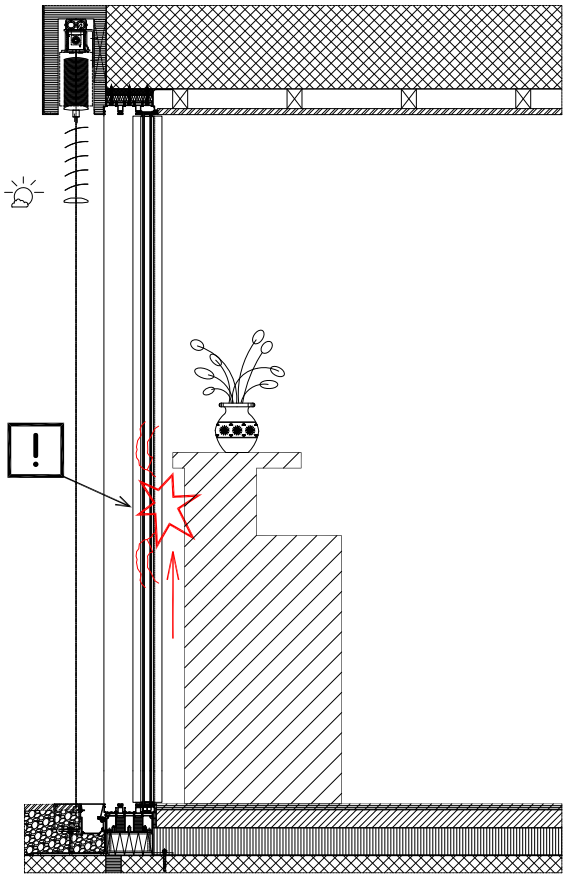
⚠CAUTION

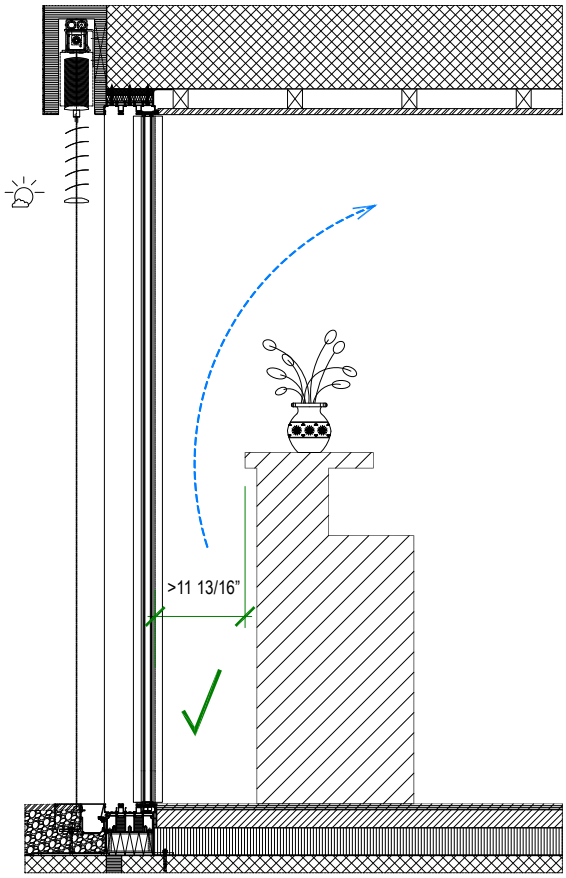
Risk of damage to property from selective heating of the glass!

Objects close to the door in direct sunlight can lead to partial heating of the glass and thus to glass breakage* (risk of thermal shock).

Do not place objects in the immediate proximity (up to 11 13/16”) of the sliding door.

* Only possible with glass configurations that deviate from the standard (TSG-H, e.g. LSG).





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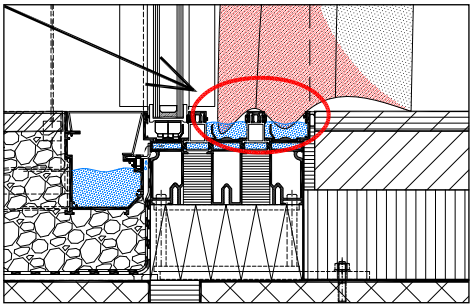
2.2.3 Water-bearing inner tracks

