

FSW EASY Safe and FSW EASY Safe-C/-C-Plus Folding sliding wall

Mounting instructions

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EN

dormakaba 

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1 About this manual

1.1 Information about the manual

Manual

This manual allows for the safe and efficient installation of the FSW EASY Safe and FSW EASY Safe-C/-C-Plus folding sliding wall (hereinafter called "folding sliding wall") as well. This manual is part of the product and must be stored accessibly within direct vicinity of the product for personnel at any time.

Personnel must have carefully read and understood these instructions before beginning any work. The basic requirement for safe working is complying with all specified safety codes and instructions in this manual. Furthermore, the local safety codes and general safety provisions for the use area of a sliding wall apply.



TIPS AND RECOMMENDATIONS

Figures

Figures are used for basic understanding and may differ from the delivered folding sliding wall version.

Target audience

This manual is intended for dormakaba Deutschland GmbH's installation personnel or a company commissioned by dormakaba for installation.

Customer service

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Applicable documents

In addition to this installation manual, please note the following documents:

- FSW EASY Safe and FSW EASY Safe-C/-C-Plus operating instructions
- If necessary, the installation instructions for the TS92/93 door closer
- System drawing of the delivered folding sliding wall
- Glass manufacturer's vitrification regulations
- Safety data sheet from the adhesive manufacturer

1.2 Symbols in the manual

Safety information

Safety information is marked in this manual with symbols. This safety information is introduced by group words that express the hazard level.



DANGER

This combination of symbol and group word indicates an imminently hazardous situation which will lead to death or serious injuries if the situation is not avoided.



WARNING

This combination of symbol and group word indicates a potentially hazardous situation which can lead to death or serious injuries if the situation is not avoided.



CAUTION

This combination of symbol and group word indicates a potentially hazardous situation which can lead to minor or moderate injuries if the situation is not avoided.



ATTENTION

This combination of symbol and group word indicates a potentially hazardous situation which can lead to material damage if the situation is not avoided.

ENVIRONMENTAL PROTECTION

This combination of symbol and group word indicates potential hazards for the environment.



TIPS AND RECOMMENDATIONS


This symbol highlights useful tips, recommendations, and information for efficient and error-free use.

Safety information in instructions

Safety information may relate to certain, individual instructions. This safety information is embedded in the instructions so that the information does not interrupt the reading flow during execution. The aforementioned group words are used.

Example:

1. Loosen screw.

2.  **CAUTION!**
Risk of entrapment on the cover!

Carefully close cover.

3. Tighten screw.

Additional markings

The following markings are used in this manual to highlight instructions, results, lists, references and other elements:

Marking	Explanation
1., 2., 3., ...	Step-by-step instructions
→	Results of instructions
.	Lists without a specified order

2 Overview and product description

2.1 Overview

The FSW EASY Safe folding sliding wall is essentially composed of the following main components:

- Base panel (Fig. 1/1)
- Folding panel (Fig. 1/2 – 4)

The FSW EASY Safe-C/-C-Plus folding sliding wall is essentially composed of the following main components:

- Base panel (Fig. 1/1)
- Folding panel (Fig. 1/2)
- Final folding base panel (Fig. 1/3)
- Final folding panel (Fig. 1/4)

Additional components of the folding sliding wall:

- Upper pivot bearing (Fig. 1/A)
- Hinge (Fig. 1/B)
- Track roller (Fig. 1/C)
- Upper slide bolt (Fig. 1/D)
- Face-mounted slide bolt (Fig. 1/E)
- Floor pivot (Fig. 1/F)
- Door rail (Fig. 1/G)
- Track rail (Fig. 1/H)

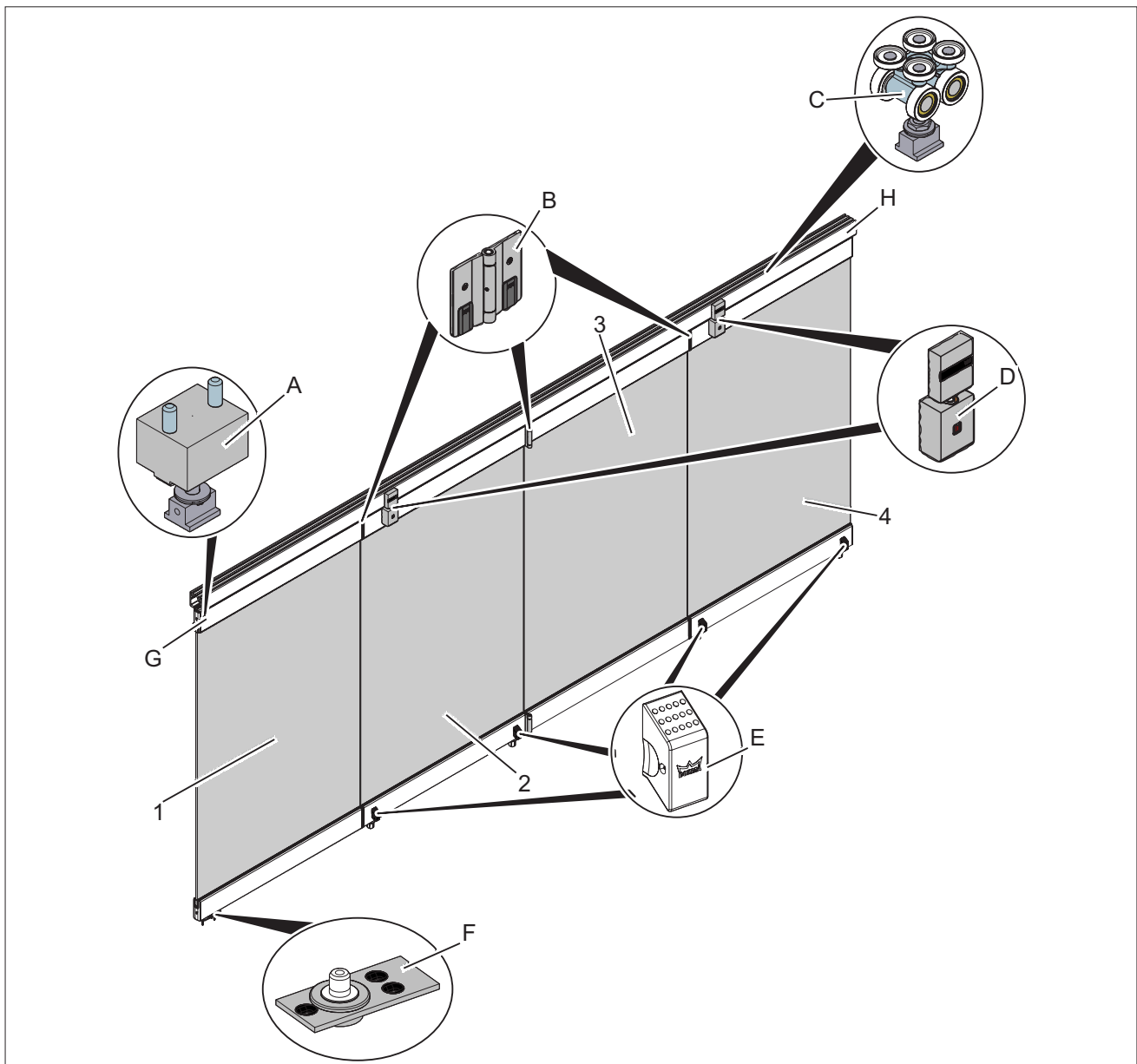


Fig. 1 Folding sliding wall overview (sample model)

Brief description

The folding sliding walls (Fig. 1) FSW EASY Safe and FSW EASY Safe-C/-C-Plus are suitable for indoor use.

The FSW EASY Safe consists of a base panel and folding panels. A separate swing panel can optionally be installed on the opposite side.

The FSW EASY Safe-C/-C-Plus consists of a base panel, folding panels, and a folding unit (a folding unit = a final folding base panel + final folding panel). The flap unit can optionally be replaced by a separate swing panel.

The panels (Fig. 1/1 – 4) are mounted in the track rail (Fig. 1/H). Folding panels are opened in pairs. Depending on the system type, the folding sliding wall can be opened in one or both directions. The base panel (Fig. 1/1) is the first panel in the system and is fixed; it cannot be moved. In the FSW EASY Safe-C/-C-Plus variant, it is half as wide (half panel width + 65 mm pivot) as the other panels. The opened folding panels are furthermore coupled with magnets in the FSW EASY Safe-C/-C-Plus variant.

The optionally available swing panel is not connected to the folding panels. The swing panel is fixed and cannot be moved.

On the FSW EASY Safe model, the panel's track rollers are positioned outside on the panel edge. On the FSW EASY Safe-C/-C-Plus model, they are positioned in the middle of the panel.

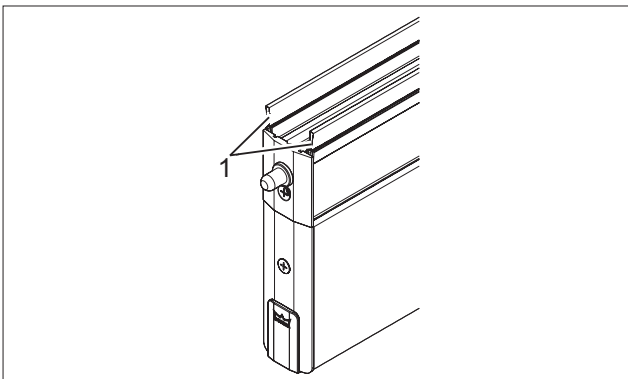


Fig. 2 Brush seals

The folding panels are connected to hinges (Fig. 1/B). Brush seals (Fig. 2/1) close the gap between the door rail and the track rail mounted above it.

2.2 Tools

Required tools

- Hole saw \varnothing 40 mm
The hole saw must be suitable for masonry.
- Hole saw \varnothing 25 mm
The hole saw must be suitable for masonry.
- Glass suction cup
For lifting and transporting large, smooth-surfaced parts with a load capacity of up to 100 kg.
1 glass suction cup can be used per person.
- Hammer
- Allen wrench, 2.5 mm
- Allen wrench, 3 mm
- Allen wrench, 5 mm
- Allen wrench, 6 mm
- Phillips and flat-head screw driver
- Plastic hammer
- Setting blocks
Setting blocks with sufficient stability and carrying capacity for the glass panes. 2 units are required to support a glass panel.
- Ladder
Safety ladder that stands firmly.
- Open-end wrench, 17 mm
- Open-end wrench, 8 mm
- Chisel
- Needle-nosed pliers
- Masonry drill \varnothing 8 mm

2.3 Scope of delivery



TIPS AND RECOMMENDATIONS

Mounting hardware such as anchors and screws are not included in the scope of delivery and are not provided by dormakaba. The mounting hardware must be selected in accordance with the existing building material before beginning installation (5.2 Selecting mounting material, p. 14).

The scope of delivery for the folding sliding wall is specified in the delivery note.

3 Safety

3.1 Intended use

Use

The FSW EASY Safe and FSW EASY Safe-C/-C-Plus folding sliding walls are solely intended to be a separating folding sliding wall and are suitable for indoor use. The operator may only use the folding sliding wall after the handover certificate is approved by dormakaba or by an installation company commissioned by dormakaba.

Intended use also includes complying with all the information in this manual and in the applicable documents.

Any use that goes beyond intended use or any other form of use is deemed misuse.

Misuse

Misuse of the folding sliding wall may lead to hazardous situations.

- Do not use the folding sliding wall as an exit door.
- The folding sliding wall is not fully sealed and therefore may not be used in refrigerated warehouses.
- Do not use the folding sliding wall in rooms where chemicals (e.g. chlorine) are used.
- Do not use the folding sliding wall in swimming pools, saunas and salt spas.
- Do not make any alterations or modifications to the folding sliding wall.
- Never install or hang objects on the folding sliding wall.
- Do not block or slow down the folding sliding wall with an object.
- Do not use the folding sliding wall without proper training.
- Do not use the folding sliding wall in areas with insufficient illumination.
- Do not use the folding sliding wall when damaged (e.g. glass breakage). Cordon off the area and have the glass replaced.
- Only use replacement parts that are approved by the manufacturer.

