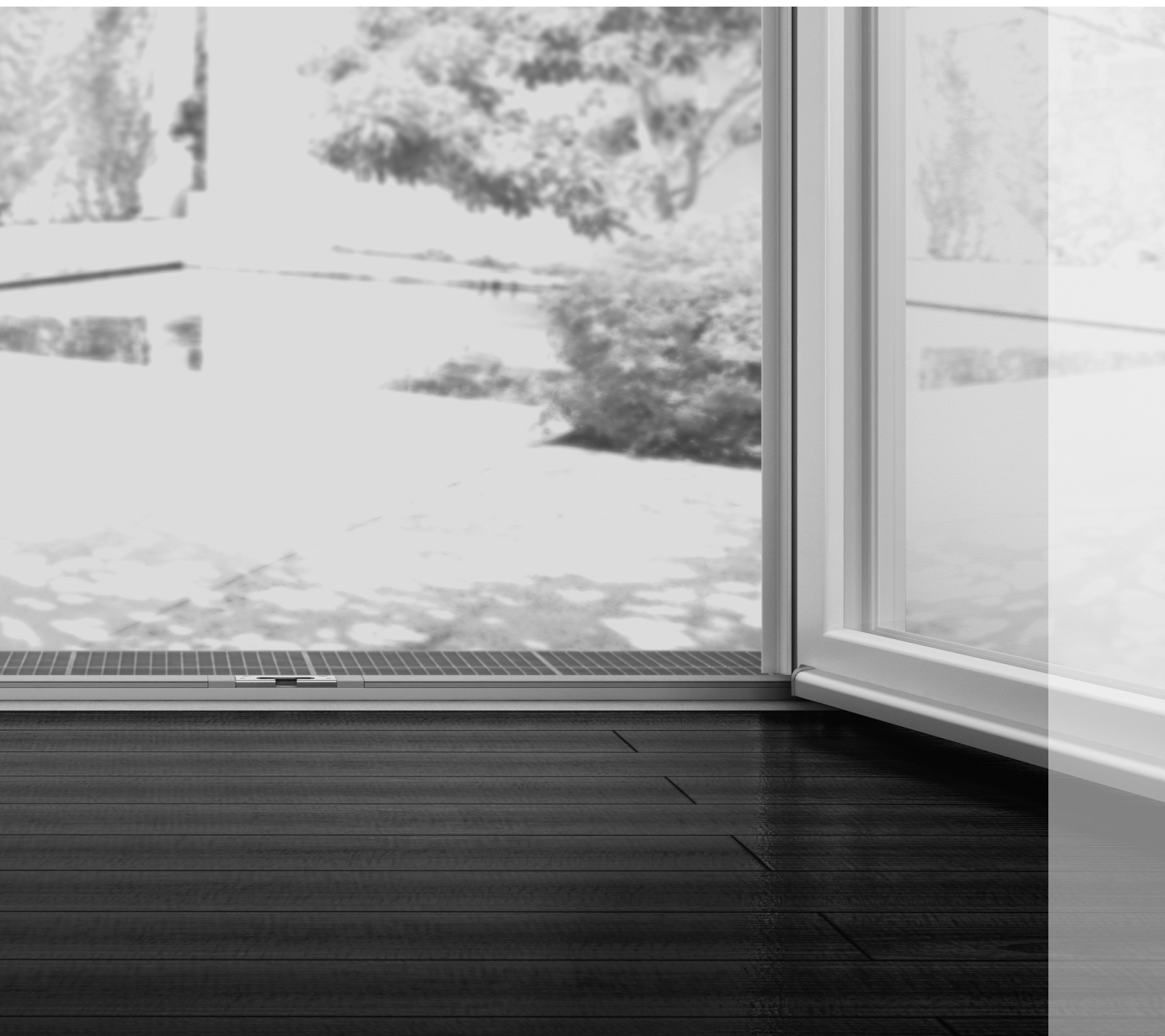







Roto Eifel

Tailor-made range of thresholds
for tightly sealed accessible doors and balcony doors

Installation, maintenance and operation instructions
for timber and PVC profiles







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1 General information

1.1 Version history

| Version | Date | Changes |
|---------|------------|---------|
| v0 | 02/05/2019 | |

1.2 Additional information to be noted

For other mandatory components (locking side, hinge side, etc.) and information (security, maintenance, transport, disposal), see the other applicable document.



INFO

These instructions are incomplete.

The other applicable document accompanying these instructions depends on the product brand used (e.g. Roto NX, Roto Safe, etc.).

Failure to observe this documentation discharges the hardware manufacturer from their liability.

1.3 Instructions

This manual contains important information, instructions and installation guidelines for the installation, maintenance and operation of hardware.

The information and instructions contained in this document refer to products belonging to the Roto hardware system named on the front page.

All steps must be completed in sequence.

The following documents apply in addition to these instructions:

Catalogues

- Roto Eifel catalogue: CTL_87
- Roto handles catalogue: CTL_1
- Roto Glas-Tec catalogue: CTL_15

Installation instructions

- Roto NX instructions – PVC: IMO_455
- Roto NT instructions – PVC: IMO_63
- Roto NT instructions – timber: IMO_64
- Roto NT Power Hinge instructions – timber: IMO_68
- Roto NT Designo instructions – timber: IMO_109
- Roto NT Designo instructions – PVC: IMO_110
- Roto Safe H instructions – Fasteo: IMO_405
- Roto Safe Eneo C / CC / CF instructions: IMO_438
- Roto Safe instructions: IMO_457
- Roto Safe C instructions IMO_503

The following guidelines also apply:

Gütegemeinschaft Schlösser und Beschläge e. V

- Directive TBDK: Attachment of supporting fitting components for turn-only and tilt&turn fittings
- Directive VHBE: Hardware for windows and balcony doors – Guidelines/ advice for end-users

- Directive VHBH: Hardware for windows and balcony doors – Guidelines/advice on the product and on liability

VFF (German Window and Facade Association)

- TLE.01: Correct handling of ready-to-install windows and external doors during transport, storage and installation
- WP.01: Maintenance of windows, facades and external doors – Maintenance, care and inspection – Information for sales
- WP.02: Maintenance of windows, facades and external doors – Maintenance, care and inspection – Measures and documents
- WP.03: Maintenance of windows, facades and external doors – Maintenance, care and inspection – Maintenance agreement

Additional guidelines







- Instructions and information issued by profile manufacturers, e.g. manufacturers of windows and balcony doors
- Instructions and information issued by screw manufacturers
- The applicable regulations, directives and national laws

Storing the instructions

These instructions are an important part of the product. The instructions must be stored so that they are always to hand.

Explanation of the markings

The manual uses the following markings for emphasis (e.g. in figures or instructions):

| Marking | Meaning |
|---|---|
|  | Sash |
|  | Frame |
|  | Drill holes, routing or screw positions |
|  | Unaffected components Indirectly affected components |
|  | Components that have just been described Arrows or movements |
|  | Item number |
| [1] | Legend |
| [A] | Steps |



INFO

Any dimensions without a unit in the instructions are given in millimetres (mm). Other units of measurement are clearly indicated by the presence of the differing unit.



INFO

Figures are provided in the left-hand version (DIN 107). The process for the right-hand version is mirror-inverted.


1.4 Symbols

| Symbol | Meaning |
|--------|------------------|
| ■ | First-level list |

| Symbol | Meaning |
|--------|----------------------------|
| □ | Second-level list |
| → | (Cross-)reference |
| ▷ | Result |
| ► | Unnumbered step |
| 1. | Numbered step |
| a. | Numbered second-level step |
| ⇒ | Requirement |

1.5 Pictographs

General

| Symbol | Meaning |
|---|--------------|
|  | Timber / PVC |

1.6 Abbreviations

| Abbreviation | Meaning |
|--------------|---------------------------|
| AD | Stop gasket |
| approx. | approximately |
| CTL | Catalogue |
| DIN L / R | DIN left / right |
| T&T | Tilt&Turn |
| SRW | Sash rebate width |
| SRH | Sash rebate height |
| S.kg | Sash weight |
| IMO | Installation instructions |
| kg | Kilograms |
| KS | PVC |
| Max. | Maximum |
| m² | Square metres |
| mm | Millimetres |
| MD | Central gasket |
| CL | Centre lock |
| Nm | Torque in newton metres |
| Not sh. | Not shown |
| RC | Resistance class |
| e.g. | for example |

1.7 Target groups

The information in this document is directed at the following target groups:

Hardware dealers

The “hardware dealers” target group includes all companies and individuals that purchase hardware from hardware manufacturers for resale, without modifying or further processing the hardware.

Door and balcony door manufacturers

The “door and balcony door manufacturers” target group includes all companies and individuals that purchase hardware from hardware manufacturers or hardware dealers and further process the hardware by integrating it in doors and balcony doors.

Building element dealers or installation companies

The "building element dealers or installation companies" target group includes all companies and individuals that purchase doors and balcony doors from door and balcony door manufacturers for resale and for installation in construction projects, without modifying the doors or balcony doors.

Builders

The "builders" target group includes all companies and individuals who place orders for the manufacture of doors and balcony doors for installation in their construction projects.

End users

The "end users" target group includes all individuals who use the installed doors and balcony doors.

1.8 Target groups' obligation to give instructions



INFO

Each target group must fulfil their obligation to give instructions in full.

Unless specified otherwise in the text below, documents and information can be passed on as a printed document, on a CD-ROM or via the Internet.

Responsibility of hardware dealers

Hardware dealers must pass the following documents on to the door and balcony door manufacturer:

- Catalogue
- Installation, maintenance and operation instructions
- Directive on fixing load-bearing Turn-Only and Tilt&Turn hardware components (TBDK)
- Guidelines/advice on the product and on liability (VHBH)
- Guidelines/advice for end users (VHBE)

Responsibility of the door and balcony door manufacturer

The door and balcony door manufacturer must pass the following documents on to building element dealers or the builder, even if a subcontractor (installation company) is involved:

- Installation, maintenance and operation instructions
- Directive on fixing load-bearing Turn-Only and Tilt&Turn hardware components (TBDK)
- Guidelines/advice on the product and on liability (VHBH)
- Guidelines/advice for end users (VHBE)

They must ensure that the end users are provided with the documents and information intended for them in printed format.

Responsibility of building element dealers and the installation company

Building element dealers must pass the following documents on to the builder, even if a subcontractor (installation company) is involved:

- Installation, maintenance and operation instructions (with a focus on hardware)

- Guidelines/advice on the product and on liability (VHBH)
- Guidelines/advice for end users (VHBE)

Responsibility of the builder

The builder must pass the following documents on to the end user:

- Installation, maintenance and operation instructions (with a focus on hardware)
- Guidelines/advice for end users (VHBE)

1.9 Copyright protection

The contents of this document are copyright-protected. This content can be used when working with the hardware. Any other use is not permitted without written permission of the manufacturer.

1.10 Limitation of liability

All information and instructions contained in this document have been compiled in consideration of the applicable standards and regulations, the latest developments in technology and many years of knowledge and experience.

The hardware manufacturer assumes no liability for damage caused by:

- Failure to comply with this document and all product-specific documents and other applicable directives (see the chapters entitled "Security" and "Stipulated use").
- Improper use / misuse (see the chapters entitled "Security" and "Stipulated use").
- Insufficient invitation to tender, non-compliance with installation specifications and non-compliance with the application diagrams (where available).
- Increased contamination.

Claims made by third parties against the hardware manufacturer on account of damage resulting from misuse or failure to comply with the obligation to give instructions on the part of hardware dealers, window, door and balcony door manufacturers and building element dealers or the builder are passed on accordingly.

The obligations agreed in the delivery contract, the general terms and conditions, the hardware manufacturer's terms and conditions of delivery and the legal provisions applicable when the contract was concluded shall apply.

The warranty only covers original Roto components.

We reserve the right to make technical changes as part of improvement to performance characteristics and further development.

1.11 Preserving the surface finish



ATTENTION

Surface treatments may cause property damage.

Surface treatments (e.g. painting and varnishing) on elements can damage components or prevent them from working properly.

- ▶ For masking, only use adhesive tape that does not damage the paint coats. Consult the manufacturer if in doubt.
- ▶ Protect components against direct contact with the surface treatment.
- ▶ Protect components against contamination.



ATTENTION

Using incorrect cleaning agents and sealing compounds may cause property damage.

Cleaning agents and sealing compounds may damage the surfaces of components and gaskets.

- ▶ Do not use aggressive or flammable liquids, acidic cleaners or abrasive cleaners.
- ▶ Only use mild, pH-neutral cleaning agents that have been diluted.
- ▶ Apply a thin protective film to the components, for example using a cloth soaked in oil.
- ▶ Avoid aggressive vapours (e.g. produced by formic acid, acetic acid, ammonia, amine compounds, ammonia compounds, aldehyde, carboic acid, chlorine, tannic acid) around the element.
- ▶ Do not use any acetic acid-crosslinking or acid-crosslinking sealing compounds or those with the aforementioned constituents as both direct contact with the sealing compound and its fumes can corrode the surface of the components.



ATTENTION

Contamination may cause property damage.

Contamination prevents components working properly.

- ▶ Remove deposits and contamination caused by construction materials (e.g. plaster, gypsum).
- ▶ Keep components free of deposits and contaminants.



ATTENTION

(Permanently) damp room air may cause property damage.

Damp room air can lead to mould growth and corrosion caused by condensation.

- ▶ Provide adequate ventilation for components, particularly during the construction phase.
- ▶ Intensively air out the room several times per day by opening all elements for approximately 15 minutes. If intensive airing is not an option, place the elements in tilt mode and provide airtight masking inside the room, e.g. if there is fresh screed that cannot be walked on or must not be exposed to drafts. Discharge any humidity present in the room air to the outside using condensation dryers.
- ▶ Establish a ventilation plan for more complex construction projects if necessary.
- ▶ Provide adequate ventilation during holiday periods as well.

1.12 Contact

Roto Frank

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Wilhelm-Frank-Platz 1
70771 Leinfelden-Echterdingen
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Phone +49 711 7598 0
Fax +49 711 7598 253
info@roto-frank.com
www.roto-frank.com

2 Security

This manual contains instructions relating to safety. The principal safety information in this chapter includes information and instructions relevant to the safe use or maintaining the safe condition of the product. Warning instructions that relate to handling warn of residual risks and are located before steps that are relevant to safety.

- Follow all of the instructions in order to prevent personal injury and property and environmental damage.

2.1 Presentation and structure of warning instructions

The warning instructions relate to individual actions and are structured as follows with a warning symbol:



DANGER

Nature and source of the danger.

Explanation and description of the danger and the implications.

- Measures to take to avert the danger.

2.2 Security levels of warning instructions

The warning instructions that relate to handling are identified differently according to the severity of the associated danger. The signal words and the associated warning symbols used are clarified below.



DANGER

Immediate risk of death or serious injuries.

- Observe these warning instructions to avoid personal injuries.



WARNING

Potential risk of death or serious injuries.

- Observe these warning instructions to avoid personal injuries.



CAUTION

Risk of injuries

- Observe these warning instructions to avoid personal injuries.



ATTENTION

Reference to property or environmental damage.

- Observe these warning instructions to avoid property or environmental damage.

2.3 Stipulated use

Thresholds are designed for installation in doors and balcony doors. They are used as transitions in the door and balcony door area.

Retainers are used to install thresholds on the door frame and balcony door frame.



Floor door gaskets and weather profile strips seal the bottom of a door or balcony door when closed and help ensure that cold, heat, dirt and moisture cannot enter the home.

Stipulated use also includes compliance with all safety information and specifications contained in these instructions, the other applicable documents and the applicable regulations, directives and national laws.

2.3.1 Misuse

Any use and processing of the products that goes beyond or differs from the stipulated use is considered misuse and can lead to hazardous situations.



WARNING

Misuse may pose a risk of death!

Misuse and incorrect installation of hardware can lead to serious injuries.

- ▶ Only use hardware combinations that have been approved by the hardware manufacturer.
- ▶ Only use original accessories or those that have been approved by the hardware manufacturer.
- ▶ Pay attention to the complete product documentation .

2.3.2 Usage restriction

Open and unlocked doors and balcony doors do not meet the requirements for:

- Joint sealing
- Driving rain impermeability
- Sound insulation
- Thermal insulation
- Burglary inhibition

3 Information on the product

3.1 General material characteristics

PVC in the construction industry

When installing PVC components, note the following points: PVC components should not be subjected to any scratches or impact as this could damage the surface or the component itself. When installing PVC components, note the tightening torque of the screw. An excessive tightening torque destroys the screw mounts and renders the components unusable. PC / ASA components must not come into contact with cutting oil.

Aluminium in construction

When installing aluminium components, note the following points: metals such as lead, copper or copper-based alloys (e.g. brass) must not be installed together with aluminium. Galvanised steel components or components made of stainless steel or zinc can be used together with aluminium without any problems. Aluminium components should not be subjected to scratches or impact. A film is attached at the factory to protect the anodised or coated surface. This protective film is used to protect the surface from dirt that is produced during masonry and plastering work.



INFO

- The film should not be removed until construction work is complete.
- The expansion characteristics of aluminium must be taken into consideration when installing thresholds as otherwise the connecting elements may be destroyed in the event of temperature fluctuations.
- The change in length is approx. 1.22 mm/m with a 50 °C temperature difference. A butt joint should be installed from a length of 3000 mm and above.

Driving rain impermeability

The Roto Eifel threshold can only be assessed in conjunction with the structure as a whole. The classification also depends on the installation height and location of the building. Specifications relating to this must be proved by separate tests.

Escape doors and emergency exit doors

For escape doors and emergency exit doors, consult the relevant authority to establish whether the use of a threshold is permitted.

3.2 General hardware characteristics

3.2.1 Eifel T threshold

Application ranges

- For PVC and timber main entrance doors
- For inward opening doors
- For new builds and renovation purposes

Product characteristics

- Accessible in accordance with DIN 18040
- Threshold height 20 mm
- Tested driving rain impermeability: DIN EN 1027; DIN EN 12208
- Isothermal efficiency, in line with DIN 4108-4
- Concealed screw fixing in the substructure / subfloor
- Depths of 40 mm – 140 mm
- Cover with grooved / smooth design
- Use of UV-resistant, high-impact resistant PVC



- Certified in accordance with QM 340

3.2.2 Eifel TB threshold

Application ranges

- For PVC and timber balcony doors and main entrance doors
- For inward opening doors
- For new builds and renovation purposes

Product characteristics

- Accessible in accordance with DIN 18040
- Threshold height 20 mm
- Tested driving rain impermeability: DIN EN 1027; DIN EN 12208
- Isothermal efficiency, in line with DIN 4108-4
- Concealed screw fixing in the substructure / subfloor
- Depths of 40 mm – 140 mm
- Cover with grooved design
- Use of UV-resistant, high-impact resistant PVC
- Strikers and accessories can be used without the need to work on the threshold profile
- Certified in accordance with QM 340

3.2.3 Eifel TB threshold for outward opening doors and accessible solutions

Application ranges

- For PVC and timber balcony doors and main entrance doors
- For outward opening doors
- Zero-barrier in conjunction with the Texel automatic floor door gasket and weather profile strip with brush gasket / drip seal

Product characteristics

- Accessible in accordance with DIN 18040
- Threshold height 20 mm or 0 mm (zero-barrier)
- Concealed screw fixing in the substructure / subfloor
- Three depths (70 / 80 / 90 mm)
- Cover with grooved design
- Use of UV-resistant, high-impact resistant PVC
- Strikers and accessories can be used without the need to work on the threshold profile
- Certified in accordance with QM 340

3.3 Design variants

3.3.1 Overview

| Material | Design | Variant | | Gasket | Eifel TB | Eifel T |
|----------|--------------|---------------|-----------------|--------|----------|---------|
| Timber | Balcony door | Single-leafed | Inward opening | AD, MD | ■ | – |
| | | | Outward opening | AD, MD | ■ | – |
| | | Double-leafed | Inward opening | AD, MD | ■ | – |
| | | | Outward opening | AD, MD | ■ | – |
| | Door | Single-leafed | Inward opening | AD, MD | ■ | ■ |
| | | | Outward opening | AD, MD | ■ | – |
| | | Double-leafed | Inward opening | AD, MD | ■ | ■ |
| | | | Outward opening | AD, MD | ■ | – |
| PVC | Balcony door | Single-leafed | Inward opening | AD, MD | ■ | – |
| | | | Outward opening | AD, MD | ■ | – |
| | | Double-leafed | Inward opening | AD, MD | ■ | – |
| | | | Outward opening | AD, MD | ■ | – |
| | Door | Single-leafed | Inward opening | AD, MD | ■ | ■ |
| | | | Outward opening | AD, MD | ■ | – |
| | | Double-leafed | Inward opening | AD, MD | ■ | ■ |
| | | | Outward opening | AD, MD | ■ | – |



4 Brief instructions

4.1 Roto Eifel

Summary of IMO 423 – installation of Eifel

| | Installation sequence | Note | Page reference | Timber | PVC |
|----------------------------|--|--|----------------|--------|-----|
| Sash | Prepare the leaf with hardware components from the Roto NX / Roto NT / Roto Safe product range | See IMO 455 / 63 / 64 / 68 / 109 / 110 / 405 / 483 / 457 / 503 | | ■ | ■ |
| | Install the floor door gasket | Automatic gasket | → from page 50 | ■ | ■ |
| | | Sliding threshold seal | → from page 55 | ■ | ■ |
| | Install the weather profile strip | Standard | → from page 57 | ■ | ■ |
| | | Comfort | → from page 62 | ■ | ■ |
| | | Design | → from page 80 | ■ | ■ |
| | Install the aero stop | Optional | → from page 91 | ■ | ■ |
| Threshold and frame | Crop the threshold | | → from page 26 | ■ | ■ |
| | Install the tilt striker with packer | After installing the balcony door, remove the screws again and screw down the tilt striker to the substructure with longer screws. | → from page 93 | ■ | ■ |
| | Install the NT Designo packer | For NT Designo only | → from page 95 | ■ | ■ |
| | Crop the reinforcement in the frame | | → from page 29 | – | ■ |
| | Install the filler piece | | → from page 29 | – | ■ |
| | Install the adapter profile | For Eifel TB: only with the universal threshold retainer | → from page 29 | – | ■ |
| | Install the frame | Without retainer | → from page 23 | ■ | ■ |
| | | With retainer | → from page 29 | – | ■ |
| | Install the hardware mount | | | ■ | – |
| | Install the wind stop | Optional | → from page 49 | ■ | ■ |
| Subfloor | Install the anti-moisture foil | | | ■ | ■ |
| | Install the base profile | | | ■ | ■ |
| Cover | Crop the cover | Cutting depending on the components used | → from page 29 | ■ | ■ |
| | Install the cover | | | ■ | ■ |

5 Installation

5.1 Processing instructions

Maximum sash sizes and weights

The specifications, application diagrams and component assignments which can be found in the hardware manufacturer's product-specific documents provide information on the maximum permitted sash sizes and weights. The component with the lowest permitted load bearing capacity determines the maximum permitted sash weight.

- Before using electronic data records and implementing them in window construction programs in particular, check that they match the specifications, application diagrams and component assignments.
- Never exceed the maximum permitted sash sizes and weights. If any points are unclear, contact the hardware manufacturer.

Specifications from profile manufacturers

The door and balcony door manufacturer must comply with all specified system dimensions (e.g. gasket gap dimensions or locking distances).

They must continue to ensure and check this on a regular basis, especially when new hardware components are used for the first time, during production and on a continuous basis, up to and including installation.



INFO

The hardware components are always designed in such a way that any system dimensions affected by the hardware can be adjusted. The hardware manufacturer shall not be liable for any additional expenses incurred if a deviation from these dimensions is not discovered until after installation.

Assembling hardware

Burglar inhibiting doors and balcony doors need hardware which meets special requirements.

Doors and balcony doors for wet rooms and those for use in environments with aggressive, corrosive constituents in the air require hardware that meets special requirements.

The resistance of doors and balcony doors to wind loads when they are closed and locked depends on the individual design of the doors and balcony doors. The hardware system is capable of handling wind loads specified by legislation and standards (for example in accordance with EN 12210 – in particular test pressure P3).

In general, the hardware defined in this document is capable of meeting statutory and normative requirements for accessible dwellings.

Coordinate suitable hardware combinations and installation procedures in doors and balcony doors with the hardware manufacturer and profile manufacturer for the areas listed above, and conclude a separate agreement for them.



INFO

The hardware manufacturer's specifications on the combination of hardware (e.g. the use of additional scissor stays, the design of hardware for burglar-inhibiting balcony door sashes, etc.) are binding.

Specifications relating to installation and care



ATTENTION

Sealing compounds that contain silicone may cause property damage.

Sealing compounds that contain silicone may considerably reduce the sealing effect near the threshold after three to five years.

- ▶ Only use silicone-free sealing compounds to seal the threshold.

Remove excess sealing compound after installation.

The number of screws for installation may vary.



ATTENTION

Using incorrect cleaning agents and sealing compounds may cause property damage.

Cleaning agents and sealing compounds may damage the surfaces of components and gaskets.

- ▶ Do not use aggressive or flammable liquids, acidic cleaners or abrasive cleaners.
- ▶ Only use mild, pH-neutral cleaning agents that have been diluted.
- ▶ Apply a thin protective film to the components, for example using a cloth soaked in oil.
- ▶ Avoid aggressive vapours (e.g. produced by formic acid, acetic acid, ammonia, amine compounds, ammonia compounds, aldehyde, carbolic acid, chlorine, tannic acid) around the element.
- ▶ Do not use any acetic acid-crosslinking or acid-crosslinking sealing compounds or those with the aforementioned constituents as both direct contact with the sealing compound and its fumes can corrode the surface of the components.

5.2 Screw connections



DANGER

Incorrectly installed or screwed-in hardware components present a risk of death.

Incorrectly installed and screwed-in hardware components may lead to hazardous situations and cause serious or fatal accidents.

- ▶ During installation and screwdriving work, observe the specifications provided by the profile manufacturer; contact the profile manufacturer if necessary.
- ▶ Use the recommended screws.
- ▶ Select the length of the screws according to the profiles used.
- ▶ Ensure that the hardware components are adequately secured; contact the screw manufacturer if necessary.



CAUTION

Using incorrect screw material may cause property damage.

Using the wrong screws may damage the components.

1. Only use galvanised zinc-plated and passivated steel screws.
2. Use screws with additional sealing in more challenging climatic conditions.
3. Use stainless-steel screws on stainless-steel components only.
4. For aluminium components, use screws made of steel (coated with zinc-nickel or zinc flakes) or stainless steel.



ATTENTION

Improper screw fixings may cause property damage.

Improper screw fixings may damage the components and the element as a whole, and stop them from working properly.

- ▶ Unless stated otherwise, turn screws in straight.
- ▶ Tighten screw heads until they are flush with the surface.
- ▶ Do not over-tighten screws. Note the torques.
- ▶ Use the recommended screws.
- ▶ Select the length of the screws according to the profiles used.

5.2.1 Screw connections for PVC / timber profiles



WARNING

Incorrect screw connections may pose a risk of death!

Short screws will not reach the steel reinforcement and will therefore not hold.

Hardware components can be pulled out of the sash if they are not screwed into the steel reinforcement.

- ▶ Select the length of the screws so that they will hold in the steel reinforcement.



INFO

Screws are not included in the scope of delivery.

Exception

- Comfort weather profile strip (screws for the weather profile strip included with the end caps)
- Comfort floating-mullion gasket

The following specifications apply to screw connections:

| Components | Quantity | Size | d _k | Diameter to be drilled | Drive |
|--|----------|---|----------------|------------------------|---------------|
| Threshold retainer rebate | 2 | 3.5 x ... | 8 | – | Not specified |
| Threshold retainer pile, screw fixing at the side | 2 - 3 | 4.0 x ... | 8 | – | Not specified |
| Threshold retainer lug, screw fixing at the side | 2 - 3 | 4.0 x ... | 8 | – | Not specified |
| Universal threshold retainer, screw fixing at the side | 2 - 3 | 4.0 x ... | 8 | – | Not specified |
| Automatic gasket | ... | Use special screws if necessary. Other information is available upon request. | | | |



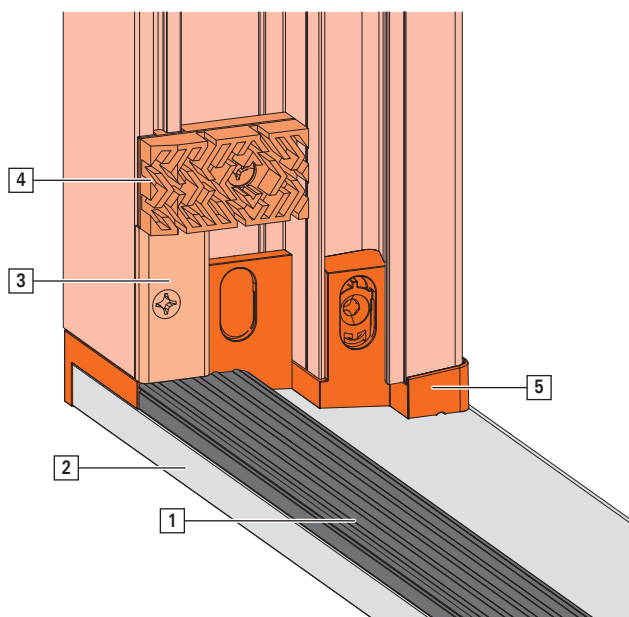
INFO

Use self-drilling screws for screw connections in the area of the reinforcement in the profile and pre-drill if necessary.