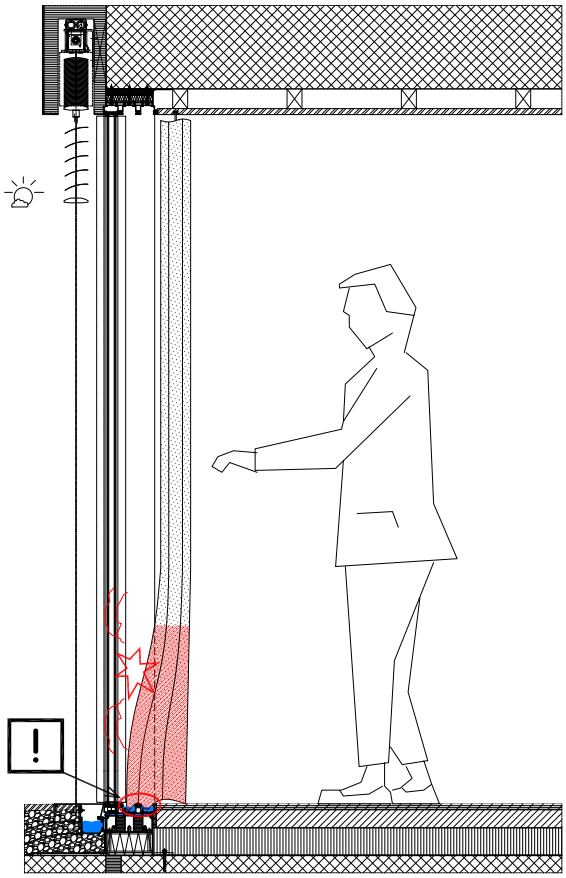


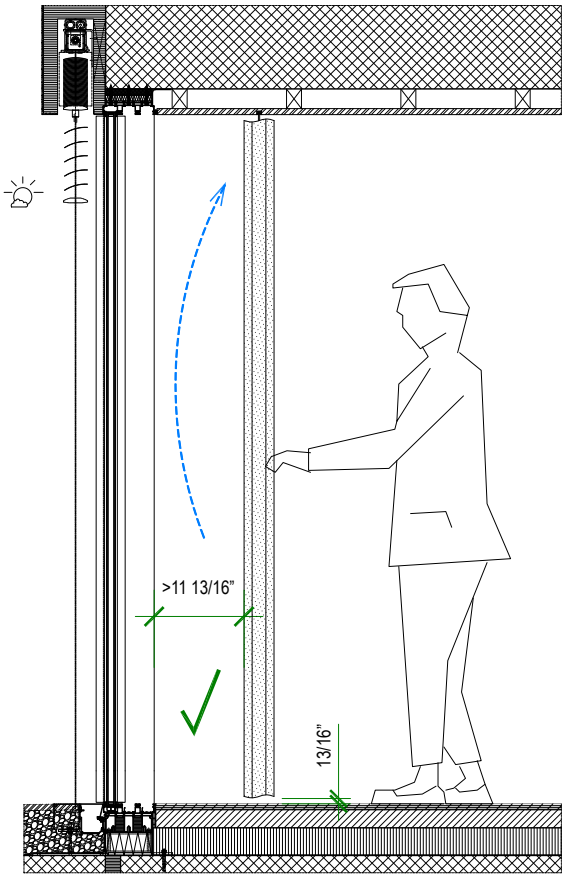
⚠CAUTION

In extreme situations, inner tracks can carry water, which could be absorbed by overly long curtains.

Curtains must end at least 13/16” above the floor.

Dark curtains must be at least 11 13/16” away from the door (risk of thermal shock).





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Manually operated sliding doors
Design and functionality

3. Design and functionality

The single sliding door consists of a fixed panel (2) and a sliding panel (1).

3.1 Short description

The sliding panel (1) is opened (arrow) and closed by operating a locking handle (3).

The sliding panel is locked when it is closed and unlocked by the locking handle (3) when it is opened.

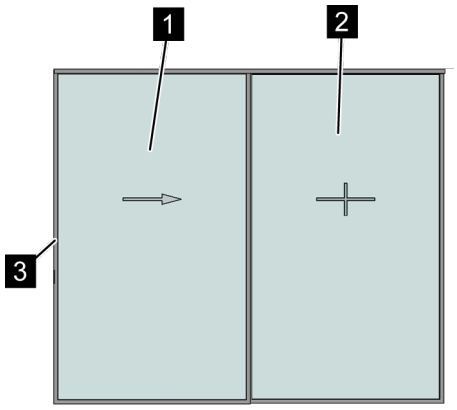

Fig. 1: Single-panel sliding door

1 Sliding panel
2 Fixed panel
3 Locking/opening profile with locking handle

3.2 Types of sliding door

The following types of opening are available:

- Single-panel sliding door
- Extending sliding door
- Combined system

- Wallside / Edge opening (RV)
- Centre opening on same level (MVe)
- Centre opening offset (MVv)
- Corner opening (EV)

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Manually operated sliding doors
Design and functionality

3.2.1 Single-panel sliding door

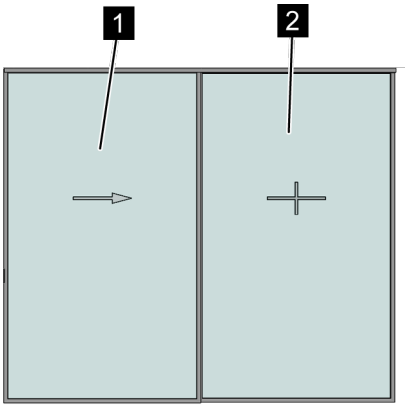

Fig. 2: Single-panel sliding door

Only the sliding panel (1) of the single-panel sliding door moves.

