



Roto NX

Connecting thresholds to the hardware system

Contact

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1 General information

1.1 Version history

Version	Date	Changes
v0	07/2014	Publication
v1	19/09/2023	Addition of Roto NX Hinge side P → <i>from page 25</i> Addition of Roto NX Hinge side T → <i>from page 29</i> Addition of Roto NX Hinge side Power Hinge → <i>from page 31</i> Addition of Roto NX Hinge side Designo → <i>from page 33</i> Addition of new thresholds → <i>from page 37</i> Restructuring of leaf components → <i>from page 13</i> New drilling jig for pivot rest on hinge side P → <i>from page 26</i>

1.2 Instructions

This manual contains important information, instructions, application diagrams (max. sash sizes and weights) and assembly instructions 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:

Roto NX

- Catalogue
 - PVC: CTL_105
 - Timber: CTL_104
- Installation instructions
 - PVC
 - Hinge side P: IMO_455
 - Hinge side Designo (HA 13): IMO_517
 - Timber
 - Hinge side T: IMO_456
 - Hinge side Designo (HA 13): IMO_542
 - Hinge side Power Hinge: IMO_68

Roto Eifel

- Catalogue
 - CTL_87
- Installation instructions
 - IMO_423

The following guidelines also apply:

- Guideline TBDK issued by the Gütegemeinschaft Schlösser und Beschläge e. V. quality assurance association (Attachment of supporting fitting components for turn-only and tilt&turn fittings),
- Directive VHBE issued by the Gütegemeinschaft Schlösser und Beschläge e. V. quality assurance association (Hardware for windows and balcony doors – Guidelines / advice for end-users),
- Directive VHBH issued by the Gütegemeinschaft Schlösser und Beschläge e. V. quality assurance association (Hardware for windows and balcony doors – Guidelines / advice on the product and on liability),

- Instructions and information issued by profile manufacturers (e.g. manufacturers of windows and balcony doors),
- DIN EN 17210:2021-08, Accessibility and usability of the built environment - Functional requirements
- The applicable regulations, directives and national laws.

Compliance with the following guidelines is additionally recommended:

- TLE.01 by the VFF (German Window and Facade Association) Correct handling of ready-to-install windows and external doors during transport, storage and installation,
- WP.01 by the VFF (German Window and Facade Association) Maintenance of windows, facades and external doors – Maintenance, care and inspection – Information for sales,
- WP.02 by the VFF (German Window and Facade Association) Maintenance of windows, facades and external doors – Maintenance, care and inspection – Measures and documents,
- WP.03 by the VFF (German Window and Facade Association) Maintenance of windows, facades and external doors – Maintenance, care and inspection – Maintenance agreement.

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, arrows or movements that have just been described
	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 right-hand version (DIN 107).

1.3 Symbols

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

1.4 Pictographs

Symbol	Meaning
	Sash rebate width
	Sash rebate height
	Sash weight
	PVC
	Timber

1.5 Product features

Symbol	Meaning
	Hardware axis
	Description
	Base
	DIN left / right
	Corner drive, integrated
	Rebate clearance
	Sash rebate width
	Sash rebate height



Symbol	Meaning
	Sash weight
	Fixed handle height
	Centred / variable handle height
	Size
	Information
	Fixed toggle lever position
	Centred / variable toggle lever position
	Couplable
	Length
	Material number
	Lifting mishandling device
	Surface
	Position
	Profile
	Number of welded-on strikers
	Number of locking cams
	Type of locking cams
	Bullet catch
	Security class

Symbol	Meaning
	System
	Adjustment

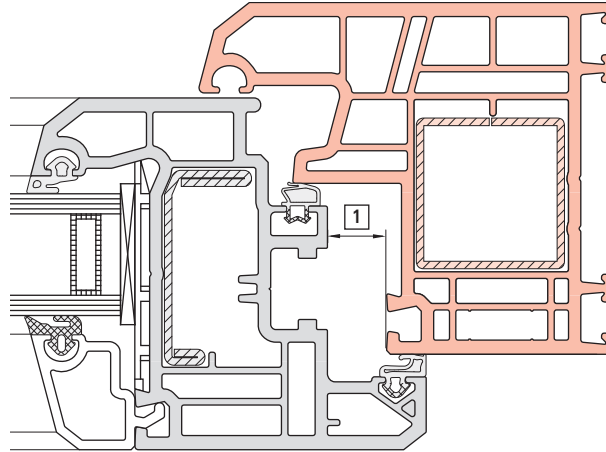
1.6 Abbreviations

Abbreviation	Meaning
GC	Gasket compression
CTL	Catalogue
DIN L / R	DIN left / right
d _k	Screw head diameter
T&T	Tilt&Turn
BS	Backset
SRW	Sash rebate width
SRH	Sash rebate height
S.kg	Sash weight
HH	Handle height
BSec	Basic security
IMO	Installation instructions
Y	Yes
kg	Kilograms
KU	Couplable
mm	Millimetres
CL	Centre lock
N	No
Nm	Torque in newton metres
LMD	Lifting mishandling device
RC	Resistance class
BC	Bullet catch
LOE	Lever-operated espagnolette
SEC	Security
ST	Striker
STD	Standard

1.7 Explanation of terms

Rebate clearance

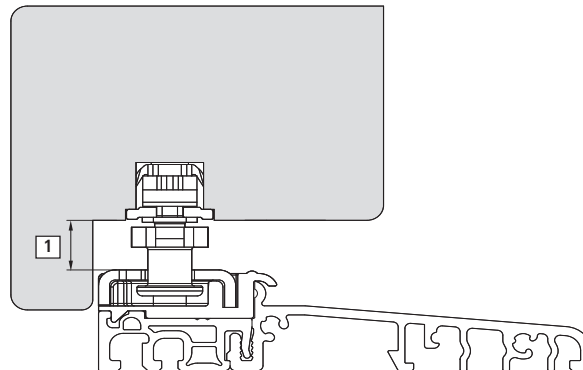
Distance between leaf and frame when closed.



[1] = rebate clearance

Functional clearance

Distance between threshold cover and leaf rebate.



[1] = functional clearance

1.8 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.

Window and balcony door manufacturers

The “window 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 windows 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 windows and balcony doors from window and balcony door manufacturers for resale and for in-

stallation in construction projects, without modifying the windows or balcony doors.

Builders

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

End users

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

1.9 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 data storage device or via the Internet.

Responsibility of hardware dealers

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

- Catalogue
- Installation, maintenance and operation instructions
- Directive on attachment of supporting fitting components for turn-only and tilt&turn fittings (TBDK)
- Guidelines/advice on the product and on liability (VHBH)
- Guidelines/advice for end-users (VHBE)

Responsibility of the window and balcony door manufacturer

The window 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 attachment of supporting fitting components for turn-only and tilt&turn fittings (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)

1.10 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.

1.11 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.

1.12 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 the tilt position 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 draughts. 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.



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.
- ▶ Note the product-related documentation → *from page 6*.

2.3.2 Usage restriction

Open and unlocked doors do not meet the requirements for:

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

2.4 Basic safety information

The following hazards may arise when handling the product:

2.4.1 Installation

Incorrect installation poses an immediate risk of death or serious injuries.

Incorrect installation or assembly of hardware can lead to hazardous situations or property damage. Depending on the height of the fall, this can result in serious to life-threatening injuries and glass breakage.

- ▶ 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.
- ▶ Always have installation performed by a specialist company.

Heavy loads pose a risk of injury.

Lifting and carrying heavy loads may lead to injuries in the event of a fall or physical overexertion.

- ▶ Note the applicable accident prevention regulations.
- ▶ Transport heavy loads with two people and use suitable transportation means (such as an industrial truck).

Physical overexertion may be harmful to health.

Moving heavy loads for extended periods leads to physical injury in the long term.

- ▶ When carrying and lifting by hand, comply with a maximum weight of 25 kg for men and 10 kg for women.
- ▶ Carry and lift even small loads with an ergonomically correct posture.



2.4.2 Use

Falls from open windows and balcony doors present an immediate risk of death and pose the risk of serious injuries.

Opened sashes of windows and balcony doors create a danger zone. Depending on the height of the fall, this can result in serious to life-threatening injuries and glass breakage.

- ▶ Take care when in the vicinity of open windows and balcony doors.
- ▶ Keep children and anyone unable to understand the risks away from the hazardous area.

Trapping body parts in the opening between sash and frame may lead to serious injuries.

Gripping between the sash and frame when closing windows and balcony doors poses the risk of crushing injuries.

- ▶ When closing windows and balcony doors, never grip between the sash and frame and always exercise caution.
- ▶ Keep children and anyone unable to understand the risks away from the hazardous area.

Opening and closing leaves improperly poses the risk of injury and property damage.

Incorrect opening and closing of leaves can result in serious injuries and substantial property damage.

- ▶ When moving the sash, ensure that it will not slam against the frame or other leaves once fully opened or closed.
- ▶ Ensure that the sash is slowly guided by hand throughout its entire movement range, until it has been brought into a fully closed or opening position.
- ▶ When closing a sash and locking the hardware, the gasket counter force must be overcome.

Misuse poses a risk of injury and property damage.

Misuse can lead to hazardous situations and may destroy the hardware, frame materials or other individual components within the windows or balcony doors.

- ▶ Do not introduce any obstacles in the opening area between the frame and window or balcony door sashes.
- ▶ Do not place additional loads on windows and balcony door sashes.
- ▶ Refrain from intentionally or uncontrollably slamming or pushing the window or balcony door sash against the window reveal or the opening restrictor.

Improper maintenance poses the potential risk of injury and property damage.

Windows and balcony doors, including the hardware, require expert maintenance (care, cleaning, maintenance and inspection) in order to guarantee their proper condition and safe use.

- ▶ Keep the hardware free of deposits and contaminants.
- ▶ Carry out care and cleaning tasks as specified in these instructions.
- ▶ Always have regular maintenance, adjustment and repair work carried out by a specialist company.

2.4.3 Ambient conditions

Physical and chemical influences may result in property damage.

Hardware components can be permanently damaged in a saline, aggressive or corrosive environment to the point that they can no longer function.

- ▶ Do not use the hardware components in a saline, aggressive or corrosive environment.
- ▶ Carry out care and cleaning tasks as specified in these instructions.
- ▶ Corrosion protection must be inspected by an authorised specialist company as part of regular maintenance work.

Moisture may cause property damage.

Depending on the outside temperature, relative humidity of the room air and installation situation of the windows and balcony doors, a temporary build-up of condensation may occur. This can lead to corrosion on the hardware and mould growth on the frame or wall. Ambient conditions that are too damp, particularly during the construction phase, can lead to timber elements warping.

- ▶ Avoid preventing the circulation of air (e.g. due to deep reveals, curtains and unfavourable positioning of heaters or the like).
- ▶ Intensively air out the room several times per day.

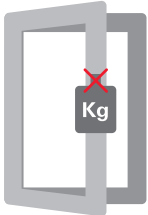
Open all windows and balcony doors for approximately 15 minutes so that the air in the room can be completely replaced.

- ▶ Provide adequate ventilation during holiday periods as well.
- ▶ Create a ventilation plan for construction projects if necessary.

2.5 Operation

The safety symbols and markings and the associated warning instructions explained below apply to the safe operation of windows and balcony doors.

Safety symbols and markings

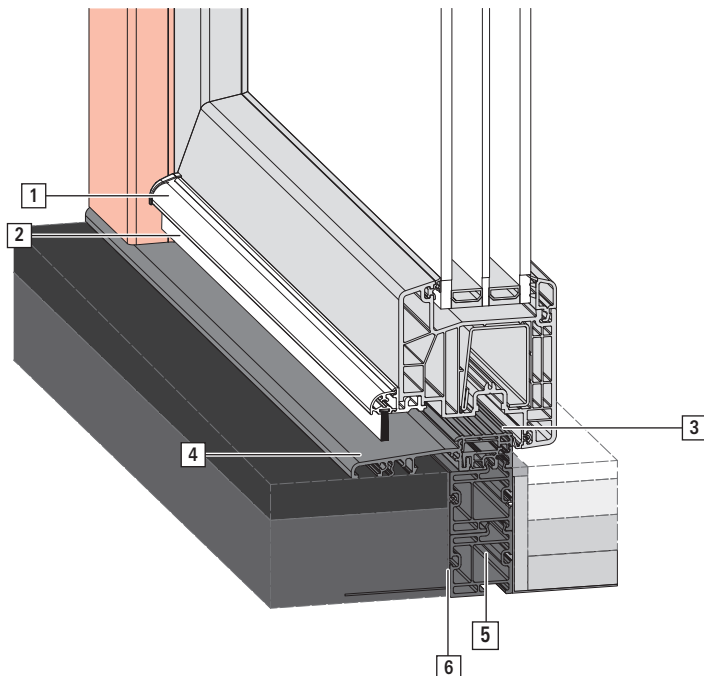
Symbol	Meaning
	<p>Falls from open windows and balcony doors present an immediate risk of death and pose the risk of serious injuries.</p> <p>Take care when in the vicinity of open windows and balcony doors.</p> <p>Keep children and anyone unable to understand the risks away from the hazardous area.</p>
	<p>Trapping body parts in the opening between sash and frame may lead to serious injuries.</p> <p>When closing windows and balcony doors, never grip between the sash and frame and always exercise caution.</p> <p>Keep children and anyone unable to understand the risks away from the hazardous area.</p>
	<p>Placing additional loads on the sash may lead to minor injuries and property damage.</p> <p>Avoid placing additional loads on the sash.</p>



Symbol	Meaning
	<p>The impact of wind may lead to minor injuries and property damage.</p> <p>Avoid exposing the open sash to wind.</p> <p>Close and lock the window and balcony door sash in windy or draughty conditions.</p>
	<p>Introducing obstacles into the opening between sash and frame may result in minor injuries and property damage.</p> <p>Avoid introducing obstacles into the opening between sash and frame.</p>
	<p>Pressing the sash against the edge of an opening (reveal) may pose a risk of minor injuries and cause property damage</p> <p>Refrain from pressing the sash against the edge of an opening (reveal).</p>

3 Information on the product

3.1 General structure of the substructure and thresholds



Roto products

- [1] Weather profile strip
- [2] Drip seal
- [3] Cover
- [4] Threshold
- [5] Base profile
- [6] Anti-moisture foil

Substructure

-  Finished floor
-  Floor insulation
-  Screed
-  Concrete
-  Insulation
-  Ground
-  Floor



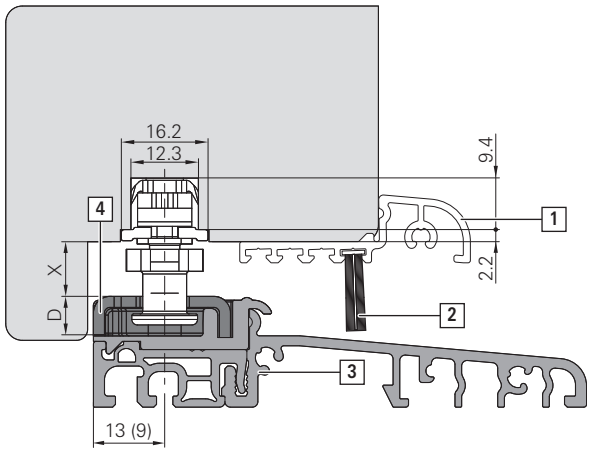
INFO

Based on RAL installation guidelines.

The substructure shown is an example only. The substructure always has to be assessed and approved by a specialist company.