3.2 Remaining residual risks during installation

3.2.1 Basic hazards at the installation site

Weather conditions



WARNING

Bad weather conditions may cause serious danger!

If installation work is carried out in harsh weather conditions (e.g. thunderstorm, lightning, storm, rain, hail or snowfall), it can lead to serious injuries or even death.

Check the weather conditions before beginning any work.

Prohibit work in harsh weather conditions and thunderstorms.

Ensure that work can be safely carried out in existing weather conditions.

Fall hazard



WARNING

Working carelessly on a ladder or scaffolding poses a risk of injury!

Due to the height of the sliding wall, a ladder or a scaffolding will be required for some installation work. Falling may lead to serious injuries.

When performing any work on a ladder or a scaffolding, ensure that the ladder or scaffolding securely stands on firm and even ground.

When performing any work on a ladder or a scaffolding, ensure that there are no people underneath.

The ladder or scaffolding must be in perfect condition.

If necessary, have a second person secure the ladder or scaffolding.

Heavy parts



WARNING

Risk of injury from crushed limbs when working with heavy parts!

- Heavy parts may lead to serious injuries if improperly set down.
Carefully lift and lay down heavy parts using an approved pallet truck only.
- Always wear protective equipment when working with heavy parts: safety shoes.
 - Never move heavy parts abruptly.

Dirt and objects lying around



CAUTION

- Risk of injury due to tripping on dirt and other objects lying around!
Packaging remains and objects that are lying around are tripping hazards. Injuries may result from falling.
- Immediately remove the remaining packaging from the work area and dispose of it in the intended place.
 - Clearly label the required items in the work area that are tripping hazards.
- Remove unnecessary objects from the work area, particularly near the ground.

Danger of lacerations



CAUTION

- Danger of lacerations when performing installation work on the sliding wall!
Risk of injury when working on components with sharp notches and edges.
- Always be mindful of sharp notches and edges on components before beginning work.
- Transport parts with sharp notches and edges with protective gloves and protective clothing only.

3.2.2 Mechanical hazards

Improper installation



WARNING

Risk of injury due to improper installation and start-up!

- Improper assembly can lead to severe injuries and significant object damage.
- Ensure that there is sufficient installation clearance before beginning work.
 - Carefully handle parts with open, sharp edges.
 - Ensure that the installation area is organized and clean.
 - Install parts properly.
 - Secure the parts so that they do not fall down or become knocked over.

3.2.3 Chemical substance hazards

Improperly handling adhesives



CAUTION

Adhesives pose a health hazard!

- Contact with adhesives can cause allergies and skin irritation.
- Wear protective gloves and protective glasses when handling adhesives.
 - Do not swallow adhesives, do not inhale vapors.
 - In the event of eye contact, thoroughly rinse with plenty of water and seek medical attention, if necessary.
 - Thoroughly wash with plenty of water and soap in the event of skin contact.
 - Please follow the included safety data sheet from the adhesive manufacturer.
- Always keep the latest version of the adhesive manufacturer's safety data sheet at hand.

3.3 The operator's responsibility

Operator

The operator is the person who uses the folding sliding wall himself/herself for professional or commercial persons or grants it to a third party for use/utilization and bears the legal responsibility for protecting the user, personnel or third party during use.

Operator obligations

The folding sliding wall is used in the commercial sector. Therefore, the operator of the folding sliding wall is subject to legal obligations on occupational safety.

In addition to the safety information in this manual, the applicable safety, occupational safety, and environmental guidelines for the folding sliding wall's area of use must be observed.

The following is particularly applicable:

- The operator must inform himself/herself about applicable occupational safety guidelines and, in a separate hazard assessment, detect additional hazards that surface due to the special work conditions at the folding sliding wall's place of use. To avoid these hazards, the operator must create operating instructions for using the folding sliding wall.
- During the entire time of use, the operator must inspect the folding sliding wall to determine whether the operating instructions he/she has created conform to the current guidelines and make amendments to the operating instructions, if necessary.
- The operator must clearly regulate and specify responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- The operator must ensure that anyone who operates the folding sliding wall has read and fully understood the manual. Furthermore, he/she must regularly train the personnel and inform them about hazards.
- The operator must ensure safe accessibility of the folding sliding wall. This includes keeping the folding sliding wall, along with the entrance and exit, free from contaminants.

Furthermore, the operator is responsible for consistently maintaining the folding sliding wall in perfect operating condition. Thus, the following applies:

- The operator must ensure that the cleaning and maintenance plan for the folding sliding wall is observed.
- After the installation was finished, the operator was trained in operating and on the function of the folding sliding wall by dormakaba or an installation company commissioned by dormakaba. Furthermore, the operator must demonstrably obtain a handover protocol and confirm with his/her signature.

3.4 Personnel qualification

Inadequately qualified personnel



WARNING

Risk of injury if personnel are insufficiently qualified!

Unqualified personnel are unable to assess hazards when handling the folding sliding wall. These people expose themselves and others to severe or deadly injuries. Whenever unqualified personnel work on the folding sliding wall or stay in the folding sliding wall's danger area, hazards surface that can cause severe injuries and significant material damage.

- All work in this manual should only be carried out by dormakaba installation personnel or by a company commissioned by dormakaba.
- Keep unqualified personnel away from hazard areas.
- Please contact dormakaba if you have any questions (Customer service, p. 3).

Requirements for personnel

Only people who are expected to reliably carry out this work are permitted to perform this work. Persons whose responsiveness is affected—e.g. by substances such as drugs, alcohol or medication—are not allowed.



TIPS AND RECOMMENDATIONS

Follow age-related and occupational guidelines at the place of use.

Qualified installer

Due to his/her professional training, knowledge and experience along with knowledge of applicable norms and provisions, a qualified installer is able to perform installation work on the FSW EASY Safe and FSW EASY Safe-C/-C-Plus as well as independently detect and prevent possible hazards.

A qualified installer has knowledge and experience in the following areas:

- Occupational safety, operational safety and accident prevention guidelines
- Handling ladders and scaffolding
- Handling and transporting long, heavy components
- Installing glass panels
- Handling tools and machines
- Inserting fasteners
- Assessing the structure

3.5 Personal protective equipment

Personal protective equipment is used to protect personnel from hazards that may affect the safety or health of personnel while they are working.

Personnel must wear personal protective equipment when carrying out different works on and with the folding sliding wall. The individual chapters of this manual go separately into detail about this personal protective equipment. Explanation:

Protective clothes



Protective clothes are close-fitting work clothes with low tensile strength, narrow sleeves and no protruding parts.

Protective glasses



The protective glasses serve to protect the eyes from flying parts and splashed liquids.

Protective gloves



Protective gloves serve to protect the hands from friction, abrasions, punctures, deep wounds and contact with hot surfaces.

Safety shoes



Safety shoes protect the feet from bruises, falling parts and slipping on slippery floors.

3.6 Material damage hazard

Objects lying around and loose materials



ATTENTION

Material damage due to objects lying around and loose materials!

Objects lying around (e.g. tools) on the floor may move unpredictably when using the folding sliding wall and get stuck in the folding sliding wall. This may lead to material damage.

- Immediately remove unneeded objects such as tools, materials, packages, etc. from the folding sliding wall work area.

Remove objects lying around and dirt from the panel area before use.

Severe weather



ATTENTION

Severe weather may cause material damage!

The effects of severe weather, e.g. hail, can damage the glass panes and lead to injuries.

- Protect the glass panes from the effects of severe weather.
- If necessary, stop the installation and continue when the weather improves.

3.7 Environmental protection

Packaging material and environmentally hazardous materials



ATTENTION

Incorrectly handling the packaging materials and environmentally hazardous substances may harm the environment!

Severe damage may be caused to the environment if packaging material and environmentally harmful substances are improperly handled, particularly during improper disposal.

- Always follow the instructions below on handling environmentally hazardous substances and disposing of them.
 - Immediately take suitable measures if environmentally harmful substances accidentally leak into the environment.
 - Dispose of packaging material in an environmentally responsible manner.
- Follow applicable local disposal guidelines. If necessary, commission a specialized company to dispose of the waste.

The following environmentally hazardous substances are used:

Adhesives

Adhesives contain poisonous substances. They may not be leaked to the environment. They must be disposed of via a waste management facility.

3.8 Replacement parts

Wrong replacement parts



WARNING

Risk of injury if the wrong replacement parts are used!

Using the wrong or defective replacement parts may pose a hazard for personnel and cause damage, malfunctions or a complete breakdown.

- Only use original replacement parts from dormakaba or replacement parts authorized by dormakaba.

Always contact dormakaba if you have any questions (Customer service, p. 3).

Ordering replacement parts



TIPS AND RECOMMENDATIONS

Loss of warranty

The manufacturer's warranty will expire if unauthorized replacement parts are used.

Complaints can be made at dormakaba's customer service department for misdelivered, damaged or missing parts and materials (Customer service, p. 3).

4 Delivery and transport

4.1 Safety during transport

Heavy loads



WARNING

Risk of injury due to heavy loads!

Lifting heavy loads may result in injuries.

- Use appropriate tools such as pallet trucks and lifting equipment.

Always carry or transport loads over 25 kg with 2 people.

Unmarked centers of gravity



WARNING

Risk of injury due to unmarked centers of gravity!

Failing to mark the centers of gravity on loads may lead to severe injuries due to unpredictable behavior when lifting.

- Find the center of gravity when fastening parts.
- Secure the load-carrying and fastening equipment on the parts so as to prevent slipping.
- Ensure that no people stay in the hazard area.

Improper transport



ATTENTION

Improper transport may cause material damage!

Loads may fall or overturn in case of improper transport. As a result, the glass panes can break and significant material damage may occur.

- Proceed carefully when unloading the loads and be mindful of the symbols and information on the packaging.
- Only use the designated attachment points.

Do not remove packaging until shortly before installation.

4.2 Delivery and storage

Type of delivery

The folding sliding wall, broken down into packages, is delivered to the installation site by a shipping company hired by dormakaba.

Storing the packages



ATTENTION

Trapped moisture due to weather effects may cause material damage!

- Store the packages indoors with the greatest level of protection possible.
- If they must be stored outdoors, protect the packages from the weather.

Place the packages on a dry base where no moisture can accumulate.

As a general rule, store the packages under the following conditions:

- Do not expose to harsh substances (e.g. detergents).
- Protect from direct sunlight.
- Place the packages at ground level and on the appropriate surface (e.g. squared timber).
- Avoid mechanical vibrations.



TIPS AND RECOMMENDATIONS

There may be storage instructions on the packages that go beyond the requirements listed here. Comply with these instructions accordingly.

4.3 Transport inspection

Check the delivery for integrity and for missing items

Immediately check the delivery for missing items and transport damage upon receipt.

In case of significant noticeable transport damage or signs of transport damage on the package during shipment, proceed as follows:

- Refuse the delivery or accept the delivery conditionally.
- Make note of the extent of damage on the transport documents or on the shipper's delivery note.
- In case of missing parts or transport damage, file a complaint (Customer service, p. 3).



TIPS AND RECOMMENDATIONS

File a complaint about any defect as soon as it is detected. Claims for damages can only be asserted within the valid damage claims period.

4.4 Removing packaging

Regarding the packaging

The individual packages are shrink-wrapped in film and/or packaged on wooden frames, in crates or in wooden boxes.

Only environmentally friendly materials were used for the packaging.

The packaging should protect the individual parts from transport damage, corrosion and other damage until installation.

1. Do not remove packaging until shortly before installation

Handling packaging materials

Dispose of packaging material according to local regulations and guidelines.



ATTENTION

Improper disposal may harm the environment!

Packaging material is valuable raw material and can continue to be used or usefully reconditioned and recycled in many cases. Improper disposal of packaging material may create hazards for the environment.

- Dispose of packaging material in an environmentally responsible manner.

Follow applicable local disposal guidelines. If necessary, commission a specialized company to dispose of the waste.

5 Installation

5.1 Safety during installation

Crushing hazard



WARNING

Crushing hazard when installing and uninstalling the panels!