The arrow (Fig. 2) indicates the opening direction.

1 Sliding panel
2 Fixed panel

3.2.2 Extending sliding door

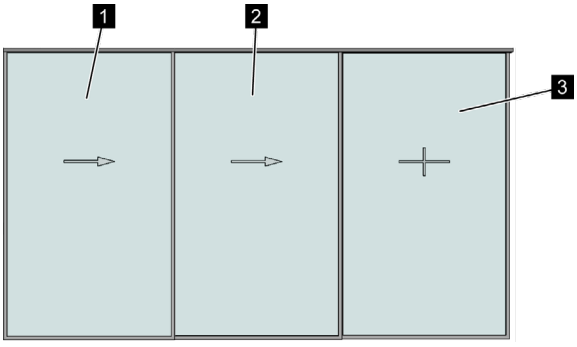

Fig. 3: Right extension

The extending sliding door has two extension panels (1) and (2).

When the door opens (arrows) both extension panels move together until the extension panel (2) reaches the end position in the fixed panel (3).

The sliding panel (1) continues to open until it comes up against the locking profile of the sliding panel (2).

When the door closes, the two extension panels (1) and (2) move together until the extension panel (2) engages in the fixed panel (3).

The extending panel (1) continues to move until it engages in the end position. The system is locked in this position.

1 Extension panel 1
2 Extension panel 2
3 Fixed panel

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Manually operated sliding doors
Design and functionality

3.2.3 Combined system

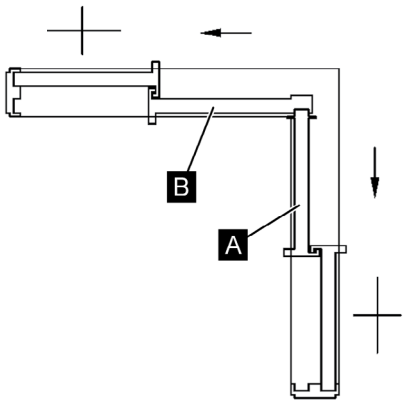

Fig. 4: Combined system, top-down view

The single-panel sliding door (Fig. 2) and the extension (Fig. 3) can be combined in different variants to create a system (Fig. 4 and Fig. 5).

A combined system is divided up into system **A** and system **B**.

System **A** is a system that opens first and closes last.
System **B** is a system that opens second and closes first.

The arrows (Fig. 4 and Fig. 5) show the opening direction of the systems.

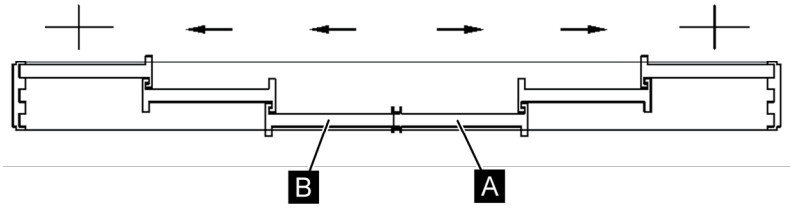

Fig. 5: Combined extending system, top-down view (left extension and right extension)

A combined double extending system (Fig. 5) consists of four sliding panels.

Two of the sliding panels are opened to the right (system **A**) and the other two open to the left (system **B**).

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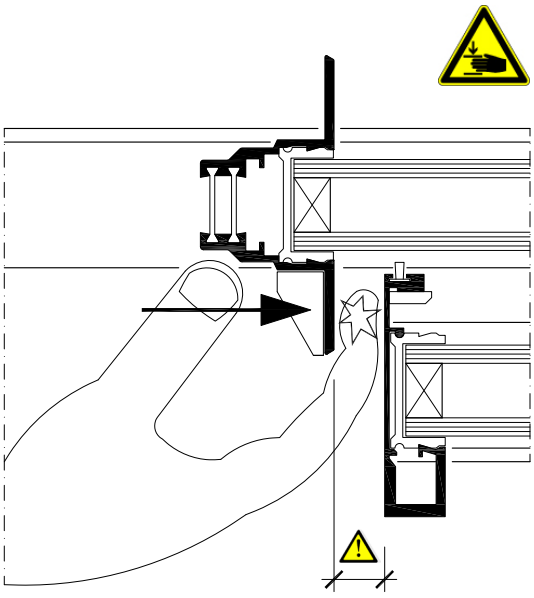
Manually operated sliding doors
Operation

4. Operation

4.1 Operating safety instructions

The system has been manufactured taking the applicable standards and regulations, the state of technology, our knowledge and our many years of experience into consideration. However, injuries can still occur in the event of improper behavior. Please observe the safety instructions explained in the following to avoid dangerous situations.