3.2 Threshold functional clearance



Example:

- [D] Height of threshold cover
- [X] Functional clearance between the threshold cover and leaf rebate (Euro-rebate system)

- [1] Weather profile strip
- [2] Drip seal / brush gasket
- [3] Threshold, inward opening
- [4] Tilt striker

The following combinations of components must be used due to the differing functional clearance between the threshold cover and leaf rebate:

Threshold functional clearance [X]	Frame rebate clearance	Cam variant
4 – 5	12 – 13	V cam
7 – 8	15 – 16	V cam, extended, 7 mm
10 – 11	18 – 17	V cam, extended, 10 mm

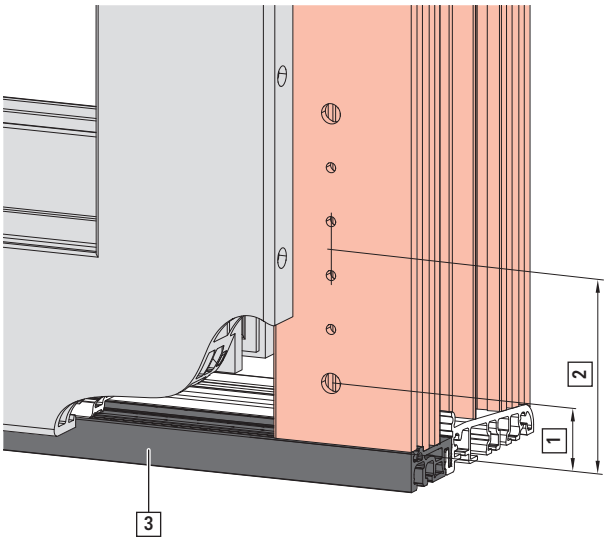


INFO

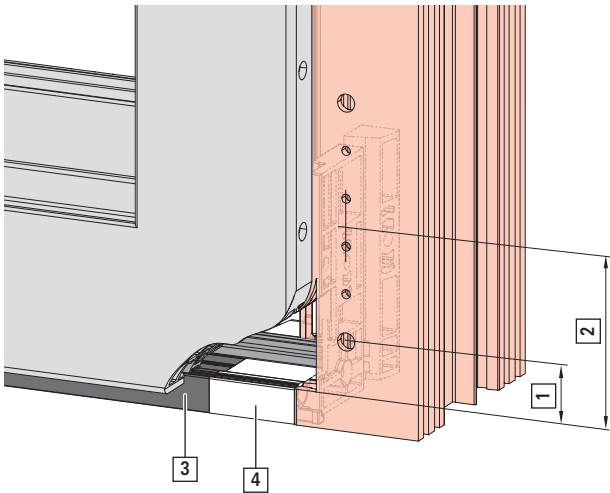
Roto can assist with the generally recommended profile assessments if you contact the Roto sales representative in charge of this.

3.3 Drill holes

Contour-milled



Threshold retainer



- [1] Distance between the drill hole in the pivot rest and the base of the threshold (top edge of thermal separation)
- [2] Distance between the centre of the pivot rest and the base of the threshold (top edge of thermal separation)
- [3] Thermal separation
- [4] Example of threshold retainer rebate

General information

- Do not drill into the threshold, threshold retainer or thermal separation.
- The pivot rest must not be torn out; ensure a secure fit.
- If the pivot rest is moved, the tilt depth may need to be limited to 80 mm.
- The drill hole spacing depends on the functional clearance in question.
- When using a concealed hinge side, ensure that the threshold retainer is compatible, see CTL_87.



4 Overview

4.1 PVC

Manufacturer	Threshold	Accessible	Threshold height 20 mm	Hinge side		
				P	Designo (HA 13)	
Roto Eifel	Eifel TB	–	■	■	■	→ from page 37
Alumat	MFAT 20 mm	■	–	■	–	
aluplast	System threshold	–	■	■	■	→ from page 42
Deceuninck	Easystep	■	–	■	■	→ from page 76
	Eforte	–	■	■	■	→ from page 45
Gealan	Threshold 82.5 mm	–	■	■	–	→ from page 48
	2595/2596	–	■	■	–	→ from page 50
Grundmeier (GKG)	Basic / Combi	–	■	■	–	→ from page 52
	Combi Plus	–	■	■	■	→ from page 54
	Combi Plan	■	–	■	■	→ from page 76
GU	MFT threshold	–	■	■	■	→ from page 56
	DKS	–	■	■	■	→ from page 58
Profine	System A075, A076, A077	–	■	■	■	→ from page 60
	PremiPlan Plus	■	–	■	–	→ from page 77
Rehau	WIN 80 Synego threshold	–	■	■	–	→ from page 62
	Raucero	■	–	■	■	→ from page 79
Salamander	proEvolution, 72 mm	–	■	■	■	→ from page 64
	greenEvolution, 76 mm	–	■	■	■	→ from page 67
	SIP Salamander, 82 mm	–	■	■	■	→ from page 70
Schüco	SI82	–	■	■	■	→ from page 72
	LivIng	■	–	■	■	→ from page 79
Veka	System 104.427	–	■	■	■	→ from page 73

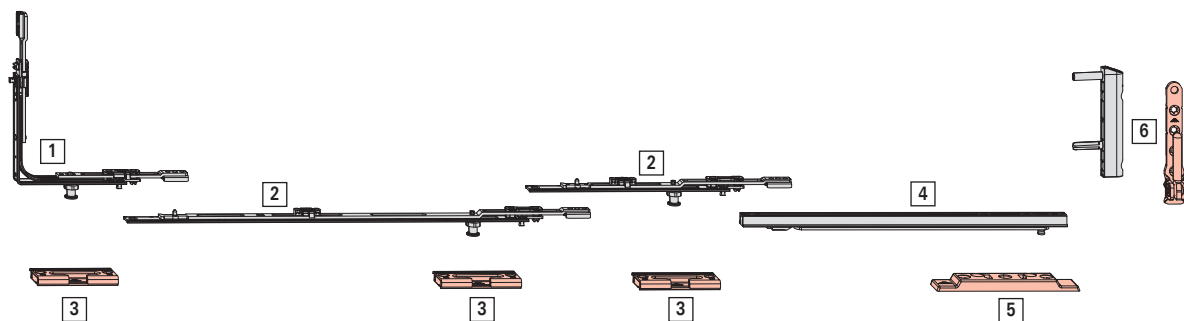
4.2 Timber

Manufacturer	Threshold	Accessible	Threshold height 20 mm	Hinge side			
				T	Designo (HA 13)	Power Hinge	
Roto Eifel	Eifel TB	–	■	■	■	■	→ from page 37
Alumat	MFAT 10 mm	■	–	–	■	–	
Grundmeier (GKG)	Basic / Combi	–	■	■	–	■	→ from page 52
	Combi Plus	–	■	■	■	■	→ from page 54
	Combi Plan	■	–	■	■	■	→ from page 76
GU	MFT threshold	–	■	■	■	–	→ from page 56
	DKS	–	■	■	■	–	→ from page 58
Gutmann	Weser 20	–	■	■	–	–	→ from page 50

5 Hinge sides

5.1 Sash

5.1.1 Using leaf components



The figure is an example

- | | |
|----------------------------|---|
| [1] Corner drive, standard | [4] Turn restrictor leaf component |
| [2] Centre lock | [5] Turn restrictor frame component |
| [3] Tilt striker | [6] Pivot rest / corner hinge on hinge side |

Component	Cam	Functional clearance		
		4 – 5	7 – 8	10 – 11
Corner drives				
Standard	1 P	260277	–	–
	1 V	260272	642264	614456
Standard (RC 3)	2 V	260274	823317	794778
Faceplate	1 V	367227	823316	794779
	1 V	839224	858513	858515
Centre locks				
CL 200	1 P	255284	–	–
	1 V	296853	625214	–
CL 200 KU	1 P	622880	–	–
	1 V	337708	–	–
CL 400	1 P	255285	–	–
	1 P with offset	593611	–	–
	1 V	296854	625225	566651
	1 V with offset	593612	–	–
CL 400 KU	1 P	622881	–	–
	1 V	337710	–	618554
CL 600	1 P	255286	–	–
	1 V	296885	625226	–
CL 600 KU	1 P	622882	–	–
	1 V	296852	625227	618553
		337711	–	–
Centre lock with claw				
CL 200 KU	Claw 21 mm	–	–	365299
	Claw 17 mm	–	–	821929
CL 400 KU	Claw 21 mm	–	–	365300
	Claw 17 mm	–	–	821995
Shootbolt protrusions				
110		–	–	633930
110 with reverse-action travel		–	–	633931
110 for N16 faceplate		–	–	633325



Component	Cam	Functional clearance		
		4 – 5	7 – 8	10 – 11
Espagnolette connector				
Espagnolette connector, Euro-groove 7/8		331973	–	–
Floating-mullion sash espagnolette connector for VT espagnolette connector without protrusion		630573	–	630572
		628701	–	–
Espagnolette connector with protrusion and reverse-action travel		312032	–	312033
Espagnolette connector with protrusion, without reverse-action travel		457626	349187	–

5.1.2 Using an arrestable brake stay

Arrestable brake stay	Functional clearance
	10 – 11
Scissor stay no. 1	486820
Scissor stay no. 2	632993
Scissor stay no. 3	633026
Arm no. 1	486821
Arm no. 2	492757
Arm no. 3	632994

5.1.3 Using the turn restrictor

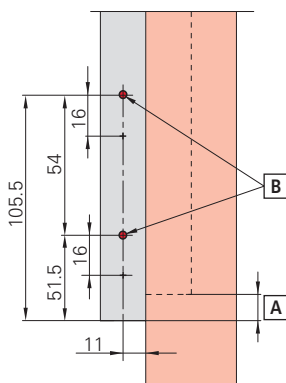
Turn restrictor		Functional clearance
		4 – 5; 7 – 8; 10 – 11
Turn restrictor 191		260564
		808087
Turn restrictor 335	Selectable setting	260565
		572445
Turn restrictor 355	Spring-loaded setting	772326

5.2 Hinge side

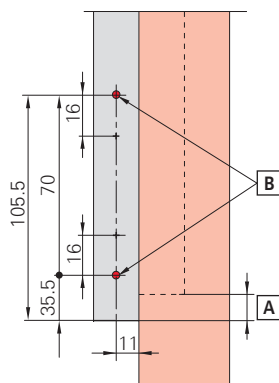
5.2.1 Roto NX | Hinge side P

5.2.1.1 Corner hinge

P 6/150



Height adjustable

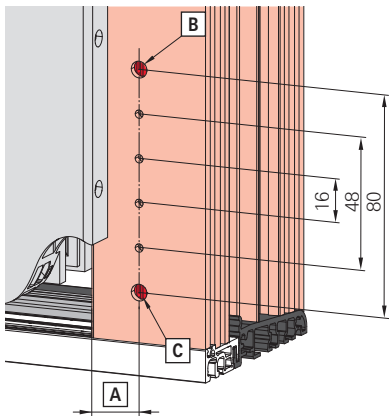


Height and gasket-compression adjustable

Assignment	Meaning
[A]	Overlap width

Corner hinge threshold drilling jig (offset by 9 mm)

P 6/130 | P 6/150

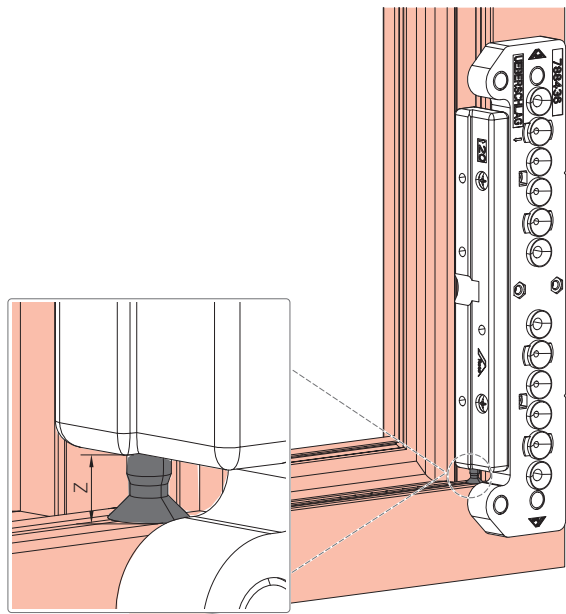


Drilling jig

		Nº
Stay bearing, standard, and pivot rest		788436



Spacer

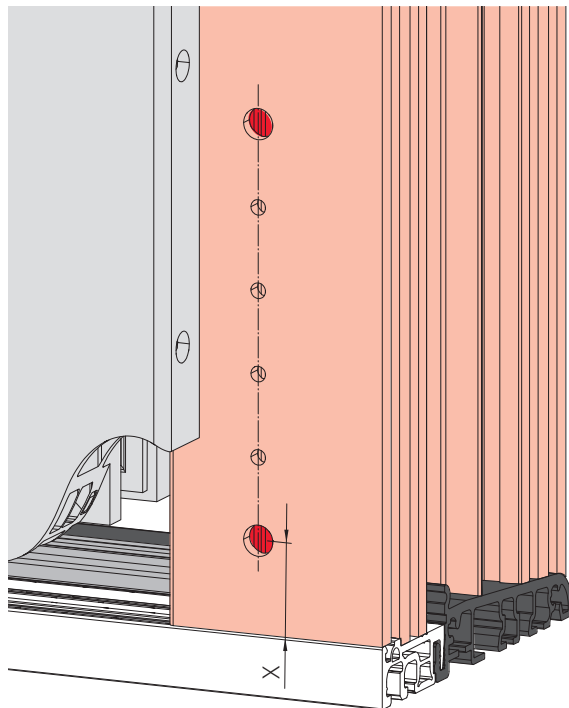


Extend the drilling jig stop for the pivot rest by dimension Z using the adjusting screw.
Place the drilling jig in the threshold rebate base.

Functional clearance	[Z]	Drilling jig
4 – 5	9	2033355
7 – 8	12	
10 – 11	15	

5.2.1.3 Dimensions

Position of pivot rest, system 12/20-13



Functional clearance	[X] Top edge of thermal separation Threshold height 20 mm		Accessible
4 – 5	5		–
7 – 8	8		–
10 – 11	11		31

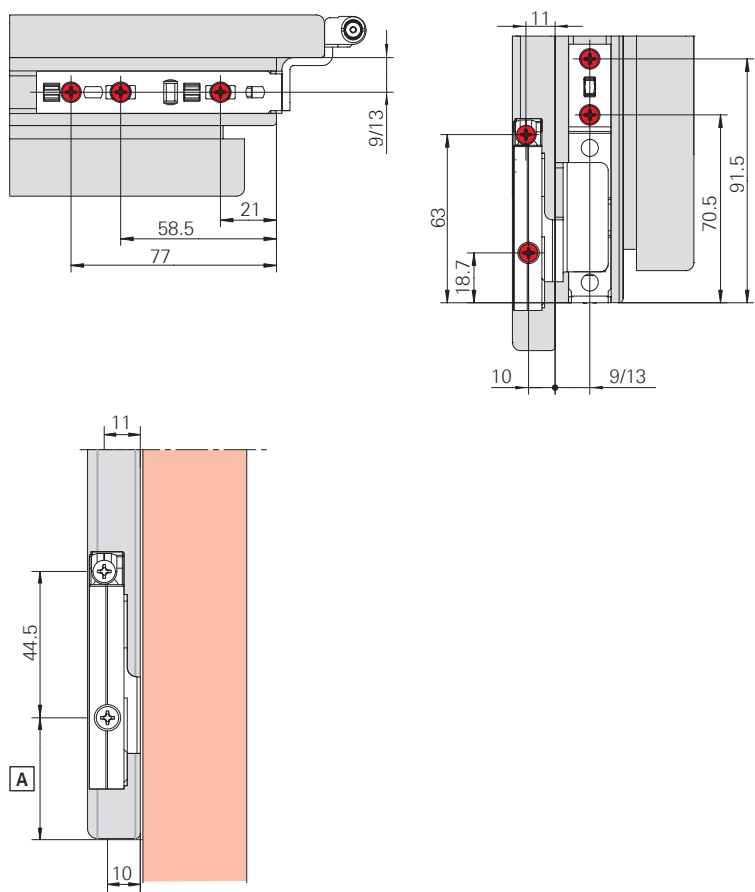
Corner hinge drilling jig

			Nº
Corner hinge K3		Height adjustable	230728
		Height and gasket-compression adjustable	391685
Corner hinge K6		Height adjustable	230730
		Height and gasket-compression adjustable	449305



5.2.2 Roto NX | Hinge side T

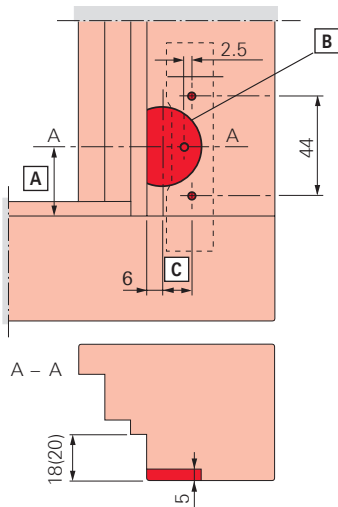
5.2.2.1 Rebate corner hinge



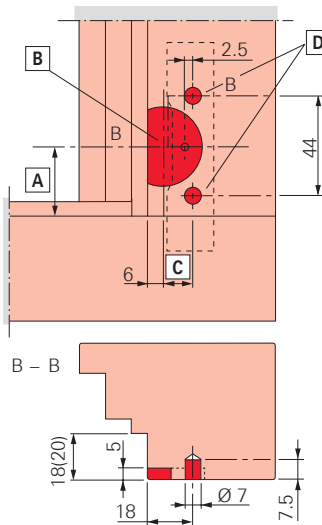
Assignment	Rebate corner hinge	Value	System
[A]	Threshold (39.0)	44.5 mm	12/18-9, 12/18-13
		46.5 mm	12/20-9, 12/20-13
	Threshold (51.5)	57.0 mm	12/18-9, 12/18-13
		59.0 mm	12/20-9, 12/20-13