5.3 Drilling and routing dimensions

5.4 Example: assembly of individual components

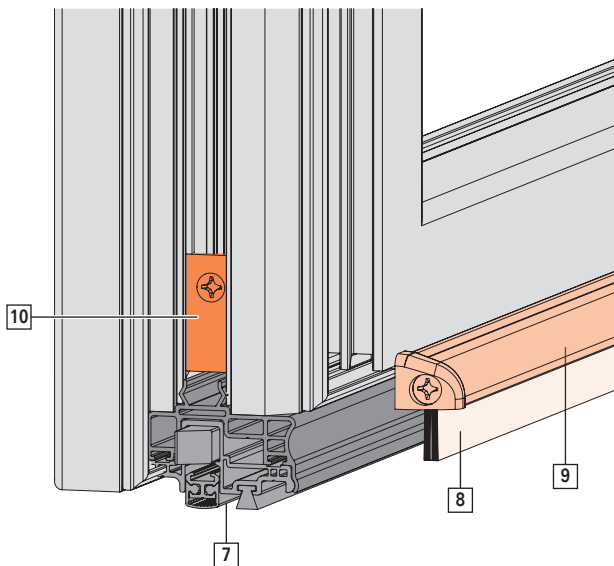
Frame



- [1] Cover
- [2] Threshold
- [3] Pressure plate
- [4] Wind stop
- [5] Retainer

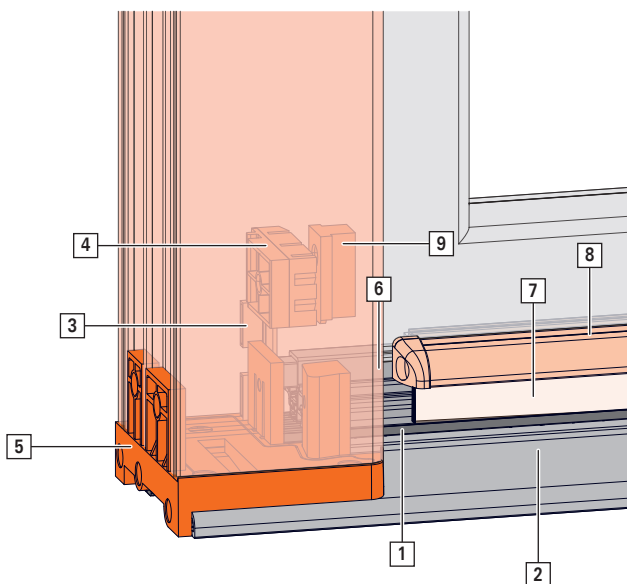


Sash



- [7] Automatic gasket
- [8] Brush gasket / drip seal
- [9] Weather profile strip
- [10] Aero stop

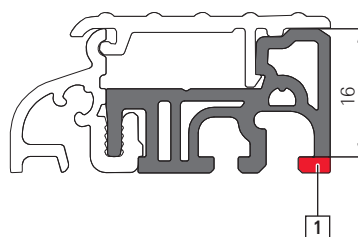
Installation situation



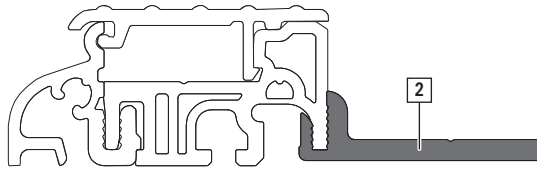
- [1] Cover
- [2] Threshold
- [3] Pressure plate
- [4] Wind stop
- [5] Retainer
- [6] Automatic gasket
- [7] Brush gasket / drip seal
- [8] Weather profile strip
- [9] Aero stop

5.5 Hardware mounting profile

1. Cut the thermal separation [1] of the threshold to size.



2. Install the hardware mounting profile [2] with thermal separation so that it is level.





5.6 Without retainer

5.6.1 Eifel TB – inward opening



INFO

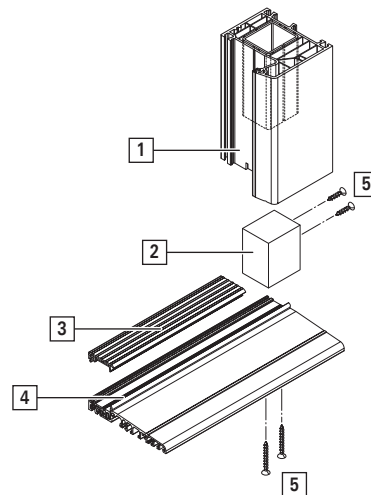
The figures show installation for a PVC profile.



INFO

Note the protection for the end-grain timber on timber profiles.

- [1] Frame counter-routed
- [2] Filler piece
- [3] Cover
- [4] Threshold
- [5] Screws



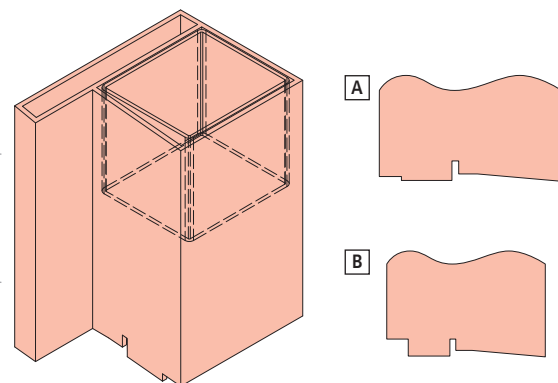
Routing pattern

- [A] Eifel TB
- [B] Eifel T



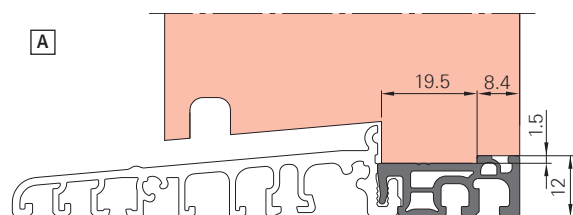
INFO

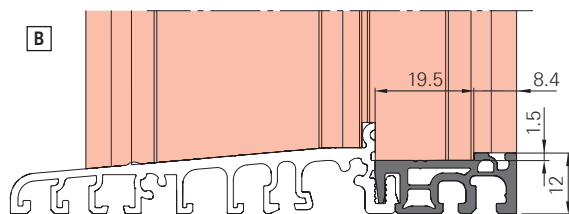
For the order template for the notch milling machine, see FLY_135.



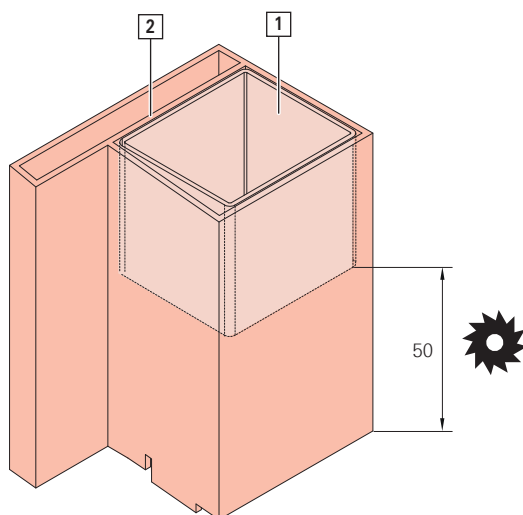
1. Counter-route the frame.

- [A] Timber
- [B] PVC

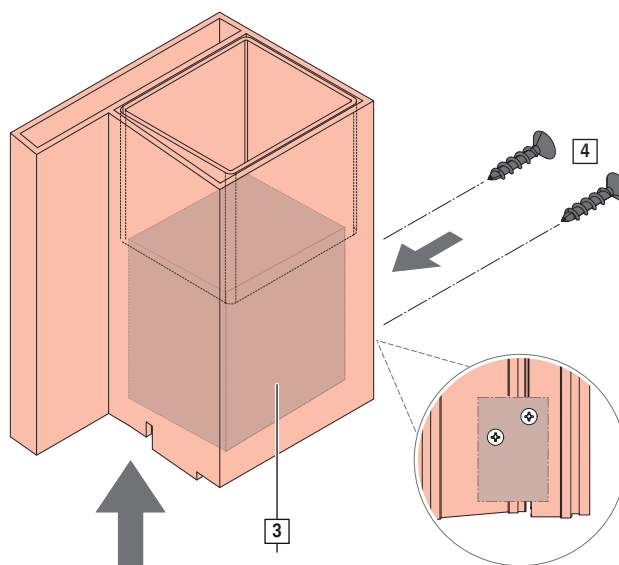




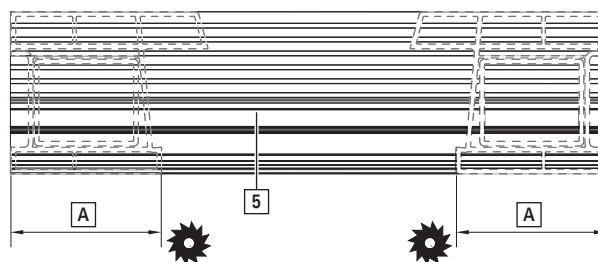
2. Crop the reinforcement [1] in the frame [2] by approx. 50 mm.



3. Push the filler piece [3] into the frame and secure with screws [4].



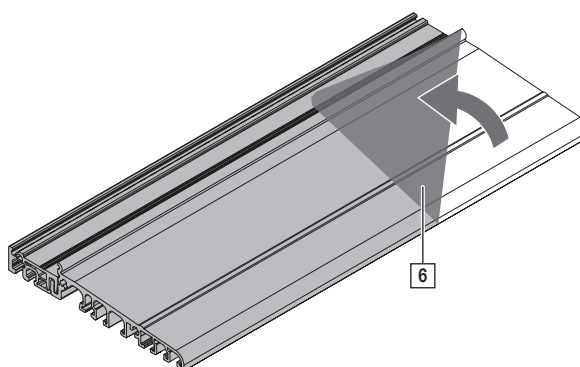
4. Cut the threshold [5] to the frame width.
 Cut the cover: frame width - 2 x frame profile width [A]



5. Pre-drill the threshold.

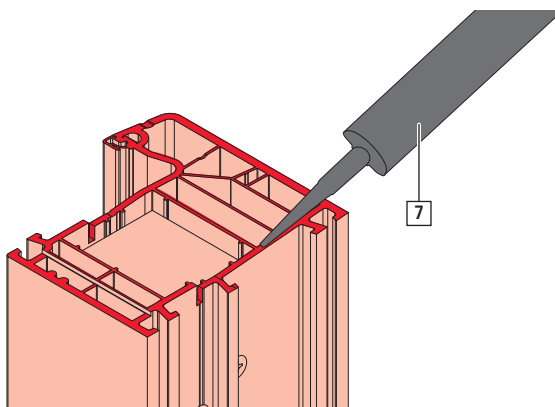


6. Remove the protective film [6] in the profile area.



7. Clean the threshold in the installation area using suitable cleaning agents.

8. Seal the frame profile all the way round [7].

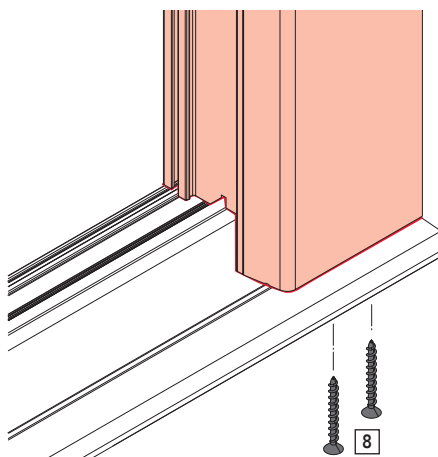


9. Join the threshold and frame and screw them together [8].



INFO

Install the wind stop if necessary →
from page 49.

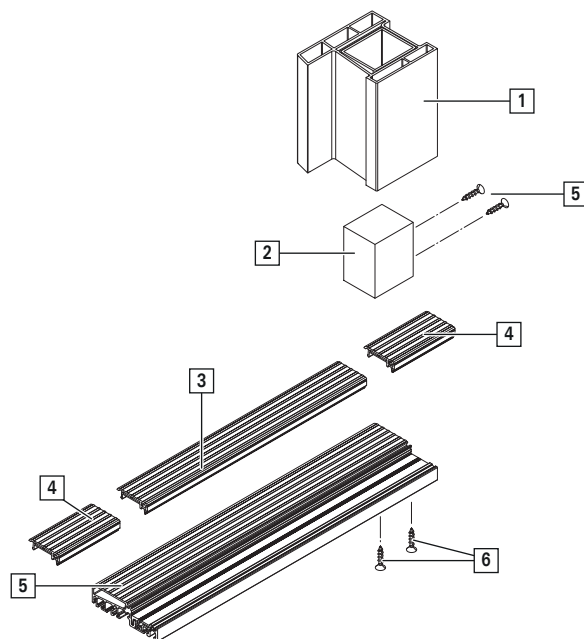


10. Remove excess sealing compound.

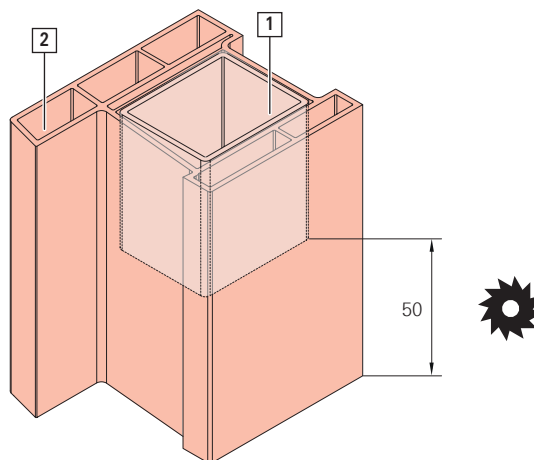
11. Clip on the cover.

5.6.2 Eifel TB – outward opening

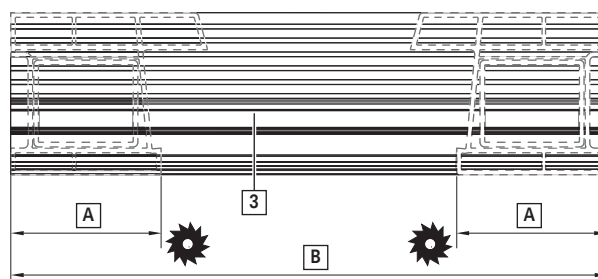
- [1] Frame
- [2] Filler piece
- [3] Cover
- [4] Cover cutting
- [5] Threshold
- [6] Screws



1. Requirement: reinforcement [1] in the frame [2] cropped by approx. 50 mm.

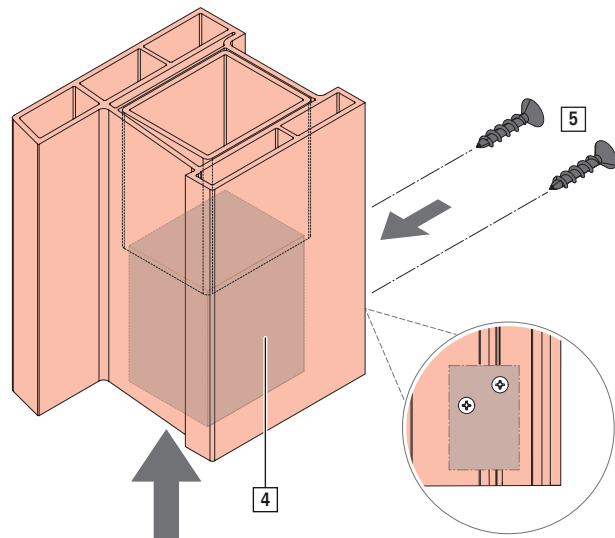


2. Cut the threshold [3] to the frame width.
To cut the cover:
2 cover cuttings: length = frame profile width [A]
1 cover: length = frame width [B] - (2 x frame profile width [A])

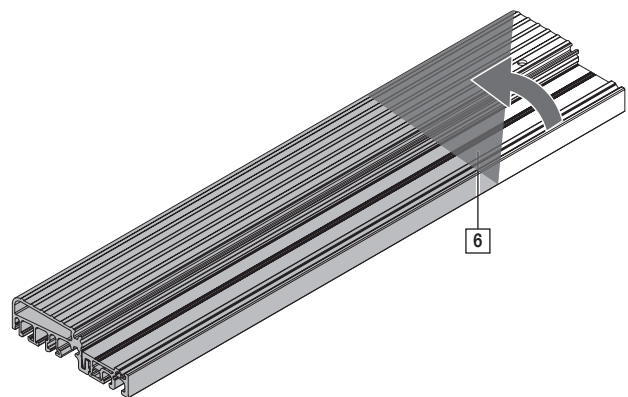




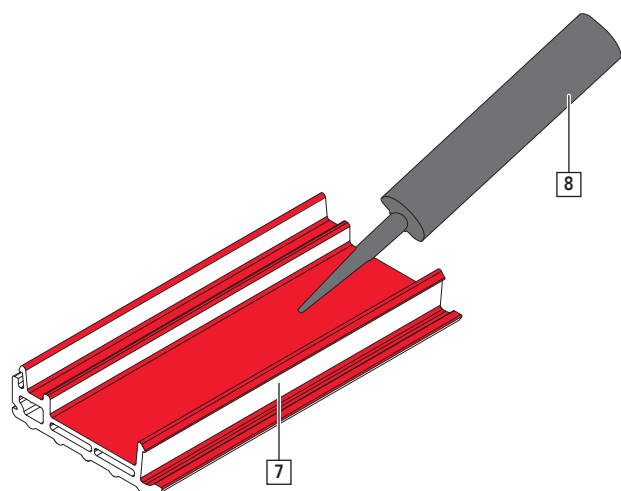
3. Push the filler piece [4] into the frame and secure with screws [5].



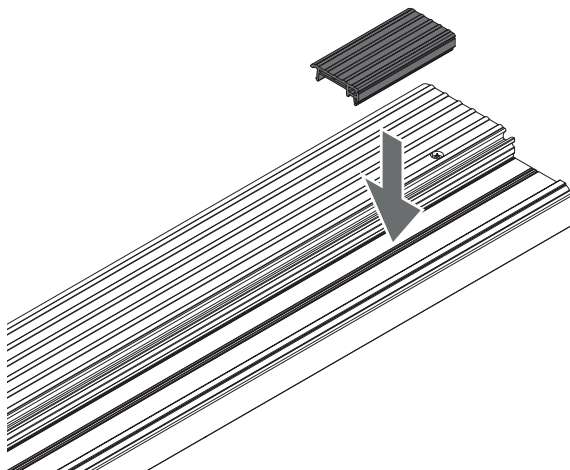
4. Pre-drill the threshold.
5. Remove the protective film [6] in the installation area.



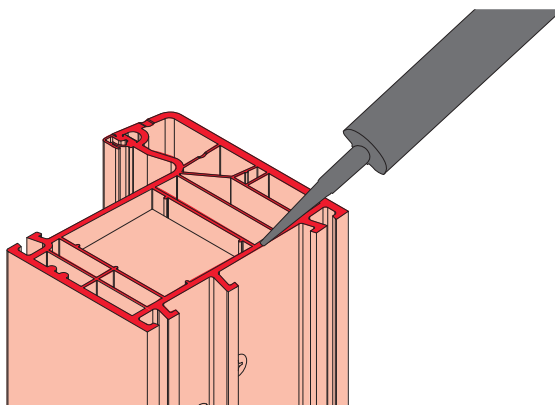
6. Clean the threshold in the installation area using suitable cleaning agents.
7. Seal the cover cutting [7] all the way round [8].



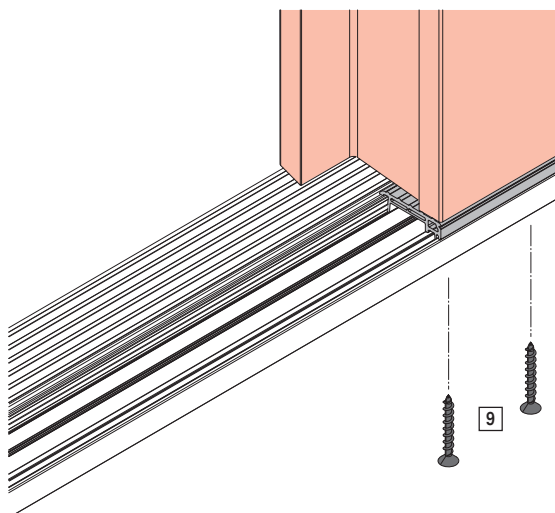
8. Insert the cover cutting so that it is flush with the outer edge.



9. Seal the frame profile all the way round.



10. Position the frame so that it is flush and secure with screws [9].



11. Remove excess sealing compound.

12. Clip on the cover.

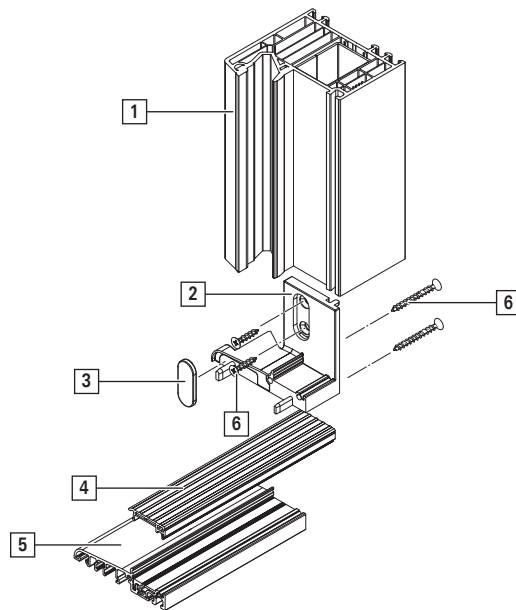


5.7 With retainer

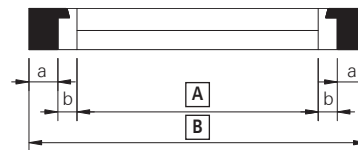
| Material | Design | Variant | | Rebate | Pile | Lug | Outline | Universal | Compensation profile | Centre post bracket |
|----------|--------------|---------------|-----------------|--------|------|-----|---------|-----------|----------------------|---------------------|
| Timber | Balcony door | Single-leafed | Inward opening | – | – | – | ■ | ■ | ■ | – |
| | | | Outward opening | – | – | – | – | – | – | |
| | | Double-leafed | Inward opening | – | – | – | ■ | ■ | ■ | – |
| | | | Outward opening | – | – | – | – | – | – | |
| | Door | Single-leafed | Inward opening | – | – | – | ■ | ■ | ■ | – |
| | | | Outward opening | – | – | – | – | – | – | |
| | | Double-leafed | Inward opening | – | – | – | ■ | ■ | ■ | – |
| | | | Outward opening | – | – | – | – | – | – | |
| PVC | Balcony door | Single-leafed | Inward opening | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | | | Outward opening | – | – | – | – | – | – | – |
| | | Double-leafed | Inward opening | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | | | Outward opening | – | – | – | – | – | – | – |
| | Door | Single-leafed | Inward opening | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | | | Outward opening | – | – | – | – | – | – | – |
| | | Double-leafed | Inward opening | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | | | Outward opening | – | – | – | – | – | – | – |

5.7.1 Threshold retainer rebate

- [1] Frame
- [2] Threshold retainer
- [3] Cover cap
- [4] Cover
- [5] Threshold
- [6] Screws

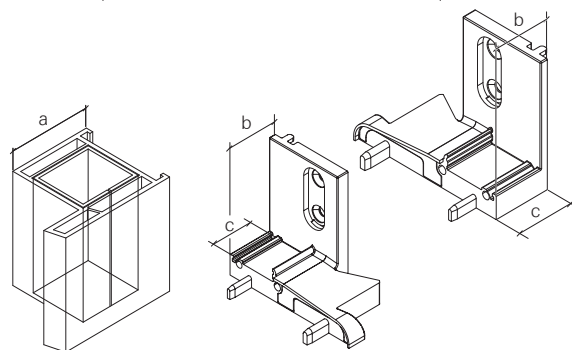


1. Cut the threshold to size [A].
Cut the cover: length = [A] + (2 x c)
[A] Threshold cutting: Length = B - [(2 x a) + (2 x b)]
[B] Frame external width
[a] Visible width of frame (without overlap)
[b] Width of threshold retainer
[c] Width of cover mount in threshold retainer

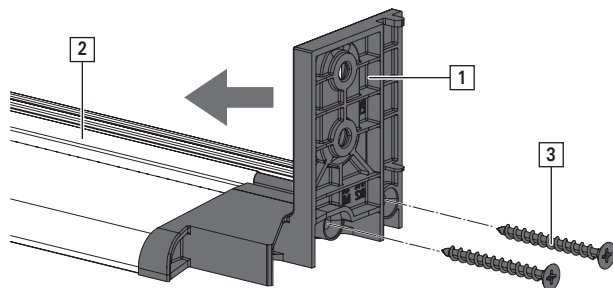


INFO

Cut the frame such that it is obtuse.
Saw down the threshold and cover in separate sawing steps.

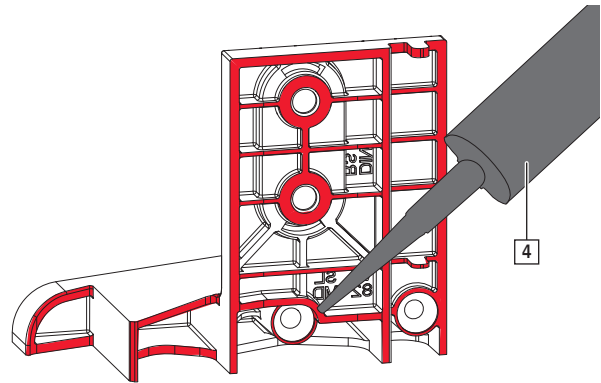


2. Position the threshold retainer [1] on the threshold [2] so that it is flush and secure with screws [3].





3. Seal the threshold retainer on the frame side [4].

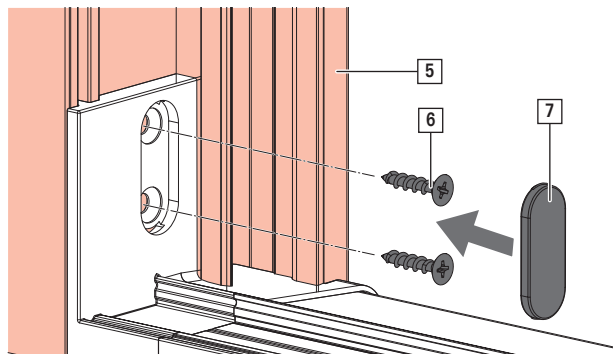


4. Place the threshold retainer on the frame [5] and secure with screws [6].
Fit the cover cap [7].



INFO

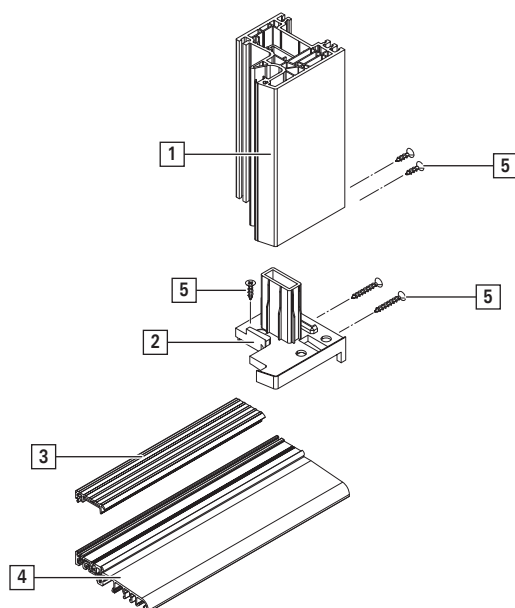
Install the wind stop if necessary. →
*5.10.2 "Wind stop and aero stop" from
page 91*



5. Remove excess sealing compound.
6. Clip on the cover.

5.7.2 Threshold retainer pile

- [1] Frame
- [2] Threshold retainer
- [3] Cover
- [4] Threshold
- [5] Screws

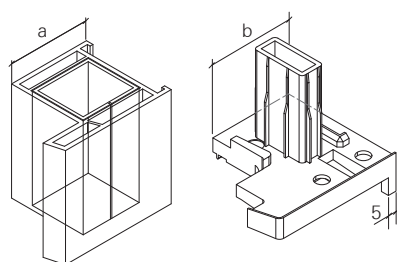
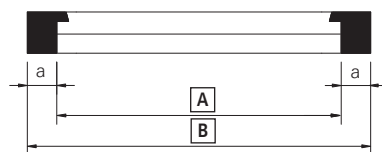


1. Cut the threshold: $[B] - 2 \times 5$
 Cut the cover: $[A] = [B] - 2 \times a$

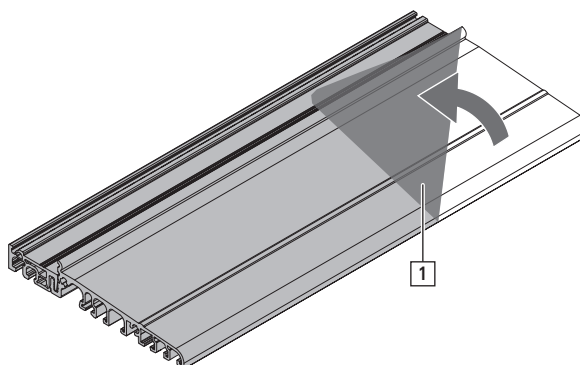
[A] Cover cutting

[B] Frame external width

[a] Visible width of frame (without overlap): $b = a$

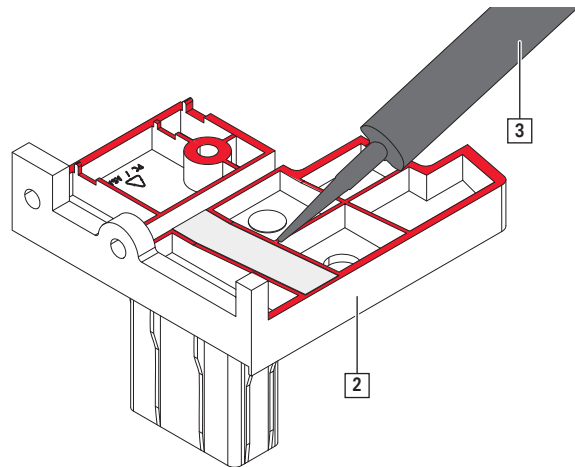


2. Remove the protective film [1] in the profile area.

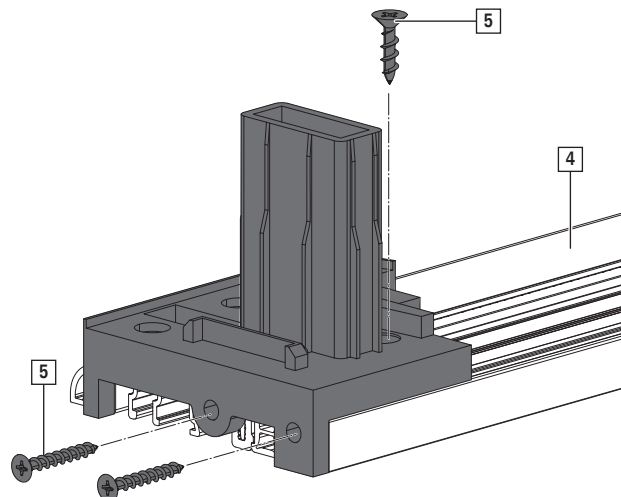




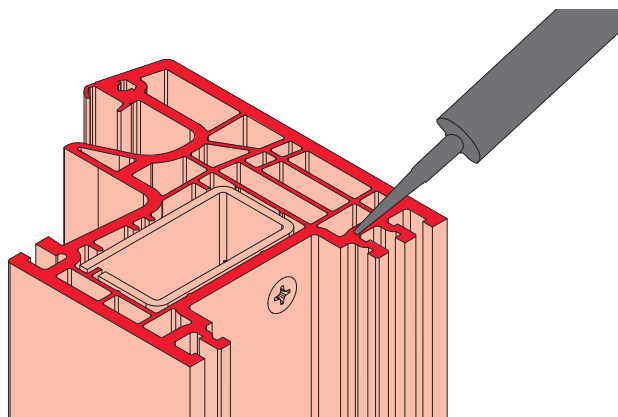
3. Clean the threshold in the installation area using suitable cleaning agents.
4. Seal the threshold retainer [2] all the way round [3].