4.1.1 Moving components



⚠CAUTION

Risk of injury from moving components when opening and closing the sliding door!

Moving components can cause injuries when opening and closing the sliding door.

- Before opening and closing the sliding door, ensure that no persons are present in the door area.
- Do not reach into or handle moving components whilst the door is being opened and closed.
- Persons (including children) who are incapable of using the equipment safely because of their physical, sensory or mental capabilities or lack of experience or awareness may not use the equipment without supervision or instruction from a responsible person.

4.1.2 Incorrect operation

⚠WARNING

Risk of injury from incorrect operation!

Incorrect operation can lead to serious injuries and considerable damage to property.

- The sliding panels must never be bent, twisted or subjected to additional loads.
- Do not place objects in the door area between the sliding panels and the frame.
- Never loosen screws or remove them from the system.

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Manually operated sliding doors
Operation

4.2 Danger areas

⚠ CAUTION

The marked dots in the illustration (Fig. 6) show the possible danger areas on the system, where persons are at risk of injury in the event of improper behavior.

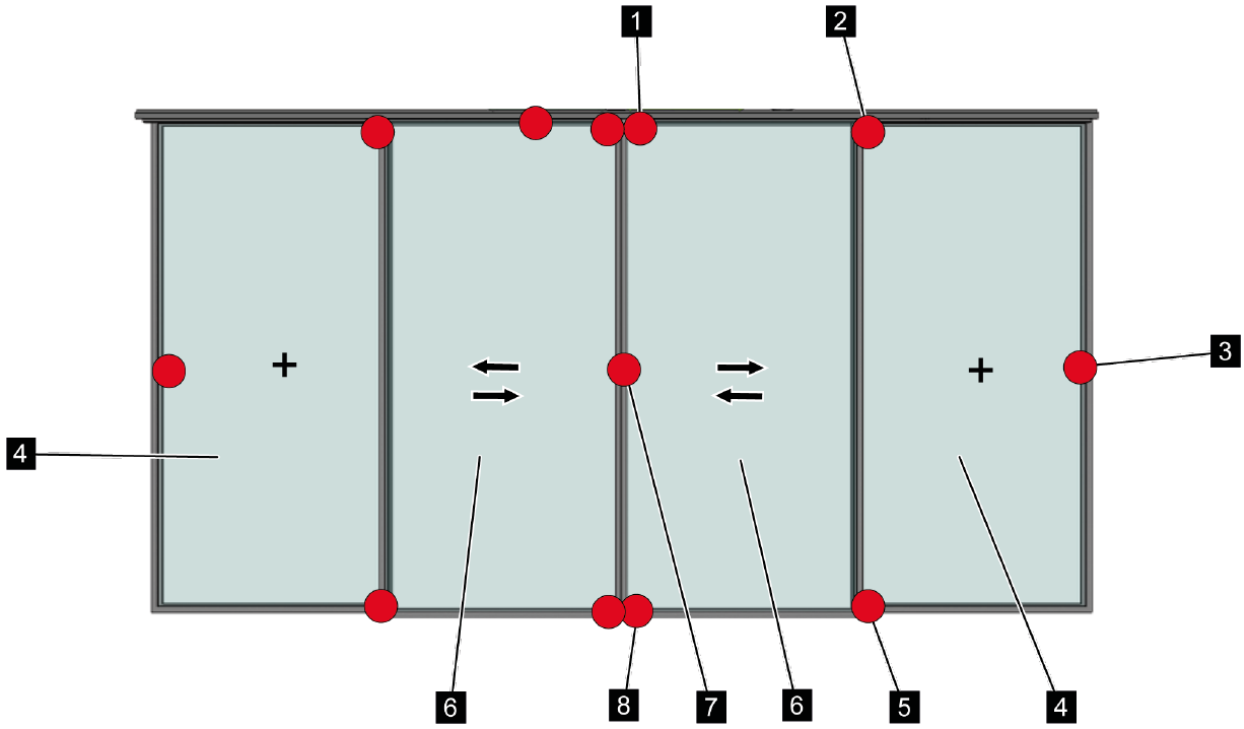
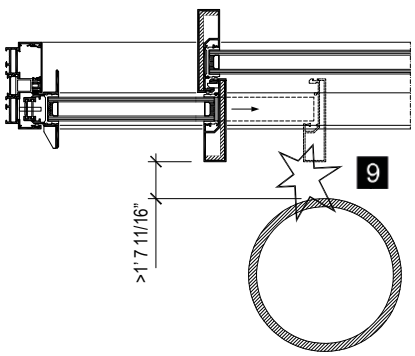