5.2.2.2 Pivot rest

Without supporting pin



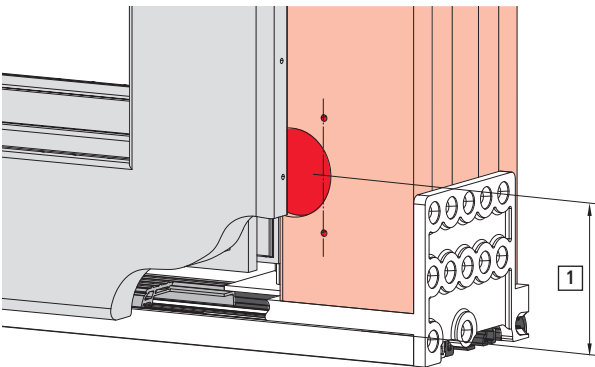
With supporting pin



Assignment	Functional clearance	Rebate corner hinge for threshold (39.0)	Rebate corner hinge for threshold (51.5)	Meaning	System
		Pivot rest	Pivot rest		
[A]	4 – 5	31	43.5		
	7 – 8	34	46.5		
	10 – 11	37	49.5		
[B]		Drill hole Ø 34 mm, 5 mm deep		Drill hole Ø 34 mm, 5 mm deep	
[C]				12.0 mm	12/18-9, 12/18-13
				14.0 mm	12/20-9, 12/20-13
[D]				Drill hole Ø 7 mm, 5 mm deep	

5.2.2.3 Dimensions

Position of pivot rest

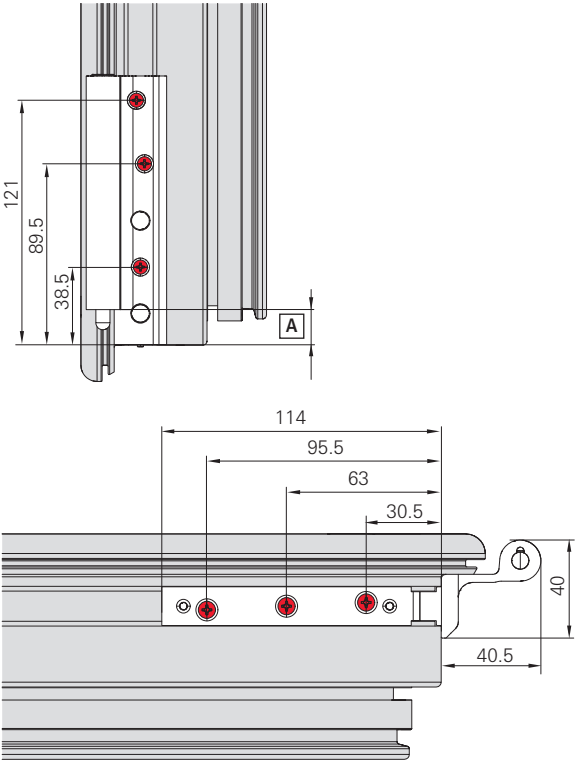


Assignment	Functional clearance	Rebate corner hinge for threshold (39.0)	Rebate corner hinge for threshold (51.5)
		Pivot rest	Pivot rest
[1]	4 – 5	31	43.5
	7 – 8	34	46.5
	10 – 11	37	49.5



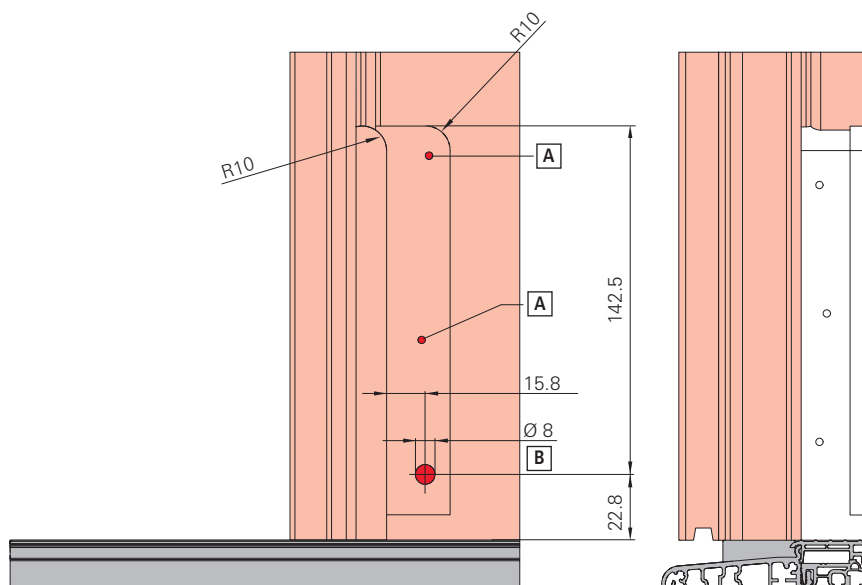
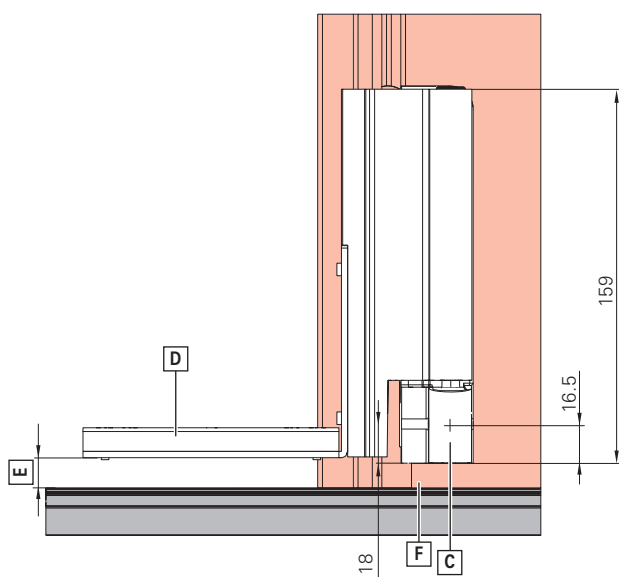
5.2.3 Roto NX | Hinge side Power Hinge

5.2.3.1 Rebate corner hinge



Assignment	Rebate corner hinge	Value	System
[A]	Standard	44.5 mm	12/18-9, 12/18-13
		46.5 mm	12/20-9, 12/20-13
	Threshold	57.0 mm	12/18-9, 12/18-13
		59.0 mm	12/20-9, 12/20-13

5.2.3.2 Pivot rest



Assignment	Meaning	Value
[A]	–	8 mm deep
[B]	–	29 mm deep
[C]	Threshold pivot rest	–
[D]	Rebate corner hinge	–
[E]	Functional clearance	–
[F]	Use a pressure-proof packer	–

Assignment	Functional clearance	Rebate corner hinge, standard Threshold pivot rest	Rebate corner hinge for threshold Threshold pivot rest
[E]	4 – 5	16.5 mm	34.5 mm
	7 – 8	19.5 mm	37.5 mm
	10 – 11	22.5 mm	40.5 mm



Rebate corner hinges

						Nº
12/18-9 12/20-9	Standard	20	12	White aluminium	Left	613970
	Standard	20	12	White aluminium	Right	613971
	Standard	29	12	White aluminium	Left	561988
	Standard	29	12	White aluminium	Right	561989
	Threshold	29	12	White aluminium	Left	622833
	Threshold	29	12	White aluminium	Right	622834
12/18-13 12/20-13	Standard	29	12	White aluminium	Left	561986
	Standard	29	12	White aluminium	Right	561987
	Threshold	29	12	White aluminium	Left	622831
	Threshold	29	12	White aluminium	Right	622832

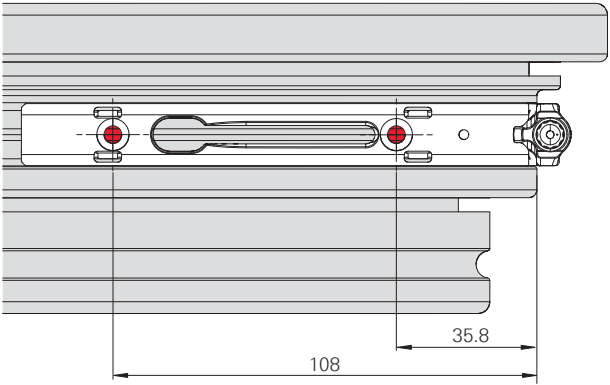
Pivot rest

						Nº
Threshold	29	12	max. 200 kg	Left	White aluminium	561984
	29	12	max. 200 kg	Right	White aluminium	561985

5.2.4 Roto NX | Hinge side Designo (HA 13)

5.2.4.1 Timber

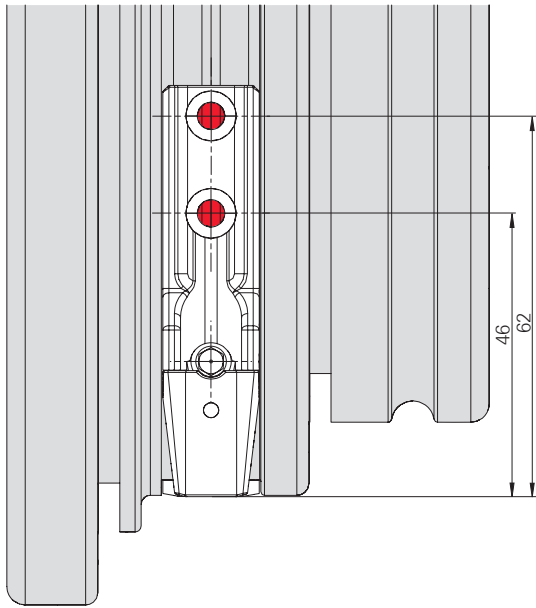
Corner hinge



Hinge sides

Hinge side

Roto NX | Hinge side Designo (HA 13)

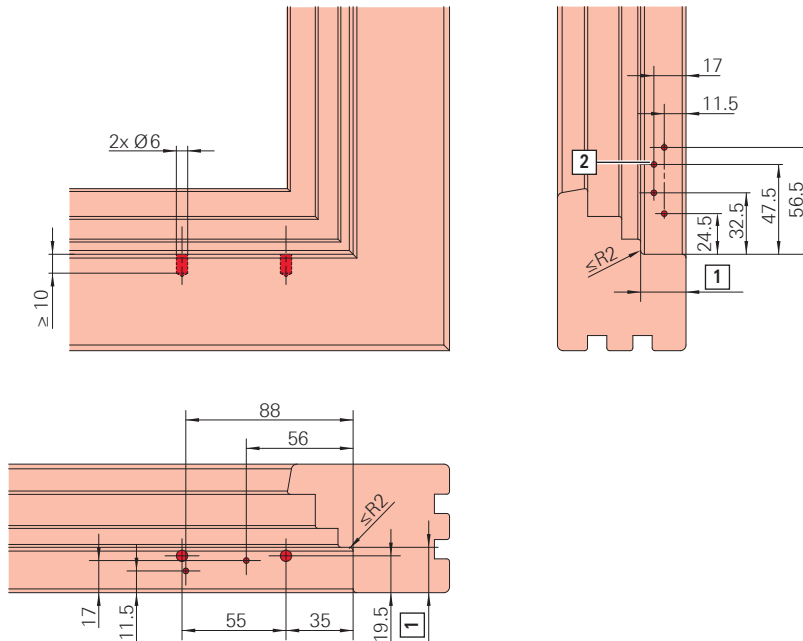


Functional clearance	Corner hinge		Pivot rest	Packer
10 – 11	634705	Left	563737	771917
		Right	563736	771918



Pivot rest

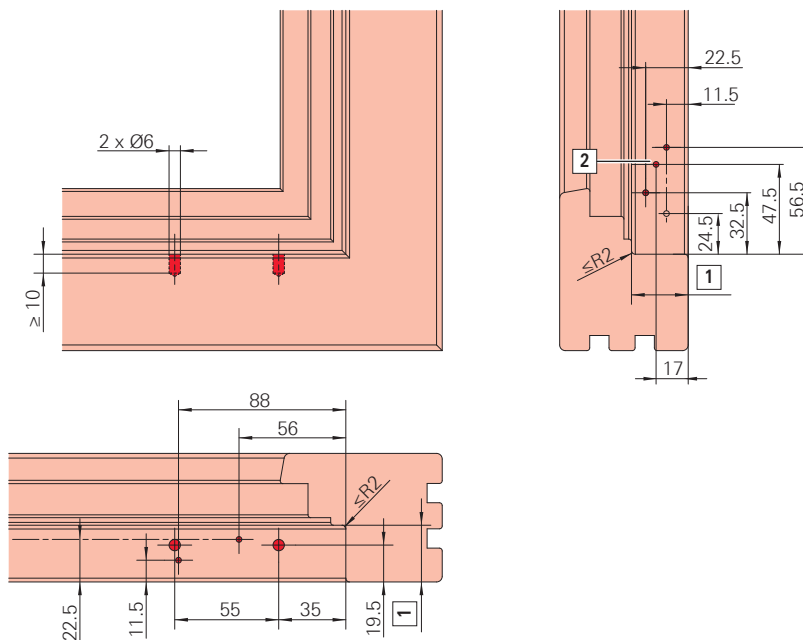
Rebate depth 24



[1] Rebate depth

[2] Only for S.kg ≥ 80 kg with load transfer

Rebate depth 30

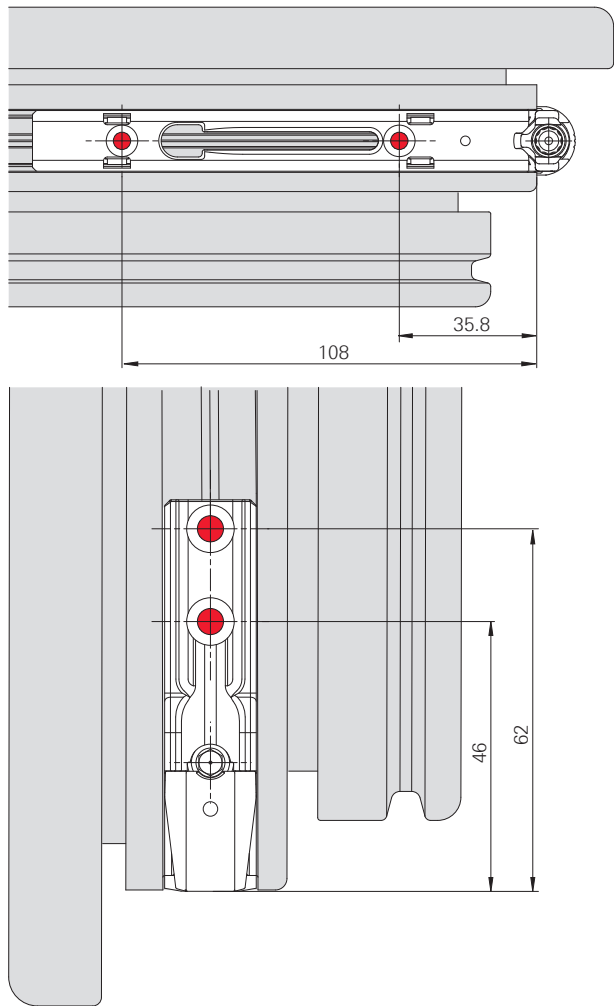


[1] Rebate depth

[2] Only for S.kg ≥ 80 kg with load transfer

5.2.4.2 PVC

Corner hinge



functional clearance	Corner hinge	Packer
10 – 11	See thresholds	See thresholds

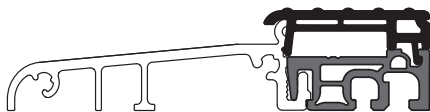


6 Thresholds

6.1 Threshold height 20 mm

6.1.1 Roto Eifel

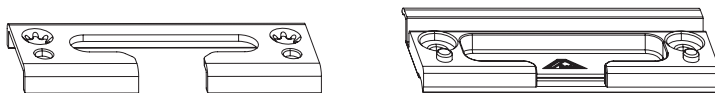
6.1.1.1 Roto Eifel TB



Tilt striker and packer



				Nº
Tilt striker and support	9	Grey	Signal grey RAL 7004	857129
		Black	Jet black RAL 9005	2010026
	13	Grey	Signal grey RAL 7004	856745
		Black	Jet black RAL 9005	858228



