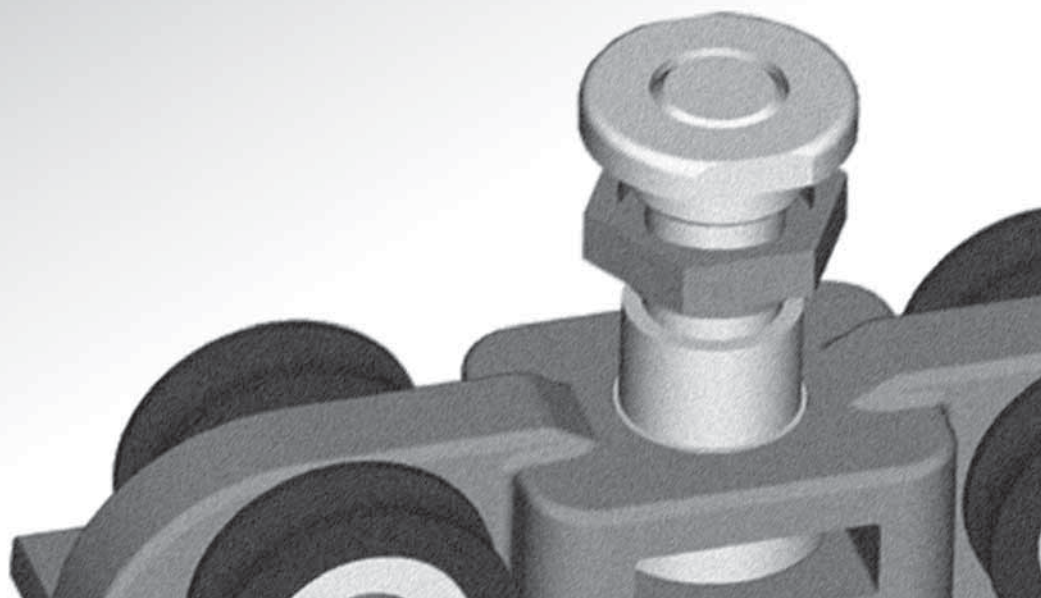


WE OPEN SPACE



**Roto Patio 6080**

## **The Fold&Slide hardware system**

Installation instructions  
for all Patio 6080 systems



## **Imprint**

Copyright: November 2007 (Translation: paul@prunty.de)  
Roto Frank AG  
Stuttgarter Strasse 145-149  
D-70771 Leinfelden-Echterdingen, Germany  
Telephone: +49 711 7598-0  
Telefax: +49 711 7598-253  
info@roto-frank.com  
www.roto-frank.com

## **Liability exclusion**

All specifications in this brochure were compiled carefully and reviewed. Due to technical progress, whether by means of legislation modification or by lapse of time, the results automatically lead to changes. We therefore hope you shall understand that we cannot be held liable for the correctness and completeness of the contents. All rights, in particular the right to copy and circulate, reserved.

## **Folded drawing sheet enclosed**

A folded drawing sheet with vertical and horizontal profile cross-sections for timber and PVC versions is in the pocket on the inside back-cover. If this folded drawing sheet is missing, you can request this from us. Installation instructions and the folded drawing sheet are also available in Adobe Reader .pdf file format. Further documentation (brochures, price lists, profile-related data sheets, etc.) for Patio 6080 is available upon request.



<b>Roto Patio 6080</b>	<b>4</b>
Product liability guidelines	4
General advice	6
General design description	7
Combination possibilities	7
<b>Hardware overview</b>	<b>8</b>
Roto Patio 6080	8
Schematic overview	8
Hardware overview (based on diagram 431)	9
Parts list	10
List of profile systems	12
For your notes	13
<b>Installation</b>	<b>14</b>
Drilling jig	14
Explanation	14
Positioning	15
Predrilling for the sash and frame hinges	16
Frame hinge 16/50 resp. 21/50 and sash hinge 20/40 or 30/40	16
Frame hinge 16/50 resp. 21/50 and sash hinge 20/50 or 30/50	17
Frame hinge 16/54 and sash hinge 20/54 or 30/54	18
Predrilling for the support brackets	19
Installation	20
Frame hinge-bearing and hinge	20
Sash hinge-bearing and hinge	21
Support brackets	22
Track roll-supports – Roller track/guide track	23
Support-bracket with guide roller/Hinging the sashes	25
Adjustment	26
Unhinging the sashes	27
Enhanced threshold – Frame	28
Strikers on the enhanced threshold	29
Gasket strip on the enhanced threshold	30
Enhanced threshold version with Roto NT Tilt&Turn sash	31
Sash retaining devices	32
Sash stoppers	33
<b>Advice</b>	<b>34</b>
Spacer blocking	34
Guide track & roller track length	34
Central locking system components	35
<b>Operation</b>	<b>36</b>
Operation – Opening Fold&Slide doors	36
Abbreviations used in this documentation	37



# Product liability guidelines

## Sliding hardware for balcony door and window sashes.

According to the defined manufacturer's liability described in paragraph 4 of the "product liability law", the following information regarding sliding hardware for balcony doors and windows should be observed. Non-compliance exempts the manufacturer of his liability.

### 1. Product information and stipulated application

Sliding hardware as covered by this definition is hardware for sliding sashes for balcony-doors and windows, which are mainly used as glazed exterior-structures. In combination with the sliding sashes, fixed-glazing-units and/or further sashes i.e. Turn-Only sashes for cleaning purposes can be situated in a window element.

The sashes that are equipped with this sliding hardware are capable of:

- Sliding,
- Lifting and sliding,
- Tilting and sliding,
- Lifting, tilting and sliding,
- Parallel-retracting and sliding,
- Tilting, parallel-retracting and sliding.

Sliding hardware is used on vertically installed windows and balcony-door sashes made of timber, PVC, aluminium or steel, and their corresponding material combinations. Sliding hardware as covered by this definition is equipped with a locking mechanism that locks the sliding sash to the frame, as well as rollers located on the bottom horizontal plane of the sliding sash. In addition, scissors stay-arms for tilting and mechanisms to lift and/or parallel-retract the sashes can be specified. By means of the hardware, the sashes are locked, brought into the ventilation position, and pushed to the side.

Differing applications do not correspond to its stipulated use. Burglar-resistant window and balcony doors, window and balcony doors for damp rooms and those for use in

environments with aggressive, corrosive air content, require hardware adapted for the respective application and individually agreed upon performance features.

Opened balcony-door and window sashes achieve only a sheltering function and do not meet any demands on joint impermeability, water tightness, sound reduction, heat-insulation and burglary-resistance.

In the case of wind and draught, the window and balcony-door sashes must be closed and locked. Wind and draught as covered by this definition is present, if a window or balcony door sash while in one of its opening positions, can open or close on its own, in an uncontrolled manner by means of either air pressure or air suction. A static opening position of windows and balcony door sashes can only be achieved with additional hardware.

The resistance against wind loads in a closed and locked state is dependent on the respective designs of windows & balcony doors. Should wind loading in accordance with DIN EN 12210 occur (in particular the p3 pressure test), suitable hardware compilations are to be matched in relation to the respective window design and frame material, and each case individually agreed upon.

Generally speaking, the sliding hardware can fulfil the demands for barrier-free dwellings in accordance with DIN 18025. However corresponding hardware compilations and installations for windows and balcony doors are necessary, which must be coordinated and each case individually agreed upon.

### 2. Misuse

Misuse (therefore not the specified product utilisation) of sliding hardware for windows and balcony doors occurs in particular:

- If obstacles are inserted in the opening vicinity, thus preventing its proper specified use.
- If additional loads are exerted on window or balcony-door sashes,
- If while sliding over and/or locking, someone reaches between the sash and frame, and/or a person or body-part is in this vicinity while sliding.

### 3. Liability

The respective entire hardware set may only consist of hardware components from Roto Frank AG. In the case of inappropriately assembled hardware, and/or in case of non original accessory components and/or non factory-approved accessory components, no liability is accepted.

### 4. Product performance

#### 4.1 Maximum sash weights and sash rebate dimensions

The following listed maximum sash weights for the individual hardware versions may not be exceeded. The building component with the least permissible load-carrying capacity determines the max. sash weight. Application diagrams and component classification are to be adhered to. (Refer to the following pages)

#### 4.2 Combination of hardware

The manufacturers' regulations concerning the combination of hardware are obligatory. (For example: the exterior-handle arrangement, the hardware layout for burglary-resistant windows and balcony-door sashes).



## 5. Product maintenance

Security relevant hardware components are to be examined at least once a year for stability and wear and tear. Depending on the requirements, the locking screws are to be tightened and/or parts to be replaced. In addition to this, the following maintenance work is to be carried out at least once annually:

- All movable parts and all locking points of the sliding hardware are to be greased and tested.
- Only cleaning and maintenance agents that do not damage the corrosion protection of the hardware components are to be used.

The hardware adjustments, as well as the replacement of parts, are to be carried out by a specialist company.

When coating - for example when painting or varnishing - the windows and balcony doors hardware is to be excluded from this process and is also to be protected against any impurities (paint/varnish splashes).

### 5.1 Preservation of the surface finish

Electrolytically applied zinc coatings are not attacked in a normal room climate, when no condensation can form on the hardware or occasionally formed condensation can dry rapidly. In order to permanently preserve the hardware's surface quality and to avoid deterioration by corrosion, it is imperative to observe the following points:

- The hardware and/or the rebate areas are to be ventilated sufficiently in particular during the building phase so that they are not exposed neither to direct wetness nor to condensation.
- The hardware is to be kept free from deposits and soiling from building materials (building dust, plaster, cement etc.).
- Aggressive vapours in the rebate area (for example: by means of formic acid or

acetic acid, ammonia, amine or ammonia compounds, aldehydes, phenols, tannic acid etc.) in connection with small formations of condensation can lead to fast corrosion of the hardware. In the case of such aggressive vapours occurring, a general adequate ventilation of the rebate areas of windows and balcony doors is to be ensured. This is particularly valid for windows and balcony doors made of oak or other types of timber with a high concentration of (tannic-) acid.

- Furthermore no acetic-acid or cross-linked acidic sealing compounds or those with the above mentioned contents may be used, since both the direct contact with the sealing compound and its vaporisation can attack the surface.
- The hardware may only be cleaned with mild, pH-neutral cleaning agent in diluted form. Under no circumstances may aggressive, acidiferous cleaners or abrasive cleaning agents whose contents are listed in the above paragraph be used.

## 6. Obligation to issue information and instructions

In order to fulfil the information and instruction obligations, as well as the maintenance operations in accordance with the 'product liability law', the following is available:

- for planning engineers "planning documents"
- for specialised dealers "catalogues"
- for fabricators "installation instructions" and "factory drawings"
- for builders and end users: "service & maintenance instructions" as well as "operating manuals".

In order to ensure proper functioning of sliding hardware on balcony-door and window sashes:

- Planning engineers are obliged to request and comply with the manufacturers or specialised dealers' product information.
- The specialised dealers are obliged to observe and request product information from the manufacturer and to pass this on to the fabricators, in particular installation instructions, factory drawings, service & maintenance instructions as well as operating manuals.
- Fabricators are obliged to observe the product information and in particular to request service & maintenance instructions as well as operating manuals from the manufacturer or specialised dealer, and to pass these on to the builders and end users.

## 7. Application of related hardware

Related hardware with rollers and locking mechanisms – for example hardware for Slide & Fold doors – are to be treated accordingly with regard to product information and intended use, misuse, product features, product maintenance and the obligation to issue information & instruction



## General advice

### Timber and PVC balcony Fold&Slide with 12mm clearance

#### Functional safety of the hardware

■ To ensure continual functional safety of the hardware, the following should be observed:

1. Application ranges and/or sash rebate width & height, max. sash weight and total element width and profile manufacturers' regulations.
2. Professional installation of the hardware components in accordance with these installation instructions.
3. Professional installation of the elements throughout the window installation process.
4. Observation of the maintenance and operation instructions.
5. The entire hardware may consist of only original ROTO system components. The use of non-Roto components excludes any liability on our part.
6. Roller-tracks and guide-tracks are to be cleaned regularly from dust and dirt, so that the rollers' smooth movement is maintained.
7. All Patio 6080 hardware components are made of rustproof materials.

#### Product liability regulations

■ The window handle is to be fixed with M5 x .. DIN 965 countersunk screws.

When fixing the central locking hardware components, corrosion protected hardware-adapted fenestration screws are to be used. The window-fabricator must ensure adequate fixing of the hardware components, consulting the screw manufacturer if necessary. The glazing spacer-block regulations for the glazing method are to be adhered to.

#### Product liability – Liability exclusion

■ The hardware manufacturer is not liable for malfunctions or damage to the hardware and to the windows or balcony-doors equipped with the hardware, if any such malfunctions or damage have been caused by inadequate tendering procedures or failure to adhere to the installation instructions and application drawings.



# General design description

## Combination possibilities



### Roto Patio 6080 (Fold&Slide door)

One-handed operation central locking system concealed in the sash-rebate. The hardware can be used on timber, timber/aluminium and PVC profiles. Doors optionally hung top or bottom, inward or outward opening, with standard roller track or enhanced-threshold for barrier-free living in accordance with DIN 18024/5. Application especially for thoroughfares to the conservatory or to a roofed terrace, etc. The roller tracks and guide tracks are silver anodised and the elements are colour-coordinated with cover strips. Hinges and support-brackets are powder-coated. The access sash can be Tilt&Turn or Turn-Only. All components are retro-adjustable.

### Application range:

Sash rebate width: min. 450 mm – max. 1200 mm  
(access sash on the frame side)

Sash rebate width: min. 450 mm – max. 900 mm  
(folding sash)

Sash rebate height: min. 600 mm – max. 2400 mm

Sash weight: max. 80 kg

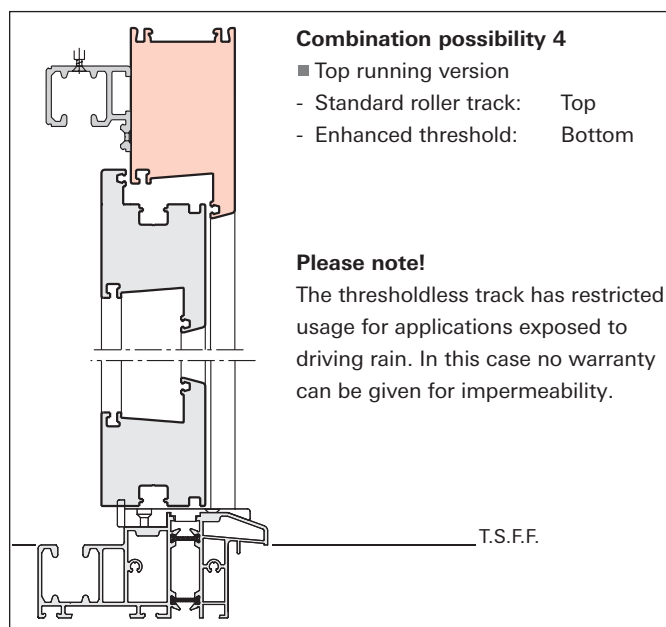
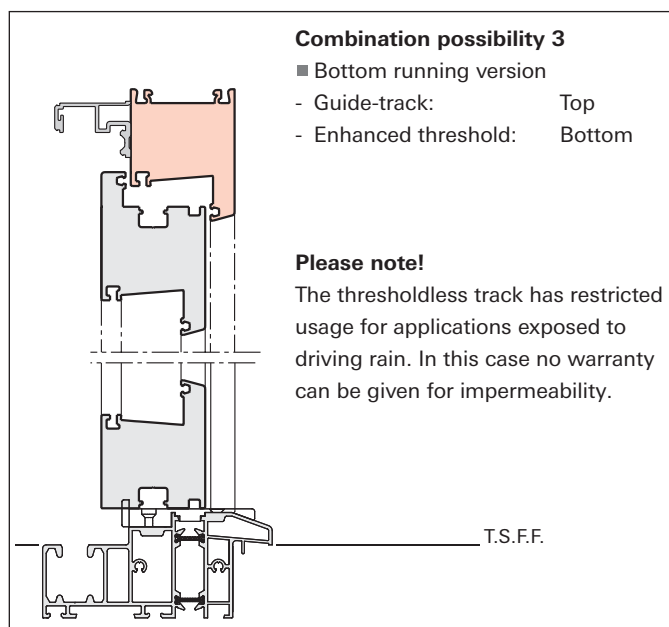
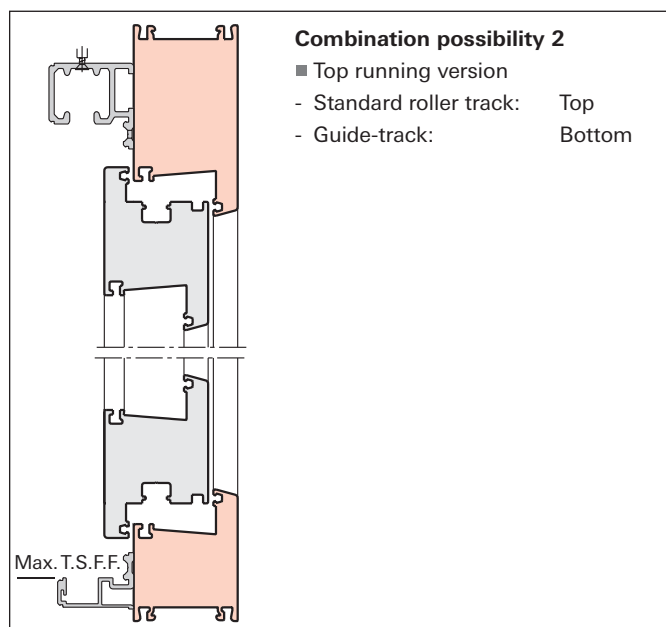
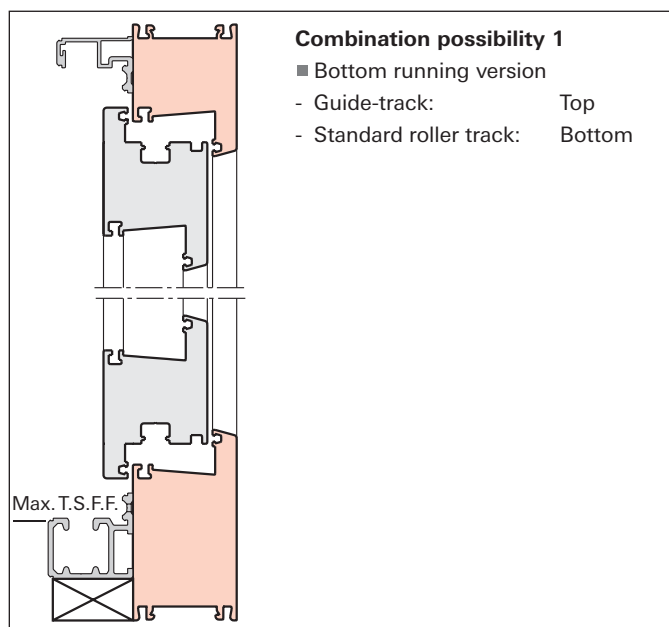
Roller track length: max. 6 m

### Standard colours:

White-R07.2, Medium Bronze-R05.3, Silver-R01.1

### Additional possibilities:

Roto security components, MVS.





## Roto Patio 6080

### Schematic overview

The schematic overview is depicted with right hand versions (viewed from the inside). A mirror image of each diagram can also be implemented. Refer to the folded drawing sheet for an explanation of the alphabetic characters in the drawings.

#### For timber and PVC designs

DIAGRAM 330

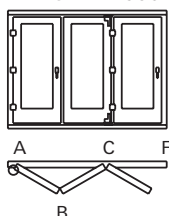


DIAGRAM 321

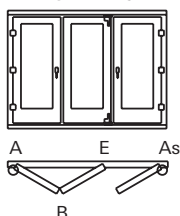


DIAGRAM 431

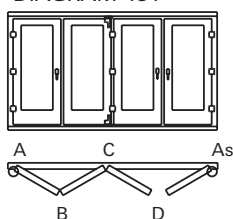


DIAGRAM 532

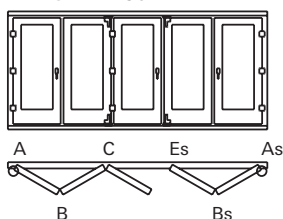


DIAGRAM 633

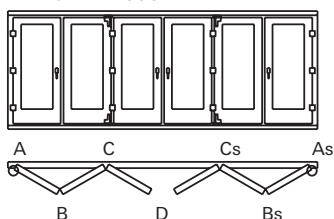


DIAGRAM 541

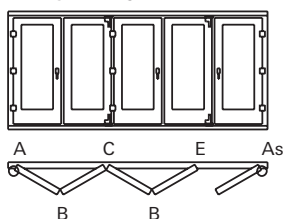


DIAGRAM 651

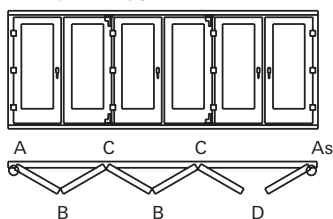
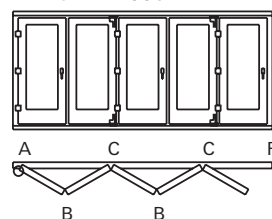


DIAGRAM 550



#### Example – Explanation of the numeric sequence

**DIAGRAM 532**

Quantity of sashes  
that open to the left

Quantity of sashes  
that open to the right

Sash total  
quantity

#### Only applicable to timber designs

DIAGRAM 743

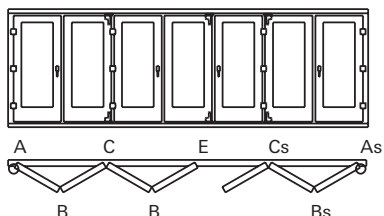


DIAGRAM 761

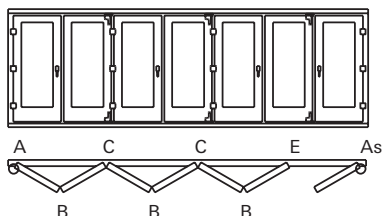


DIAGRAM 770

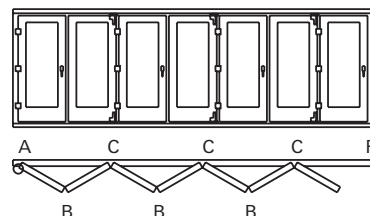
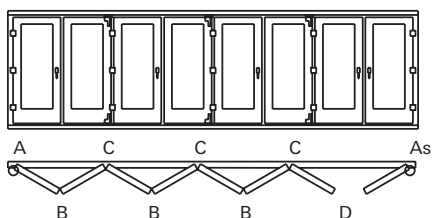


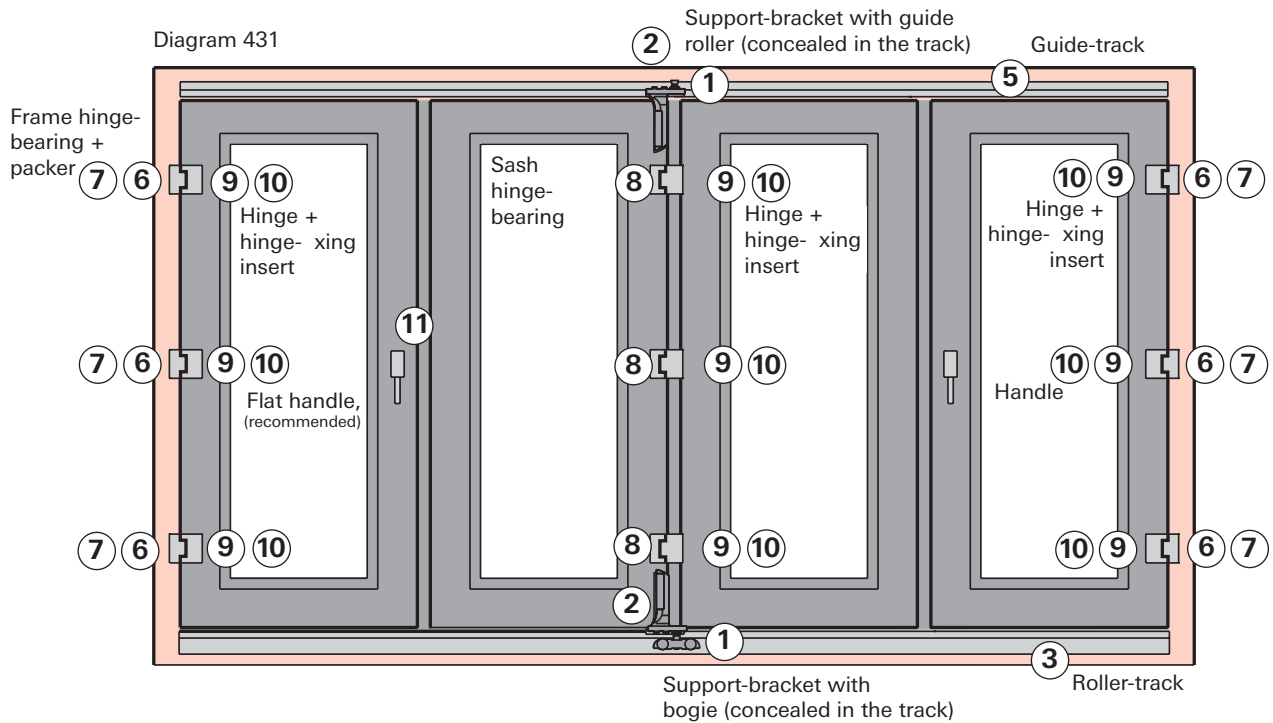
DIAGRAM 871



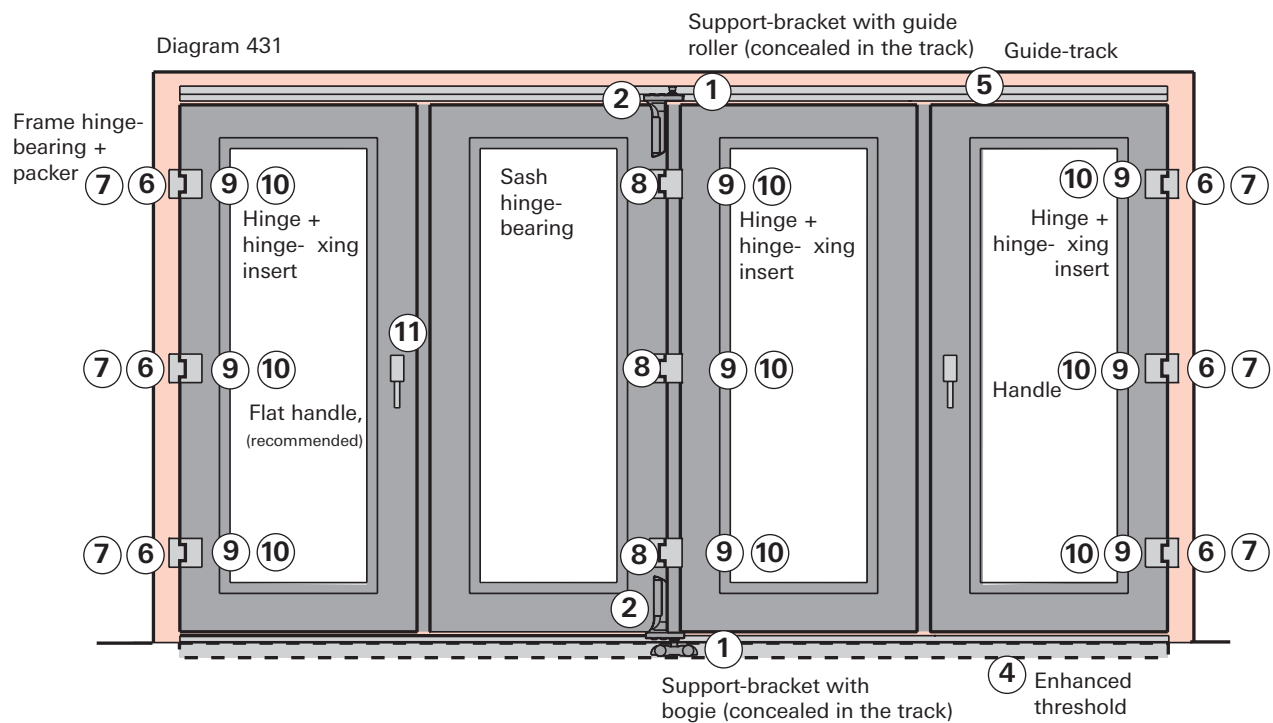


# Hardware overview (based on diagram 431)

## Standard roller-track version



## Version with enhanced threshold



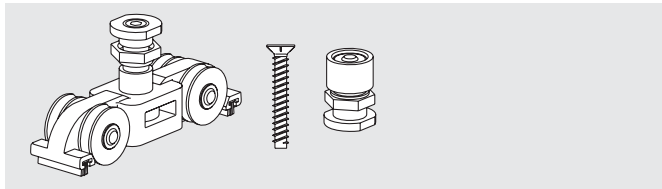


## Parts list

### Description

### Mat. No.:

#### ① Bogie set with accessories

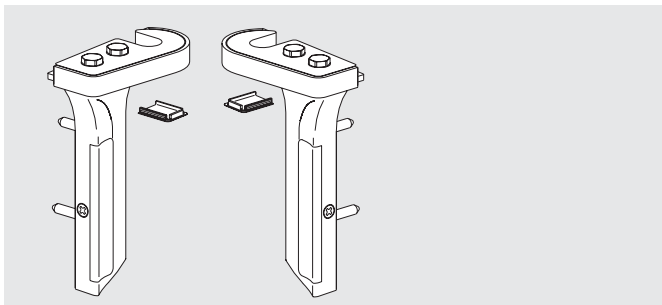


Set

**312 563**

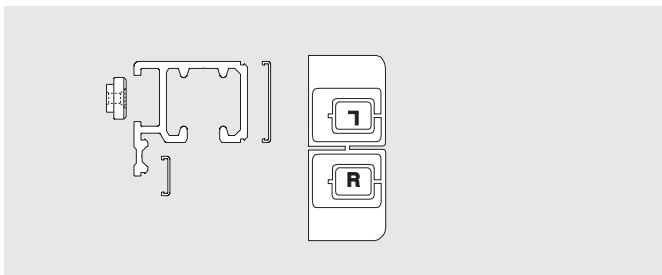
**Note:** When ordering for the "top running version" in combination with the enhanced threshold (refer to page 7; combination possibility no. 4), the glider guide 207159 is to be ordered separately. The lock-nuts are to be replaced. (guide roller)

#### ② Support-brackets (Pair)



Version	R07.2	White	<b>312 566</b>
Version	R05.3	Medium bronze	<b>312 567</b>
Version	R01.1	Silver	<b>312 568</b>

#### ③ Roller track (incl. accessories)



Version	3000 mm	R07.2	White	<b>312 570</b>
Version	4000 mm	R07.2	White	<b>312 571</b>
Version	5000 mm	R07.2	White	<b>312 583</b>
Version	6000 mm	R07.2	White	<b>312 584</b>

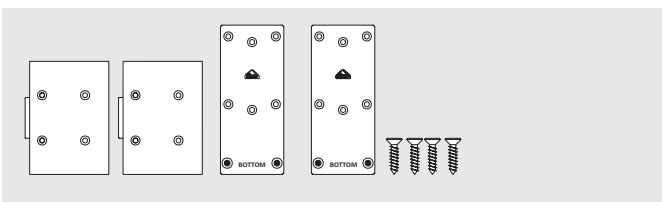
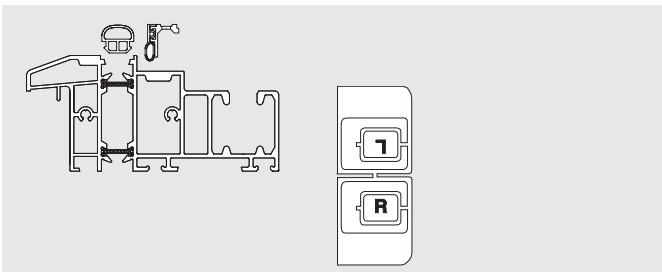
Version	3000 mm	R05.3	Medium bronze	<b>312 727</b>
Version	4000 mm	R05.3	Medium bronze	<b>312 728</b>
Version	5000 mm	R05.3	Medium bronze	<b>312 730</b>
Version	6000 mm	R05.3	Medium bronze	<b>312 774</b>

Version	3000 mm	R01.1	Silver	<b>312 733</b>
Version	4000 mm	R01.1	Silver	<b>312 734</b>
Version	5000 mm	R01.1	Silver	<b>312 775</b>
Version	6000 mm	R01.1	Silver	<b>312 776</b>

### Description

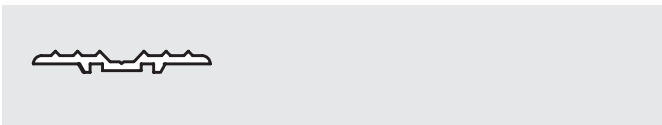
### Mat. No.:

#### ④ Enhanced threshold (incl. accessories)



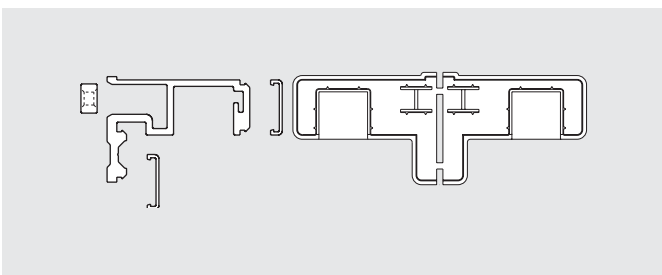
Version	3000 mm	Silver	<b>382 921</b>
Version	4000 mm	Silver	<b>382 922</b>
Version	5000 mm	Silver	<b>382 923</b>
Version	6000 mm	Silver	<b>382 924</b>

#### ④a Cover strip (anodised silver EV1)



For roller track & enhanced threshold 1300mm **317 480**

#### ⑤ Guide-track (incl. accessories)

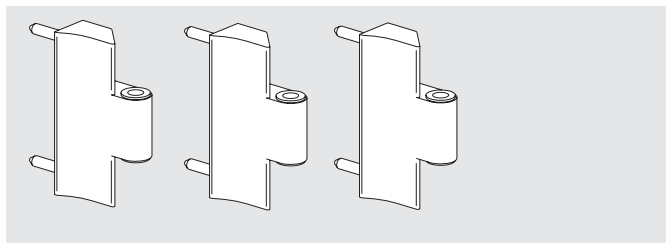


Version	3000 mm	R07.2	White	<b>312 797</b>
Version	4000 mm	R07.2	White	<b>312 798</b>
Version	5000 mm	R07.2	White	<b>312 799</b>
Version	6000 mm	R07.2	White	<b>312 800</b>

Version	3000 mm	R05.3	Medium bronze	<b>312 802</b>
Version	4000 mm	R05.3	Medium bronze	<b>312 803</b>
Version	5000 mm	R05.3	Medium bronze	<b>312 804</b>
Version	6000 mm	R05.3	Medium bronze	<b>312 805</b>

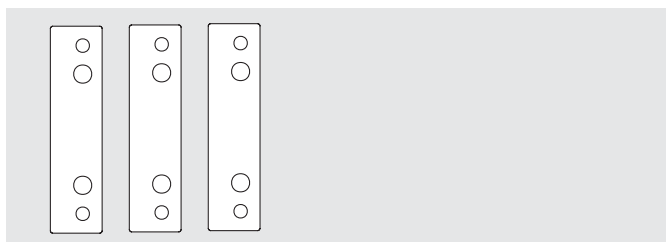
Version	3000 mm	R01.1	Silver	<b>312 807</b>
Version	4000 mm	R01.1	Silver	<b>312 808</b>
Version	5000 mm	R01.1	Silver	<b>312 809</b>
Version	6000 mm	R01.1	Silver	<b>312 810</b>



**Description**
**Mat. No.:**
**⑥ Frame hinge-bearings** (packaging unit: 3 pcs.)


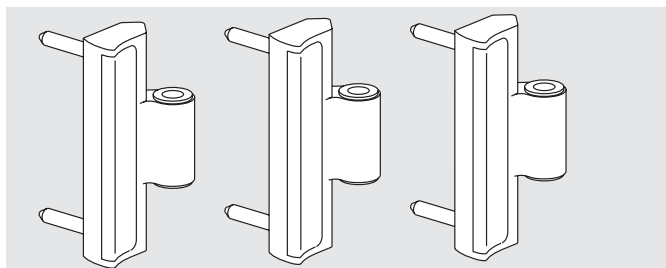
Version	16 mm	R07.2	White	<b>312 811</b>
Version	16 mm	R05.3	Medium bronze	<b>312 812</b>
Version	16 mm	R01.1	Silver	<b>312 813</b>

Version	21 mm	R07.2	White	<b>312 814</b>
Version	21 mm	R05.3	Medium bronze	<b>312 816</b>
Version	21 mm	R01.1	Silver	<b>312 819</b>

**⑦ Packers for frame hinge-bearings** (packaging unit: 3 pcs.)


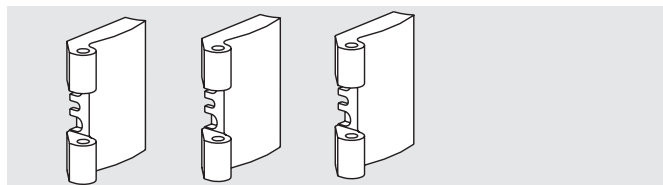
Version	1 mm	R07.2	White	<b>312 831</b>
Version	1 mm	R05.3	Medium bronze	<b>312 832</b>
Version	1 mm	R01.1	Silver	<b>312 833</b>

Version	2 mm	R07.2	White	<b>312 834</b>
Version	2 mm	R05.3	Medium bronze	<b>312 835</b>
Version	2 mm	R01.1	Silver	<b>312 836</b>

**⑧ Sash hinge-bearings** (packaging unit: 3 pcs.)


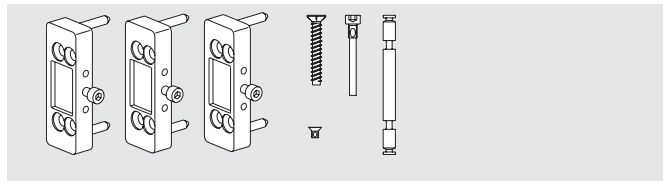
Version	20 mm	R07.2	White	<b>312 821</b>
Version	20 mm	R05.3	Medium bronze	<b>312 822</b>
Version	20 mm	R01.1	Silver	<b>312 823</b>

Version	30 mm	R07.2	White	<b>383 354</b>
Version	30 mm	R05.3	Medium bronze	<b>383 405</b>
Version	30 mm	R01.1	Silver	<b>383 406</b>

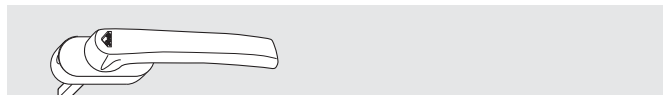
**Description**
**Mat. No.:**
**⑨ Hinges** (packaging unit: 3 pcs.)


