



Roto NX

Hinge side T

The Tilt&Turn hardware system for windows and balcony doors
shaping the industry once again

Contact

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1 General information

1.1 Version history

Ver- sion	Date	Changes
v0	14/10/2019	Publication
v1	02/06/2020	RC 3 hardware overview added Chapter on jigs added → <i>from page 205</i> Adjustment of new V cams added → <i>from page 315</i>
v2	19/02/2024	New item numbers for lever-operated espagnolette Plus → <i>from page 38</i> Installation of retainer clasp for lever-operated espagnolette Standard → <i>from page 289</i> Installation of fastening plate → <i>from page 290</i> Installation of turn lock → <i>from page 307</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:

Catalogue

- Roto NX: CTL_104
- Handles: CTL_1

Installation instructions

- Roto NX | Connecting thresholds: to the hardware system IMO_347

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),
- Directive FPKF issued by the Gütegemeinschaft Schlösser und Beschläge e. V. quality assurance association (Restrictor and cleaning stays for Tilt-Only sashes and Tilt-Only fanlights),
- Instructions and information issued by profile manufacturers (e.g. manufacturers of windows and balcony doors),
- 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
	Optional / alternative components seated in the sash
	Sash / components seated in the sash
	Optional / alternative components seated in the frame
	Frame / components seated in the frame
	Drill holes, routing, 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
	Timber

1.5 Product features

Symbol	Meaning
	Hardware axis
	Description
	Floor
	Supporting pin
	Drill hole for supporting pin
	DIN left / right
	Integrated corner drive
	Rebate clearance
	Rebate depth
	Sash rebate width
	Sash rebate height
	Sash weight
	Fixed handle height
	Centred / variable handle height

Symbol	Meaning
	Size
	Information
	Fixed toggle lever position
	Centred / variable toggle lever position
	Couplable
	Length
	Material number
	Installation type
	Lifting mishandling device
	Groove
	Surface
	Position
	Number of welded-on strikers
	Number of locking cams
	Type of locking cam
	Bullet catch
	Security class
	System
	Adjustment



1.6 Abbreviations

Abbreviation	Meaning
GC	Gasket compression
approx.	approximately
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
Max.	Maximum
mm	Millimetres
CL	Centre lock
N	No
Nm	Torque in newton metres
LMD	Lifting mishandling device
RC	Resistance class
BC	Bullet catch
SEC	Security
ST	Striker
e.g.	For example

1.7 Target groups

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

Hardware dealers

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

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 installation 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.

1.8 Target groups' obligation to give instructions



INFO

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

Unless specified otherwise in the text below, documents and information can be passed on as a printed document, on a 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)

1.9 Copyright protection

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

1.10 Limitation of liability

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

The hardware manufacturer assumes no liability for damage caused by:

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

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

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

The warranty only covers original Roto components.

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

1.11 Preserving the surface finish



ATTENTION

Surface treatments may cause property damage.

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

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



ATTENTION

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

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

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



ATTENTION

Contamination may cause property damage.

Contamination prevents components working properly.

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



ATTENTION

(Permanently) damp room air may cause property damage.

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

- ▶ Provide adequate ventilation for components, particularly during the construction phase.
- ▶ Intensively air out the room several times per day by opening all elements for approximately 15 minutes. If intensive airing is not an option, place the elements in 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

Turn-Only and Tilt&Turn hardware components are one-hand operation, Turn-Only and Tilt&Turn hardware components for windows and balcony doors in structural engineering. This hardware is used to move window sashes and balcony door sashes to a turned position by actuating a hand lever or a tilt position which is restricted by the scissor stay version. Turn-Only and Tilt&Turn hardware components may be used on vertically installed windows and balcony doors made of timber, PVC, aluminium or steel, or corresponding combinations of the aforementioned materials. Turn-Only and Tilt&Turn hardware components in the sense of this definition close windows and bal-

cony door sashes or move them into various ventilation positions. During the closing process, the gasket counter force must generally be overcome.

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 9*.

2.3.2 Usage restriction

Opened sashes in windows and balcony doors, and windows and balcony door sashes that are unlocked or placed in ventilation positions, only have a shielding effect. They do not meet the following requirements:

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



INFO

Windows built with security strikers for tilt ventilation fulfil the burglary inhibition function in the tilt position.

2.4 Stipulated use for end users

For windows or balcony doors with Turn-Only or Tilt&Turn hardware, windows or balcony door sashes can be moved to a turned position by operating a hand lever or to a tilt position restricted by the scissor stay version.

When closing a sash and locking the hardware, the gasket counter force must generally be overcome.



WARNING

Opening and closing sashes in an uncontrolled manner may pose a risk of death!

Opening and closing the sash in an uncontrolled manner may lead to serious injuries.

- ▶ Ensure that the sash does not collide with the frame, opening restrictor (buffer) or other sashes when it is moved into the fully open or closed position.
- ▶ 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.



ATTENTION

Opening and closing sashes in an uncontrolled manner may result in property damage.

Opening and closing the sash in an uncontrolled manner may cause the element to malfunction.

- ▶ Ensure that the sash does not collide with the frame, opening restrictor (buffer) or other sashes when it is moved into the fully open or closed position.
- ▶ 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.

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.

No claims of any kind can be made on account of damage resulting from failure to comply with the stipulated use.

2.4.1 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 9.*

2.5 Basic safety information

The following hazards may arise when handling the product:

2.5.1 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.

2.5.2 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.

2.5.3 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.

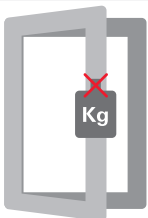
Depending on the outside temperature, relative humidity of the room air and installation situation of the windows and balcony doors, a temporary build-up of condensation may occur. This can lead to corrosion on the hardware and mould growth on the frame or wall. Ambient conditions that are too damp,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

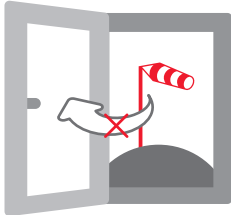
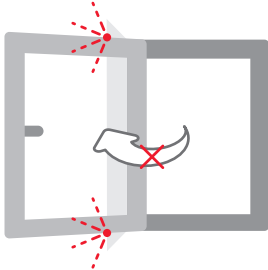
- ▶ Avoid preventing the circulation of air (e.g. due to deep reveals, curtains and unfavourable positioning of heaters or the like).
- ▶ Intensively air out the room several times per day.
 Open all windows and balcony doors for approximately 15 minutes so that the air in the room can be completely replaced.
- ▶ Provide adequate ventilation during holiday periods as well.
- ▶ Create a ventilation plan for construction projects if necessary.

2.6 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 hardware characteristics

- High loads up to 150 kg: surface-mounted hinge side T for timber windows and doors.
- Enhanced ventilation comfort without additional installation effort thanks to night ventilation integrated in the sash stay (stay arm and stay guide) as standard.
- Laterally adjustable stay bearing for arched windows.
- Rebate sash stay or Tilt-Only hinges with gasket compression adjustment that are screwed into the hardware groove.
- Simple adjustment options for lateral and height adjustment; additional gasket compression adjustment via:
 - E locking cam: gasket compression adjustable eccentric cam
 - P locking cam: gasket compression adjustable security eccentric cam
 - V locking cam: gasket compression and height adjustable security eccentric cam
- Form-fitting "Clip&Fit" connection.
- The faceplate and gearbox / lock casing are connected simply without screws thanks to the Easy Mix system with high backsets ≥ 25 mm.
- Custom options for adapting the Roto NX hardware system to different security requirements – from basic security up to tested security windows with RC classification in accordance with DIN EN 1627-1630.
- TiltSafe burglar inhibiting tilt position in accordance with the RC 2 / RC 2 N classification.
- High-quality Roto Sil surface for maximum corrosion resistance (DIN EN 13126 / 8), free from chromium VI compounds).
In combination with Roto Sil, Roto Sil Level 6 is an advanced standard for connection components subject to high stress, such as rivets, bolts and sliding elements.
- Attractive hinge side T with white and titanium surface versions (powder coating).
- Certified in accordance with QM 328.
- Ten-year warranty for the functionality of the hardware.

3.2 General information

Hardware functional safety

The following points must be noted in order to ensure the functional safety of the hardware at all times:

1. Correct installation of hardware components in accordance with the installation instructions.
2. Correct installation of elements during window installation.
3. The window manufacturer must pass the maintenance and operation instructions and the product liability guidelines (if applicable) on to the user.
4. The hardware as a whole may only consist of original Roto system components. The use of components from other manufacturers excludes any liability.

Product liability regulations

Electrogalvanised and passivated steel fenestration screws are to be used to fasten the hardware components.

The window manufacturer must ensure that the hardware components are adequately secured; the screw manufacturer must be involved if required.

When attaching security-relevant, load-bearing hardware components (hinge sides), the manufacturer of windows and balcony doors must prove the specified forces in accordance with the table below (excerpt from Directive TBDK issued by the Gütegemeinschaft Schlösser und Beschläge e. V.) by means of testing and ensure them on their product.

Sash weight	Tractive force in newtons (N)
60 kg	1650 N
70 kg	1900 N
80 kg	2200 N
90 kg	2450 N
100 kg	2700 N
110 kg	3000 N
120 kg	3250 N
130 kg	3500 N
140 kg	3900 N
150 kg	4200 N



INFO

Observe directive TBDK for tractive force values as a function of the sash weights.

Further information can be found at www.beschlagindustrie.de.

Do not use any acid cross-linked sealing compounds that could lead to corrosion of the hardware components. The spacer block guidelines for glazing methods must be complied with.