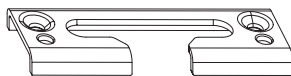
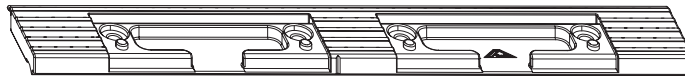
				Nº
Tilt striker and support	13	Black	Jet black RAL 9005	2001901
		Grey	Signal grey RAL 7004	2001883

Tilt striker TiltFirst and packer



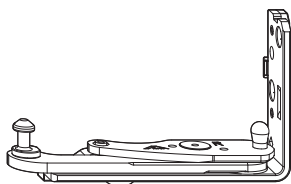
					Nº
TiltFirst (TF) tilt striker and packer	13	Grey	Signal grey RAL 7004	Left	857109
		Grey	Signal grey RAL 7004	Right	857108
		Black	Jet black RAL 9005	Left	897774
		Black	Jet black RAL 9005	Right	897773

Zweiflügler



					Nº
Tilt striker and support for double-sashed window	13	Grey	Signal grey RAL 7004, for use in lever-operated espagnolette Plus	2001904	
		Grey	Signal grey RAL 7004, for use in lever-operated espagnolette Plus	2001906	

Pivot rest Designo (HA 13 mm)



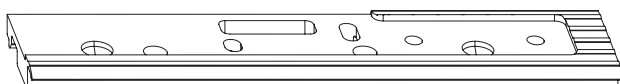
PVC

				Nº
Aluplast Ideal 2000		Roto Sil	Left	623974
		Roto Sil	Right	623973
Rehau S 980 Geneo		Roto Sil	Left	606371
		Roto Sil	Right	606370
Rehau S 735 MD		Roto Sil	Left	610966
Rehau S 788		Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)				
Aluplast Ideal 4000		Roto Sil	Left	628950
Aluplast Ideal 5000		Roto Sil	Right	628949
Aluplast Ideal 8000				
Schüco Corona MD				
Aluplast energeto 5000 view				
Aluplast energeto 7000				
Aluplast Ideal 7000				
Kömmerling 88 Plus		Roto Sil	Left	606355
Kömmerling Eurodur 3S		Roto Sil	Right	606354
Kömmerling Eurofutur Classic				
Kömmerling Eurofutur Elegance				
Veka Softline 70 MD		Roto Sil	Left	606397
Salamander ProEvolution 72		Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD		Roto Sil	Left	626609
Trocal InnoNova 70.M5 MD		Roto Sil	Right	626608
Deceuninck Eforte		Roto Sil	Left	635402
Deceuninck Prestige		Roto Sil	Right	635401
Inoutic AD 13				
Inoutic MD 100				

Timber

				Nº
13	24	Roto Sil	Left	563737
		Roto Sil	Right	563736

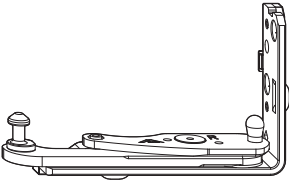
Unterlage Bandseite Designo (BA 13 mm)





						Nº
Designo hinge side packer (HA13)		13	E6 / C-0 Grey	Left	1 Piece(s)	771917
			E6 / C-0 Grey	Right	1 Piece(s)	771918

Pivot rest Designo (HA 9 mm)



Timber

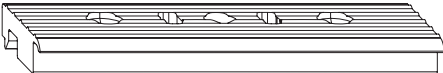
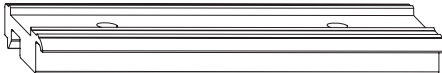
				Nº
9	20 mm	Roto Sil	Left	477025
		Roto Sil	Right	476814

Packer for hinge side Designo (HA 9 mm)



						Nº
Packer for hinge side Designo (HA 9)		9	E6 / C-0 Grey	Left	1 Piece(s)	2006171
			E6 / C-0 Grey	Right	1 Piece(s)	2006172

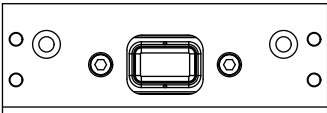
Packer for turn restrictor 191 / 335



							Nº
Packers for turn restrictor 191 / 335		Compatible with Eifel TB	4	13	E6 / C-0 Grey	1 Piece(s)	818552
			10	13	E6 / C-0 Grey	1 Piece(s)	823247

Zweiflügler

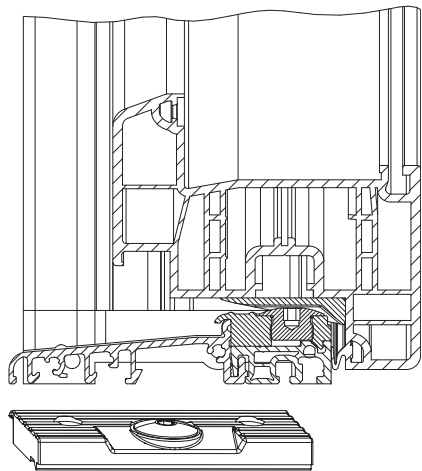
Shootbolt protrusion strikers



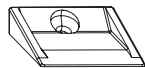
						Nº
Shootbolt protrusion		16	29	Laterally adjustable	Roto Sil	729031
		13	29	Laterally adjustable	Roto Sil	734219

6.1.1.2 Run-up block

Functional clearance 4 mm

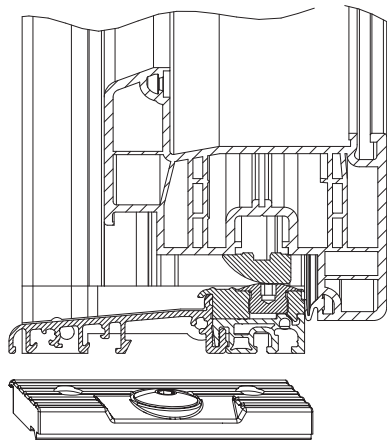


					
Rebate run-up block for threshold (functional clearance 4 / 10 / 12 mm)	Frame	Screw-on	Height adjustable	Grey	772947
				Black	800136



		
Run-up plate for adjustable rebate run-up block		Sash 771035

Functional clearance 10 mm

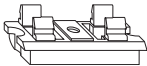
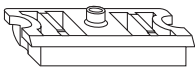


					
Rebate run-up block for threshold (functional clearance 4 / 10 / 12 mm)	Frame	Screw-on	Height adjustable	Grey	772947
				Black	800136



Security component for filling the rebate clearance (floating-mullion installation)

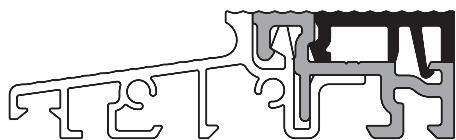
The drawing consists of two parts. The upper part is a cross-sectional view of a door and its lock mechanism. It shows the door's internal structure, including the lock cylinder, the lock body, and the handle assembly. The handle is shown in a cross-section, revealing its internal components. The lower part is a separate view of the lock cylinder and handle assembly, showing the handle, the lock cylinder, and the internal components of the handle assembly.

Rebate run-up block for threshold (functional clearance 4 / 10 / 12 mm)Run-up block for groove mounting

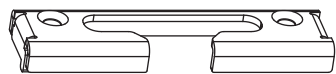
Run-up block for floating-mullion installation

6.1.2 Aluplast

6.1.2.1 System threshold – rebate depth 24 mm



Tilt striker



			Nº
Tilt striker	13	Roto Sil	857125

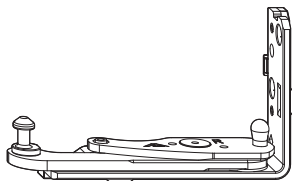
Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165



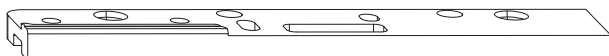
Pivot rest Designo (HA 13 mm)



			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD Rehau S 788 Rehau S 799 Brillant Design (S 730)	Roto Sil	Left	610966
	Roto Sil	Right	610965
Aluplast Ideal 4000 Aluplast Ideal 5000 Aluplast Ideal 8000 Schüco Corona MD Aluplast energeto 5000 view Aluplast energeto 7000 Aluplast Ideal 7000	Roto Sil	Left	628950
	Roto Sil	Right	628949
Kömmerling 88 Plus Kömmerling Eurodur 3S Kömmerling Eurofutur Classic Kömmerling Eurofutur Elegance	Roto Sil	Left	606355
	Roto Sil	Right	606354
Veka Softline 70 MD Salamander ProEvolution 72	Roto Sil	Left	606397
	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD Trocal InnoNova 70.M5 MD	Roto Sil	Left	626609
	Roto Sil	Right	626608
Deceuninck Eforte Deceuninck Prestige Inoutic AD 13 Inoutic MD 100	Roto Sil	Left	635402
	Roto Sil	Right	635401

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

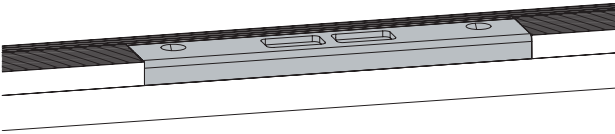
Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	822159
	13	E6 / C-0	Right	822165

Zweiflügler

Shootbolt protrusion, bottom, universal, integrated



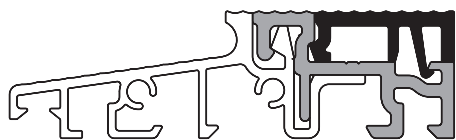
					Nº
Shootbolt protrusion	13	24	–	Roto Sil	808675

Compatible leaf components → *from page 24.*

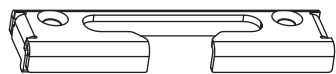


6.1.3 Deceuninck

6.1.3.1 Eforte – rebate depth 24 mm



Tilt striker



			
Tilt striker	13	Roto Sil	Nº 857125

Tilt striker TiltFirst

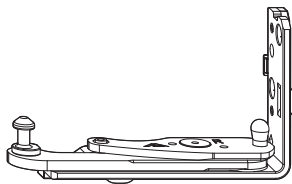


					
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165



INFO
Fill the 2 mm gap with sealing compound.

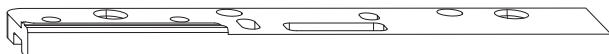
Pivot rest Designo (HA 13 mm)



			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD Rehau S 788 Rehau S 799 Brillant Design (S 730)	Roto Sil	Left	610966
	Roto Sil	Right	610965
Aluplast Ideal 4000 Aluplast Ideal 5000 Aluplast Ideal 8000 Schüco Corona MD Aluplast energeto 5000 view Aluplast energeto 7000 Aluplast Ideal 7000	Roto Sil	Left	628950
	Roto Sil	Right	628949
Kömmerling 88 Plus Kömmerling Eurodur 3S Kömmerling Eurofutur Classic Kömmerling Eurofutur Elegance	Roto Sil	Left	606355
	Roto Sil	Right	606354
Veka Softline 70 MD Salamander ProEvolution 72	Roto Sil	Left	606397
	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD Trocal InnoNova 70.M5 MD	Roto Sil	Left	626609
	Roto Sil	Right	626608
Deceuninck Eforte Deceuninck Prestige Inoutic AD 13 Inoutic MD 100	Roto Sil	Left	635402
	Roto Sil	Right	635401

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

Unterlage Bandseite Designo (BA 13 mm)

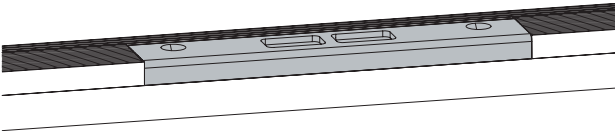


				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	822159
	13	E6 / C-0	Right	822165



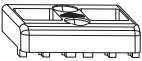
Zweiflügler

Shootbolt protrusion, bottom, universal, integrated



					Nº
Shootbolt protrusion	13	24	–	Roto Sil	808675

2-hole striker



		Nº
13	Roto Sil	740167

Compatible leaf components → *from page 24.*

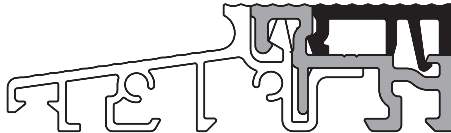
Thresholds

Threshold height 20 mm

Gealan

6.1.4 Gealan

6.1.4.1 Threshold 82.5 – rebate depth 22 mm

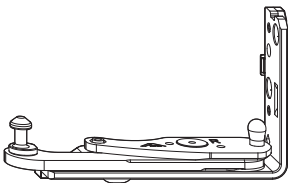


Tilt striker and packer



			Nº
Tilt striker and support	13	RAL 7035	2001905

Pivot rest Designo (HA 13 mm)

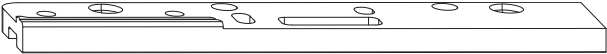


			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD	Roto Sil	Left	610966
Rehau S 788	Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)			
Aluplast Ideal 4000	Roto Sil	Left	628950
Aluplast Ideal 5000	Roto Sil	Right	628949
Aluplast Ideal 8000			
Schüco Corona MD			
Aluplast energeto 5000 view			
Aluplast energeto 7000			
Aluplast Ideal 7000			
Kömmerling 88 Plus	Roto Sil	Left	606355
Kömmerling Eurodur 3S	Roto Sil	Right	606354
Kömmerling Eurofutur Classic			
Kömmerling Eurofutur Elegance			
Veka Softline 70 MD	Roto Sil	Left	606397
Salamander ProEvolution 72	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD	Roto Sil	Left	626609
Trocal InnoNova 70.M5 MD	Roto Sil	Right	626608
Deceuninck Eforte	Roto Sil	Left	635402
Deceuninck Prestige	Roto Sil	Right	635401
Inoutic AD 13			
Inoutic MD 100			

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.



Unterlage Bandseite Designo (BA 13 mm)



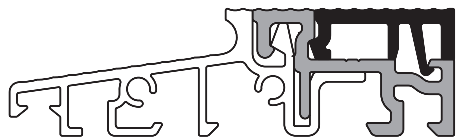
				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	822159
	13	E6 / C-0	Right	822165



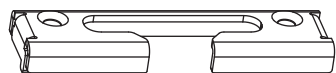
INFO
Route the threshold for the compatible packer.

Compatible leaf components → *from page 24.*

6.1.4.2 Main and balcony door threshold 2595 / 2595 – rebate depth 24 mm



Tilt striker



			Nº
Tilt striker	13	Roto Sil	857125

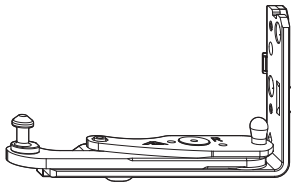
Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165

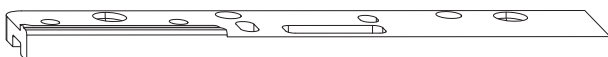


Pivot rest Designo (HA 13 mm)



			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD Rehau S 788 Rehau S 799 Brillant Design (S 730)	Roto Sil	Left	610966
	Roto Sil	Right	610965
Aluplast Ideal 4000 Aluplast Ideal 5000 Aluplast Ideal 8000 Schüco Corona MD Aluplast energeto 5000 view Aluplast energeto 7000 Aluplast Ideal 7000	Roto Sil	Left	628950
	Roto Sil	Right	628949
Kömmerling 88 Plus Kömmerling Eurodur 3S Kömmerling Eurofutur Classic Kömmerling Eurofutur Elegance	Roto Sil	Left	606355
	Roto Sil	Right	606354
Veka Softline 70 MD Salamander ProEvolution 72	Roto Sil	Left	606397
	Roto Sil	Right	606396
Tropical InnoNova 70.A5 AD Tropical InnoNova 70.M5 MD	Roto Sil	Left	626609
	Roto Sil	Right	626608
Deceuninck Eforte Deceuninck Prestige Inoutic AD 13 Inoutic MD 100	Roto Sil	Left	635402
	Roto Sil	Right	635401

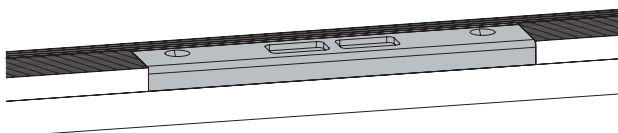
Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	822159
	13	E6 / C-0	Right	822165

Zweiflügler

Shootbolt protrusion, bottom, universal, integrated

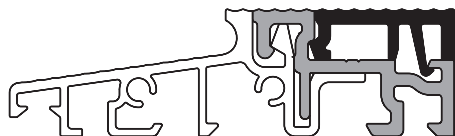


					Nº
Shootbolt protrusion	13	24	—	Roto Sil	808675

Compatible leaf components → *from page 24.*

6.1.5 Grundmeier

6.1.5.1 Basic / Combi – rebate depth 24 mm



Tilt striker



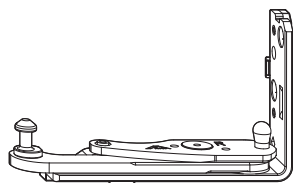
			Nº
Tilt striker	13	Roto Sil	857125

Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165

Pivot rest Designo (HA 13 mm)



PVC

			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD	Roto Sil	Left	610966
Rehau S 788	Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)			
Aluplast Ideal 4000	Roto Sil	Left	628950
Aluplast Ideal 5000	Roto Sil	Right	628949
Aluplast Ideal 8000			
Schüco Corona MD			
Aluplast energeto 5000 view			
Aluplast energeto 7000			
Aluplast Ideal 7000			



			Nº
Kömmerling 88 Plus Kömmerling Eurodur 3S Kömmerling Eurofutur Classic Kömmerling Eurofutur Elegance	Roto Sil	Left	606355
	Roto Sil	Right	606354
	Roto Sil	Left	606397
	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD Trocal InnoNova 70.M5 MD	Roto Sil	Left	626609
	Roto Sil	Right	626608
Deceuninck Eforte Deceuninck Prestige Inoutic AD 13 Inoutic MD 100	Roto Sil	Left	635402
	Roto Sil	Right	635401

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

Timber

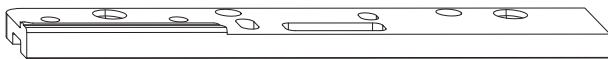
				Nº
13	24	Roto Sil	Left	563737
		Roto Sil	Right	563736



INFO

Remove the stainless-steel packer.