5. Position the threshold retainer on the threshold [4] so that it is flush and secure with screws [5].



6. Seal the frame profile all the way round.

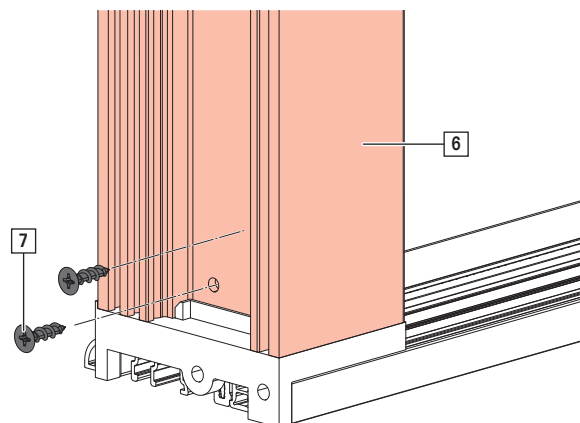


7. Position the frame [6] on the threshold retainer and secure with screws [7].



INFO

Install the wind stop if necessary. →
*5.10.2 "Wind stop and aero stop" from
page 91*

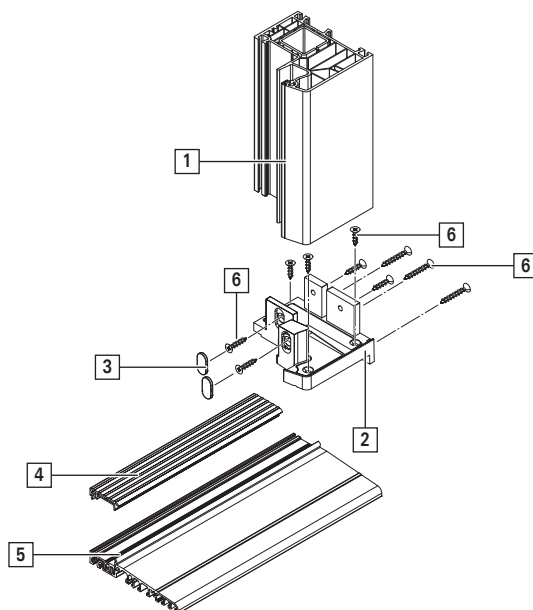


8. Remove excess sealing compound.
9. Clip on the cover.

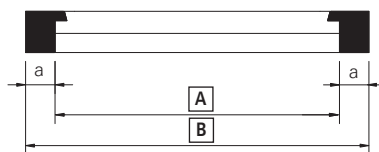


5.7.3 Threshold retainer lug

- [1] Frame
- [2] Threshold retainer
- [3] Cover caps
- [4] Cover
- [5] Threshold
- [6] Screws

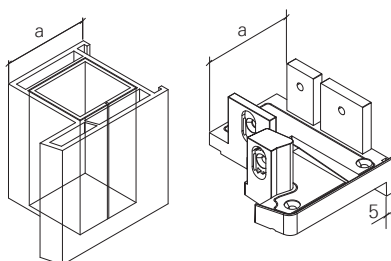


1. Cut the threshold: $[B] - 2 \times 5$
 Cut the cover: $[A] = [B] - 2 \times a$
 [A] Cover cutting
 [B] Frame external width
 [a] Visible width of frame (without overlap)

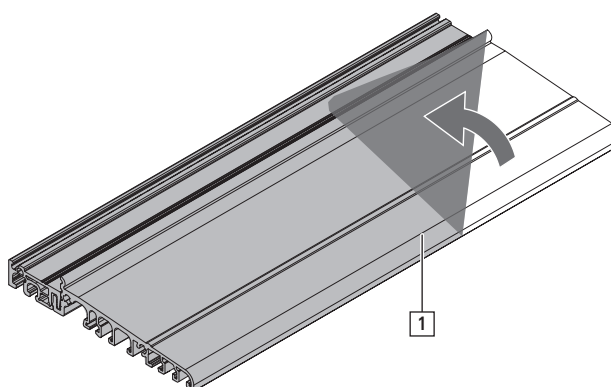


INFO

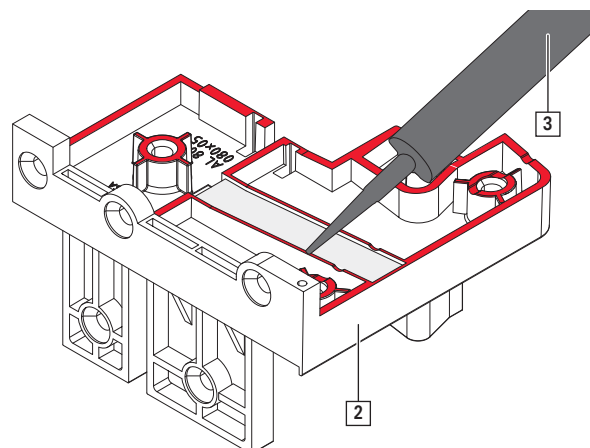
Cut the frame such that it is obtuse.
 Saw down the threshold and cover in separate sawing steps.



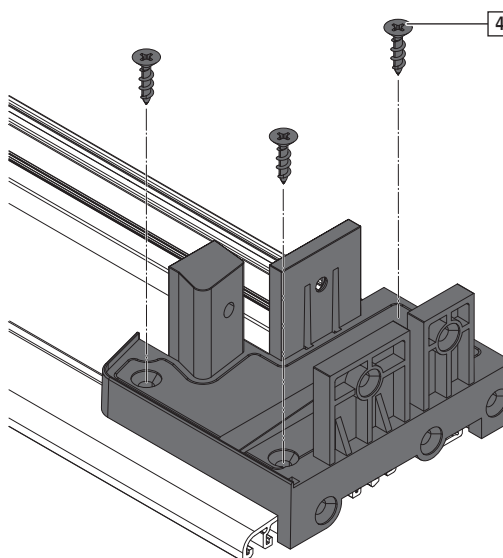
2. Remove the protective film [1] in the profile area.



3. Seal the threshold retainer [2] all the way round [3].

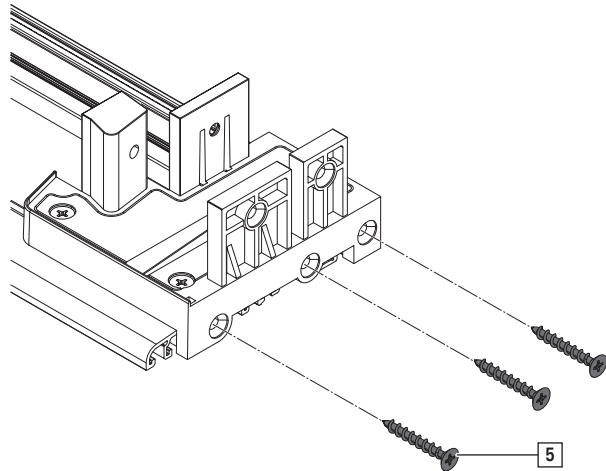


4. Clean the threshold in the installation area using suitable cleaning agents.
5. Position the threshold retainer on the threshold so that it is flush and secure with screws [4].

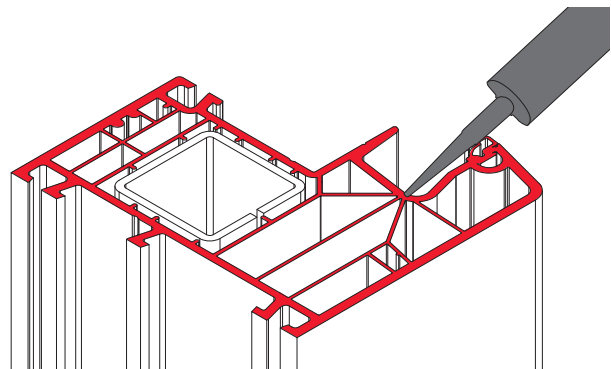




6. Screw the threshold retainer onto the threshold [5].



7. Seal the frame profile all the way round.

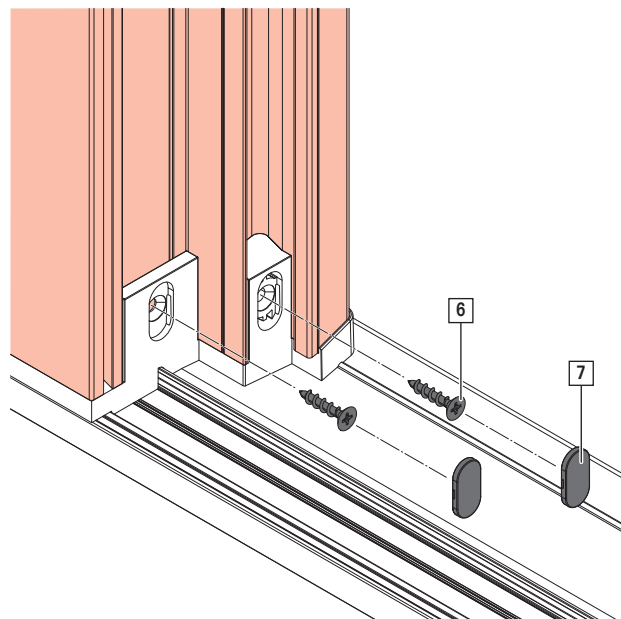


8. Position the frame on the threshold retainer and secure with screws [6].
Clip in the cover caps [7].

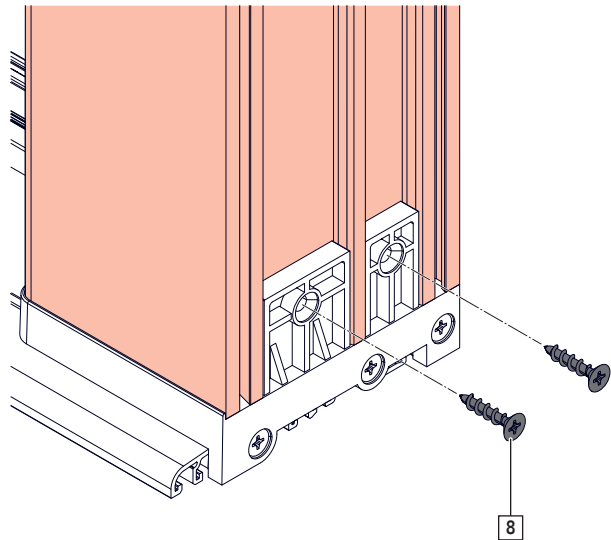


INFO

Install the wind stop if necessary. →
*5.10.2 "Wind stop and aero stop" from
page 91*



9. Screw the threshold retainer onto the frame [8].



10. Remove excess sealing compound.

11. Clip on the cover.



5.7.4 Threshold retainer outline



INFO

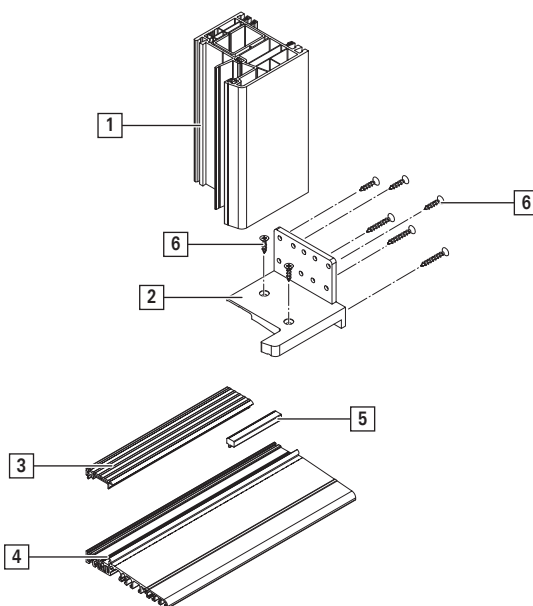
The figures show installation for a PVC profile.



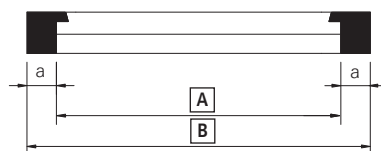
INFO

Note the protection for the end-grain timber on timber profiles.

- [1] Frame
- [2] Threshold retainer
- [3] Cover
- [4] Threshold
- [5] Adapter profile
- [6] Screws



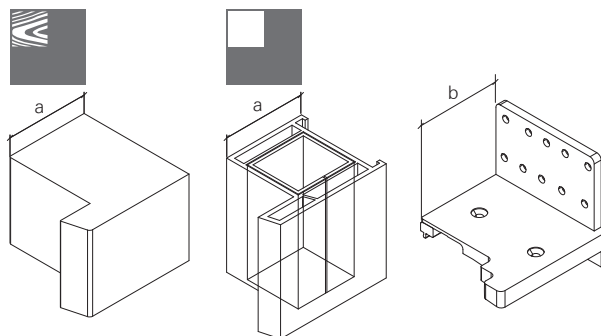
1. Cut the threshold to the frame width [B].
 Cut the cover: $[A] = [B] - 2 \times a$
- [A] Cover cutting
 [B] Frame external width (= threshold length)
 [a] Visible width of frame (without overlap)
 [b] Threshold retainer width



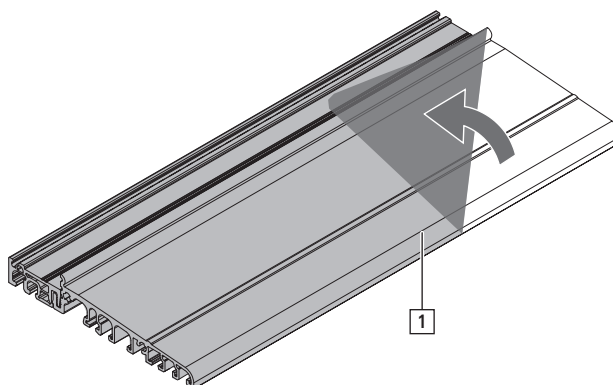
INFO

Cut the frame such that it is obtuse.

Saw down the threshold and cover in separate sawing steps.



2. Remove the protective film [1] in the profile area.



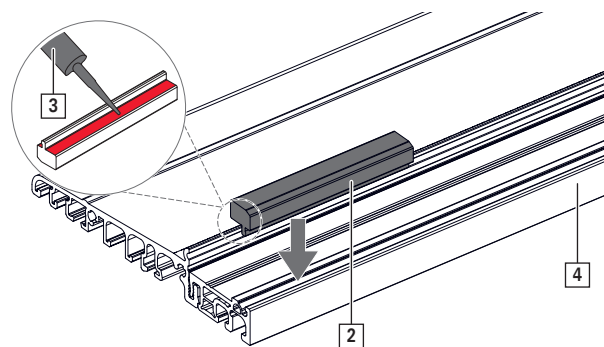
3. Clean the threshold in the installation area using suitable cleaning agents.

4. **Optional**

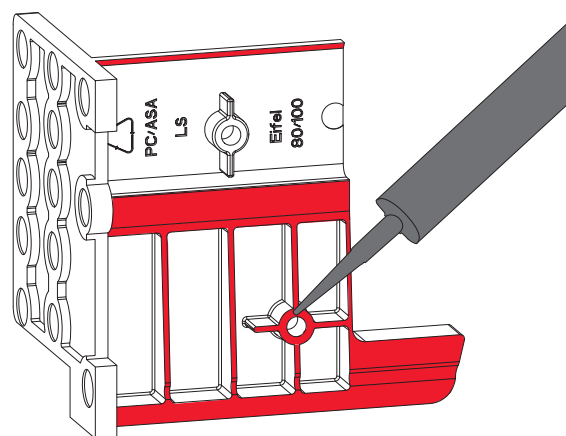
For Eifel TB (in case of a gap between the threshold and threshold retainer):

Cut the adapter profile [2] according to the threshold retainer width.

Seal the adapter profile all the way round [3] and place it in the threshold [4].

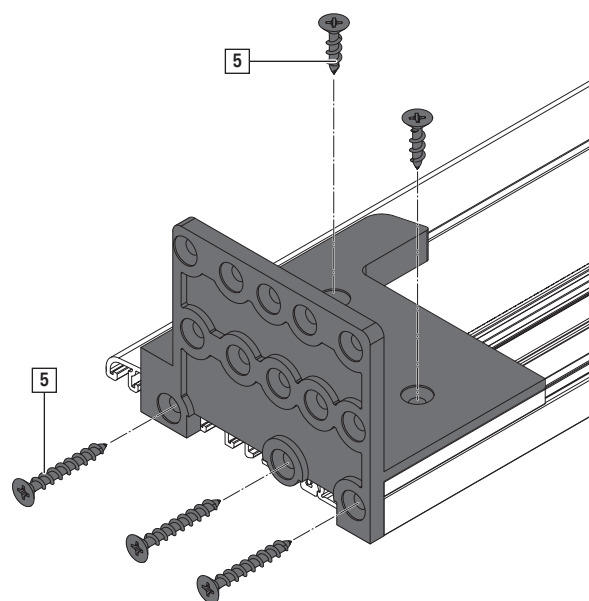


5. Seal the threshold retainer all the way round.

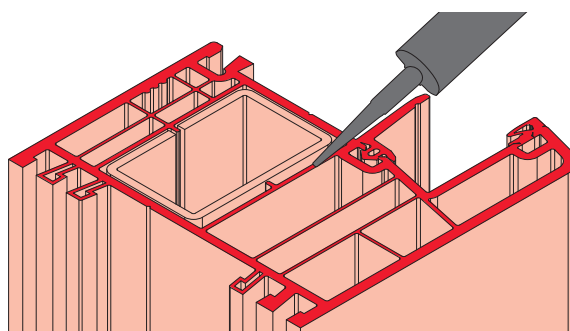




6. Position the threshold retainer on the threshold so that it is flush and secure with screws [5].



7. Seal the frame profile all the way round.

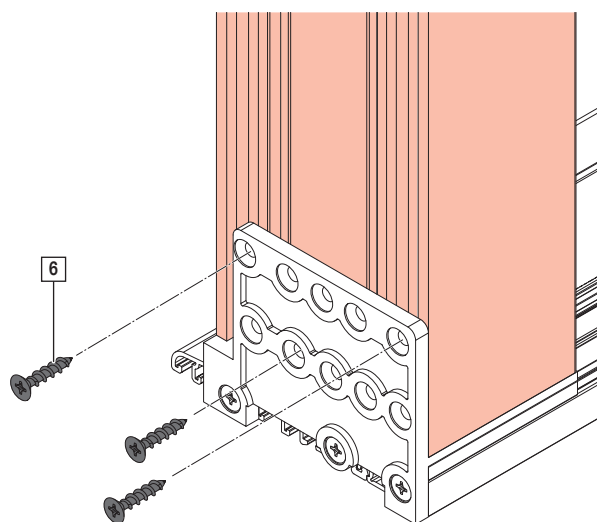


8. Position the frame on the threshold retainer and secure with screws [6].



INFO

Install the wind stop if necessary. →
 5.10.2 "Wind stop and aero stop" from
 page 91

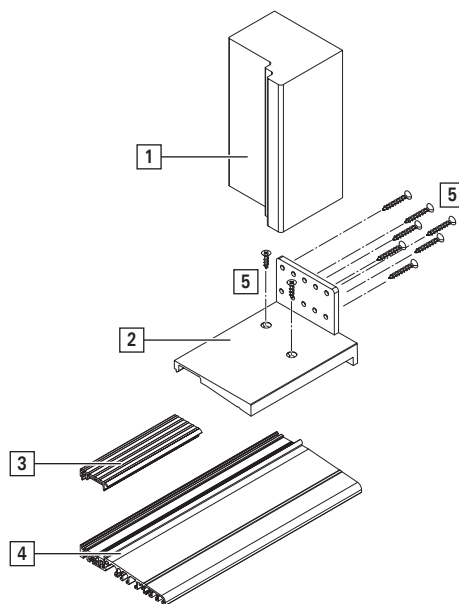


9. Remove excess sealing compound.

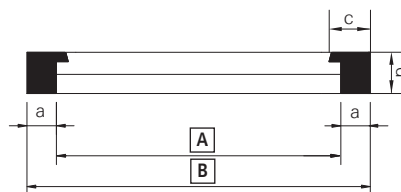
10. Clip on the cover.

5.7.5 Universal threshold retainer

- [1] Frame
- [2] Threshold retainer
- [3] Cover
- [4] Threshold
- [5] Screws

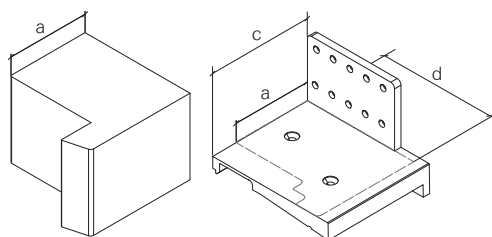


1. Cut the threshold to the frame width [B].
 Cut the cover: $[A] = [B] - 2 \times c$
- [A] Cover cutting
 - [B] Frame external width (= threshold length)
 - [a] Visible width of frame (without overlap)
 - [c] Visible width of frame (with overlap)
 - [d] Profile depth



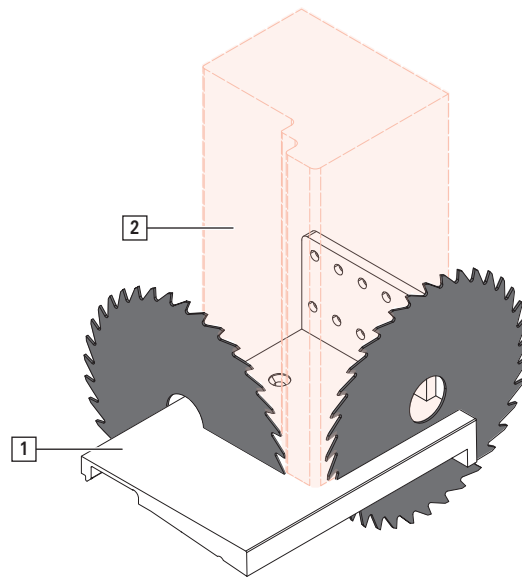
INFO

Cut the frame such that it is obtuse.
 Saw down the threshold and cover in separate sawing steps.

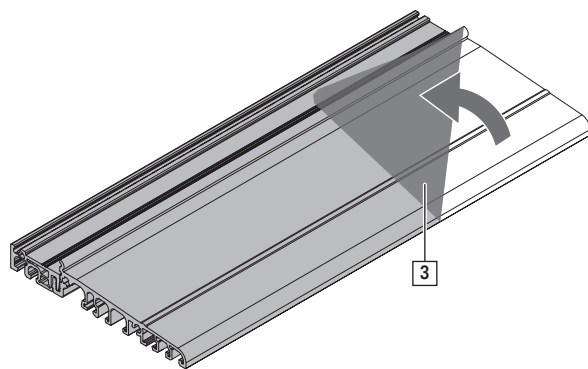




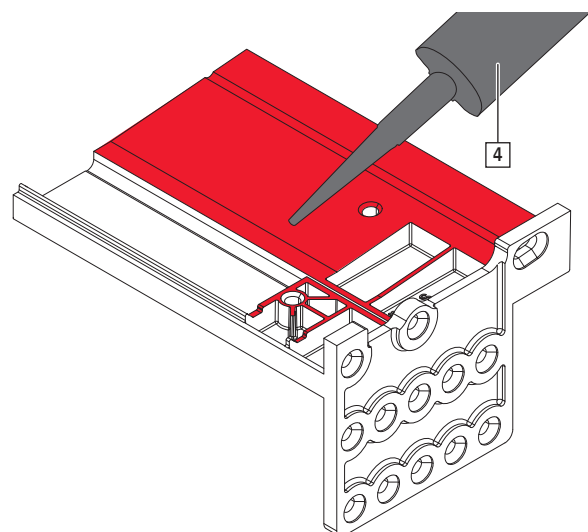
2. Cut the threshold retainer [1] according to the frame [2].



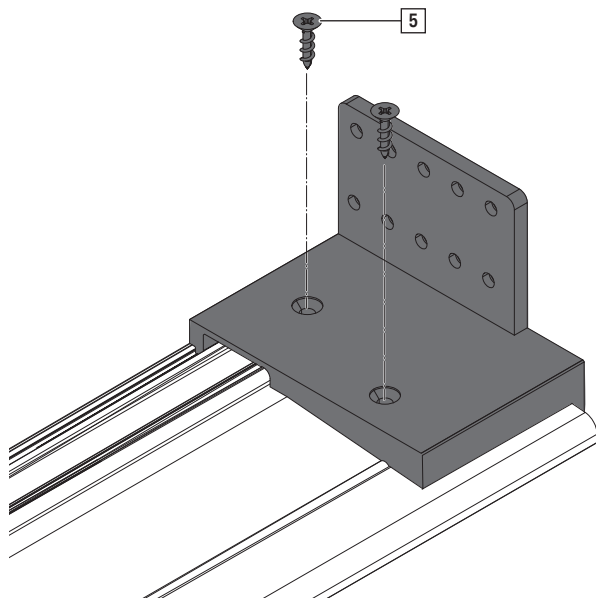
3. Remove the protective film [3] in the profile area.



4. Clean the threshold in the installation area using suitable cleaning agents.
5. Seal the threshold retainer all the way round [4].



6. Position the threshold retainer on the threshold so that it is flush and secure with screws [5].

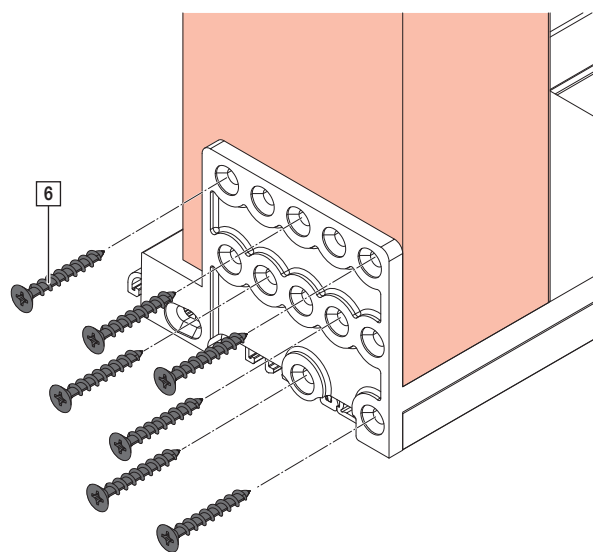


7. Seal the frame profile all the way round.
8. Position the frame on the threshold retainer and secure with screws [6].



INFO

Install the wind stop if necessary. →
*5.10.2 "Wind stop and aero stop" from
page 91*



9. Remove excess sealing compound.
10. Clip on the cover.



5.7.6 Compensation profile



INFO

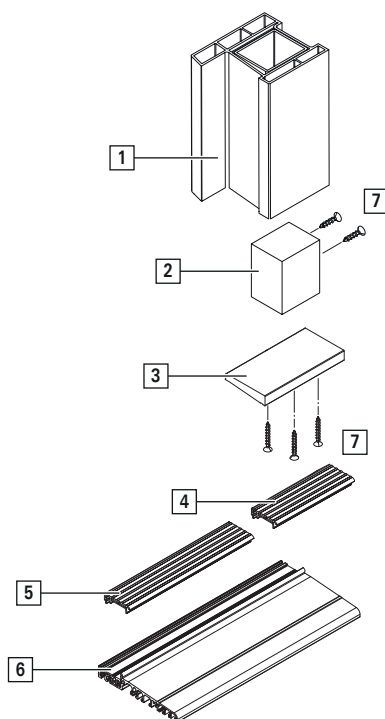
The figures show installation for a PVC profile.



INFO

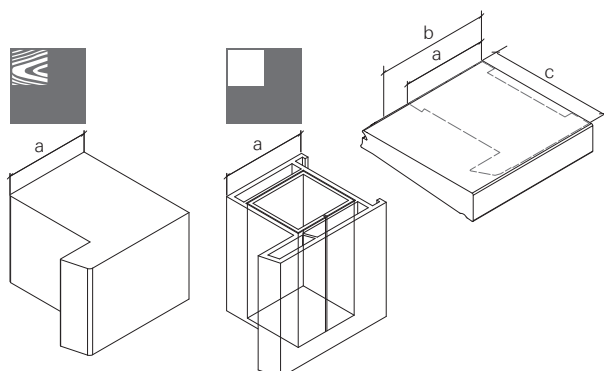
Note the protection for the end-grain timber on timber profiles.

- [1] Frame
- [2] Filler piece
- [3] Compensation profile
- [4] Cover cutting
- [5] Cover
- [6] Threshold
- [7] Screws



1. Cut the threshold to the frame width.
 Cut the cover: length = frame width - 2 x b
 Cut two cover cuttings: length = b

- [a] Visible width of frame (without overlap)
- [b] Visible width of frame (with overlap)
- [c] Profile depth

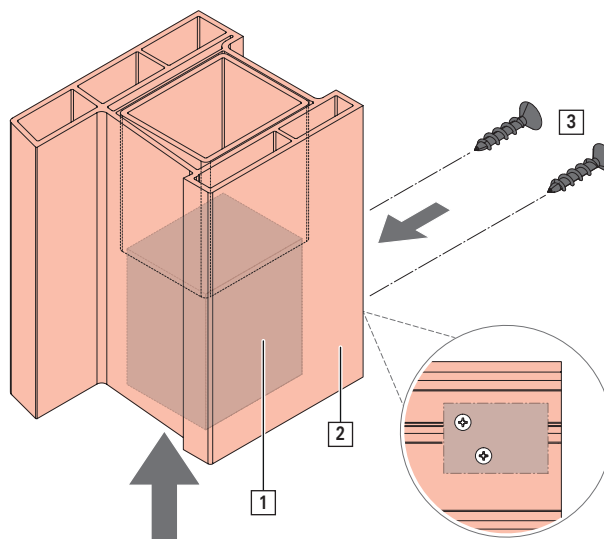


INFO

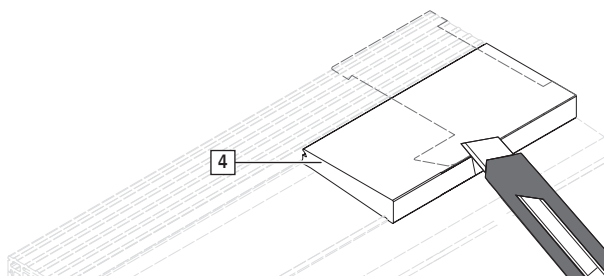
Cut the frame such that it is obtuse.

Saw down the threshold and cover in separate sawing steps.

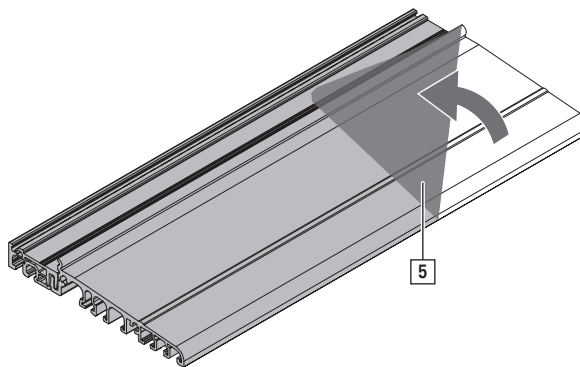
2. Push the filler piece [1] into the frame [2] and secure with screws [3].



3. Cut the compensation profile [4] according to the frame profile (b x c).



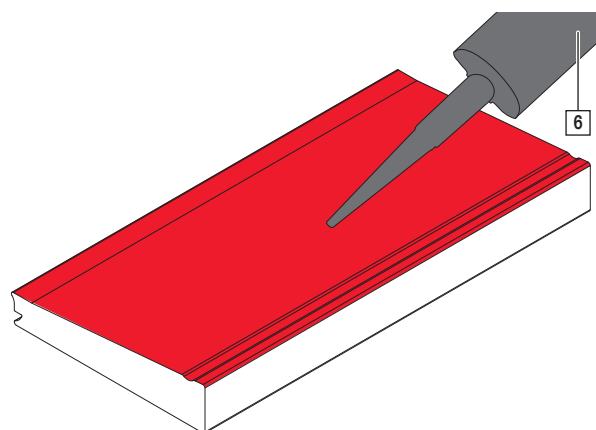
4. Remove the protective film [5] in the profile area.