Product liability – liability exclusion

The hardware manufacturer is not liable for malfunctions or damage to the hardware, or to windows and balcony doors equipped with the hardware, if this has been caused by insufficient invitation to tender or failure to comply with the installation specifications and application diagrams, or if the hardware has been subjected to increased levels of dirt.

The warranty only covers original Roto components.

Profile classification – application ranges

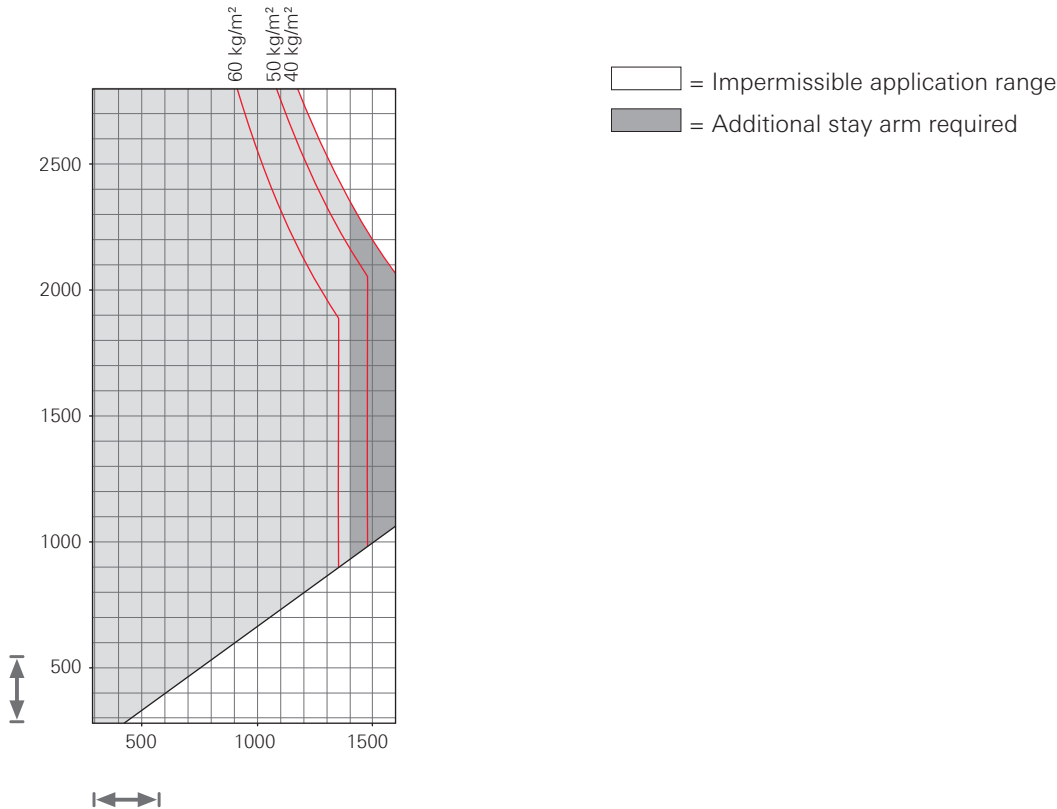
The individual application diagrams must be complied with.

When determining the maximum permitted sash formats and sash weights, the values specified by the profile manufacturers and system owners must not be exceeded either.



3.3 Application diagrams

3.3.1 Turn-Only / Tilt&Turn hardware for rectangular windows



The specifications in the application diagram refer to the glass weight in kg/m².

1 mm/m² glass thickness $\approx$ 2.5 kg

Application range

		Basic security	Security RC1 N	Security RC 2 / RC 2 N	Security RC 3
	Sash rebate width	290 – 1600 mm	400 – 1600 mm	490 – 1400 mm	490 – 1400 mm
	Sash rebate height	280 – 2800 mm	280 – 2800 mm	490 – 2800 mm	600 – 2800 mm
	Sash weight	max. 150 kg	max. 150 kg	max. 150 kg	max. 150 kg

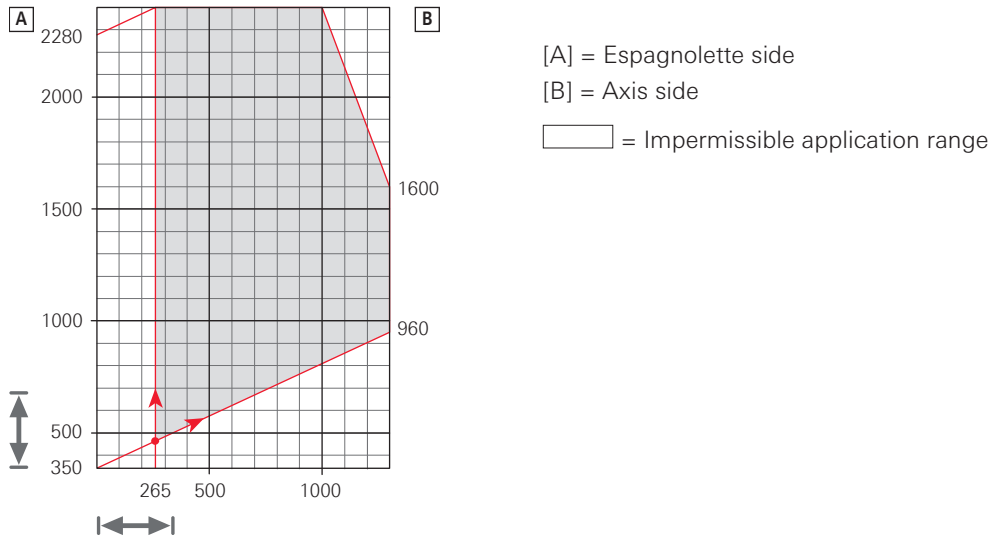


INFO

For pivot rests without supporting pin, the sash weight is max. 130 kg.

3.3.2 Tilt&Turn hardware for pitched windows

3.3.2.1 Pitched angle 25°



The specifications in the application diagram refer to the glass weight in kg/m².
1 mm/m² glass thickness ≈ 2.5 kg

Application range

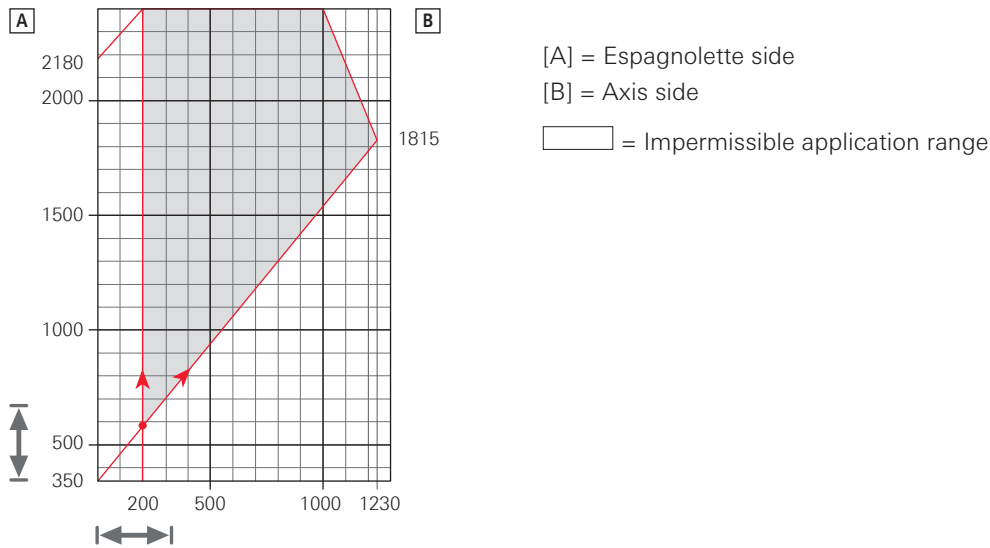
Basic security		
	Sash rebate width	See diagram
	Sash rebate height	See diagram
	Sash weight	Max. 80 kg



INFO

Observe directive TBDK for tractive force values as a function of the sash weights.
Further information can be found at www.beschlagindustrie.de.

3.3.2.3 Pitched angle 50°



The specifications in the application diagram refer to the glass weight in kg/m².
1 mm/m² glass thickness ≅ 2.5 kg

Application range

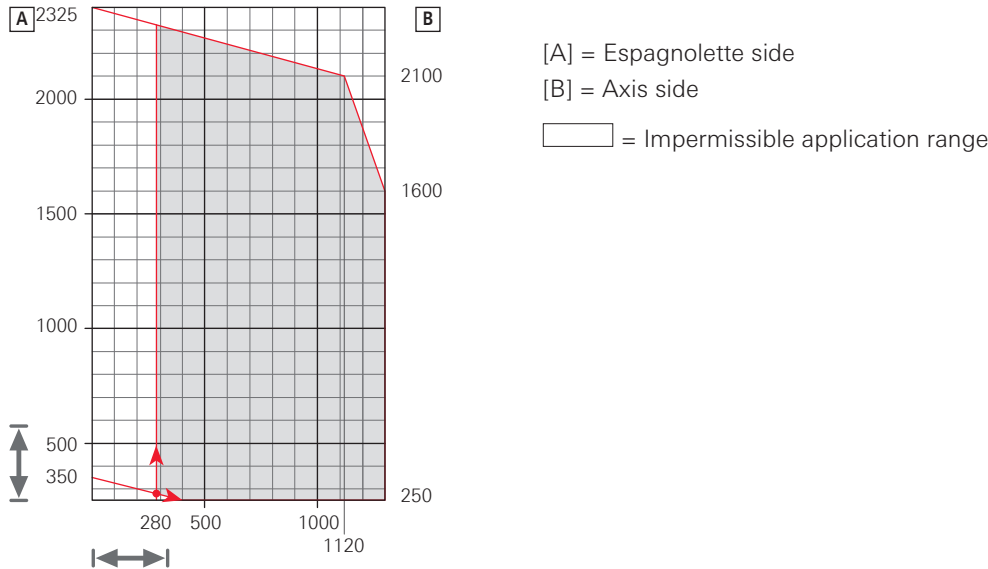
Basic security		
	Sash rebate width	See diagram
	Sash rebate height	See diagram
	Sash weight	Max. 80 kg



INFO
Observe directive TBDK for tractive force values as a function of the sash weights.
Further information can be found at www.beschlagindustrie.de.