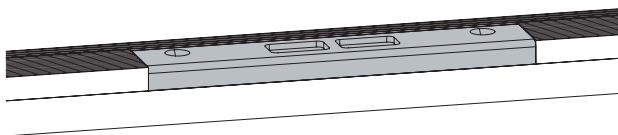
Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	822159
	13	E6 / C-0	Right	822165

Zweiflügler

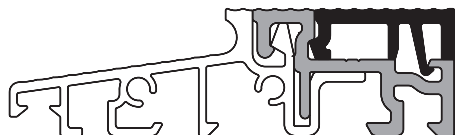
Shootbolt protrusion, bottom, universal, integrated



					Nº
Shootbolt protrusion	13	24	—	Roto Sil	808675

Compatible leaf components → *from page 24*.

6.1.5.2 Combi Plus – rebate depth 24 mm

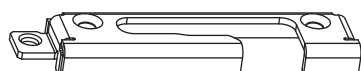


Tilt striker



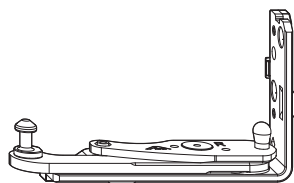
			Nº
Tilt striker	13	Roto Sil	857125

Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165

Pivot rest Designo (HA 13 mm)



PVC

			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD	Roto Sil	Left	610966
Rehau S 788	Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)			
Aluplast Ideal 4000	Roto Sil	Left	628950
Aluplast Ideal 5000	Roto Sil	Right	628949
Aluplast Ideal 8000			
Schüco Corona MD			
Aluplast energeto 5000 view			
Aluplast energeto 7000			
Aluplast Ideal 7000			
Kömmerling 88 Plus	Roto Sil	Left	606355
Kömmerling Eurodur 3S	Roto Sil	Right	606354
Kömmerling Eurofutur Classic			
Kömmerling Eurofutur Elegance			
Veka Softline 70 MD	Roto Sil	Left	606397
Salamander ProEvolution 72	Roto Sil	Right	606396



				Nº
Trocal InnoNova 70.A5 AD Trocal InnoNova 70.M5 MD		Roto Sil	Left	626609
		Roto Sil	Right	626608
Deceuninck Eforte Deceuninck Prestige Inoutic AD 13 Inoutic MD 100		Roto Sil	Left	635402
		Roto Sil	Right	635401

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

Timber

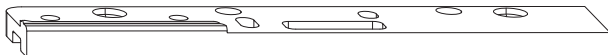
					Nº
13			Roto Sil	Left	563737
24			Roto Sil	Right	563736



INFO

Remove the stainless-steel packer.

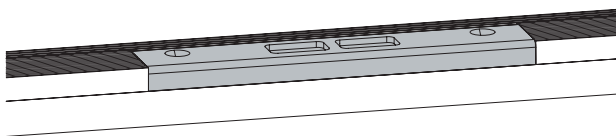
Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	822159
	13	E6 / C-0	Right	822165

Zweiflügler

Shootbolt protrusion, bottom, universal, integrated

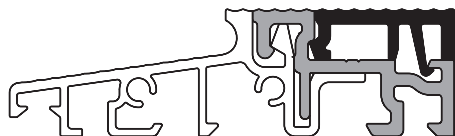


					Nº
Shootbolt protrusion	13	24	–	Roto Sil	808675

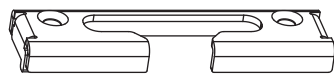
Compatible leaf components → *from page 24*.

6.1.6 GU

6.1.6.1 MFT threshold – rebate depth 22 mm

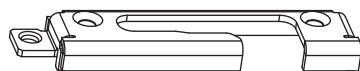


Tilt striker



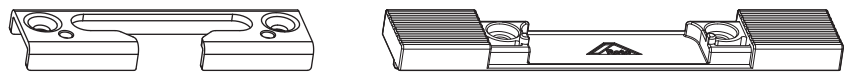
			Nº
Tilt striker	13	Roto Sil	857125

Tilt striker TiltFirst



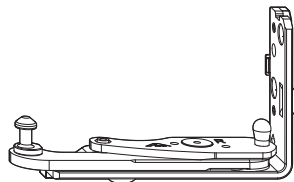
					Nº
TiltFirst (TF) tilt striker	13	Roto Sil	–	Left	494936
		Roto Sil	–	Right	494935

Tilt striker and packer



				Nº
Tilt striker and support	13	Jet black RAL 9005	Black	2001902
	13	Light grey RAL 7035	Grey	2001903

Pivot rest Designo (HA 13 mm)



PVC

			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370



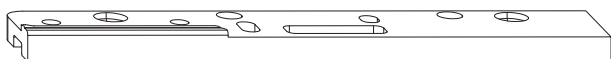
			Nº
Rehau S 735 MD	Roto Sil	Left	610966
Rehau S 788	Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)			
Aluplast Ideal 4000	Roto Sil	Left	628950
Aluplast Ideal 5000	Roto Sil	Right	628949
Aluplast Ideal 8000			
Schüco Corona MD			
Aluplast energeto 5000 view			
Aluplast energeto 7000			
Aluplast Ideal 7000			
Kömmerling 88 Plus	Roto Sil	Left	606355
Kömmerling Eurodur 3S	Roto Sil	Right	606354
Kömmerling Eurofutur Classic			
Kömmerling Eurofutur Elegance			
Veka Softline 70 MD	Roto Sil	Left	606397
Salamander ProEvolution 72	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD	Roto Sil	Left	626609
Trocal InnoNova 70.M5 MD	Roto Sil	Right	626608
Deceuninck Eforte	Roto Sil	Left	635402
Deceuninck Prestige	Roto Sil	Right	635401
Inoutic AD 13			
Inoutic MD 100			

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

Timber

				Nº
13	24	Roto Sil	Left	563737
		Roto Sil	Right	563736

Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	E6 / C-0	Left	795643
		E6 / C-0	Right	795644

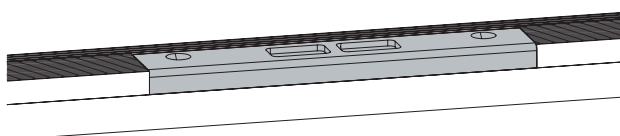


INFO

Route the threshold for the compatible packer.

Zweiflügler

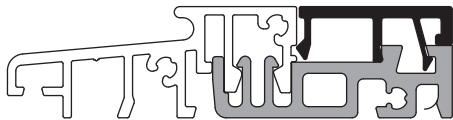
Shootbolt protrusion, bottom, universal, integrated



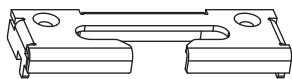
					Nº
Shootbolt protrusion	13	22	–	Roto Sil	641498

Compatible leaf components → *from page 24*.

6.1.6.2 System 609284 GU DKS – rebate depth 24 mm

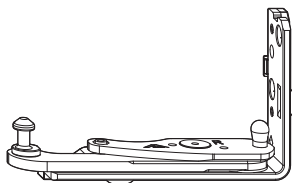


Tilt striker



			Nº
Tilt striker	13	Roto Sil	634679
	13	Roto Sil	857127

Pivot rest Designo (HA 13 mm)



						Nº
Timber	13	24	12	max. 150 kg	Left	563737
		24	12	max. 150 kg	Right	563736

Unterlage Bandseite Designo (BA 13 mm)



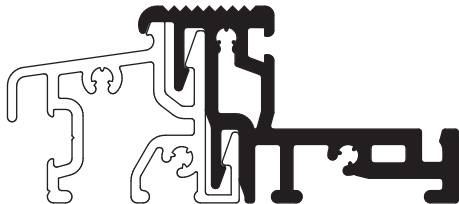
			Nº
Packer	13	Roto Sil	622615

Compatible leaf components → *from page 24.*

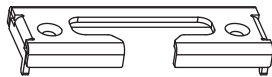


6.1.7 Gutmann

6.1.7.1 Weser system



Tilt striker



			Nº
Tilt striker	9	Roto Sil	857128
	13	Roto Sil	857010

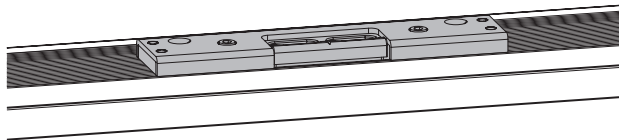
Tilt striker TiltFirst



				Nº
Tilt striker TiltFirst	9	Roto Sil	Right	836582
	9	Roto Sil	Left	836601

Zweiflügler

Shootbolt protrusion, bottom, universal, integrated

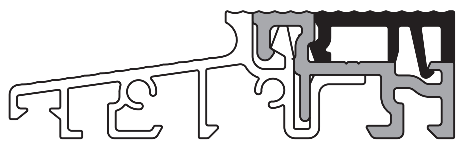


					Nº
Shootbolt protrusion	13	29	Laterally adjustable	Roto Sil	371717
	9	29	Laterally adjustable	Roto Sil	371719

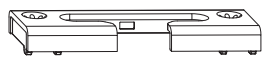
Compatible leaf components → *from page 24.*

6.1.8 Profine

6.1.8.1 Threshold A 76 – rebate depth 24 mm



Tilt striker



			Nº
Tilt striker	13	Roto Sil	857125

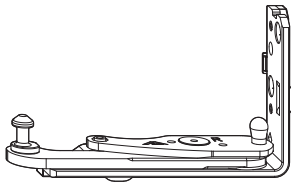
Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165



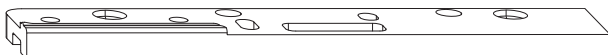
Pivot rest Designo (HA 13 mm)



			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD	Roto Sil	Left	610966
Rehau S 788	Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)			
Aluplast Ideal 4000	Roto Sil	Left	628950
Aluplast Ideal 5000	Roto Sil	Right	628949
Aluplast Ideal 8000			
Schüco Corona MD			
Aluplast energeto 5000 view			
Aluplast energeto 7000			
Aluplast Ideal 7000			
Kömmerling 88 Plus	Roto Sil	Left	606355
Kömmerling Eurodur 3S	Roto Sil	Right	606354
Kömmerling Eurofutur Classic			
Kömmerling Eurofutur Elegance			
Veka Softline 70 MD	Roto Sil	Left	606397
Salamander ProEvolution 72	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD	Roto Sil	Left	626609
Trocal InnoNova 70.M5 MD	Roto Sil	Right	626608
Deceuninck Eforte	Roto Sil	Left	635402
Deceuninck Prestige	Roto Sil	Right	635401
Inoutic AD 13			
Inoutic MD 100			

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

Unterlage Bandseite Designo (BA 13 mm)

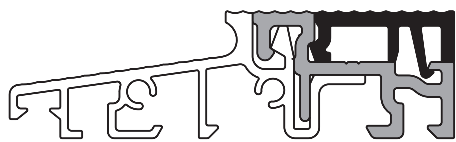


					Nº
Packer for hinge side Designo (HA 13)	13	24	E6 / C-0	Left	822159
	13	24	E6 / C-0	Right	822165

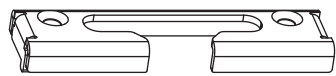
Compatible leaf components → *from page 24*.

6.1.9 Rehau

6.1.9.1 Win 80 Synego threshold – rebate depth 24 mm

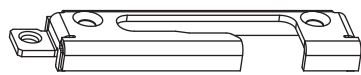


Tilt striker



			Nº
Tilt striker	13	Roto Sil	857125

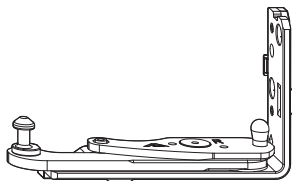
Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165



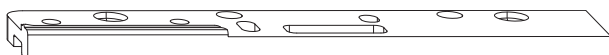
Pivot rest Designo (HA 13 mm)



			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD	Roto Sil	Left	610966
Rehau S 788	Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)			
Aluplast Ideal 4000	Roto Sil	Left	628950
Aluplast Ideal 5000	Roto Sil	Right	628949
Aluplast Ideal 8000			
Schüco Corona MD			
Aluplast energeto 5000 view			
Aluplast energeto 7000			
Aluplast Ideal 7000			
Kömmerling 88 Plus	Roto Sil	Left	606355
Kömmerling Eurodur 3S	Roto Sil	Right	606354
Kömmerling Eurofutur Classic			
Kömmerling Eurofutur Elegance			
Veka Softline 70 MD	Roto Sil	Left	606397
Salamander ProEvolution 72	Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD	Roto Sil	Left	626609
Trocal InnoNova 70.M5 MD	Roto Sil	Right	626608
Deceuninck Eforte	Roto Sil	Left	635402
Deceuninck Prestige	Roto Sil	Right	635401
Inoutic AD 13			
Inoutic MD 100			

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

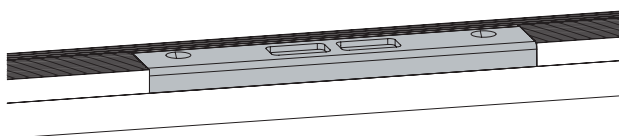
Unterlage Bandseite Designo (BA 13 mm)



					Nº
Packer for hinge side Designo (HA 13)	13	24	E6 / C-0	Left	822159
	13	24	E6 / C-0	Right	822165

Zweiflügler

Shootbolt protrusion, bottom, universal, integrated



					Nº
Shootbolt protrusion	13	24	–	Roto Sil	808675

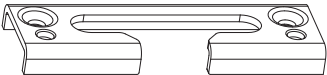
Compatible leaf components → *from page 24*.