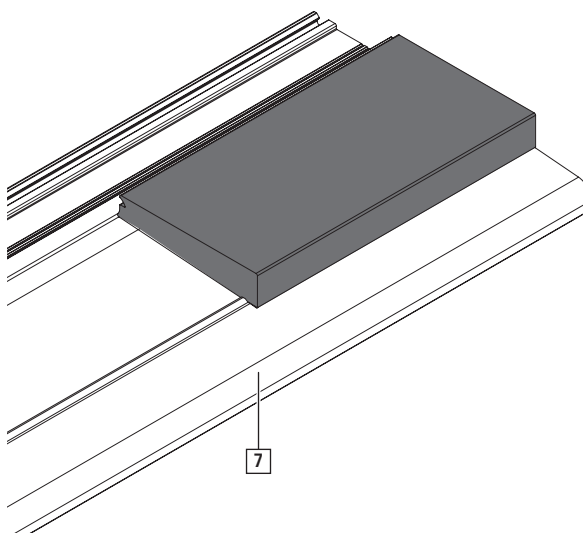
5. Clean the threshold in the installation area using suitable cleaning agents.



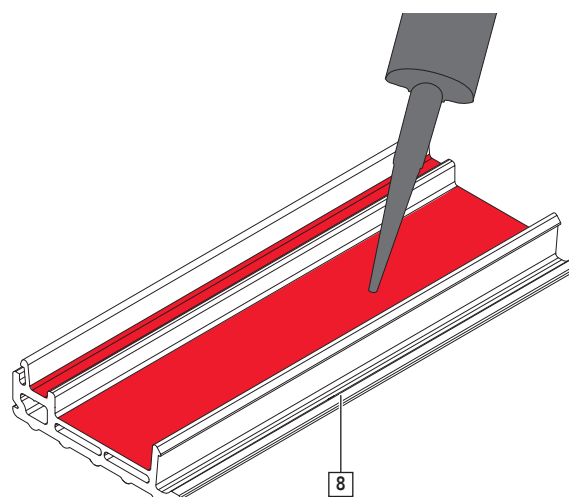
6. Seal the compensation profile all the way round [6].



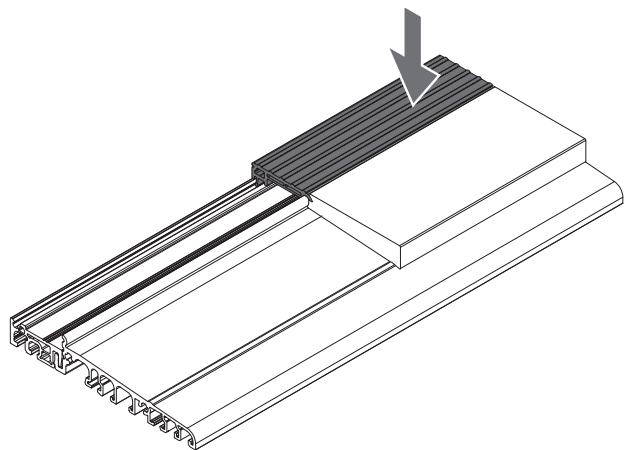
7. Place the compensation profile on the threshold [7] so that it is flush.



8. Seal the cover cutting [8].



9. Place the cover cutting on the threshold so that it is flush.



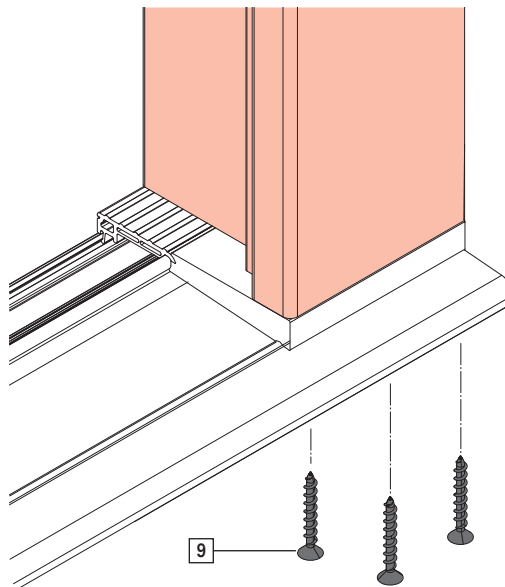
10. Position the frame so that it is flush and secure with screws [9].

For PVC profiles:



INFO

Install the wind stop if necessary. →
*5.10.2 "Wind stop and aero stop" from
page 91*



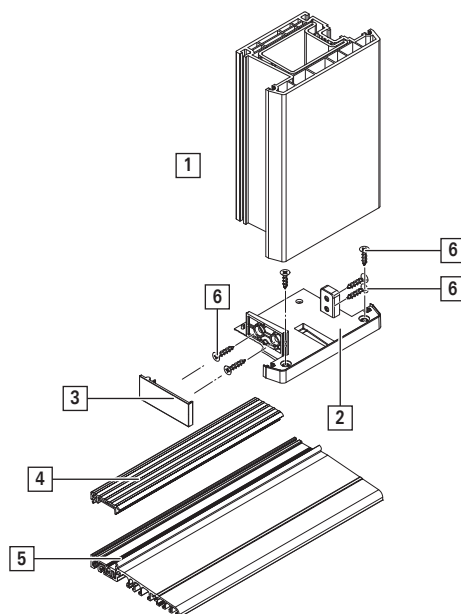
11. Remove excess sealing compound.

12. Clip on the cover.



5.7.7 Centre post bracket lug

- [1] Frame
- [2] Centre post bracket
- [3] Cover cap
- [4] Cover
- [5] Threshold
- [6] Screws



INFO

Installation as per "Threshold retainer lug" → *from page 35*

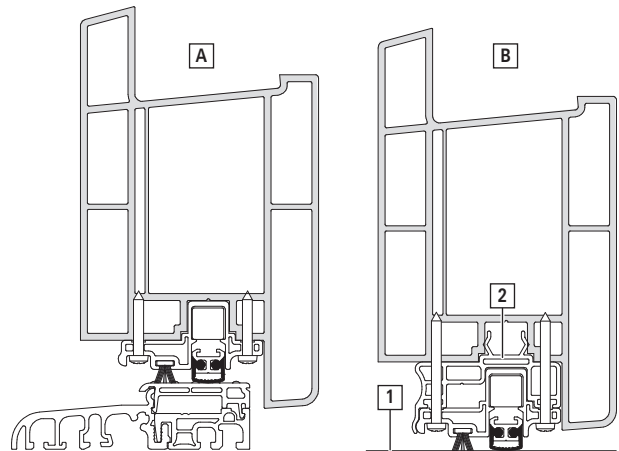
5.8 Floor door gaskets

| Material | Design | | Variant | Automatic gasket | Sliding threshold seal |
|----------|--------------|---------------|-----------------|------------------|------------------------|
| Timber | Balcony door | Single-sashed | Inward opening | — | — |
| | | | Outward opening | — | — |
| | | Double-sashed | Inward opening | — | — |
| | | | Outward opening | — | — |
| | Door | Single-leafed | Inward opening | ■ | ■ |
| | | | Outward opening | ■ | ■ |
| | | Double-leafed | Inward opening | ■ | ■ |
| | | | Outward opening | ■ | ■ |
| PVC | Balcony door | Single-sashed | Inward opening | — | — |
| | | | Outward opening | — | — |
| | | Double-sashed | Inward opening | — | — |
| | | | Outward opening | — | — |
| | Door | Single-leafed | Inward opening | ■ | ■ |
| | | | Outward opening | ■ | ■ |
| | | Double-leafed | Inward opening | ■ | ■ |
| | | | Outward opening | ■ | ■ |

5.8.1 Automatic gaskets

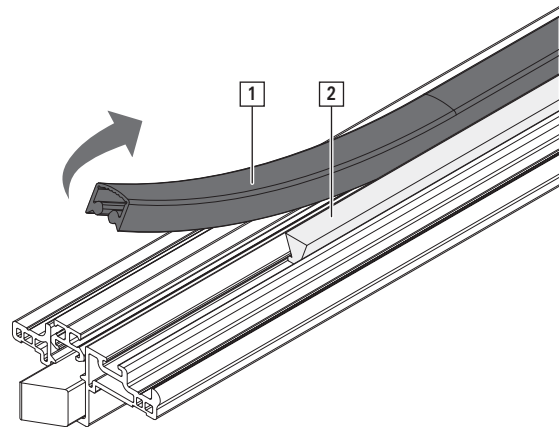
Installation situations

- [A] Texel automatic floor door gasket with Eifel TB threshold
- [B] Texel automatic floor door gasket – zero-barrier
- [1] Top edge of the finished floor
- [2] Adapter profile for Texel

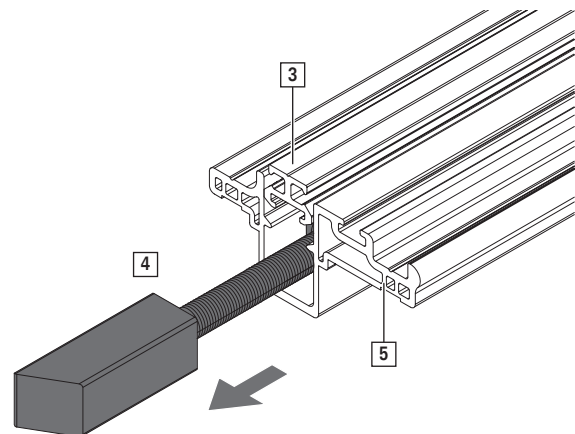


Single-leafed door

1. Lift the rubber lip [1] and move the brush gasket [2].



2. Slightly lift the aluminium profile [3] and use a suitable tool (e.g. combination pliers) to release the pressure piece [4] from the PVC profile [5] and pull it out fully.



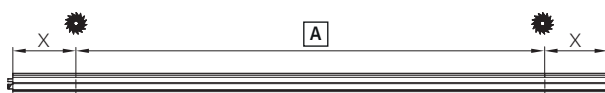


- Crop the Texel automatic floor door gasket by the dimension X from the outside.

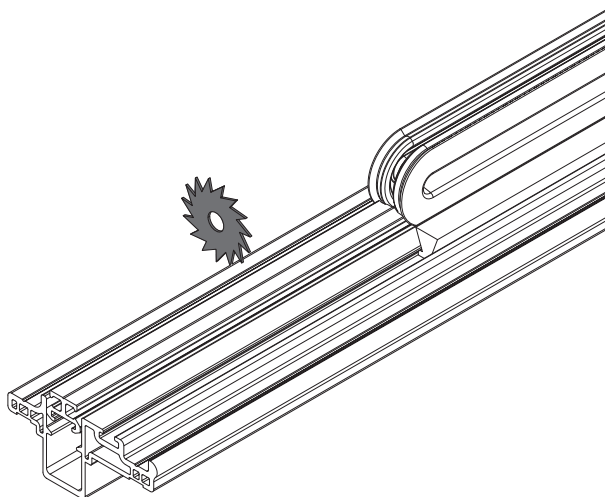


INFO

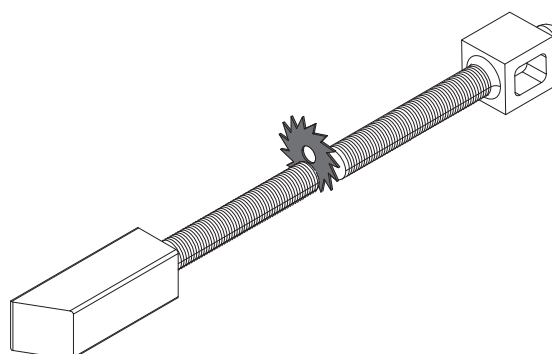
The Texel automatic floor door gasket can be cropped by up to 125 mm on the left and right.



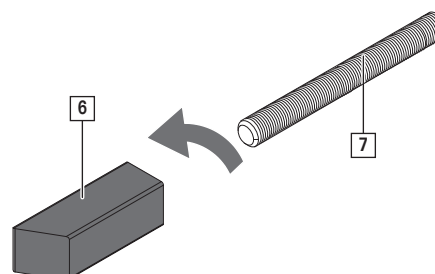
[A] Sash rebate width



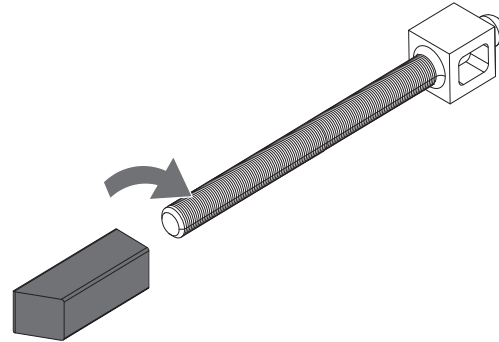
- Crop the pressure piece by the dimension X from the outside.



- Unscrew the pressure piece activation mechanism [6] from the pressure piece rod [7].



6. Screw the pressure piece activation mechanism onto the remaining pressure piece rod.



7. Insert the pressure piece into the PVC profile. Ensure that the slope of the pressure piece activation mechanism is oriented as shown in the illustration. Push the pressure piece in firmly until it clicks into place.

$X \approx 8 \text{ mm}$

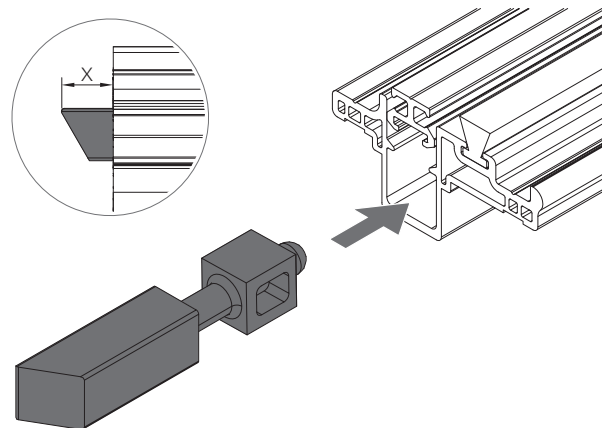


ATTENTION

Positioning the pressure piece incorrectly may cause property damage.

Positioning the pressure piece incorrectly means that leaktightness cannot be ensured.

- Ensure there is a projection. The pressure piece must protrude far enough that the Texel automatic floor door gasket is activated when the door is closed.

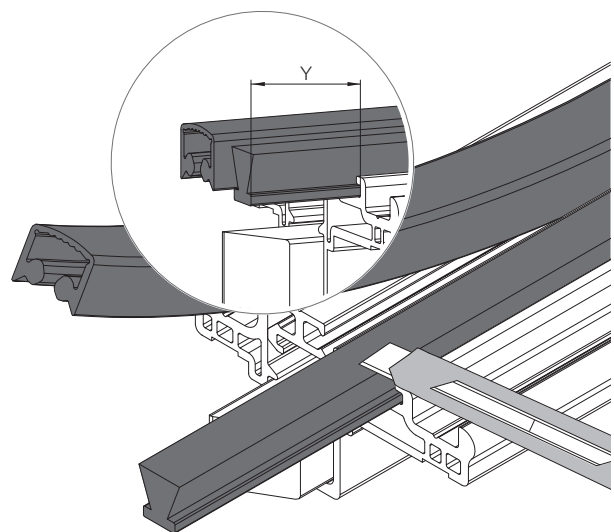


INFO

The pressure piece is positioned correctly once it can no longer be pulled out again by hand.

8. Crop the rubber lip and brush gasket equally. Ensure there is a projection.

$Y \approx X$ (projection of pressure piece activation mechanism)



9. For hardware axis 13:



Cut the adapter profile for Texel to the sash rebate width.

Clip the adapter profile into the sash groove.

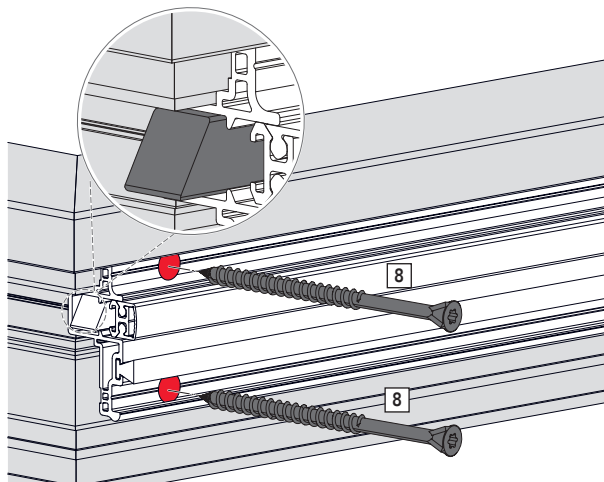
10. Secure the Texel automatic floor door gasket to the leaf with screws [8]. The number of screws depends on the length of the gasket.



ATTENTION
Inserting screws incorrectly
may cause property damage.

Inserting screws incorrectly may jeopardise tight sealing.

- ▶ Insert screws so that they are straight.
- ▶ Insert screws so that the screw head is located within the sliding threshold seal and does not prevent proper operation.



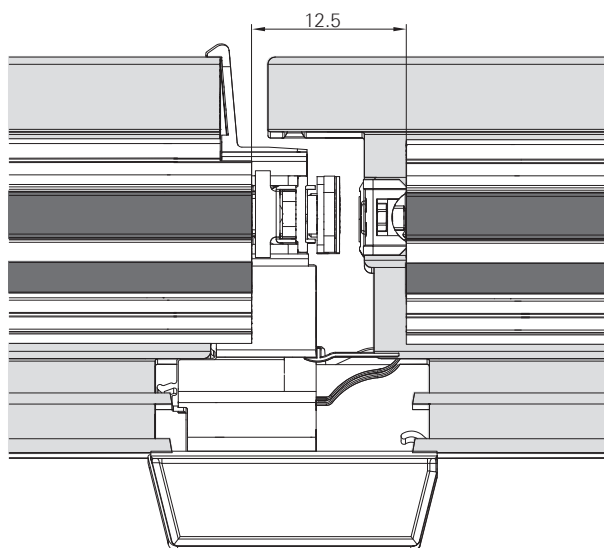
Double-leafed door

1. Steps 1 - 9 are identical to the steps for single-leafed doors.



INFO

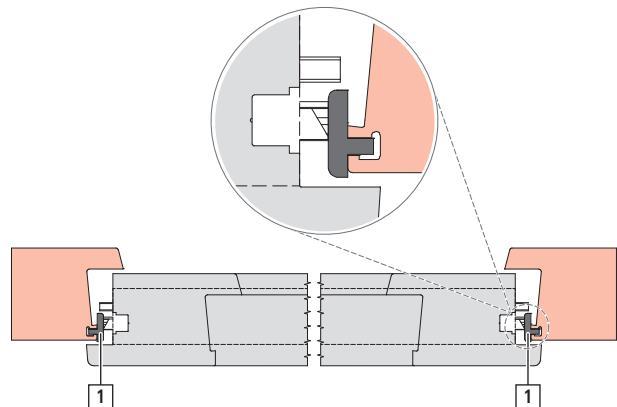
On double-leafed doors, note the distance in the area of the floating mullion.



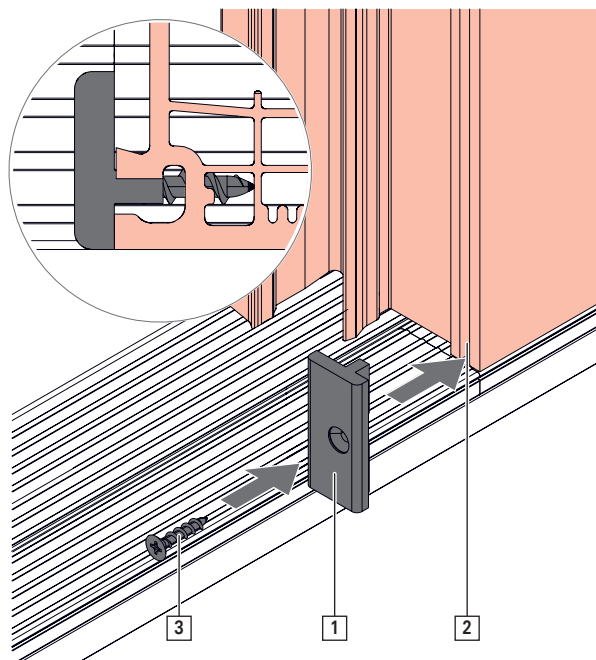
5.8.2 Pressure plate for automatic gaskets

Installation situations

[1] Pressure plates for Texel automatic floor door gasket



1. Insert the pressure plate [1] into the frame groove [2] on the right and left and position on the threshold.



2. Secure each pressure plate with one screw [3].



INFO

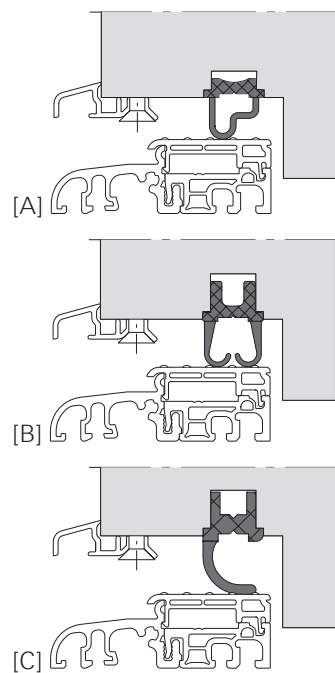
Variant: secure the pressure plate for smooth rebate with two screws.



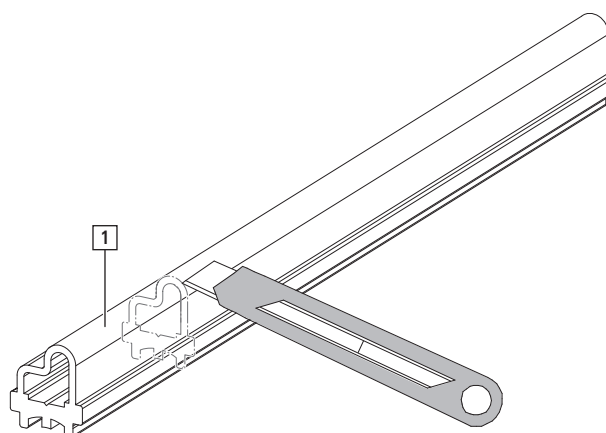
5.8.3 Sliding threshold seal

Installation situations

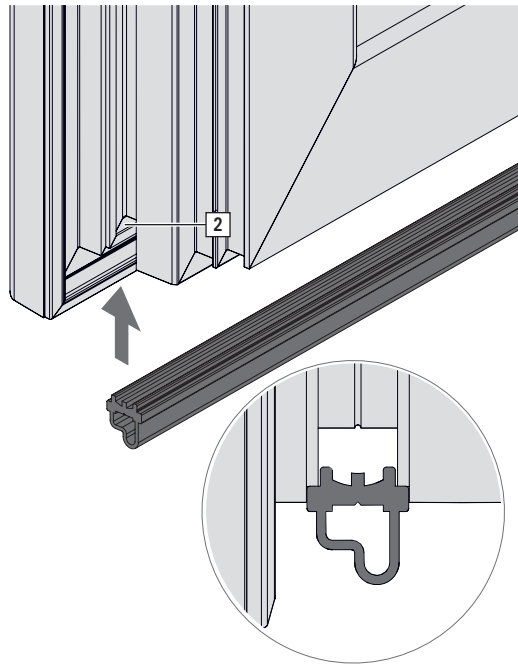
- [A] Amrum sliding threshold seal with Eifel TB threshold
- [B] Sylt sliding threshold seal with Eifel TB threshold
- [C] Rügen sliding threshold seal with Eifel TB threshold



1. Cut the sliding threshold seal [1] to the SRW.



2. Press the sliding threshold seal into the sash profile [2].
 Ensure that it is flush.

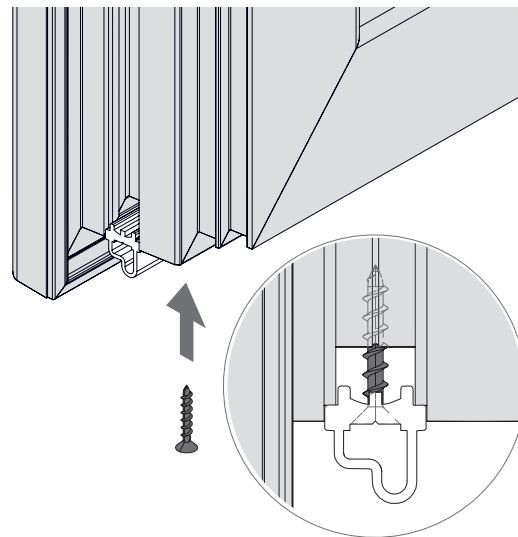


3. Secure the sliding threshold seal on the sash through the sealing lip with screws.
 The number of screws depends on the length of the gasket.



ATTENTION
Inserting screws incorrectly may cause property damage.

- Inserting screws incorrectly may jeopardise tight sealing.
- ▶ Insert screws so that they are straight.
 - ▶ Insert screws so that the screw head is located within the sliding threshold seal and does not prevent proper operation.



5.9 Weather profile strip

| Material | Design | | Variant | Standard | Comfort | Design |
|----------|--------------|---------------|-----------------|----------|---------|--------|
| Timber | Balcony door | Single-leafed | Inward opening | ■ | ■ | ■ |
| | | | Outward opening | — | — | — |
| | | Double-leafed | Inward opening | — | ■ | ■ |
| | | | Outward opening | — | — | — |
| | Door | Single-leafed | Inward opening | ■ | ■ | ■ |
| | | | Outward opening | — | — | — |
| | | Double-leafed | Inward opening | — | ■ | ■ |
| | | | Outward opening | — | — | — |



| Material | Design | | Variant | Standard | Comfort | Design |
|----------|--------------|---------------|-----------------|----------|---------|--------|
| PVC | Balcony door | Single-leafed | Inward opening | ■ | ■ | ■ |
| | | | Outward opening | — | — | — |
| | | Double-leafed | Inward opening | — | ■ | ■ |
| | | | Outward opening | — | — | — |
| | Door | Single-leafed | Inward opening | ■ | ■ | ■ |
| | | | Outward opening | — | — | — |
| | | Double-leafed | Inward opening | — | ■ | ■ |
| | | | Outward opening | — | — | — |

5.9.1 Standard

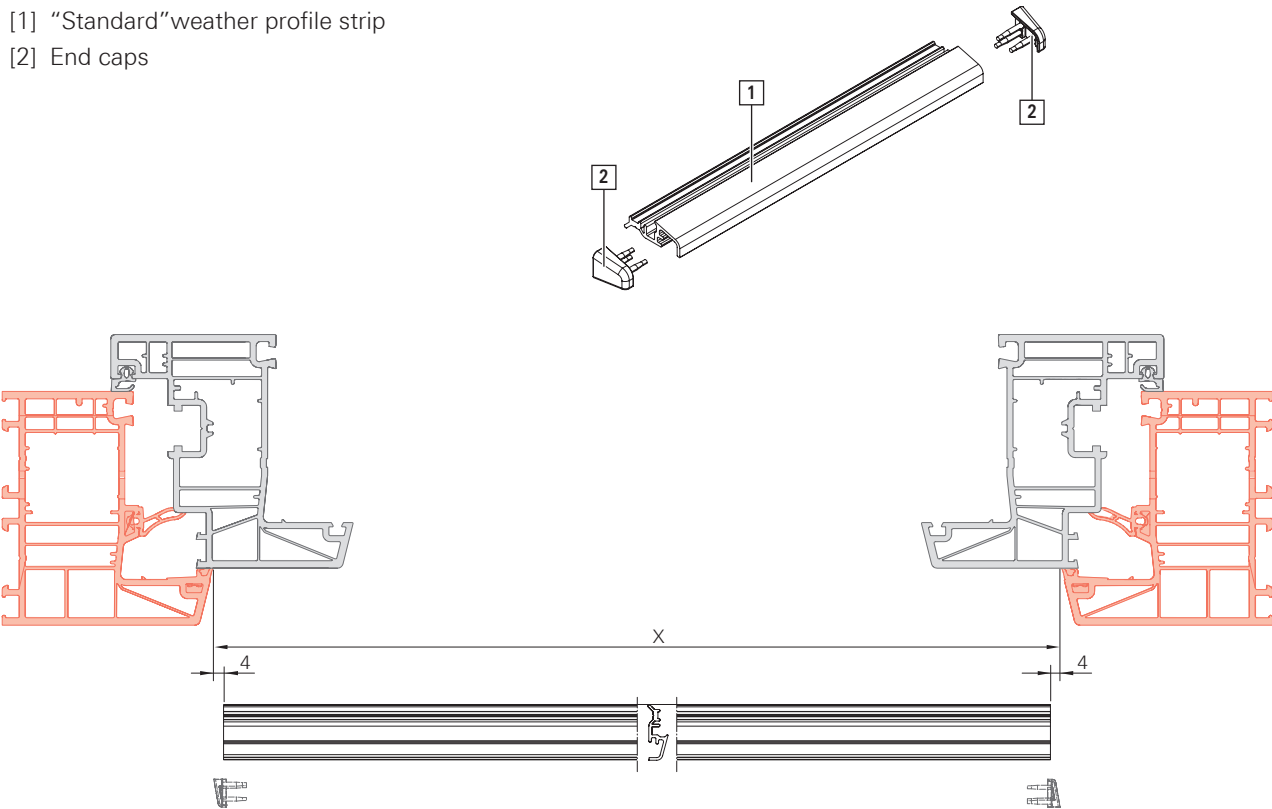
5.9.1.1 Single-leafed door



INFO

The figures show installation for a PVC profile.

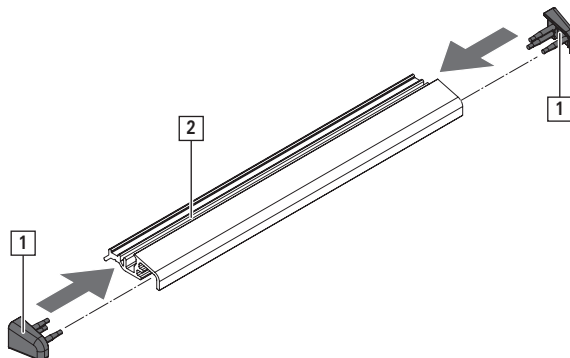
- [1] “Standard” weather profile strip
[2] End caps



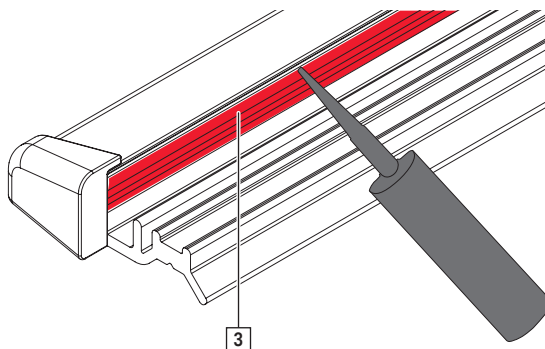
1. Crop the weather profile strip:

Length = X - (2 x 4) - hardware adjustment range

2. Place the end caps [1] on the weather profile strip [2].



3. Apply sealing compound [3] along the entire length.



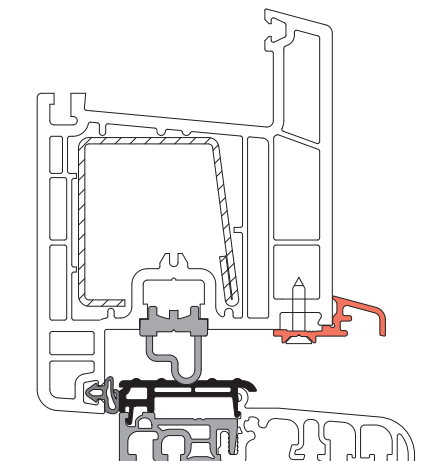
4. Position the weather profile strip at the bottom of the sash and secure with screws.
Drill the drainage holes on the weather profile strip.