Version	40/44 mm	R07.2	White	<b>312 824</b>
Version	40/44 mm	R05.3	Medium bronze	<b>312 825</b>
Version	40/44 mm	R01.1	Silver	<b>312 826</b>

Version	50/54 mm	R07.2	White	<b>312 827</b>
Version	50/54 mm	R05.3	Medium bronze	<b>312 828</b>
Version	50/54 mm	R01.1	Silver	<b>312 829</b>

**⑩ Hinge- xing inserts** (packaging unit: 3 pcs.)


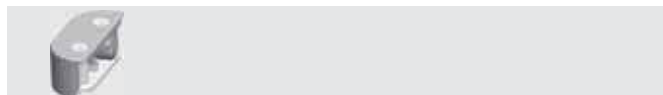
A: for screwing axis	40/50 mm, 40 mm screws	<b>312 830</b>
B: for screwing axis	44/54 mm, 50 mm screws	<b>347 881</b>
C: for timber/aluminum, screwing axis	40/50 mm, 60 mm screws, incl. 18.5 mm offset bushes	<b>382 783</b>

**⑪ RotoLine at handles** (10 mm lugs/35 mm spindle length)


R07.2	White	<b>336 110</b>
R05.3	Medium bronze	<b>336 111</b>
R01.1	Silver	<b>336 112</b>

**Sash retaining devices**


Sash retaining device	R07.2	White	<b>340 208</b>
Sash retaining device	R06.2	Black	<b>340 211</b>
Sash retaining device	R01.1	Silver	<b>375 241</b>

**Sash stoppers**


Sash stop	R07.2	White	<b>444 807</b>
Sash stop	R05.3	Medium bronze	<b>444 808</b>
Sash stop	R01.1	Silver	<b>444 809</b>



## List of profile systems

Profile	Frame hinge-bearing/Hinge		Sash hinge-bearing/Hinge		Drawing no.
	Frame hinge-bearing/Hinge	Packer	Exterior sash hinge	Interior sash hinge	
Timber	16/50	–	20/40	20/40	E02-0071-02
Timber/Alu (Gutmann)	16/50	–	20/40*	20/40	S04B007-002
Timber/Alu (Bug)	10/50	1 + 2 + 2	20/40*	20/40	S05B018-001
Timber/Alu (Uniform)	16/50	1 + 2	20/40*	20/40	S05B005-001
PVC profiles:					
Aluplast Ideal 2000	16/50	1	20/40	20/40	S03B013-002
Aluplast Ideal 4000	16/50	1 + 2	20/40	20/40	S03B013-003
Brueggemann AD	16/50	1	20/40	20/40	S04B002-001
Dimex/Accord Contur 7.0 AD	16/54	2 + 2	30/44	30/44	S07B004-001
Dimex/Accord Komfort	16/54	1	30/54	30/54	S07B004-005
Gealan S 3000	16/50	1	20/40	20/40	S03B008-001
Gealan S 8000	16/50	1	20/40	20/40	S03B008-005
Inoutic AD 13	16/50	1	20/40	20/40	S03B001-002
Inoutic Elite	16/50	2 + 2	20/50	20/50	S03B001-003
Inoutic Prestige	21/54	2 + 1	20/54	20/54	S03B001-004
KBE AD 70	21/54	–	30/54	30/54	S03B014-001
Koemmerling Eurod. 3S	16/50	–	20/40	20/40	S03B005-005
PlusTec Euroline	16/50	–	20/50	20/40	S03B002-001
Rehau Thermo-Design	16/50	1	20/40	20/40	S03B009-001
Rehau Brilliant-Design	16/50	1 + 2	20/40	20/40	S03B009-002
Salamander ID/2D	16/50	2	30/50	30/50	S03B011-001
Schueco Corona AS 60	16/50	–	30/50	30/50	S03B004-001
Schueco Corona CT 70	16/50	2 + 2	20/50	20/50	S03B004-002
Trocal InnoNova 2000	16/54	2	20/54	20/54	S03B015-001
Trocal InnoNova 70.A5	21/54	–	30/54	30/54	S03B015-002
Veka Softline AD9	16/50	–	20/50	20/50	S03B007-001
Veka Softline AD13	16/50	1	20/40	20/40	S03B007-004
Veka Topline AD13	16/50	1 + 2	20/40	20/40	S03B007-003

**\*Note:** Use the timber/aluminum hinge-inset.

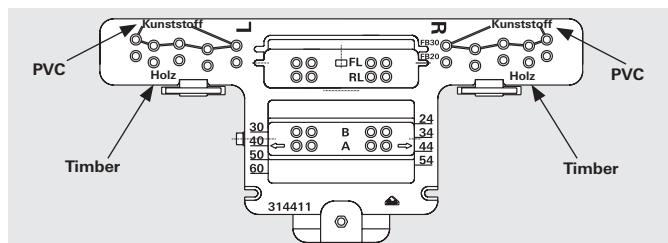


## Drilling jigs

### Description

Mat. No.:

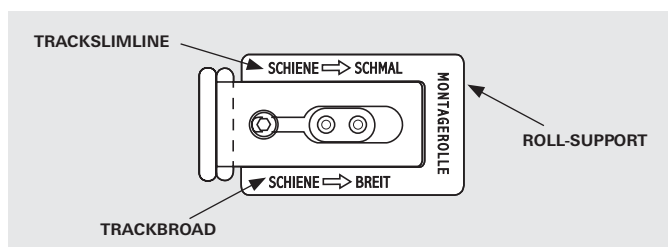
#### Drilling jig (for hinges and support-brackets)



Drilling jig (for hinges and support-brackets)

314 411

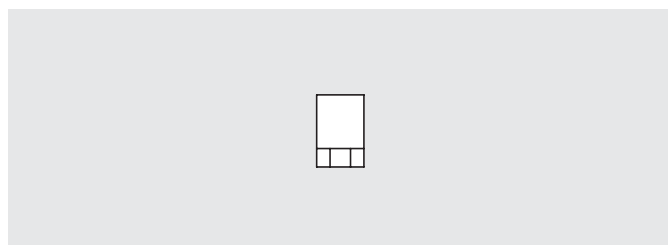
#### Drilling jig (for roller track & guide track)



Drilling jig (for roller track & guide track)

314 417

#### Drilling jig (for sash stopper)



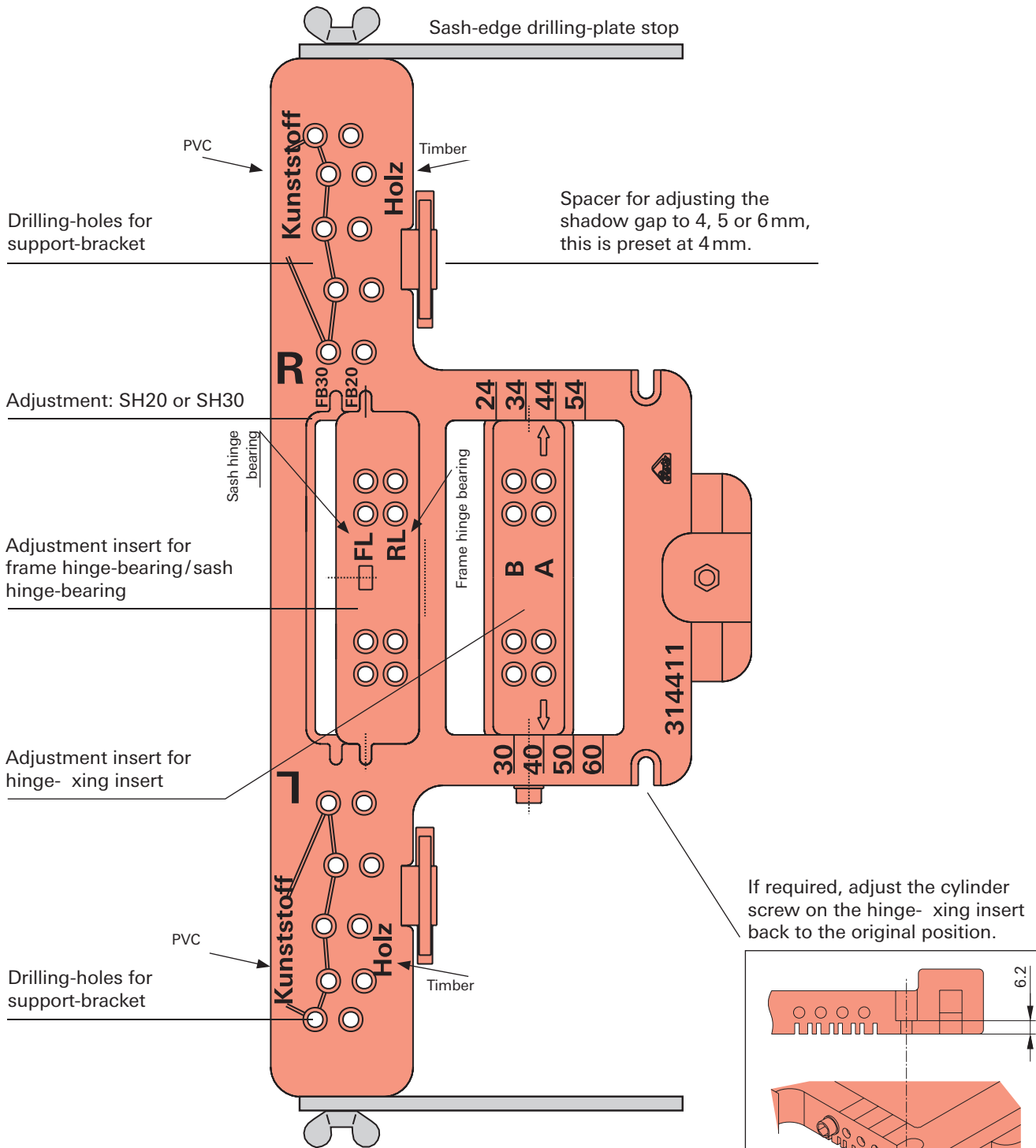
Drilling jig (for sash stopper)

469 831

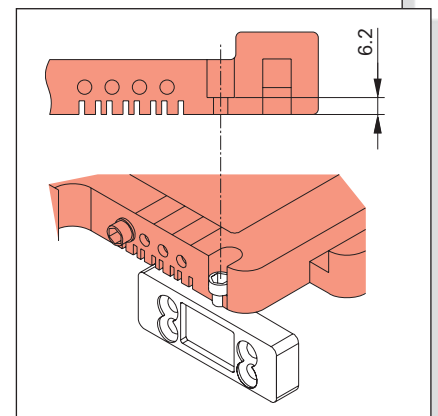


## Drilling jig Explanation

Drilling jig components (Mat. No.: 314 411)

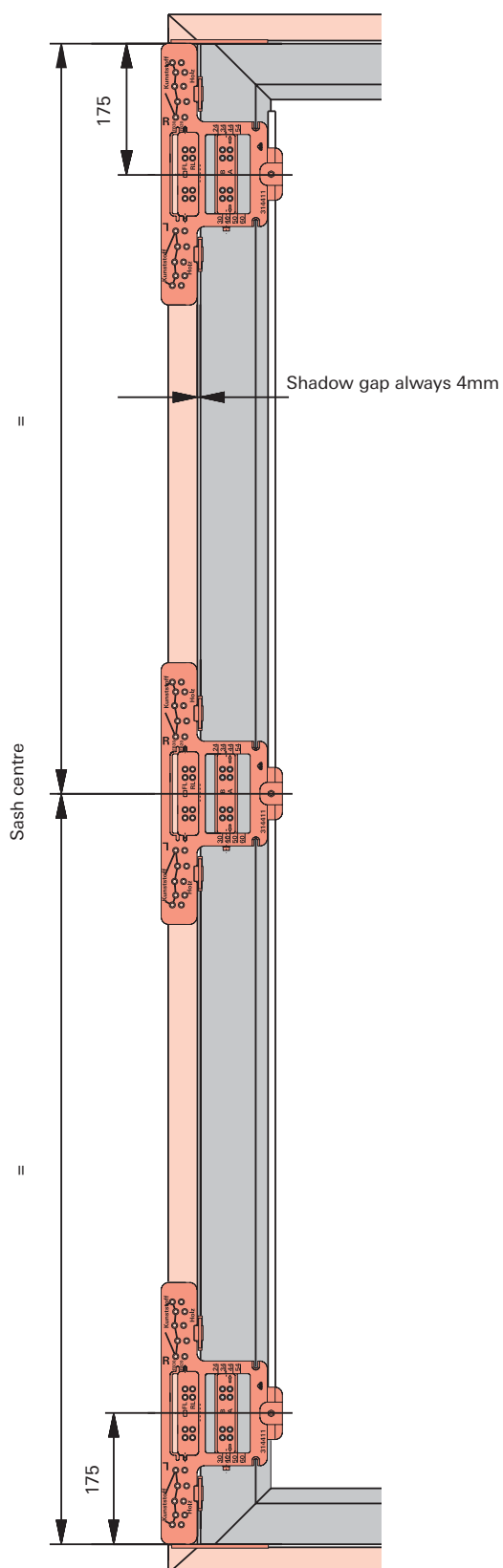


If required, adjust the cylinder screw on the hinge- xing insert back to the original position.

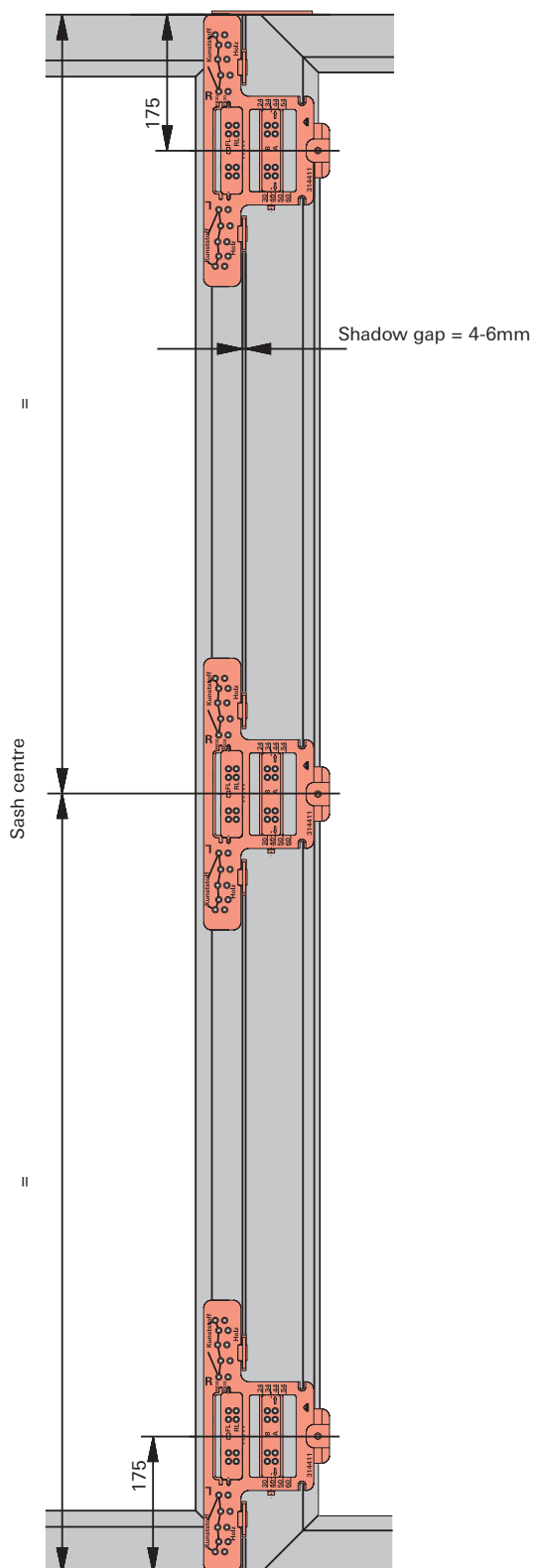




## Positions for frame hinge-bearings



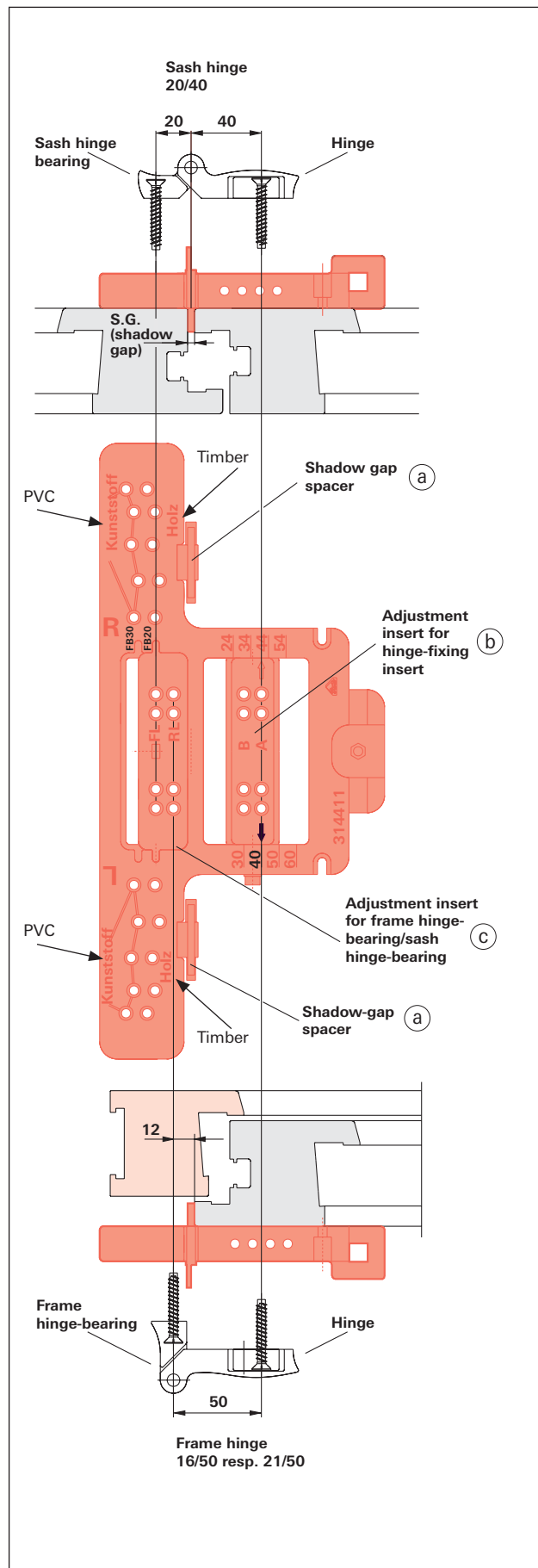
## Positions for sash hinge-bearing





## Predrilling for the sash and frame hinges

### Frame hinge 16/50 resp. 21/50 and sash hinge 20/40 or 30/40



#### Installing frame hinges 16/50 resp. 21/50

##### Drilling jig settings:

1. Shadow gap spacers: (a): **4 mm**
2. Adjustment insert for hinge- xing insert (b): **Set arrow to 40**
3. Adjustment insert for frame hinge-bearing/ sash hinge-bearing: (c): **FB 20 (Sash hinge)**

##### Predrilling:

4. Lay the frame-sided folding-sash on top of the frame and line these up (observe the clearance)
5. Predrill with a  $\varnothing$  5mm drill bit
  - Adjustment insert for hinge- xing insert: (b): **A**
  - Adjustment insert for frame hinge-bearing/ sash hinge-bearing: (c): **RL (Frame hinge-bearing)**

#### Installing sash hinges 20/40 resp. 30/40

##### Drilling jig settings

6. Shadow gap spacers: (a): **Pro le related (pp. 12)**
7. Adjustment insert for hinge- xing insert (b): **Set arrow to 40**
8. Adjustment insert for frame hinge-bearing/ sash hinge-bearing: (c): **FB 20 resp. FB30 (Sash hinge)**

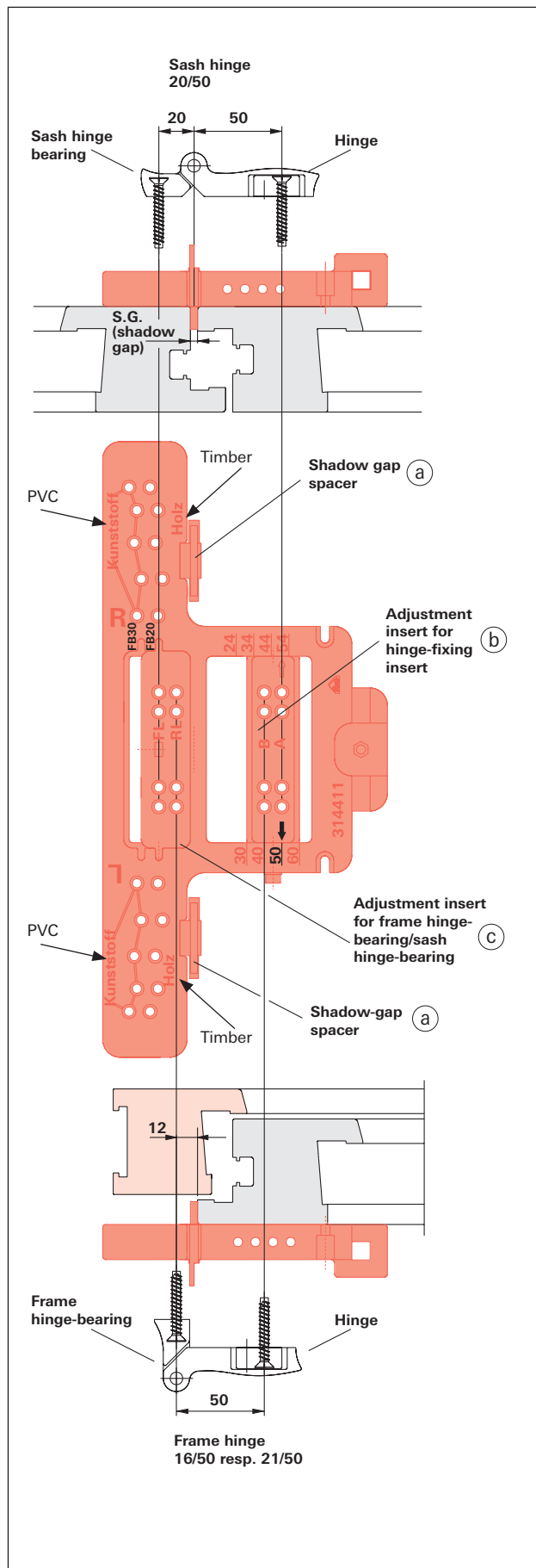
##### Predrilling:

9. Position the folding-sashes in accordance with the appropriate diagram
10. Predrill with a  $\varnothing$  5mm drill bit
  - Adjustment insert for hinge- xing insert: (b): **A**
  - Adjustment insert for frame hinge-bearing/ sash hinge-bearing: (c): **FL (Sash hinge bearing)**



# Predrilling for the sash and frame hinges

Frame hinge 16/50 resp. 21/50 and sash hinge 20/50 or 30/50



## Installing frame hinges 16/50 resp. 21/50

### Drilling jig settings:

1. Shadow gap spacers: (a): **4 mm**
2. Adjustment insert for hinge- xing insert (b): **Set arrow to 50**
3. Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **FB 20  
(Sash hinge)**

### Predrilling:

4. Lay the frame-sided folding-sash on top of the frame and line these up (observe the clearance)
5. Predrill with a  $\varnothing$  5mm drill bit
  - Adjustment insert for hinge- xing insert: (b): **B**
  - Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **RL  
(Frame hinge-bearing)**

## Installing sash hinges 20/50 resp. 30/50

### Drilling jig settings

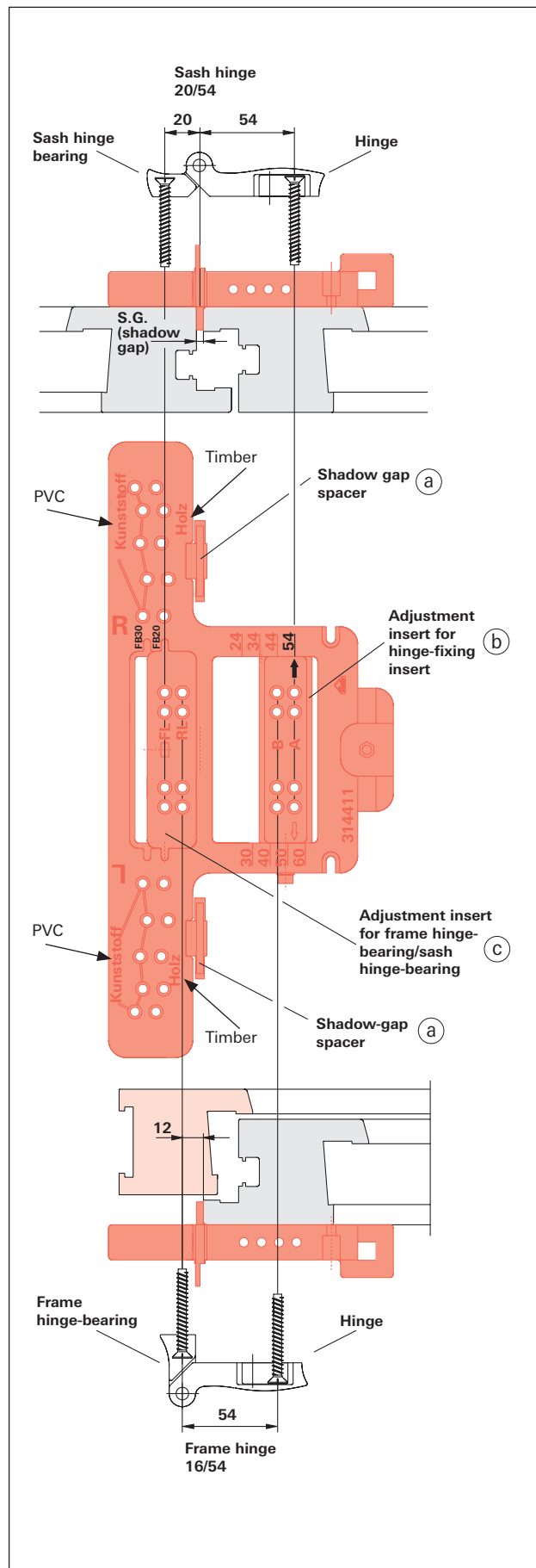
6. Shadow gap spacers: (a): **Pro le related  
(pp. 12)**
7. Adjustment insert for hinge- xing insert (b): **Set arrow to 50**
8. Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **FB 20 resp.  
FB30  
(Sash hinge)**

### Predrilling:

9. Position the folding-sashes in accordance with the appropriate diagram
10. Predrill with a  $\varnothing$  5mm drill bit
  - Adjustment insert for hinge- xing insert: (b): **A**
  - Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **FL  
(Sash hinge bearing)**



## Predrilling for the sash and frame hinges Frame hinge 16/54 and sash hinge 20/54 or 30/54



### Installing frame hinges 16/54

#### Drilling jig settings:

1. Shadow gap spacers: (a): **4 mm**
2. Adjustment insert for hinge- xing insert (b): **Set arrow to 54**
3. Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **FB 20**  
**(Sash hinge)**

#### Predrilling:

4. Lay the frame-sided folding-sash on top of the frame and line these up (observe the clearance)
5. Predrill with a  $\varnothing$  5mm drill bit
  - Adjustment insert for hinge- xing insert: (b): **B**
  - Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **RL**  
**(Frame hinge-bearing)**

### Installing sash hinges 20/54 resp. 30/54

#### Drilling jig settings

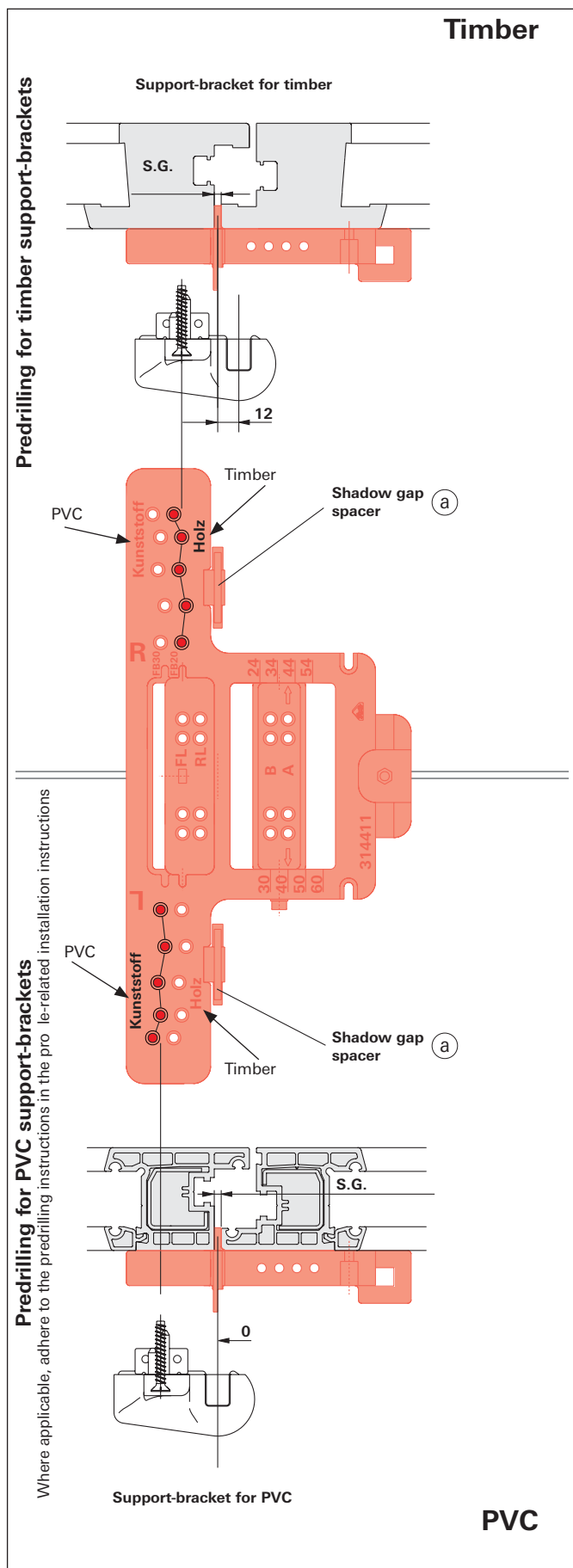
6. Shadow gap spacers: (a): **Profile related**  
**(pp. 12)**
7. Adjustment insert for hinge- xing insert (b): **Set arrow to 54**
8. Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **FB 20 resp.**  
**FB30**  
**(Sash hinge)**

#### Predrilling:

9. Position the folding-sashes in accordance with the appropriate diagram
10. Predrill with a  $\varnothing$  5mm drill bit
  - Adjustment insert for hinge- xing insert: (b): **A**
  - Adjustment insert for frame hinge-bearing/  
sash hinge-bearing: (c): **FL**  
**(Sash hinge bearing)**



# Predrilling for the support brackets Timber/PVC



## Predrilling for timber support-brackets

### Drilling jig settings:

Shadow gap spacers: (a) : 4 mm

### Predrilling:

Predrill with a  $\varnothing$  5mm drill bit, in accordance with the drilling jigs inscription (Holz = Timber, Kunststoff = PVC)

## Predrilling for PVC support-brackets

### Drilling jig settings :

Shadow gap spacers: (a) : 4 mm

### Predrilling:

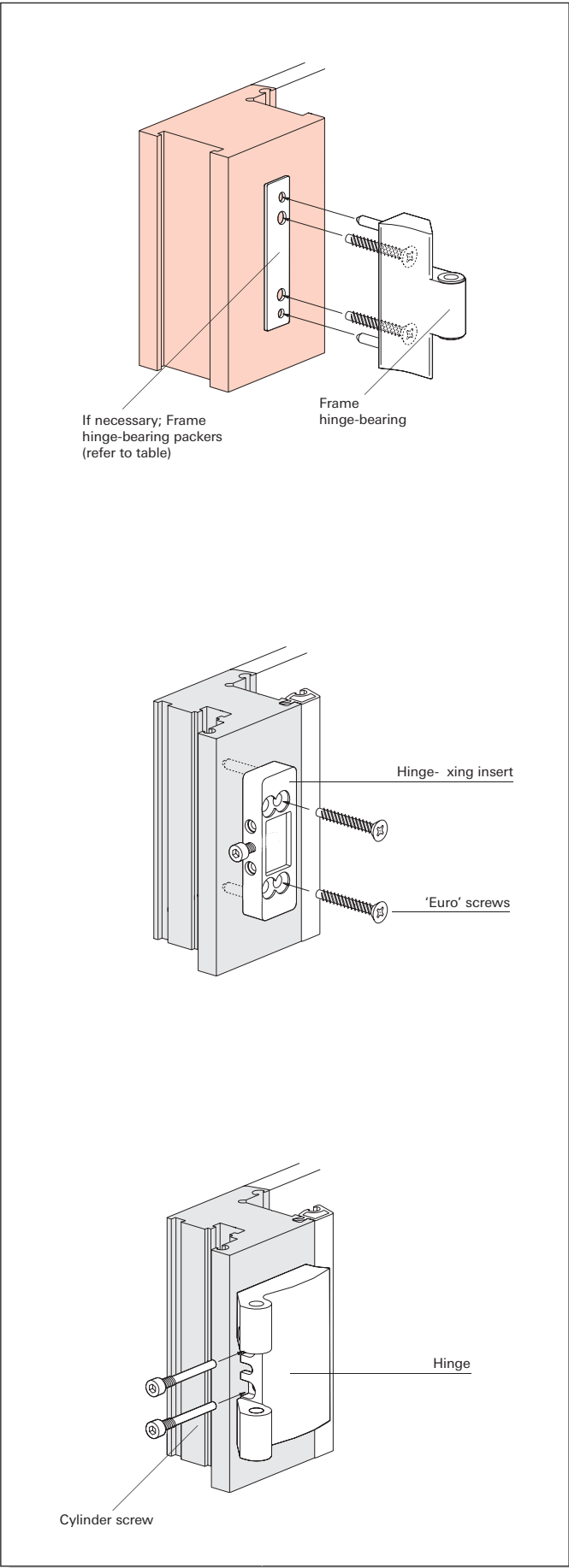
Predrill with a  $\varnothing$  5mm drill bit, in accordance with the drilling jigs inscription (Holz = Timber, Kunststoff = PVC)

### Please note:

Adhere to the advice in the profile-related installation instructions, as some PVC profile systems are also drilled in the same position as timber systems. (refer to page 12 for the drawing number).