6.1.10 Salamander

6.1.10.1 proEvolution 72



Tilt striker and packer

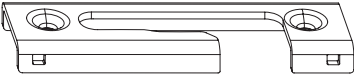
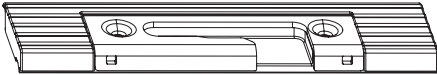


					Nº
Tilt striker and support		9	Grey	Signal grey RAL 7004	857129
			Black	Jet black RAL 9005	2010026
		13	Grey	Signal grey RAL 7004	856745
			Black	Jet black RAL 9005	858228



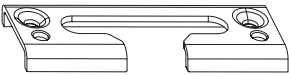
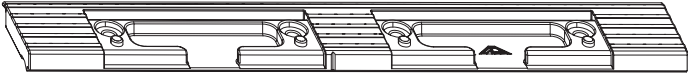
					Nº
Tilt striker and support		13	Jet black RAL 9005	Black	2001902
		13	Light grey RAL 7035	Grey	2001903

Tilt striker TiltFirst and packer



						Nº
TiltFirst (TF) tilt striker and packer		13	Grey	Signal grey RAL 7004	Left	857109
			Grey	Signal grey RAL 7004	Right	857108
			Black	Jet black RAL 9005	Left	897774
			Black	Jet black RAL 9005	Right	897773

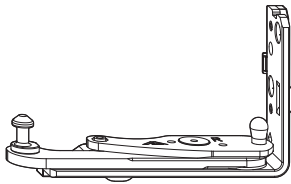
Zweiflügler



					Nº
Tilt striker and support for double-sashed window		13	Grey	Signal grey RAL 7004, for use in lever-operated espagnolette Plus	2001904
			Grey	Signal grey RAL 7004, for use in lever-operated espagnolette Plus	2001906

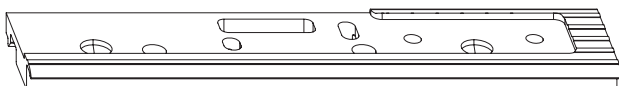


Pivot rest Designo (HA 13 mm)



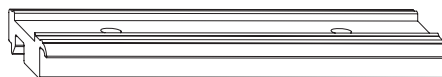
			Nº
Aluplast Ideal 2000	Roto Sil	Left	623974
	Roto Sil	Right	623973
Rehau S 980 Geneo	Roto Sil	Left	606371
	Roto Sil	Right	606370
Rehau S 735 MD Rehau S 788 Rehau S 799 Brillant Design (S 730)	Roto Sil	Left	610966
	Roto Sil	Right	610965
Aluplast Ideal 4000 Aluplast Ideal 5000 Aluplast Ideal 8000 Schüco Corona MD Aluplast energeto 5000 view Aluplast energeto 7000 Aluplast Ideal 7000	Roto Sil	Left	628950
	Roto Sil	Right	628949
Kömmerling 88 Plus Kömmerling Eurodur 3S Kömmerling Eurofutur Classic Kömmerling Eurofutur Elegance	Roto Sil	Left	606355
	Roto Sil	Right	606354
Veka Softline 70 MD Salamander ProEvolution 72	Roto Sil	Left	606397
	Roto Sil	Right	606396
Tropical InnoNova 70.A5 AD Tropical InnoNova 70.M5 MD	Roto Sil	Left	626609
	Roto Sil	Right	626608
Deceuninck Eforte Deceuninck Prestige Inoutic AD 13 Inoutic MD 100	Roto Sil	Left	635402
	Roto Sil	Right	635401

Unterlage Bandseite Designo (BA 13 mm)



					Nº
Designo hinge side packer (HA13)	13	E6 / C-0 Grey	Left	1 Piece(s)	771917
		E6 / C-0 Grey	Right	1 Piece(s)	771918

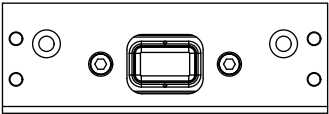
Packer for turn restrictor 191 / 335



						
Packers for turn restrictor 191 / 335	Compatible with Eifel TB	4	13	E6 / C-0 Grey	1 Piece(s)	818552
		10	13	E6 / C-0 Grey	1 Piece(s)	823247

Zweiflügler

Shootbolt protrusion strikers



					
Shootbolt protrusion	13	29	Laterally adjustable	Roto Sil	734219

Compatible leaf components → from page 24.



6.1.10.2 greenEvolution 76



Tilt striker and packer



				Nº
Tilt striker and support	9	Grey	Signal grey RAL 7004	857129
		Black	Jet black RAL 9005	2010026
	13	Grey	Signal grey RAL 7004	856745
		Black	Jet black RAL 9005	858228



				Nº
Tilt striker and support	13	Jet black RAL 9005	Black	2001902
	13	Light grey RAL 7035	Grey	2001903

Tilt striker TiltFirst and packer



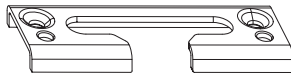
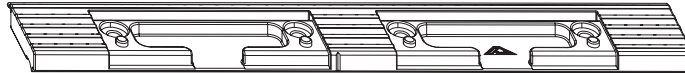
					Nº
TiltFirst (TF) tilt striker and packer	13	Grey	Signal grey RAL 7004	Left	857109
		Grey	Signal grey RAL 7004	Right	857108
		Black	Jet black RAL 9005	Left	897774
		Black	Jet black RAL 9005	Right	897773

Thresholds

Threshold height 20 mm

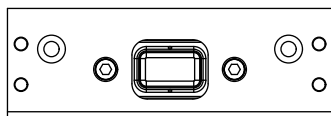
Salamander

Zweiflügler



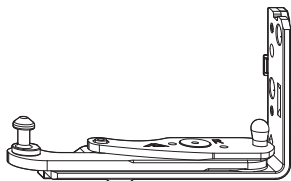
					Nº
Tilt striker and support for double-sashed window		13	Grey	Signal grey RAL 7004, for use in lever-operated espagnolette Plus	2001904
			Grey	Signal grey RAL 7004, for use in lever-operated espagnolette Plus	2001906

Shootbolt protrusion strikers



						Nº
Shootbolt protrusion		13	29	Laterally adjustable	Roto Sil	734219

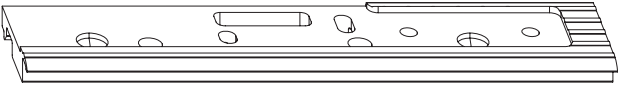
Pivot rest Designo (HA 13 mm)



				Nº
Aluplast Ideal 2000		Roto Sil	Left	623974
		Roto Sil	Right	623973
Rehau S 980 Geneo		Roto Sil	Left	606371
		Roto Sil	Right	606370
Rehau S 735 MD		Roto Sil	Left	610966
Rehau S 788		Roto Sil	Right	610965
Rehau S 799 Brillant Design (S 730)				
Aluplast Ideal 4000		Roto Sil	Left	628950
Aluplast Ideal 5000		Roto Sil	Right	628949
Aluplast Ideal 8000				
Schüco Corona MD				
Aluplast energeto 5000 view				
Aluplast energeto 7000				
Aluplast Ideal 7000				
Kömmerling 88 Plus		Roto Sil	Left	606355
Kömmerling Eurodur 3S		Roto Sil	Right	606354
Kömmerling Eurofutur Classic				
Kömmerling Eurofutur Elegance				
Veka Softline 70 MD		Roto Sil	Left	606397
Salamander ProEvolution 72		Roto Sil	Right	606396
Trocal InnoNova 70.A5 AD		Roto Sil	Left	626609
Trocal InnoNova 70.M5 MD		Roto Sil	Right	626608
Deceuninck Eforte		Roto Sil	Left	635402
Deceuninck Prestige		Roto Sil	Right	635401
Inoutic AD 13				
Inoutic MD 100				

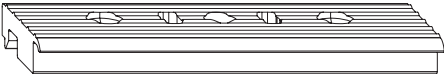


Unterlage Bandseite Designo (BA 13 mm)



					Nº
Designo hinge side packer (HA13)	13	E6 / C-0 Grey	Left	1 Piece(s)	771917
		E6 / C-0 Grey	Right	1 Piece(s)	771918

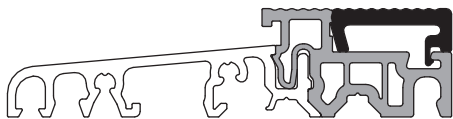
Packer for turn restrictor 191 / 335



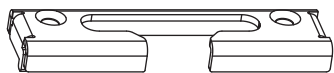
						Nº
Packers for turn restrictor 191 / 335	Compatible with Eifel TB	4	13	E6 / C-0 Grey	1 Piece(s)	818552
		10	13	E6 / C-0 Grey	1 Piece(s)	823247

Compatible leaf components → *from page 24.*

6.1.10.3 SIP Salamander, 82 mm – rebate depth 24 mm



Tilt striker



			Nº
Tilt striker	13	Roto Sil	857125

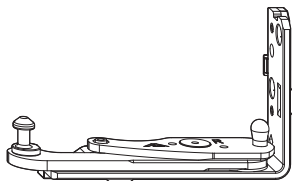
Tilt striker TiltFirst



					Nº
Tilt striker TiltFirst (TF)	13	24	Roto Sil	Left	2029166
	13	24	Roto Sil	Right	2029165



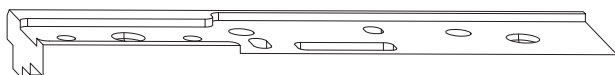
Pivot rest Designo (HA 13 mm)



				Nº
Pivot rest for hinge side Designo (HA 13)	Brüggmann AD 13 Brüggmann MD 13 Veka Alphaline 90 Veka Softline 70 AD Veka Softline 70 MD Veka Softline 82 MD Veka Topline AD 13 Veka Topline MD 13 Salamander BluEvolution 73 Salamander BluEvolution 82 Salamander GreenEvolution 76 Veka Softline 76 AD Veka Softline 76 MD	Left	Roto Sil	635235
Pivot rest for hinge side Designo (HA 13)	Brüggmann AD 13 Brüggmann MD 13 Veka Alphaline 90 Veka Softline 70 AD Veka Softline 70 MD Veka Softline 82 MD Veka Topline AD 13 Veka Topline MD 13 Salamander BluEvolution 73 Salamander BluEvolution 82 Salamander GreenEvolution 76 Veka Softline 76 AD Veka Softline 76 MD	Right	Roto Sil	635234

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

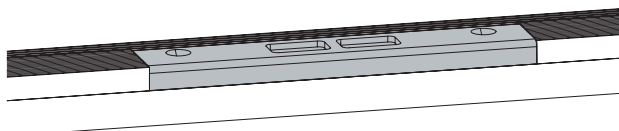
Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	Left	–	823923
		Right	–	823866

Zweiflügler

Shootbolt protrusion, bottom, universal, integrated

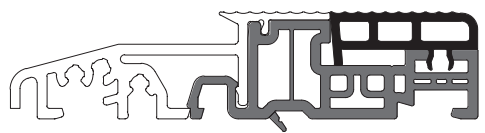


					Nº
Shootbolt protrusion	13	24	–	Roto Sil	808675

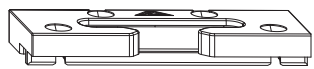
Compatible leaf components → *from page 24*.

6.1.11 Schüco

6.1.11.1 Combi threshold SI82 – rebate depth 27 mm



Tilt striker



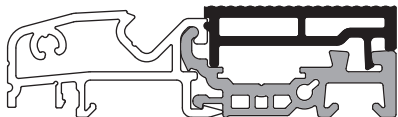
			Nº
Tilt striker	13	Roto Sil	771929
Tilt striker	13	Black	2002883

Compatible leaf components → *from page 24.*

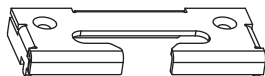


6.1.12 Veka

6.1.12.1 System 104.427 – rebate depth 34 mm

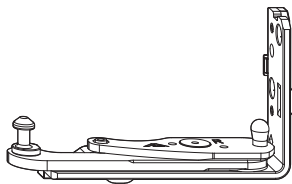


Tilt striker



				Nº
Tilt striker	13	Roto Sil	–	856747

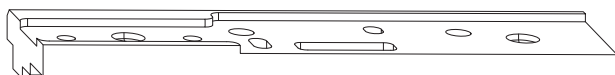
Pivot rest Designo (HA 13 mm)



				Nº
Pivot rest for hinge side Designo (HA 13)	Brüggmann AD 13 Brüggmann MD 13 Veka Alphaline 90 Veka Softline 70 AD Veka Softline 70 MD Veka Softline 82 MD Veka Topline AD 13 Veka Topline MD 13 Salamander BluEvolution 73 Salamander BluEvolution 82 Salamander GreenEvolution 76 Veka Softline 76 AD Veka Softline 76 MD	Left	Roto Sil	635235
Pivot rest for hinge side Designo (HA 13)	Brüggmann AD 13 Brüggmann MD 13 Veka Alphaline 90 Veka Softline 70 AD Veka Softline 70 MD Veka Softline 82 MD Veka Topline AD 13 Veka Topline MD 13 Salamander BluEvolution 73 Salamander BluEvolution 82 Salamander GreenEvolution 76 Veka Softline 76 AD Veka Softline 76 MD	Right	Roto Sil	635234

To remove the PVC packer for the pivot rest Designo, see → *from page 84*.

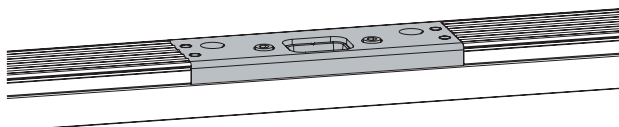
Unterlage Bandseite Designo (BA 13 mm)



				Nº
Packer for hinge side Designo (HA 13)	13	Left	–	823923
		Right	–	823866

Zweiflügler

Shootbolt protrusion, bottom



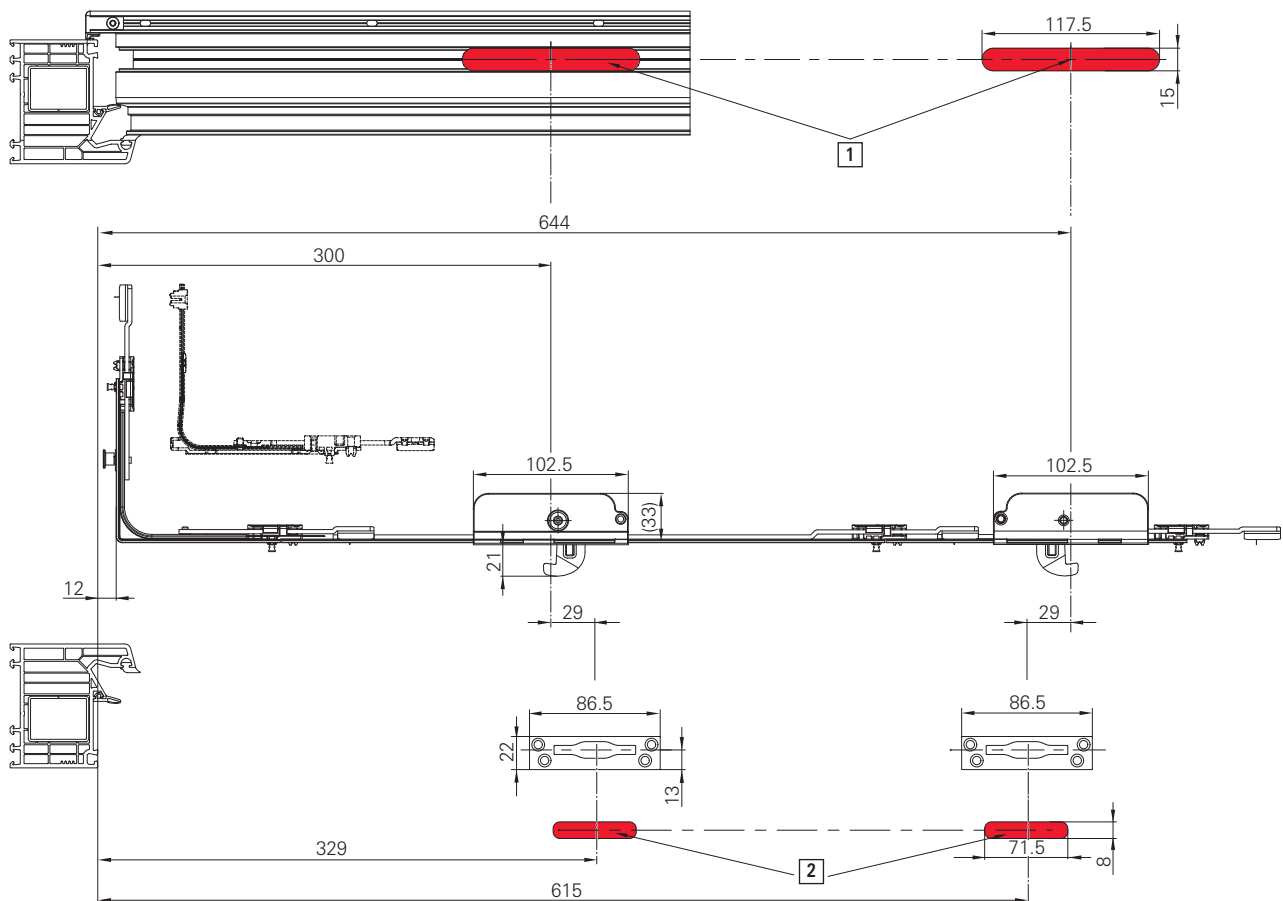
				Nº
Shootbolt protrusion	16	Laterally adjustable	Roto Sil	729030

Compatible leaf components → *from page 24*.

6.2 Accessible

6.2.1 Drilling and routing dimensions

6.2.1.1 Single-leafed door



[1] Routing for the claw housing: 33 mm deep

[2] The routing depth for the claw tilt striker depends on the functional clearance.



INFO

If a claw is used, an espagnolette with centred / variable handle height is required.



INFO

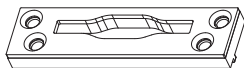
Claws must not be cropped.