ATTENTION
Improper drainage holes may cause property damage.

Incorrect or improper drainage holes may prevent water flowing away as intended.

- Do not drill into the reinforcement profile in the main chamber of the sash.





5.9.2 Comfort

5.9.2.1 Single-leafed door



INFO

The figures show installation for a PVC profile.

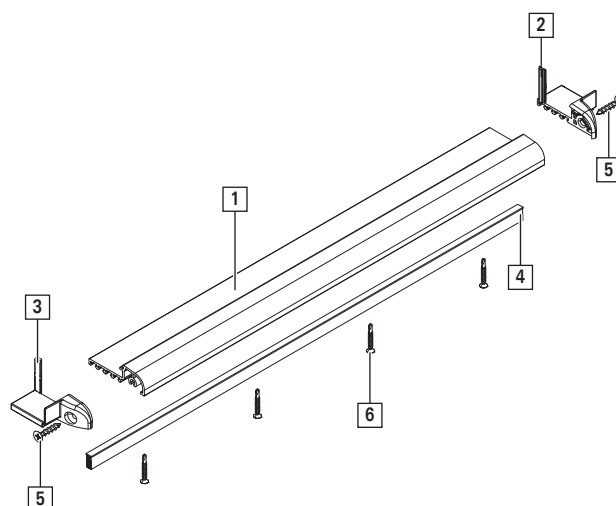
- [1] "Comfort" weather profile strip
- [2] End cap on the locking side
- [3] End cap on the hinge side
- [4] Brush gasket



INFO

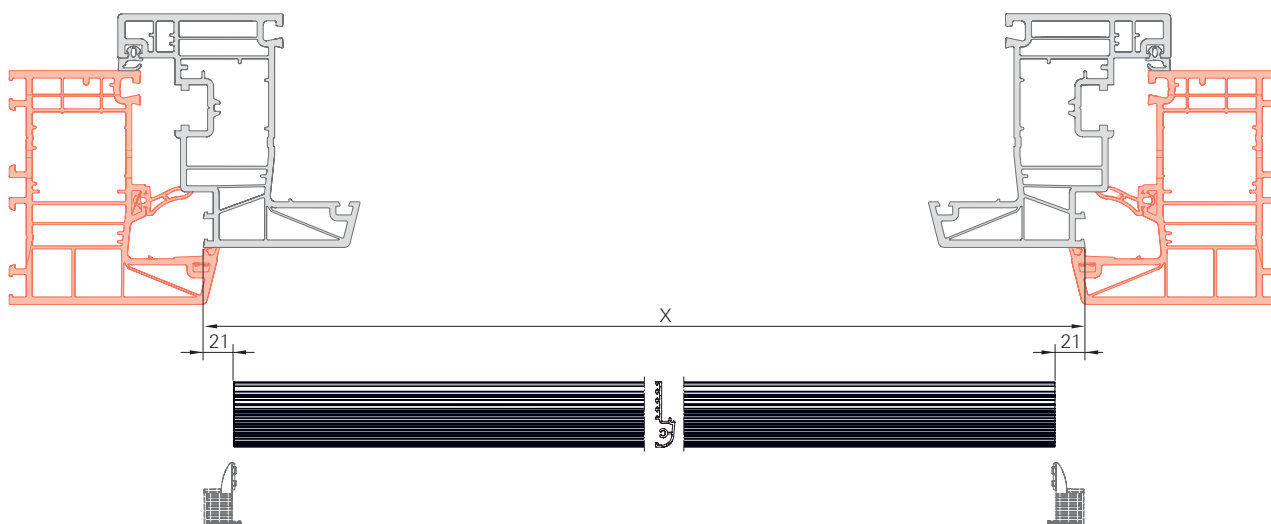
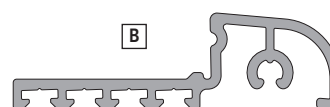
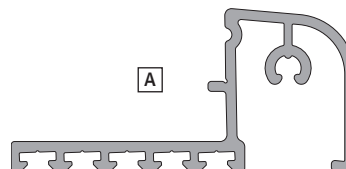
A drip seal can be used instead of or in addition to the brush gasket.

- [5] Fixing screws
- [6] Self-drilling screws

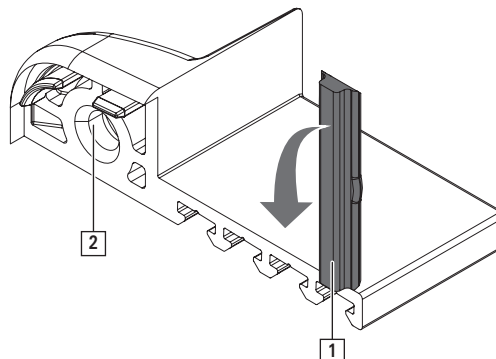


Comfort weather profile strip variants

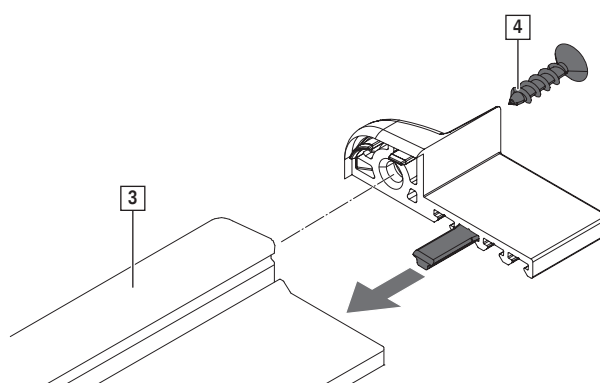
- [A] MD
- [B] AD



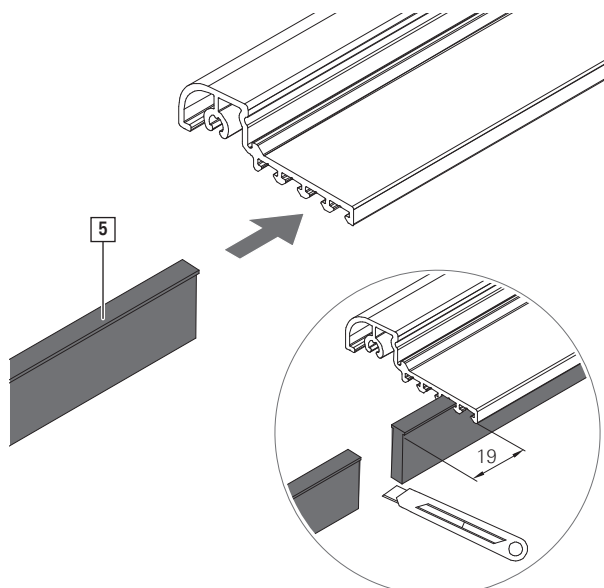
1. Crop the weather profile strip:
Length = $X - 2 \times 21$
2. Detach the locating aid [1] from the end cap on the hinge side [2].



3. Insert the locating aid into the free groove of the end cap on the hinge side. Position the end cap on the weather profile strip [3] and secure with one screw [4].



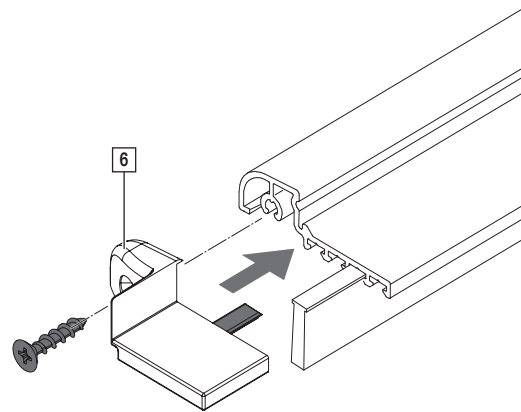
4. Insert the brush gasket [5] as far as it will go into the free groove of the end cap on the hinge side. Cut the brush gasket, leaving it to protrude by 19 mm.



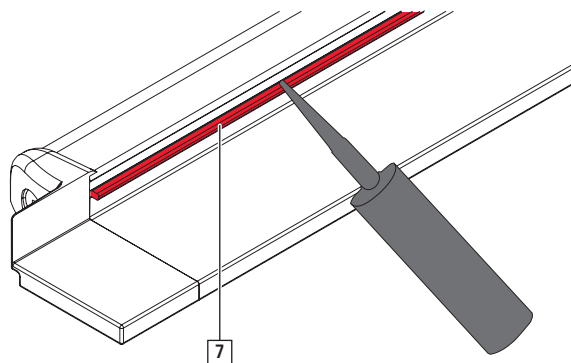


5. Repeat step 2 with the end cap on the locking side [6].

Insert the locating aid into the free groove of the end cap on the locking side. Position the end cap on the weather profile strip and secure with one screw.



6. Apply sealing compound [7] along the entire length.



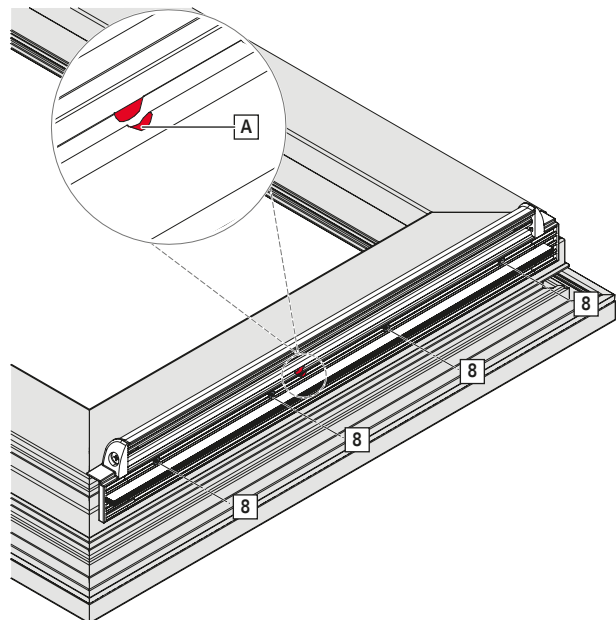
7. Position the weather profile strip at the bottom of the sash and secure with screws [8].
 Drill the drainage holes [A].



ATTENTION
Improper drainage holes may cause property damage.

Incorrect or improper drainage holes may prevent water flowing away as intended.

- ▶ Do not drill into the reinforcement profile in the main chamber of the leaf.
- ▶ Do not drill into the gaskets in the weather profile strip.



5.9.2.2 Double-leafed door



INFO

The figures show installation for a PVC profile.

First opening leaf

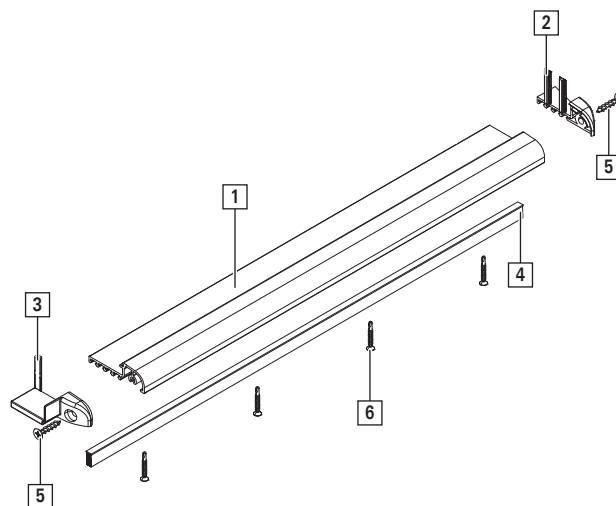
- [1] "Comfort" weather profile strip
- [2] End cap on the floating-mullion profile
- [3] End cap on the hinge side
- [4] Brush gasket



INFO

A drip seal can be used instead of or in addition to the brush gasket.

- [5] Fixing screws
- [6] Self-drilling screws



Second opening leaf

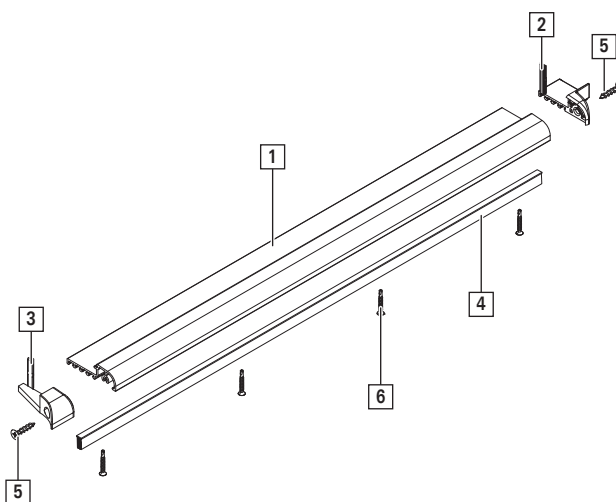
- [1] "Comfort" weather profile strip
- [2] End cap on the hinge side
- [3] End cap on the floating-mullion profile
- [4] Brush gasket



INFO

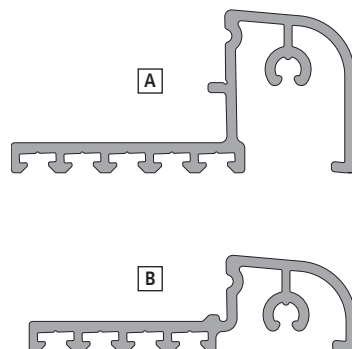
A drip seal can be used instead of or in addition to the brush gasket.

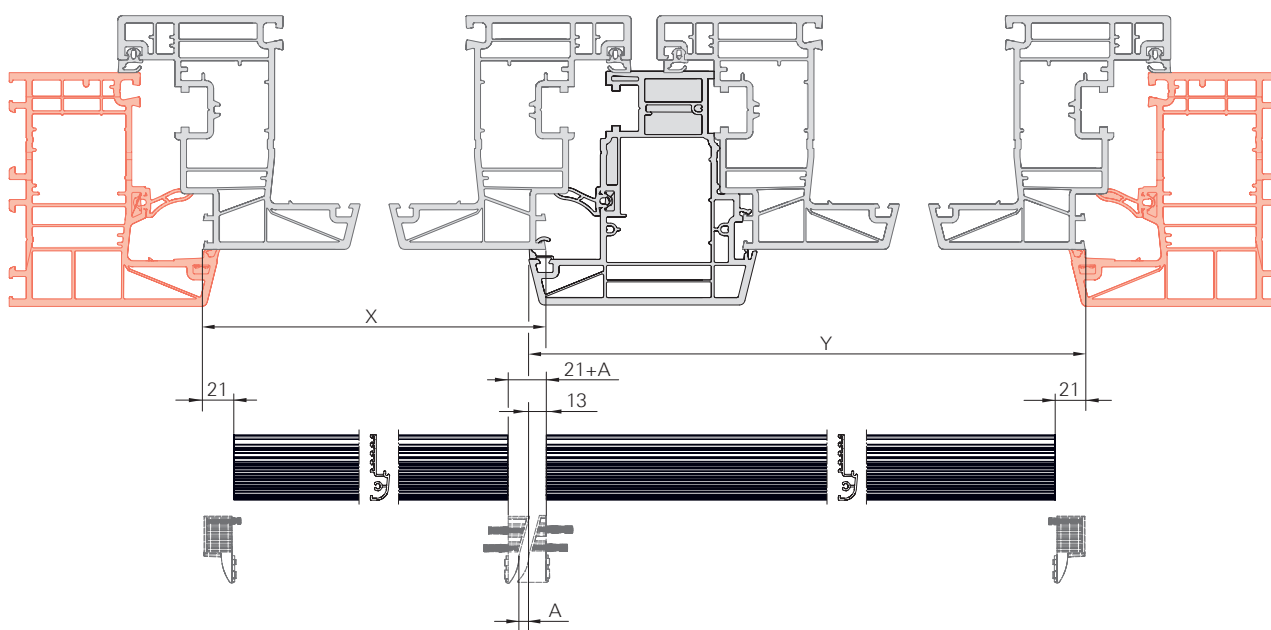
- [5] Fixing screws
- [6] Self-drilling screws



Comfort weather profile strip variants

- [A] MD
- [B] AD





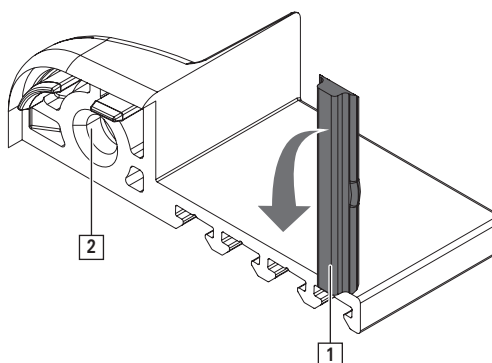
[A] Hardware adjustment range

Cropping the weather profile strip

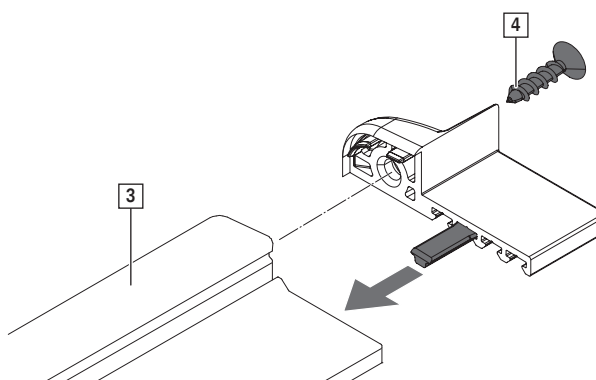
1. Crop the weather profile strip:
 First opening leaf: length = $X - 21 - (21 + A)$
 Second opening leaf: length = $Y - 21 - 13$

Installing the first opening leaf

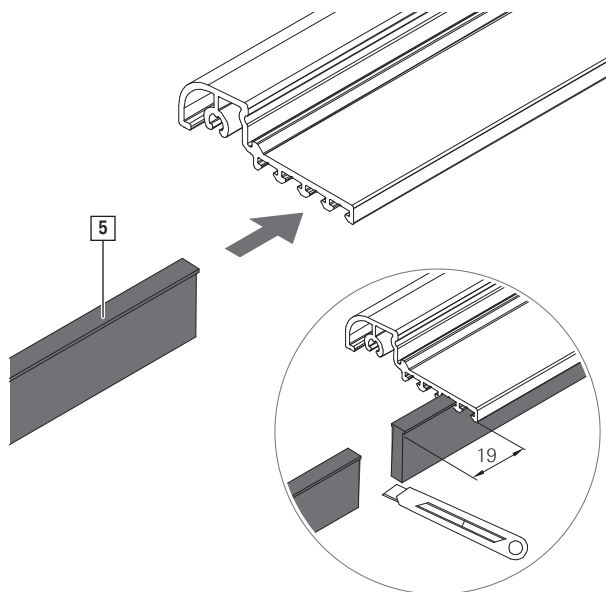
1. Determine the assignment of the grooves (screw mounting, gasket mounting) in the locating aid.
 Detach the locating aid [1] from the end cap on the hinge side [2].



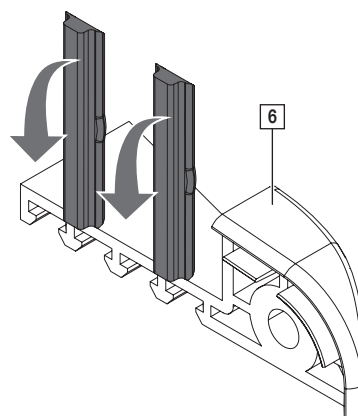
2. Insert the locating aid into the free groove of the end cap on the hinge side. Position the end cap on the hinge side on the weather profile strip [3] and secure with one screw [4].



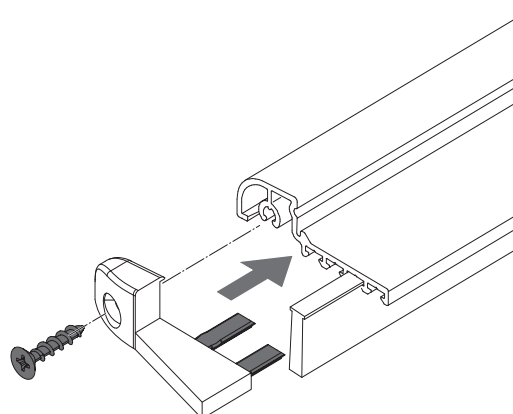
3. Insert the brush gasket [5] as far as it will go into the free groove of the end cap on the hinge side. Cut the brush gasket, leaving it to protrude by 19 mm.



4. Detach the locating aids from the end cap on the floating mullion [6].

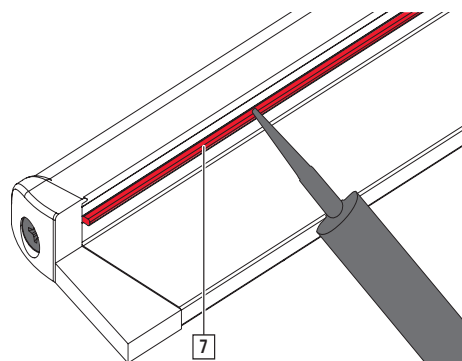


5. Insert the locating aids into the free grooves of the end cap on the floating mullion. Position the floating-mullion end cap on the weather profile strip and secure with one screw.





6. Apply sealing compound [7] along the entire length.



7. Position the weather profile strip at the bottom of the sash and secure with screws [8].
 Drill the drainage holes [A].

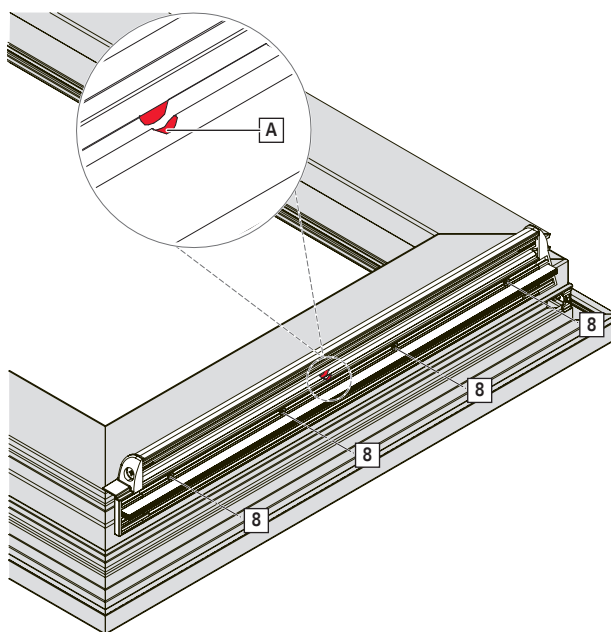


ATTENTION

Improper drainage holes may cause property damage.

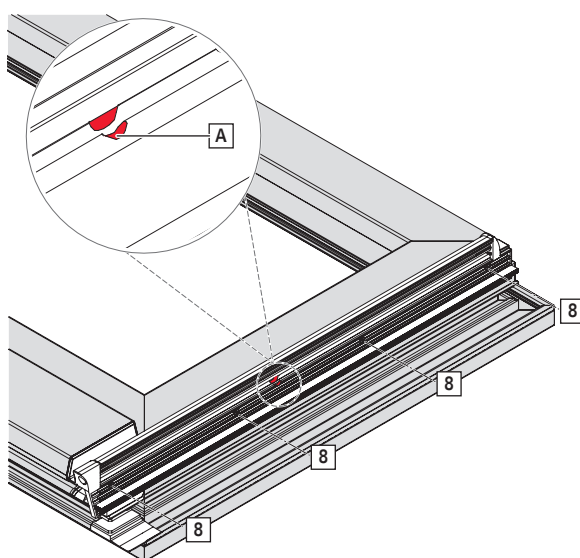
Incorrect or improper drainage holes may prevent water flowing away as intended.

- ▶ Do not drill into the reinforcement profile in the main chamber of the leaf.
- ▶ Do not drill into the gaskets in the weather profile strip.



Installing the second opening leaf

1. Repeat steps 1-7 from "Installing the first opening leaf" for the second opening leaf.



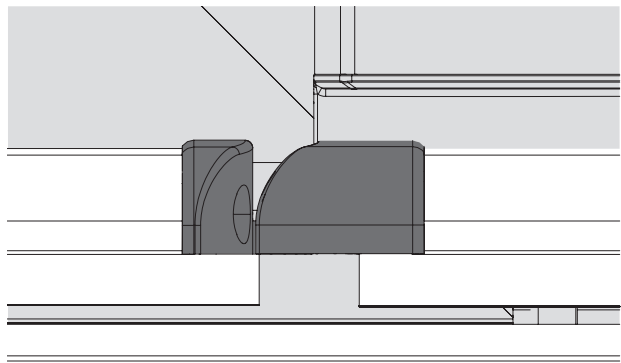


Fig. 5.2: Figure: installation situation in the area of the end caps on the floating mullion



5.9.2.3 Double-leafed door with gasket mounting profile



INFO

The figures show installation for a PVC profile.

First opening leaf

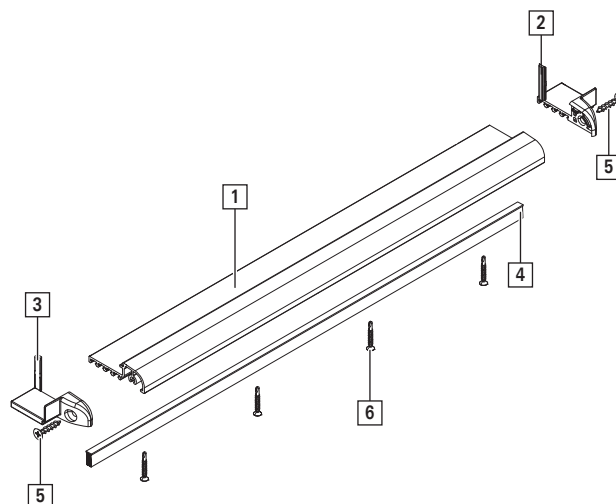
- [1] "Comfort" weather profile strip
- [2] End caps on the locking side
- [3] End caps on the hinge side
- [4] Brush gasket



INFO

A drip seal can be used instead of or in addition to the brush gasket.

- [5] Fixing screws
- [6] Self-drilling screws



Second opening leaf

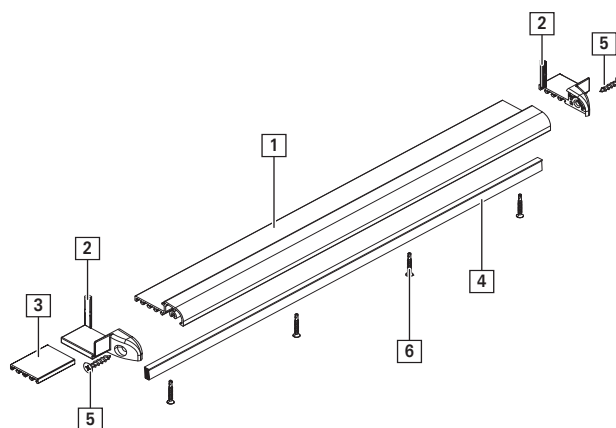
- [1] "Comfort" weather profile strip
- [2] End caps on the hinge side / on the floating mullion
- [3] Gasket mounting profile
- [4] Brush gasket



INFO

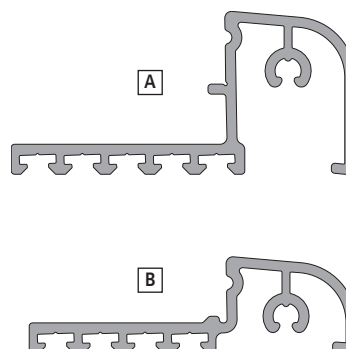
A drip seal can be used instead of or in addition to the brush gasket.

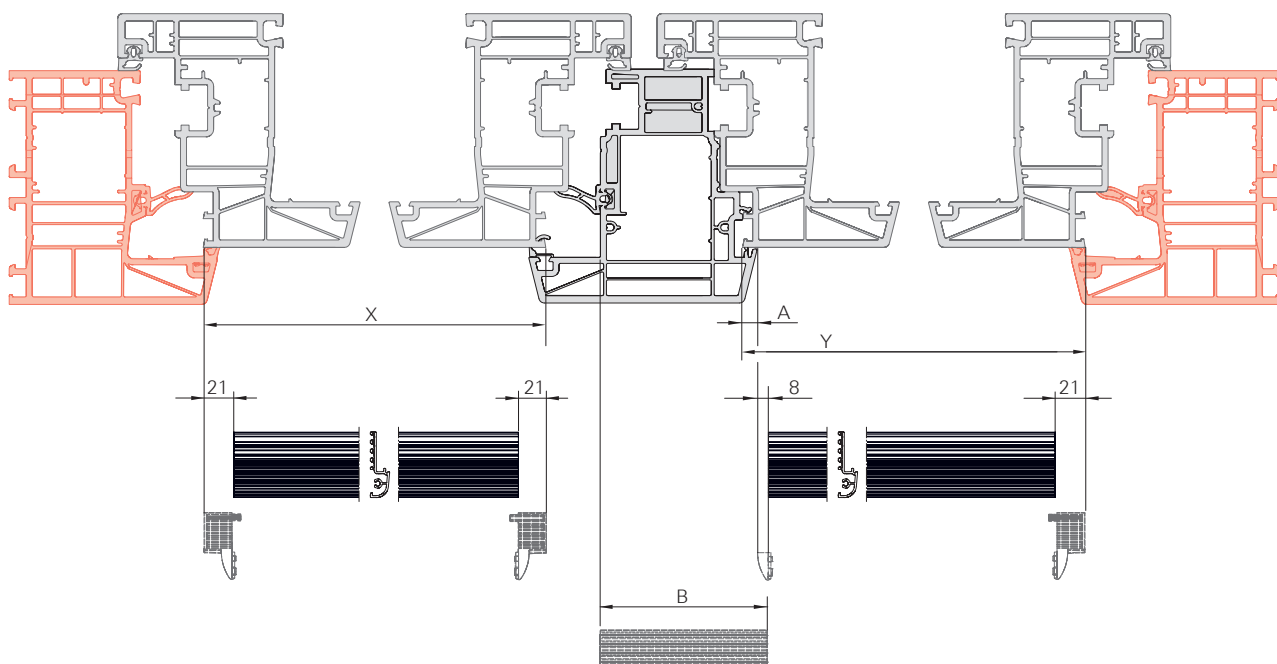
- [5] Fixing screws
- [6] Self-drilling screws



Comfort weather profile strip variants

- [A] MD
- [B] AD





[A] Profile system-dependent dimension

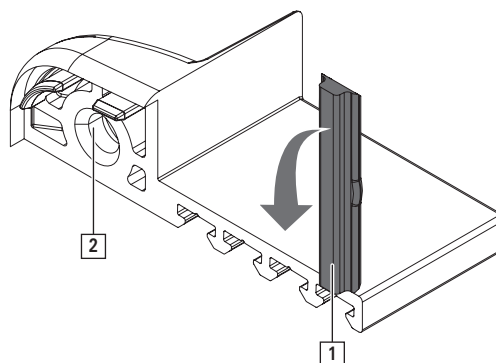
[B] Length of gasket mounting profile

Cropping the weather profile strip

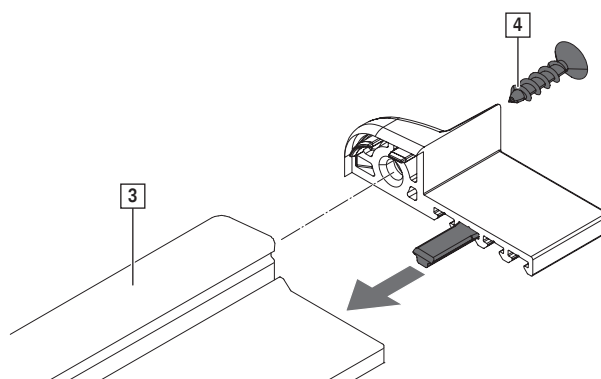
1. Crop the weather profile strip:
 First opening leaf: length = $X - (2 \times 21)$
 Second opening leaf: length = $Y - A - 8 - 21$

Installing the first opening leaf

1. Determine the assignment of the grooves (screw mounting, gasket mounting) in the locating aid.
 Detach the locating aid [1] from the end cap on the hinge side [2].