3.3.2.4 Pitched angle -15°



The specifications in the application diagram refer to the glass weight in kg/m².
1 mm/m² glass thickness ≈ 2.5 kg

Application range

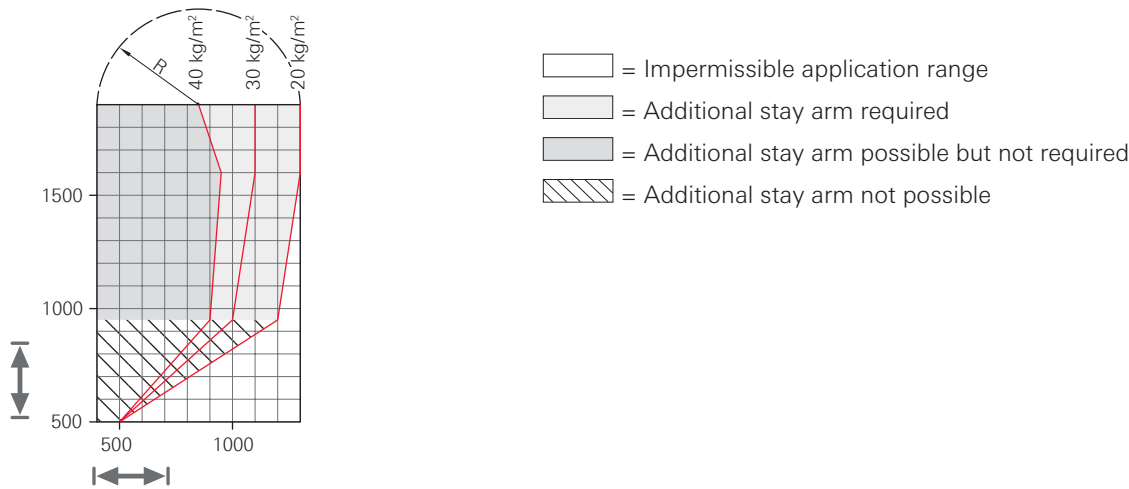
Basic security		
	Sash rebate width	See diagram
	Sash rebate height	See diagram
	Sash weight	Max. 80 kg



INFO

Observe directive TBDK for tractive force values as a function of the sash weights.
Further information can be found at www.beschlagindustrie.de.

3.3.3 Tilt&Turn hardware for arched windows



The specifications in the application diagram refer to the glass weight in kg/m².
1 mm/m² glass thickness $\approx$ 2.5 kg



INFO
The radius (R) of the arched window must be equal to half the SRW.

Application range

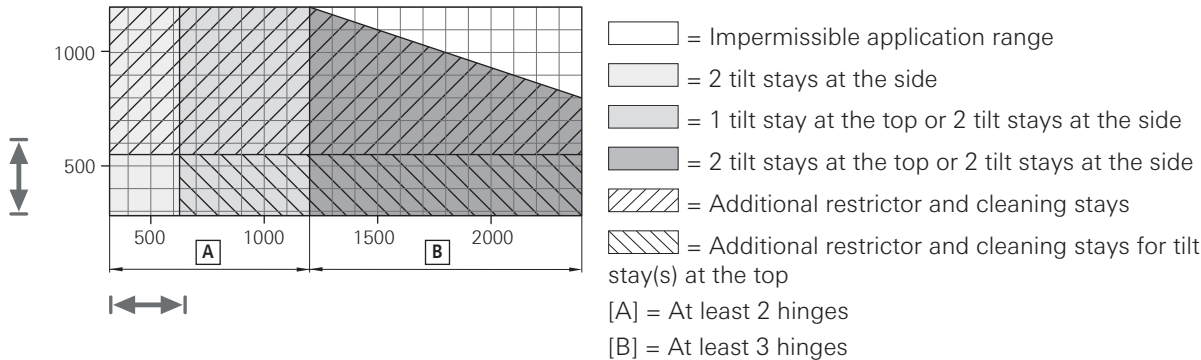
Basic security		
	SRW	400 – 1300 mm
	SRH	500 – 1900 mm
	S.kg	Max. 80 kg



INFO
Observe directive TBDK for tractive force values as a function of the sash weights.
Further information can be found at www.beschlagindustrie.de.



3.3.4 Tilt-Only hardware for rectangular windows



The specifications in the application diagram refer to the glass weight in kg/m².

1 mm/m² glass thickness $\approx$ 2.5 kg

Application range

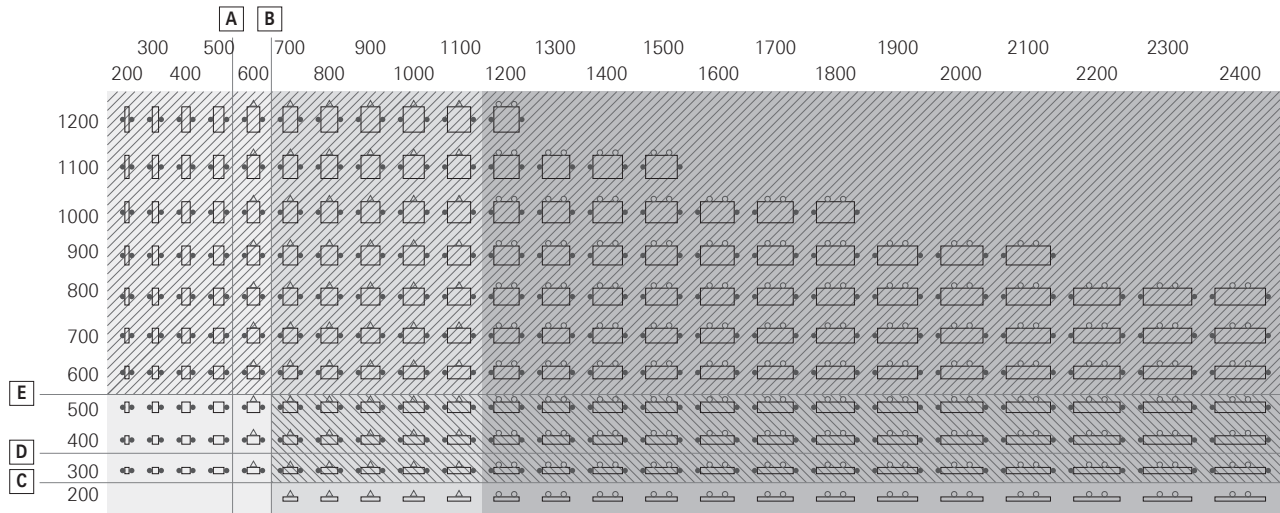
Basic security		
	Sash rebate width	451 – 2400 mm
	Sash rebate height	290 – 1200 mm
	Sash weight	max. 80 kg



INFO

Restrictor and cleaning stays recommended; mandatory for fanlights (in accordance with RAL RG 607 / 12).

Restrictor and cleaning stays up to max. 60 kg.