Fig. 6: Danger areas



1. Between top edge of panel and runner when closing
2. Between top edge of panel and runner when opening
3. Between sliding panels and between sliding panel and frame when opening
4. Fixed panel
5. Between bottom edge of panel and runner when opening
6. Sliding panel
7. Between sliding panels and between sliding panel and frame when closing
8. Between bottom edge of panel and runner when closing
9. Danger to the body (danger of being drawn in, crushing)

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Manually operated sliding doors
Operation

4.3 Opening/closing the sliding doors

4.3.1 Single-panel sliding door + extension

4.3.1.1 Opening the sliding door

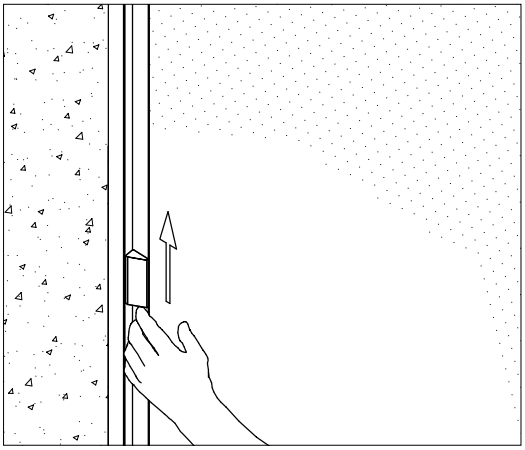

Fig. 7: Unlocking the locking handle

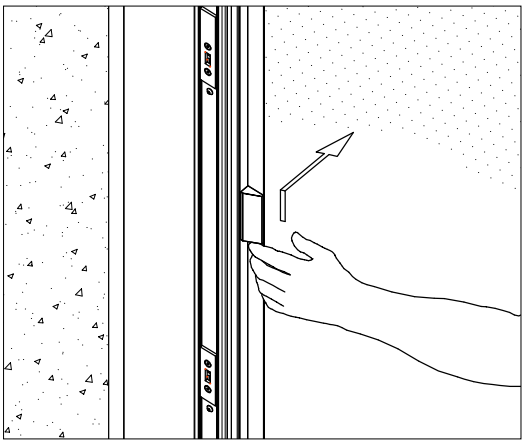

Fig. 8: Opening the sliding door

The method of operation of the single-panel sliding door and the sliding door extension is identical.

1. Slide locking handle upwards (arrow) and hold in this position.

→ The sliding door is unlocked.

2. Ensure that no living beings or objects are in the door area.

⚠ CAUTION

Risk of damage from uncontrolled opening and closing of the sliding panels!

Uncontrolled opening and closing of the sliding panels can cause a considerable amount of damage.

- Move sliding doors slowly when opening and closing.
- Ensure that the sliding panel is moved along the frame extremely slowly, and that it does not bump against it in an uncontrolled way when it reaches the end position.

3. Open sliding door slowly (arrow).

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Manually operated sliding doors
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4.3.1.2 Closing the sliding door

1. Ensure that no living beings or objects are in the door area.

⚠CAUTION

Risk of damage from uncontrolled opening and closing of the sliding panels!

Uncontrolled opening and closing of the sliding panels can cause a considerable amount of damage.

- Move sliding panels slowly when opening and closing.
- Ensure that the sliding panel is moved along the frame extremely slowly, and that it does not bump against it in an uncontrolled way when it reaches the end position.

2. Slowly move the sliding panel as far as it will go.

→ The sliding door is locked automatically.

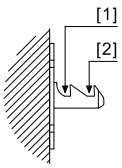
⚠WARNING

Risk of being locked out!

Sliding doors that do not have a locking handle on the outside lock automatically when they are fully closed (otherwise you'll need a locking handle with locking catch).

4.3.1.3 Locking the sliding door (RC 2)

Systems with increased burglary protection have a lockable locking handle.



NOTE:
Partially-opened sliding elements (in the hygienic ventilation position, gap ventilation with bump stop or flush edge bolt) are regarded as open doors and are therefore not burglary-proof. In order to fulfil RC 2, the sliding element must be fully closed (hook position [1]) and locked, and the key must be removed.

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Manually operated sliding doors
Operation

4.3.2 Opening / closing a combined system

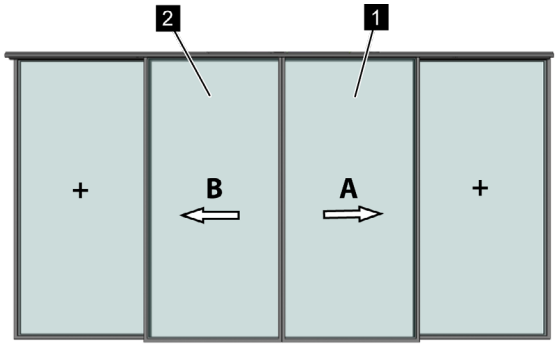

Fig. 9: Two-panel system

Opening the system:

1. Unlock sliding panel (1) of system **A** and open (arrow).
   [→ «Opening the sliding door» on page 14.1.4.3].

2. Open sliding panel (2) of system **B**.

Closing the system:

1. Close sliding panel (2) of system **B**.

2. Close sliding panel (1) of system **A**.
   [→ «Closing the sliding door» on page 14.1.4.4].

4.3.3 Sliding door with locking catch

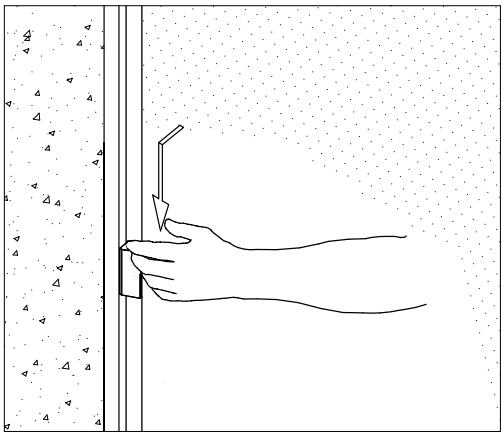

Fig. 10: Locking the sliding door

If you want to be able to fully close the sliding door from the outside without it locking automatically, a locking handle with locking catch must be used.

The locking catch holds up the locking handle so that the panel is not locked.

In order to lock the sliding doors again after opening, the locking handle with locking catch must be pushed down manually.

1. Push locking handle down (arrow).

NOTE:
The additional pushbutton makes it possible to lock the locking handle in the lower closed position, ideal for securing the door in the hygienic ventilation position.

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Manually operated sliding doors
Cleaning and care
Glass

5. Cleaning and care

5.1 Glass

As part of the facade, glass is subject to natural soiling. In order to provide problem-free use, certain points must be adhered to during cleaning and care.

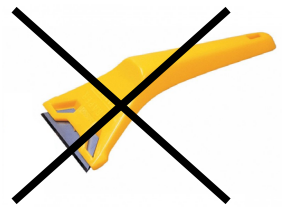
Normal soiling is not a problem for glass. Plenty of clean water should be used in order to avoid a scouring effect caused by dirt particles.

Suitable tools:
- Soft, clean sponges
- Leather / cloths
- Rubber wiper

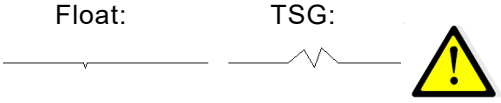
The cleaning effect can be assisted by using cleaning agents that are as neutral as possible or normal commercial household glass cleaner.

If the soiling consists of grease or sealant residue, normal commercial solvents such as white alcohol or isopropanol can be used for cleaning.

5.1.1 Non-permissible materials



Float: TSG:



Of the chemical cleaning agents that are available, do NOT use alkaline solutions, acids or materials containing fluoride.

The use of pointed, sharp metal objects (blades and knives) or scraping off with a glass scraper can cause surface damage and deep scratches, and is not permitted! Scratches may only become visible after a certain time with TSG due to its surface tension.

⚠ CAUTION

NEVER use metal blades!
These can cause severe damage to TSG glass.

5.1.2 Important notes

The following points must be observed during glass cleaning:

- use normal commercial glass cleaning products
- rinse cloths as often as possible
- grains of dirt in cloths can scratch the glass
- do not use abrasive or scouring materials
- do not use alkalis (lyes)

Film "Cleaning and Care"
on sky-frame.com/manual

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Manually operated sliding doors
Cleaning and care
Surface

5.2 Surface

Proper cleaning and care of the coated surfaces is required to keep the surface of the aluminium profiles clean and retain their shiny appearance for many years, and is therefore a prerequisite for the guarantee.

Cleaning instructions:

- Loose dust: Wipe off with a dry cotton cloth without using pressure, or remove with a sponge and water and then dry with a clean cloth
- Adhesive, paint, putty, tar: Carefully remove using a suitable solvent and clean cotton cloth
- Cement, mortar, concrete, plaster: Remove immediately with a sponge or soft cloth before it dries. Wash off under flowing water and then dry with a clean cloth.
- Sealed surfaces: Rinse with plenty of water. Clean with neutral cleaning agent and a sponge. Do not use abrasive, mechanical cleaning! Rinse and dry.
- Soiling in general: Rinse with plenty of water. Clean with neutral cleaning agent and a sponge. Rinse and dry.

Recommendation:
- pH-neutral cleaning agent in diluted form

Cleaning interval: **at least once per year***

Cleaning agent:
- NOT with high concentration of solvent
- NOT scouring / abrasive
- NOT alkaline (lyes)
- NOT acidic
- NOT containing chlorine

Elements installed in a particularly aggressive atmosphere (near the sea, industrial climate or the combination according to corrosivity categories C4 and C5 according to ISO 9223): **monthly***

*** or if urgently required**
(direct exposure to salt or chlorine water, also spray; sand; bird droppings; insects; pollen; autumn leaves...)