If the panel is installed or uninstalled by 1 person only, the panel can slip and injure the affected person or surrounding persons.

- Carry out work with 2 people. Proceed carefully.

Falling objects



WARNING

Falling components or tools pose a risk of injury!

If tools or components are not secured on a scaffolding or ladder, the objects may injure nearby people when the objects fall.

- Ensure that tools do not fall down.
- Do not leave tools or components unattended.

Wear a protective helmet.

Heavy parts



WARNING

Risk of injury due to heavy parts!

Lifting heavy parts alone may lead to injuries.

- Never lift heavy parts alone. Lift and transport heavy parts with 2 people.

Sufficient lighting



WARNING

Insufficient lighting during installation poses a risk of injury!

Insufficient or missing lighting at the installation site poses a risk of injury for people.

- Always ensure sufficient lighting at the installation site.

Never perform installation if the lighting at the installation site is defective or missing.

5.2 Selecting mounting material

Requirements

- Qualified installer



WARNING

Improper mounting materials pose a risk of injury!

If mounting materials that do not match the structure or weight of the folding sliding wall are used, there is a risk of parts being torn out. This can lead to life-threatening injuries and even death.

Always consider the local structure and weight information in the enclosed system drawing when selecting the mounting materials.

1. Select the mounting material (anchors, screws) according to existing structure and the weight of the folding sliding wall.

5.3 Installing the track rail

5.3.1 Installing small modules (e.g. rail stop)

Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Protective gloves
- Safety shoes
- Ladder
- Allen wrench, 3 mm
- Allen wrench, 6 mm



WARNING

Risk of injury due to insufficient substructure load capacity!

If the track rail is fastened to an inadequate substructure, the track rail can fall and injure people.

- Always verify if the substructure is designed for the full weight of the folding sliding wall before installation. The full weight consists of the weight figures for the individual components in the enclosed system drawing and the weight for the glass panes.

Ensure:

- There is a system drawing.

1. Check the mounting points for the track rail on the substructure/ceiling at the following intervals:
 - Approx. every 100 mm in the panel's stacking track area.

2. Insert the clamping pieces (Fig. 3/2) into the upper track rail channels (Fig. 3/1).

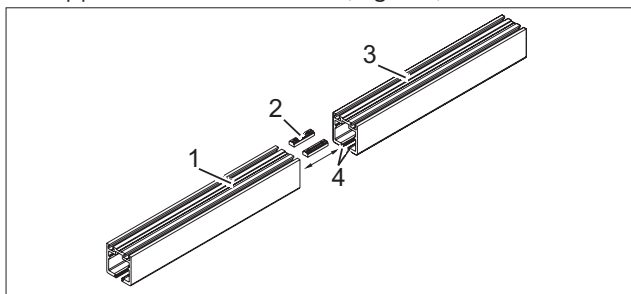


Fig. 3 Interlocking the track rails

3. Secure the clamping pieces (Fig. 3/2) using the set screws on the top side.
4. Insert the tapered dowel pins (4x) 20 mm into the lower channel (Fig. 3/4) halfway.
5. Interlock the track rail elements (Fig. 3/1 and Fig. 3/3). For this, insert the clamping pieces (Fig. 3/2) into the upper track rail channels (Fig. 3/3).
6. Secure the clamping pieces (Fig. 3/2) using the set screws on the top side.
7. Install the track rail on the substructure/ceiling with at least 2 people.

5.3.2 Installing long track rails (front of the system)

Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Protective gloves
- Safety shoes
- Ladder
- Allen wrench, 3 mm
- Allen wrench, 6 mm



WARNING

Risk of injury due to insufficient substructure load capacity!

If the track rail is fastened to an inadequate substructure, the track rail can fall and injure people.

Always verify if the substructure is designed for the full weight of the folding sliding wall before installation. The full weight consists of the weight figures for the individual components in the enclosed system drawing and the weight for the glass panes.

Ensure:

- There is a system drawing.
1. Check the mounting points for the track rail on the substructure/ceiling at the following intervals:
 - Mounting points approx. every 300 mm.
 2. Insert the clamping pieces (Fig. 4/2) into the upper track rail channels (Fig. 4/1).

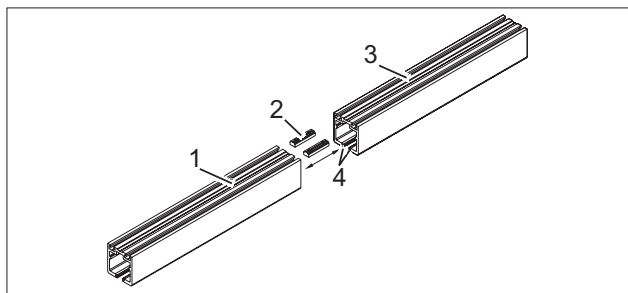


Fig. 4 Interlocking the track rails

3. Secure the clamping pieces (Fig. 4/2) using the set screws on the top side.
4. Insert the tapered dowel pins (4x) 20 mm into the lower channel (Fig. 4/4) halfway.
5. Screw the prepared track rail piece to the substructure/ceiling with at least 2 people.
6. Insert the next track rail piece's (Fig. 4/3) joint into the already installed track rail piece. For this, insert the clamping pieces into the upper channels.
7. Screw the second track rail piece to the substructure/ceiling.

5.4 Installing the floor pivot

Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Protective gloves
- Safety shoes
- Masonry drill \varnothing 8 mm
- Hole saw \varnothing 40 mm
- Hammer
- Chisel

Ensure:

There is a system drawing.



ATTENTION

Differences in measurements may cause material damage!

1. Align the floor pivot according to the system drawing spaced 65 mm from the door and 5 mm from the folding sliding wall (Fig. 5). Look for any differing measurements in the included system drawing.

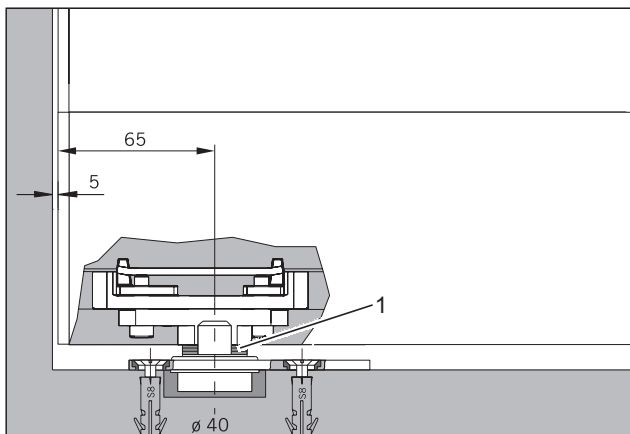


Fig. 5 Installing the floor pivot

2. Mark the mounting points for the floor pivot and the middle of the floor pivot (system axis) on the floor.
3. Remove the floor pivot.

4. **CAUTION!**
Flying chips pose a risk of injury when drilling!

Wear protective glasses. Drill holes on the markings using an 8-mm drill and make them at least 40 mm deep.

5. Clean the drill holes.
6. Wear protective glasses. Drill the middle of the floor pivot at least 15 mm deep using a 40-mm hole saw (Fig. 5).

7. **CAUTION!**
Flying chips pose a risk of injury when chiseling!

Wear protective shoes and protective glasses. Chisel out the middle strip in the 40-mm hole.

8. Insert the dowels into the 8-mm holes (Fig. 5).
9. Insert the floor pivot into the 40-mm hole and align using the mounting hole.



TIPS AND RECOMMENDATIONS

The floor pivot has an adjustment range of \pm 3 mm.

10. Screw the floor pivot into the floor using screws and dowels. Align the floor pivot above the oblong holes according to the system drawing.
11. Tighten the fastening screws.
12. If necessary, correct the floor pivot height. To do so, put the included washers (3 units, 1 mm thick) under the floor pivot (Fig. 5/1).
→ **The floor pivot is installed.**
13. Repeat the process for additional floor pivots, if necessary.

5.5 Installing the door rail on the glass pane

Requirements

- Qualified installer
- Protective clothes
- Protective gloves
- Safety shoes
- Allen wrench, 5 mm
- Setting blocks
- Glass suction cup

Ensure:

- There is a system drawing.

1. **CAUTION!**
Improper setting down can cause risk of injury!

Carefully place the glass pane on 2 saw horse with 2 persons (Fig. 6).

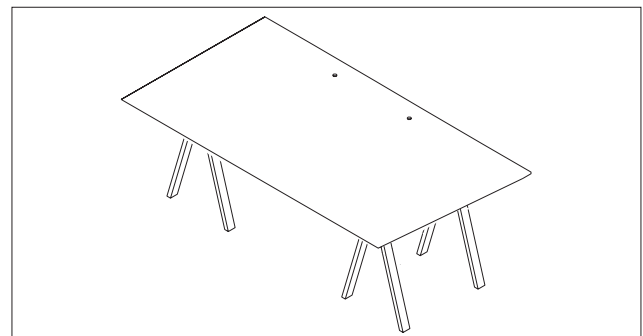


Fig. 6 Setting down the glass pane

- Loosen the boltings on the door rails (Fig. 7).

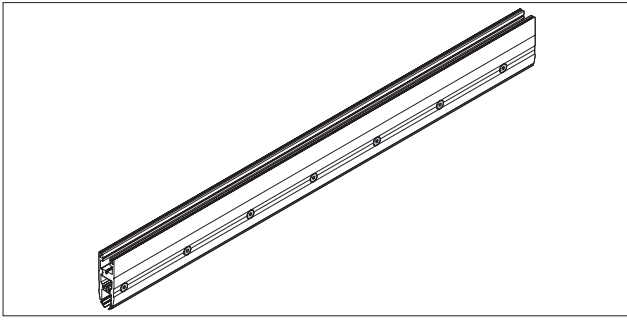


Fig. 7 Door rail boltings



TIPS AND RECOMMENDATIONS

The upper door rail is labeled "top". The screw heads are located on the inside.

- Slide on the upper door rail (Fig. 8/1) on the top side of the glass pane (Fig. 8/2) up to the stop (Fig. 8).

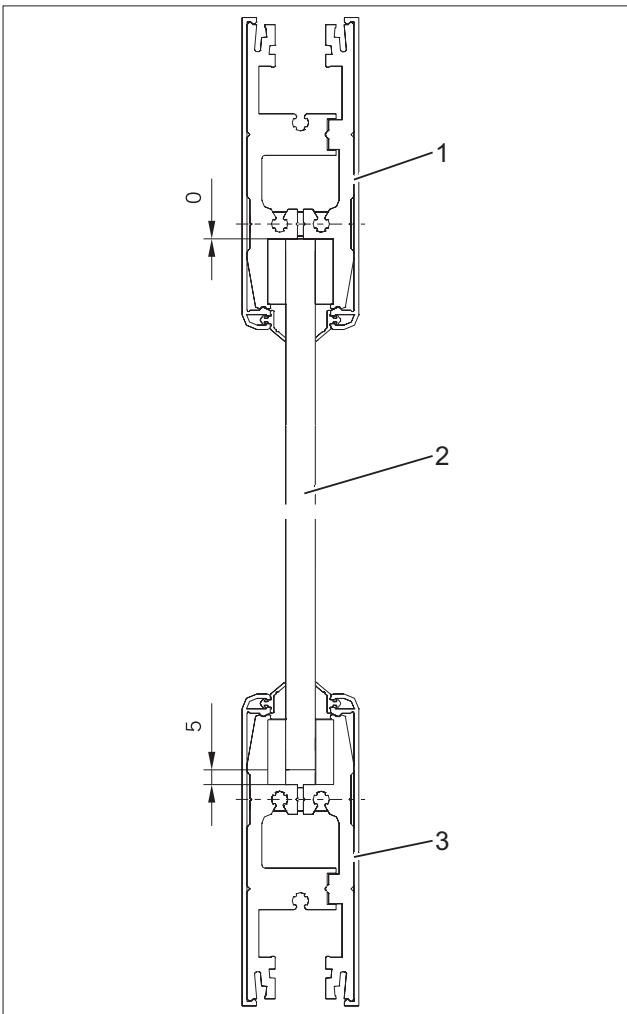


Fig. 8 Sliding on the door rail



TIPS AND RECOMMENDATIONS

The lower door rail is marked "bottom". The screw heads are located on the inside.