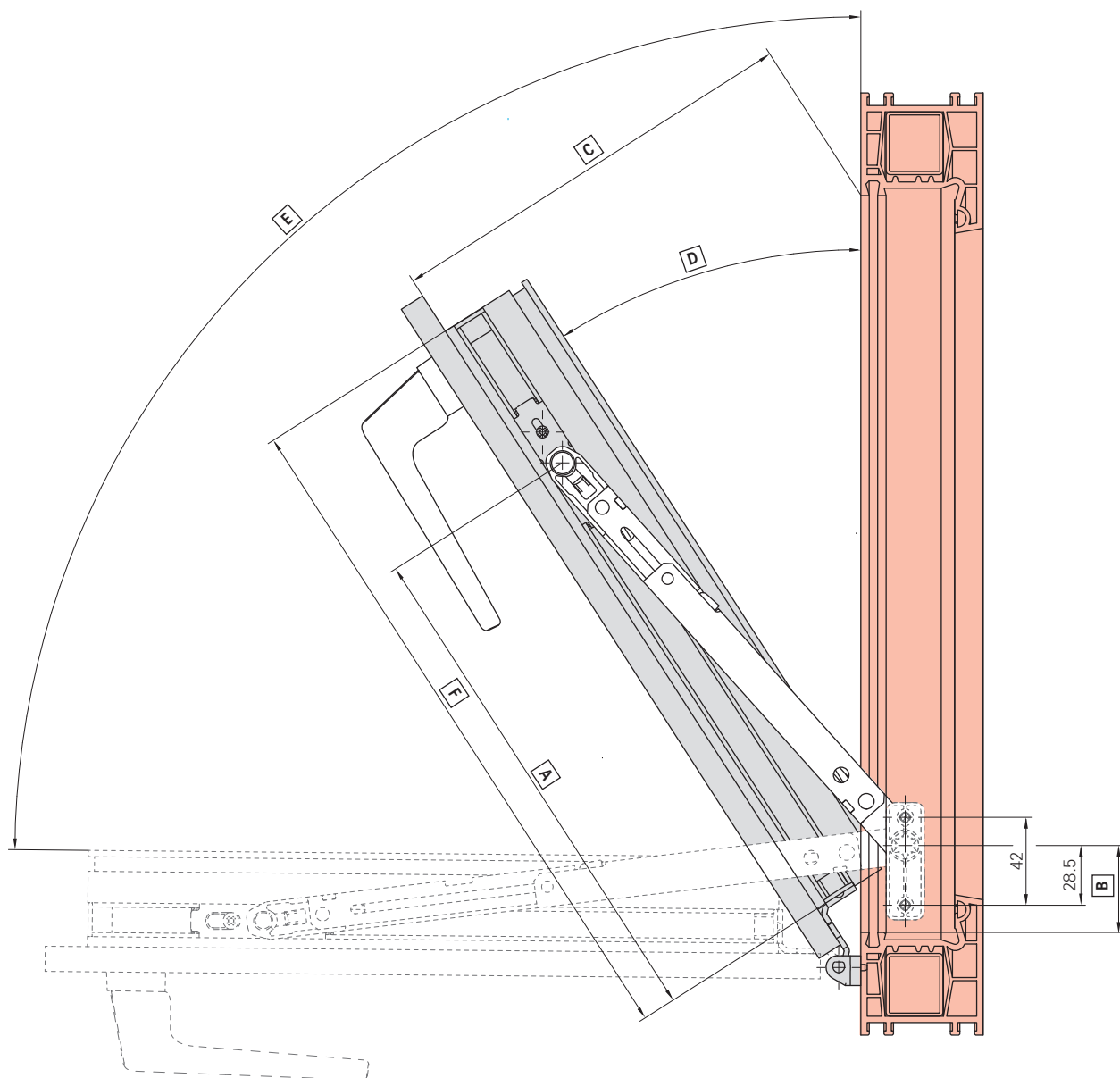
- [A] From 501 mm tilt stay at the top is only possible with Turn-Only/Tilt-Only espagnolette
[B] From 621 mm tilt stay at the top is possible with Turn-Only/Tilt-Only espagnolette and T&T espagnolette
[C] From **260 mm** K, E5, P, T, A
[D] From **360 mm** K, E5, P, T, A, Designo, Alu
[E] From **520 mm** all hinge sides

- Possible position of tilt stay up to 80 kg
- Alternative position of tilt stay up to 80 kg
- △ Alternative position of tilt stay up to 60 kg



INFO

Tilt stays at the side cannot be used in conjunction with the CL 200 centre lock.

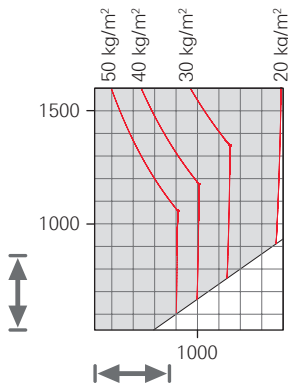




- [A] Position of sash bearing
- [B] Position of frame bearing
- [C] Tilt depth restrictor position
- [D] Opening angle restrictor position
- [E] Opening angle cleaning position
- [F] Sash rebate height (SRH)

SRH	Type	[A]	[B]	[C]	[D]	[E]
290 – 400	1	250	45	180 – 245	33°	90°
401 – 560	1	280	75	205 – 275	27°	67°
561 – 700	2	525	170	225 – 277	22°	88°
701 – 850	2	575	220	244 – 292	19°	72°
851 – 1200	2	625	270	261 – 363	17°	62°

3.3.5 Comfort windows



 = Impermissible application range

The specifications in the application diagram refer to the glass weight in kg/m².
1 mm/m² glass thickness ≈ 2.5 kg

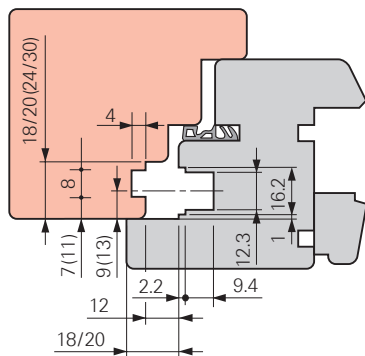
Application range

Basic security		
	Sash rebate width	520 – 1400 mm
	Sash rebate height	530 – 1600 mm
	Sash weight	max. 50 kg

3.4 Groove and rebate dimension systems

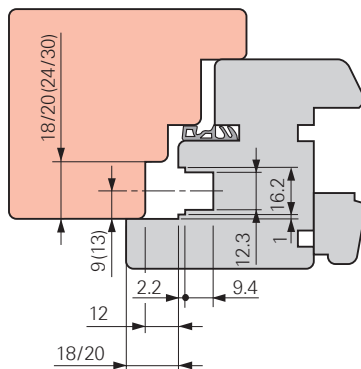
3.4.1 Turn-Only / Tilt&Turn windows

Without overlap gasket



System

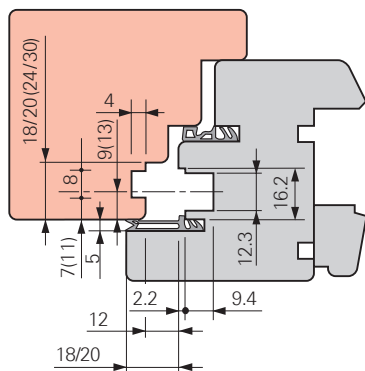
12/18-9, 12/20-9, Euro-groove 7/8
 12/18-13, 12/20-13, Euro-groove 11/8



System

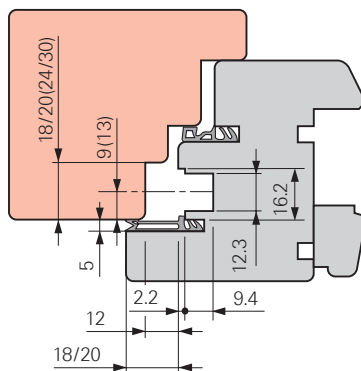
12/18-9, 12/20-9, Euro-rebate 18/20
 12/18-13, 12/20-13, Euro-rebate 24/30

With overlap gasket



System

12/18-9, 12/20-9, Euro-groove 7/8
 12/18-13, 12/20-13, Euro-groove 11/8

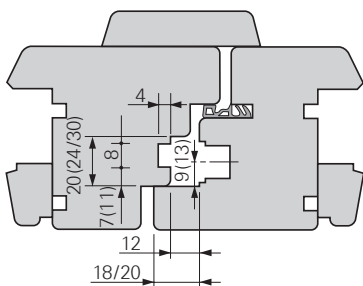


System

12/18-9, 12/20-9, Euro-rebate 18/20
 12/18-13, 12/20-13, Euro-rebate 24/30

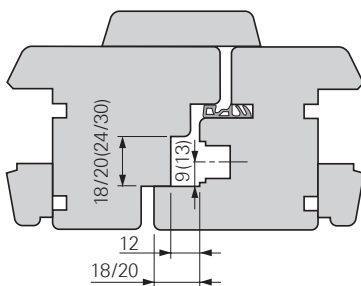
3.4.2 Floating-mullion window – centre part

Without overlap gasket



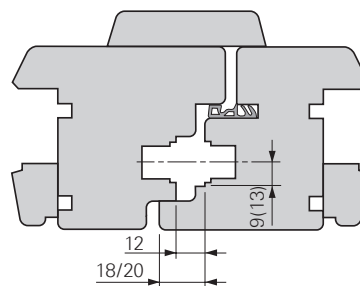
System

12 / 18-9, 12 / 20-9, Euro-groove 7 / 8
 12 / 18-13, 12 / 20-13, Euro-groove 11 / 8



System

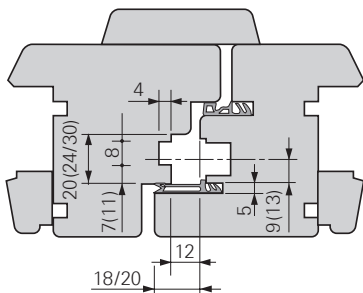
12 / 18-9, 12 / 20-9, Euro-rebate 18 / 20
 12 / 18-13, 12 / 20-13, Euro-rebate 24 / 30



System

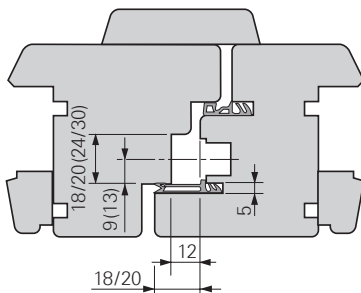
12 / 18-9, 12 / 20-9, 12 / 18-13, 12 / 20-13
 Opposing hardware groove

With overlap gasket



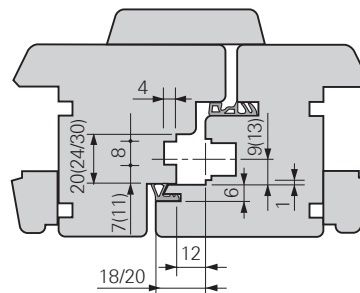
System

12 / 18-9, 12 / 20-9, Euro-groove 7 / 8
 12 / 18-13, 12 / 20-13, Euro-groove 11 / 8



System

12 / 18-9, 12 / 20-9, Euro-rebate 18 / 20
 12 / 18-13, 12 / 20-13, Euro-rebate 24 / 30

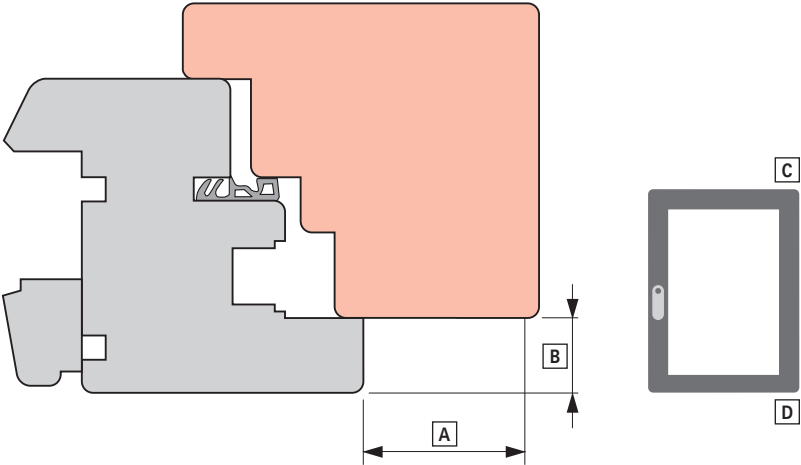


System

12 / 18-9, 12 / 20-9, Euro-groove 7 / 8
 12 / 18-13, 12 / 20-13, Euro-groove 11 / 8
 Small overlap gasket

3.5 Frame clearances

3.5.1 Hinge side T



Frame clearances with an 18 mm overlap width.