The following generally applies:
- Always wipe in the rolling or grinding direction.
- Only use gentle pressure when cleaning.
- Use distilled or mineral water for final rinse (avoids streaking).
- Remove with a squeegee and dry with a clean cotton cloth.
- Do not clean in direct sunlight or if the surface is very hot.

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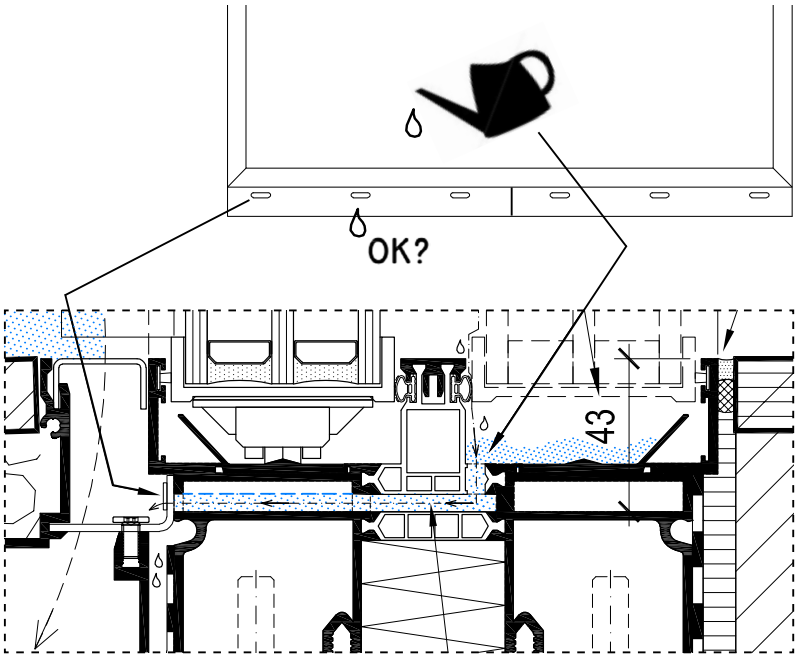
Manually operated sliding doors
Cleaning and care
Sill profile

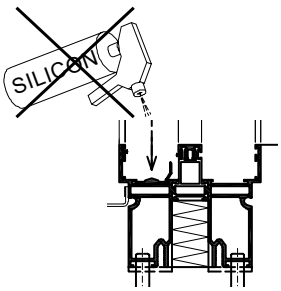
5.3 Sill profile

To retain **good running properties** and guarantee that **correct drainage** takes place over the long term, the sill profiles should be checked and cleaned if necessary:

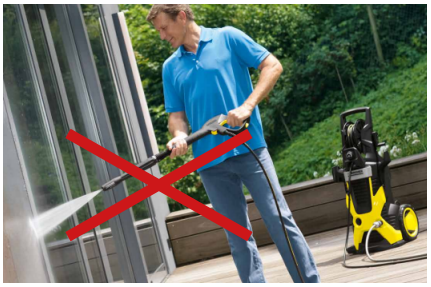
- Check channels for soiling and clean.
- Remove soiling from the sill profile (running tracks) with a vacuum cleaner (narrow nozzle).
- Clean sill profile with a damp cloth and a liquid cleaning agent.
- Check that all drainage openings are clear **[OK?]**.



NOTE:
The surface of the running track (stainless steel) should **NOT BE TREATED WITH SILICON SPRAY** or other lubricants.



The running properties are best on a **dry** surface.



TIP:
Clean blocked drainage openings with a thin piece of wood or plastic and rinse with plenty of water in order to ensure that drainage takes place.

⚠ CAUTION

DO NOT USE A HIGH-PRESSURE CLEANER!
High pressure can damage the seal of the sill profile.

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Manually operated sliding doors
Cleaning and care
Seals + Insect screen

5.4 Seals

The seals have been treated with silicone in the factory to prevent them from freezing on.

If this protection has deteriorated over time, proceed as follows:

1. Spray silicone spray onto a cloth outdoors.
2. Apply silicone spray to the seals using the cloth.

Recommendation:
Rub the seals with silicone spray once a year.

⚠ CAUTION

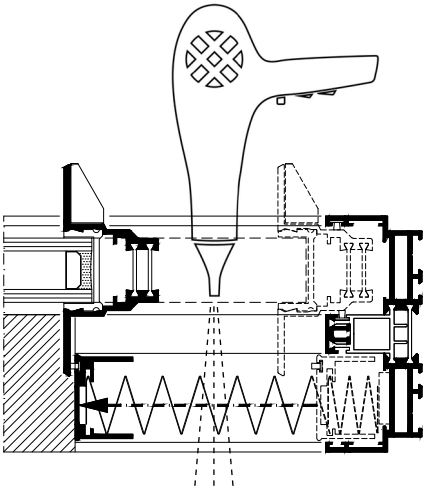
Damage caused by road salt!