- Slide on the lower door rail (Fig. 8/3) on the bottom side of the glass pane (Fig. 8/2) up to 5 mm (Fig. 8).



TIPS AND RECOMMENDATIONS

The end covers (right and left) can be used as a distance gauge.

- Center the door rails so there is a distance of 4.5 mm from the glass edge on both sides (Fig. 9).

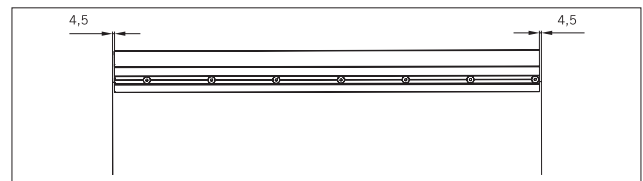


Fig. 9 Aligning the door rail



ATTENTION

Improper tightening may cause material damage!

- Carefully tighten the upper and lower door rail (Fig. 10). Maintain a 15 Nm tightening torque.
→ **The door rails stick to the glass pane.**

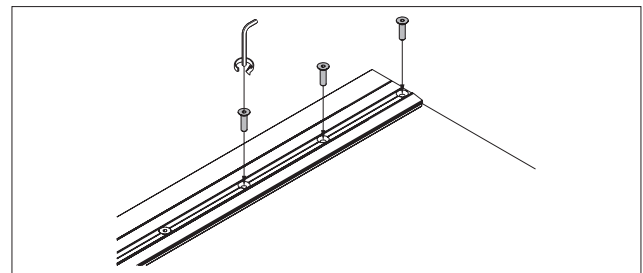


Fig. 10 Tighten the door rail

- Repeat the process for the remaining panels.

5.6 Adhering the door rail with LSG pane (optional)



TIPS AND RECOMMENDATIONS

If vibration is expected from the glass pane during use, the upper door rail is adhered in addition to the LSG pane. 2 adhesive chambers are located on the upper door rail for this purpose. The chambers are located on the left and right on the inside of the panel. Each chamber has a fill hole (Fig. 11/1) through which the adhesive is applied.

Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Protective gloves
- Safety shoes
- Setting blocks
- Repaplast Grey (adhesive)
- Towel



WARNING

Unhardened adhesive poses a risk of injury!

If LSG panes are used too early, the glass can loosen and severely injure people. Let the adhesive harden for at least 24 hours before using the folding sliding wall.

Ensure:

- The glass pane is placed on the setting blocks.
- The door rails are installed (5.5 Installing the door rail on the glass pane, p. 16).

1. Inject adhesive through the fill hole (Fig. 11/1), until the adhesive leaks on the edge of the adhesive chamber.

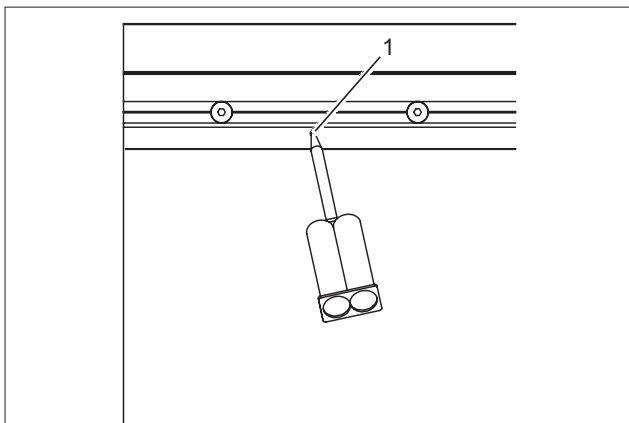


Fig. 11 Adhering the door rail

2. Remove excess adhesive on the adhesive chamber outlet and on the fill hole.
3. Repeat the process for the second adhesive chamber.

4. Repeat the process for the remaining panels.



ATTENTION

Improper hardening may cause material damage!

Let the adhesive harden for 15 min. before the installation is continued.

5.7 Installing the slide bolt bottom section on the folding panel

Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Safety shoes
- Allen wrench, 3 mm
- Allen wrench, 5 mm
- Ladder

Ensure:

- The door rails are already installed (5.5 Installing the door rail on the glass pane, p. 16).
- The LSG panes are adhered to the door rails, if necessary (5.6 Adhering the door rail with LSG pane (optional), p. 18).



TIPS AND RECOMMENDATIONS

The door rails for those panels on which the slide bolt bottoms are already mounted as per the system drawing are already pre-drilled.

1. Insert the feed piece (Fig. 12/1) into the door rail (Fig. 12/2) and align them on the thread holes.

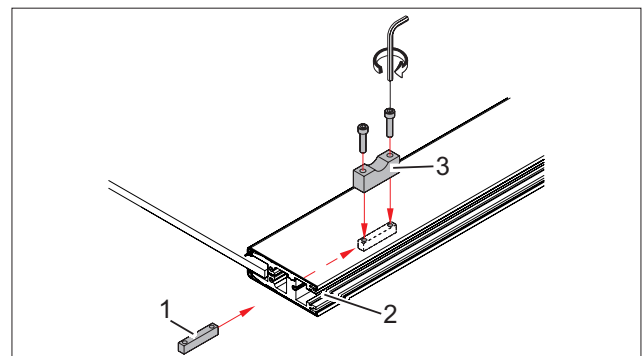


Fig. 12 Screwing the adapter

2. Screw the adapter (Fig. 12/3) with the door rail (Fig. 12/2) and with the feed piece.

- Place the slide bolt bottom section (Fig. 13/1) on the adapter and screw together.

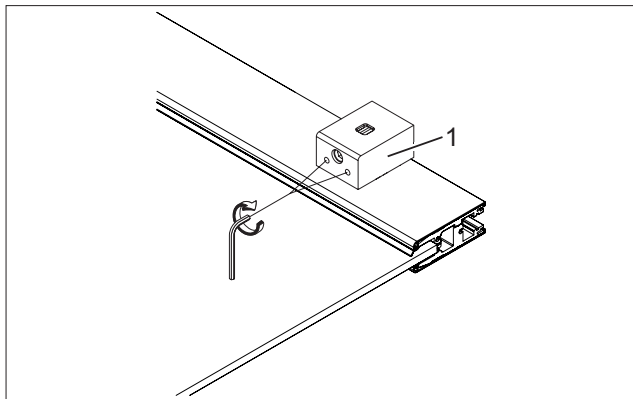


Fig. 13 Installing the slide bolt bottom section

5.8 Installing the upper pivot bearing



TIPS AND RECOMMENDATIONS

The upper pivot bearing is included pre-assembled. The upper pivot bearing must first be disassembled before installation. Afterwards, the upper pivot bearing is inserted into the track rail. The pivot bearing's support block is inserted into the door rail.

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Allen wrench, 5 mm
- Needle-nosed pliers
- Open-end wrench, 8 mm
- Open-end wrench, 17 mm

Disassembling the pivot bearing

- Remove the washer (Fig. 14/1) from the upper (Fig. 14/2) pivot bearing.

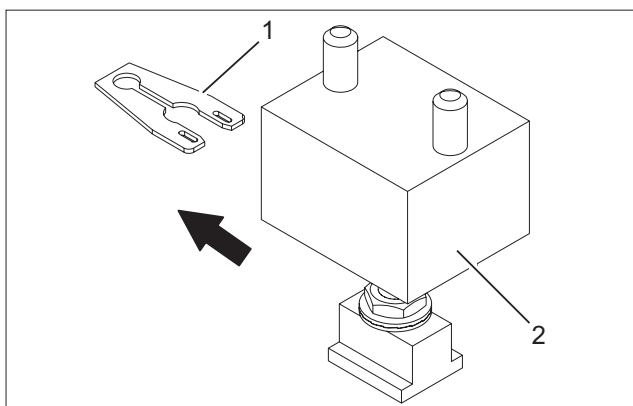


Fig. 14 Removing the washer

- Pull out the support block (Fig. 15/1).

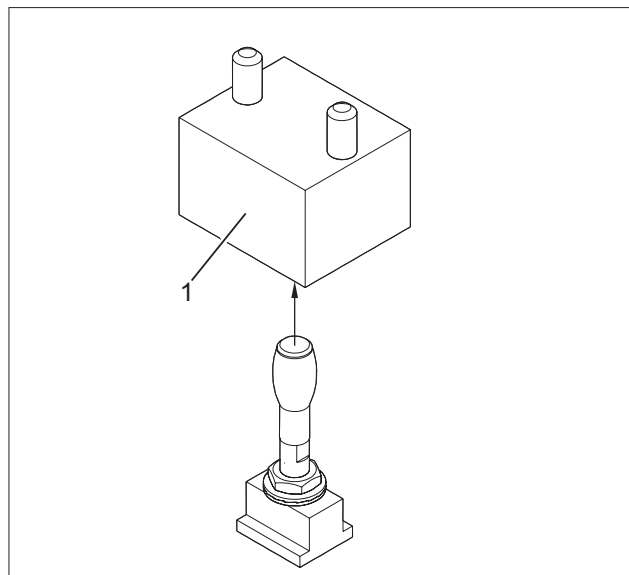


Fig. 15 Removing the support block

- Unscrew the set screws using the Allen wrench until the threaded pin and the end opposite of the support block head (Fig. 16/1) are flush.
→ **The upper pivot bearing is disassembled.**

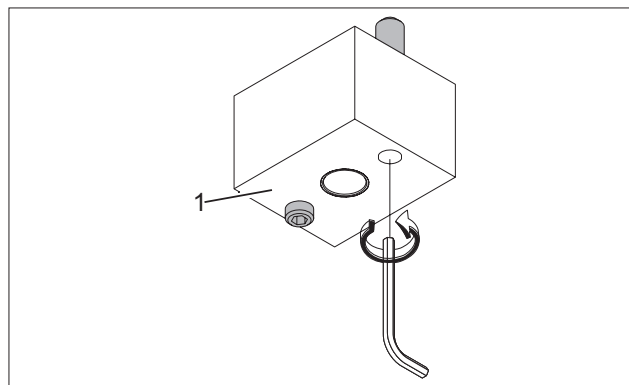


Fig. 16 Loosening the threaded pins

Installing the upper pivot bearing

4. Press together the washer (Fig. 17/2) with needle-nosed pliers and insert in the track rail's (Fig. 17/1) guide rails.

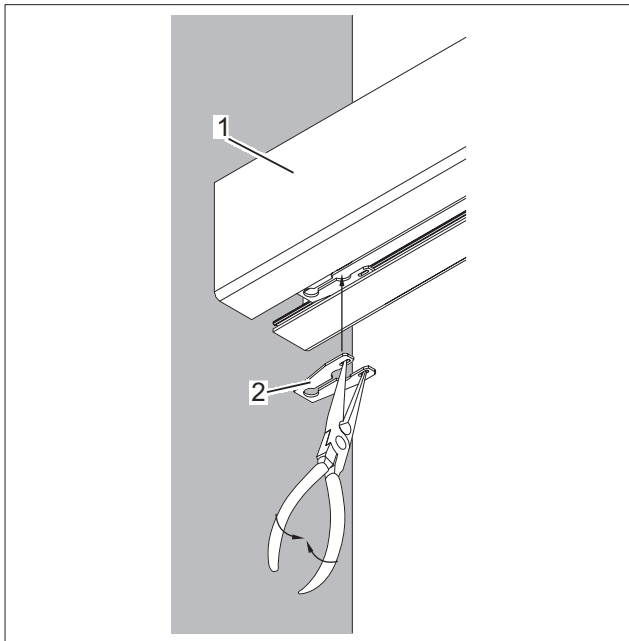


Fig. 17 Inserting the washer

5. Insert the upper pivot bearing (Fig. 18/2) into the track rail through the revision opening (Fig. 18/1).

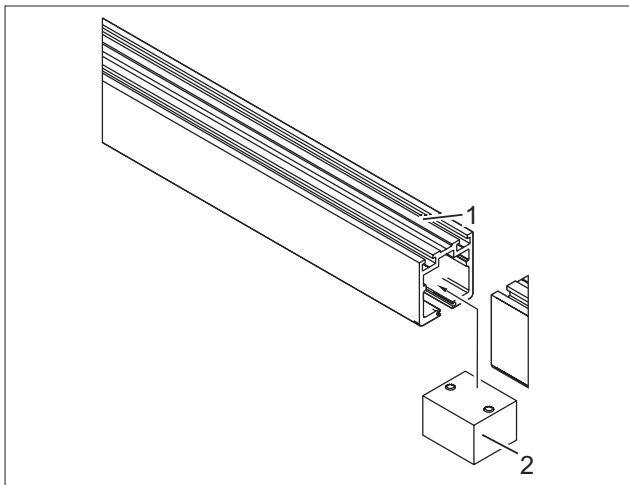


Fig. 18 Inserting the upper pivot bearing

6. Position the pivot bearing (Fig. 19/1) center-lined in the track rail 70 mm from the wall (65 mm pivot + 5 mm wall/panel space) (Fig. 19).