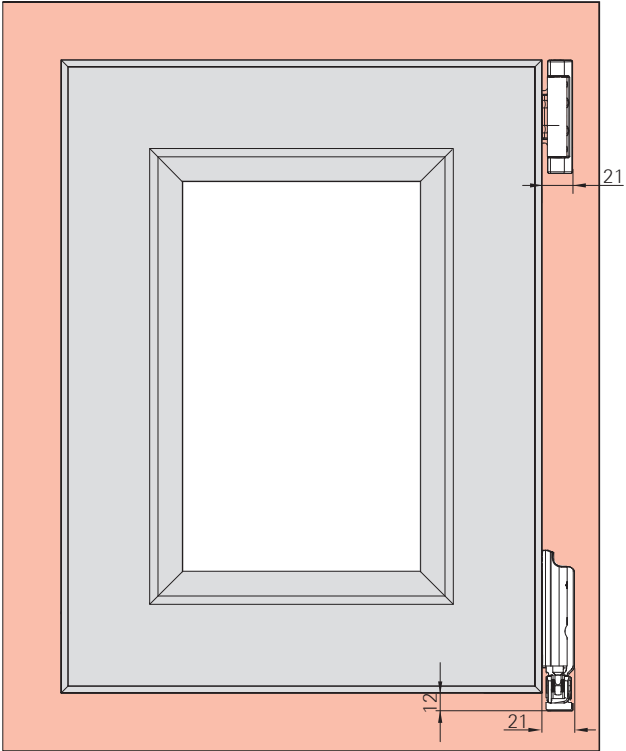
Sash weight	Opening angle	Frame clearance [A]	Overlap height [B]	Top [C]	Bottom [D]
150 kg	Approx. 180°	21.0	min. 16	0.0	12.0



INFO

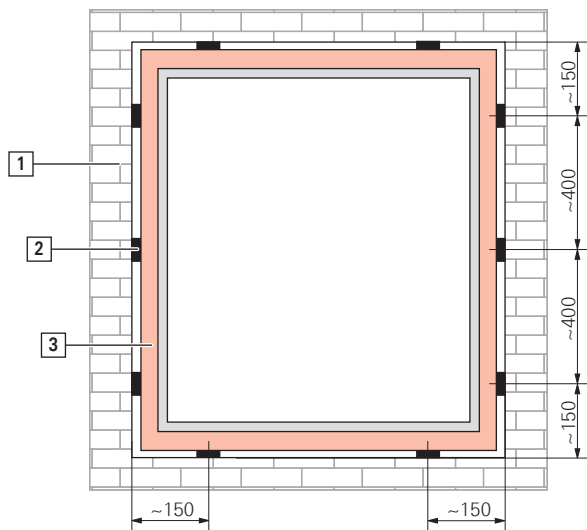
Clearances including cover caps.
Opening angle up to 21 mm overlap height.

Sash weight 150 kg





3.6 Mounting suggestion for security windows



- [1] Brickwork
- [2] Spacer blocks
- [3] Frame



INFO

Attach spacer blocks in the vicinity of the screw fixings for the security strikers.

Burglar inhibiting windows in accordance with DIN EN 1627–1630 may only be designated as such if installation is performed in accordance with the specified standard in all points.

4 Hardware overviews

The hardware overviews on the following pages are a recommendation on the part of Roto Frank Fenster- und Türtechnologie GmbH.

The basic page layout in the hardware overviews chapter firstly shows examples of the combination of individual hardware components, and the associated parts list can be seen on the following pages.

Additional combinations of hardware components can be found in the catalogue.

The item numbers in the squares link the hardware overview to the parts list.

The actual composition of the hardware depends on:

- the width of the element
- the height of the element
- the weight of the element
- the resistance class
- the profile system

Application range

The applicable application range [A] depends on the opening type and resistance class. The application range of the individual components [B] may differ from the applicable application range [A].

Anwendungsbereich

FFB: 290 - 1600 mm

[A] — **FFH:** 430 - 2800 mm

FG: max. 150 kg

[1] DK-Getriebe KSR – Griffsitz konstant, Dornmaß 15 mm

									Nº
[B] —	280 – 570	120	460	J	N	–	–	–	742199
	511 – 710	170	600	J	J	–	–	–	795324
	601 – 800	263	690	N	J	–	–	–	619591
	801 – 1000	413	890	N	J	1	E	–	619592
	1001 – 1200	513	1090	N	J	1	E	–	619593
	1201 – 1400	563	1290	N	J	1	E	–	619594
	1401 – 1600	563	1490	N	J	2	E	–	619595
	1601 – 1800	563	1690	N	J	2	E	–	619596
	1601 – 1800	1000	1690	N	J	2	E	–	838345
	1801 – 2000	1000	1890	N	J	2	E	–	794637
	2001 – 2200	1000	2090	N	J	3	E	–	794638
	2201 – 2400	1000	2290	N	J	3	E	–	794639

Example

The highlighted T&T espagnolette can generally be used from a SRH of min. 280 mm [B]. With this opening type and resistance class, elements are only allowed to be constructed from an SRH of 430 mm [A] and above. The highlighted T&T espagnolette is in the specified range and can therefore be installed.



INFO

Resistance classes

- The RC 1 N, RC 2, RC 2 N and RC 3 resistance classes refer to the entire system.
- The hardware combinations shown in the hardware overviews are recommendations.
- The hardware complies with the corresponding resistance classes in the required system tests.
- However, the resistance classes are only complied with if all of the other components in the system (e.g. profile system, reinforcement, glass, etc.) are also designed for this.
- Steel security locking components must generally be used in systems with a 9 mm hardware axis.

Profile-related frame components and general sets are listed in additional chapters.

Recommended handles can be found in the Roto Handles catalogue.

Determine the quantity of required hardware components with Roto Con Orders.



INFO

Roto Con Orders

Efficient online hardware configurator for the custom configuration of individual window and door hardware components. All conventional shapes and opening types can be automatically configured quickly and easily. Individual parts lists, including application ranges and an exemplary hardware overview, can be ordered from your responsible sales representative.



www.roto-frank.com

4.1 T&T espagnolette, VT – fixed handle height

4.1.1 Tilt&Turn hardware

4.1.1.1 Basic security



**Application range****SRW:** 290 – 1600 mm**SRH:** 280 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

**INFO**

With SRH 280 – 290 mm, the screw guide must be removed (e.g. using pliers).

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

		Nº
1	E	260280
1	P	260282

For use with SRH ≤ 370 mm.

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

No sash stay corner drive is possible with SRH 280 – 320.

**INFO**

With SRH 321 – 360 mm, crop the sash stay corner drive.

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

**INFO**

With a size 150 sash stay, the tilt distance is 80 mm.

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm (SRW ≥ 1401 mm)**

		Nº
Frame and sash component	200	255237

[54] Handle → CTL_1**Optional****[63] Night vent, SRW ≥ 801 mm → from page 204****INFO**

Only for use in conjunction with P or V cam.

Sash lifter → CTL_104**Arrestable brake stay → CTL_104**



4.1.1.2 RC 1 N



**Application range****SRW:** 400 – 1600 mm**SRH:** 320 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with SRH ≤ 370 mm.

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

With SRH 320 – 360 mm, crop the sash stay corner drive.

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [1]	1	P	255286
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 [2]	1	P	255286

[23] Striker → from page 196**[24] Security striker → from page 196****[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[1] With SRW 801 – 814 mm, crop centre lock 600.

[2] With SRW 1401 – 1414 mm, crop centre lock 600.

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → *from page 201***[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → *from page 203***[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

**INFO**

With a size 150 sash stay, the tilt distance is 80 mm.

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm** (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**Optional****[63] Night vent, SRW ≥ 801 mm** → *from page 204***INFO**

Only for use in conjunction with P or V cam.