Road salt can damage the sliding doors. Avoid use of road salt in the immediate vicinity of the sliding door.

5.5 Insect screen

Clean frame, handle profile and fabric with soapy water and a soft cloth.

The fabric can also be cleaned by blowing through it from the inside to the outside using compressed air or a hair dryer (using cold air).



⚠ CAUTION

NEVER use chemical or abrasive materials!

⚠ CAUTION

In strong winds, the insect screens must be closed immediately (risk of damage).

User Manual

Manually operated sliding doors
Trouble-shooting

6. Trouble-shooting

The possible causes of faults and the work that is required to remedy them are described in the following chapter. Please contact specialist company in the event of faults that cannot be remedied using the following instructions.

6.1 Debugging the system

Sliding panel cannot be moved:

- Object trapped between sliding panel and frame
  → remove object
- Damage to system → contact a specialist company

Sliding panel can only be moved slowly:

- Heavy soiling in movement area
  → clean system

6.2 Incorrect repair

⚠WARNING

Risk of injury from incorrect repair!

Attempts to repair the system by an insufficiently qualified person can result in serious injuries and damage to property.

- Never dismantle the system.
- Never repair or modify the system yourself.

6.3 Spare parts

⚠WARNING

Risk of injury from using the wrong spare parts!

The use of wrong or defective spare parts or failing to install them correctly can put the user at risk and cause damage.

- Always have defective parts replaced by a specialist company.

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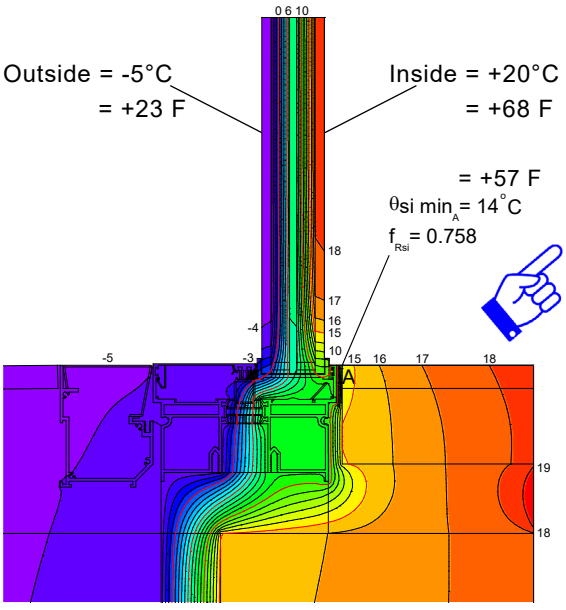
6.4 External condensation

The external glass is in a direct "radiation exchange" with the sky. Depending on the installation situation, this radiation exchange can now lead to considerable cooling of the external glass (particularly on clear nights).

If the temperature of the outer glass surface drops below the temperature of the adjacent outside air, this will result in the formation of condensation on the outer surface of the glass (even ice in certain cases).

This procedure is generally known in nature as dew or hoar frost formation.

Heating of the outer surface and the outside air (by the morning sun, for example) will cause the condensation to disappear again.



This phenomenon is not a malfunction, but is an **indication of the outstanding heat insulation** and the functionality of the insulating glass that is used.

The following generally applies to any insulating glass:
The lower the heat transmission (the smaller the U_g value or also: the better the insulating glass) the warmer the glass remains at the room side and therefore the colder the outside glass, which may become fogged.

Because of the improved insulation of triple-glazed units, condensation is more likely to form on the surface of the outer glass layer more frequently than with double-glazed units.

6.5 Internal condensation

The formation of dew on the room-side pane of glass is assisted if the air circulation is blocked (protruding soffits, curtains, unfavorable radiator arrangement, lack of ventilation) and the ambient air is too humid.

The ambient humidity must be adapted to the situation accordingly (dehumidifier, convector).

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7. Dismantling and disposal

When the system reaches the end of its service life, it must be dismantled and disposed of in an environmentally friendly way.

⚠WARNING

Risk of fatal injury from incorrect dismantling!

Problems that occur during dismantling can lead to life-threatening situations or cause a considerable amount of damage.

- Only allow experts from the specialist company to dismantle the system.
- Do not dismantle the equipment or make local modifications yourself.

8. Further instructions

Available user manuals:

- 14.1 Manually operated sliding doors
- 14.3 Power-operated sliding doors
- 14.4 Control button “Touch”

Available languages:

- German
- English
- French
- Italian
- Norwegian
- USA

Download: https://www.sky-frame.com/manual

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