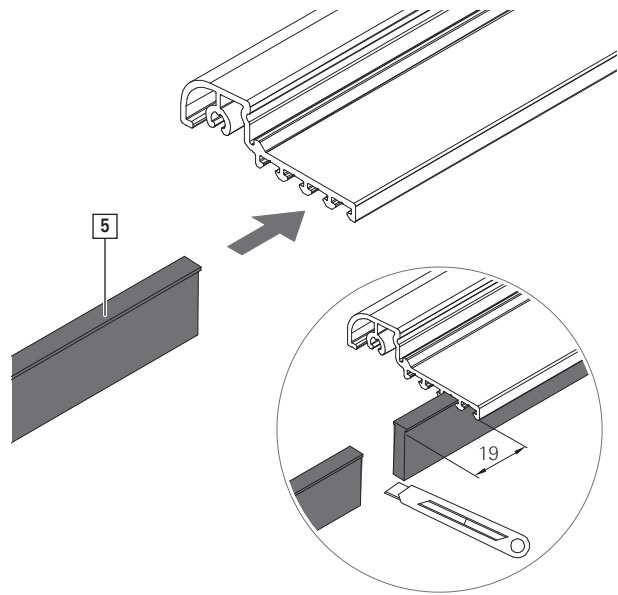


2. Insert the locating aid into the free groove of the end cap on the hinge side. Position the end cap on the hinge side on the weather profile strip [3] and secure with one screw [4].

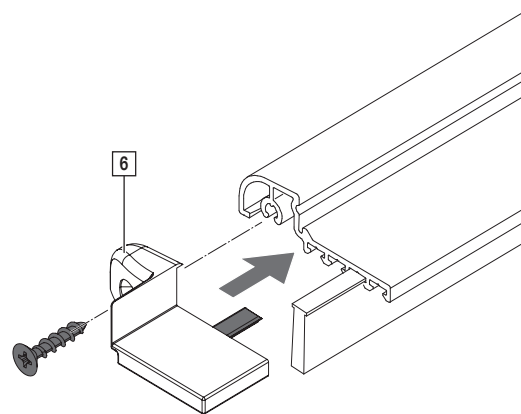




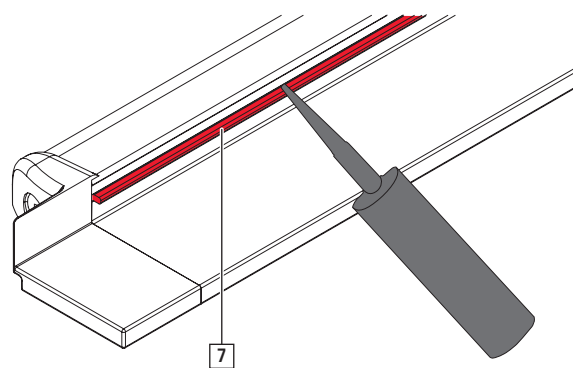
3. Insert the brush gasket [5] as far as it will go into the free groove of the end cap on the hinge side. Cut the brush gasket, leaving it to protrude by 19 mm.



4. Detach the locating aid from the end cap on the locking side.
Insert the locating aid into the free groove of the end cap on the locking side. Position the end cap on the locking side on the weather profile strip and secure with one screw.



5. Apply sealing compound [7] along the entire length.



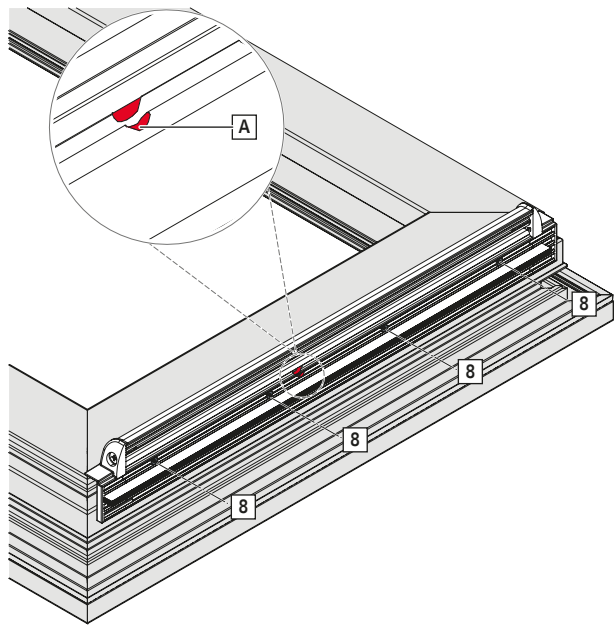
6. Position the weather profile strip at the bottom of the sash and secure with screws [8].
 Drill the drainage holes [A].



ATTENTION
Improper drainage holes may cause property damage.

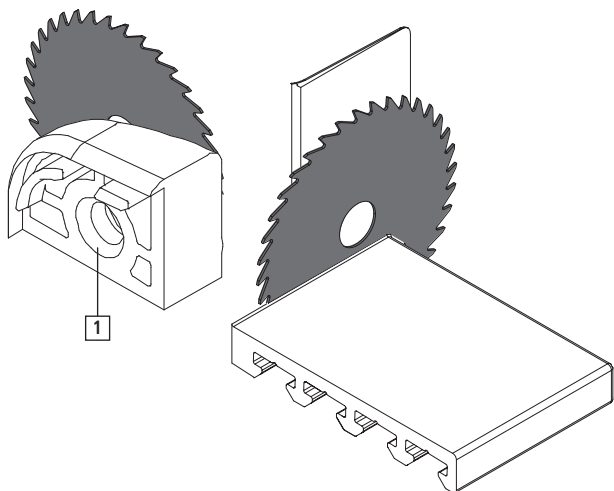
Incorrect or improper drainage holes may prevent water flowing away as intended.

- ▶ Do not drill into the reinforcement profile in the main chamber of the leaf.
- ▶ Do not drill into the gaskets in the weather profile strip.



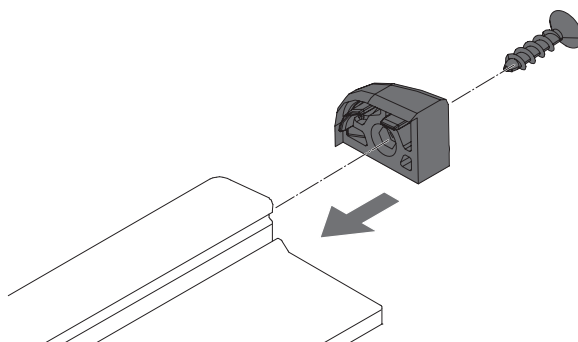
Installing the second opening leaf

1. Determine the assignment of the grooves (screw mounting, gasket mounting) in the locating aid.
 Detach the locating aid from both end caps.
2. Insert the locating aid into the free groove of the end cap on the hinge side. Position the end cap on the hinge side on the weather profile strip and secure with one screw.
3. Detach the front part of the end cap [1] from the end cap on the floating mullion and dispose of the rest.
 Deburr the separating edges on the front part of the end cap.





4. Position the front part of the end cap on the weather profile strip and secure with one screw.



5. Apply sealing compound along the entire length.
6. Position the weather profile strip at the bottom of the sash and secure with screws [2].
 Drill the drainage holes [A].

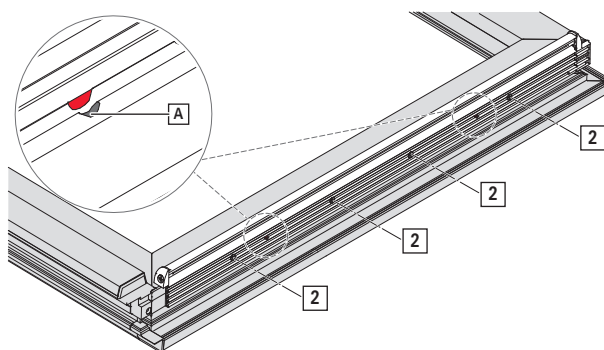


ATTENTION

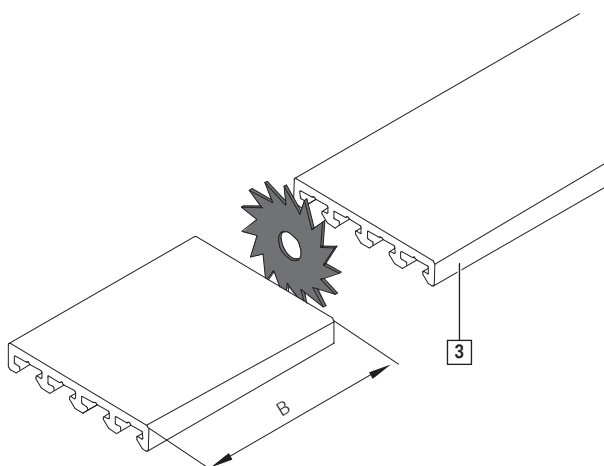
Improper drainage holes may cause property damage.

Incorrect or improper drainage holes may prevent water flowing away as intended.

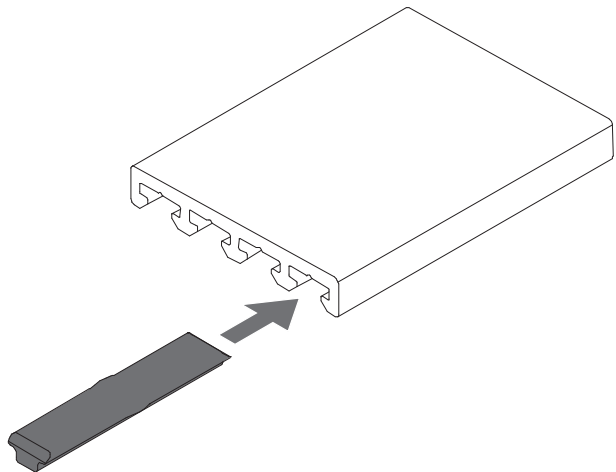
- ▶ Do not drill into the reinforcement profile in the main chamber of the leaf.
- ▶ Do not drill into the gaskets in the weather profile strip.



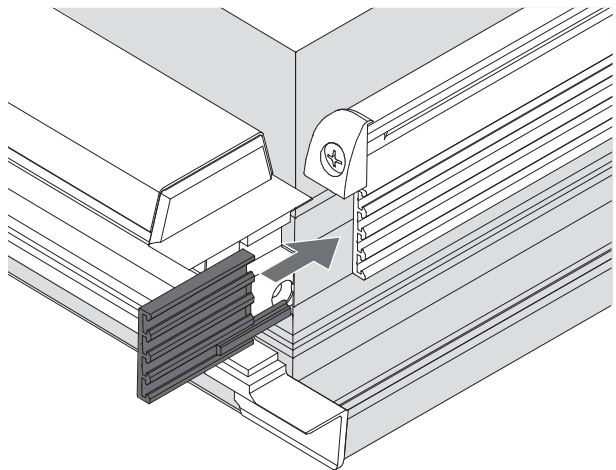
7. Crop the gasket mounting profile [3].
 Length = B



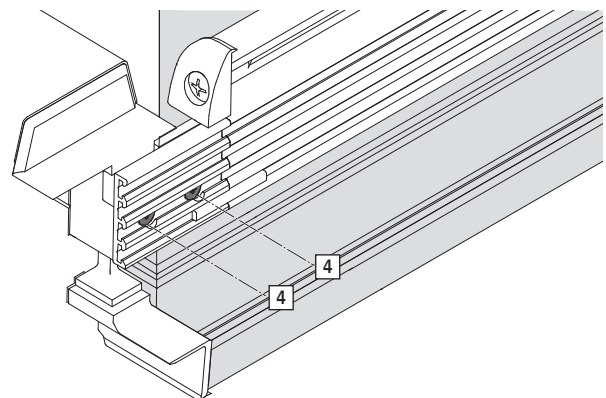
8. Insert the locating aid into the free groove of the gasket mounting profile.



9. Join the gasket mounting profile and the weather profile strip.

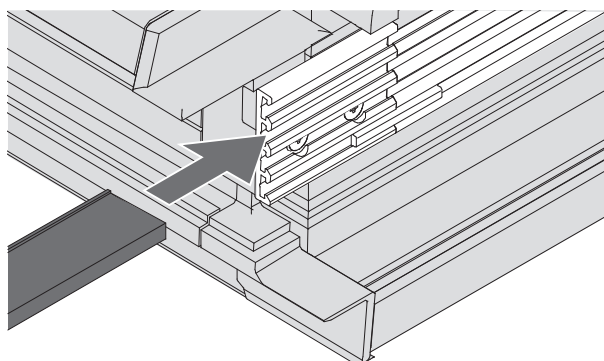


10. Secure the gasket mounting profile with two screws [4].

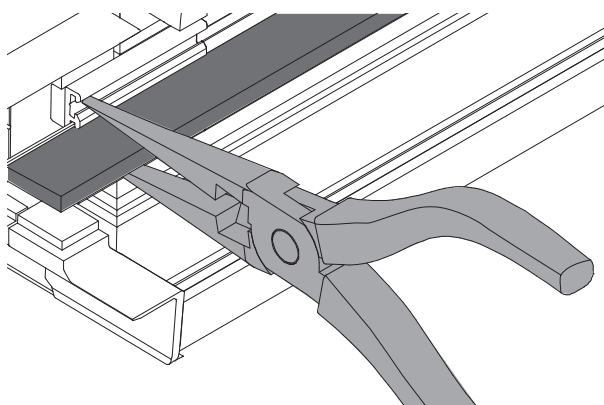




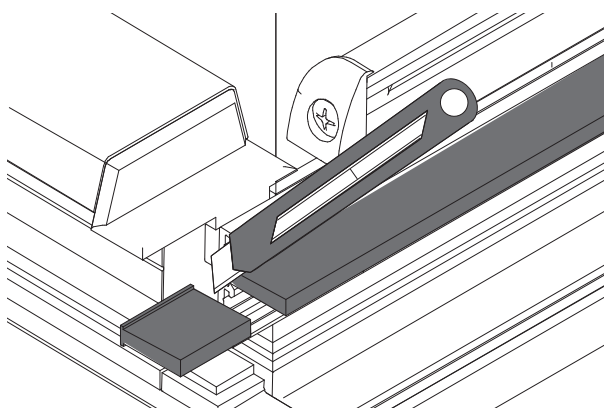
11. Insert the brush gasket as far as it will go into the free groove of the end cap on the hinge side.



12. Press the gasket mounting profile together using pliers to fix the brush gasket in position.



13. Cut the brush gasket on the gasket mounting profile so that it is level.



5.9.2.4 Double-leafed door with floating-mullion gasket



INFO

The figures show installation for a PVC profile.

First opening leaf

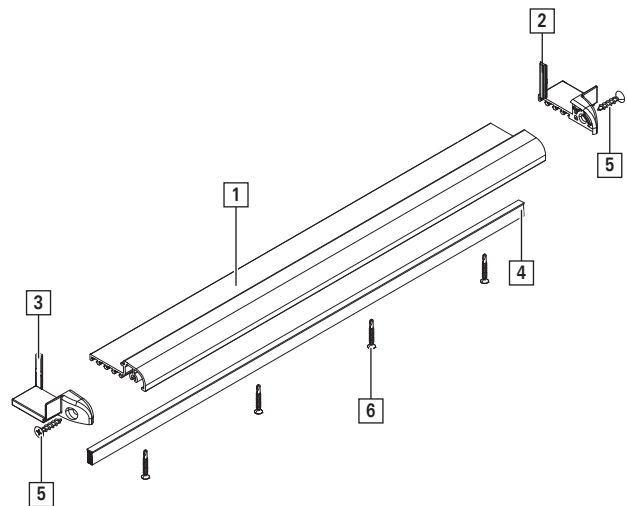
- [1] "Comfort" weather profile strip
- [2] End caps on the hinge side / on the floating mullion
- [3] End caps on the hinge side / on the floating mullion
- [4] Brush gasket



INFO

A drip seal can be used instead of or in addition to the brush gasket.

- [5] Fixing screws
- [6] Self-drilling screws



Second opening leaf

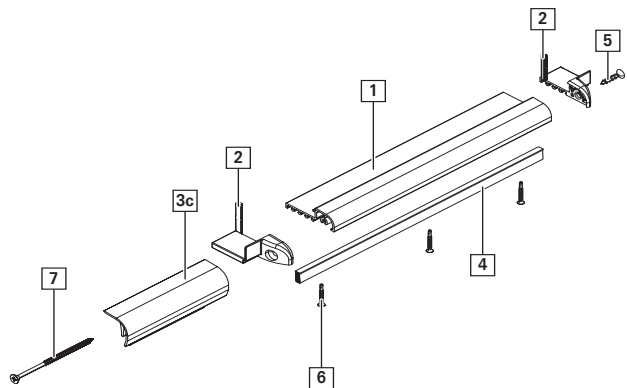
- [1] "Comfort" weather profile strip
- [2] End caps on the hinge side / on the floating mullion
- [3c] Floating-mullion gasket
- [4] Brush gasket



INFO

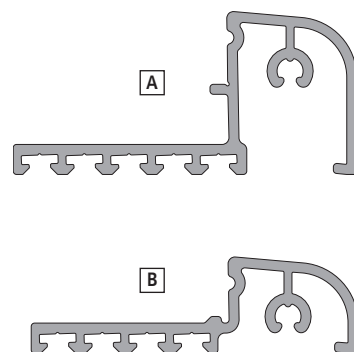
A drip seal can be used instead of or in addition to the brush gasket.

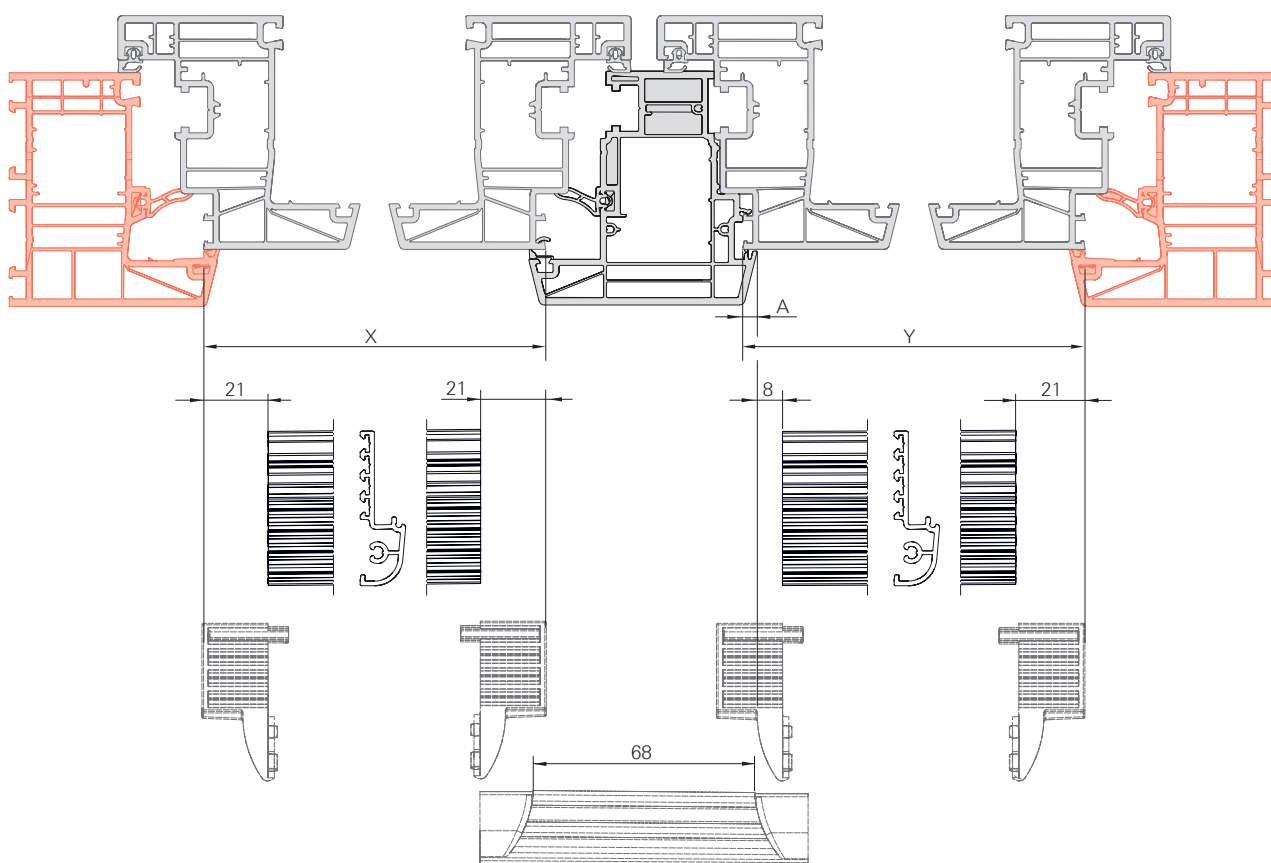
- [5] Fixing screws
- [6] Self-drilling screws
- [7] Fixing screw for the floating-mullion gasket



Comfort weather profile strip variants

- [A] MD
- [B] AD





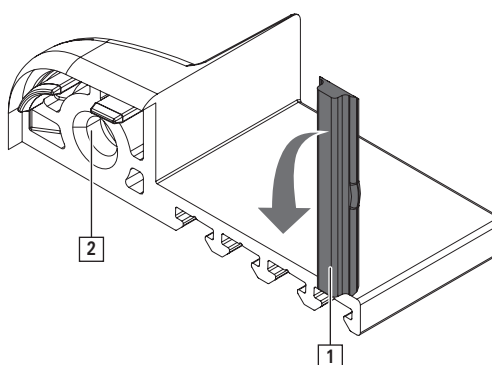
[A] Profile system-dependent dimension

Cropping the weather profile strip

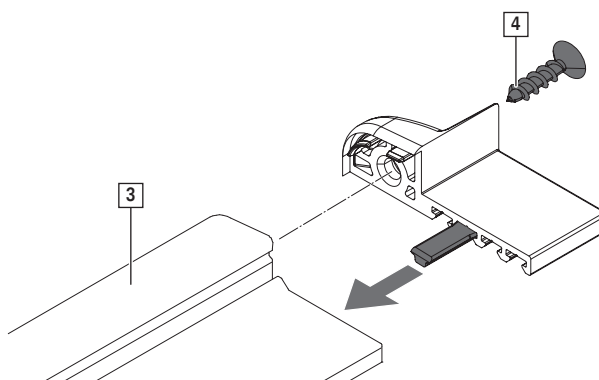
1. Crop the weather profile strip:
 $Z = \text{floating-mullion profile width}$
 First opening leaf: length = $X - (2 \times 21)$
 Second opening leaf: length = $Y - A - 8 - 21$

Installing the first opening leaf

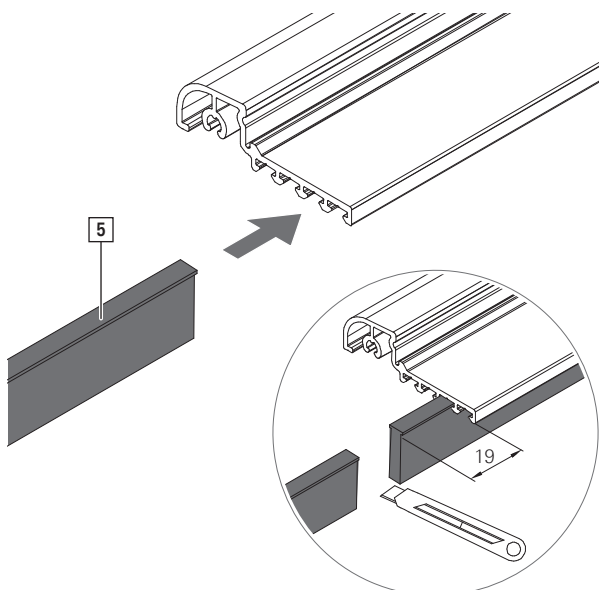
1. Detach the locating aid [1] from the "end cap on the hinge side" [2].



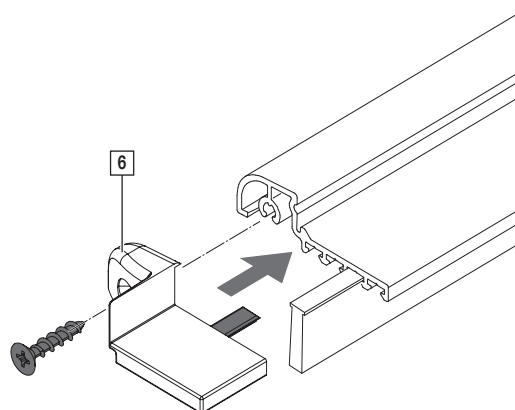
2. Insert the locating aid into the free groove of the end cap on the hinge side. Position the end cap on the hinge side on the weather profile strip [3] and secure with one screw [4].



3. Insert the brush gasket [5] as far as it will go into the free groove of the end cap on the hinge side. Cut the brush gasket, leaving it to protrude by 19 mm.

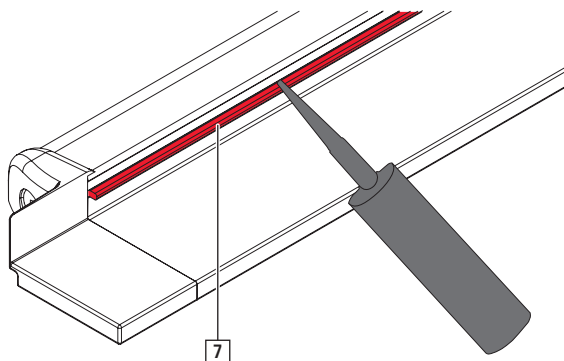


4. Detach the locating aid from the end cap on the floating mullion [6].
Insert the locating aid into the free groove of the end cap on the floating mullion. Position the end cap on the floating mullion on the weather profile strip and secure with one screw.





5. Apply sealing compound [7] along the entire length.



6. Position the weather profile strip at the bottom of the sash and secure with screws [8].
Drill the drainage holes [A].

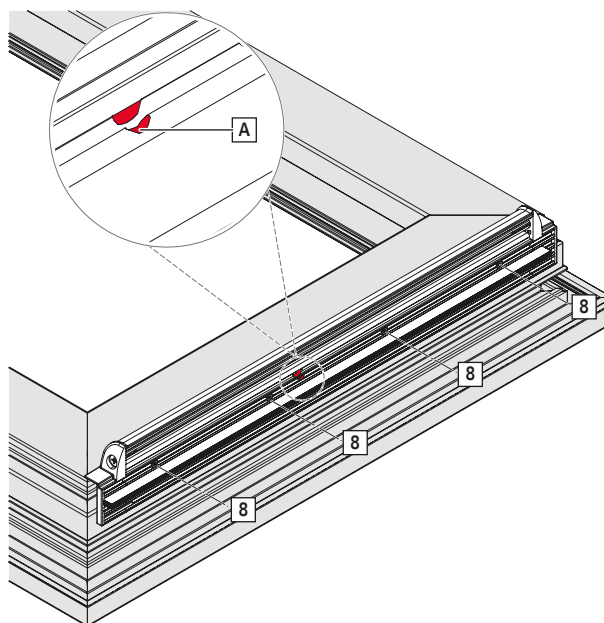


ATTENTION

Improper drainage holes may cause property damage.

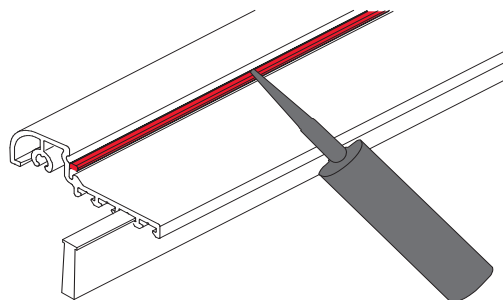
Incorrect or improper drainage holes may prevent water flowing away as intended.

- ▶ Do not drill into the reinforcement profile in the main chamber of the leaf.
- ▶ Do not drill into the gaskets in the weather profile strip.



Installing the second opening leaf

1. Repeat steps 1-3 from "Installing the first opening leaf" for the second opening leaf.
2. Apply sealing compound along the entire length.



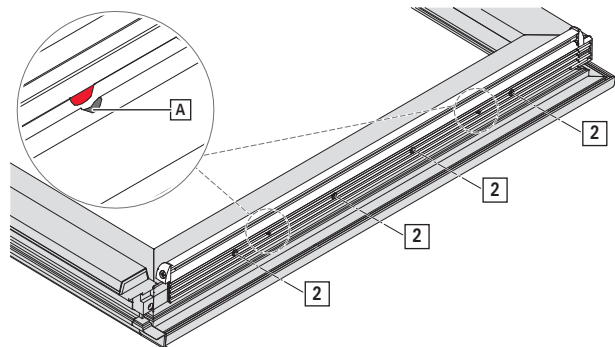
3. Position the weather profile strip at the bottom of the sash and secure with screws [2].
 Drill the drainage holes [A].



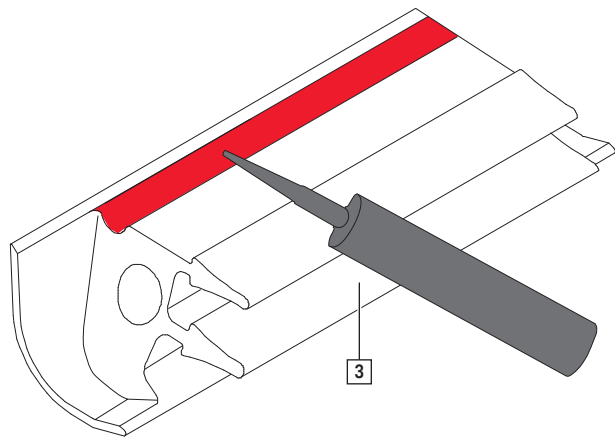
ATTENTION

Improper drainage holes may cause property damage.