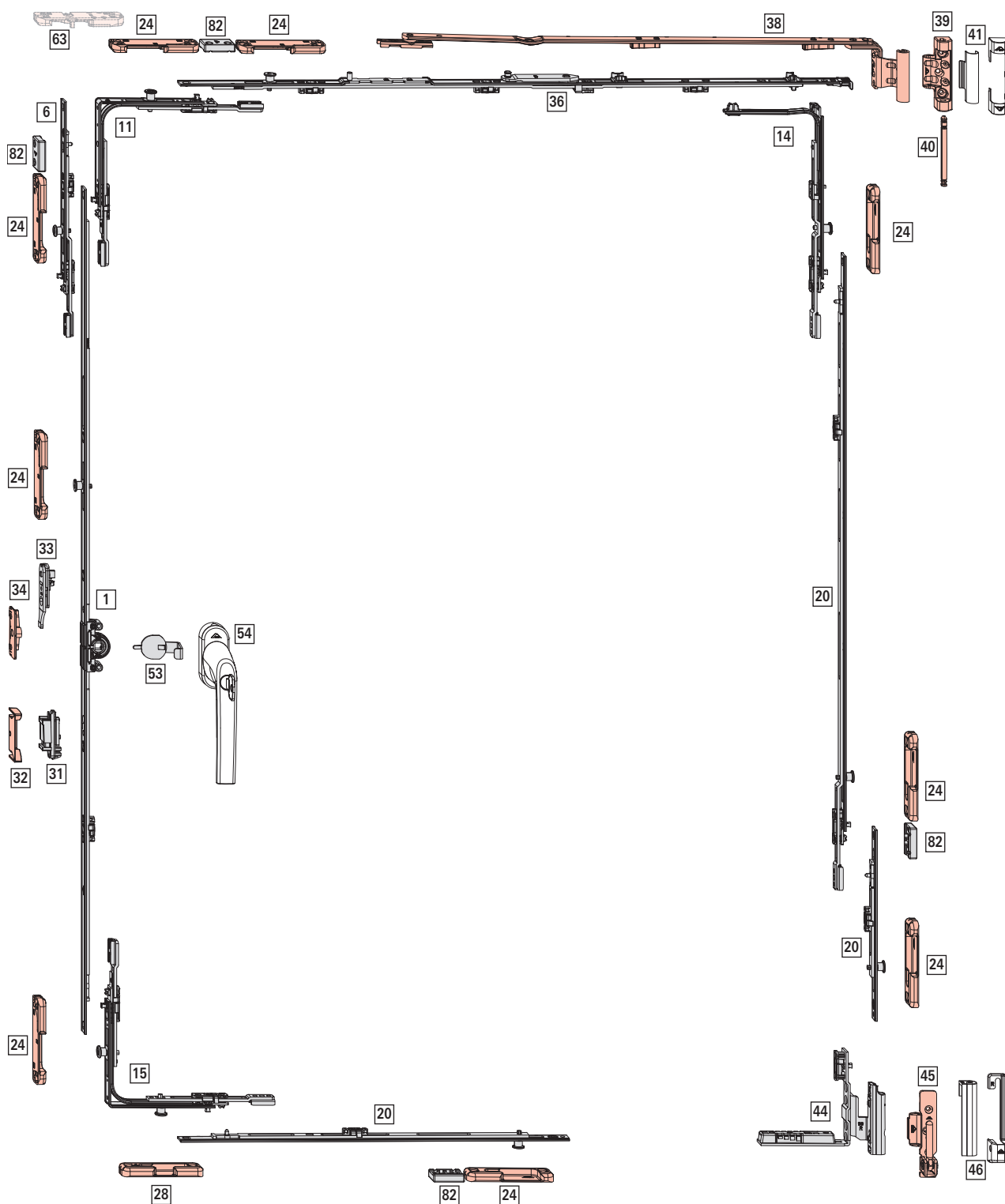
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Sash lifter → CTL_104



4.1.1.3 RC 2 / RC 2 N



**Application range****SRW:** 490 – 1400 mm**SRH:** 600 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	V	626542
1001 – 1200	513	1090	N	Y	1	V	626543
1201 – 1400	563	1290	N	Y	1	V	626544
1401 – 1600	563	1490	N	Y	2	V	626575
1601 – 1800	563	1690	N	Y	2	V	626576
1601 – 1800	1000	1690	N	Y	2	V	838324
1801 – 2000	1000	1890	N	Y	2	V	794641
2001 – 2200	1000	2090	N	Y	3	V	794642
2201 – 2400	1000	2290	N	Y	3	V	794643

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

200	Y	1	V
400	Y	1	V

Size-specific combinations:

2401 – 2600	200 KU	1	V
2601 – 2800	400 KU	1	V

[11] Standard corner drive

1	V
	260272

[14] Sash stay corner drive

1	V
	260284

[15] Corner drive, standard (security)

2	V
	260274

[20] Multipart centre lock – security, horizontal and vertical

200	N	1	V
400	N	1	V
600	N	1	V
600	Y	1	V

Size-specific combinations:

490 – 690	600 – 800	200	1
691 – 890	801 – 1000	400	1
891 – 1090	1001 – 1200	600	1

1091 – 1290	1201 – 1400	600 KU	1	V
		200	1	V
1291 – 1400	1401 – 1600	600 KU	1	V
		400	1	V
	1601 – 1800	600 KU	1	V
		600	1	V
	1801 – 2000	600 KU	1	V
		600 KU	1	V
		200	1	V
	2001 – 2200	600 KU	1	V
		600 KU	1	V
		400	1	V
	2201 – 2400	600 KU	1	V
		600 KU	1	V
		600	1	V
	2401 – 2600	600 KU	1	V
		600 KU	1	V
		600 KU	1	V
		200	1	V
	2601 – 2800	600 KU	1	V
		600 KU	1	V
		600 KU	1	V
		400	1	V

[24] Security striker → from page 196**[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

411 – 600	250	490	–	–
601 – 800	350	690	–	–
801 – 1000	500	890	1	V
1001 – 1200	500	1090	1	V
1201 – 1400	500	1290	1	V

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Optional

[63] Night vent, SRW ≥ 801 mm → from page 204



INFO

Only for use in conjunction with P or V cam.

Sash lifter → CTL_104



[illegible]



Application range

SRW: 490 – 1400 mm

SRH: 600 – 2800 mm

S.kg: max. 150 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	V	626542
1001 – 1200	513	1090	N	Y	1	V	626543
1201 – 1400	563	1290	N	Y	1	V	626544
1401 – 1600	563	1490	N	Y	2	V	626575
1601 – 1800	563	1690	N	Y	2	V	626576
1601 – 1800	1000	1690	N	Y	2	V	838324
1801 – 2000	1000	1890	N	Y	2	V	794641
2001 – 2200	1000	2090	N	Y	3	V	794642
2201 – 2400	1000	2290	N	Y	3	V	794643

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[17] Centre lock, multipart – security, horizontal – top

				Nº
200	Y	1	V	337708

Size-specific combinations:

				Nº
1001 – 1400	200 KU	1	V	337708

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

					Nº
490 – 690	600 – 800	200 KU	1	V	337708
691 – 890	801 – 1000	200 KU	1	V	337708
		200 KU	1	V	337708
891 – 1090	1001 – 1200	200 KU	1	V	337708
		200 KU	1	V	337708
		200 KU	1	V	337708
1091 – 1290	1201 – 1400	200 KU	1	V	337708
		400 KU	1	V	337710
		200 KU	1	V	337708
1291 – 1400	1401 – 1600	200 KU	1	V	337708
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	1601 – 1800	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	1801 – 2000	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	2001 – 2200	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
	2201 – 2400	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	2401 – 2600	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
	2601 – 2800	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708

[24] Security striker → from page 198**[28] Tilt striker → from page 194****[31] Bullet catch sash component** (optional SRH ≥ 1601 mm)

	Nº
 Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
 Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	350	890	1	V	787358

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[82] Anti-jemmy device**

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

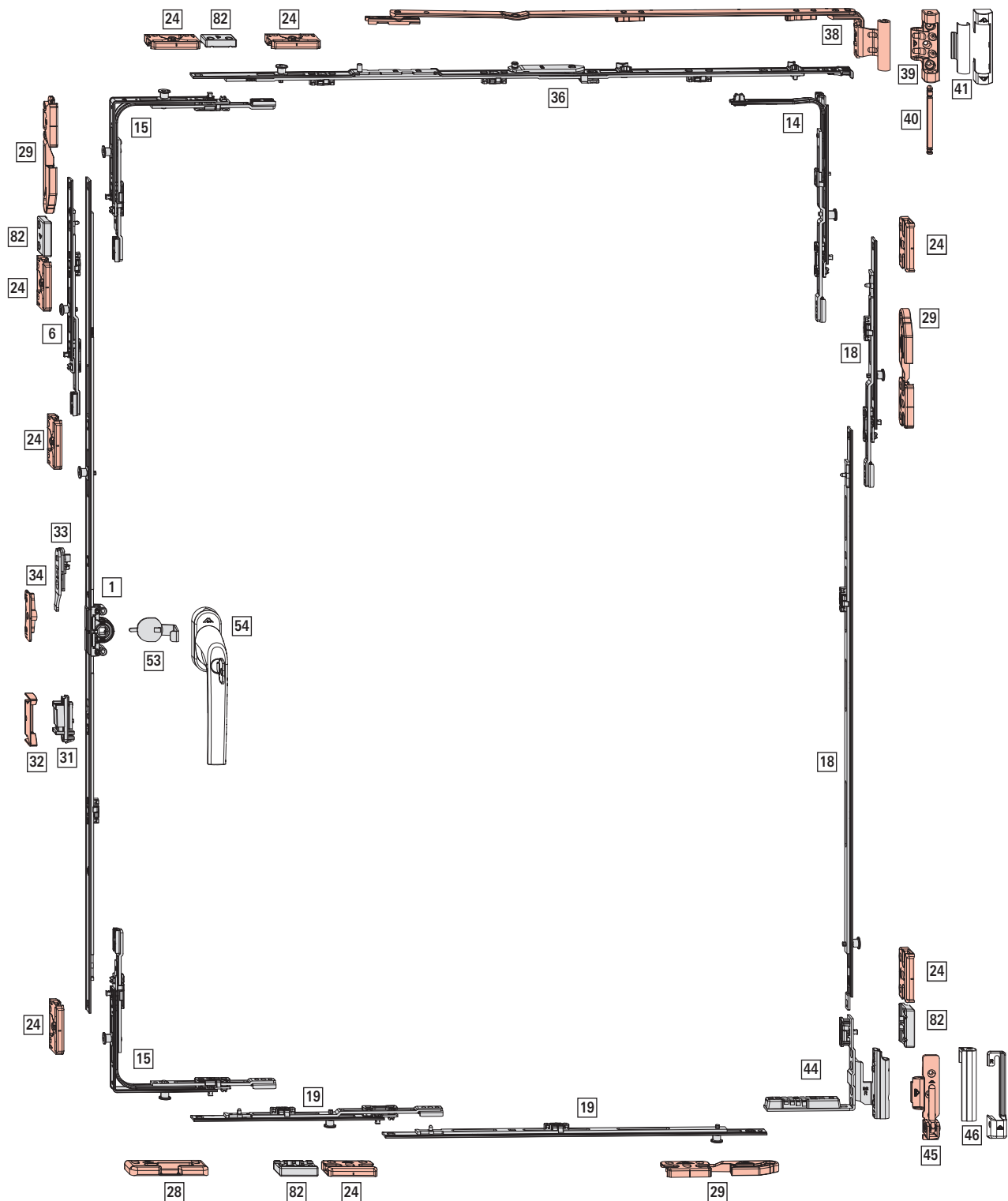
Optional**[63] Night vent, SRW ≥ 801 mm → from page 204****INFO**