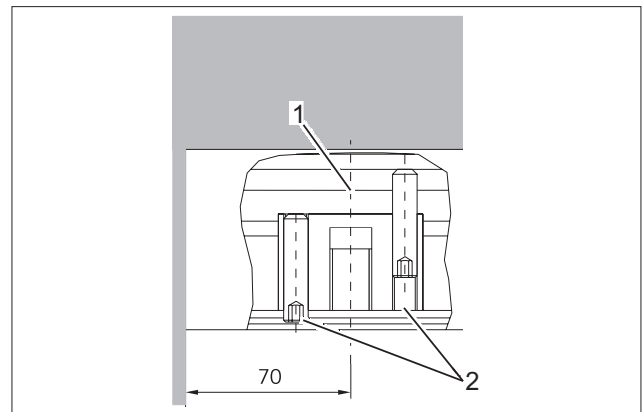


Fig. 19 Positioning the upper pivot bearing

7. Tighten the threaded pin (Fig. 19/2) on the upper pivot bearing.

Insert the support block in the door rail/carrier profile

8. Loosen the lock nut (Fig. 20/1) on the support block using a 17-mm open-end wrench.

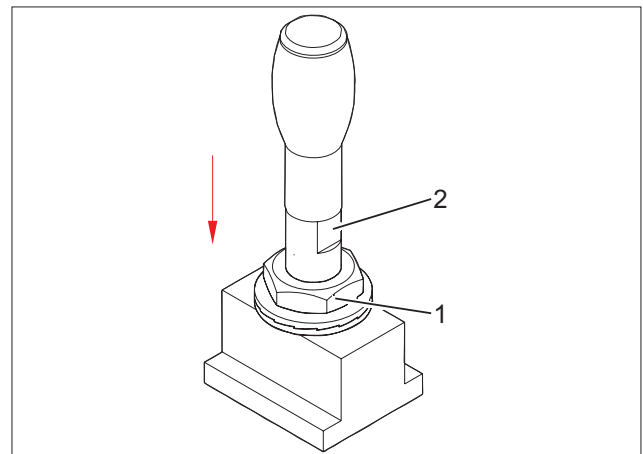


Fig. 20 Loosening the support block

9. Screw in the bolts (Fig. 20/2) using an 8-mm open-end wrench.

10. Insert the support block into the upper door rail/ the upper carrier profile (Fig. 21).

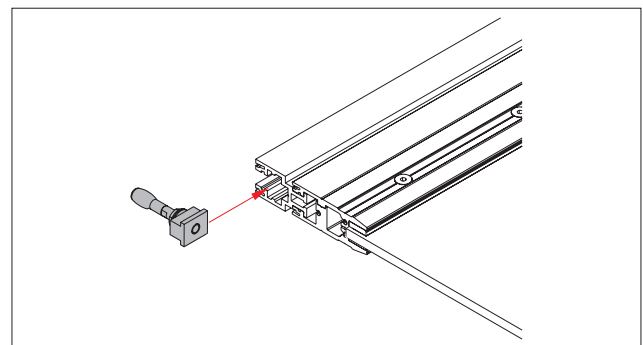


Fig. 21 Inserting the support block

- Align the support block center-lined in the upper door rail at a distance of 60.5 mm from the edge (Fig. 22).

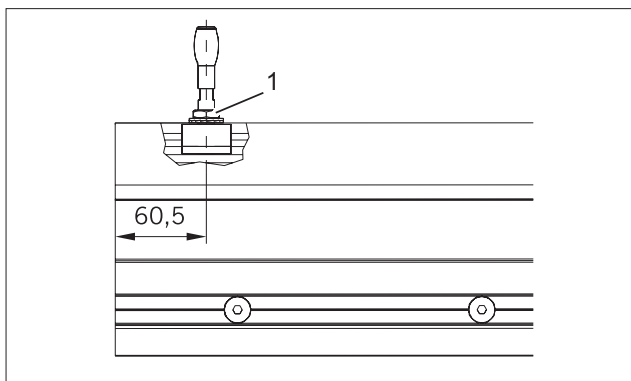


Fig. 22 Aligning support block

- Tighten the nut (Fig. 22/1) on the support block using a 17-mm open-end wrench.

5.9 Installing the swing panel



TIPS AND RECOMMENDATIONS

After the upper pivot bearing components have been installed in the track rail and in the door rail/carrier profile, the components are assembled when installing the swing panel.



TIPS AND RECOMMENDATIONS

FSW EASY Safe-C/-C-Plus

The swing panel is only half as wide as the rest of the panel.

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Glass suction cup
- Plastic hammer
- Open-end wrench, 8 mm
- Phillips and flat-head screw driver

Ensure:

- There is a system drawing.

1.



CAUTION!

Risk of injury due to improper actions!

Using 2 people, position the swing panel (Fig. 23/2) below the upper pivot bearing (Fig. 23/1) in the support block (Fig. 23).

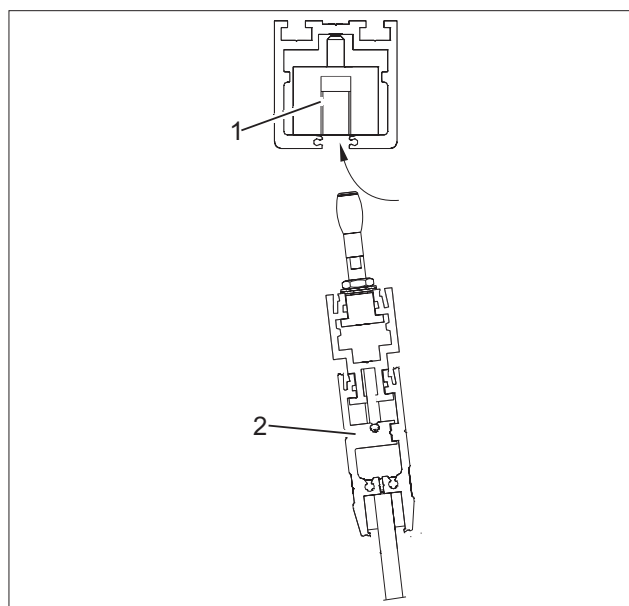


Fig. 23 Positioning the swing panel

- Insert the bolts (Fig. 24/1) into the upper pivot bearing (Fig. 24/2). Place the bottom of the swing panel (Fig. 24/3) on the floor pivot (Fig. 24/4).

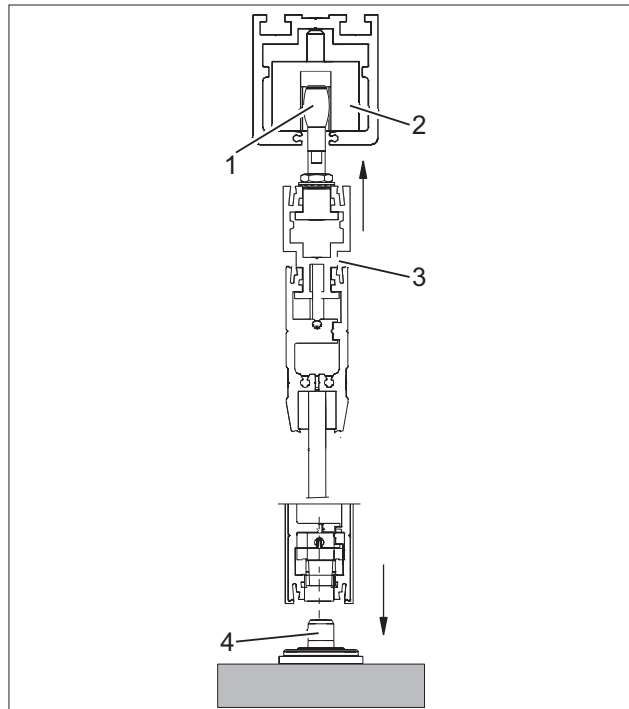


Fig. 24 Inserting the swing panel

3. Screw the bolt (Fig. 25/1) into the upper pivot bearing using an 8-mm open-end wrench until the wrench flat (Fig. 25/2) is flush with the lower edge of the track rail.

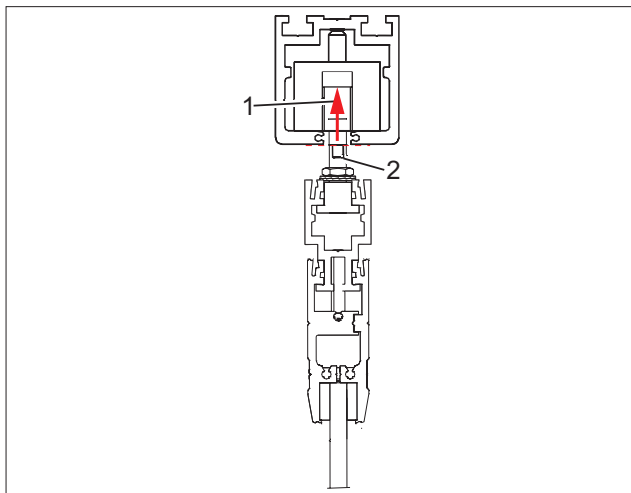


Fig. 25 Fastening the swing panel

4. Laterally snap the washer over the bolts using a plastic hammer and a flat-head screwdriver (Fig. 26).
→ **The swing panel is installed.**

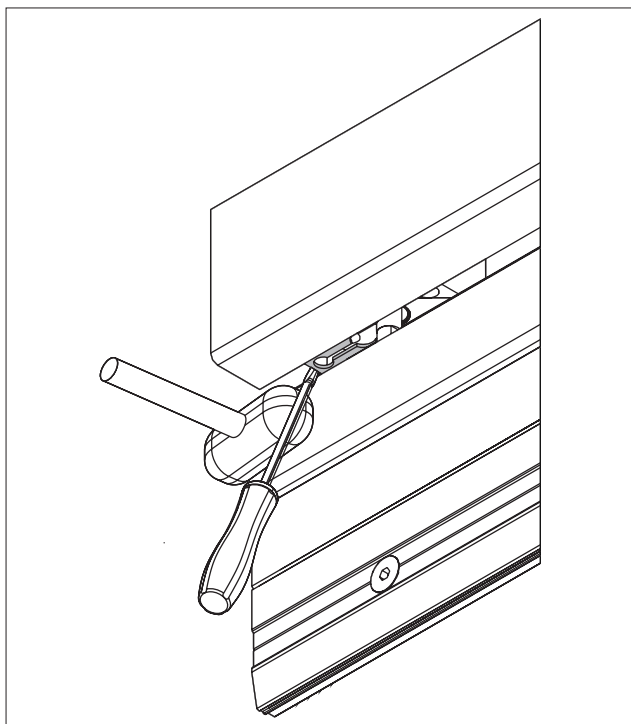


Fig. 26 Attach the washer

5.10 Installing the folding panel

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Allen wrench, 2.5 mm
- Open-end wrench, 17 mm
- Glass suction cup
- Setting blocks

Ensure:

- There is a system drawing.