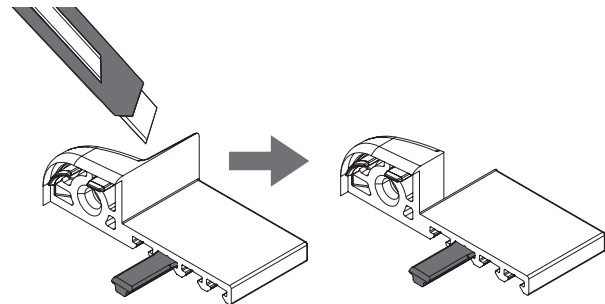
- Incorrect or improper drainage holes may prevent water flowing away as intended.
- ▶ Do not drill into the reinforcement profile in the main chamber of the leaf.
 - ▶ Do not drill into the gaskets in the weather profile strip.



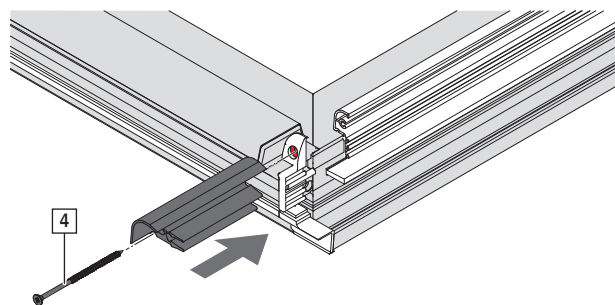
4. Apply sealing compound along the entire length of the floating-mullion gasket [3].



5. Detach the locating aid from the end cap on the floating mullion.
 Insert the locating aid into the free groove of the end cap on the floating mullion.
 Cut the end cap.



6. Position the end cap on the floating mullion on the weather profile strip.
 Join the floating-mullion gasket and end cap on the floating mullion with one screw [4].



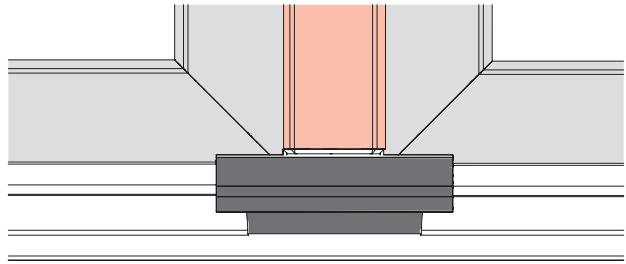


Fig. 5.4: Figure: installation situation in the area of floating-mullion gasket

5.9.3 Design

5.9.3.1 Single-leafed door

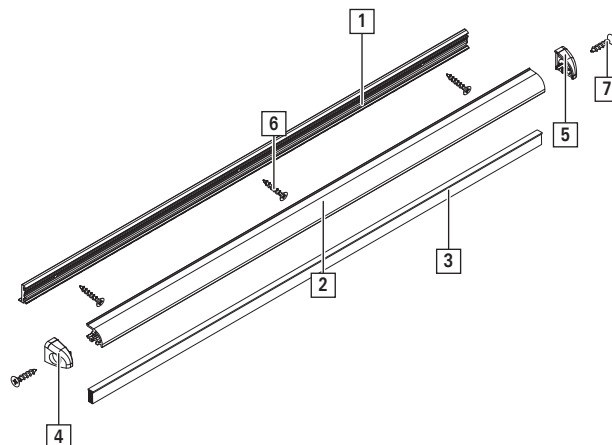
- [1] "Design" weather profile strip mounting profile (AD)
- [2] "Design" weather profile strip clip-in profile
- [3] Brush gasket



INFO

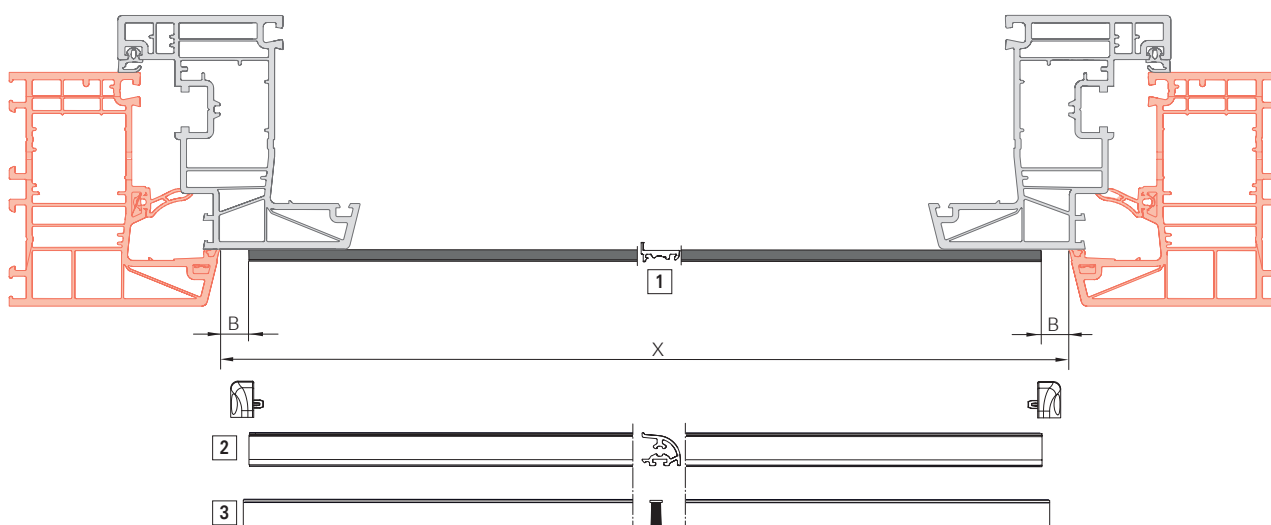
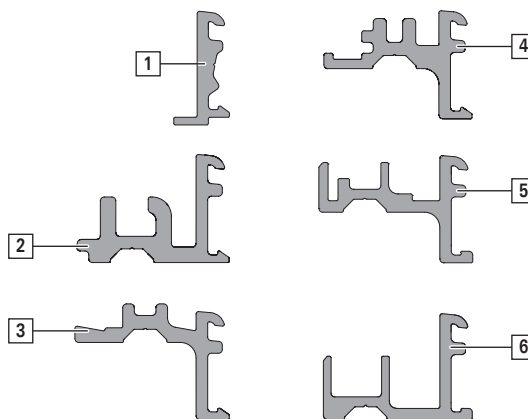
A drip seal can be used instead of or in addition to the brush gasket.

- [4] End cap on the hinge side
- [5] End cap on the locking side
- [6] Fixing screws
- [7] AD: countersunk screws
 MD: self-drilling screws (not sh.)



Mounting profile variants

- [1] AD
- [2] MD I
- [3] MD II
- [4] MD III
- [5] MD IV
- [6] MD V



- [B] Doors: 21.5 mm
 Balcony doors: 18.5 mm



1. Crop the weather profile strip mounting profile [1], clip-in profile [2] and brush gasket [3]:

Length of weather profile strip mounting profile:

$$[1] = X - (2 \times B)$$

Length of weather profile strip clip-in profile: [2] =

$$[1]$$

Length of brush gasket: [3] = [1] + (2 x 3)

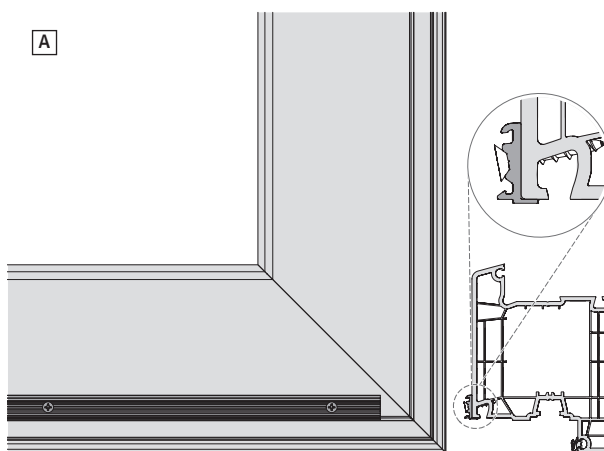


INFO

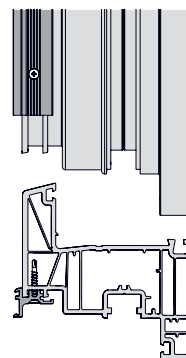
The differing dimensions for doors and balcony doors are due to the different hardware adjustment ranges.

2. Secure the AD mounting profile [A] to the front of the sash with countersunk screws. Optionally pre-drill with a drilling jig.

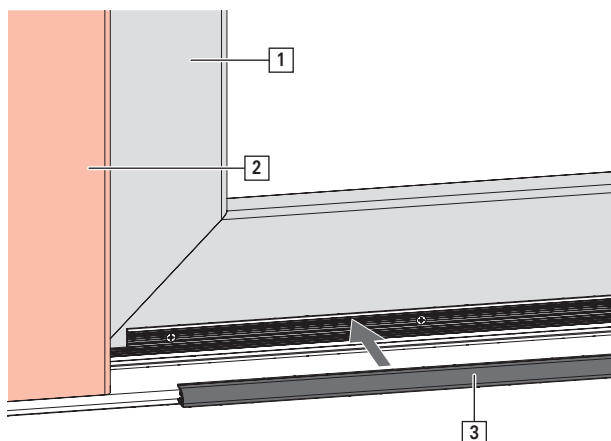
Alternatively: secure the MD mounting profile [B] to the bottom of the sash with self-drilling screws.



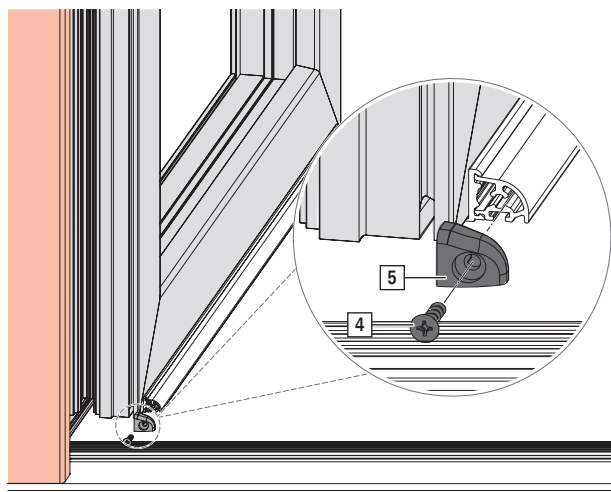
B



3. Install the sash [1] in the frame [2].
Clip the clip-in profile [3] into the sash from the outside.



4. Open the sash. Position the end cap on the hinge side [5] on the clip-in profile on the hinge side and secure with one screw [4].

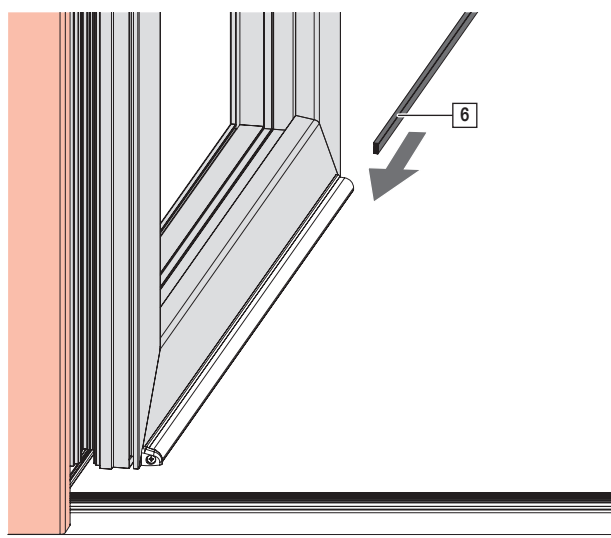


5. Push the brush gasket [6] into the clip-in profile.



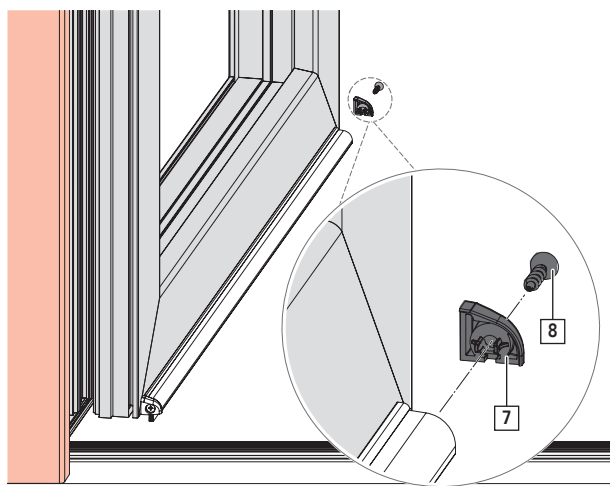
INFO

The brush gasket protrudes slightly.

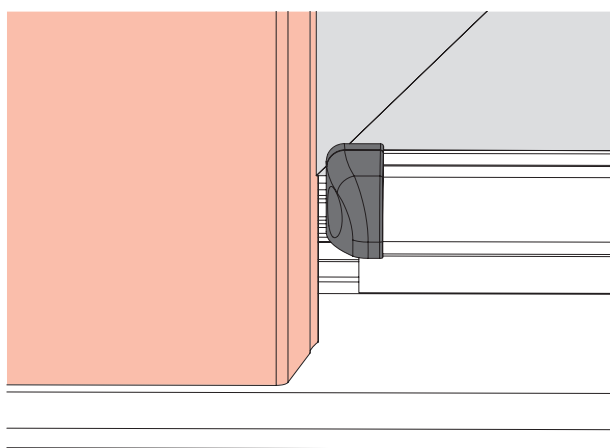




6. On the sash, position the end cap on the locking side [7] on the clip-in profile on the locking side and secure with a screw [8] to fix the brush gasket in position.



7. Installation situation of the end cap in the hinge area.



5.9.3.2 Double-leafed door

First opening leaf

- [1] "Design" weather profile strip mounting profile (MD)
- [2] "Design" weather profile strip clip-in profile
- [3] Brush gasket

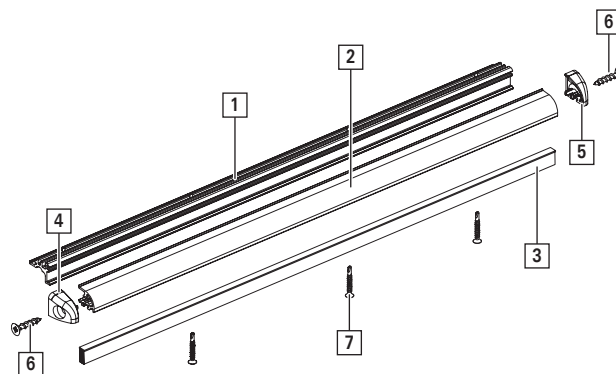


INFO

A drip seal can be used instead of or in addition to the brush gasket.

- [4] End cap on the hinge side
- [5] End cap on the floating mullion
- [6] Fixing screws
- [7] AD: countersunk screws (not sh.)

MD: self-drilling screws



Second opening leaf

- [1] "Design" weather profile strip mounting profile (MD)
- [2] "Design" weather profile strip clip-in profile
- [3] Brush gasket

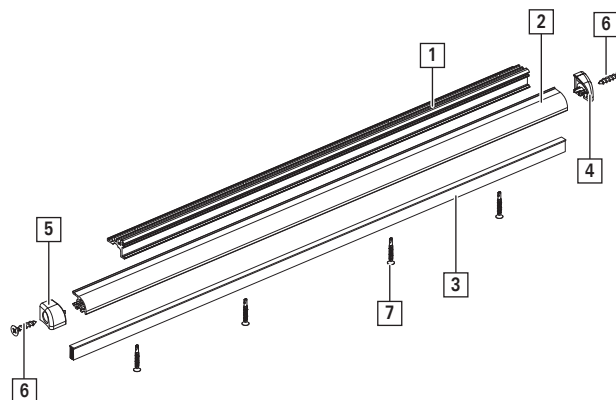


INFO

A drip seal can be used instead of or in addition to the brush gasket.

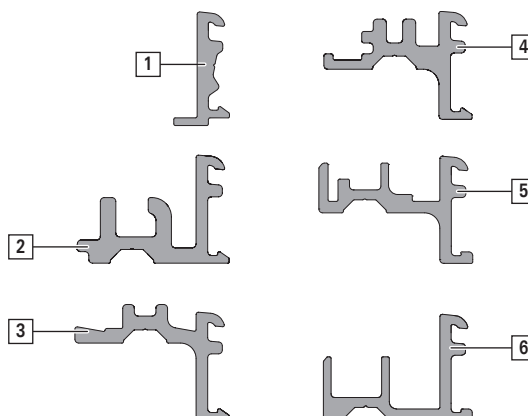
- [4] End cap on the locking side
- [5] End cap on the floating mullion
- [6] Fixing screws
- [7] AD: countersunk screws (not sh.)

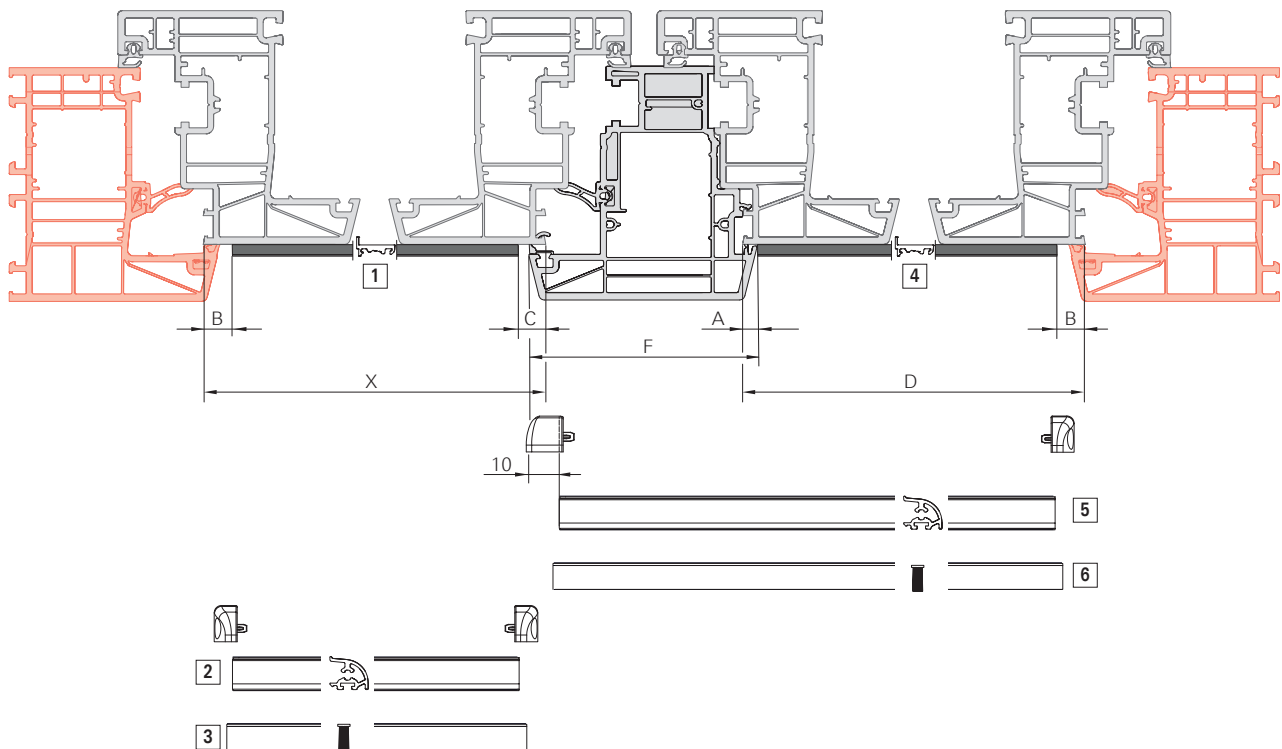
MD: self-drilling screws



Mounting profile variants

- [1] AD
- [2] MD I
- [3] MD II
- [4] MD III
- [5] MD IV
- [6] MD V





[A] Profile system-dependent dimension

[B] Doors: 21.5 mm

Balcony doors: 18.5 mm

[C] Doors: 23.5 mm

Balcony doors: 20.5 mm

Cropping the weather profile strip

1. First opening leaf:

Length of weather profile strip mounting profile: [1] = $X - B - C$

Length of weather profile strip clip-in profile: [2] = [1]

Length of brush gasket: [3] = $[1] + (2 \times 3)$

Second opening leaf:

Length of weather profile strip mounting profile: [4] = $D - A - B$

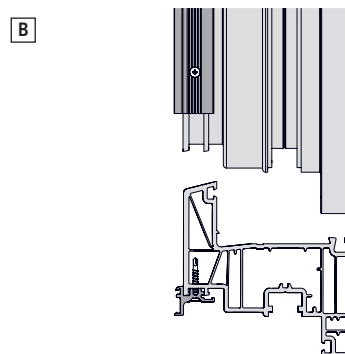
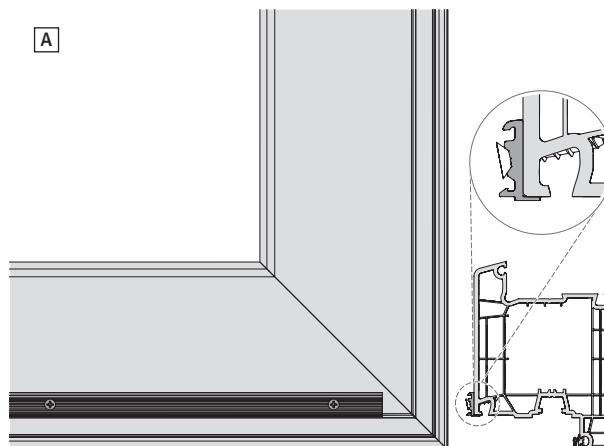
Length of weather profile strip clip-in profile: [5] = $[4] + F - 10$

Length of brush gasket: [6] = $[5] + 7 + 3$

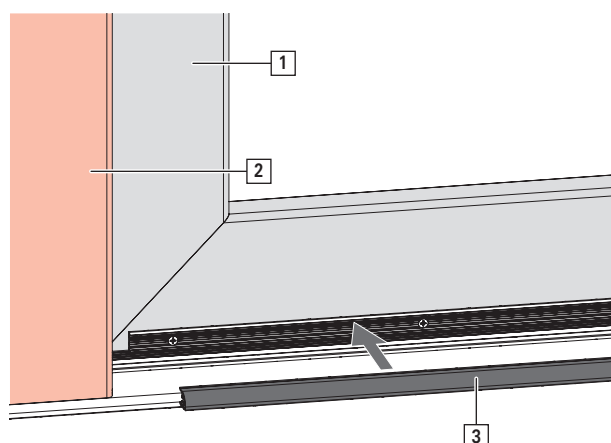
Installing the first opening leaf

1. Secure the AD mounting profile [A] to the front of the sash with countersunk screws. Optionally pre-drill with a drilling jig.

Alternatively: secure the MD mounting profile [B] to the bottom of the sash with self-drilling screws.

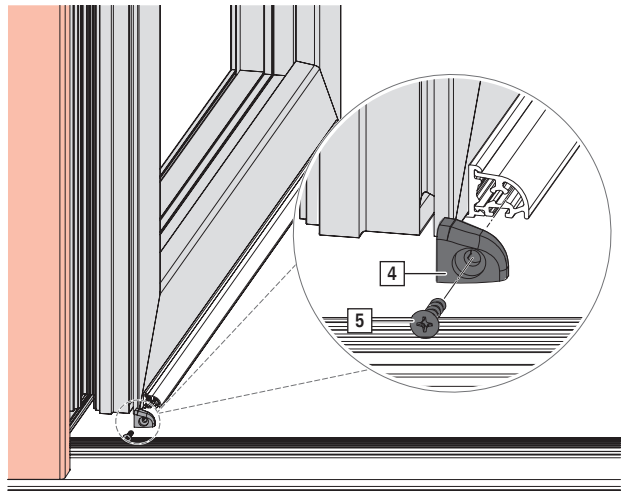


2. Install the sash [1] in the frame [2].
Clip the clip-in profile [3] into the sash from the outside.





3. Open the sash. Position the end cap on the hinge side [4] on the clip-in profile on the hinge side and secure with one screw [5].

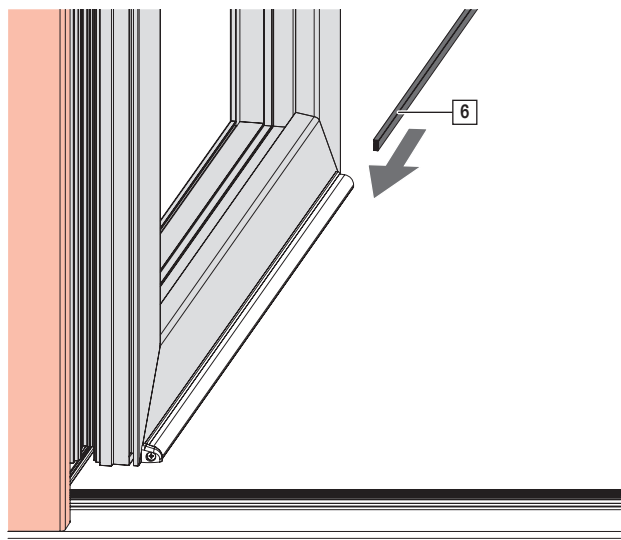


4. Push the brush gasket [6] into the clip-in profile.



INFO

The brush gasket protrudes slightly.

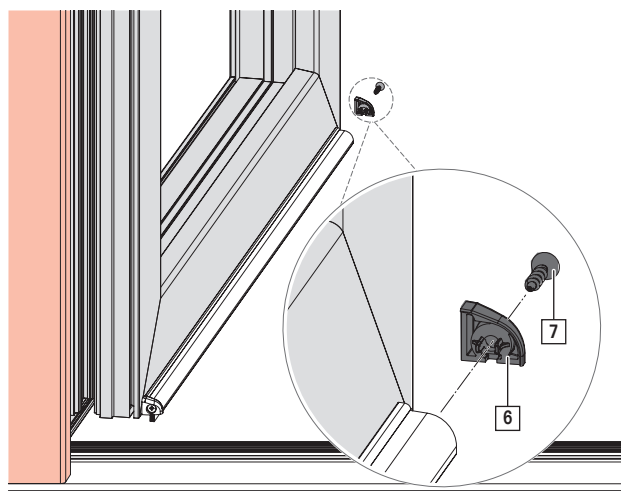


5. Position the floating-mullion end cap [7] on the locking side on the clip-in profile and secure with one screw [8] to fix the brush gasket in position.



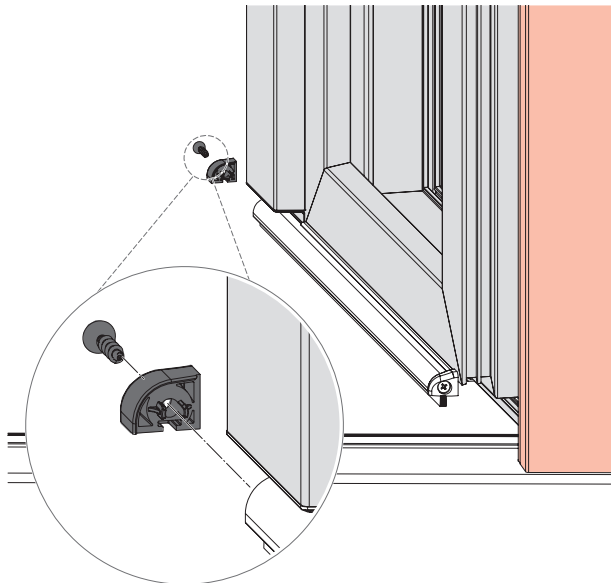
INFO

Ensure that you use the correct end cap.

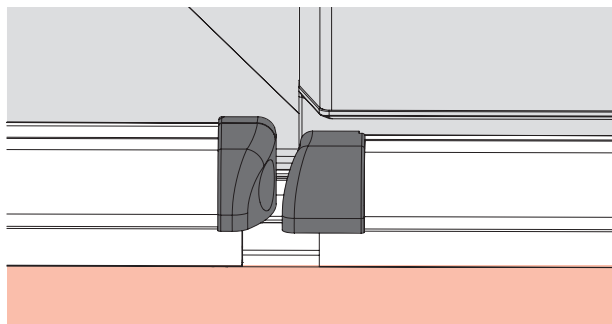


Installing the second opening leaf

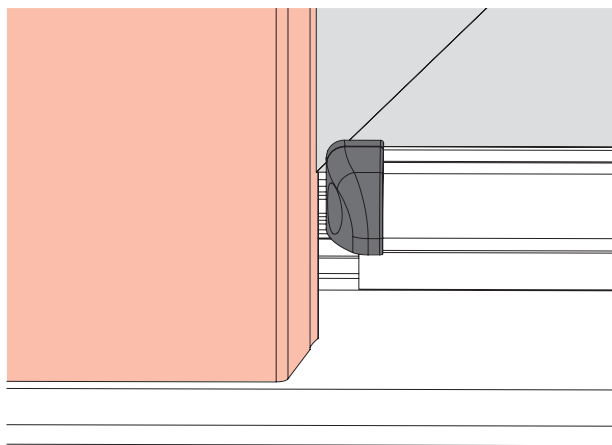
1. Repeat installation steps 1 and 5 for the second opening leaf.



2. Installation situation of the end cap in the floating-mullion area.



3. Installation situation of the end cap in the hinge area.





5.10 Accessories

| Material | Design | Variant | Cover bridge | Wind stop and aero stop | Tilt striker | NT Designo packer | Run-up block |
|----------|--------------|---------------|-----------------|-------------------------|--------------|-------------------|--------------|
| Timber | Balcony door | Single-leafed | Inward opening | – | – | ■ | ■ |
| | | | Outward opening | – | – | – | – |
| | | Double-leafed | Inward opening | ■ | – | ■ | ■ |
| | | | Outward opening | – | – | – | – |
| | Door | Single-leafed | Inward opening | – | – | – | – |
| | | | Outward opening | – | – | – | – |
| | | Double-leafed | Inward opening | ■ | – | – | ■ |
| | | | Outward opening | – | – | – | – |
| PVC | Balcony door | Single-leafed | Inward opening | – | – | ■ | ■ |
| | | | Outward opening | – | – | – | – |
| | | Double-leafed | Inward opening | ■ | – | ■ | ■ |
| | | | Outward opening | – | – | – | – |
| | Door | Single-leafed | Inward opening | – | ■ | – | – |
| | | | Outward opening | – | – | – | – |
| | | Double-leafed | Inward opening | ■ | ■ | – | ■ |
| | | | Outward opening | – | – | – | – |

5.10.1 Cover bridge



INFO

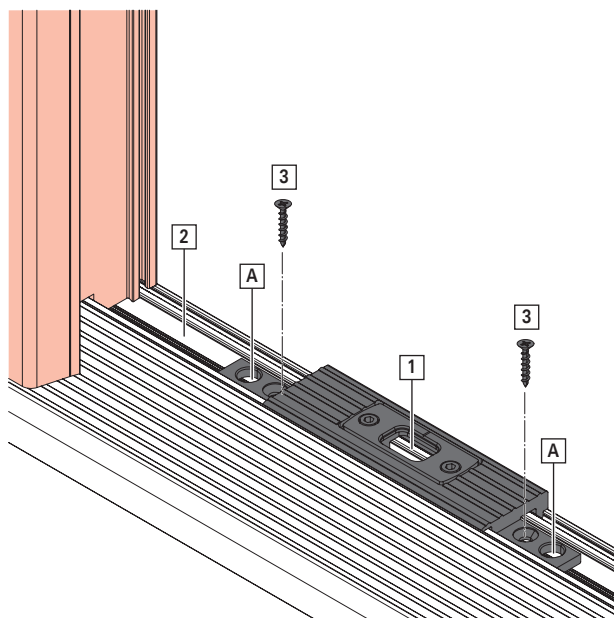
Using the cover bridge changes the $U_{t,BW}$ value and the isotherms in this area.