6.2.2 Deceuninck

6.2.2.1 Easystep – rebate depth 22 mm



Claw tilt striker



		Nº
	Roto Sil	818568

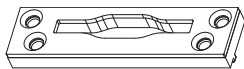
Compatible leaf components → *from page 24.*

6.2.3 Grundmeier

6.2.3.1 Combi Plan – rebate depth 22 mm



Claw tilt striker



		Nº
	Roto Sil	818568

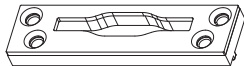
Compatible leaf components → *from page 24.*



6.2.3.2 Combi Plan – rebate depth 24 mm

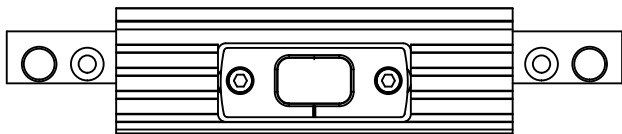


Claw tilt striker



		Nº
	Roto Sil	2006302

Cover bridge



		Nº
	E6 / C-0 Grey	2029641

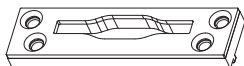
Compatible leaf components → *from page 24.*

6.2.4 Profine

6.2.4.1 PremiPlan Plus – rebate depth 22 mm



Claw tilt striker



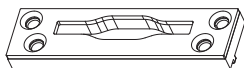
		Nº
	Roto Sil	818568

Compatible leaf components → *from page 24.*

6.2.4.2 PremiPlan Plus – rebate depth 24 mm

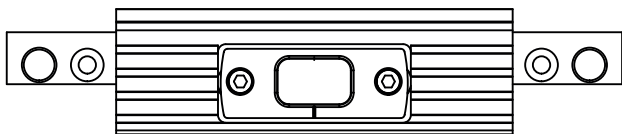


Claw tilt striker



		Nº
	Roto Sil	2006302

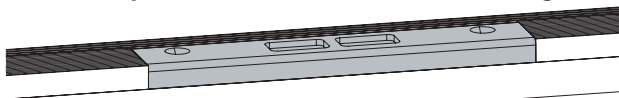
Cover bridge



		Nº
	E6 / C-0 Grey	2029641

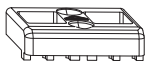
Zweiflügler

Shootbolt protrusion, bottom, universal, integrated



					Nº
Shootbolt protrusion	13	24	–	Roto Sil	808675

2-hole striker



		Nº
13	Roto Sil	740167

Compatible leaf components → from page 24.

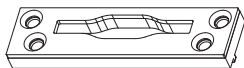


6.2.5 Rehau

6.2.5.1 Raucero – rebate depth 24 mm



Claw tilt striker



		Nº
	Roto Sil	2006302

Compatible leaf components → *from page 24.*

6.2.6 Schüco

6.2.6.1 Living – rebate depth 27 mm



Claw tilt striker

		Nº
27	Roto Sil	2005546

Compatible leaf components → *from page 24.*

7 Installation

7.1 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 fabrication 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 element 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 element 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 the element has been installed.

Combining hardware

Burglar inhibiting elements need hardware which meets special requirements.

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

Coordinate suitable hardware combinations and installation procedures in elements 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 elements, etc.) are binding.

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

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.



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.

All PVC components must be installed at room temperature ($>15^{\circ}\text{C}$).

Remove the protective film immediately after installation.

The number of screws for installation may vary.

7.2 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.



ATTENTION

Using incorrect screw material may cause property damage.

Using the wrong screws may damage the components.

- ▶ Only use galvanised zinc-plated and passivated steel screws.
- ▶ Use screws with additional sealing in more challenging climatic conditions.
- ▶ Use stainless-steel screws on stainless-steel components only.
- ▶ 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 torque. Choose a torque that will not deform the hardware and profile. Define profile-specific torques on the basis of the demo assembly.
- ▶ Use the recommended screws.
- ▶ Select the length of the screws according to the profiles used.

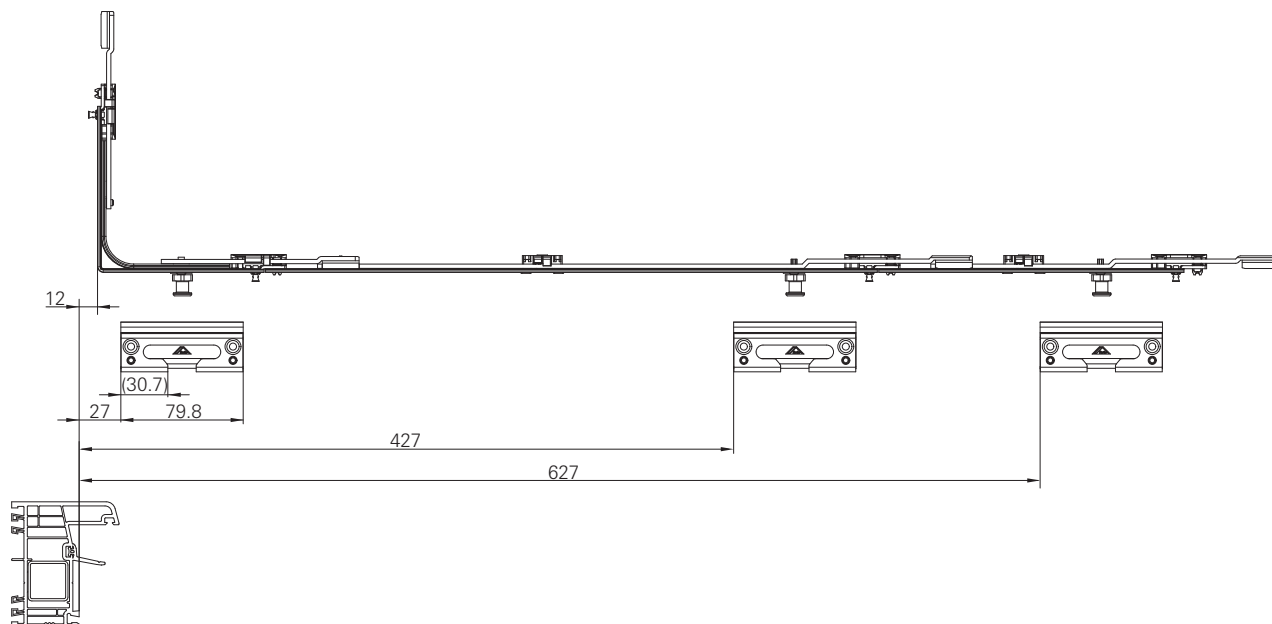
7.3 Installation dimensions



INFO

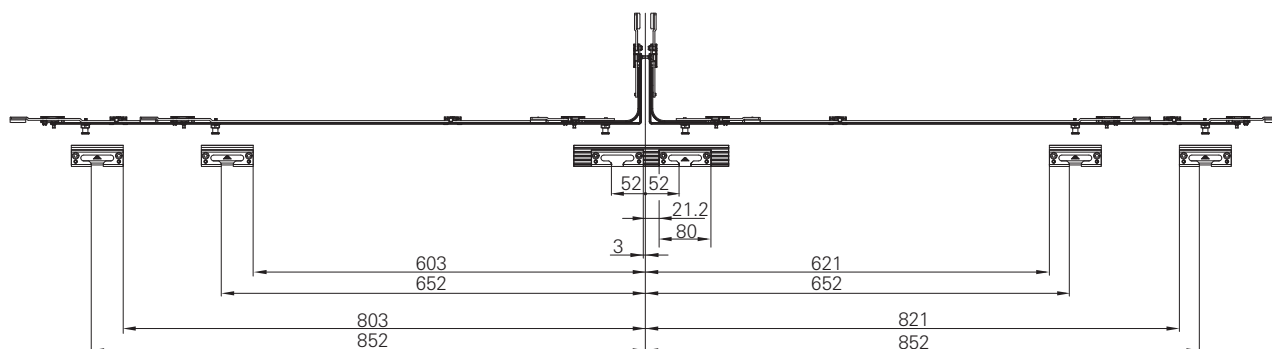
The installation dimensions shown here relate exclusively to thresholds for a threshold height of 20 mm.

7.3.1 Turn-Only / Tilt&Turn hardware

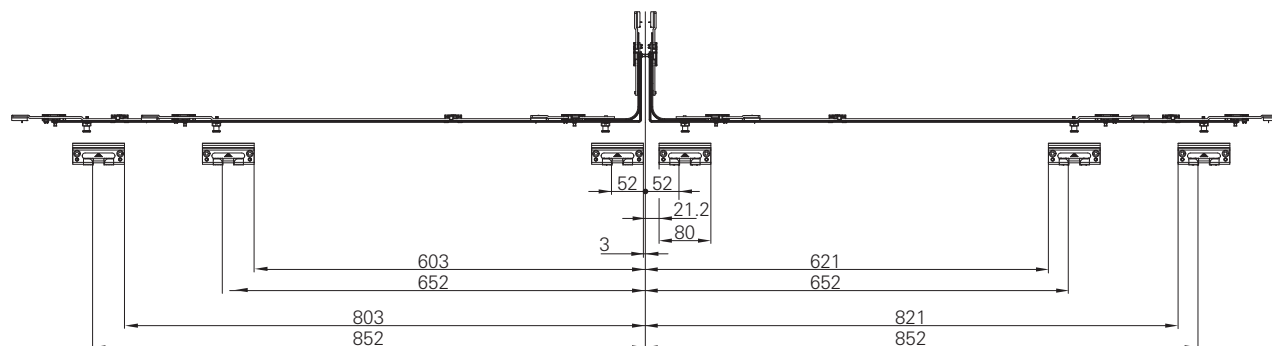


7.3.2 Floating-mullion hardware, lever-operated espagnolette, standard

Tilt striker set



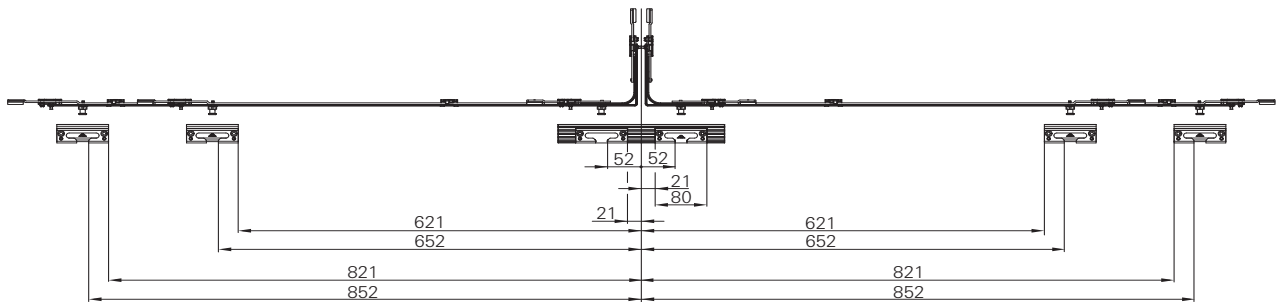
Tilt striker



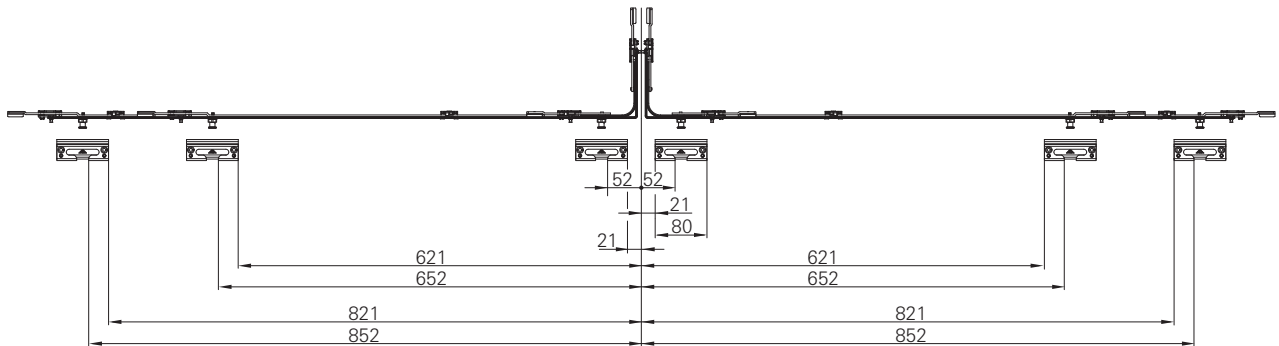


7.3.3 Floating-mullion hardware, lever-operated espagnolette Plus

Tilt striker set

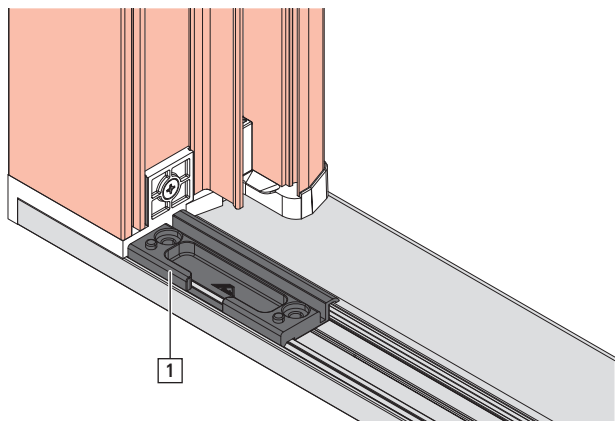


Tilt striker

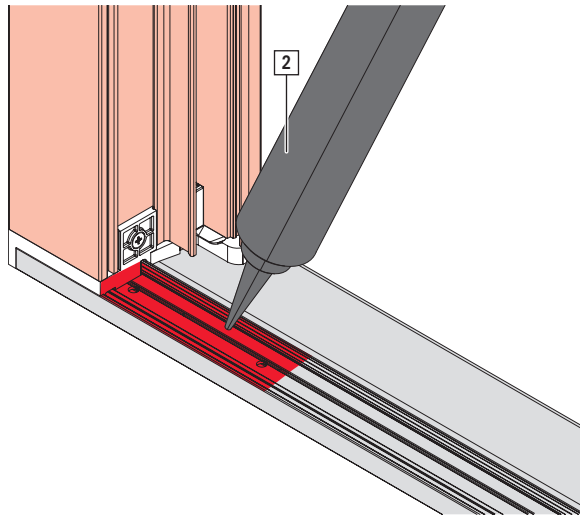


7.4 Tilt striker

1. Position the packer [1].



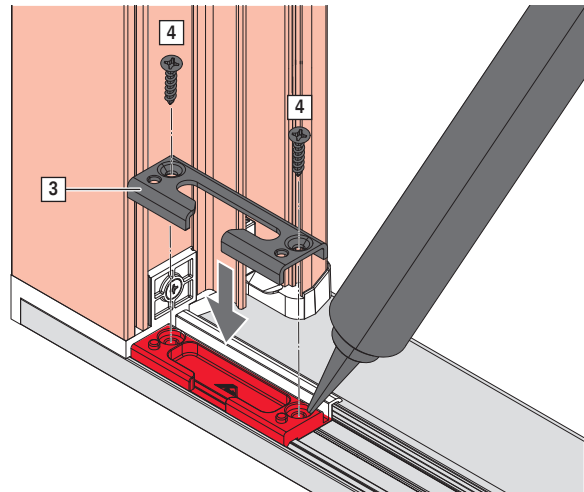
2. Apply sealing compound [2] to the threshold across the entire area of the tilt striker seat.



3. Insert the packer.
Apply sealing compound across the entire area of the top part of the tilt striker.
Fit the top part of the tilt striker [3].
Fasten the tilt striker with two screws [4].

**INFO**

The screws must extend down into the base profile.

**INFO**

Process the threshold as specified by the manufacturer.

7.5 Packer for hinge side Designo (HA 13)

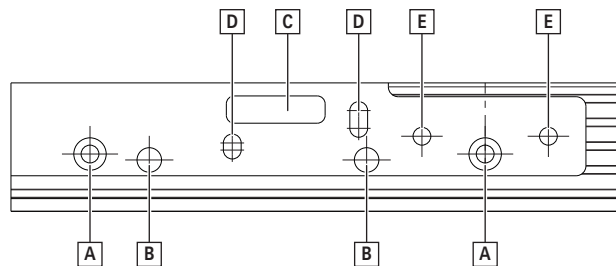
**INFO**

The figures show installation for a PVC profile.