TIPS AND RECOMMENDATIONS

Position the track roller according to the system drawing:

- FSW EASY Safe: Track roller is positioned 65 mm from the end of panels 2 and 4.
- FSW EASY Safe-C/-C-Plus: Track roller is positioned in the middle of the panel.

1. Insert the track rollers into the track rail. Position the track rollers in the track rail according to the system drawing (Fig. 27).

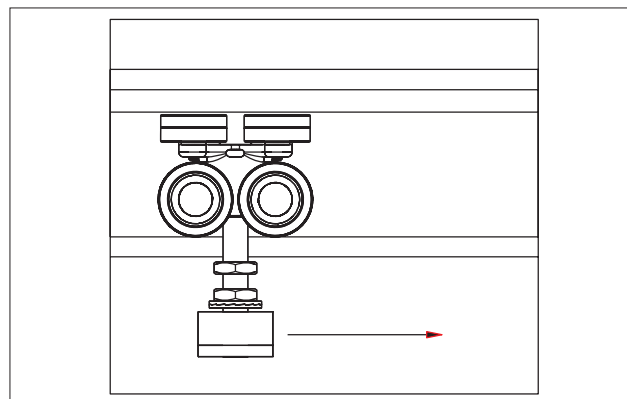



Fig. 27 Insert track roller

2. Place the 12-mm setting blocks on the floor. Use 2 people to place the folding panel on the spacer blocks.

3.  **CAUTION!**
Risk of injury due to heavy part!

Use 2 people to place the folding panel (Fig. 28/5) on the setting block (Fig. 28/6).

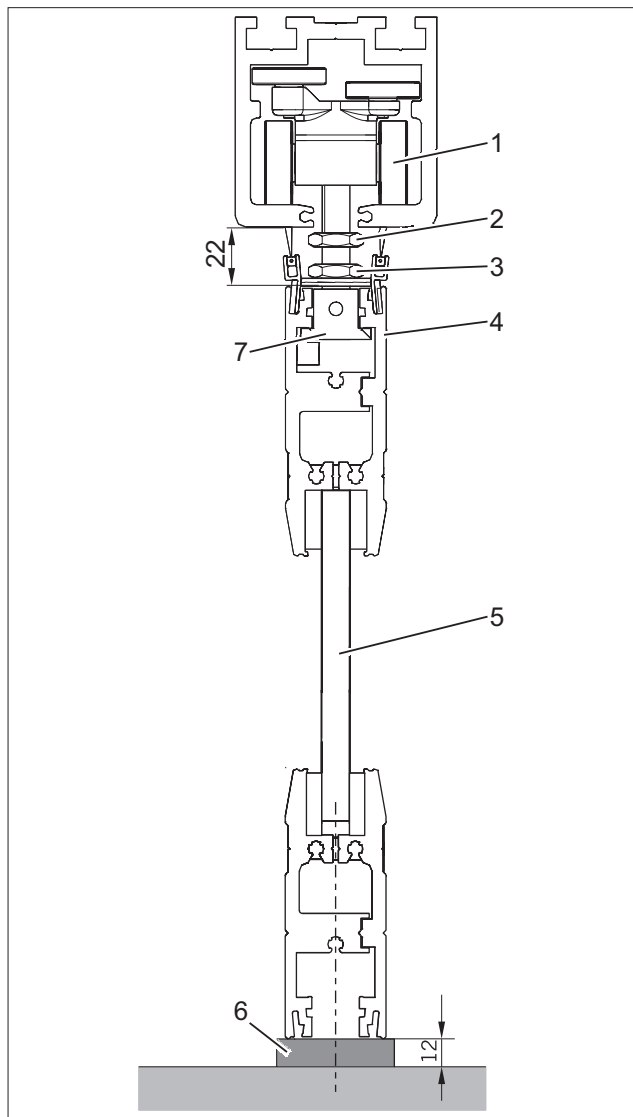


Fig. 28 Installing the folding panel

i **TIPS AND RECOMMENDATIONS**

Suspension blocks

Position the suspension blocks according to the system drawing:

- FSW EASY Safe: until the end of the panel
- FSW EASY Safe-C/-C-Plus: in the middle of the panel

4. Laterally insert the suspension block (Fig. 28/7) into the upper door rail (Fig. 28/4) or into the folding panel's carrier profile.

5. Align the height of the folding panel using the nut (Fig. 28/2) to provide a 12-mm distance between the floor and the door rail (Fig. 28).
Nut rotational direction (seen from below):

- counter-clockwise: greater bottom play
- clockwise: less bottom play

6. Tighten lock (Fig. 28/3) to set the height.

7. Repeat the process for the remaining folding panels until all panels are installed.

Installing the hinge on the panel

8. Open the hinges and reciprocally arrange the panels.

i **TIPS AND RECOMMENDATIONS**

The hinges are delivered assembled.

9. Open the folding sliding wall as shown in Fig. 29.

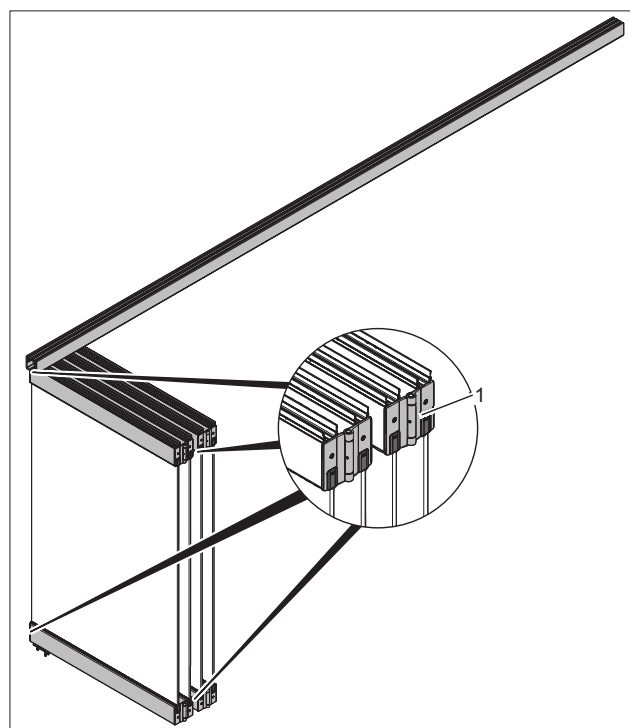


Fig. 29 Installing the hinges – FSW EASY Safe (example illustration)

10. Alternately install the hinges on the installed panels with 3 screws on the front of the door rails/carrier profiles (Fig. 29/1).

11. Slide the cover caps (dark gray) on the hinges.

6 Finishing the installation

6.1 Installing the revision piece

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Allen wrench, 6 mm
- Ladder
- Hammer
- Phillips and flat-head screw driver

1. Insert 2 guide pieces (Fig. 30/1) into the grooves (Fig. 30/2) of the track rail (Fig. 30/3).

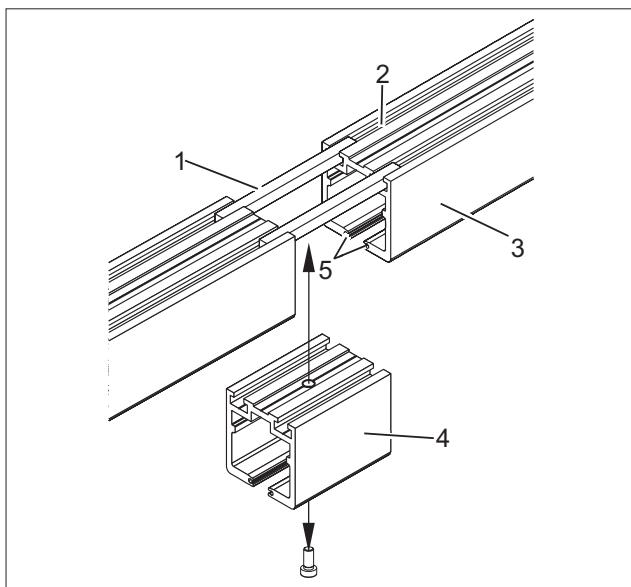


Fig. 30 Inserting the revision piece

2. Force the tapered dowel pins (Fig. 30/5) into the lower channels of the track rail.
3. Insert the revision piece (Fig. 30/4) into the track rail (Fig. 30/3).
4. Tighten the revision piece (Fig. 30/4) with a screw.
5. Force the tapered dowel pins halfway into the revision piece. Use a hammer and a flat-head screw driver to do so.

6.2 Installing the face-mounted slide bolt

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Plastic hammer
- Phillips and flat-head screw driver

Ensure:

- The panels are installed (5.10 Installing the folding panel, p. 22).



TIPS AND RECOMMENDATIONS

The sleeve (Fig. 31/2) is pre-installed.

1. Insert the panel (Fig. 31/1) behind the sleeve (Fig. 31/2) on the axis (Fig. 31).

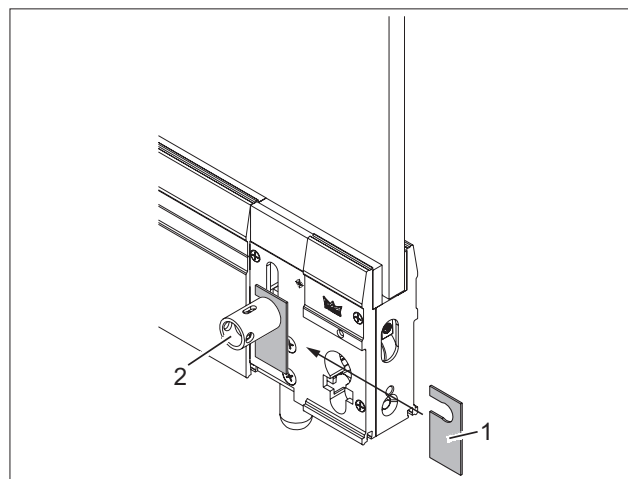


Fig. 31 Installing the panel

2. Repeat the process for additional panels.

Preparing the cover profile

3. Install (Fig. 32/2) the rubber seal into the cover profile (Fig. 32/1) throughout the entire length.

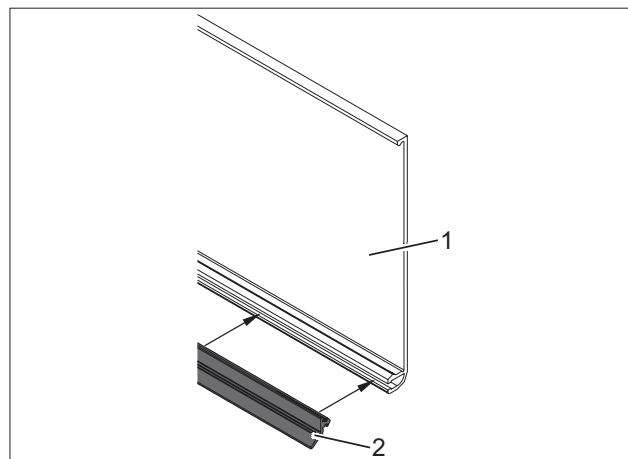


Fig. 32 Installing the rubber seal



ATTENTION

Improper hardening may cause material damage!

4. Place the cover profile (Fig. 33/2) on the door rail from below (Fig. 33/1) and snap on using a hammer. Do not hit the cover profile directly with the hammer; (Fig. 33/2) rather, use an intermediate layer (Fig. 33/3).