1. Position the cover bridge [1] in the threshold [2].
Secure with two screws [3].
[A]: secure on the construction site with two dowels and two screws.

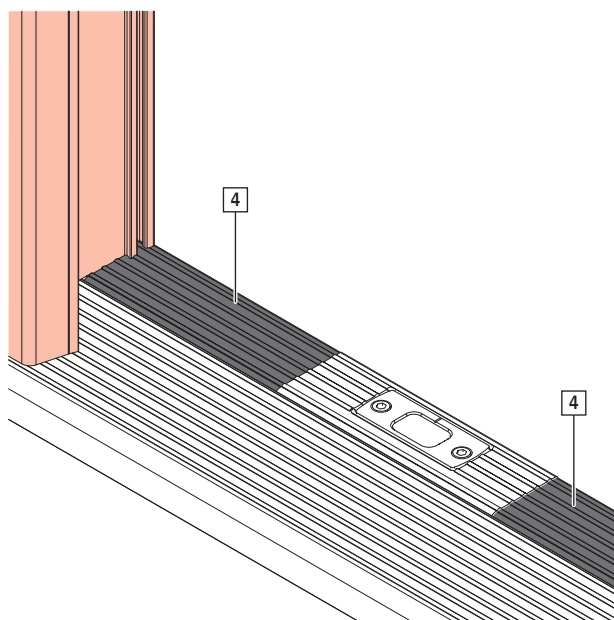


INFO

Screws must be securely screwed into the substructure / subfloor.



2. Apply sealing compound along the entire length of the threshold rebate. Mount and clip in the cover [4].

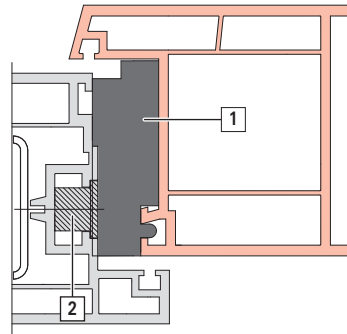




5.10.2 Wind stop and aero stop

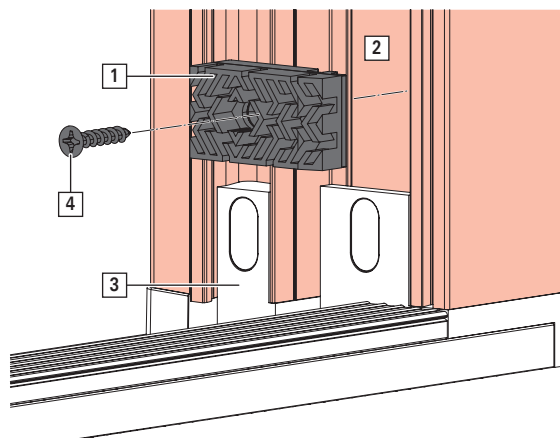
Installation situations

- [1] Wind stop
(for vertical sealing of the rebate area)
- [2] Aero stop
(as a counter bearing for the wind stop)



Installing the wind stop

1. Position the wind stop [1] in the frame rebate groove [2] connected to the retainer.



2. Secure with screw [3].

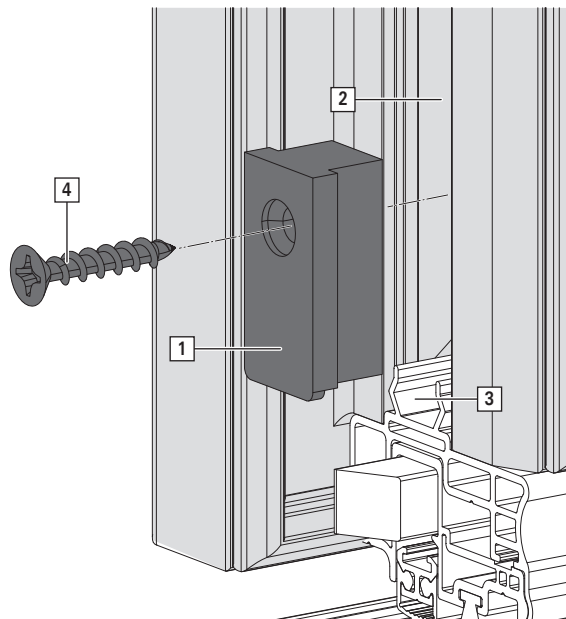


INFO

Use appropriate sealing compound to optimise the sealing of the rebate area.

Installing the aero stop

1. Place the aero stop [1] in the sash rebate groove [2].
If necessary, notch out the spring bar [3] of the adapter profile in the area of the aero stop.

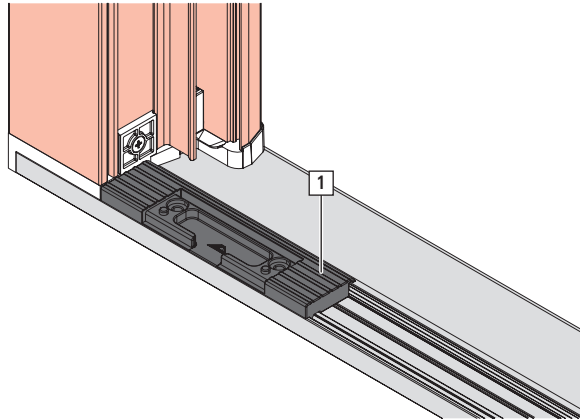


2. Secure in the centre at the height of the wind stop with one screw [4].

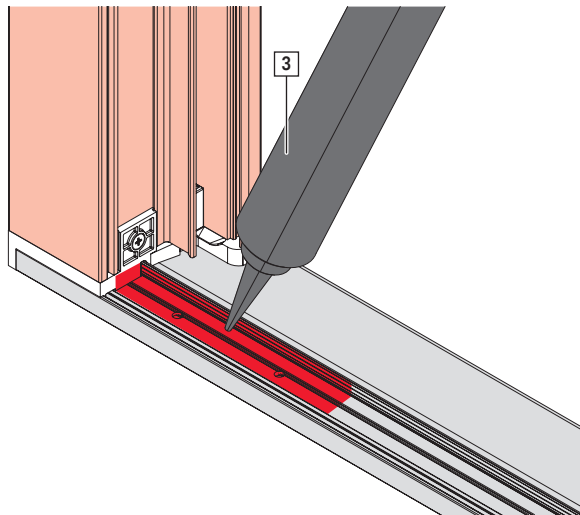


5.10.3 Eifel TB tilt striker

1. Fit the tilt striker [1].



2. Apply sealing compound [3] to the threshold across the entire area of the tilt striker seat.



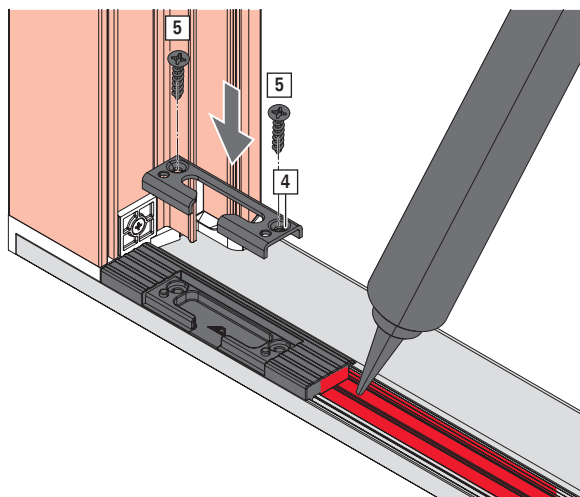
3. Insert the tilt striker.
Fit the top part of the tilt striker [4].
Secure the tilt striker with two screws [5].



INFO

After installing the balcony door, remove the screws again and screw down the tilt striker to the substructure with longer screws.

Apply sealing compound to the threshold across the entire area of the cover seat.

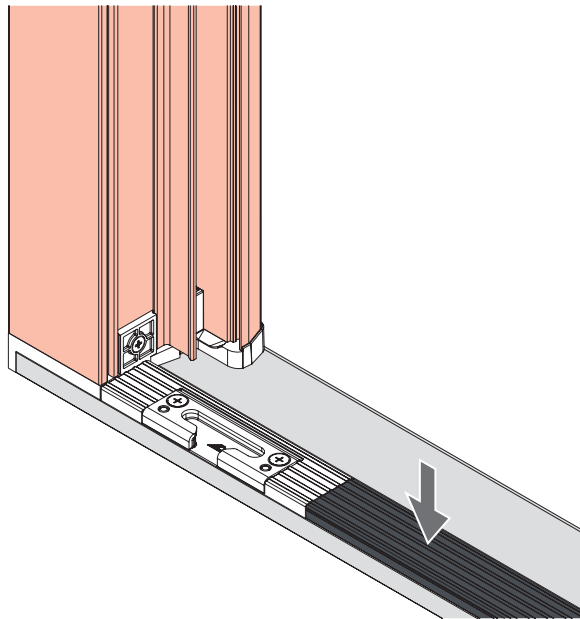


4. Clip on the cover [6].



INFO

The tilt striker and cover line up precisely level with each other.





5.10.4 NT Designo packer

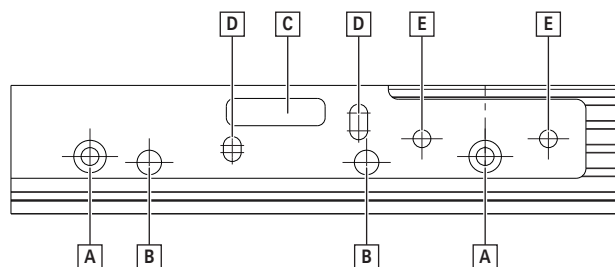


INFO

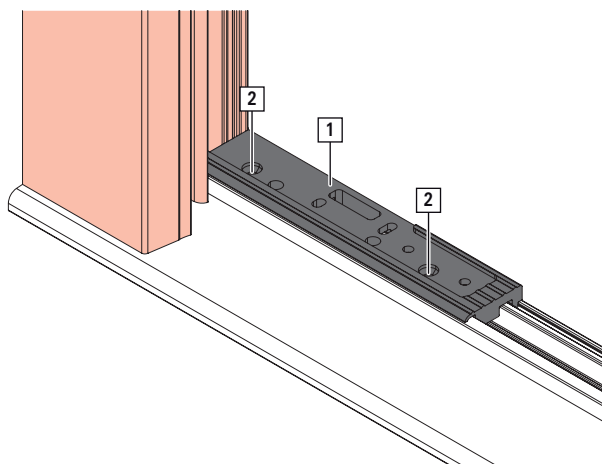
The figures show installation for a PVC profile.

Description of the hole pattern for the NT Designo packer

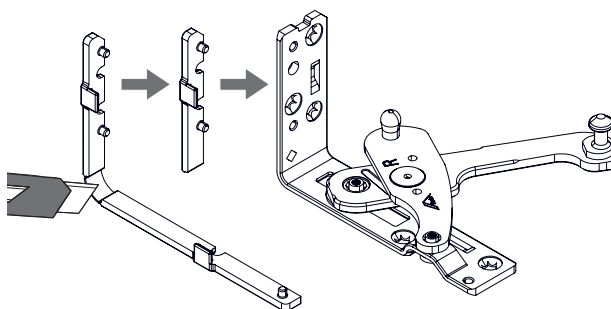
- [A] Packer screw fixing
- [B] Mount for bolt for the timber Designo baseplate
- [C] Mount for support for the PVC Designo baseplate
- [D] Screw fixing for the Designo pivot rest
- [E] Screw fixing for the turn restrictor frame component



1. Insert the packer [1] into the frame corner.
 Secure to the threshold with two screws [2].



2. Separate and remove the lower part of the PVC packer.
 Place the upper part of the PVC part on the pivot rest.



3. Open the pivot rest [3] and position on packer with bolt.



INFO

In the case of the pivot rest for the smooth rebate, it may be necessary to support the vertical side with packers.

Secure with four screws [4].



INFO

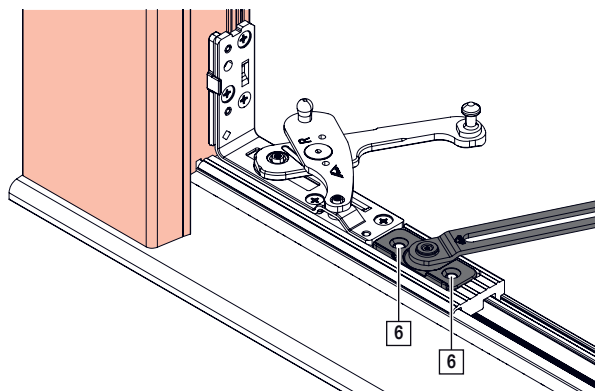
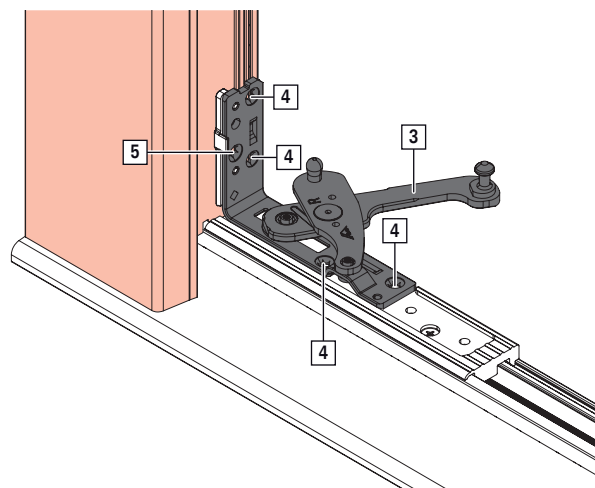
Screws must be securely screwed into the substructure / subfloor.



INFO


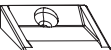
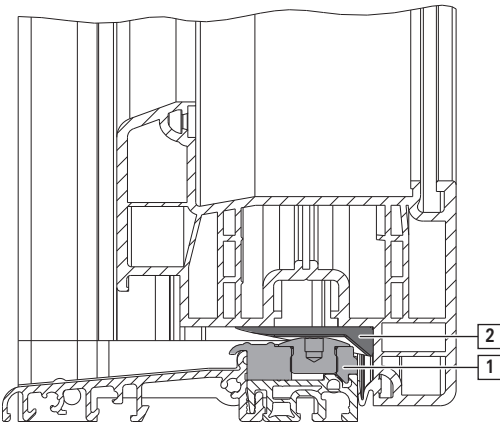

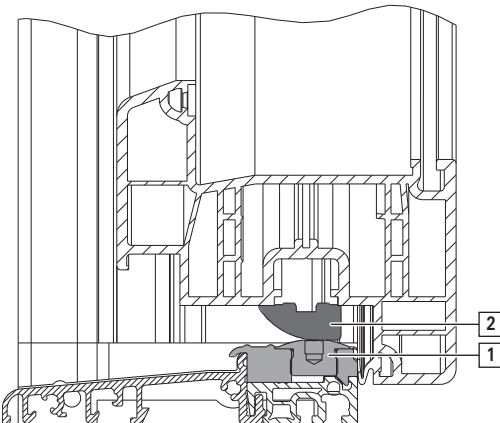
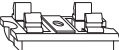
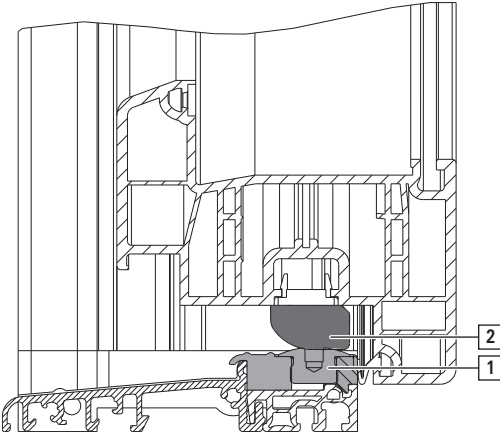

When using load transfer, secure the pivot rest with an additional screw [5].

4. Position the turn restrictor on the packer and secure with two screws [6].





5.10.5 Run-up block

| Threshold rebate clearance | Frame component | Sash component | Installation situation |
|----------------------------|--|--|--|
| 4 mm |  [1] Adjustable run-up plate |  [2] NT run-up block with overlap support |  |
| 10 mm | |  [2] NT run-up block |  |
| 12 mm | |  [2] NT run-up block for groove mounting |  |
| | |  NT run-up block for floating-mullion installation | |



INFO

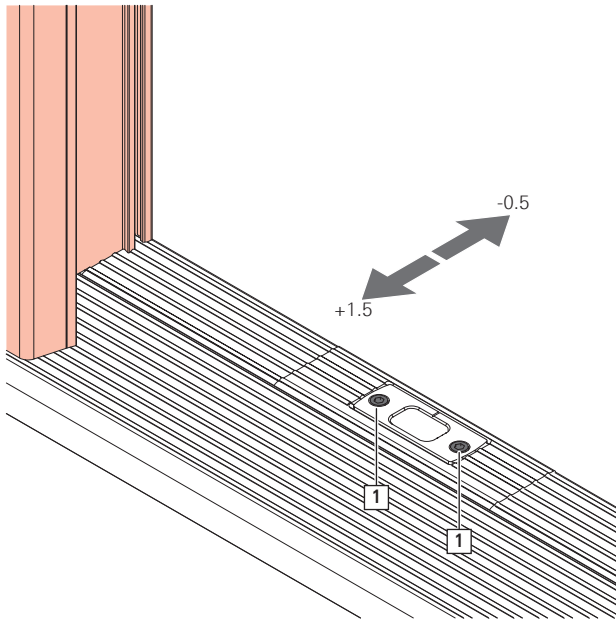
No run-up block is provided for thresholds with 7 mm rebate clearance.

1. Insert the adjustable run-up plate into the Eifel TB threshold. Break the cover to do so. If necessary, cut the sash gasket in the area of the run-up block.

6 Adjustment

6.1 Adjusting the cover bridge

Use a SW3 hex key on the adjusting screws [1] to adjust the gasket compression (-0.5 / +1.5 mm).





7 Maintenance



CAUTION

Performing maintenance work incorrectly can lead to injuries.

Performing maintenance incorrectly can lead to injuries.

- ▶ Ensure that there is sufficient space for installation before starting work.
- ▶ Ensure that the installation site is clean and tidy.
- ▶ Always have hardware adjustment and replacement work performed by a specialist company.
- ▶ Secure the sash against unintentionally opening or closing.
- ▶ Do not unhinge the sash for maintenance.



ATTENTION

Incorrect or improper testing may cause property damage.

Incorrect or improper testing of the hardware may cause the element to malfunction.

- ▶ Have the hardware checked by a specialist company when installed.
- ▶ If defects need to be remedied, have the element unhinged and remounted by a specialist company.



INFO

The manufacturer must draw the attention of builders and end consumers to these maintenance instructions.

Roto Frank Fenster- und Türtechnologie GmbH recommends the manufacturer conclude a maintenance agreement with their end users.

No legal claims can be derived from the following recommendations; their application is to be based on the specific individual case.

| | Responsibility | |
|--|--------------------------|-----------------|
| Maintenance interval | <input type="checkbox"/> | → from page 99 |
| Cleaning | | → from page 100 |
| Clean hardware | <input type="checkbox"/> | |
| Care | | → from page 100 |
| Lubricate movable parts | <input type="checkbox"/> | |
| Lubricate locking points | <input type="checkbox"/> | |
| Performance test | | |
| Check that hardware components are fitted securely | <input type="checkbox"/> | |
| Inspect hardware components for wear | <input type="checkbox"/> | |
| Check that movable parts work properly | <input type="checkbox"/> | |
| Check that locking points work properly | <input type="checkbox"/> | |
| Check ease of movement | ■ | |
| Repair | | → from page 101 |
| Retighten screws | ■ | |
| Replace damaged components | ■ | |

☐ = May be carried out by a specialist company or the end user

■ = **Must** be carried out by a specialist company

7.1 Maintenance intervals



ATTENTION

Failure to adhere to maintenance intervals may cause property damage.

The maintenance interval for all tasks relating to the hardware components is **annually** at the least. In hospitals, schools and hotels, the maintenance interval is **six-monthly**.

Regular maintenance is necessary in order to maintain the proper and smooth-running operation of the hardware and to prevent premature wear or even defects.

- ▶ Determine and adhere to the appropriate maintenance interval in accordance with the ambient conditions.

7.2 Cleaning



ATTENTION

Using incorrect cleaning agents and sealing compounds may cause property damage.

Cleaning agents and sealing compounds may damage the surfaces of components and gaskets.

- ▶ Do not use aggressive or flammable liquids, acidic cleaners or abrasive cleaners.
- ▶ Only use mild, pH-neutral cleaning agents that have been diluted.
- ▶ Apply a thin protective film to the components, for example using a cloth soaked in oil.
- ▶ Avoid aggressive vapours (e.g. produced by formic acid, acetic acid, ammonia, amine compounds, ammonia compounds, aldehyde, carboic acid, chlorine, tannic acid) around the element.
- ▶ Do not use any acetic acid-crosslinking or acid-crosslinking sealing compounds or those with the aforementioned constituents as both direct contact with the sealing compound and its fumes can corrode the surface of the components.

Cleaning the hardware

- ▶ Clean deposits and contaminants off the hardware using a soft cloth.
- ▶ Lubricate movable parts and locking points after cleaning. → 7.3 "Care" from page 100
- ▶ Apply a thin protective film to the hardware, for example using a cloth soaked in oil.

7.3 Care



ATTENTION

Using incorrect lubricants may cause property damage.

Substandard lubricants can prevent the hardware from working properly.

- ▶ Use high-quality lubricants.
- ▶ Only use resin-free and acid-free lubricants.



ATTENTION

Cleaning agents and lubricants may pollute the environment.

Leaking or excess cleaning agents and lubricants may pollute the environment.

- ▶ Remove any leaking or excess cleaning agents and lubricants.
- ▶ Dispose of cleaning agents and lubricants separately and properly.
- ▶ Observe the applicable directives and national laws.

Ease of movement can be improved by lubricating or adjusting the hardware. All functional hardware components must be lubricated on a regular basis.

Recommended lubricants

- Roto NX / NT grease

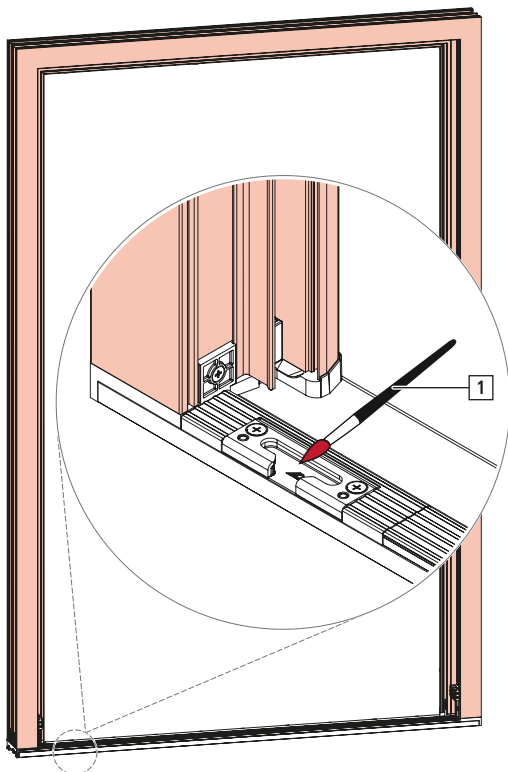


INFO

The figure displays the positioning of potential lubrication points. The figure does not necessarily match the installed hardware. The quantity of lubrication points varies depending on the size and design of the element.



7.3.1 Lubrication points



[1] Grease

7.4 Performance test



WARNING

Improper repair work may pose a risk of death!

Improper maintenance may prevent the element from working properly and make it less safe to use.

- ▶ Always have repairs performed by a specialist company.

Check for proper operation:

- ▶ Inspect hardware components for damage, deformation and a firm fit.
- ▶ Check that doors or balcony doors run smoothly by opening and closing them.
- ▶ Check the door or balcony door gaskets for elasticity and fit.
- ▶ Check closed doors or balcony doors to ensure that they are leakproof.
- ▶ Locking and unlocking torque max. 10 Nm. The test can be performed using a torque wrench.

Have malfunctions remedied by a specialist company.

7.5 Repair



WARNING

Improper repair work may pose a risk of death!

Improper maintenance may prevent the element from working properly and make it less safe to use.

- ▶ Always have repairs performed by a specialist company.



ATTENTION

Improper screw fixings may cause property damage.

Loose or faulty screws can prevent the hardware from working properly.

- ▶ Check that the individual screws are secure and seated correctly.
- ▶ Tighten or replace loose or faulty screws.
- ▶ Use only the suggested screws.

Repair work includes replacing and repairing components and is only necessary if components have become damaged after wear or as a result of external circumstances. The hardware must be secured reliably in order to ensure that the element works properly and is safe to use.

The following tasks must only be performed by a specialist company:

- All adjustment work on the hardware
- Replacing hardware or hardware components
- Installing and removing windows, doors or balcony doors

The specialist company must observe the following:

- Perform the necessary repair work properly, according to generally recognised engineering practice and in accordance with the applicable regulations.
- Do not perform makeshift repairs on worn or damaged components.
- Only use original or approved spare parts for repairs.



8 Dismantling



WARNING

Improper dismantling may pose a risk of death!

The sash may fall during dismantling.

- ▶ Secure the sash to prevent it from falling, e.g. by using two people.
- ▶ Always have dismantling work performed by a specialist company.



CAUTION

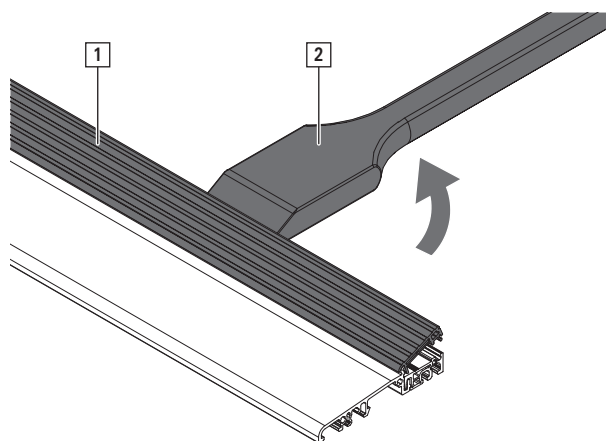
Physical strain may cause injury and damage to health.

Carrying and lifting heavy loads for extended periods leads to physical injury in the long term.

- ▶ When carrying or lifting loads, maintain an ergonomically correct posture. The maximum permissible load is 25 kg for men and 10 kg for women.

8.1 Removing the cover

Remove the cover [1] using a glazing tool [2].



9 Transport

9.1 Transporting elements and hardware



DANGER

Improper transport poses a risk of death!

Improper procedures for transporting, loading or unloading elements may cause serious injuries and glass breakage as a result of the elements swinging open, falling or becoming overloaded.

- ▶ Note the applicable accident prevention regulations.
- ▶ Note force application points and reaction forces.
- ▶ Prevent the sash from opening uncontrollably.
- ▶ Avoid jerky movements.
- ▶ Use suitable transportation means and protective devices.
- ▶ Watch out for protruding components.
- ▶ Transport heavy loads with two people and use suitable transportation means (such as an industrial truck).



CAUTION

Trapped limbs may result in injuries.

The transported goods can skid, open, close or fall during transportation tasks. This can result in limbs being trapped and seriously injured.

- ▶ Never reach near the scissor stays.
- ▶ Close the sash after installation and secure it in place for transport.
- ▶ Wear safety gloves and protective footwear.



CAUTION

Physical strain may cause injury and damage to health.

Carrying and lifting heavy loads for extended periods leads to physical injury in the long term.

- ▶ When carrying or lifting loads, maintain an ergonomically correct posture. The maximum permissible load is 25 kg for men and 10 kg for women.

Hardware is supplied to the specialist company as complete sets. The components are packaged accordingly for each shipment. The instructions for safely transporting the hardware are described below.

Observe the following basic instructions when transporting hardware:

- ▶ Transport larger scopes of delivery using appropriate transportation means (such as industrial trucks).
- ▶ Note the transport weight in order to select appropriate transportation means.
- ▶ Immediately check the delivery for completeness and transport damage on receipt.



INFO

Submit a complaint about any defects as soon as they are identified. Claims for damages may only be made within the reclamation period.

Use the following transportation means for support when transporting, loading and unloading larger scopes of delivery:

- Industrial trucks, e.g. forklifts, telescopic handlers, pallet trucks



- Lifting equipment, e.g. transport nets, carry straps, round slings
- Protective devices, e.g. edge protection, spacer blocks



INFO

Industrial trucks and lifting devices may only be operated by qualified persons.



INFO

Lifting equipment and protective devices may only be used if they are in full working order.

9.2 Storing the hardware

Store all hardware components as follows until they are installed:

- Dry and protected
- On a level surface
- Protected against sunlight

10 Disposal



ATTENTION

Incorrect disposal may pollute the environment.

Pieces of hardware are raw materials.

- ▶ Dispose of hardware for environmentally friendly material reutilisation as mixed scrap.

10.1 Disposing of packaging

The hardware is supplied as complete sets together with the packaging. Once unpacked, the installation company or builder is responsible for disposing of the packaging properly. The packaging materials are produced in accordance with current environmental protection standards. The materials can be recycled separately.

Follow the basic instructions below for the proper disposal of packaging:

- ▶ Do not dispose of packaging in household waste.
- ▶ Hand over packaging at local waste collection points or recycling centres.
- ▶ Observe the national regulations on the disposal of recyclable materials.
- ▶ Contact the local authorities if necessary.

10.2 Disposing of hardware

Once the hardware is finished with, the end user or builder is responsible for properly disposing of the windows, doors or balcony doors and the hardware, including any accessories. Hardware is produced in accordance with current environmental protection standards. The materials can be recycled separately.

Follow the basic instructions below for the proper disposal of hardware:

- ▶ Observe the information and specifications for disposal contained in the other applicable documents.
- ▶ Separate hardware components from windows, doors or balcony doors.
- ▶ Do not dispose of hardware in household waste.
- ▶ Hand over hardware at local waste collection points or recycling centres.
- ▶ Observe the national regulations on the disposal of recyclable materials.
- ▶ Contact the local authorities if necessary.



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