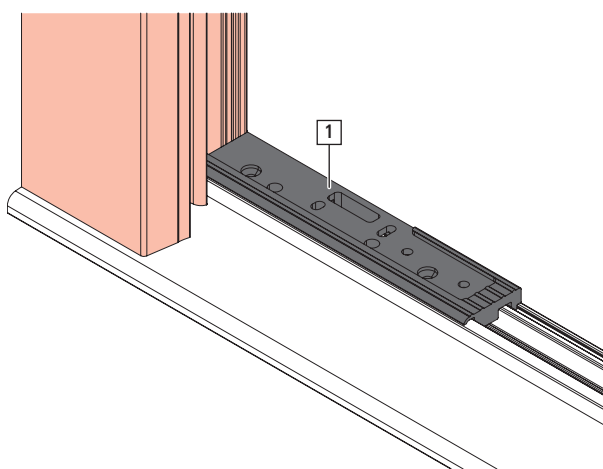


Description of hole pattern for packer for hinge side Designo (HA 13 mm)

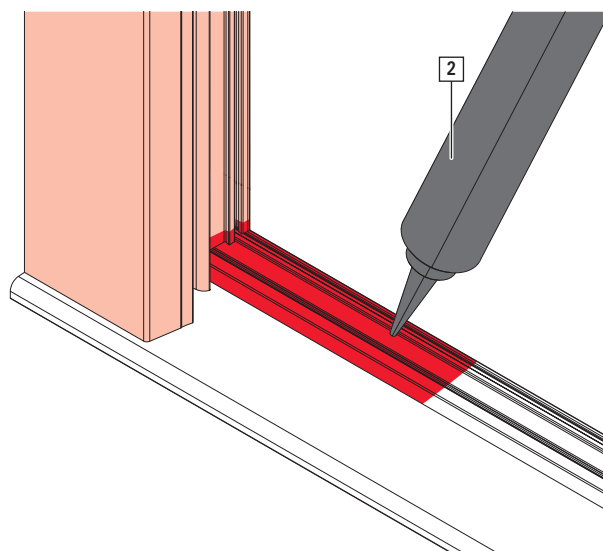
- [A] Packer screw fixing
- [B] Mount for bolt for the timber Designo base-plate
- [C] Mount for support for the PVC Designo base-plate
- [D] Screw fixing for the Designo pivot rest
- [E] Screw fixing for the turn restrictor frame component



1. Place the packer [1] in the frame corner.

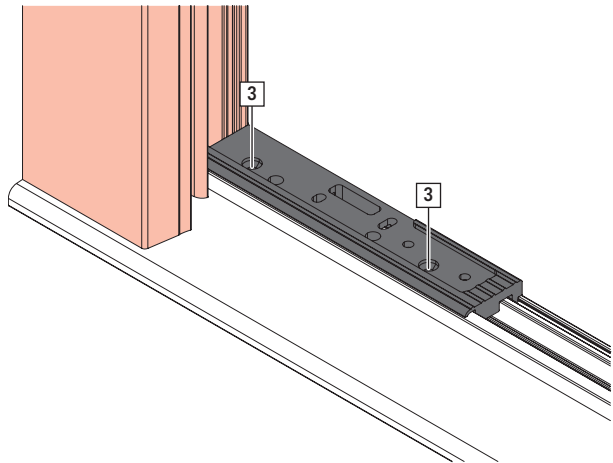


2. Apply sealing compound [2] to the threshold across the entire area of the packer.

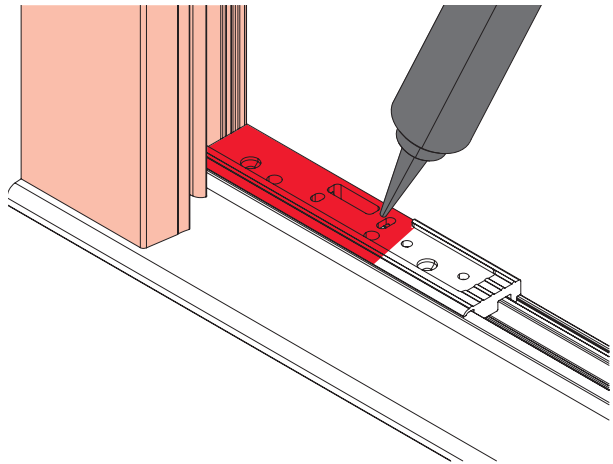


3. Insert the packer.

Fasten to the threshold with two screws [3].

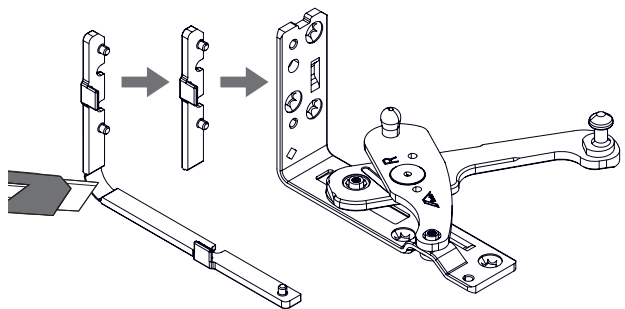
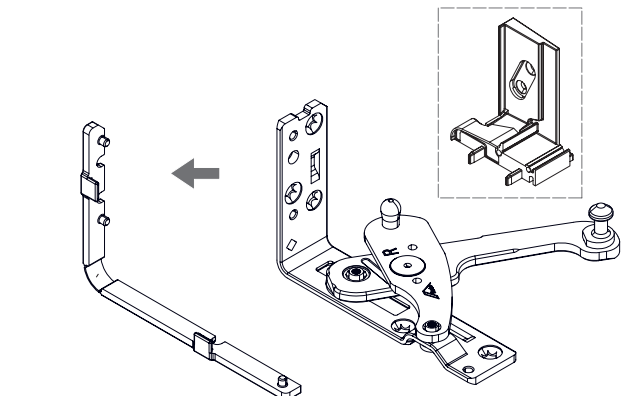


4. Apply sealing compound in the area of the pivot rest.



5. Detach the PVC packer and separate and remove the lower part. Place the upper part of the PVC part on the pivot rest.

The exception is when the PVC packer is used in conjunction with the rebate-screwed threshold retainer which can be combined with Roto NX | hinge side Designo: fully remove the PVC packer from the pivot rest.





6. Open the pivot rest [4] 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.

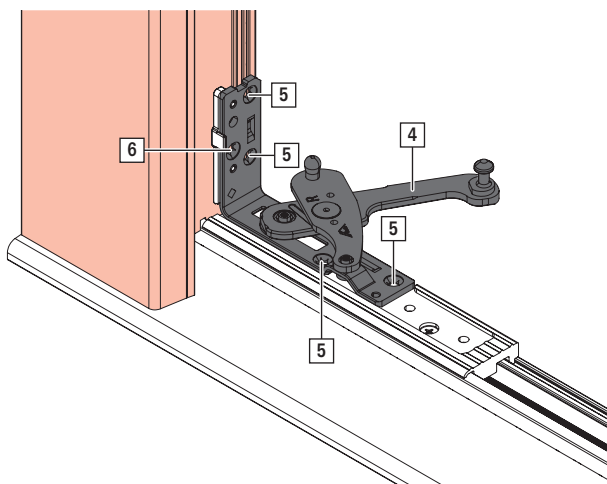
Fasten with four screws [5].



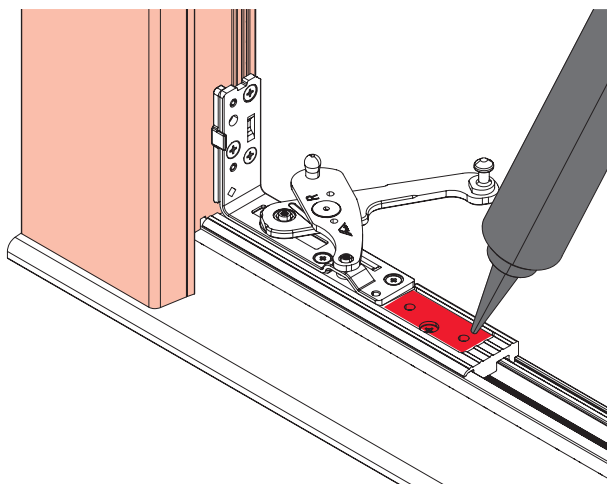
INFO

Screws must be securely screwed into the substructure / subfloor.

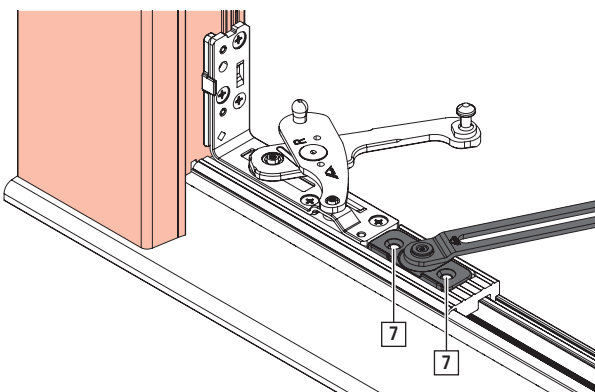
Fasten the pivot rest with an additional screw [6].



7. Apply sealing compound in the area of the turn restrictor.



8. Position the turn restrictor on the packer and fasten with two screws [7].



8 Adjustment

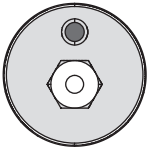
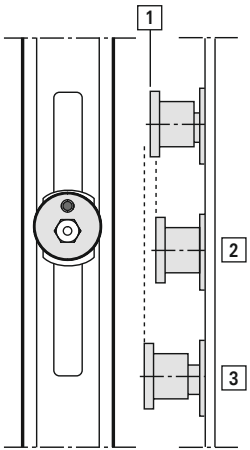
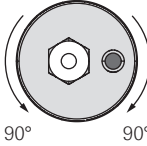
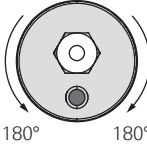
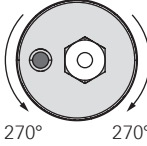
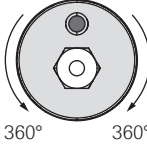


INFO

Roto hardware components may only be adjusted by authorised professionals when the element is installed.

8.1 Locking cam

V cam (standard)

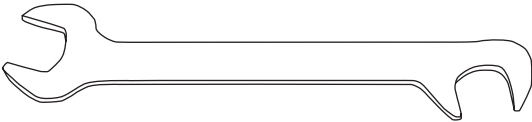
V cam	Adjustment distance	Gasket compression adjustment [mm]	Height adjustment [mm]	Side view
			+1.5 mm -0.8 mm	 <p>[1] 0 = initial position [2] -0.8 mm max. adjustment [3] +1.5 mm max. adjustment</p>
	90°	±0.8 mm	±0.125 mm	
	180°		±0.25 mm	
	270°	±0.8 mm	±0.375 mm	
	360°		±0.5 mm	



V cam (extended)

V cam	Adjustment distance	Gasket compression adjustment [mm]	Height adjustment [mm]	Side view
	90° 90°	±0.8 mm	±0.2 mm	<p>[1] 0 = initial position [2] -0.8 mm max. adjustment [3] +0.8 mm max. adjustment</p>
	180° 180°		±0.4 mm	
	270° 270°	±0.8 mm	±0.6 mm	
	360° 360°		±0.8 mm	

Double open-ended spanner



				Nº
Double open-ended spanner: extended V locking cam	132	3	Key width 13 mm	230766

9 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	☐	→ from page 90
Cleaning		→ from page 91
Clean hardware	☐	
Care		→ from page 91
Lubricate movable parts	☐	
Lubricate locking points	☐	
Performance test		→ from page 92
Check that hardware components are fitted securely	☐	
Inspect hardware components for wear	☐	
Check that movable parts work properly	☐	
Check that locking points work properly	☐	
Check ease of movement	■	
Repair		→ from page 92
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

9.1 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.



9.2 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, 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.

Cleaning the hardware

- ▶ Clean deposits and contaminants off the hardware using a soft cloth.
- ▶ Lubricate movable parts and locking points after cleaning. → 9.3 "Care" from page 91
- ▶ Apply a thin protective film to the hardware, for example using a cloth soaked in oil.

9.3 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.
- ▶ Use appropriate lubricant in more challenging climatic conditions. Note the manufacturer specifications.



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

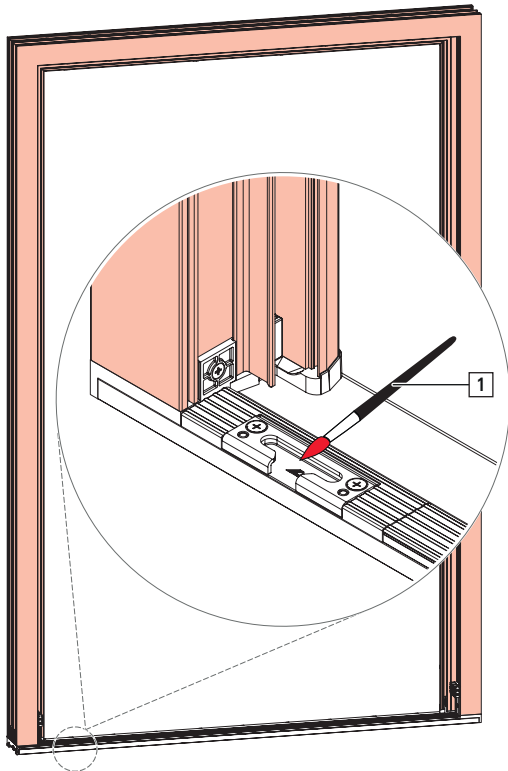
- Roto NX / NT grease



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.

9.3.1 Lubrication points



[1] Grease

9.4 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 windows or balcony doors run smoothly by opening and closing them.
- ▶ Check the window or balcony door gaskets for elasticity and fit.
- ▶ Check closed windows 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.

9.5 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.

10 Transport

10.1 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 scope of delivery. 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.
- ▶ Ensure that the transport process is careful and appropriate for the material and that components are protected against dirt during transport.
- ▶ 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.

10.2 Transporting components



ATTENTION

Property damage to PVC components in cold or sunlight!

If it cannot be ensured that PVC components will be transported at temperatures below $> 15^{\circ}\text{C}$, improper use may result in damage.

1. Do not throw, tip or drop PVC components.
2. Protect PVC components against sunlight.

Do not wrap multiple components together in film (avoid stress / deformation).

The surface of PVC is prone to scratching. Sharp edges on shelves, nails in pallets, coarse dirt particles between the products and other sharp-edged objects can cause scratches / score marks, potentially leading to a notch effect and breakage. Ensure that there are no scratches or score marks on the surface upon receipt.

10.3 Transporting the threshold

Transport safety device

Use a transport safety device for thresholds.

Protective profile for building phase

Use protective profiles for building phase if necessary, see CTL_87.

10.4 Storing the hardware

Store all hardware components as follows until they are installed:

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

10.5 Storing components

Incoming goods inspection

The high-quality PVC products we deliver are inspected before dispatch. However, temperature fluctuations may cause their dimensions to change. Check the goods at room temperature within ten days of receipt to ensure

that their dimensions are stable and store them out of sunlight after this check.

Only perform dimension checks straight after receiving the goods if the products are at room temperature (>15 °C) on delivery. Products with higher or lower temperatures may lead to incorrect measured values due to temperature-related expansion or contraction of the PVC. If products are too cold before the dimension check, temporarily store them in a dry place to bring them up to room temperature.

Storage location



ATTENTION

Property damage to PVC components in cold or sunlight!

If it cannot be ensured that PVC components will be stored at room temperature, they may be damaged.

1. Do not throw, tip or drop PVC components.
2. Protect PVC components against sunlight.
3. Do not store thresholds, including cover, outdoors for prolonged periods. Direct sunlight or single-sided heating poses the risk of permanent warping due to thermal expansion and the release of internal residual stress.

Store all components as follows until they are installed:

- In a dry place where they are protected
- On a level, clean surface (prolonged storage on transport frames for more than 24 hours is prohibited.)
- On a clean surface (the surface of PVC is prone to scratching. Sharp edges on shelves, nails in pallets, coarse dirt particles between the products and other sharp-edged objects can cause scratches / score marks, potentially leading to a notch effect and breakage. Ensure that there are no scratches or score marks on the surface upon receipt.)
- If storing multiple layers of components, always remove components from the top first.



11 Disposal



ATTENTION

Incorrect disposal may pollute the environment.

Pieces of hardware are raw materials.

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

11.1 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.

11.2 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.



From a single source.
Optimum hardware systems to meet all challenges.

Window

Hardware systems for windows and balcony doors

Sliding

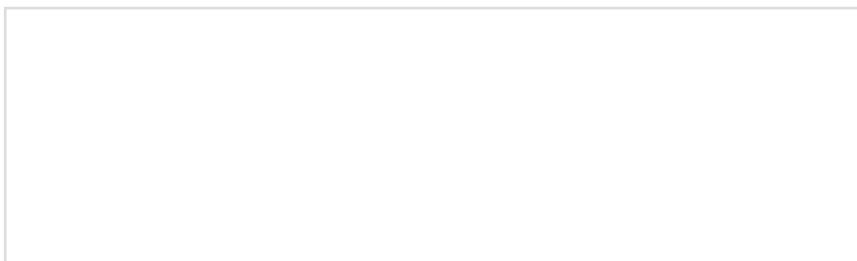
Hardware systems for large sliding windows and doors

Door

Matching hardware technology everything about doors

Equipment

Additional technology for windows and doors



Location finder