Only for use in conjunction with P or V cam.

Sash lifter → CTL_104



4.1.1.5 TiltSafe RC 2 / RC 2 N





Application range

SRW: 490 – 1400 mm

SRH: 600 – 2800 mm

S.kg: max. 150 kg



INFO

Only for hardware axis 13 and rebate depth 30 mm.

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	V	626542
1001 – 1200	513	1090	N	Y	1	V	626543
1201 – 1400	563	1290	N	Y	1	V	626544
1401 – 1600	563	1490	N	Y	2	V	626575
1601 – 1800	563	1690	N	Y	2	V	626576
1601 – 1800	1000	1690	N	Y	2	V	838324
1801 – 2000	1000	1890	N	Y	2	V	794641
2001 – 2200	1000	2090	N	Y	3	V	794642
2201 – 2400	1000	2290	N	Y	3	V	794643

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[18] Multipart centre lock – security, vertical

				Nº
200	N	1	V	296853
200	Y	1	V	337708
400	N	1	V	296854
400	Y	1	V	337710
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

				Nº
600 – 800	200	1	V	296853
801 – 1000	200 KU	1	V	337708
	200	1	V	296853
1001 – 1200	200 KU	1	V	337708
	400	1	V	296854
1201 – 1400	200 KU	1	V	337708
	600	1	V	296855
1401 – 1600	200 KU	1	V	337708
	600 KU	1	V	337711
	200	1	V	296853
1601 – 1800	200 KU	1	V	337708
	600 KU	1	V	337711
	400	1	V	296854
1801 – 2000	200 KU	1	V	337708
	600 KU	1	V	337711
	600	1	V	296855
2001 – 2200	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
2201 – 2400	200	1	V	296853
	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
2401 – 2600	400	1	V	296854
	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
2601 – 2800	600	1	V	296855
	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
	600 KU	1	V	337711
	600 KU	1	V	337711
	200	1	V	296853

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	V	296853
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
490 – 690	200	1	V	296853
691 – 890	200 KU	1	V	337708
	200	1	V	296853
891 – 1090	200 KU	1	V	337708
	400 KU	1	V	337710

				Nº
1091 – 1290	200 KU	1	V	337708
	400 KU	1	V	337710
	200	1	V	296853
1291 – 1400	200 KU	1	V	337708
	400 KU	1	V	337710
	400 KU	1	V	337710

[24] Security striker → from page 196**[28] Tilt striker → from page 193****[29] Security striker for tilt ventilation → from page 198**

			Nº
13	30	Right	797027
13	30	Left	797026

[31] Bullet catch sash component (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13	–	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[53] Drilling protection**

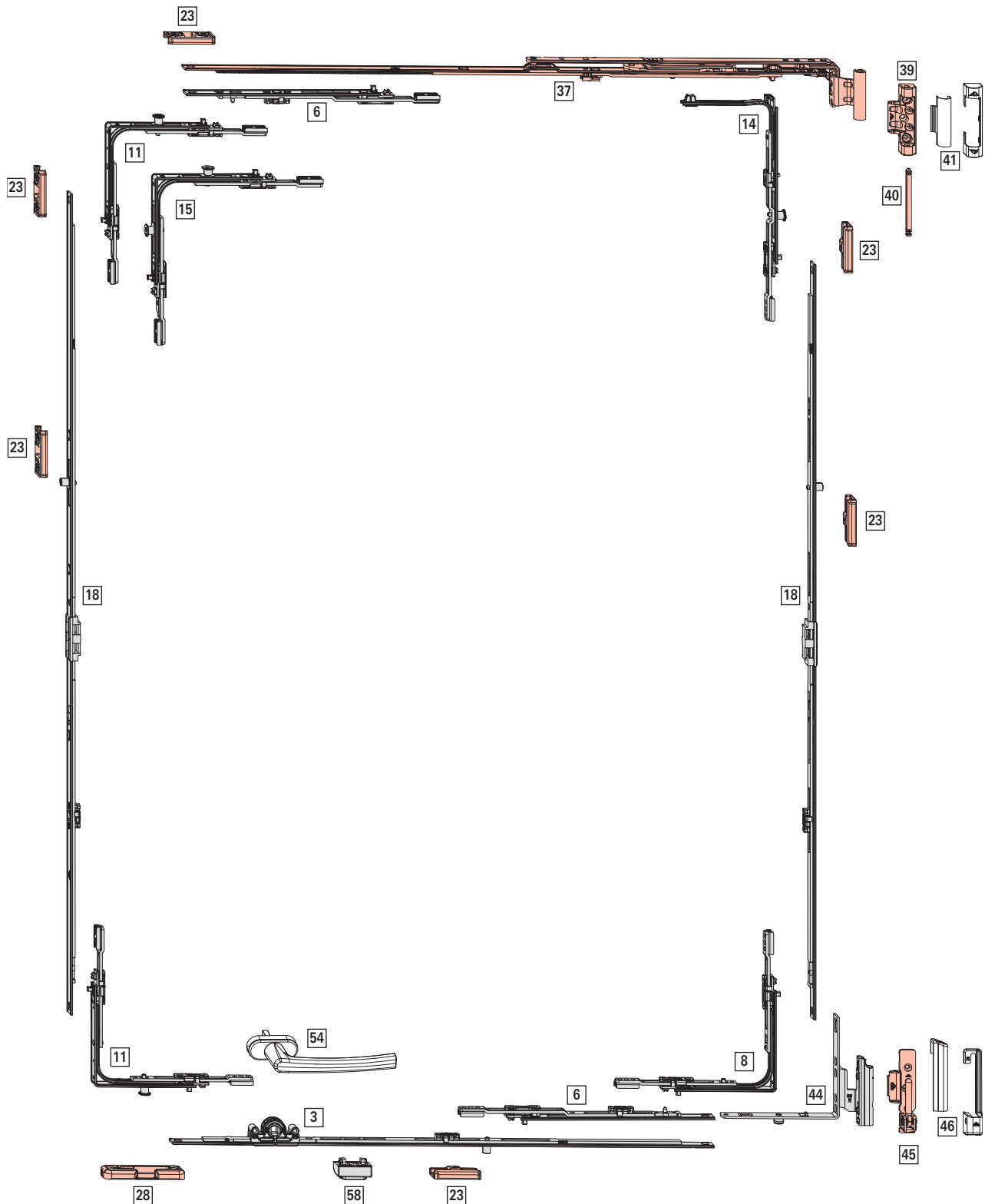
	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[82] Anti-jemmy device**

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715



4.1.1.6 Comfort – basic security



**Application range****SRW:** 520 – 1400 mm**SRH:** 530 – 1600 mm**S.kg:** max. 50 kg**[3] T&T espagnolette – comfort, fixed handle height** backset 15 mm

				Nº
520 – 700	490	–	–	307029
701 – 900	690	1	E	307030

[6] Centre lock, multipart – horizontal

				Nº
200	Y	–	–	308267
400	Y	1	E	260193

Size-specific combinations:

					Nº
bottom	top				
901 – 1100	1001 – 1200	200	–	–	308267
1101 – 1300	1201 – 1400	400	1	E	260193
1301 – 1400	–	200	–	–	308267
		400	1	E	260193

[8] Corner drive, standard, without cam

		Nº
–	–	339785

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[14] Sash stay corner drive

		Nº
1	P	260286

[15] Corner drive, standard (security)

		Nº
2	V	260274

For use with SRH ≤ 800 mm.