Frame hinge-bearing and hinge



Installation of the frame hinge-bearings

1. Select the correct frame hinge-bearing packers from the table.

Quantity of packers required			
Overlap height		Turn-Only hardware	
	O.H.	1 mm	2 mm
16	16	-	-
	17	6	-
	18	-	6
	19	6	6
	20	-	12
21	21	-	-
	22	6	-
	23	-	6
	24	6	6
	25	-	12

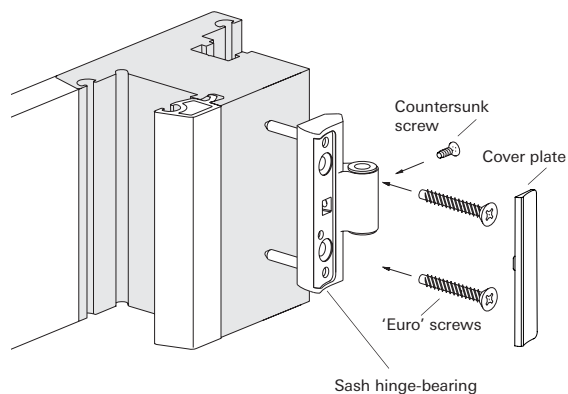
**Note:** No packers are needed for the active sash if it is equipped with Tilt&Turn hardware; because of this the number of the packers needed is halved.

2. Fix the frame hinge-bearings on the frame with 'Euro' screws.

Installation of the hinges

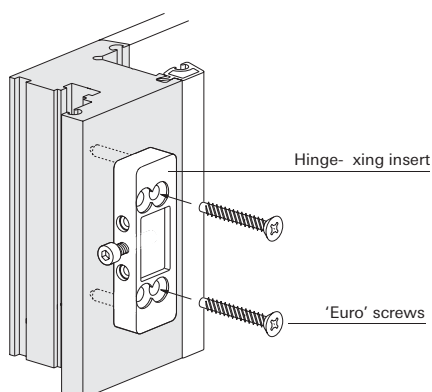
3. Fix the hinge- xing inserts with 'Euro' screws.  
4. Place the hinge on top of the hinge- xing insert and x with cylinder screws.





## Installation of the sash hinge-bearings

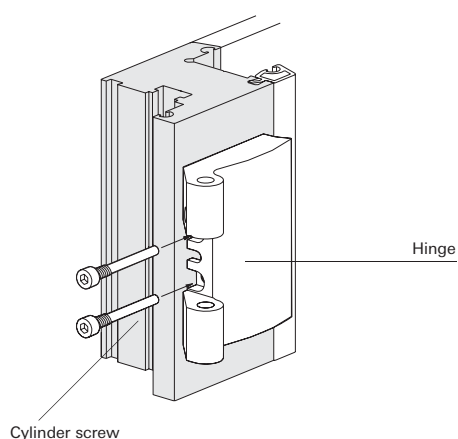
1. Fix the sash hinge-bearings on the frame with "Euro"-screws.
2. Mount the cover plate and secure with countersunk screw.



## Installation of the hinges

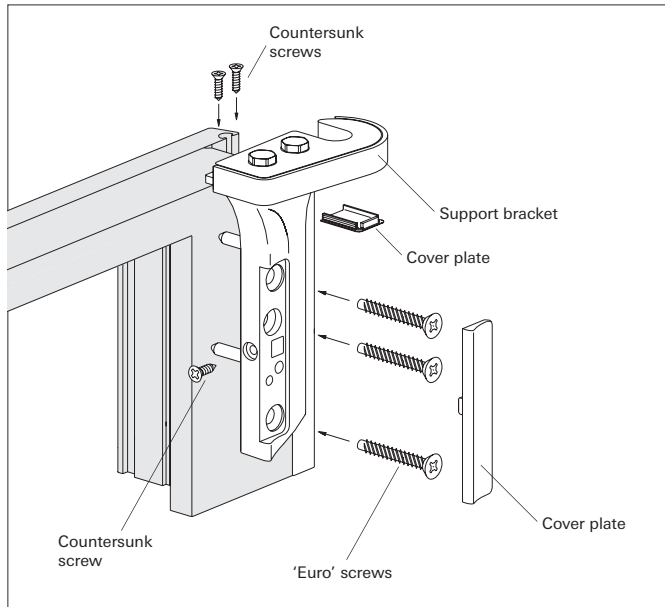
**Note:** The factory set screwing axis for the hinge-fixing insert in connection with hinge 40/44 is 40/44 mm resp. 50/54 mm with hinge 50/54.

3. Fix the hinge- xing inserts with 'Euro' screws.
4. Place the hinge on top of the hinge- xing insert and x with cylinder screws.



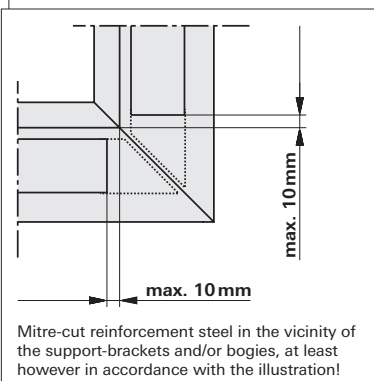
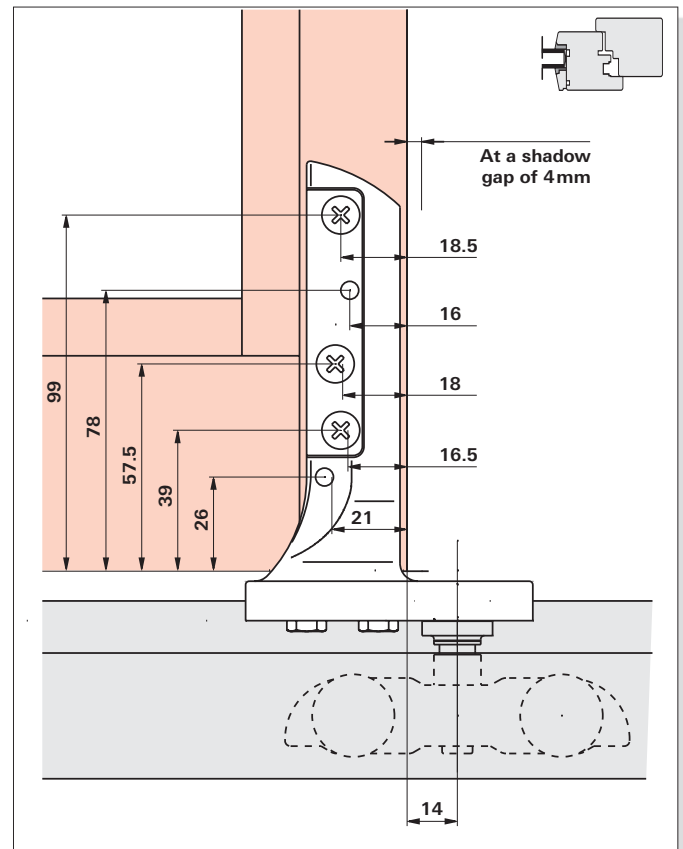
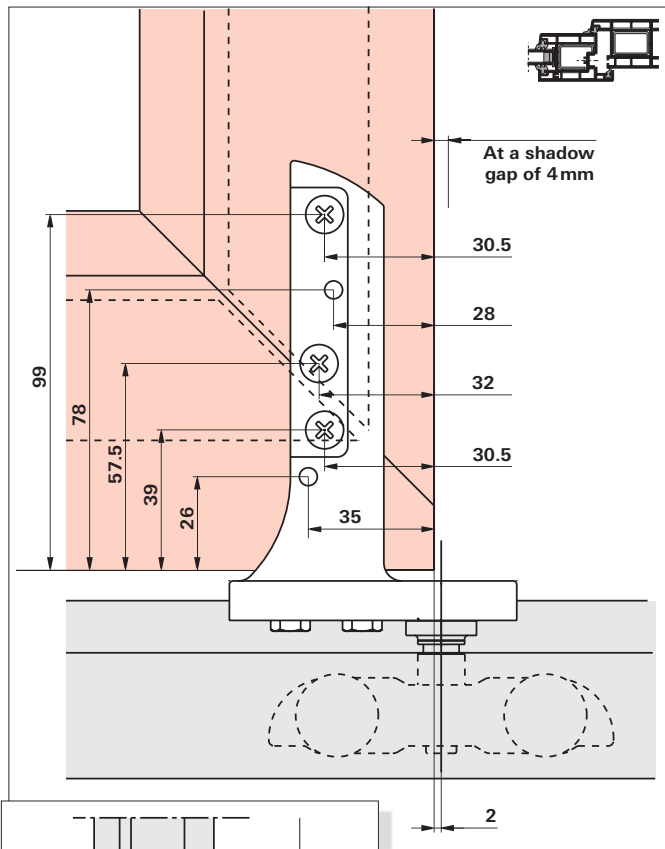


## Support brackets



### Installation of the support-brackets

1. Fix the support-brackets to the sash with 'Euro' screws and countersunk screws.
2. Mount the cover plate and secure with countersunk screw.
3. Clip on cover cap.

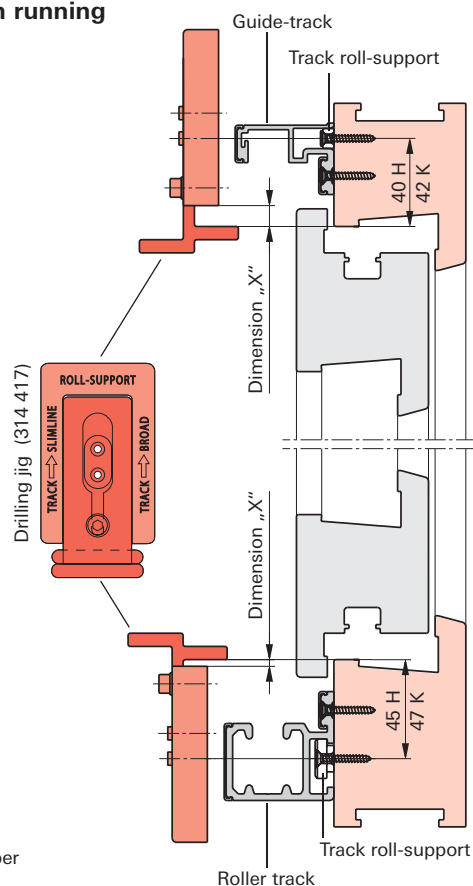


### Please note:

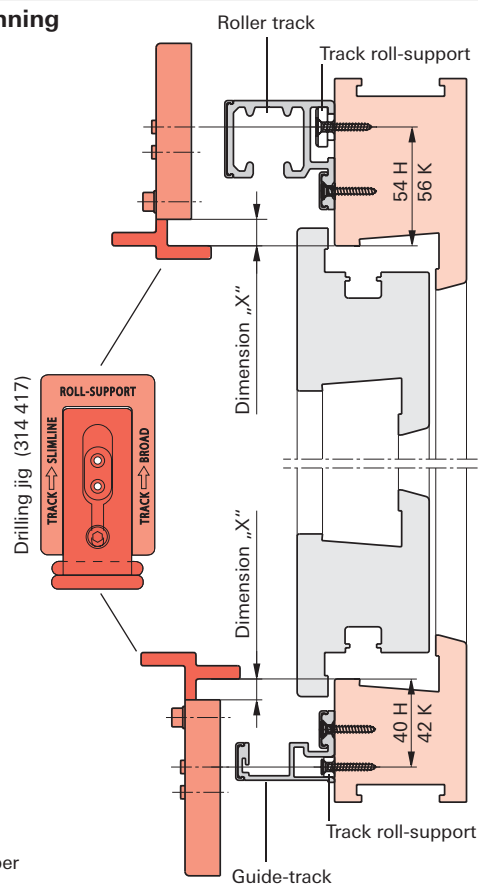
Adhere to the advice in the profile-related installation instructions, as some PVC profile systems are also drilled in the same position as timber systems. (refer to page 12 for the drawing number).



## Bottom running



## Top running



## Installation of track roll-supports

1. Adjust the drilling jig using the table.

### Quantity of packers required:

#### Bottom running

Coverage	Dimension X	Dimension X
Overlap - Clearance	bottom	top
6	3	9.5
7	4	10.5
8	5	11.5
9	6	12.5
10	7	13.5
11	8	14.5

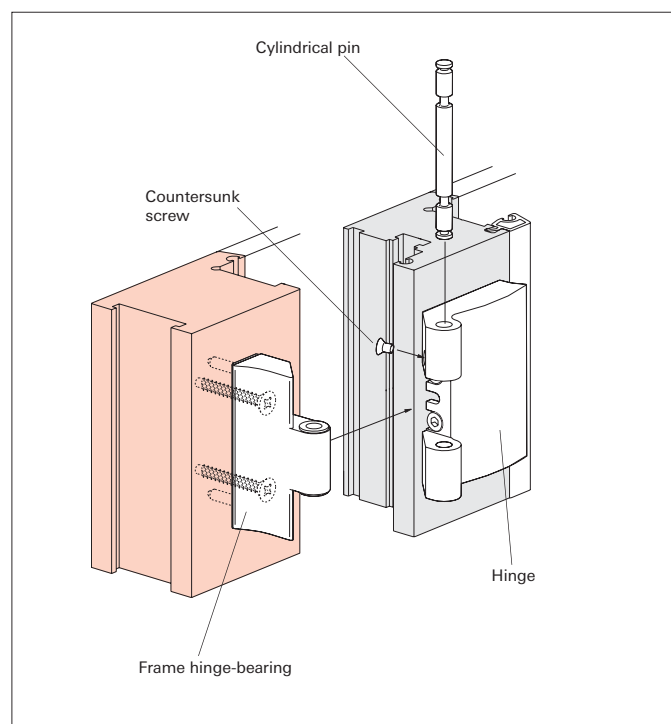
#### Top running

Coverage	Dimension X	Dimension X
Overlap - Clearance	bottom	top
6	9.5	12
7	10.5	13
8	11.5	14
9	12.5	15
10	13.5	16
11	14.5	17

2. Carry out the  $\varnothing 3$  mm drillings on the frame for the track roll-supports using the drilling jig (Mat. No. 314 417).
3. Screw the track roll-supports tightly.
4. Cut the roller track (frame outside width – 6 mm) resp. guide track (width of all sashes) to size.
5. Place the tracks onto the track roll-supports from above, and push inwards.
6. Predrill the  $\varnothing 3$  mm screw- xing holes.
7. Screw- x the tracks.



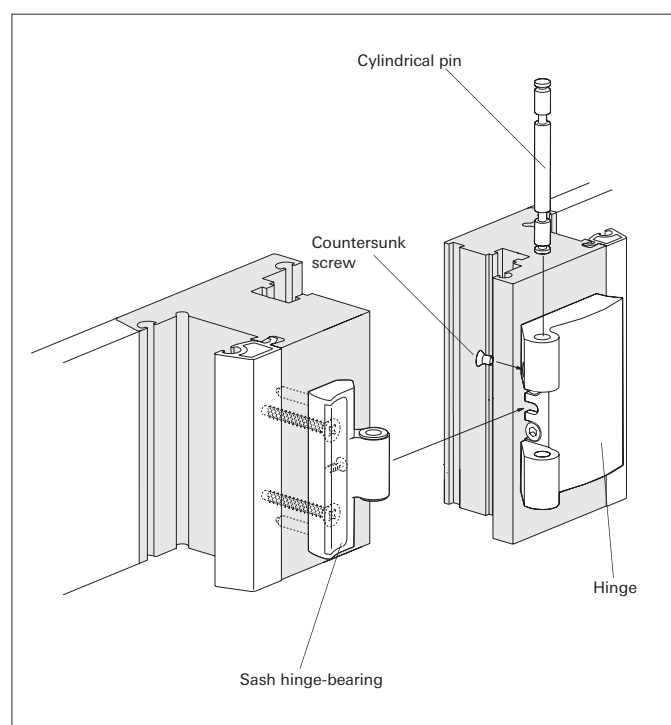
## Frame hinge – Sash hinge



### Installation of frame hinges

#### Joining frame hinge-bearings and hinges

1. Join the frame hinge-bearing and hinge in the opened sash position by inserting the cylindrical pin.
2. Secure the cylindrical pin with the countersunk screw.



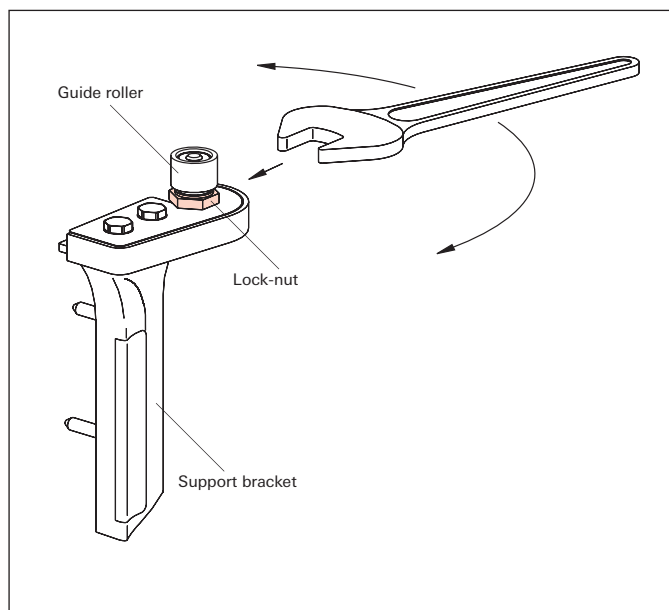
### Installation of sash hinges

#### Joining sash hinge-bearings and hinges

1. Join the sash hinge-bearing and hinge in the opened sash position by inserting the cylindrical pin.
2. Secure the cylindrical pin with the countersunk screw.

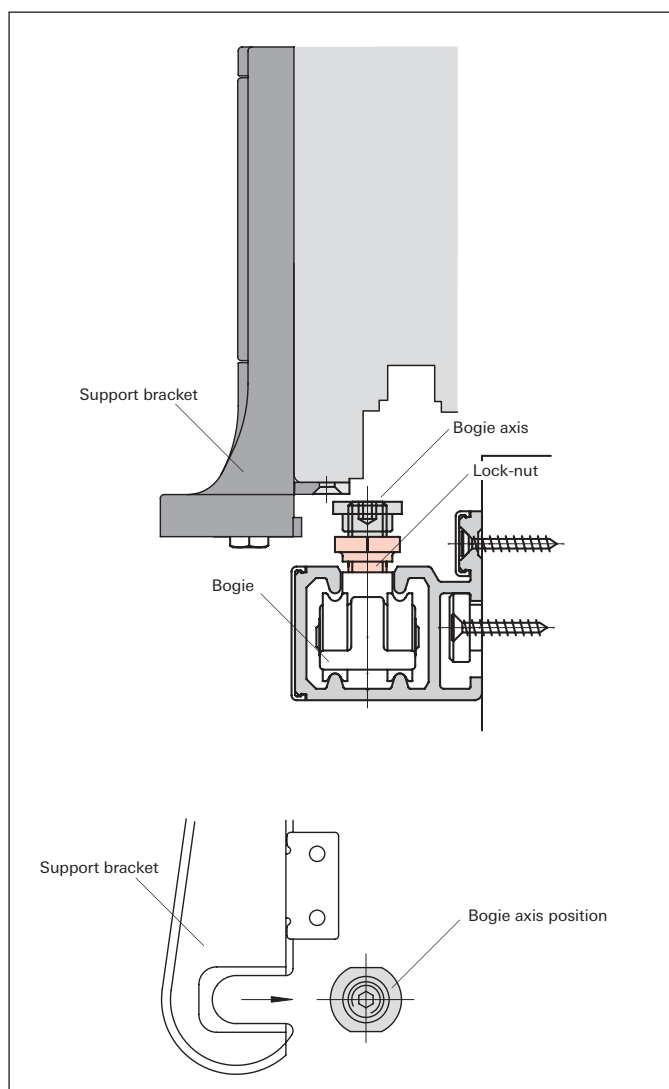


# Support-bracket with guide roller/Hinging the sashes



## Support-bracket with guide roller

1. Insert the guide roller into the track and position to the support-bracket.
2. Tighten the lock-nut with a 17 mm open-ended spanner.

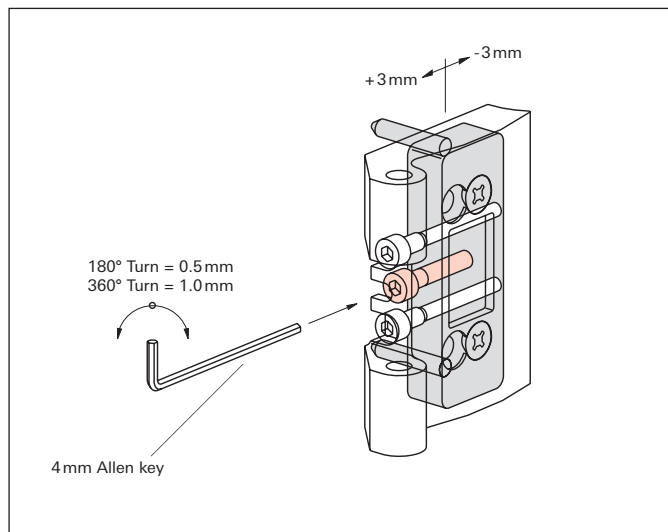


## Hinging the bogie

1. Slide the bogie in the track up as far as the support-bracket.
2. Retract the sash until the bogie can be inserted into the support bracket. (Note the bogie axis position).
3. Tighten the lock-nut with a 17 mm open-ended spanner.

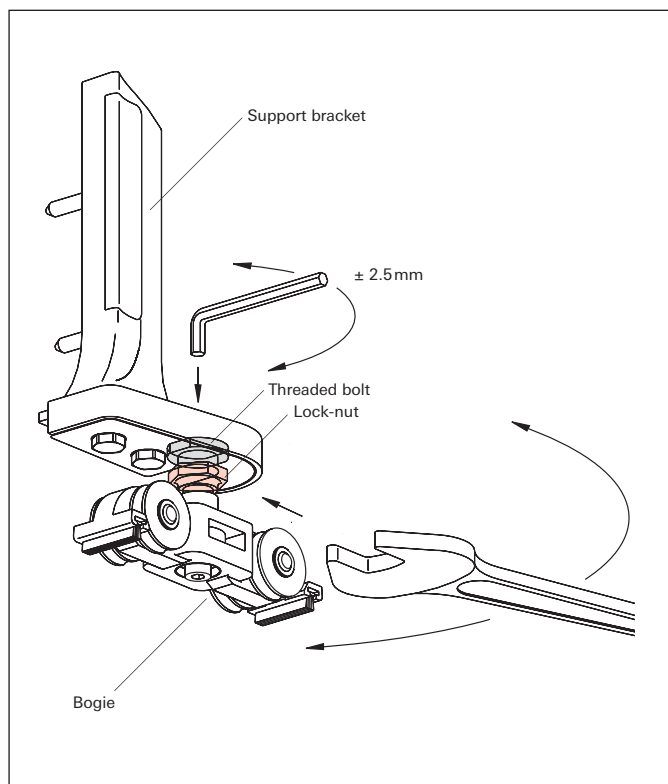


## Adjustment



### Adjustment of the shadow gap via the hinge

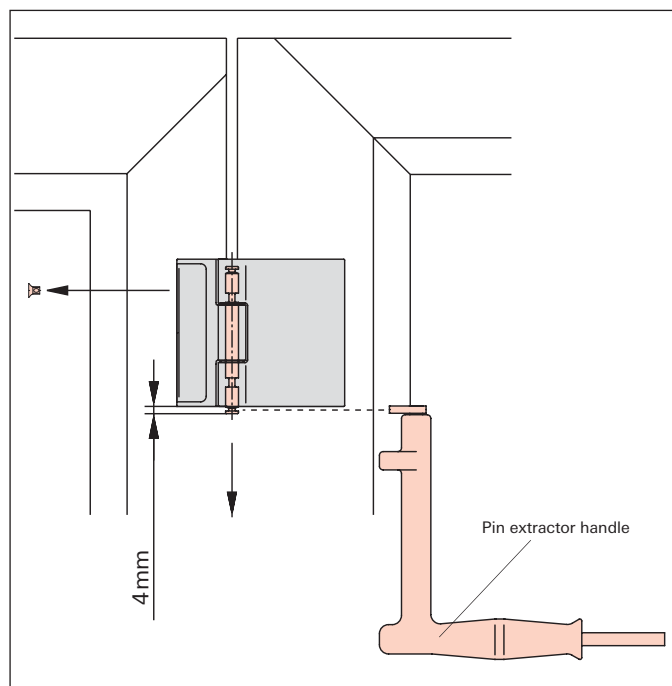
1. Open the sash resp. the element.
2. Adjust the hinge by turning the centre roller-head bolt using a 4mm Allen key.



### Adjustment of the sash via the bogie

1. Remove the cover cap.
2. Loosen the lock-nut with a 17 mm open-ended spanner.
3. Carry out the height adjustment by turning the threaded bolt using a 4 mm Allen key.
4. Tighten the lock-nut again.



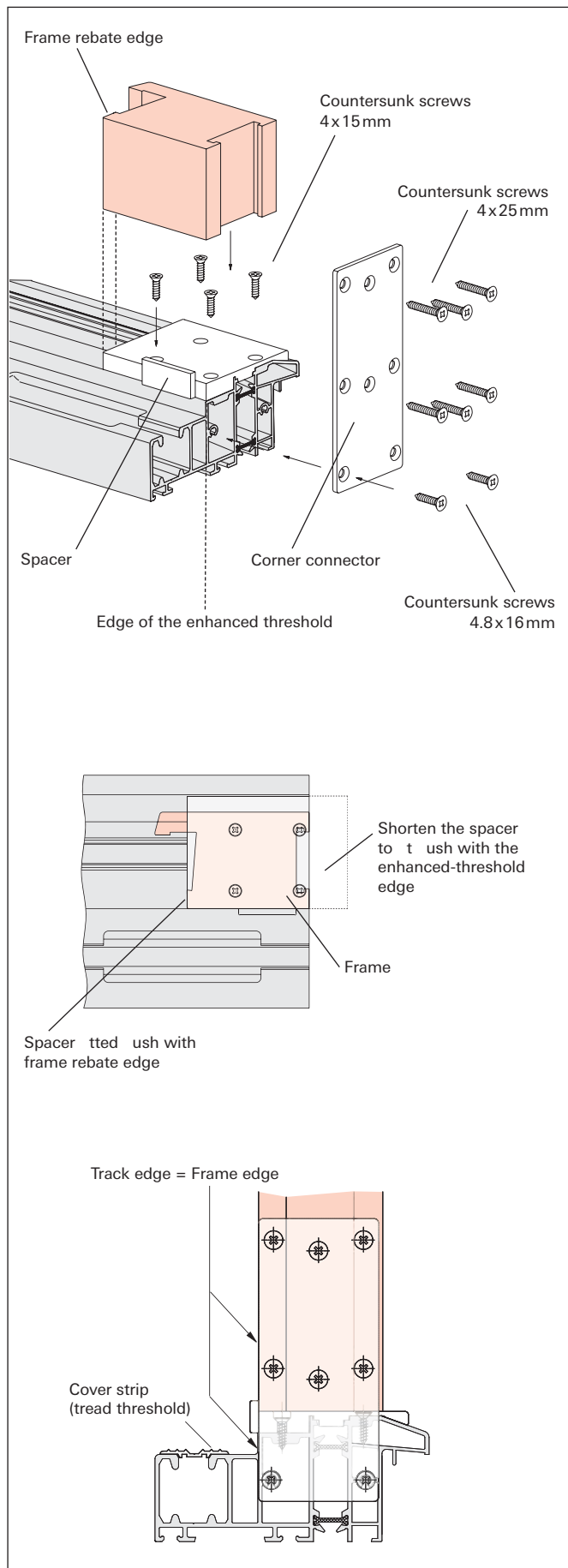


### Unhinging the sash

1. Open the sash resp. the element.
2. Remove the countersunk screw.
3. Force out the cylindrical pin min. 4 mm and then remove it using the pin extractor handle.



## Installation Enhanced threshold – Frame



### Installation of the enhanced threshold – Frame with spacers and corner connectors

1. Position the spacer flush with the frame rebate edge and shorten to fit flush with the enhanced-threshold edge.
2. Screw in the spacer with 2 resp. 4 countersunk screws (4x15mm) and position the frame.
3. Fix the corner connector to the frame and enhanced threshold using 6 pcs. 4x25mm and 2 pcs. 4.8x16mm countersunk screws.
4. The cover strip (tread threshold) is to be fixed in the vicinity of the active sash and on top of the recess for the bogies (minimum protrusion on each side 10mm).

#### Please note:

If the Fold&Slide door is installed on the construction site, the enhanced threshold is to be protected against soiling from screed or other materials.



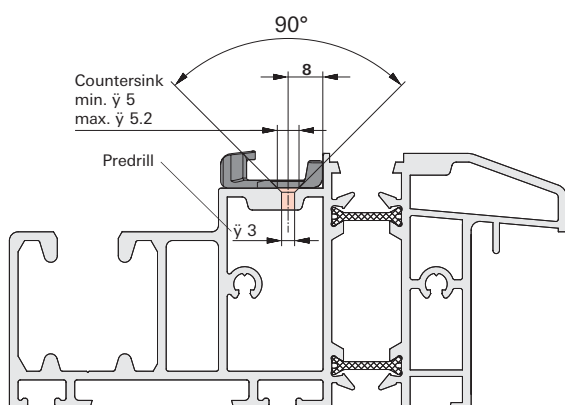
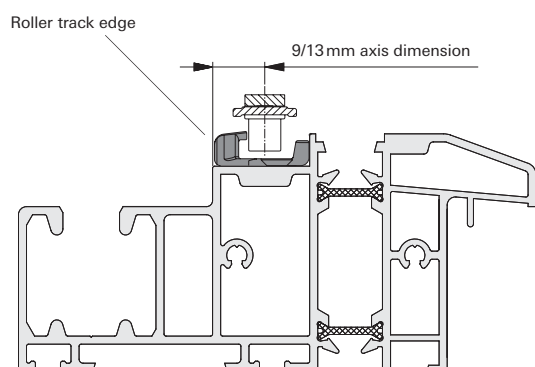
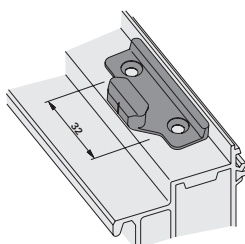
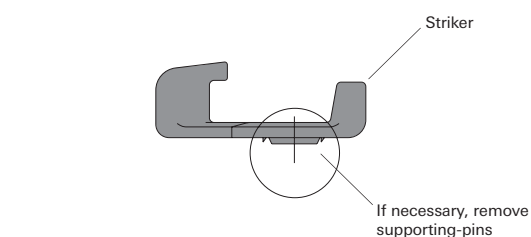
# Installation

## Strikers on the enhanced threshold



### Installation of strikers on the enhanced threshold

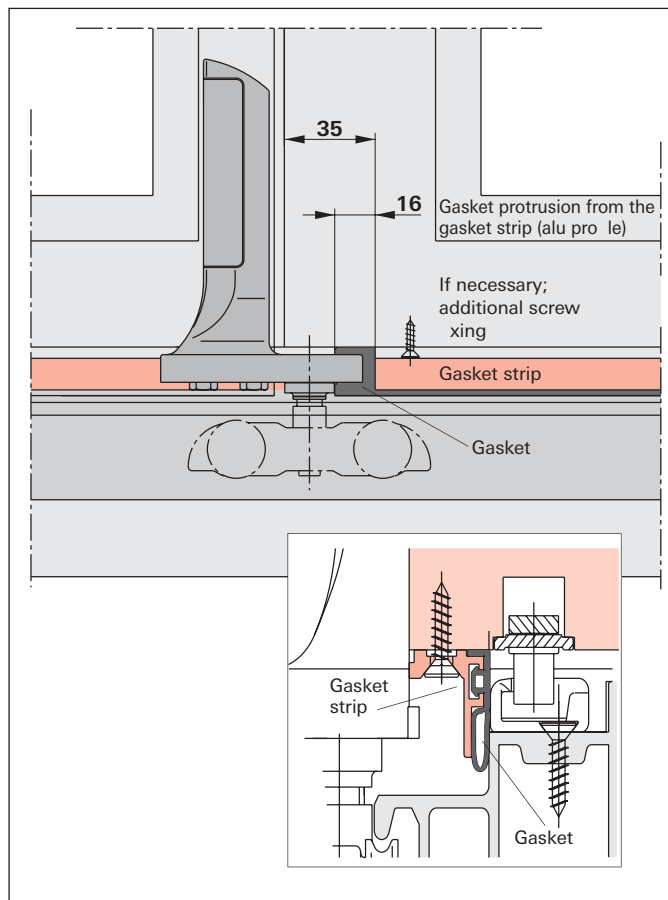
1. Use strikers for at rebate from the standard Tilt&Turn NT timber product range. (If necessary, remove the supporting-pins from the striker base).
2. Always position the strikers flush to the roller track edge.
3. Predrill holes in the threshold (Ø 3mm) and countersink (min. Ø 5mm, max. Ø 5.2mm).
4. Screw- x the strikers.



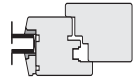


## Installation

### Gasket strip on the enhanced threshold



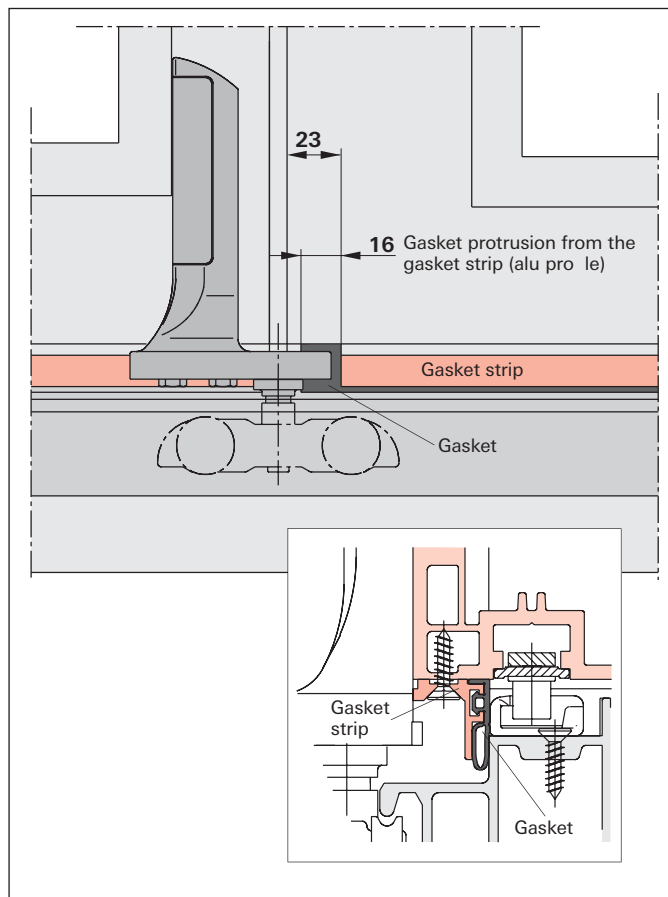
#### On the timber version:



Shorten the gasket strip (alu pro le) by 35 mm in the vicinity of the support-brackets (refer to the illustration).

The gasket however should protrude by 16 mm!

(Diagrams 321, 532, 541, 761 & 743)



#### On the PVC version:



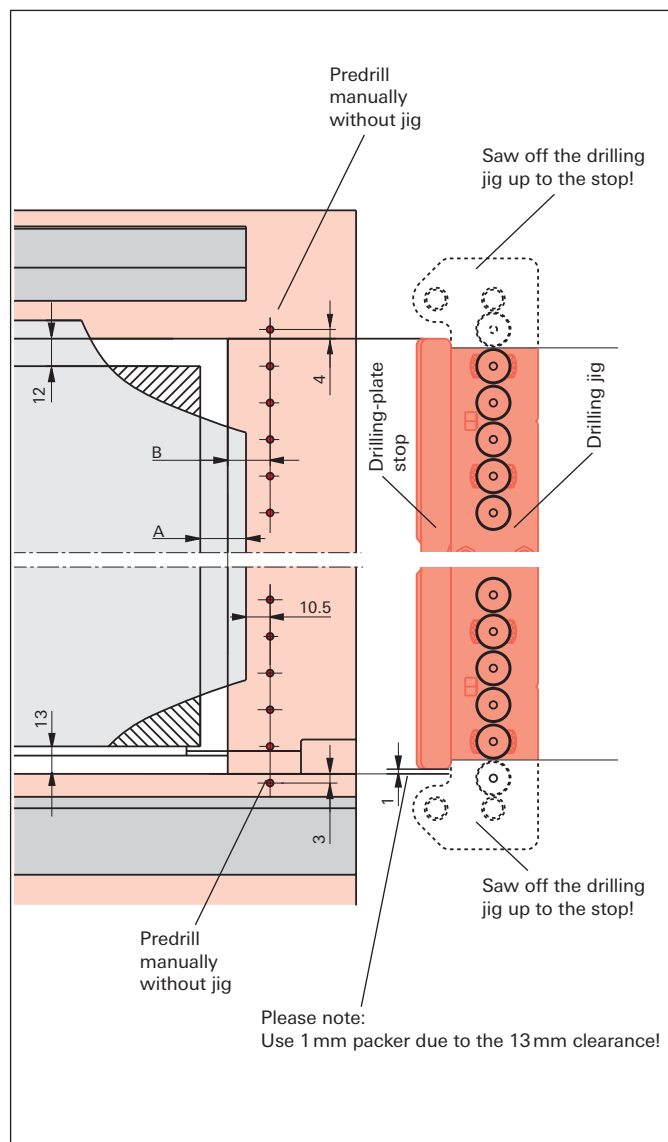
Shorten the gasket strip (alu pro le) by 23 mm in the vicinity of the support-brackets (refer to the illustration).