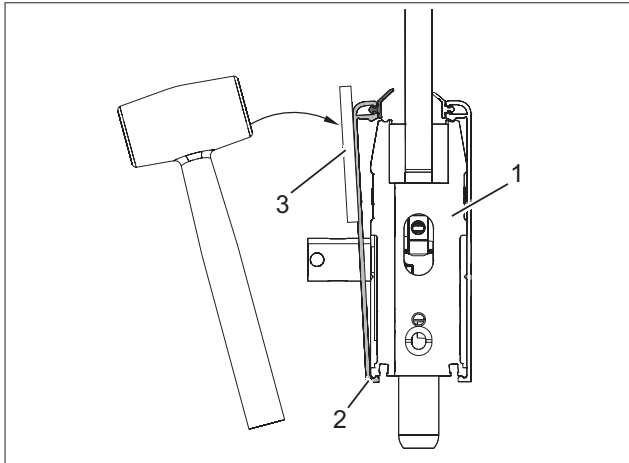


Fig. 33 Snap on cover profile

5. Pull out the sleeve (Fig. 34/1) and push upwards up to the stop. Afterwards, loosen the sleeve again.
→ **The sleeve is on the cover plate.**

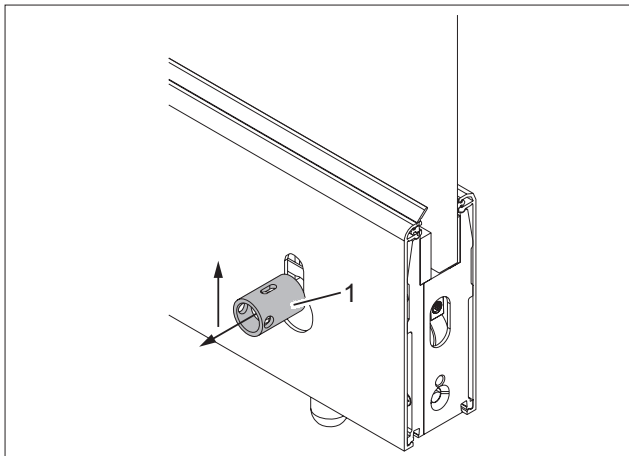


Fig. 34 Removing the sleeve

6. Slide the face-mounted slide bolt (Fig. 35/1) on the sleeve (Fig. 35/2). Align the mounting holes in the sleeve and the face-mounted slide bolt.

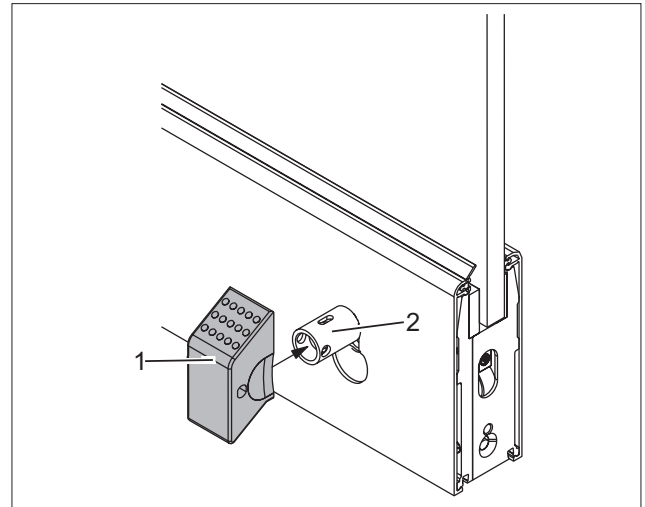


Fig. 35 Sliding on the face-mounted slide bolt

7. Screw the face-mounted slide bolt to the sleeve.
8. Repeat the process for the remaining panels.

6.3 Installing the eccentric bushing


Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Protective gloves
- Safety shoes
- Phillips and flat-head screw driver
- Masonry drill \varnothing 8 mm
- Hole saw \varnothing 25 mm
- Chisel
- Hammer

Ensure:

- There is a system drawing.
- The folding sliding wall is closed (↪ operating instructions).

1. Mark the mounting points for the eccentric bushing on the floor with the deadbolt of the lower slide bolt.
2. Open folding sliding wall (↪ operating instructions).

3.  **CAUTION!**
Flying chips pose a risk of injury when drilling!

Wear protective glasses. Drill 30 mm-deep on the drill hole using a 25-mm hole saw (Fig. 36).

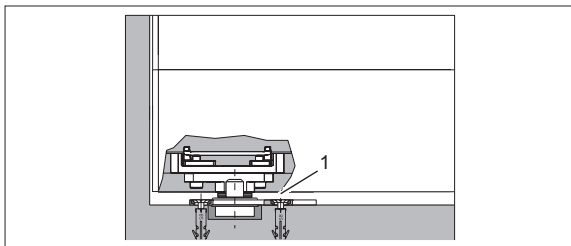



Fig. 36 Installing the eccentric bushing

4.  **CAUTION!**
Flying chips pose a risk of injury when chiseling!

Wear protective shoes and protective glasses. Chisel out the middle strip in the 25-mm holes.

5. Wear protective glasses. Drill holes on the markings using an 8-mm drill (Fig. 36). Drilling depth depends on the dowel length.
6. Clean the drill holes.
7. Insert dowels into the 8-mm holes (Fig. 36).
8. Insert the eccentric bushing into the holes (Fig. 36/1).
9. Adjust the eccentric bushings, if necessary. To do so, loosen the screws and position the bushing in position to accept lower bolt.
10. Screw the eccentric bushings on the floor with screws and dowels (Fig. 36).
→ **The eccentric bushings are installed.**

6.4 Installing the slide bolt top section on the track rail

Requirements

- Qualified installer
- Protective glasses
- Protective clothes
- Safety shoes
- Hammer
- Allen wrench, 5 mm
- Ladder
- Wedges

Ensure:

- Folding panels are installed on the track rail (5.10 Installing the folding panel, p. 22).
- The face-mounted slide bolt is installed (6.2 Installing the face-mounted slide bolt, p. 24).

1. Align the face-mounted slide bolt on the folding panel (Fig. 37/2) with the eccentric bushing. Afterwards, wedge the folding panel on both sides (Fig. 37/1) to affix the folding panel.

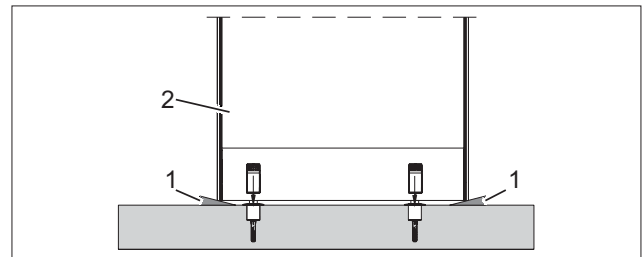


Fig. 37 Wedging the folding panel



TIPS AND RECOMMENDATIONS

The track rail is prepared for accepting the slide bolt top section.

2. Install the slide bolt top section (Fig. 38/1) according to the system drawing on the track rail (Fig. 38/2).

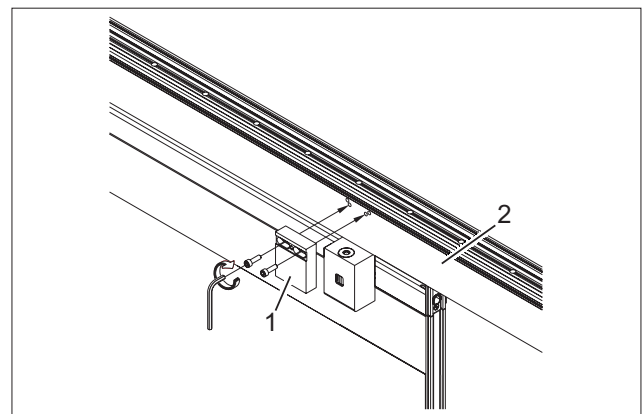


Fig. 38 Installing the slide bolt top section

3. Wind up the bolts in the slide bolt bottom section (Fig. 39/1) to connect the slide bolt bottom section (Fig. 39/1) with the slide bolt top section (Fig. 39/2).

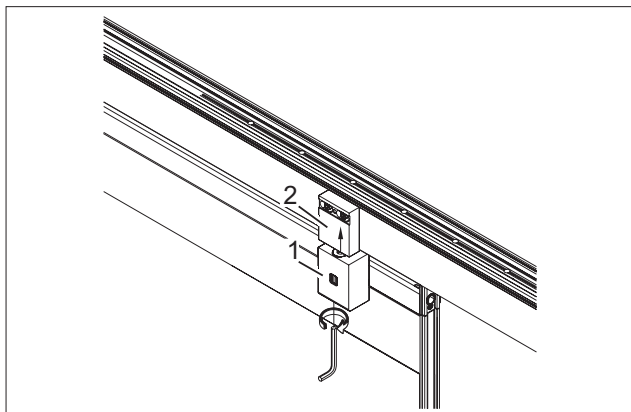


Fig. 39 Winding up the bolts

4. Align the slide bolt top section (Fig. 40/1) horizontally with the bolts, if necessary (Fig. 40). To do so, slightly loosen the screws and tighten them again after aligning.

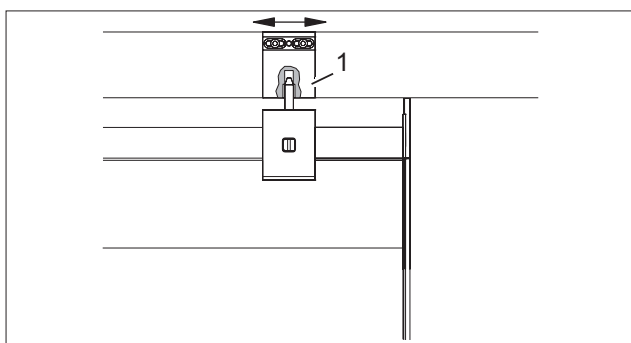


Fig. 40 Aligning the slide bolt top section

5. Place the cover (Fig. 41/2) on the slide bolt top section (Fig. 41/1).

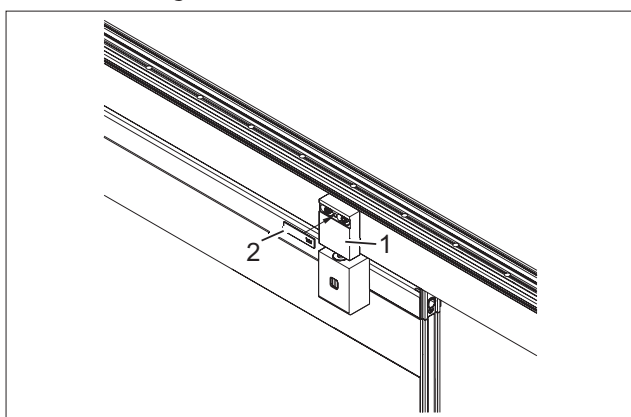


Fig. 41 Fastening the cover plate

6.5 Installing the remaining cover profiles

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Plastic hammer

1. Install the rubber seal (Fig. 42/2) into the cover profile (Fig. 42/1) throughout the entire length.

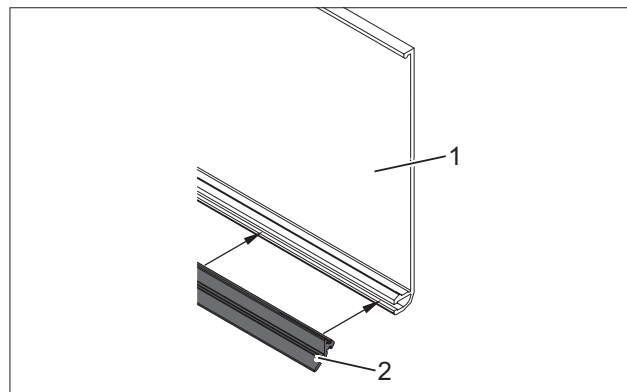


Fig. 42 Preparing the cover profile



ATTENTION

Improper clip-on may cause material damage!

2. Place the cover profile (Fig. 43/2) with the lower edge on the upper door rail (Fig. 43/1) and snap on using a hammer. Do not hit the cover profile (Fig. 43/2) directly with the hammer; rather, use an intermediate layer (Fig. 43/3).