The gasket however should protrude by 16 mm!

Note the position of the support-bracket.  
Adhere to the pro le-related installation instructions, as some PVC pro le systems are also drilled in the same position as timber systems. (refer to page 12 for the drawing number).

(Diagrams 321, 532, 541, 761 & 743)





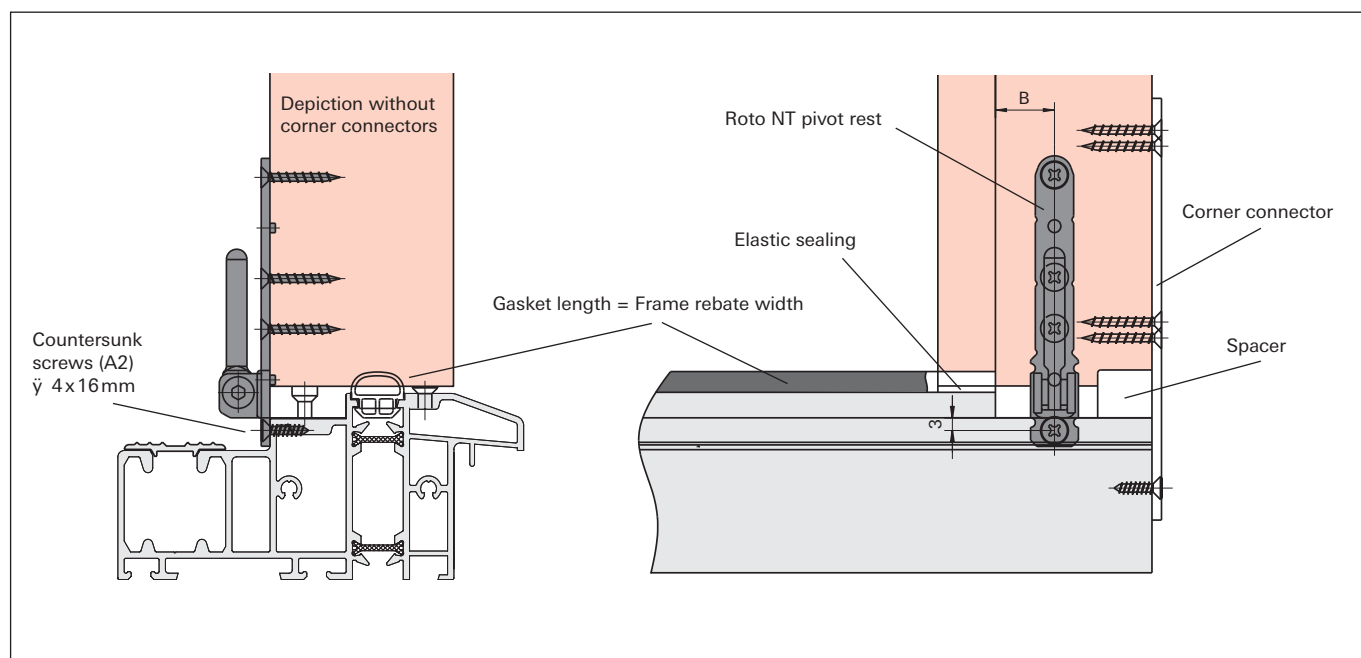
## Predrilling and screw- ing the Roto NT pivot rests and stay bearings

1. Saw off the drilling jig at the top and bottom up to the stop in accordance with the illustration. Drilling jig (frame) stay bearing/pivot rest: Mat. No.: 30 727/30 729
2. Position the drilling jig.  
Please note: On the bottom use 1 mm packer due to the 13 mm clearance!

### Overlap width

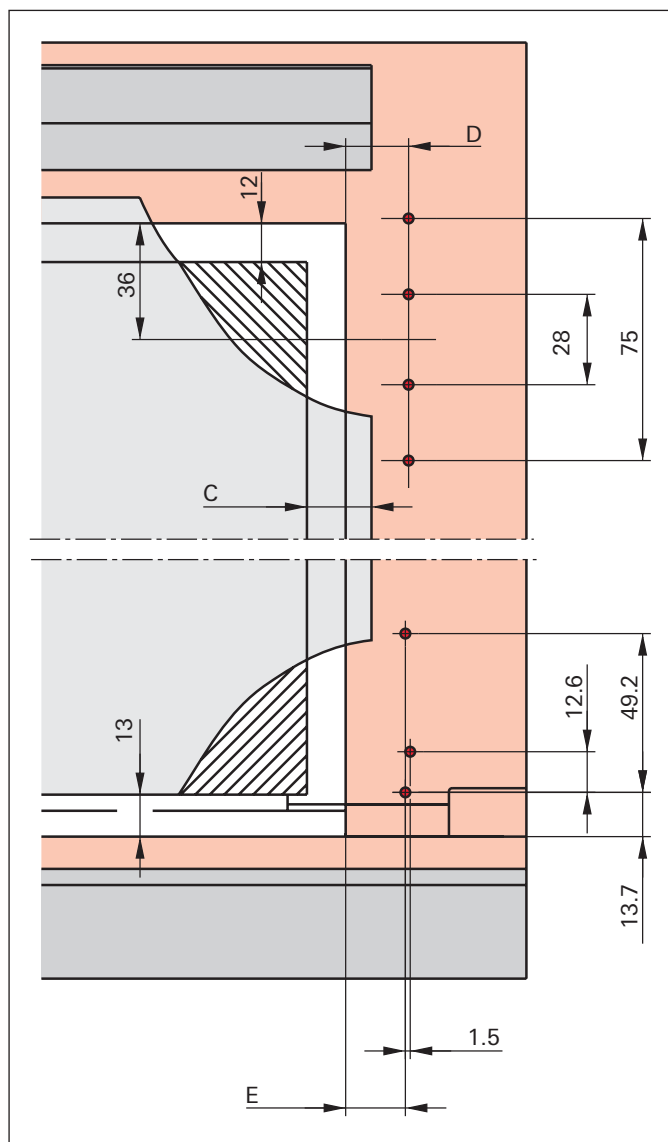
Dimension A	Dimension B
18	16.5
20	18.5
21	19.5
22	20.5

3. Predrill with  $\varnothing$  3 mm resp.  $\varnothing$  6 mm. (5 drill-holes using the drilling jig & 1 manual drill-hole).
4. Install the pivot rest / stay bearing.  
In order to ensure secure ing, please adhere to the implementation regulations for the ing of supporting, hinge sided hardware components for Turn-Only and Tilt&Turn hardware for RAL-RG 607/3 and RAL 607/13 (refer to installation instructions AB 502 GB).





## Enhanced threshold version with Roto NT Tilt&Turn sash



### Predrilling and screw- xing

#### the Roto NT pivot rests and stay bearings

1. Position the pivot rest with 1mm distance without using the drilling jig (refer to the illustration below).

#### Overlap width

Dimension C	Dimension D	Dimension E
18	17.5	16.5
20	19.5	18.5

2. Predrill with  $\varnothing$  3mm.

3. Install the pivot rest / stay bearing.

In order to ensure secure xing, please adhere to the implementation regulations for the xing of supporting, hinge sided hardware components for Turn-Only and Tilt&Turn hardware for RAL-RG 607/3 and RAL 607/13 (refer to installation instructions AB 503 GB).

#### Stay bearing A

Mat.-No.:

12/18-9 245 709

12/20-9 245 714

#### Pivot rest A

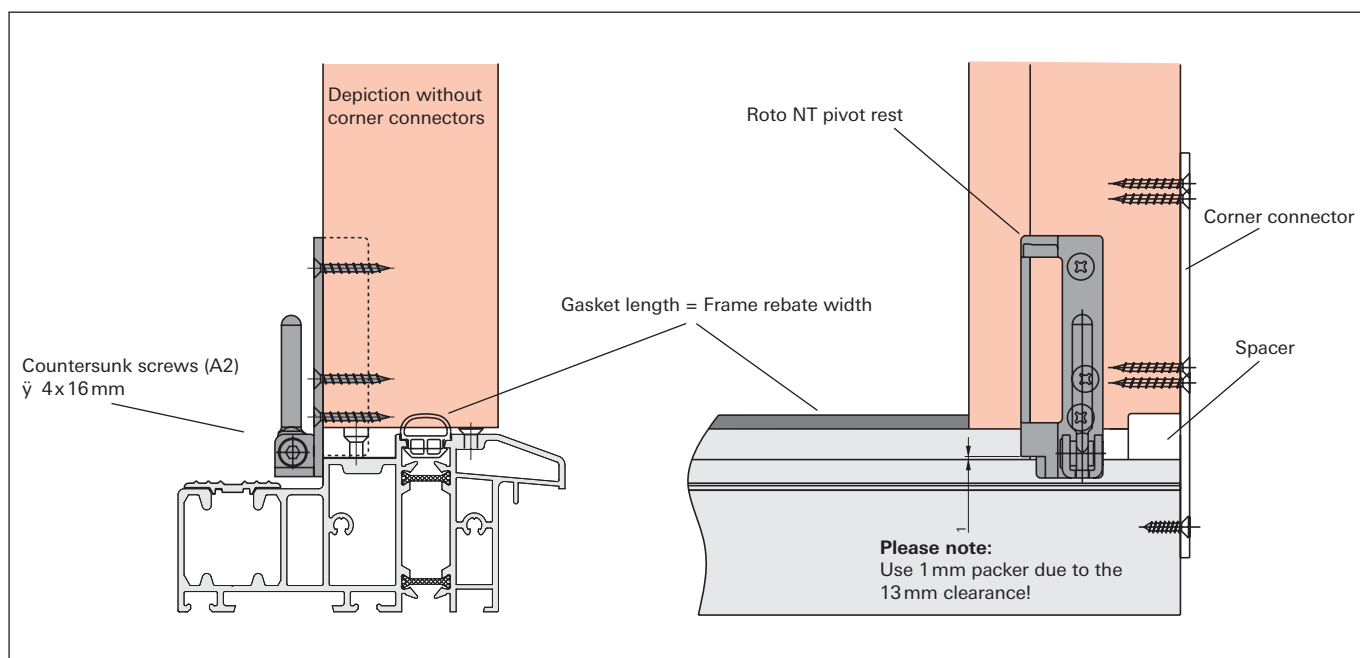
Mat.-No.:

12/18-9 L 261 911

R 261 910

12/20-9 L 262 005

R 262 004





# Accessories

## Sash retaining devices



Diagram 330

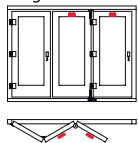


Diagram 431

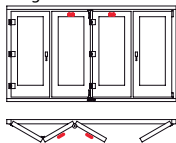


Diagram 532

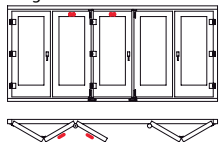


Diagram 550

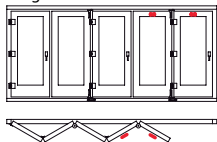


Diagram 651

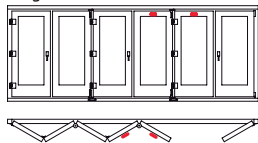


Diagram 633

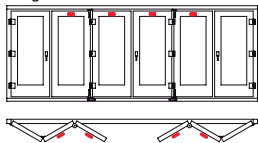


Diagram 743

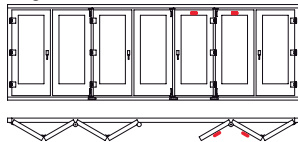


Diagram 770

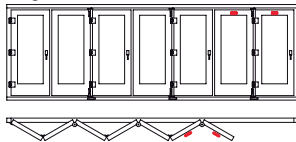
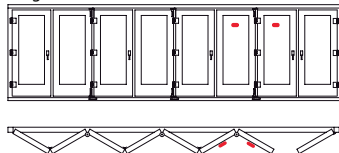


Diagram 871

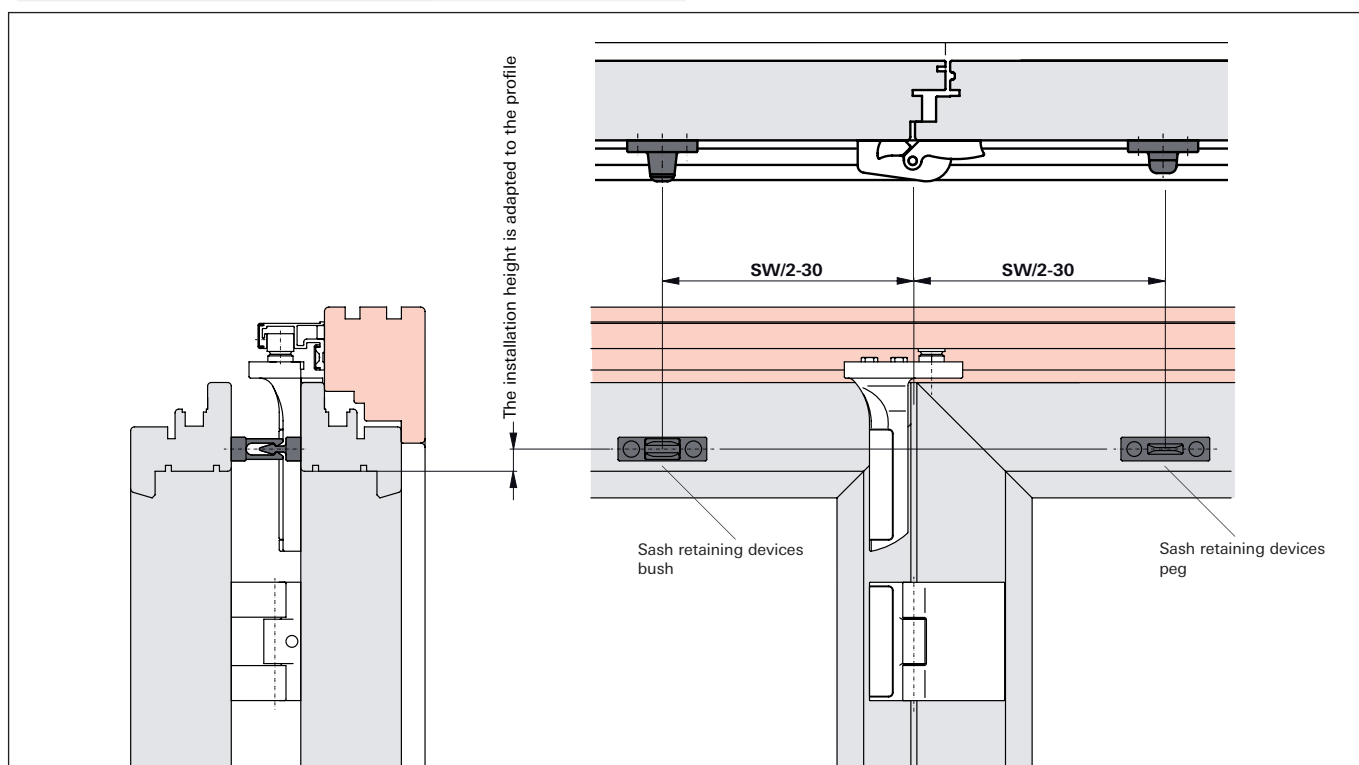


### Application of sash retaining devices

Recommended application depending on the diagram.

### Installation of sash retaining devices

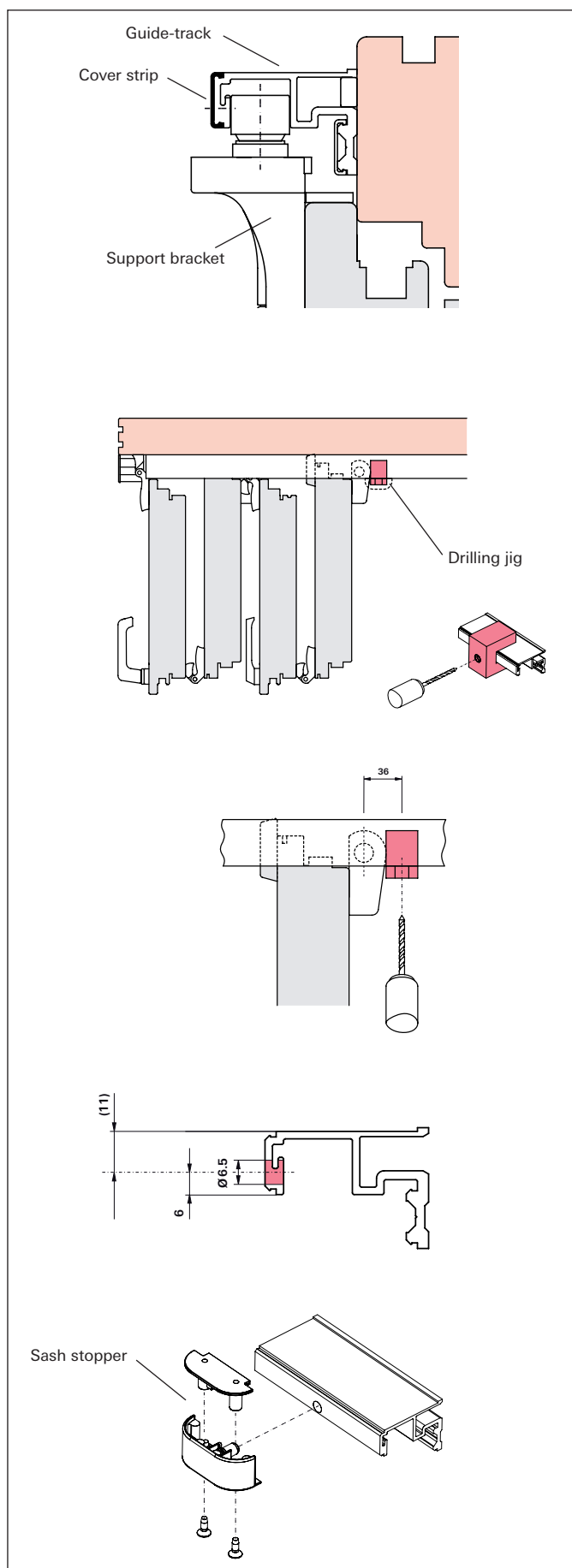
1. Locate the position in accordance with the drawing.
2. Predrill  $\varnothing$  3.5 mm
3. Screw- x the sash retaining device with  $\varnothing$  5 mm countersunk screws.





## Accessories

### Sash stoppers



#### Installation of the sash stopper

1. If necessary, remove the cover strip.
2. Open the door and push the sashes together.
3. Determine the position of the sash stopper in the open position.
4. Drill the hole in the guide track using the drilling jig (Mat. No. 469 831).
5. Mount the sash stopper and screw- x with the enclosed countersunk head screws.
6. Check that it runs smoothly.
7. Cut the cover strip to size and mount.

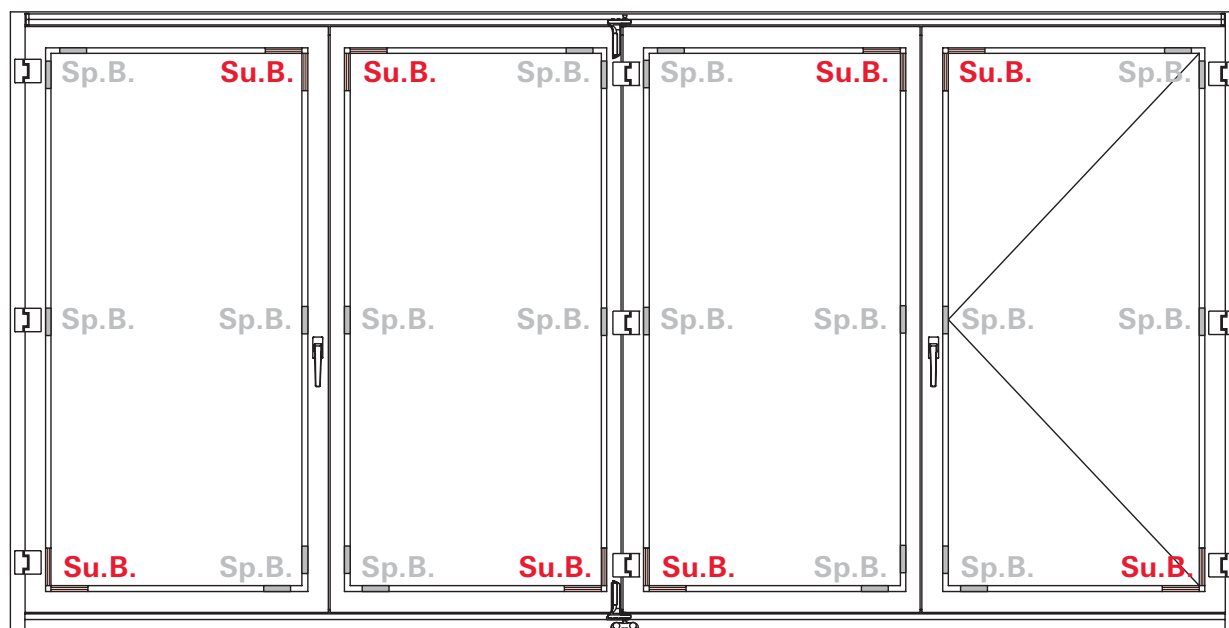


# Spacer blocking

## Guide track & roller track length



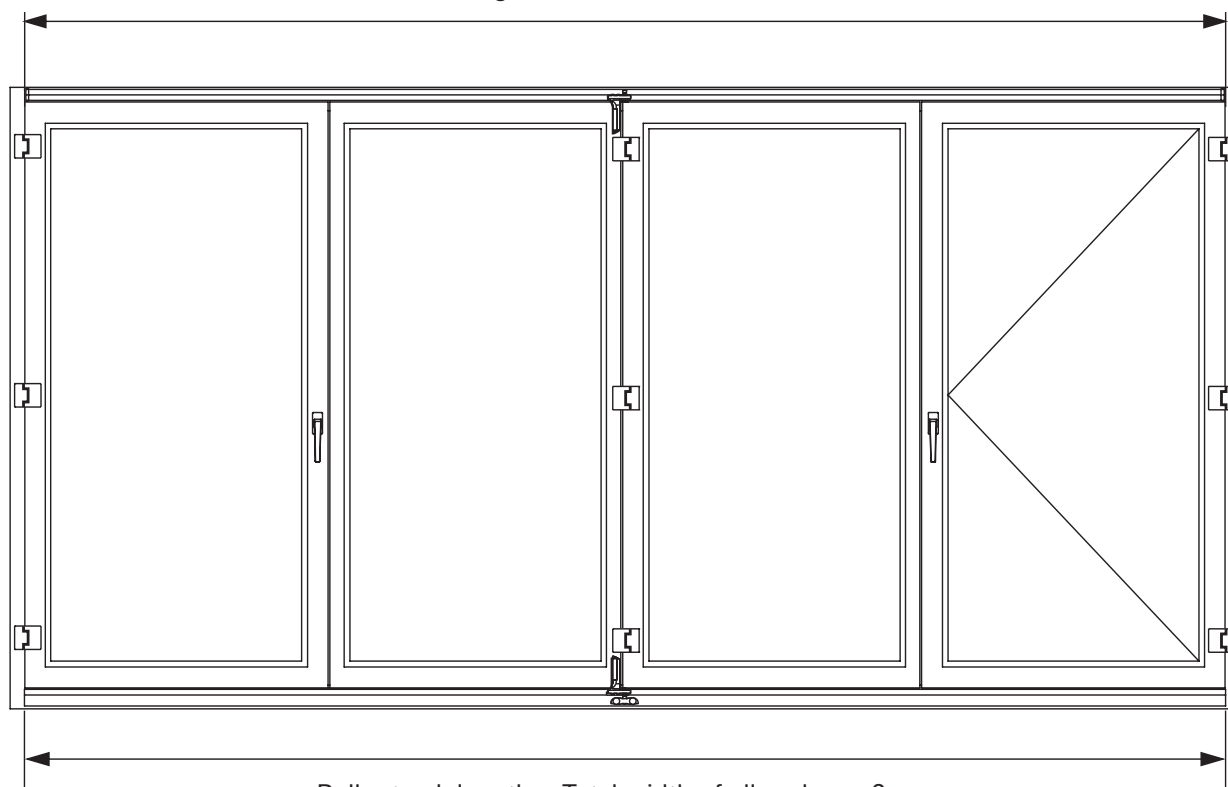
### Spacer blocking



- **Su.B.** = Support Block
- **Sp.B.** = Spacer Block

### Guide track & roller track length

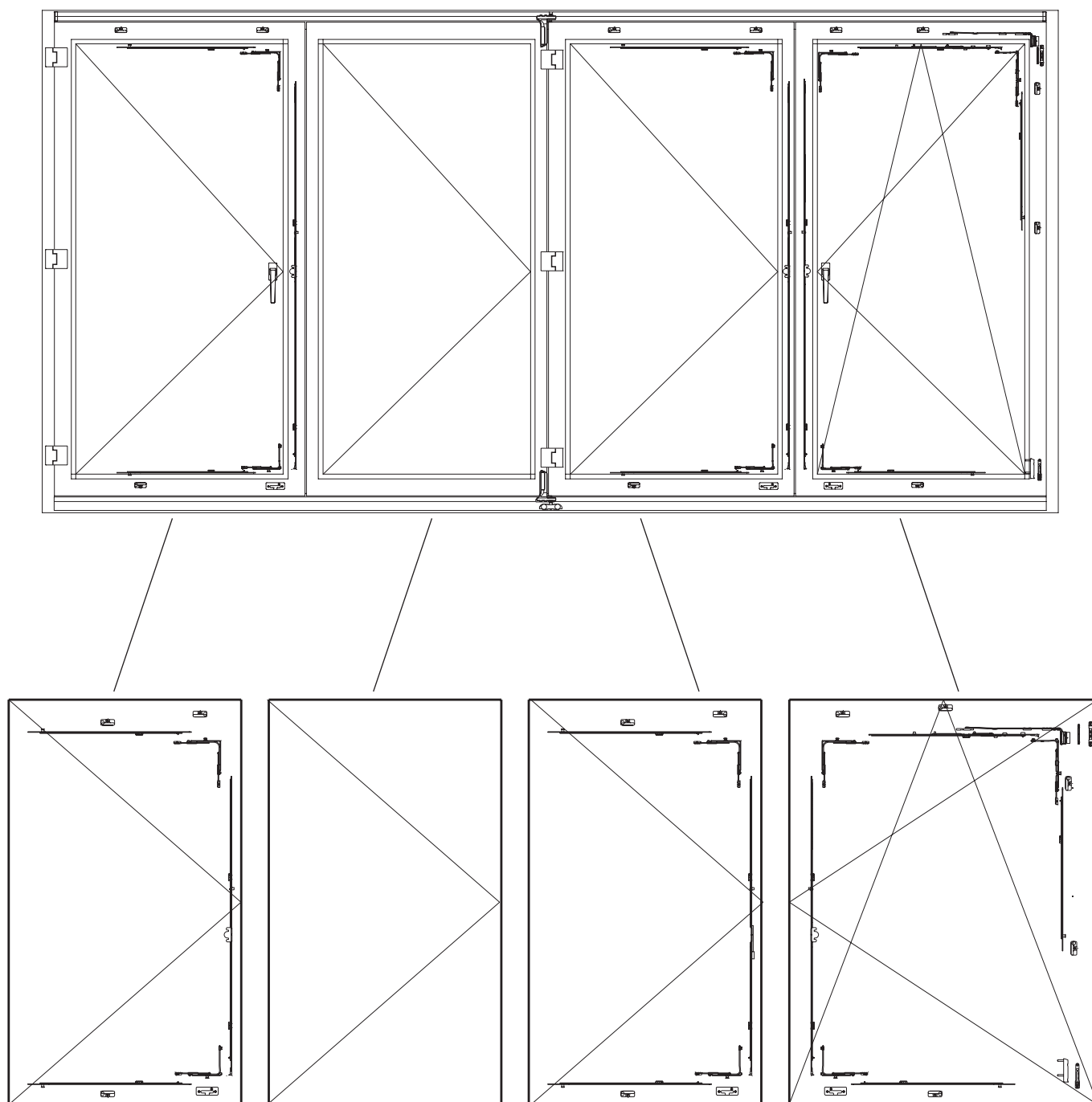
Guide track length = Total width of all sashes – 3mm



Roller track length = Total width of all sashes – 6mm

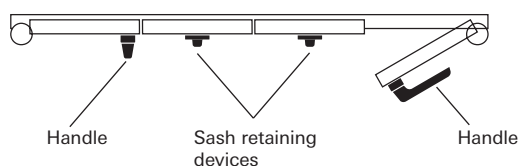


## Central locking system components (refer to Roto NT instructions AB 502 GB and AB 503 GB)

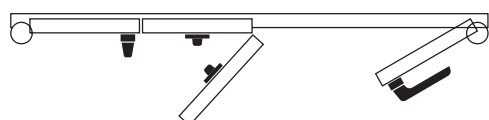




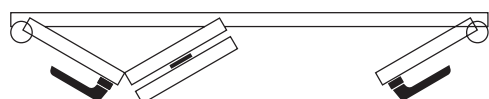
## Operation – Opening Fold&Slide doors



1. Open the active sash.



2. Turn the last sash until both bullet catch components engage in each other.

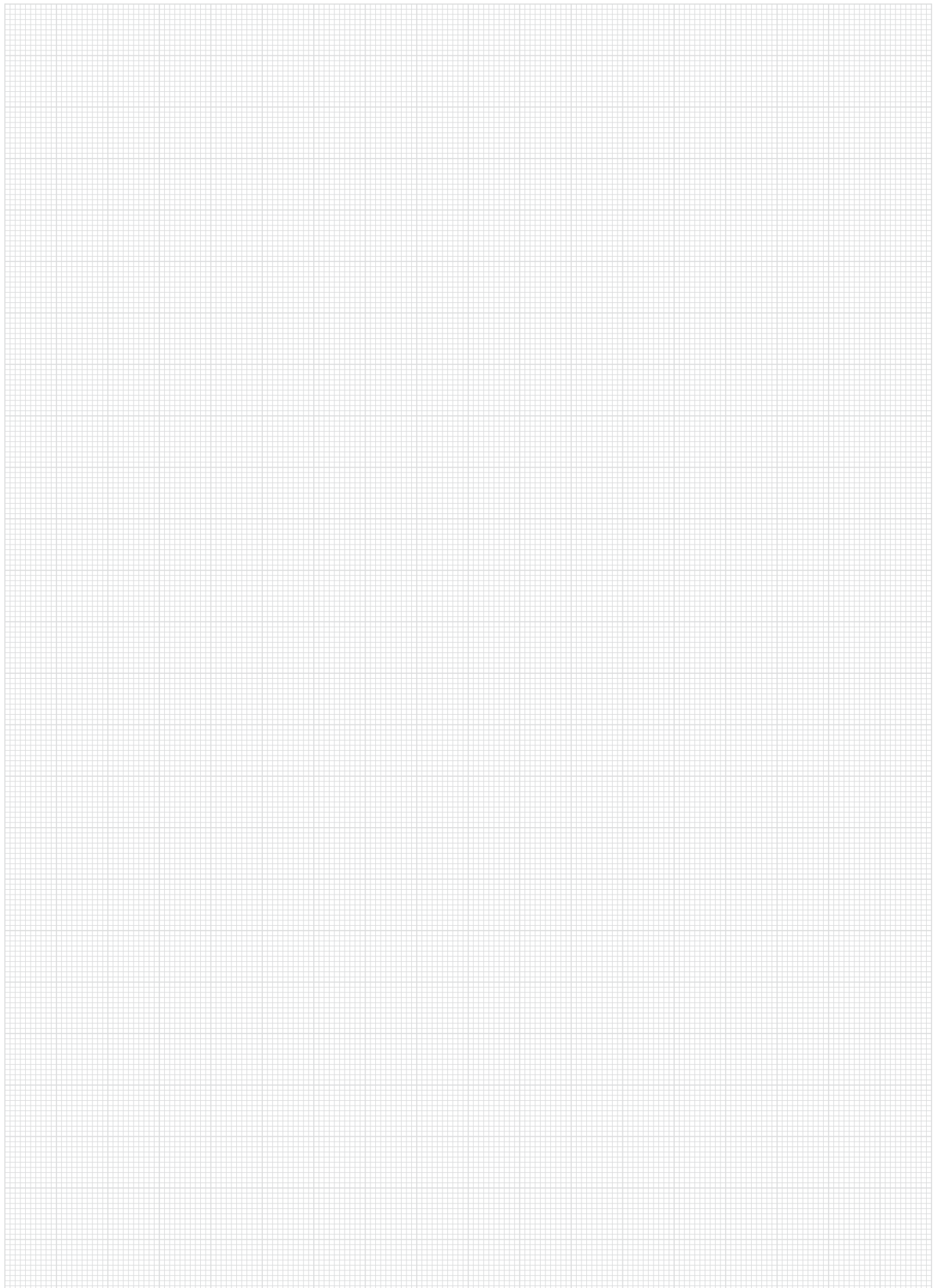


3. Unlock the rest of the sashes and fold them together

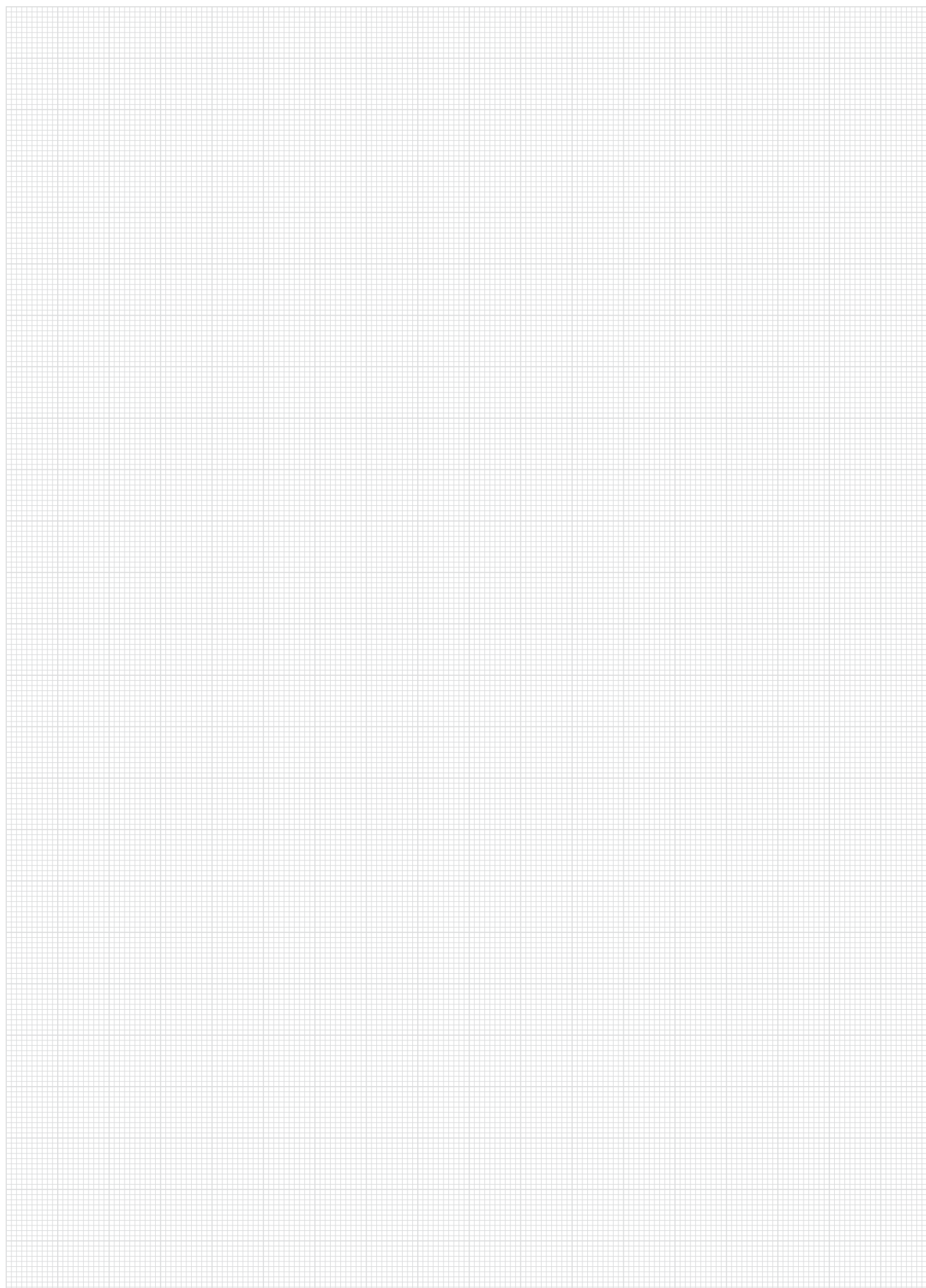
## LIST OF ABBREVIATIONS

CV	Coverage
E.TH.	Enhanced threshold
F.CL.	Frame clearance
FEH	Frame external height
FEW	Frame external width
FRH	Frame rebate height
FRW	Frame rebate width
Ill.	Illustration
K	PVC
L	Left-handed version (viewed from the inside)
Mat.no.	Material number
OH	Overlap height
R	Right-handed version (viewed from the inside)
SG	Shadow gap
SH	Sash height
SRH	Sash rebate height
SRW	Sash rebate width
SW	Sash width
Ti.	Timber
TSFF	Top-surface of finished door











# COMPETENCE WITHOUT BOUNDARIES

## International subsidiaries:

### Germany

Roto Frank AG  
Velbert factory  
Eintrachtstrasse 95  
42551 Velbert  
Tel +49 2051 203-1  
Fax +49 2051 203-251

### Belgium

S.A. Roto Frank N.V.  
Rue du Bosquet 1  
Zoning Industriel II  
1400 Nivelles  
Tel +32 67 894140  
Fax +32 67 841456  
E-Mail info.bel@roto-frank.com

### China

Beijing Roto Frank Building  
Materials Co., Ltd.  
Xindudongzhan,  
East of Xisanqi, Haidian District  
100096, Beijing  
Tel +86 10 82950045/46  
Fax +86 10 82920115  
E-Mail info.china@roto-frank.com

### France

Roto Frank Ferrures S.A.S.  
42 rue de Longchamp  
57502 Saint Avold Cédex  
Tel +33 3 87292440  
Fax +33 3 87292444

### Great Britain

Roto Frank Ltd.  
Swift Point  
Rugby, CV21 1QH  
Tel +44 1788 558600  
Fax +44 1788 558605  
E-Mail info.uk@roto-frank.com

### Italy

Roto Frank Italia Srl  
Via delle Industrie Due, 8  
30020 Meolo (Ve)  
Tel +39 0421 618-211/-616  
Fax +39 0421 618-455  
E-Mail info.it@roto-frank.com

### Netherlands

Roto Frank B.V.  
Dorpsstraat 134  
3991 BZ Houten  
Tel +31 30 6385550  
Fax +31 30 6342840  
E-Mail info.nl@roto-frank.com

### Austria

Roto Frank Austria GmbH  
Lapp-Finze-Strasse 21  
8401 Kalsdorf  
Tel +43 3135 504-0  
Fax +43 3135 52727

### Poland

Roto Frank  
Okucia Budowlane Sp z oo  
Wal Miedzeszynski 402  
03-994 Warsaw  
Tel +48 22 87216-00/-04  
Fax +48 22 87216-11  
E-Mail info.pl@roto-frank.com

### Romania

Roto Romania S.r.l.  
Com. Pantelimon,  
Bd. Biruintei, No. 102  
Jud. Ilfov, 077145  
Tel: +40 21 3007400  
Fax: +40 21 3007401  
E-Mail info.ro@roto-frank.com

### Russia

Roto Frank AG  
Kosmodamianskaja nab. 52,  
Geb. 1  
113054 Moscow  
Tel +7 095 96124-27/-30  
Fax +7 095 96124-31  
E-Mail info@roto.ru

### Switzerland

Roto Frank AG  
Bernstrasse 390  
8953 Dietikon  
Tel +41 44 7458555  
Fax +41 44 7458556  
E-Mail info.ch@roto-frank.com

### Spain

Roto Frank S.A.  
C/ Ca n'Esteve No. 4B  
08160 Montmeló (Barcelona)  
Tel +34 93 5689048  
Fax +34 93 5689092  
E-Mail info.sp@roto-frank.com

### Turkey

Roto Frank Ltd. Sti.  
Alemdağ Cad.  
Site Yolu No. 10  
34768 Ümraniye - Istanbul  
Tel +90 216 6340901  
Fax +90 216 6341578  
E-Mail info.tr@roto-frank.com

### Hungary

Roto Elzett  
Vasalatkereskedelmi Kft.  
9461 Lövö  
Kossuth u. 25  
Tel +36 99 534-400  
Fax +36 99 367-132  
E-Mail info.hun@roto-frank.com

### USA

Roto Frank of America, Inc.  
14 Inspiration Lane  
Chester, CT 06412  
Tel +1 860 526 4996  
Fax +1 860 526 8390  
E-Mail info.usa@roto-frank.com

## International representatives:

### Estonia

Roto Frank Ehitusrautised OÜ  
Peterburi tee 81-512  
11415 Tallinn  
Tel +372 632 6980  
Fax +372 632 6980  
E-Mail roto@uninet.ee

### Greece

Eurotechnica  
Industrial area of Thessalonica A7  
O.T. 18 No. 34  
57022 Sindos/P.O. Box 198  
Tel +30 2 310 796950  
Fax +30 2 310 796783  
E-Mail info@eurotechnica.gr

### Latvia

Roto Frank  
pārstāvniecība Latvijā  
Vidus prosp. 59  
2010 Jūrmala  
Tel +371 7752394  
Fax +371 7752394  
E-Mail uldis.kreslins@rotofrank.lv

### Lithuania

Roto Frank Atstovybė  
Lietuvoje  
Verkiu 34-200  
LT 08221 Vilnius  
Tel +370 2 700751  
Fax +370 2 700746  
E-Mail rotofrank@takas.lt

### Slovenia

Roto Lož d.o.o.  
Cesta 19. oktobra 52  
1386 Stari trg pri Ložu  
Tel +386 1 7095181  
Fax +386 1 7095190

### Slovenia

Kovinoplastika Lož, d.d.  
Lož, Cesta 19. oktobra 57  
1386 Stari trg pri Ložu  
Tel +386 1 7095100  
Fax +386 1 7058466  
E-Mail info@kovinoplastika.si

### Czech Republic

Roto Nové Město  
Kříčkova ulice 373  
59231 Nové Město na Moravě  
Tel +420 566 652411  
Fax +420 566 652413  
E-Mail nove.mesto@roto-nm.cz

### Ukraine

Roto Frank AG  
ul. Marina Raskowoj, 17-612  
02002 Kiev  
Tel/Fax +380 44 5010418  
Tel/Fax +380 44 5685396  
E-Mail rotokiev@adamant.net

### Belarus

Roto Frank AG  
Str. R. Luxemburg  
220036 Minsk  
Tel +375 17 2561911  
Fax +375 17 2561912  
E-Mail rotominsk@tut.by

## Roto Frank AG – headquarters

Stuttgarter Strasse 145–149 • 70771 Leinfelden-Echterdingen • Germany  
Telephone: +49 711 7598-0 • Telefax: +49 711 7598-253  
info@roto-frank.com • www.roto-frank.com

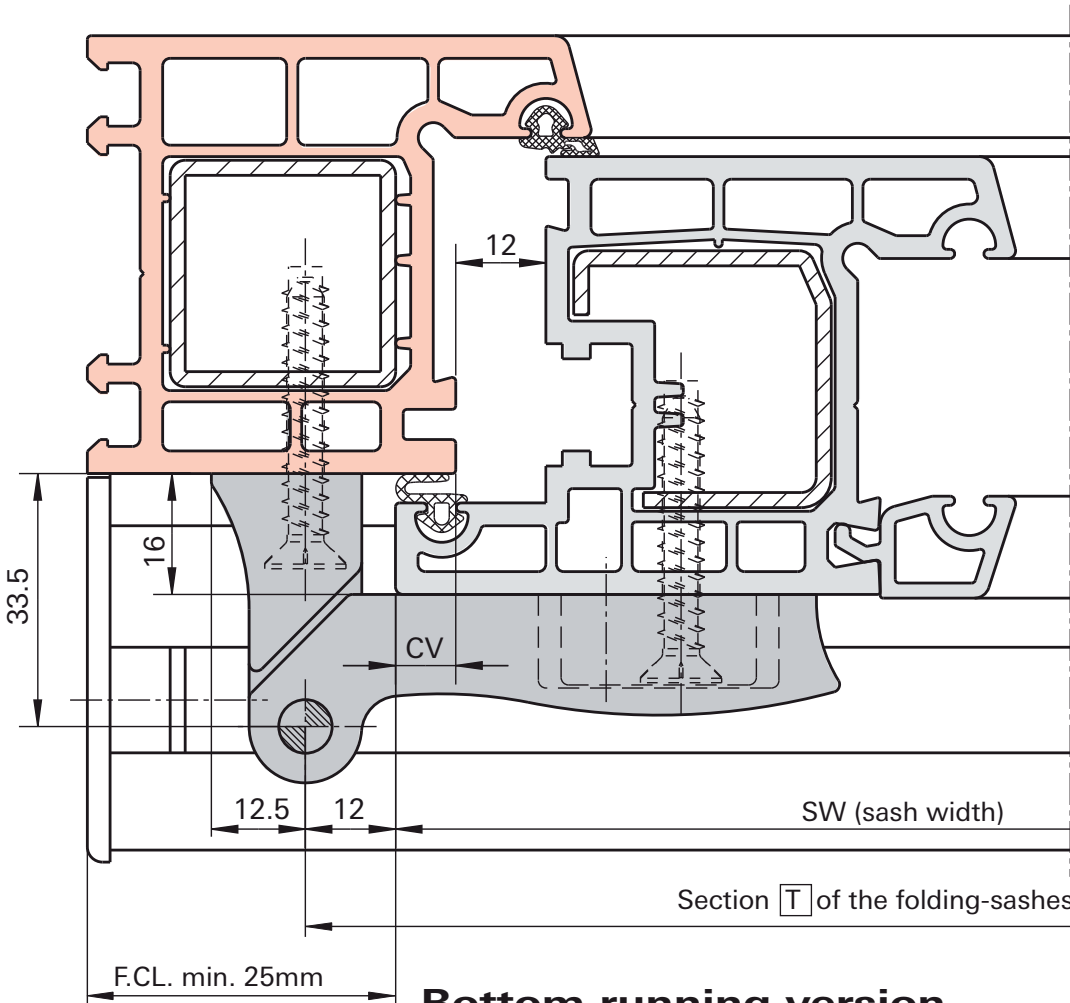
WE OPEN SPACE



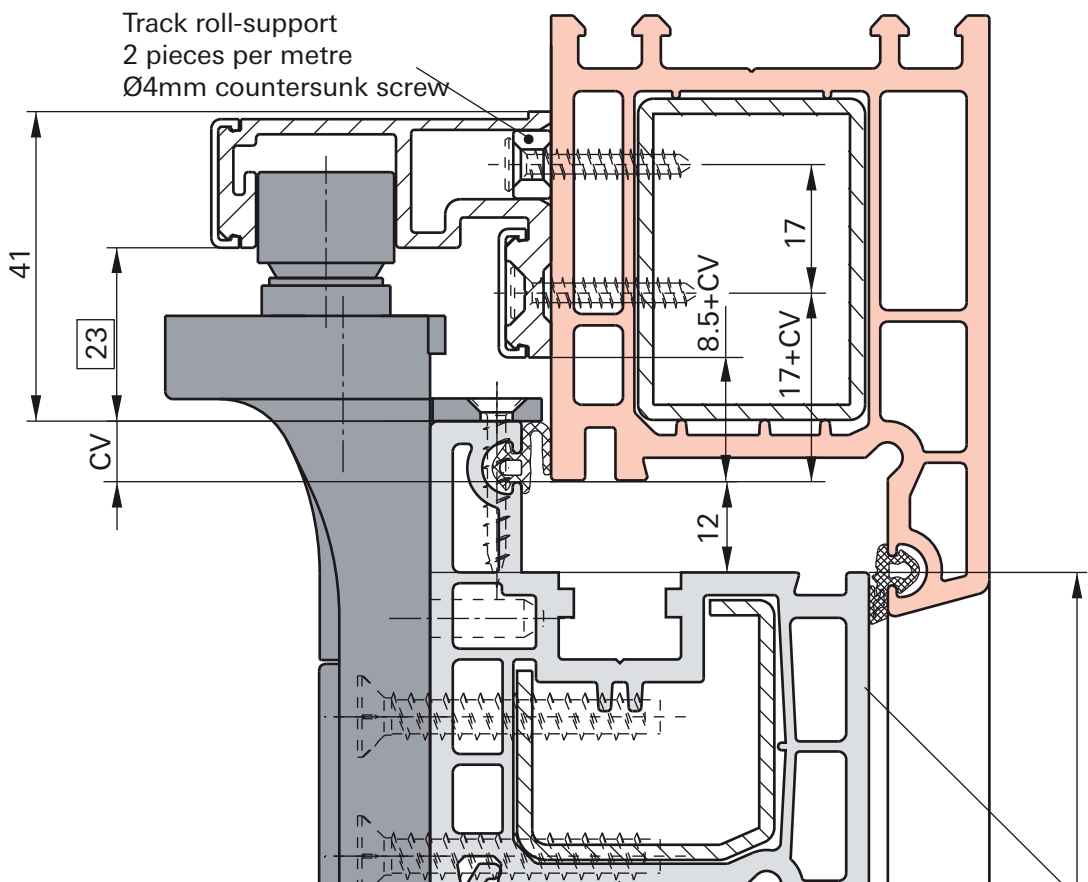


Diagram 431

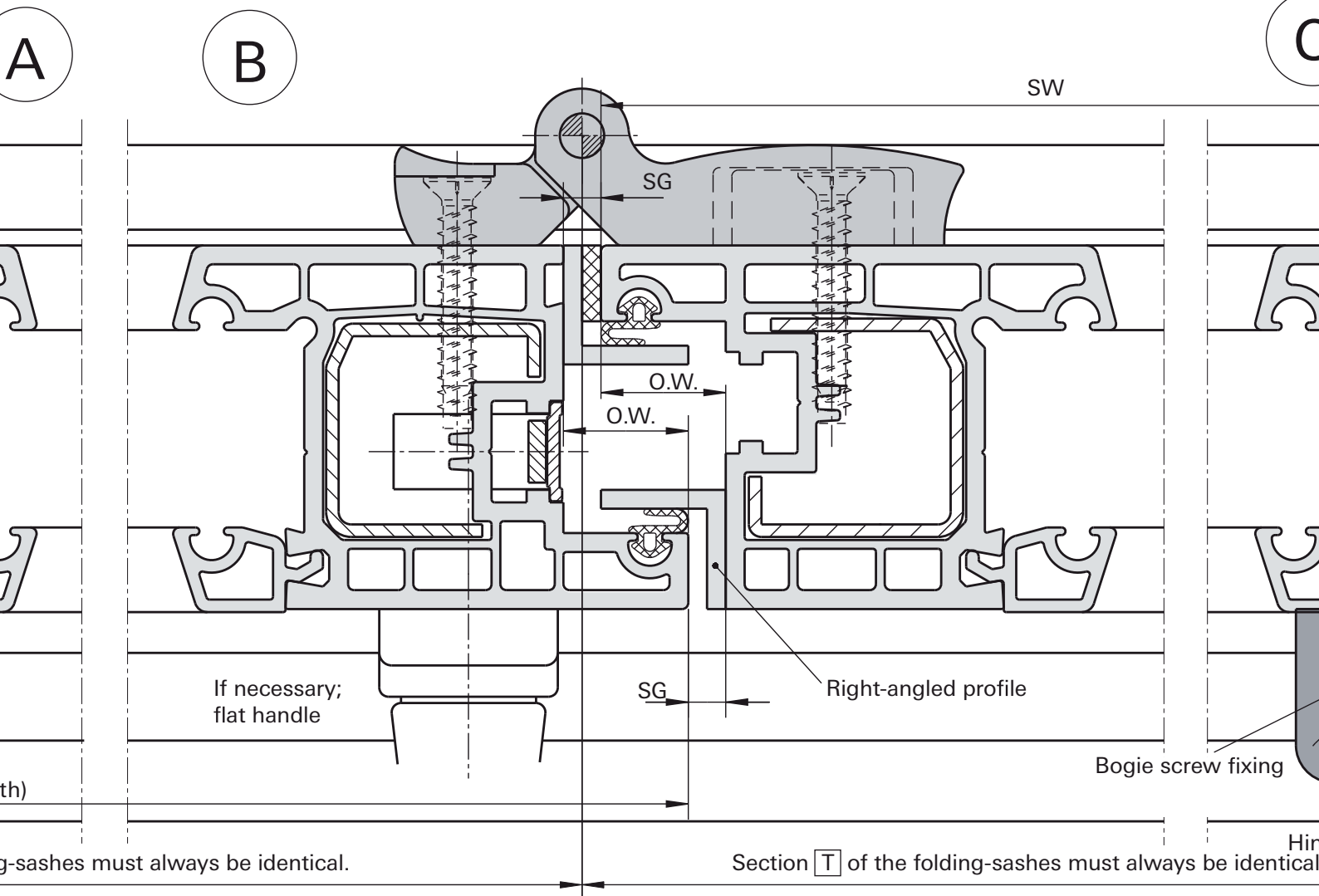
A



Bottom running version



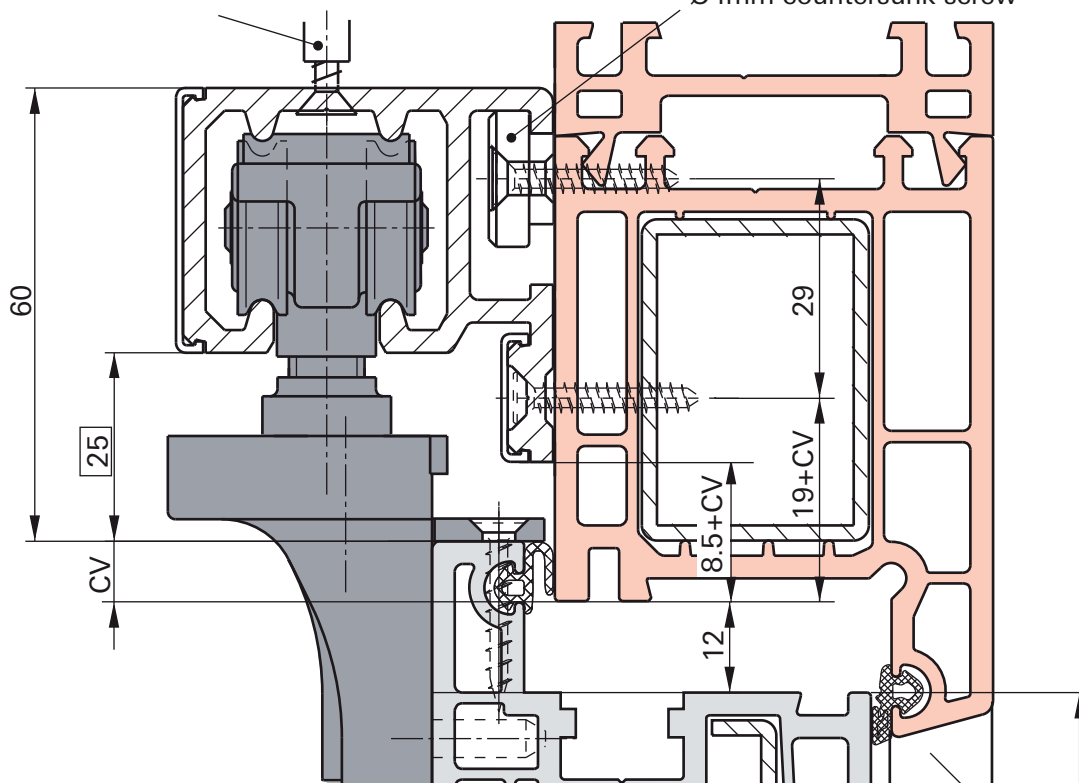




## Top running version

On top running versions the roller track must be fixed every 500mm.

Roller track PVC roll-support  
2 pieces per metre  
Ø4mm countersunk screw

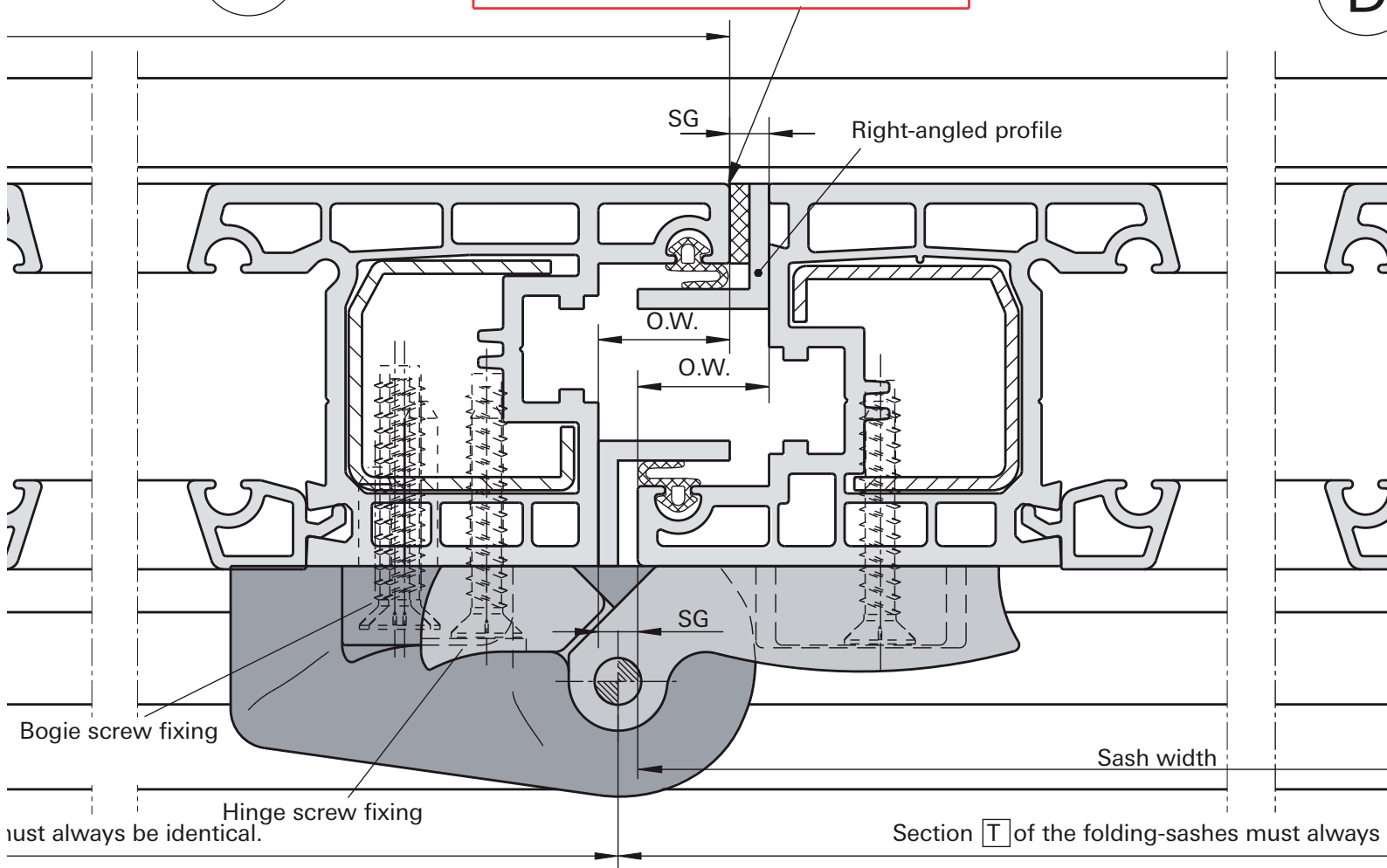


Mitre-  
reinfor  
steel in  
vicinity  
the sup  
bracke

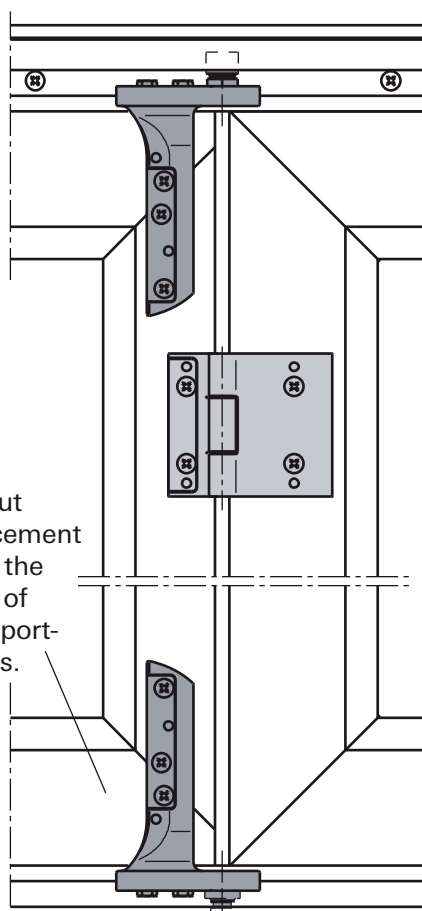


C

\* In the vicinity of the support-brackets it may be necessary to round off the profile at rebate height top and bottom for the gasket. Approx. 4mm radius



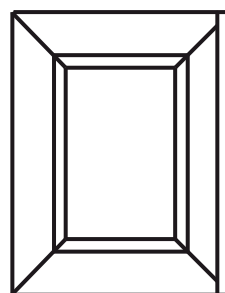
Mitre-cut reinforcement steel in the vicinity of the support-brackets.



General:

Due to better load distribution the "bottom-running" version is favoured.

Upon installing a folding system, special attention must be paid to the fixing of the frame to the masonry brickwork in order to prevent possible bending. Pack up the entire length of the bottom roller track immediately after installation.



Caution: Bear in mind when welding

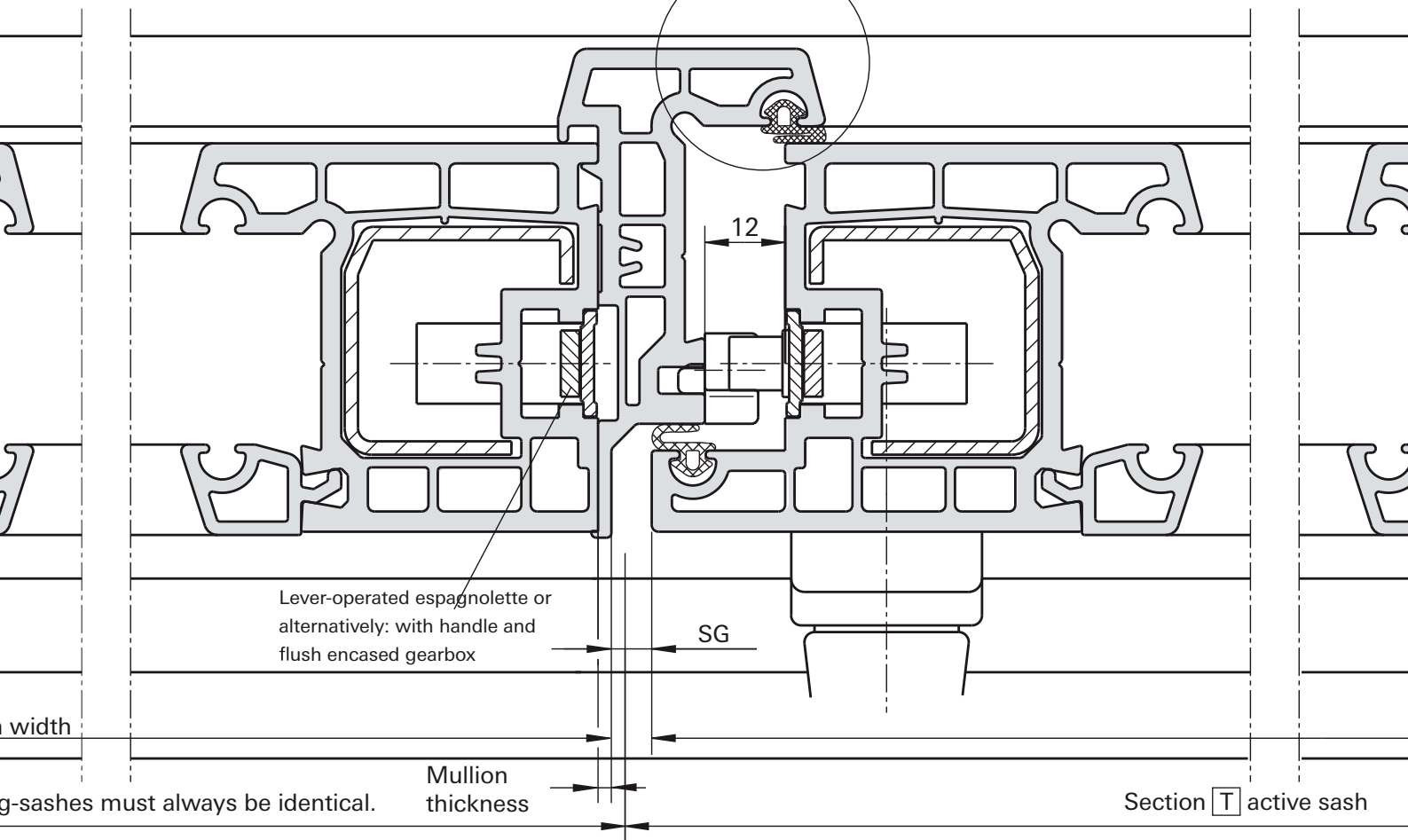
Sash B-E / C-D

Cut off overlap after welding!



D

The floating-mullion end cover cap must be rounded off to the rebate height both on top and bottom in this area.



E

Diagram 321, 532, 541, 743 & 761

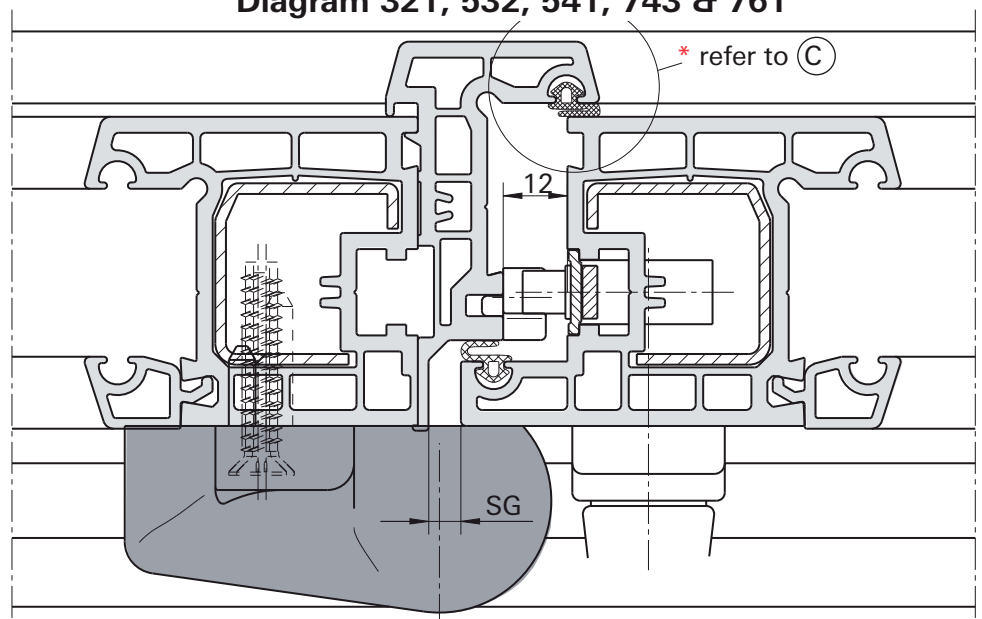
e "bottom-running"

special attention  
frame to the masonry  
visible bending.  
bottom roller track

in mind when welding!

o

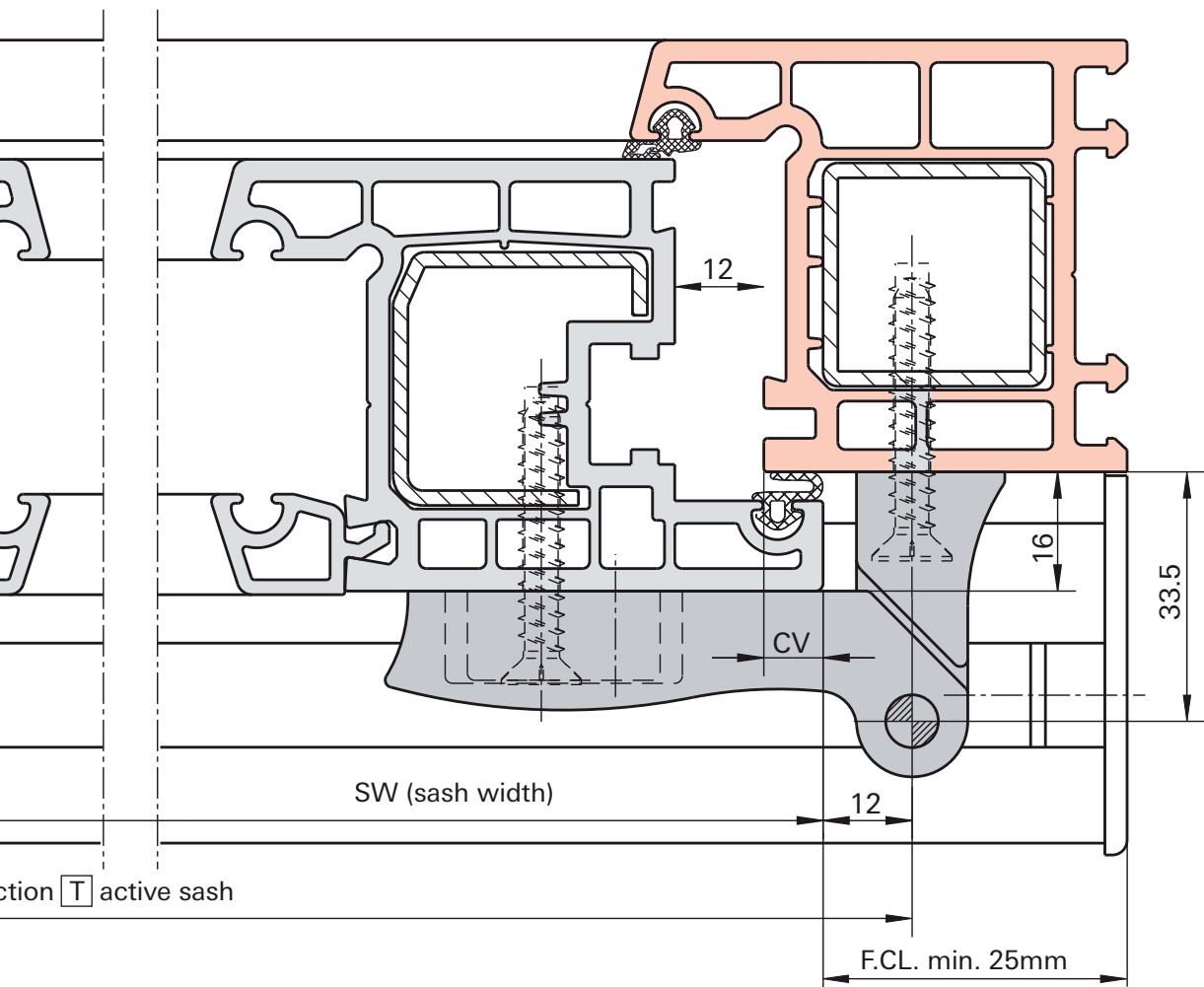
o after welding!