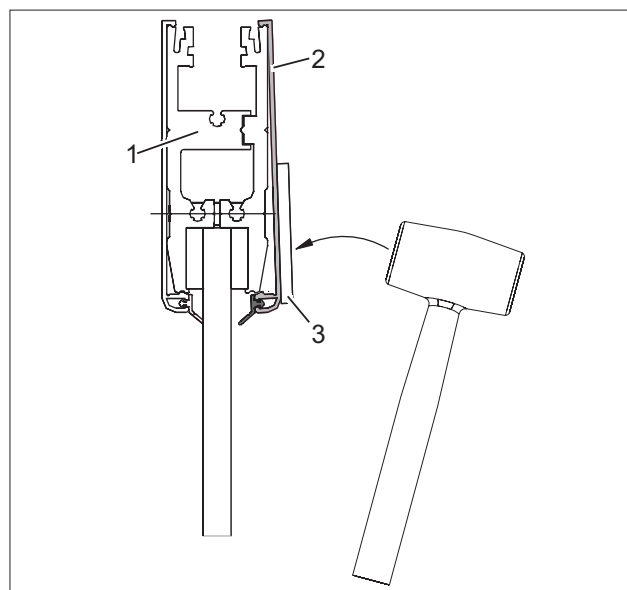


Fig. 43 Snapping on cover profile

3. Repeat the process for the remaining cover profiles on both sides of the panel on the upper and lower door rail.

6.6 Installing the brush profiles

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Plastic hammer

1. Install the brush profile (Fig. 44/1) into the door rail/carrier profile (Fig. 44/2).

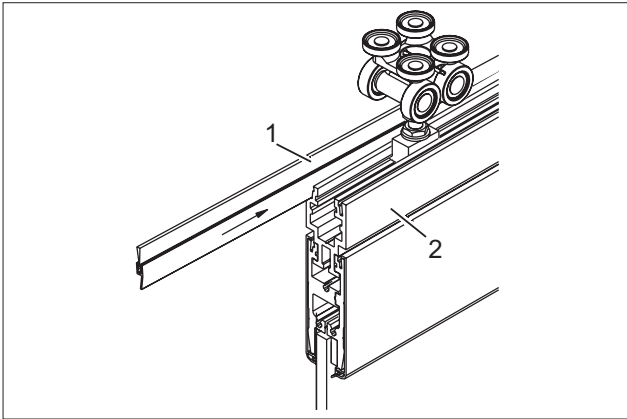


Fig. 44 Installing the brush profiles

2. Wedge in the brush profile from both sides of the end using the included plastic wedges (Fig. 45/1) and a plastic hammer.

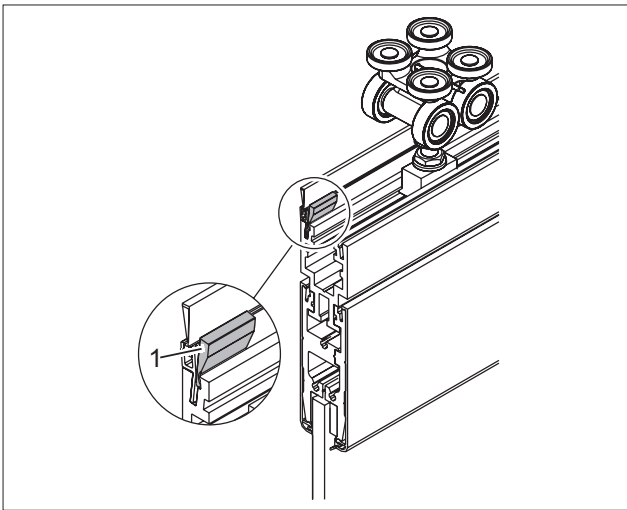


Fig. 45 Wedging the brush profile

3. Repeat the process for the remaining panels.

6.7 Installing the end covers

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Phillips and flat-head screw driver

1. Place the plastic cap (Fig. 46/1) on the end cover (Fig. 46/2).

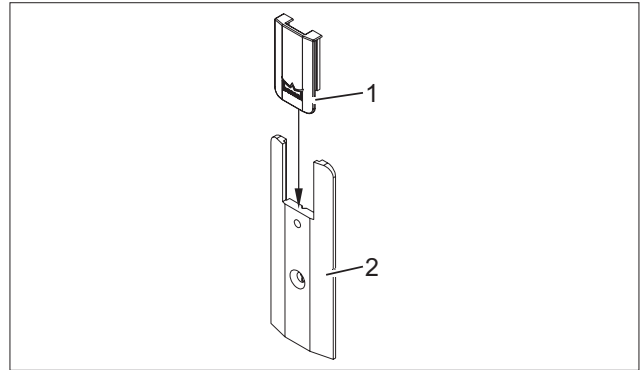


Fig. 46 Assembling the end cover



TIPS AND RECOMMENDATIONS

End cover

Only the first and last panel have an end cover.

2. Screw the end cover (Fig. 47/1) to the lower and upper ends of the door rail (Fig. 47/2) on the swing panel.

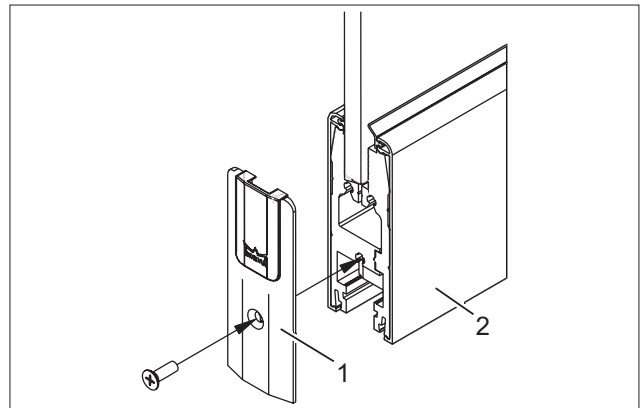


Fig. 47 Screwing together the end cover

3. Repeat the process for the last panel.

**TIPS AND RECOMMENDATIONS****Combination fixing block**

The combination fixing block is only installed if there is a carrier profile on the door rail.

4. Insert combination fixing block as shown in Fig. 48 into the carrier profile.

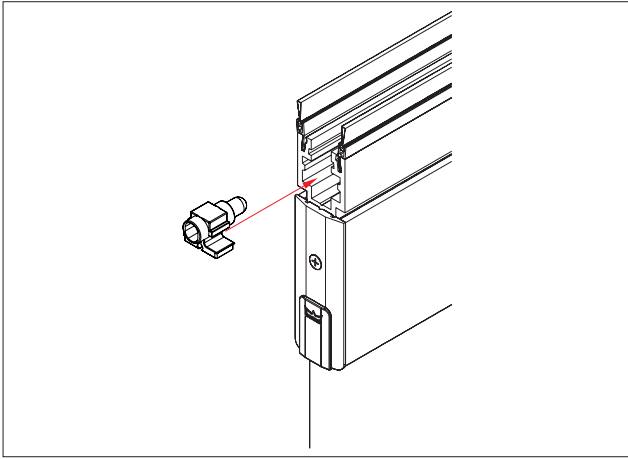


Fig. 48 Inserting the combination fixing block

5. Placing the cover on the combination fixing block (Fig. 49).

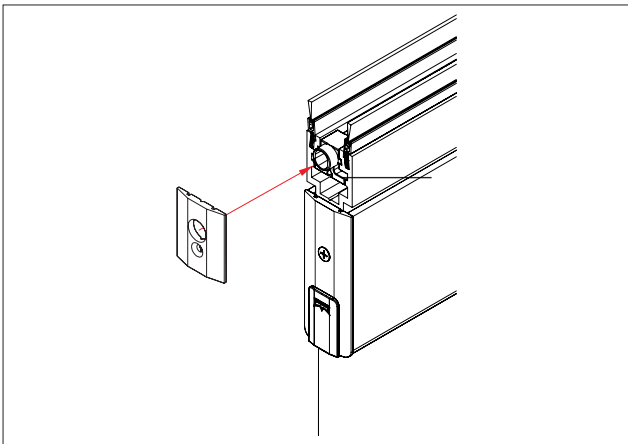


Fig. 49 Installing the cover

6. Tighten the cover (Fig. 50).

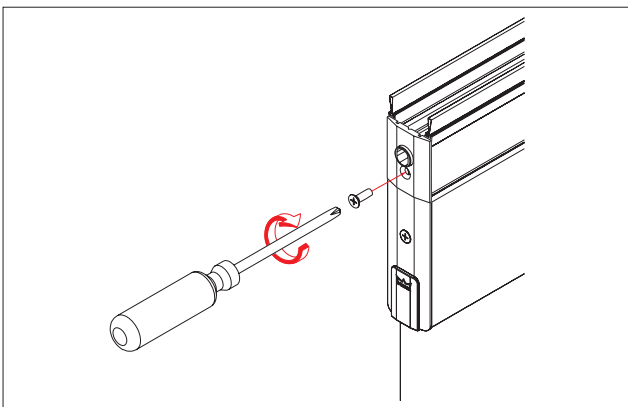


Fig. 50 Tightening the cover

6.8 Installing the TS92/93 door closers (optional)

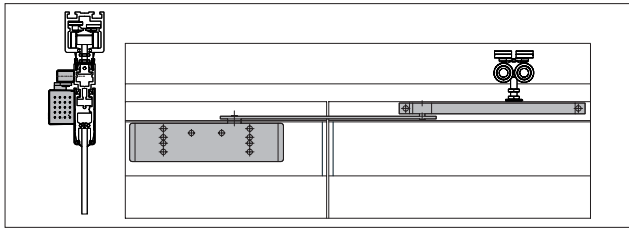


Fig. 51 Distances on the door closer



TIPS AND RECOMMENDATIONS

A TS92/93 door closer can be installed on the last panel in the FSW EASY Safe-C/-C-Plus variant. Installing the closer is described in the included mounting instructions.

6.9 Installing the magnetic slide bolt (optional)



TIPS AND RECOMMENDATIONS

The mounting holes for the magnetic slide bolt are pre-drilled in the panels.

Requirements

- Qualified installer

Ensure:

- The folding sliding wall is open (see operating instructions).
1. Fasten the magnetic slide bolt on the folding panel.



ATTENTION

Adjusting the countersunk screw too often may cause material damage!

2. Set the magnet's (Fig. 52/1) bond strength. To do so, turn the countersunk screw clockwise (Fig. 52/4) by approx. ¼ of a turn. Do not turn the countersunk screw too often; otherwise, the thread-locking fluid will dissolve and must be replaced.

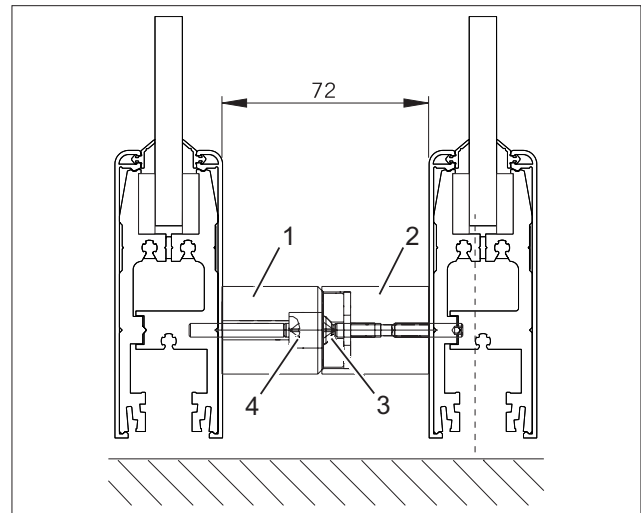


Fig. 52 Installing the magnetic slide bolt



ATTENTION

Improper fastening may cause material damage!

3. Align and fasten the mating disk (Fig. 52/2) to the center of the magnet. If necessary, slightly loosen the flat-head screw (Fig. 52/3) to re-align and re-tighten the mating disk.
4. Repeat the process for the remaining panels.

6.10 Conclusion and handover

Requirements

- Qualified installer
- Protective clothes
- Safety shoes
- Ladder

1. Affix the type plate to the interior of the track rail in the panel's stack tracking area.
2. Give the mounting and operating instructions along with the system drawing to the operator.
3. Check the handover protocol and have it signed by the operator.
4. Train the operator on how to use the system.

7 Disassembly and disposal

Improper disassembly



WARNING

Improper installation poses a risk of injury!

Parts that fall down or are knocked over may cause serious or deadly injuries.

- Only disassemble the folding sliding wall according to the information in the operating instructions.

Follow the applicable documents.

Improper disposal

ENVIRONMENTAL PROTECTION

Improper disposal may harm the environment!

Improper disposal may create hazards for the environment.

- Follow the operating instructions' specifications for disposing of components.
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