Countersunk screw  
Ø4mm

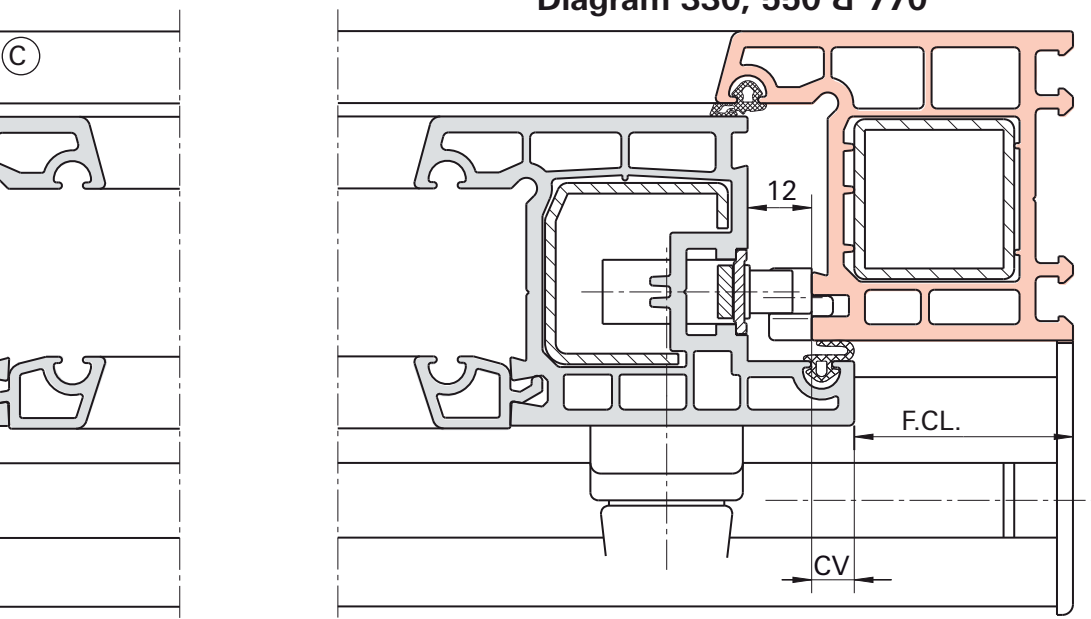


As

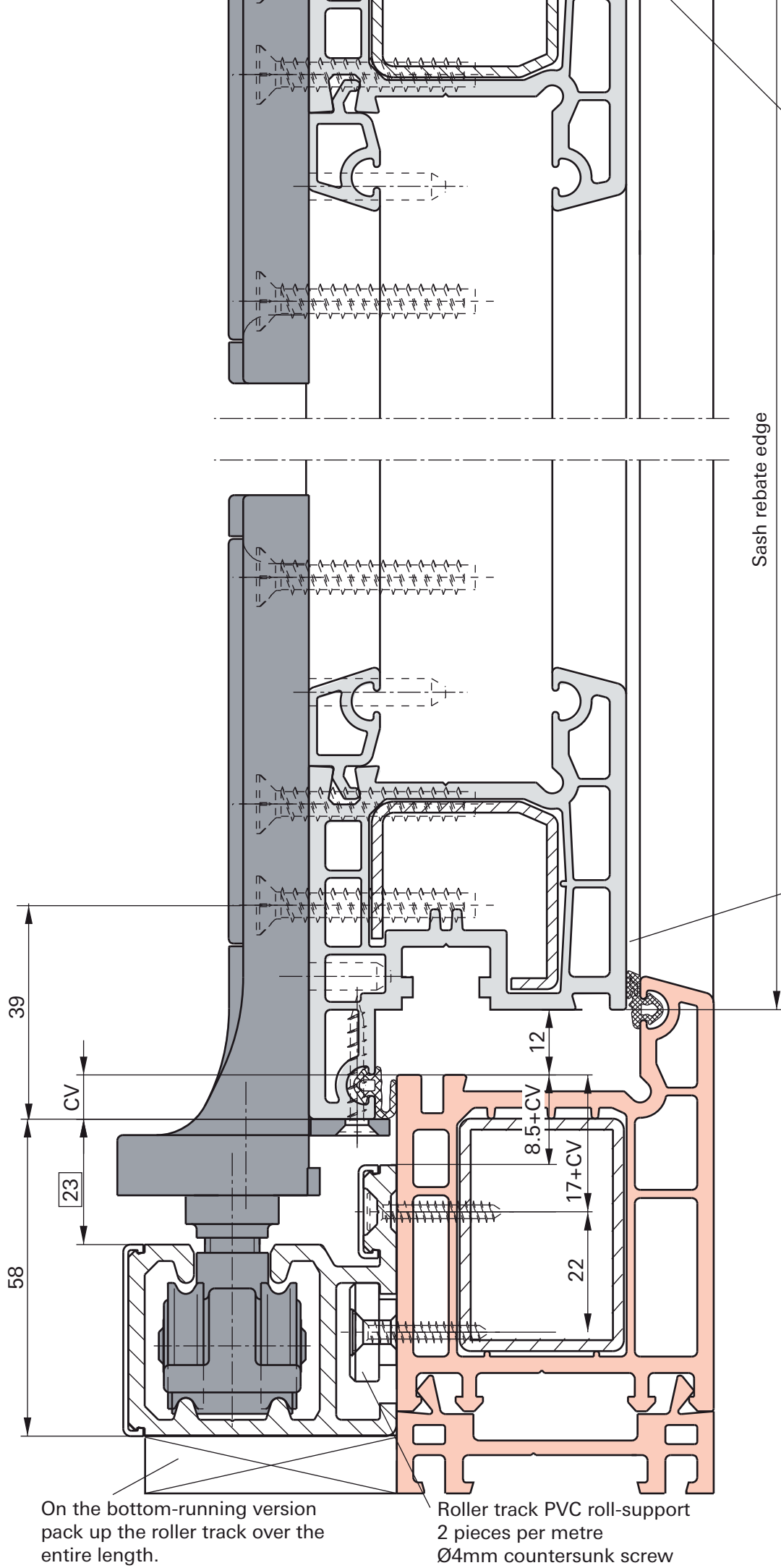


F

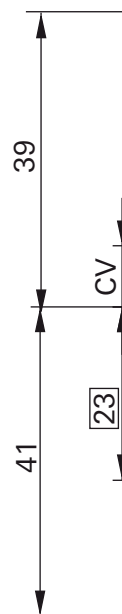
Diagram 330, 550 & 770



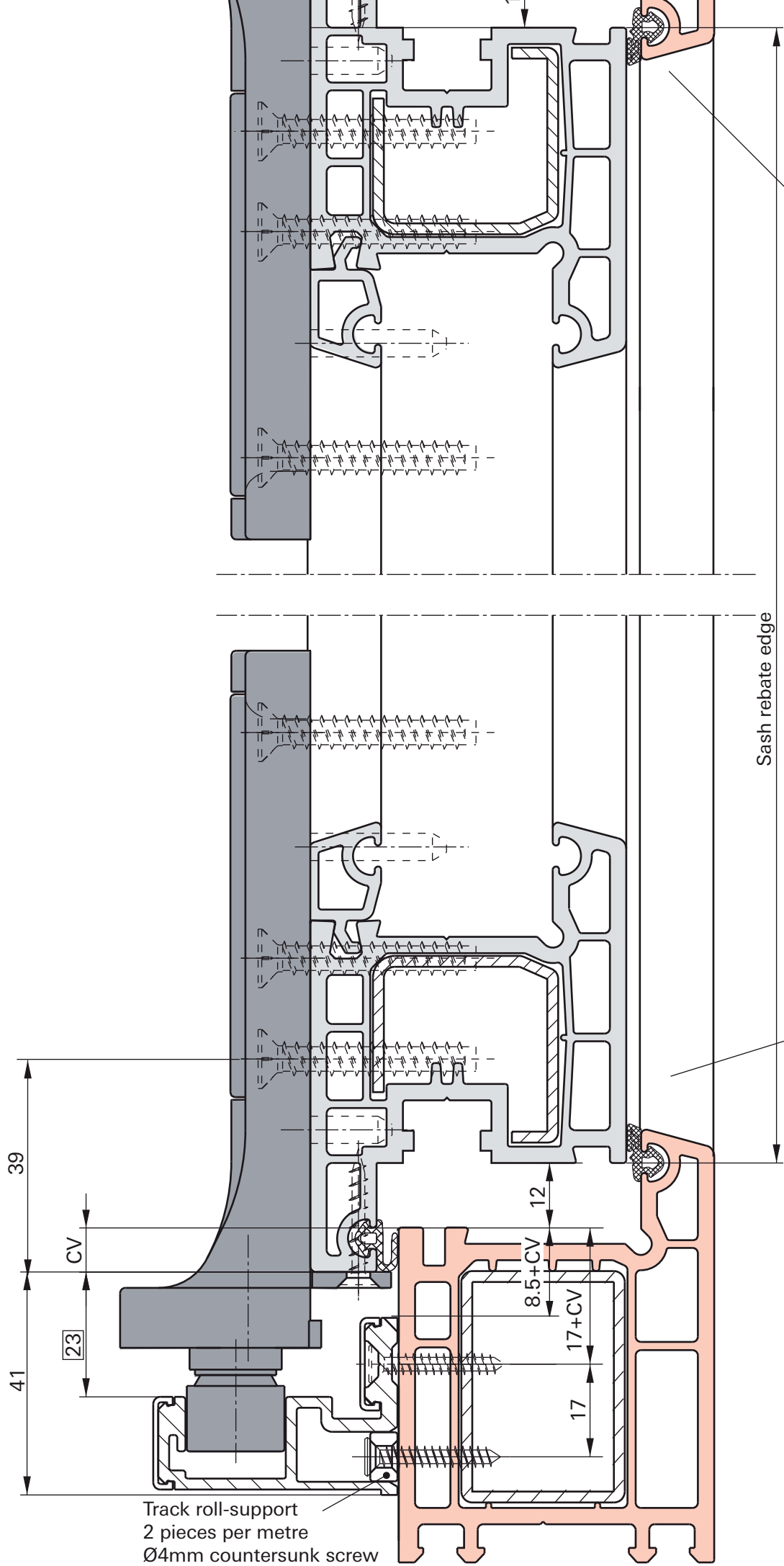




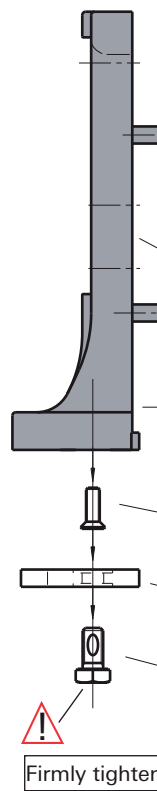
\* In the vicinity of the support-brackets it may be necessary to round off the profile at rebate height top and bottom for the gasket. Approx. 4mm radius





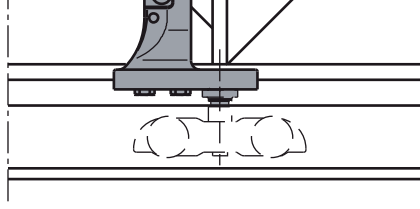


\* In the vicinity of the support-brackets it may be necessary to round off the profile at rebate height top and bottom for the gasket. Approx. 4mm radius



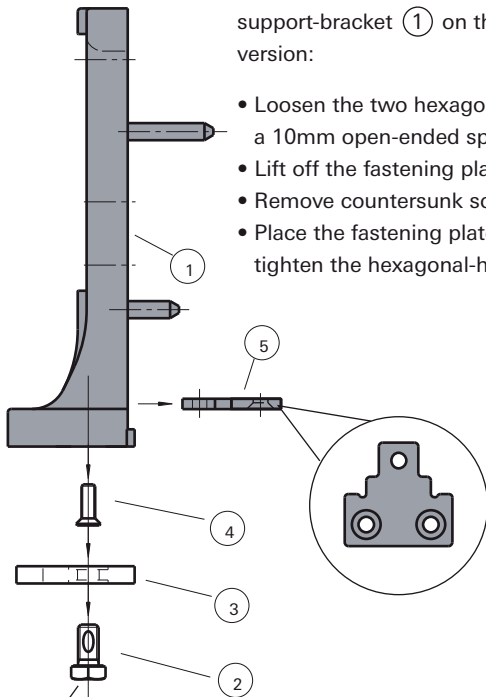
Firmly tighten





How to remove the retainer brace from the support-bracket (1) on the enhanced threshold version:

- Loosen the two hexagonal-head bolts (2) with a 10mm open-ended spanner.
- Lift off the fastening plate (3).
- Remove countersunk screw (4) and retainer brace (5).
- Place the fastening plate (3) on top again and tighten the hexagonal-head bolts (2).

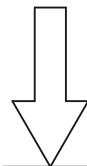


Firmly tighten the screw (2) with a 10mm open-ended spanner!

Frame rebate edge of the E.TH.

Interior covering  
e.g. tiles & adhesive

TSFF  
internal



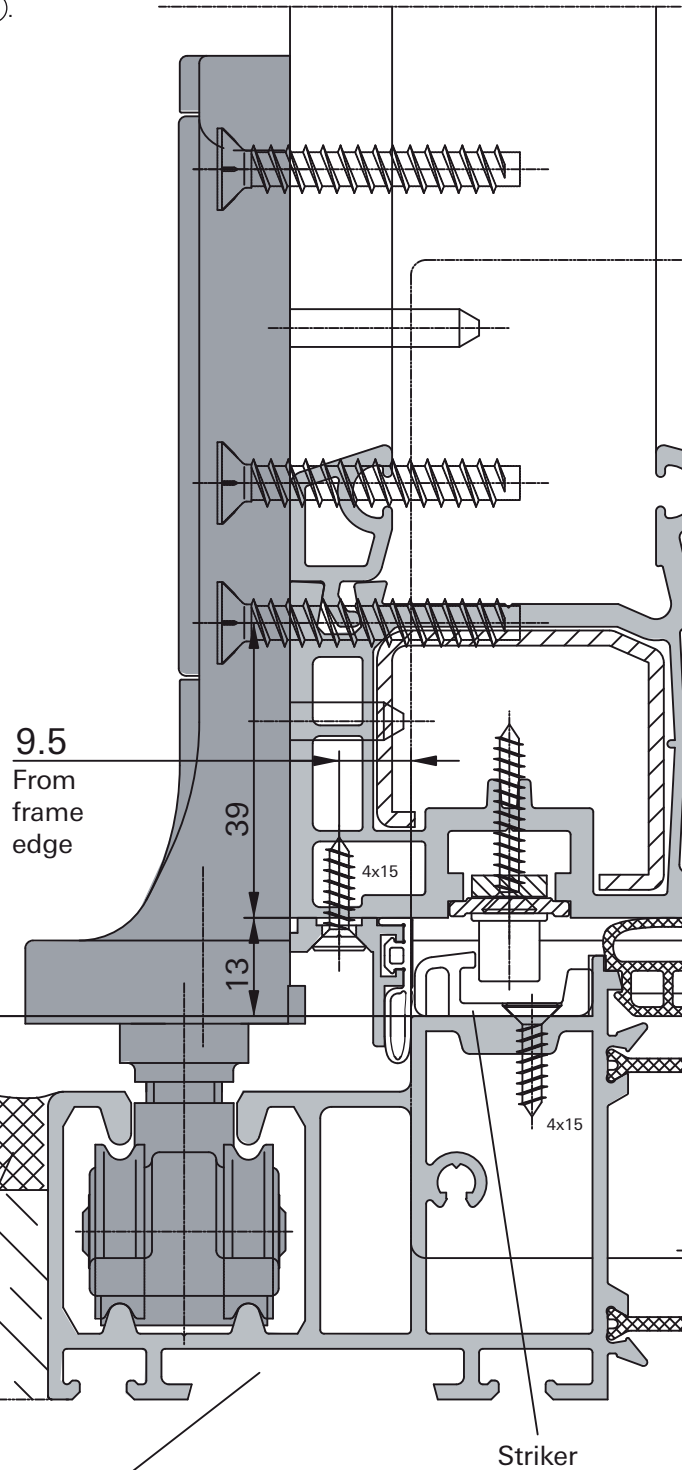
41

Elastic sealing  
Screed

10

9.5  
From  
frame  
edge

## Enhanced threshold version (Installation suggestion)



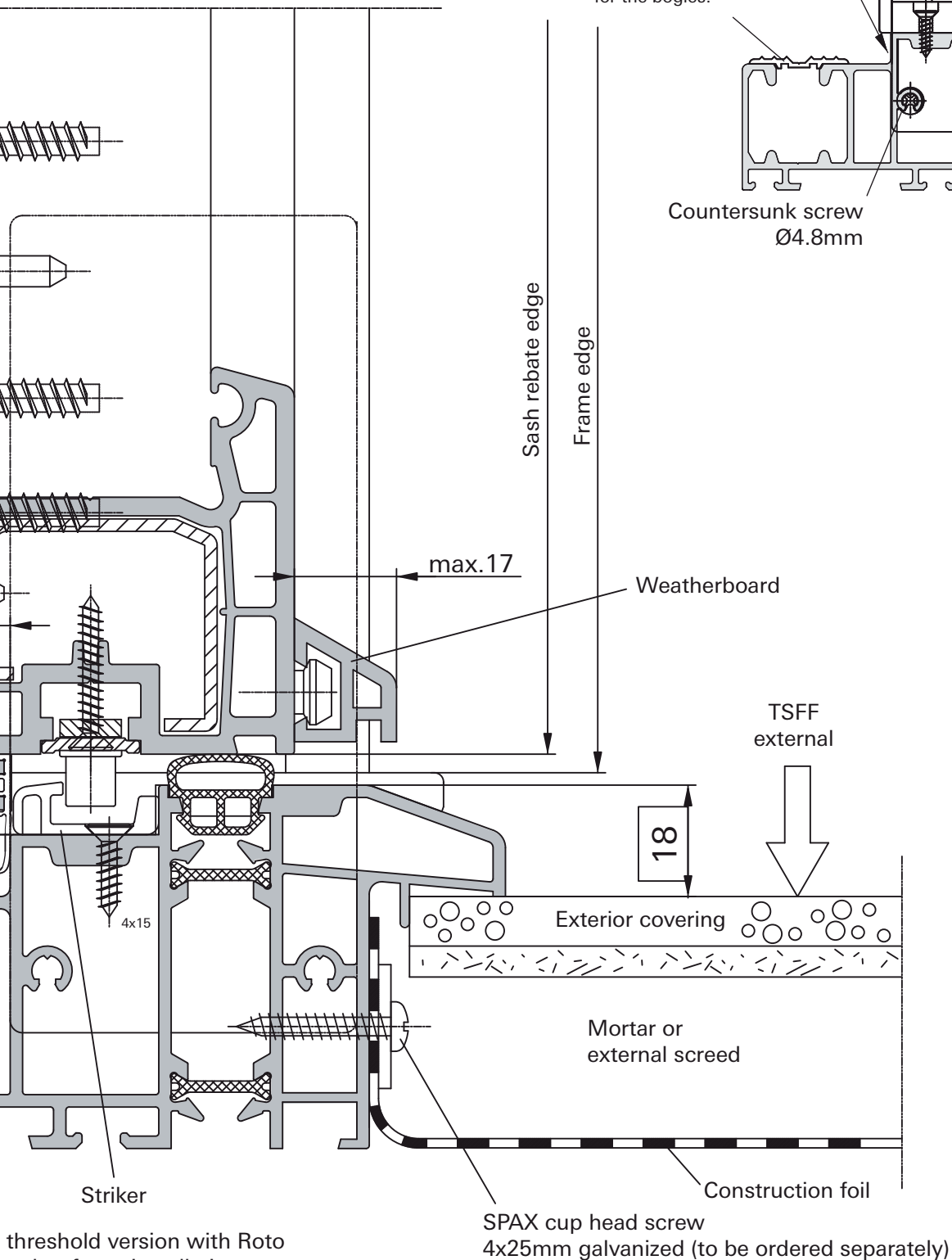
- Extension with additional profile from Veka or Schueco possible.
- Installation of anchor bolts possible.

For enhanced threshold version with NT Tilt & Turn sash refer to installation instructions AB 528 GB page 31.

necessary to round off the profile at rebate height top and bottom for the gasket. Approx. 4mm radius



## Threshold version (E.TH.) (Installation suggestion)



Pa  
Pro  
ins

App

Sas

Sas

Sas

Ove

Ab

CV

F.CL

SW

SH

SRV

SRH

E.TH

TSF

FEW

FEH

FRV

SG

O.W

O.H

\*Fc  
20

\*\*Se  
m

F.CL

O.W

SG =

Sch

Right  
sche  
A m  
impl  
In th  
enab  
As, f

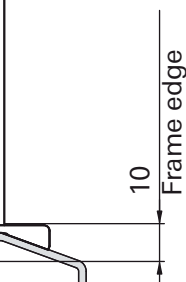
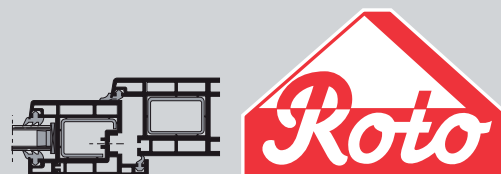
DIAG





# Patio 6080

## Profile drawing supplement for the installation instructions



### Application range

Sash rebate width:	450 to 900mm Active sash up to 1200mm
Sash rebate height:	800 to 2400mm
Sash weight:	max. 80kg
Overlap height:	16 to 25mm

### Abbreviations

CV	Coverage
F.CL.	Frame clearance
SW	Sash width
SH	Sash height
SRW	Sash rebate width
SRH	Sash rebate height
E.TH.	Enhanced threshold
TSFF	Top-surface of finished-floor
FEW	Frame external width
FEH	Frame external height
FRW	Frame rebate width
SG	Shadow gap
O.W.	Overlap width
O.H.	Overlap height

### General

Due to better load distribution the "bottom-running" version is favoured. Upon installing a folding system, special attention must be paid to the fixing of the frame to the masonry brickwork in order to prevent possible bending. Pack up the entire length of the bottom roller track immediately after installation.

### Sash width calculation (PVC)

- Determine frame outside dimension (F.E.D.)
- Classify according to diagram
- Select frame, sash, floating mullion and additional profiles
- Determine shadow gap (SG)
- Determine frame-clearance (F.CL.)
- Measure (sash) overlap width (O.W.)

### Diagram calculation

**Diagram 321:**  $SW_{321} = [F.E.D. - (2 \times F.CL.) + (2 \times O.W.) - (2.5 \times SG) + 15.5] / 3$   
**Diagram 330:**  $SW_{330} = [F.E.D. - (2 \times F.CL.) + (2 \times O.W.) - (2.5 \times SG) + 15.5] / 3$   
**Diagram 431:**  $SW_{431} = [F.E.D. - (2 \times F.CL.) + (3 \times O.W.) - (3.5 \times SG) + 15.5] / 4$   
**Diagram 541:**  $SW_{541} = [F.E.D. - (2 \times F.CL.) + (4 \times O.W.) - (4.5 \times SG) + 15.5] / 5$   
**Diagram 550:**  $SW_{550} = [F.E.D. - (2 \times F.CL.) + (4 \times O.W.) - (4.5 \times SG) + 15.5] / 5$   
**Diagram 532:**  $SW_{532} = [F.E.D. - (2 \times F.CL.) + (4 \times O.W.) - (5 \times SG) + 31] / 5$   
**Diagram 651:**  $SW_{651} = [F.E.D. - (2 \times F.CL.) + (5 \times O.W.) - (5.5 \times SG) + 15.5] / 6$   
**Diagram 633:**  $SW_{633} = [F.E.D. - (2 \times F.CL.) + (5 \times O.W.) - (6 \times SG) + 31] / 6$

\*For the profile cutting process: Cut off the 20mm overlap after welding.

\*\*Sash width C-D; B-E; Es-Bs with floating mullion profile

F.CL. = min. 25mm;  
O.W. = 20mm; O.H. = 16mm;  
SG = equal everywhere

### SW as a folding-sash

Sash	Applicable formula
A-B Bs-As	$SW_{A-B} = SW_{Bs-As} + \frac{SG}{2} - 15.5$
B-C C-B Cs-Bs C-D	$SW_{B-C} = SW_{C-B} = SW_{Cs-Bs} = SW_{C-D}$
B-E* Es-Bs*	$SW_{B-E} = SW_{Es-Bs} - \text{mullion thickness}$

### SW as an active sash

Sash	Applicable formula
E-As D-As C-F D-Cs C-Es	$SW_{E-As} = SW_{D-As} = SW_{C-F} = SW_{D-Cs} = SW_{C-Es}$

### Schematic overview

Right handed versions are depicted in the schematic overview (viewed from the inside). A mirror image of each diagram can also be implemented.

In the case of "0 active sashes": the access is enabled via the first folding-sash.

As, Bs, Cs & Es = mirror images of A, B, C & E.

The calculation is only valid for the depicted profile example. If required: please request the profile-related data sheet.

An Excel file to calculate the diagrams is also available upon request.

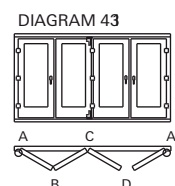
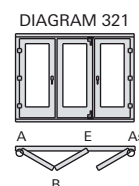
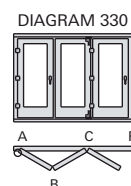
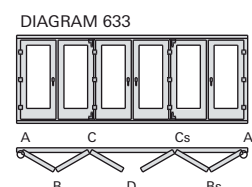
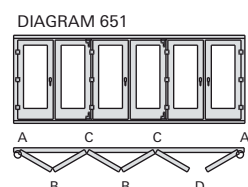
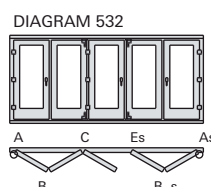
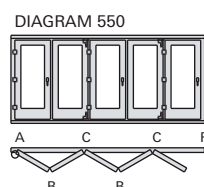
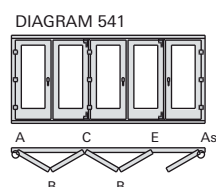
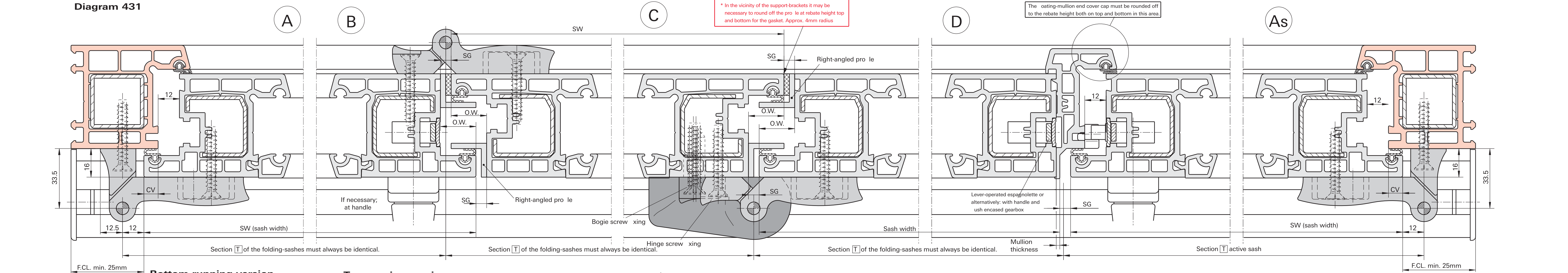
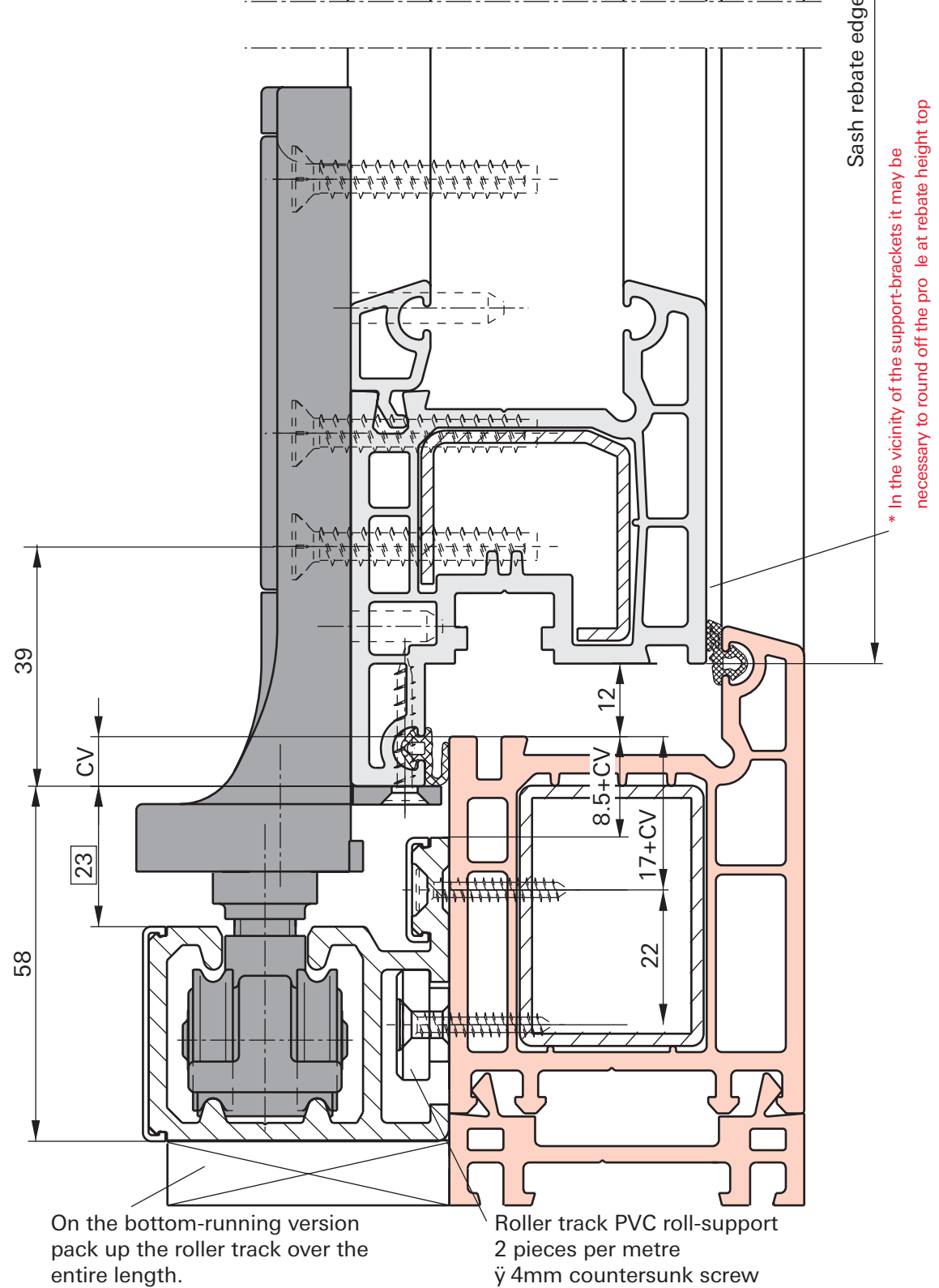
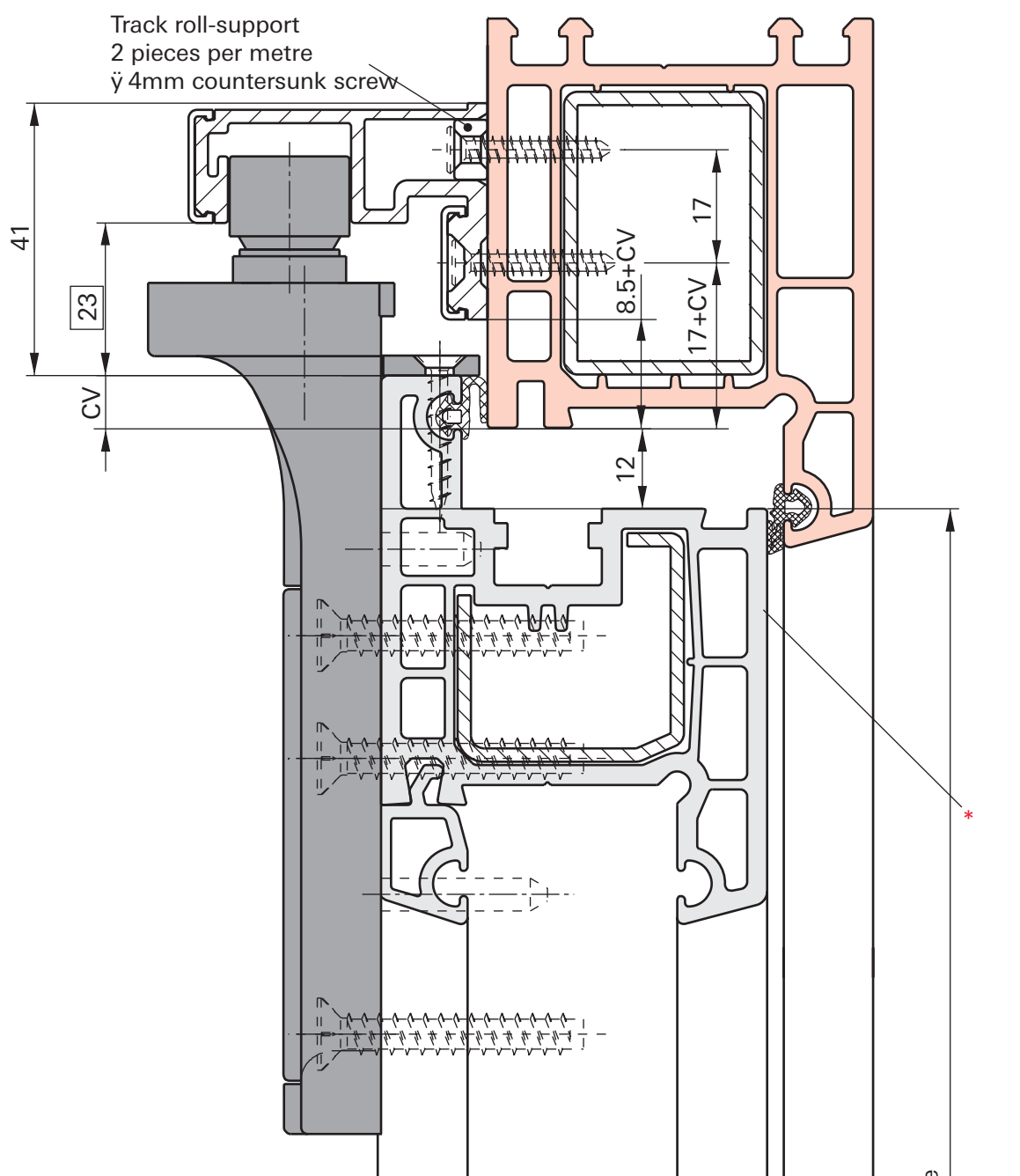




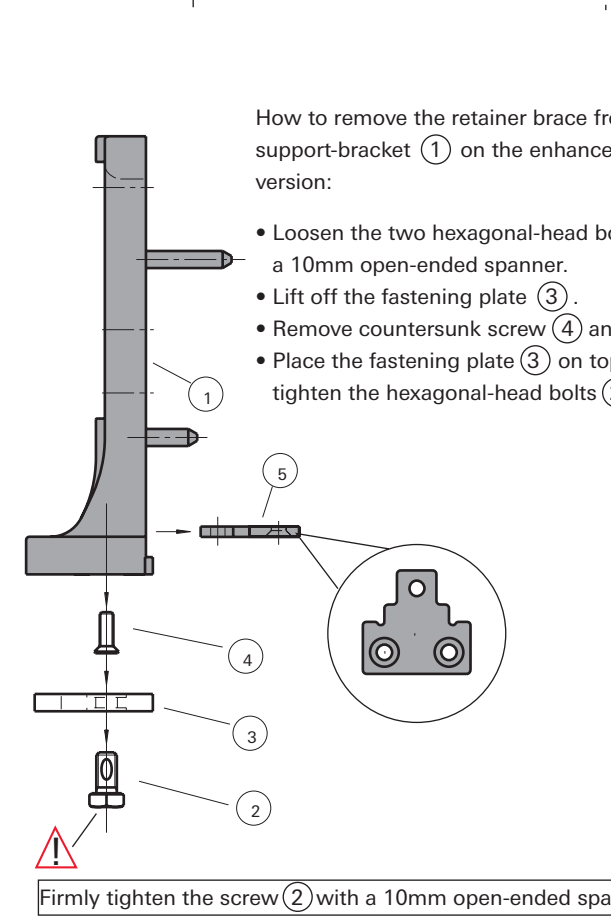
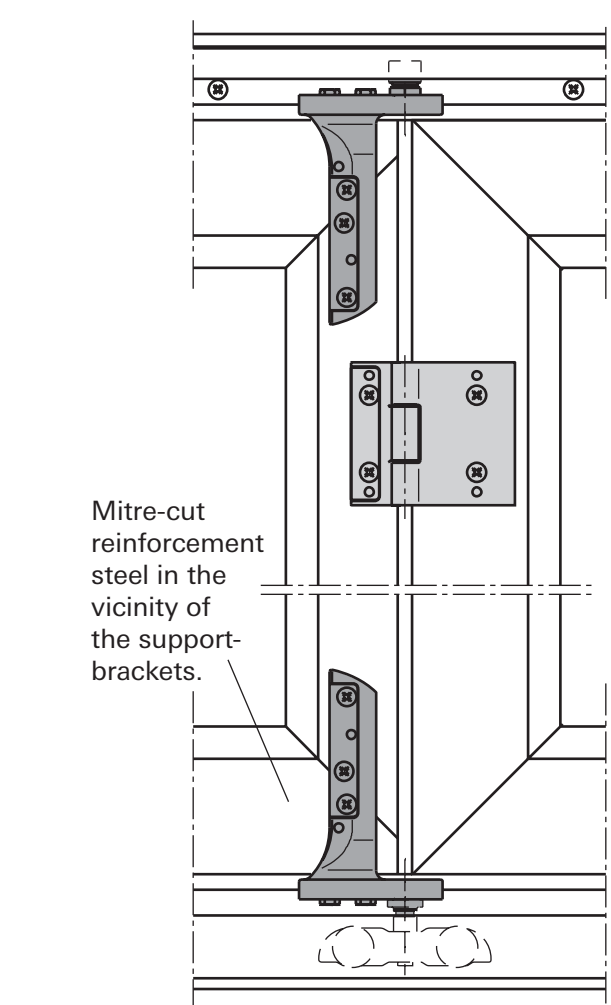
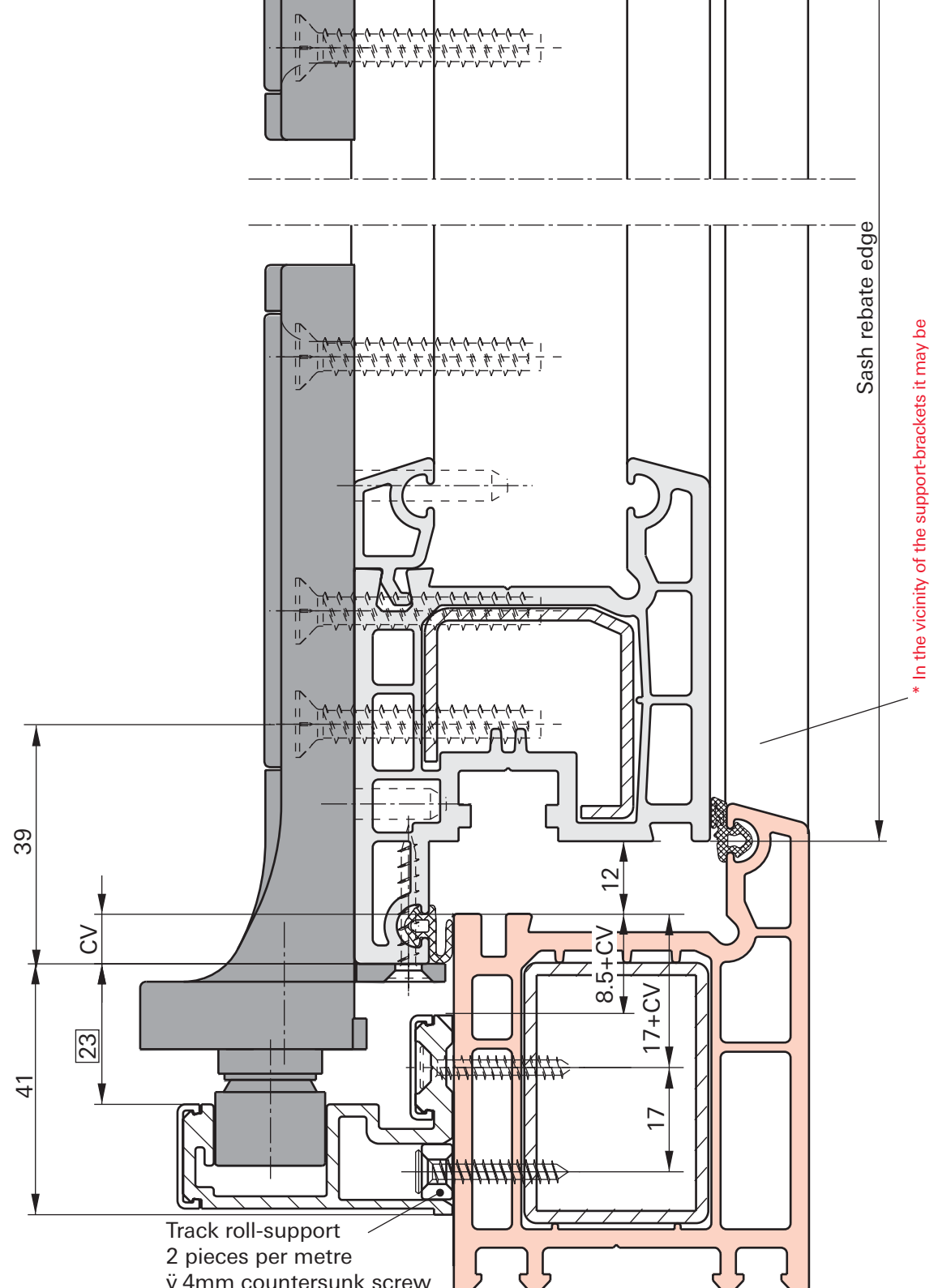
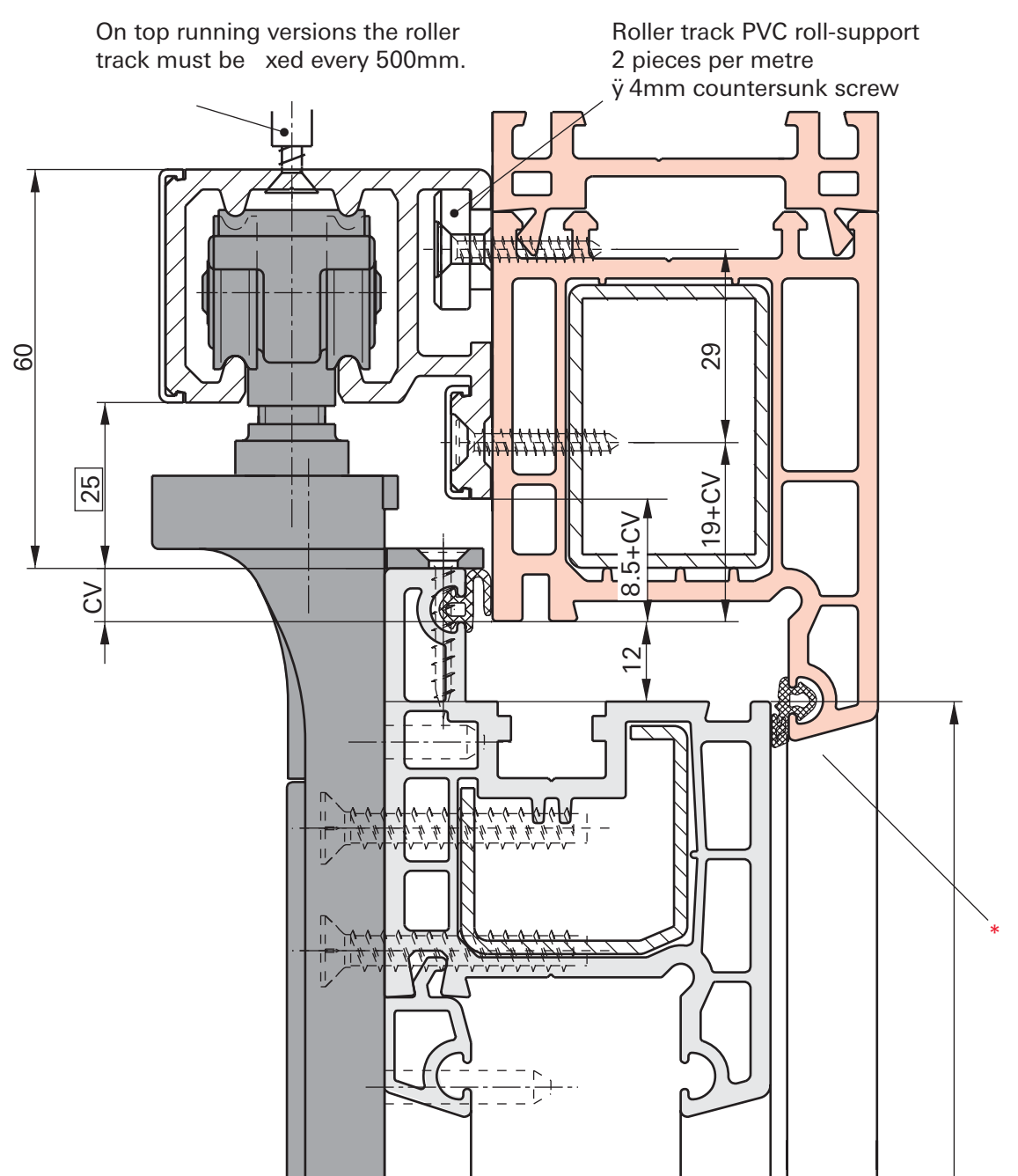
Diagram 431



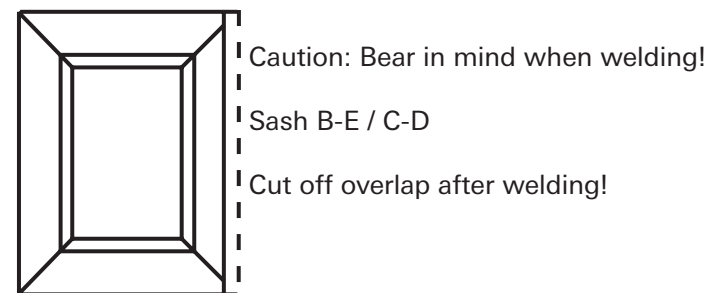
Bottom running version



Top running version



General:  
Due to better load distribution the "bottom-running" version is favoured.  
Upon installing a folding system, special attention must be paid to the xing of the frame to the masonry brickwork in order to prevent possible bending. Pack up the entire length of the bottom roller track immediately after installation.



Enhanced threshold version (E.TH.) (Installation suggestion)

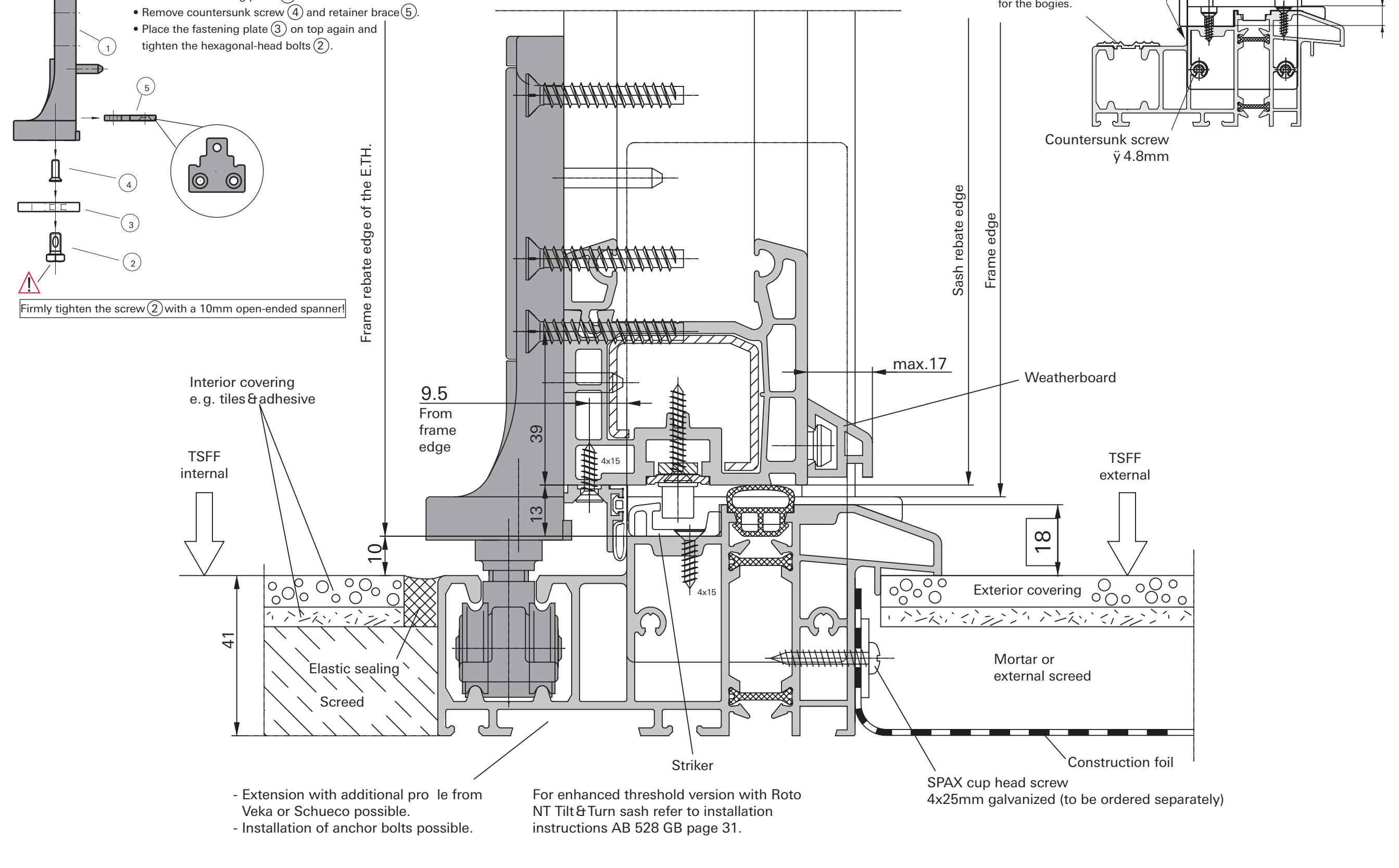


Diagram 321, 532, 541, 743 & 761

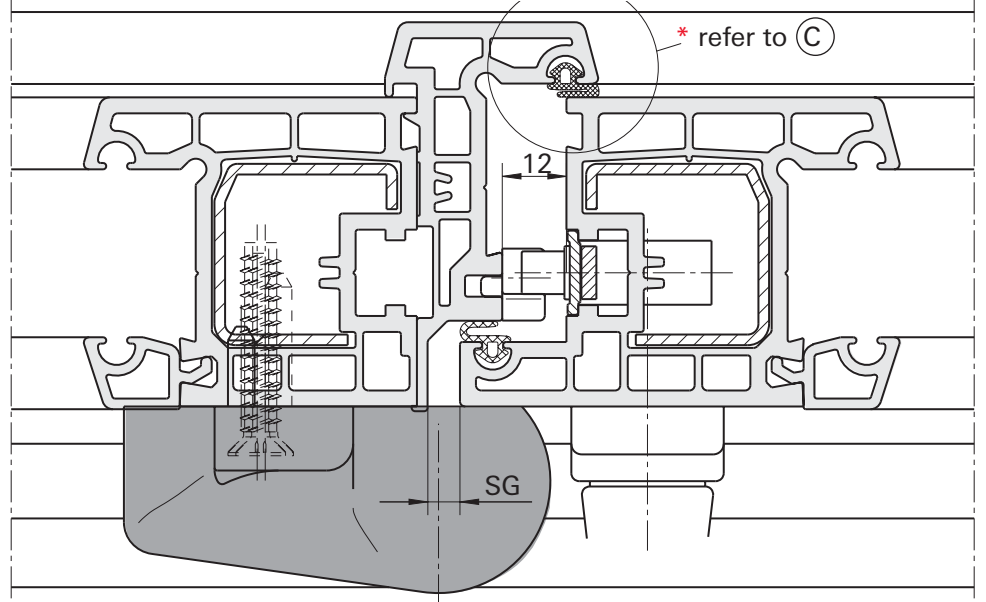
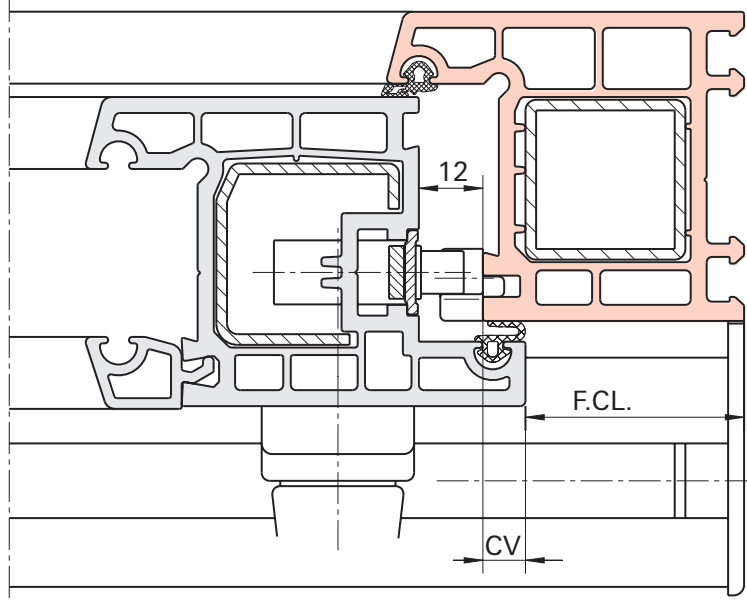
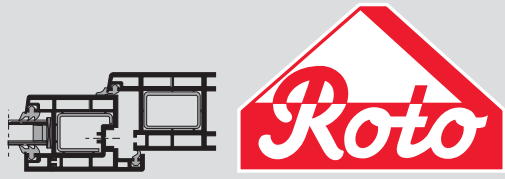


Diagram 330, 550 & 770



Patio 6080  
Pro le drawing supplement for the  
installation instructions

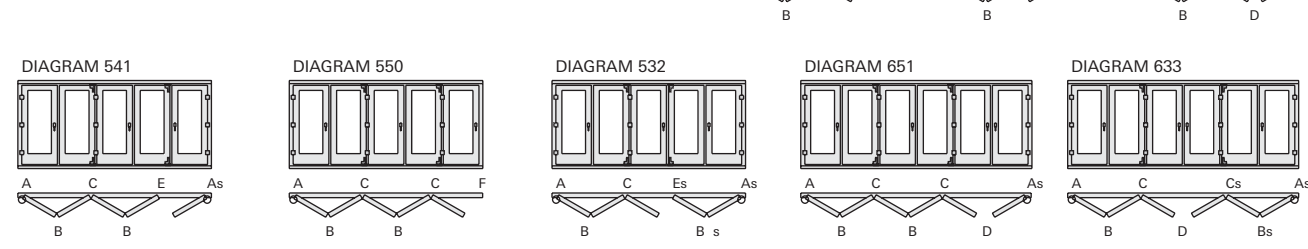


Application range	General
Sash rebate width: 450 to 900mm	Due to better load distribution the "bottom-running" version is favoured. Upon installing a folding system, special attention must be paid to the xing of the frame to the masonry brickwork in order to prevent possible bending. Pack up the entire length of the bottom roller track immediately after installation.
Sash rebate height: Active sash up to 1200mm	
Sash height: 800 to 2400mm	
Sash weight: max. 80kg	
Overlap height: 16 to 25mm	

Abbreviations	Diagram calculation
CV Coverage	• Determine frame outside dimension (F.E.D.)
F.C.L. Frame clearance	• Classify according to diagram
SW Sash width	• Select frame, sash, coating mullion and additional pro les
SH Sash height	• Determine shadow gap (SG)
SRW Sash rebate width	• Determine frame-clearance (F.C.L.)
SRH Sash rebate height	• Measure (sash) overlap width (O.W.)
E.TH. Enhanced threshold	
TSFF Top-surface of nished oor	
FEW Frame external width	
FEH Frame external height	
FRW Frame rebate width	
SG Shadow gap	
O.W. Overlap width	
O.H. Overlap height	

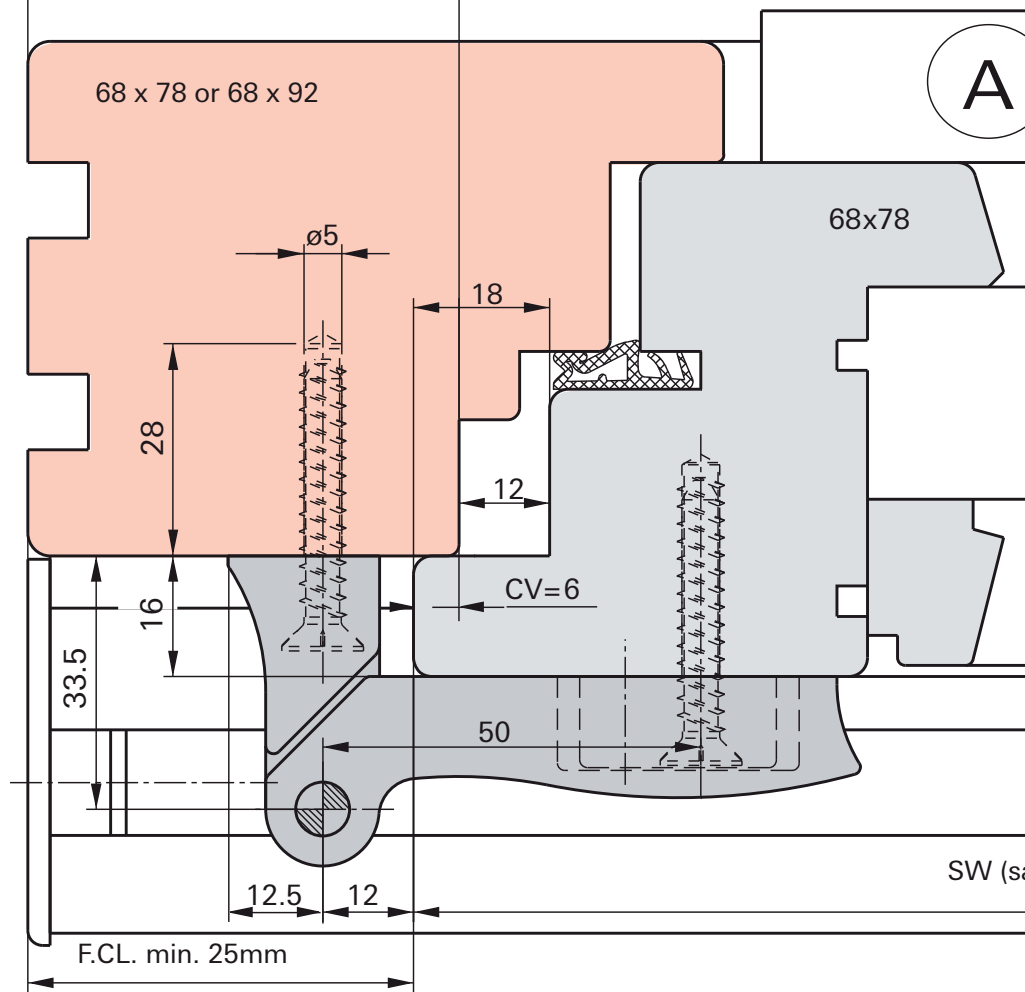
Sash	Applicable formula	Sash	Applicable formula
A-B	$SW_{A,B} = SW + \frac{SG}{2} - 15.5$	E-As	$SW_{E-As} = SW$
Bs-As		D-As	
B-C	$SW_{B-C} = SW$	C-F	
C-B		D-Cs	
Cs-Bs		C-Es	
C-D			
B-E*	$SW_{B-E*} = SW - \text{mullion thickness}$		
Es-Bs*			

Schematic overview  
Right handed versions are depicted in the schematic overview (viewed from the inside). A mirror image of each diagram can also be implemented.  
In the case of "0 active sashes": the access is enabled via the rst folding-sash.  
As, Bs, Cs & Es = mirror images of A, B, C & E.

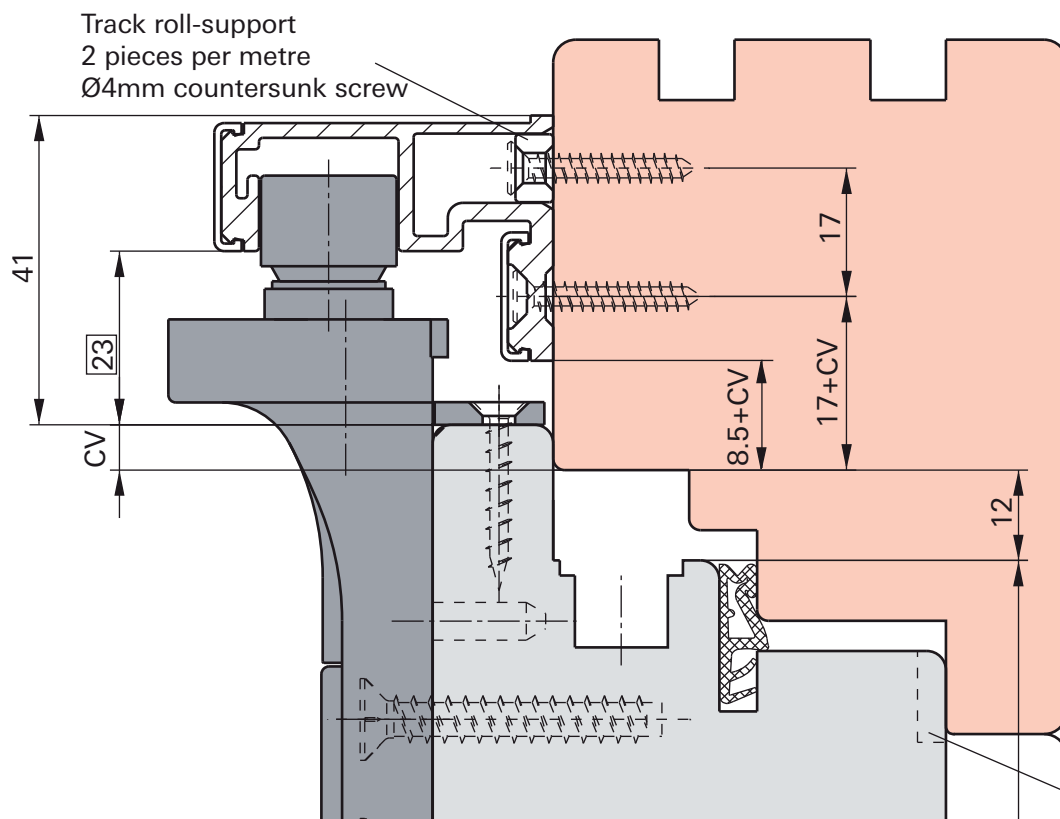




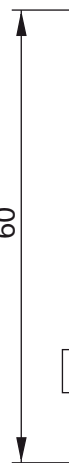
**Diagram 431**



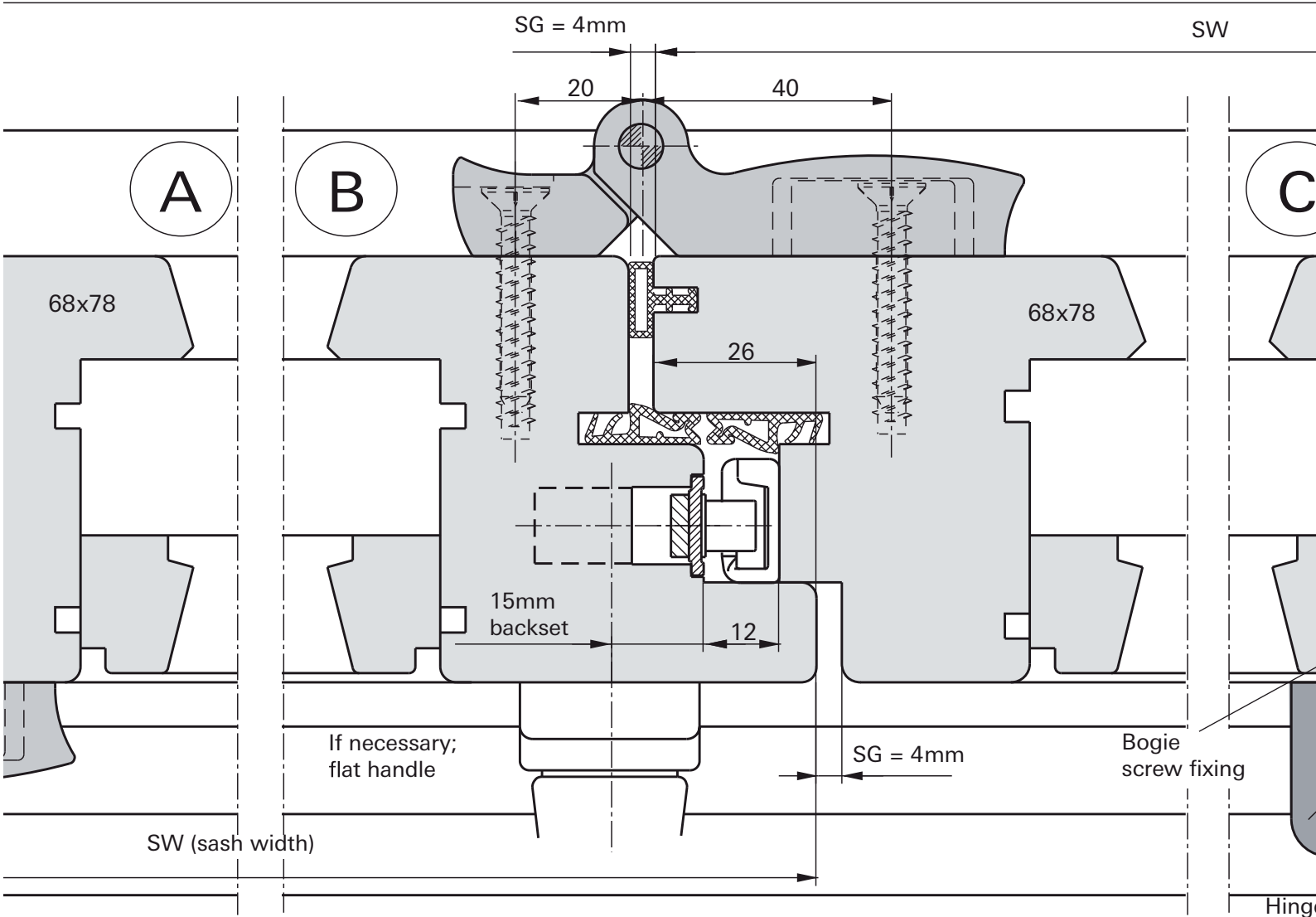
**Bottom running version**



On top running version  
track must be fixed e

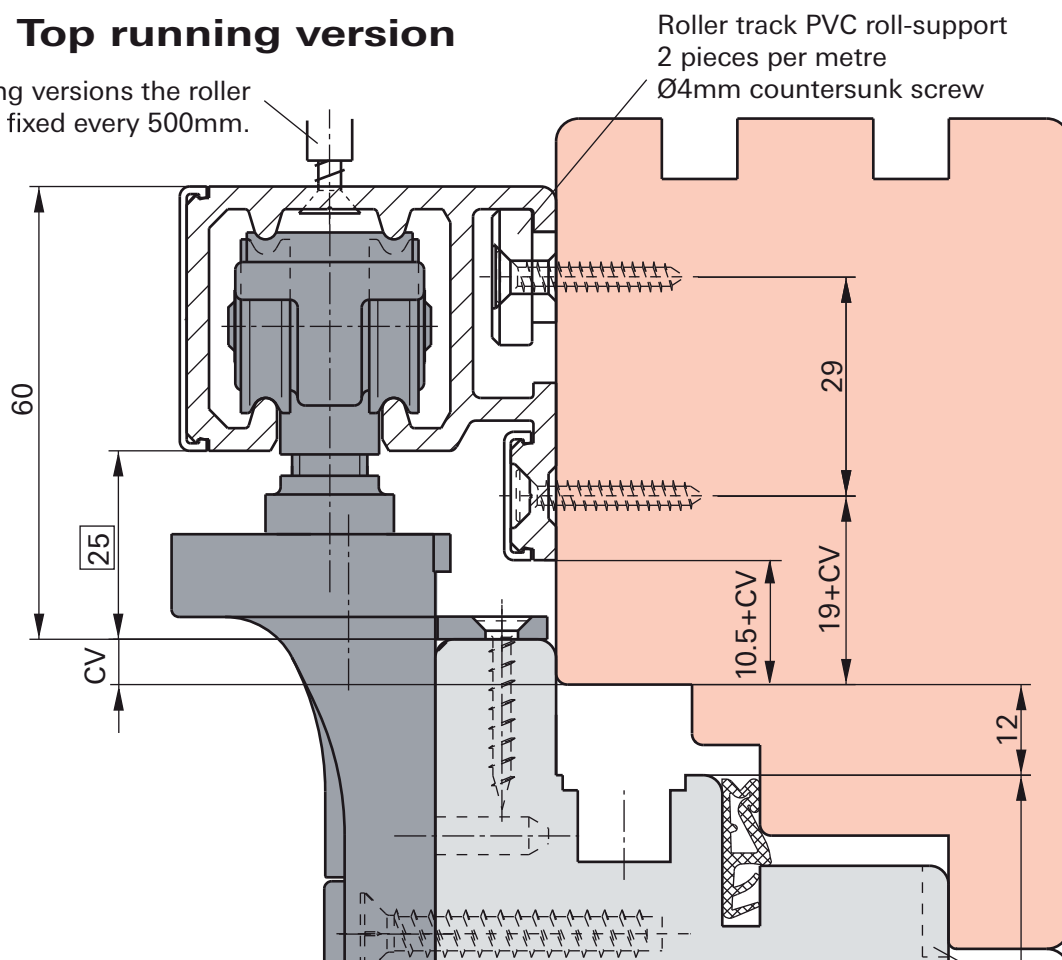






## Top running version

On top running versions the roller track must be fixed every 500mm.



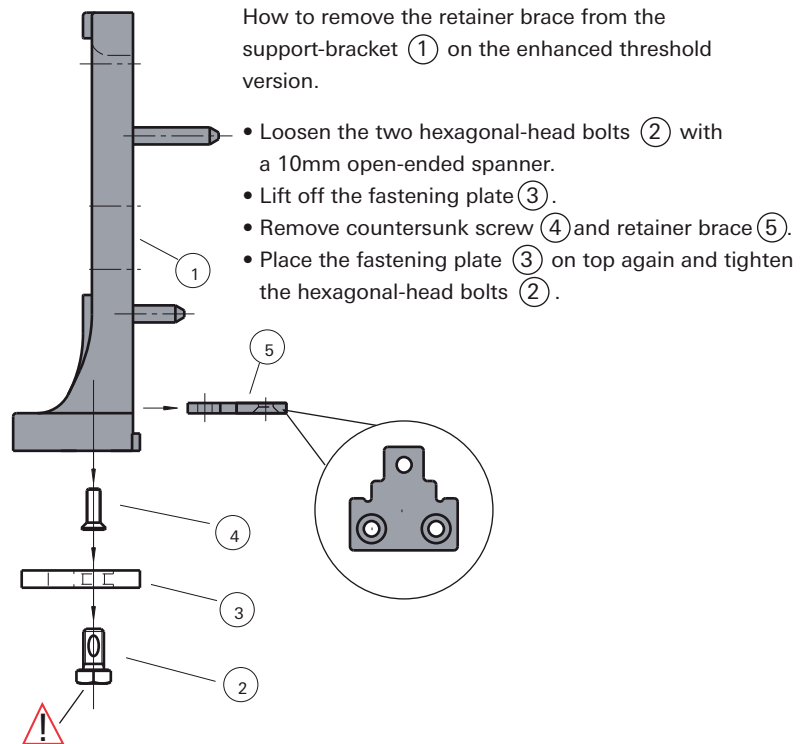
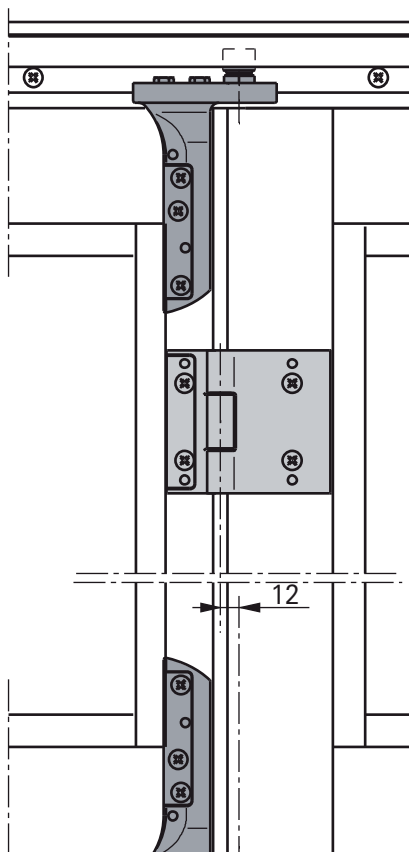
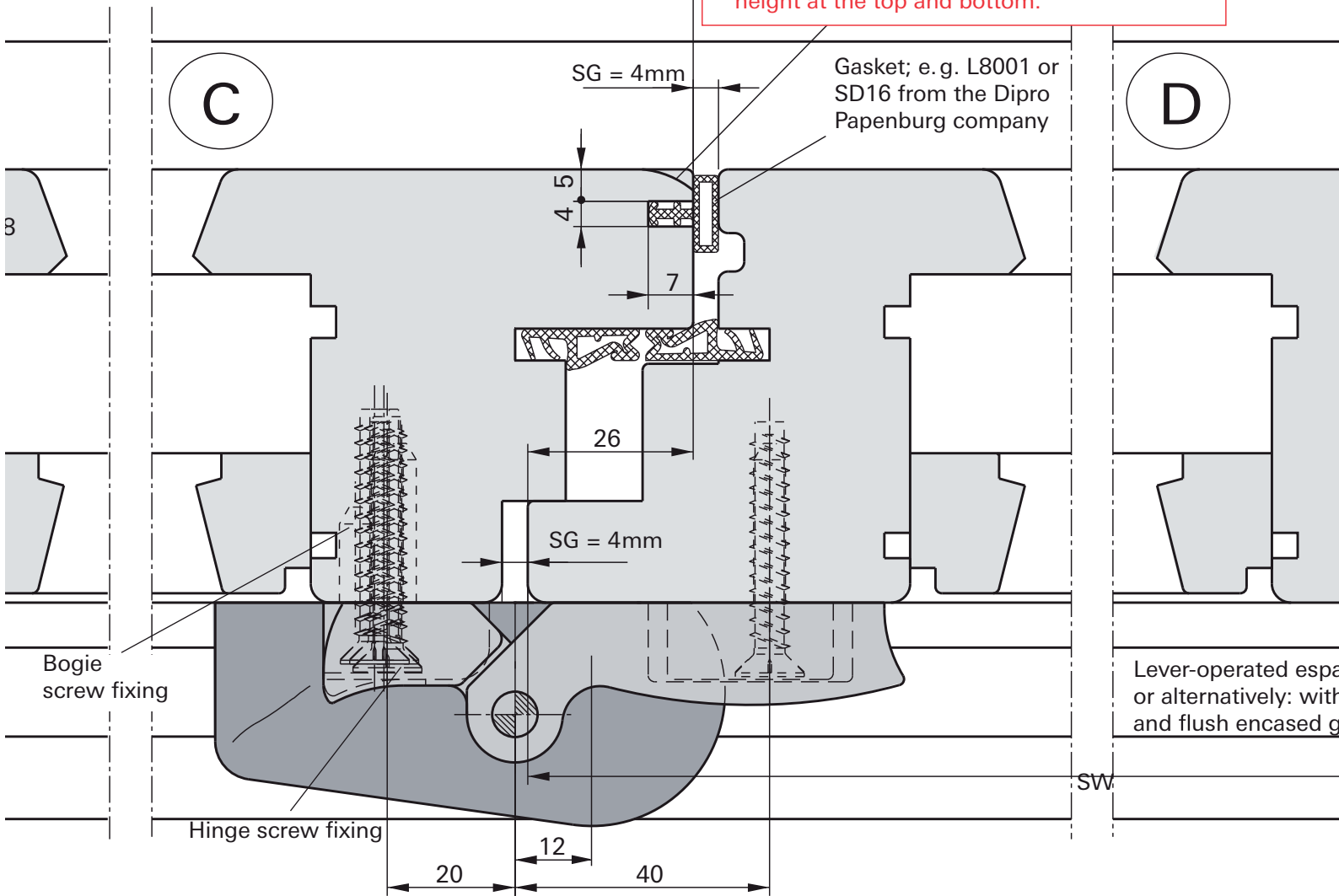


FEW

F.R.W. (frame rebate width)

SW

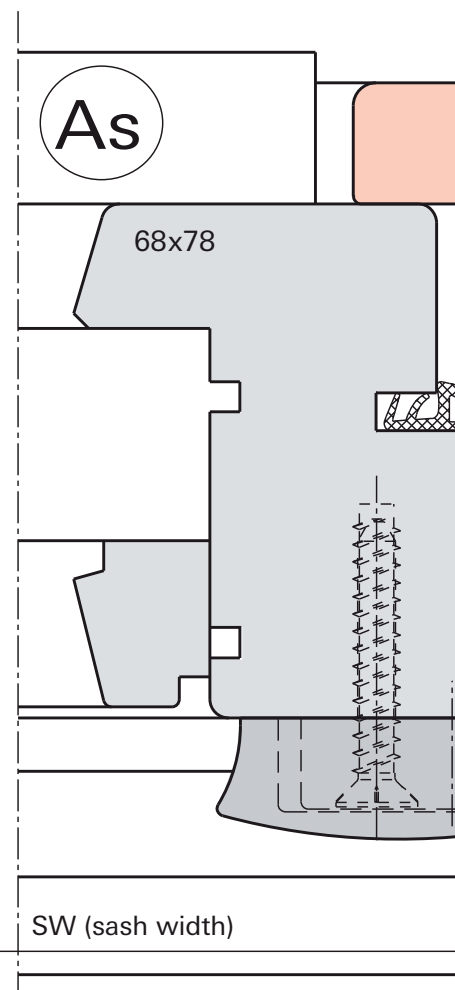
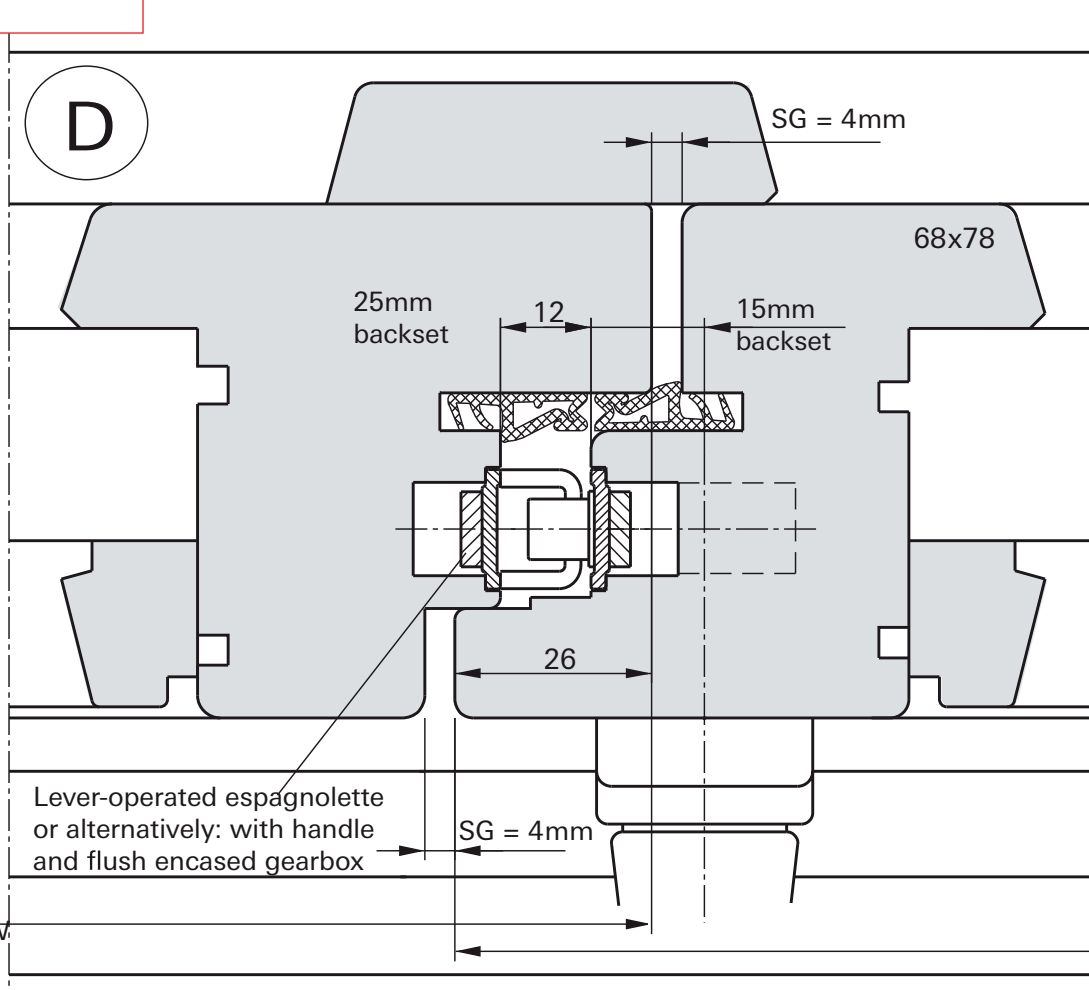
\* In the vicinity of the support-brackets it is necessary to round off to the rebate height at the top and bottom.



Firmly tighten the screws ② with a 10mm open-ended spanner!



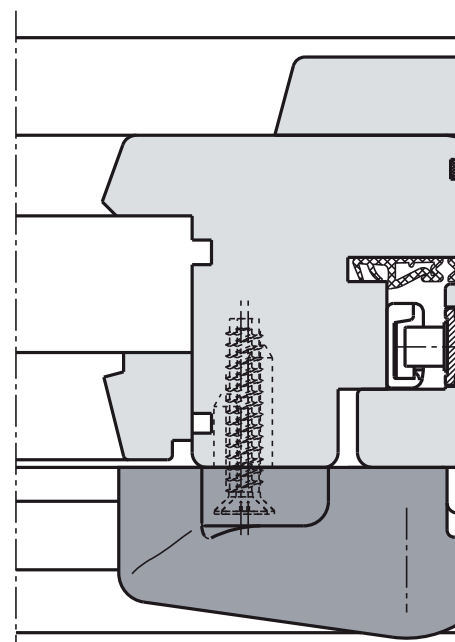
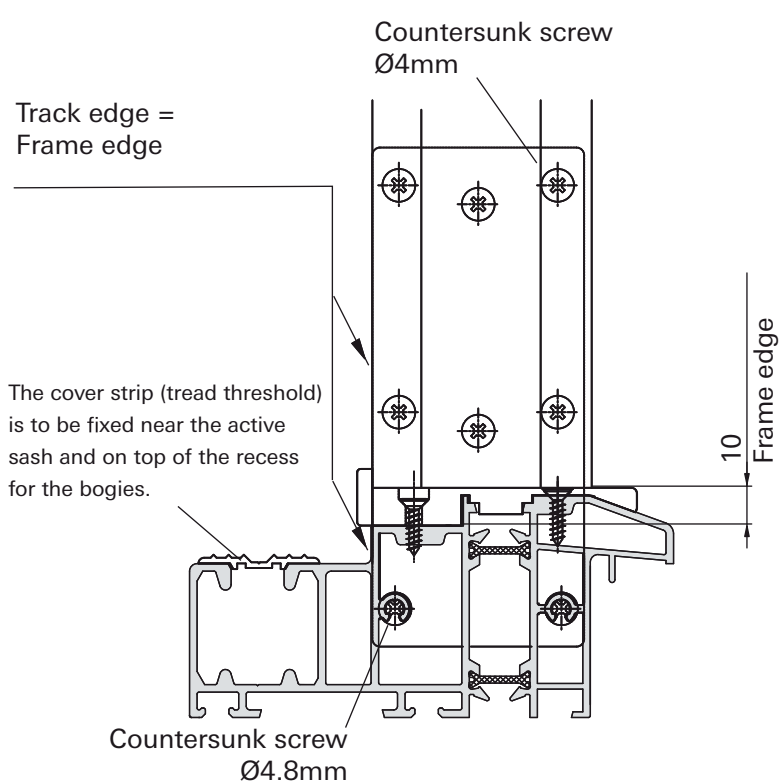
ts it  
ate



from the  
ed threshold

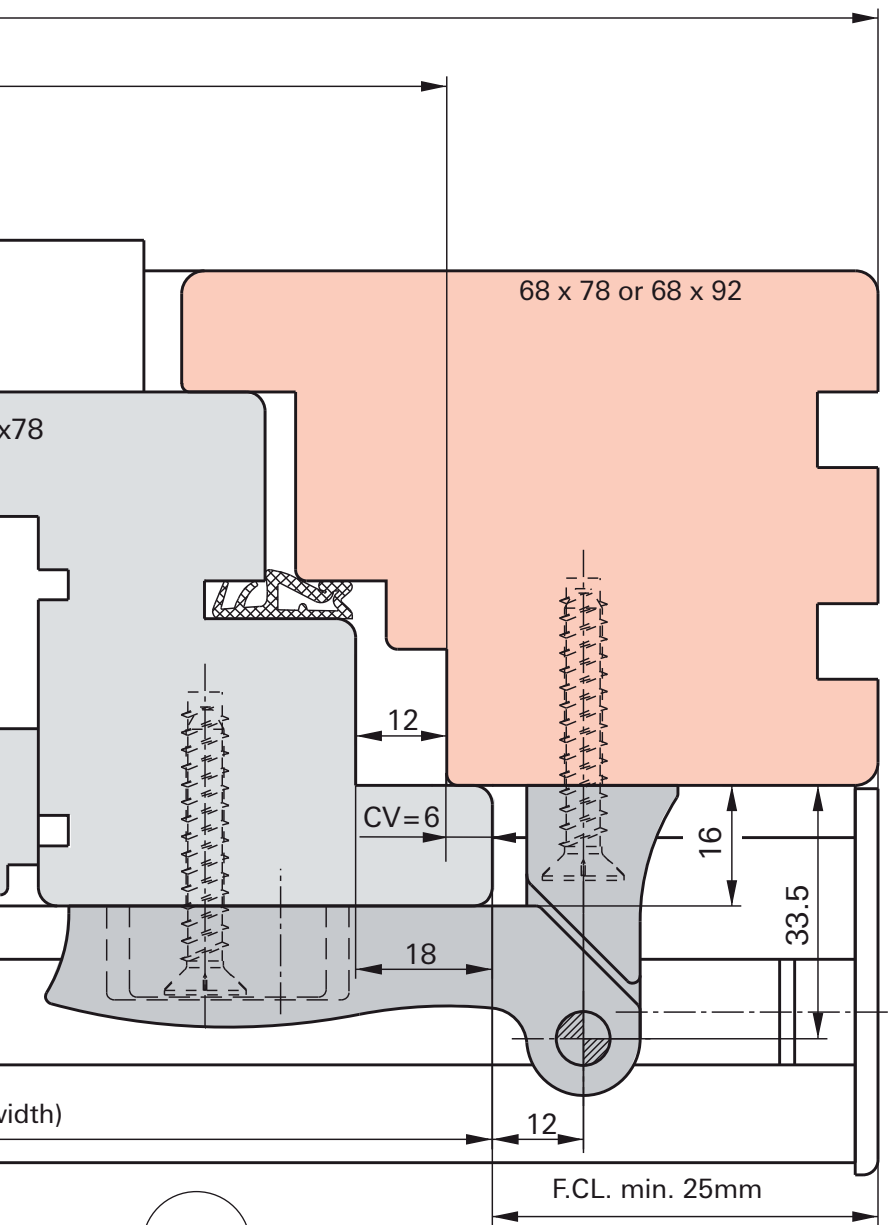
bolts ② with

nd retainer brace ⑤.  
top again and tighten

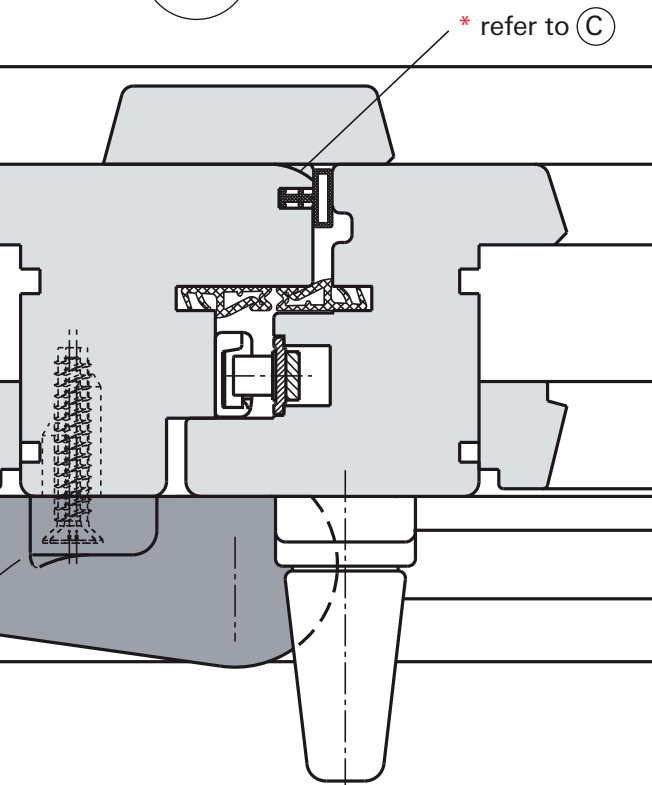


d spanner!

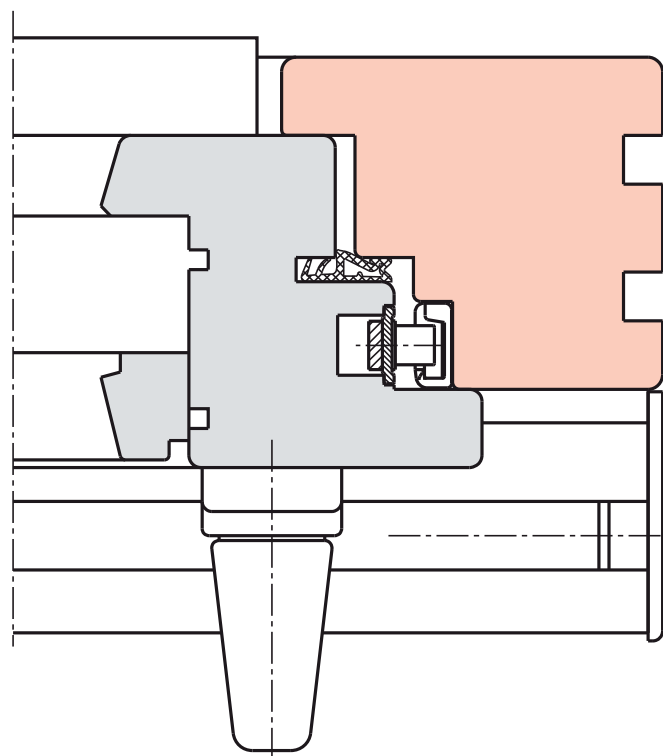




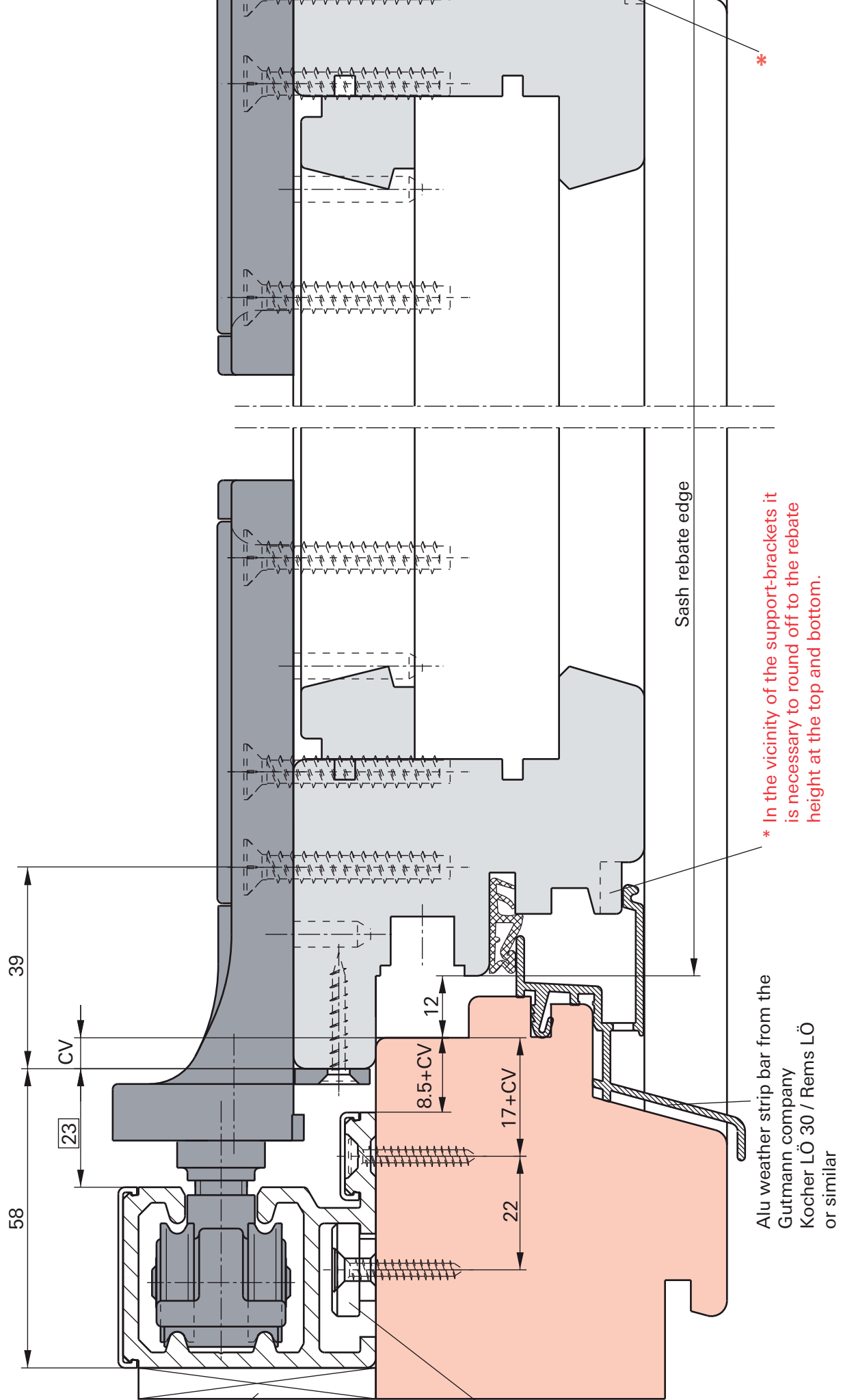
E



F







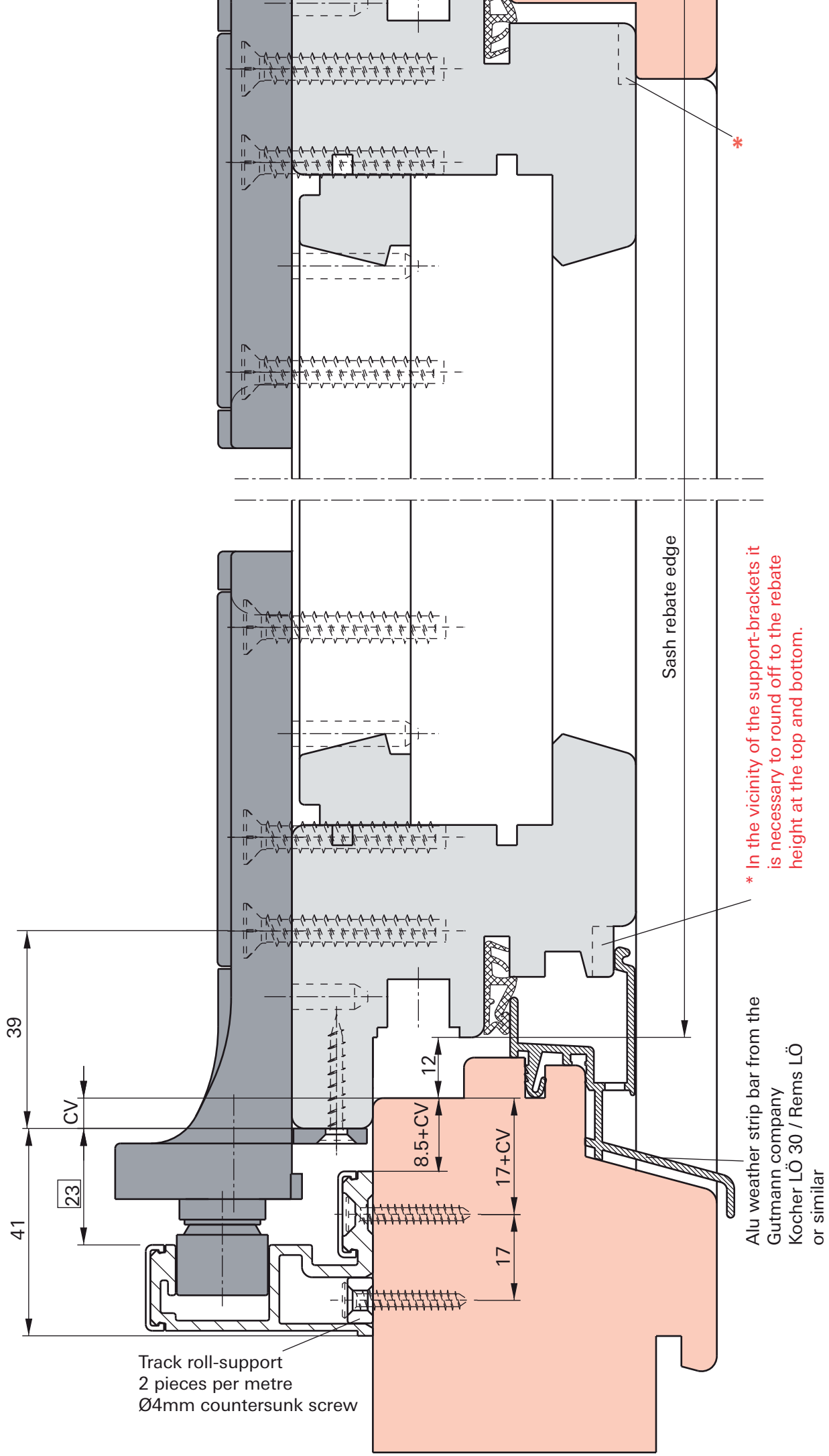
On the bottom-running version pack up the roller track over the entire length.

Roller track PVC roll-support  
2 pieces per metre  
Ø4mm countersunk screw



Kocher LÖ 30 / Rems LÖ  
or similar

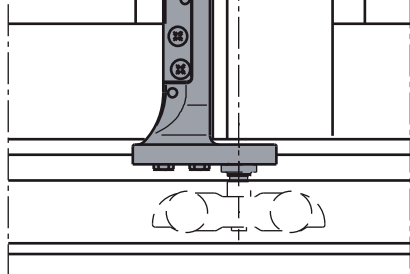
\* In the vicinity of the support-brackets it  
is necessary to round off the rebate  
height at the top and bottom.





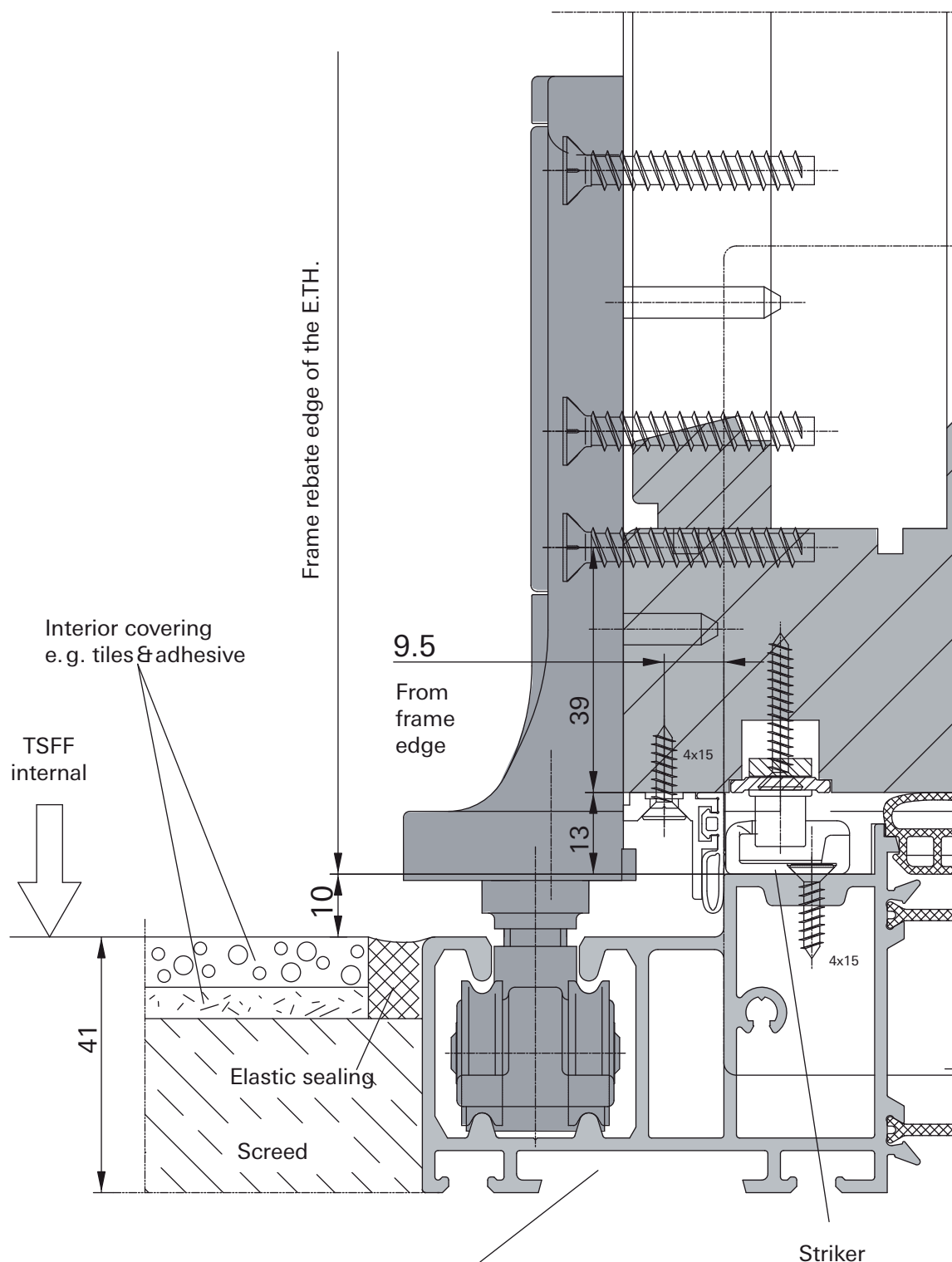
is necessary to round off to the rebate height at the top and bottom.

Gutmann company  
Kocher LÖ 30 / Rems LÖ  
or similar



Firmly tighten the screws ② with a 10mm open-ended spanner!

## Enhanced threshold version (Installation suggestion)



- Extension with additional profile from Veka or Schueco possible.
- Installation of anchor bolts possible.

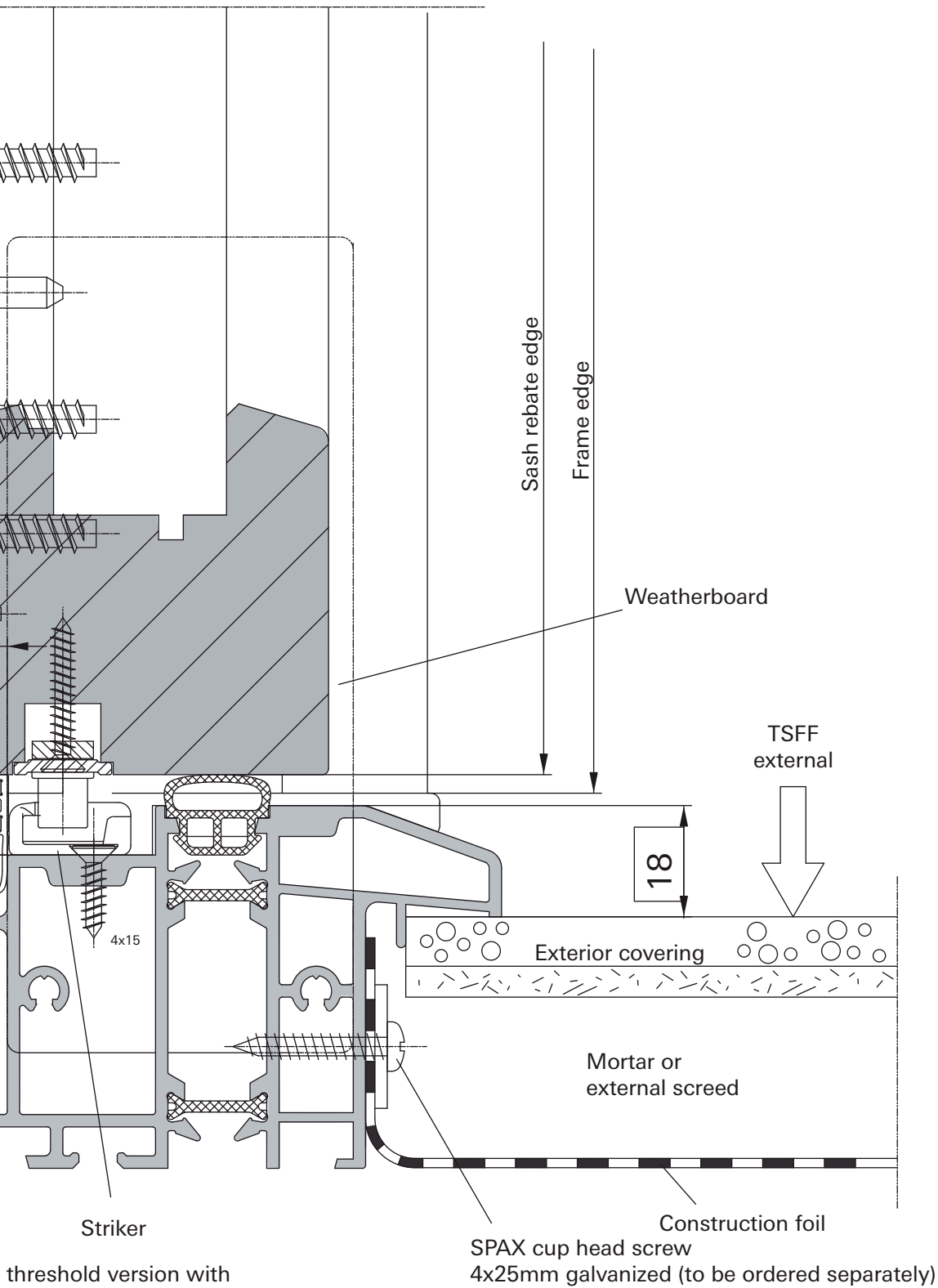
For enhanced threshold version with Roto NT Tilt & Turn sash refer to installation instructions AB 528 GB page 31.



Countersunk screw  
Ø4.8mm

d spanner!

## Threshold version (E.TH.) (Installation suggestion)



threshold version with  
Turn sash refer to installation  
B 528 GB page 31.

Pa  
Pro  
ins

App

Sas

Sas  
Sas  
Ove

Abt

CV  
F.C  
SW  
SH  
SR  
SR  
E.T  
TSF  
FEV  
FEH  
FRV  
SG  
O.V  
O.H

Sch

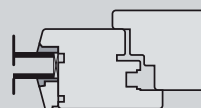
Rig  
the  
the  
diag  
In th  
the  
fold  
As,  
C &





# Patio 6080

## Profile drawing supplement for the installation instructions



### Application range

**Sash rebate width:** 450 to 900mm  
Active sash up to 1200mm  
**Sash rebate height:** 800 to 2400mm  
**Sash weight:** max. 80kg  
**Overlap height:** 16 to 25mm

### General

Due to better load distribution the "bottom-running" version is favoured.

Upon installing a folding system, special attention must be paid to the fixing of the frame to the masonry brickwork in order to prevent possible bending. Pack up the entire length of the bottom roller track immediately after installation.

### Abbreviations

CV	Coverage
F.CL.	Frame clearance
SW	Sash width
SH	Sash height
SRW	Sash rebate width
SRH	Sash rebate height
E.TH.	Enhanced threshold
TSFF	Top-surface of finished-floor
FEW	Frame external width
FEH	Frame external height
FRW	Frame rebate width
SG	Shadow gap
O.W.	Overlap width
O.H.	Overlap height

### Sash width calculation (Timber)

- Classify according to diagram
- Determine frame outside dimension (F.E.D.)
- Select frame, sash, floating mullion and additional profiles
- Determine shadow gap (SG)
- Determine frame-clearance (F.CL.)

### Diagram calculation

**Diagram 321:**  $SW_{321} = [F.E.D. - (2 \times F.CL.) - (2 \times SG) + 60] / 3$

**Diagram 330:**  $SW_{330} = [F.E.D. - (2 \times F.CL.) - (2 \times SG) + 60] / 3$

**Diagram 431:**  $SW_{431} = [F.E.D. - (2 \times F.CL.) - (3 \times SG) + 90] / 4$

**Diagram 541:**  $SW_{541} = [F.E.D. - (2 \times F.CL.) - (4 \times SG) + 120] / 5$

**Diagram 550:**  $SW_{550} = [F.E.D. - (2 \times F.CL.) - (4 \times SG) + 120] / 5$

**Diagram 532:**  $SW_{532} = [F.E.D. - (2 \times F.CL.) - (4 \times SG) + 120] / 5$

**Diagram 651:**  $SW_{651} = [F.E.D. - (2 \times F.CL.) - (5 \times SG) + 150] / 6$

**Diagram 633:**  $SW_{633} = [F.E.D. - (2 \times F.CL.) - (5 \times SG) + 150] / 6$

**Diagram 761:**  $SW_{761} = [F.E.D. - (2 \times F.CL.) - (6 \times SG) + 180] / 7$

**Diagram 770:**  $SW_{770} = [F.E.D. - (2 \times F.CL.) - (6 \times SG) + 180] / 7$

**Diagram 743:**  $SW_{743} = [F.E.D. - (2 \times F.CL.) - (6 \times SG) + 180] / 7$

**Diagram 871:**  $SW_{871} = [F.E.D. - (2 \times F.CL.) - (7 \times SG) + 210] / 8$

An Excel file to calculate the diagrams is also available upon request.

### Schematic overview

Right handed versions are depicted in the schematic overview (viewed from the inside). A mirror image of each diagram can also be implemented. In the case of "0 active sashes": the access is enabled via the first folding-sash.

As, Bs, Cs & Es = mirror images of A, B, C & E.