[18] Multipart centre lock – standard, vertical

			Nº
380	–	–	812595
690	–	–	774165
890	1	E	774174
1090	1	E	774175
1290	1	E	774176
1490	2	E	774177

Size-specific combinations:

					Nº
Hinge side					
530 – 600	530 – 670	380	–	–	812595
601 – 800	671 – 870	690	–	–	774165
801 – 1000	871 – 1070	890	1	E	774174
1001 – 1200	1071 – 1270	1090	1	E	774175
1201 – 1400	1271 – 1470	1290	1	E	774176
1401 – 1600	1471 – 1600	1490	2	E	774177

[23] Striker → from page 196**[28] Tilt striker → from page 193****[37] Scissor stay, forcibly controlled, system** 12/18-13

					Nº
520 – 600	490	Left	–	–	810190
		Right	–	–	810191
601 – 800	690	Left	–	–	810192
		Right	–	–	810193
801 – 1000	890	Left	1	E	810194
		Right	1	E	810195

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13 Left	Height and gasket-compression adjustable		815367
12/18-13 Right	Height and gasket-compression adjustable		815368

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

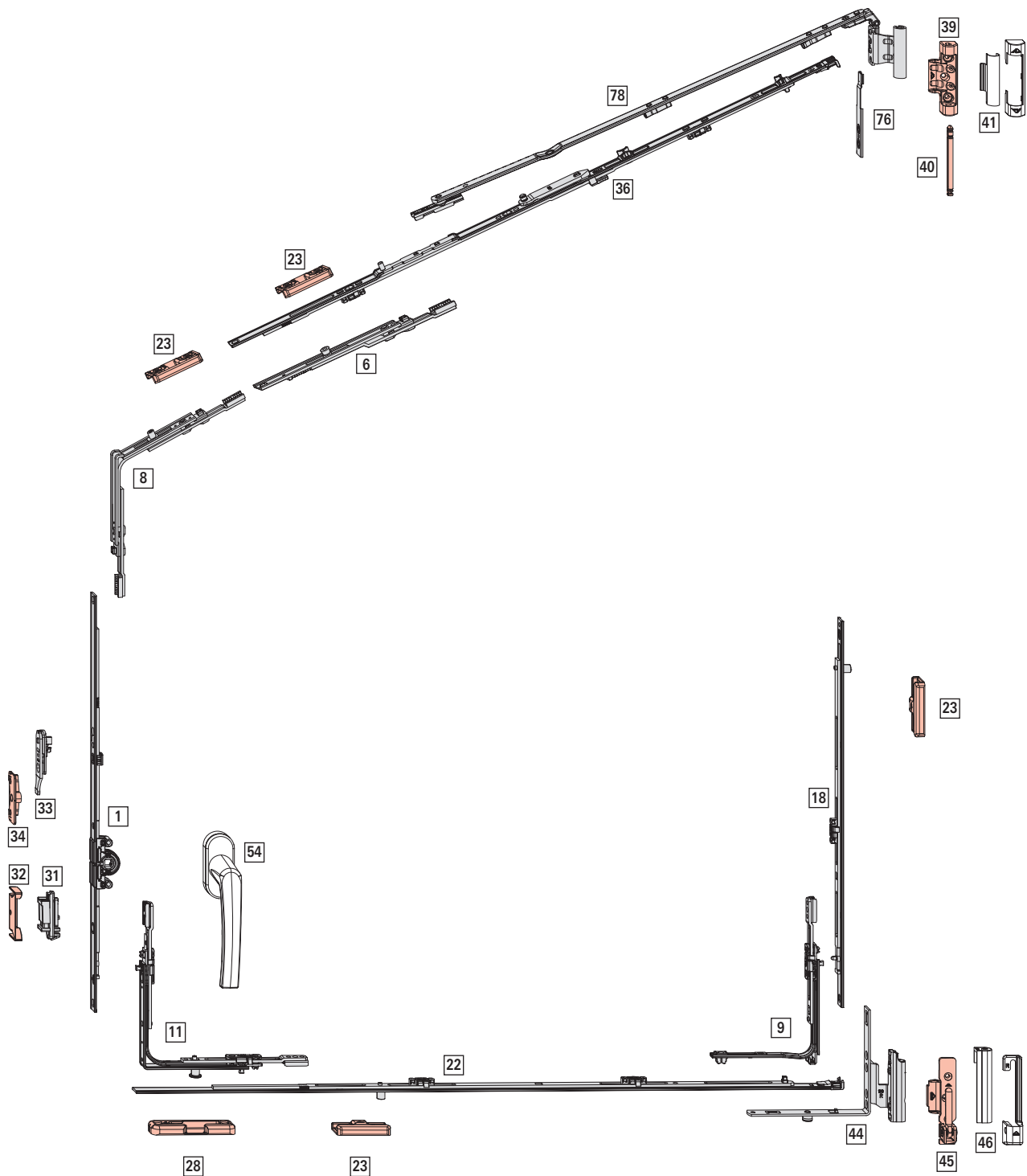
[46] Corner hinge / pivot rest cover caps → CTL_104**[54] Handle → CTL_1**

Handle 160 mm under Roto Patio Alversa, Roto Patio In-owa: Roto Line design

[58] Run-up block with mishandling device	
	Nº
Sash	307050



4.1.1.7 Pitched window





Application range

SRW: 340 – 1300 mm

SRH: 360 – 2400 mm

S.kg: max. 80 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282

[6] Centre lock, multipart

				Nº
200	Y	1	E	450821
400	Y	1	E	280346

Size-specific combinations:

				Nº
2101 – 1600	200 KU	1	E	450821
1601 – 1800	400 KU	1	E	280346

[8] Corner drive for pitched windows

		Nº
1	E	260279

[9] Corner drive for arched windows

	Nº
Standard	255273

[11] Standard corner drive

		Nº
1	P	260277

[18] Multipart centre lock – standard, vertical

				Nº
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281

[22] Arched component, vertical

					Nº
340 – 530	420	Y	–	–	245715
531 – 730	620	N	1	E	245717
731 – 930	820	N	1	E	245719
931 – 1130	1020	N	1	E	245721
1131 – 1330	1220	N	2	E	245723

[23] Striker → from page 196**[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	E	788617
1001 – 1200	500	1090	1	E	787349
1201 – 1400	500	1290	1	E	787351

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

			Nº
Stay-bearing pin	71	Roto Sil	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13 Left	Height and gasket-compression adjustable		815367
12/18-13 Right	Height and gasket-compression adjustable		815368

[45] Pivot rest				
				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps →
CTL_104

[54] Handle → CTL_1

[76] Pitched stay guide end piece	
	Nº
Pitched stay guide end piece	246734

[78] Pitched window stay arm, system 12 / 18-13			
			Nº
290 – 410	150	Left	810128
290 – 410	150	Right	810129
411 – 600	250	Left	810130
411 – 600	250	Right	810131
601 – 800	350	Left	810132
601 – 800	350	Right	810133
801 – 1400	500	Left	810134
801 – 1400	500	Right	810135



4.1.1.8 Arched window



**Application range****SRW:** 400 – 1300 mm**SRH:** 510 – 1900 mm**S.kg:** max. 80 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm						
						Nº
511 – 710	170	600	Y	–	–	795324
601 – 800	263	690	N	–	–	619591
801 – 1000	413	890	N	1	E	619592
1001 – 1200	513	1090	N	1	E	619593
1201 – 1400	563	1290	N	1	E	619594
1401 – 1600	563	1490	N	2	E	619595
1601 – 1800	563	1690	N	2	E	619596
1601 – 1800	1000	1690	N	2	E	838345
1801 – 2000	1000	1890	N	2	E	794637

[1] T&T espagnolette – fixed handle height, with additional stay arm, (SRW > 900 mm), backset 15 mm					
					Nº
985 – 1184	413	890	1	E	619592
1185 – 1384	513	1090	1	E	619593
1385 – 1584	563	1290	1	E	619594
1585 – 1784	563	1490	2	E	619595
1785 – 1900	563	1690	2	E	619596
1785 – 1900	1000	1690	2	E	838345

[9] Corner drive for arched windows	
	Nº
Standard	255273

[11] Standard corner drive	
	Nº
1	P 260277

[23] Striker → from page 196	
------------------------------	--

[28] Tilt striker → from page 193	
-----------------------------------	--

[31] Bullet-catch sash component (use optional with handle height of 1000 mm and above)	
	Nº
Bullet catch sash component	788363

[32] Bullet catch (use optional with handle height of 1000 mm and above) → from page 201	
--	--

[33] Lifting mishandling device sash component	
	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203	
--	--

[39] Stay bearing, adjustable		
		Nº
12/18-9 12/18-13	–	810106
12/18-9 12/18-13	2 x Ø 7 mm	810107

[40] Stay-bearing pin		
		Nº
Stay-bearing pin	86	834705

[41] Sash stay cover caps → CTL_104	
-------------------------------------	--

[44] Rebate corner hinge			
			Nº
12/18-13	Left	Height and gasket-compression adjustable	815367
12/18-13	Right	Height and gasket-compression adjustable	815368

[45] Pivot rest				
				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104	
---	--

[54] Handle → CTL_1	
---------------------	--

[70] Arched component, horizontal				
				Nº
400 – 500	380	–	–	812595
501 – 700	480	–	–	245729
701 – 900	680	1	E	245730
901 – 1100	880	1	E	245731
1101 – 1300	1080	1	E	245732

[71] Arched component, vertical					
					Nº
500 – 700	420	Y	–	–	245715
701 – 900	620	N	1	E	245717
901 – 1100	820	N	1	E	245719
1101 – 1300	1020	N	1	E	245721
1301 – 1500	1220	N	2	E	245723
1501 – 1700	1420	N	2	E	245725
1701 – 1900	1620	N	2	E	245727

[72] Arched espagnolette connector		
		Nº
1	E	245688

[73] Arched additional stay arm (optional SRH > 985 mm)

		Nº
Frame and sash component	SRW from 900	245764

[74] Arched centre lock

					Nº
601 – 1000	750	N	2	E	245736

[75] Arched centre lock, couplable

					Nº
1001 – 1300	590	Y	2	E	245734

Size-specific combinations:

				Nº
601 – 1000	750	2	E	245736
1001 – 1300	590 KU	2	E	245734
	750	2	E	245736

[77] Arched window set, system 12 / 18-13

			Nº
max. 80 kg	1	V	810102

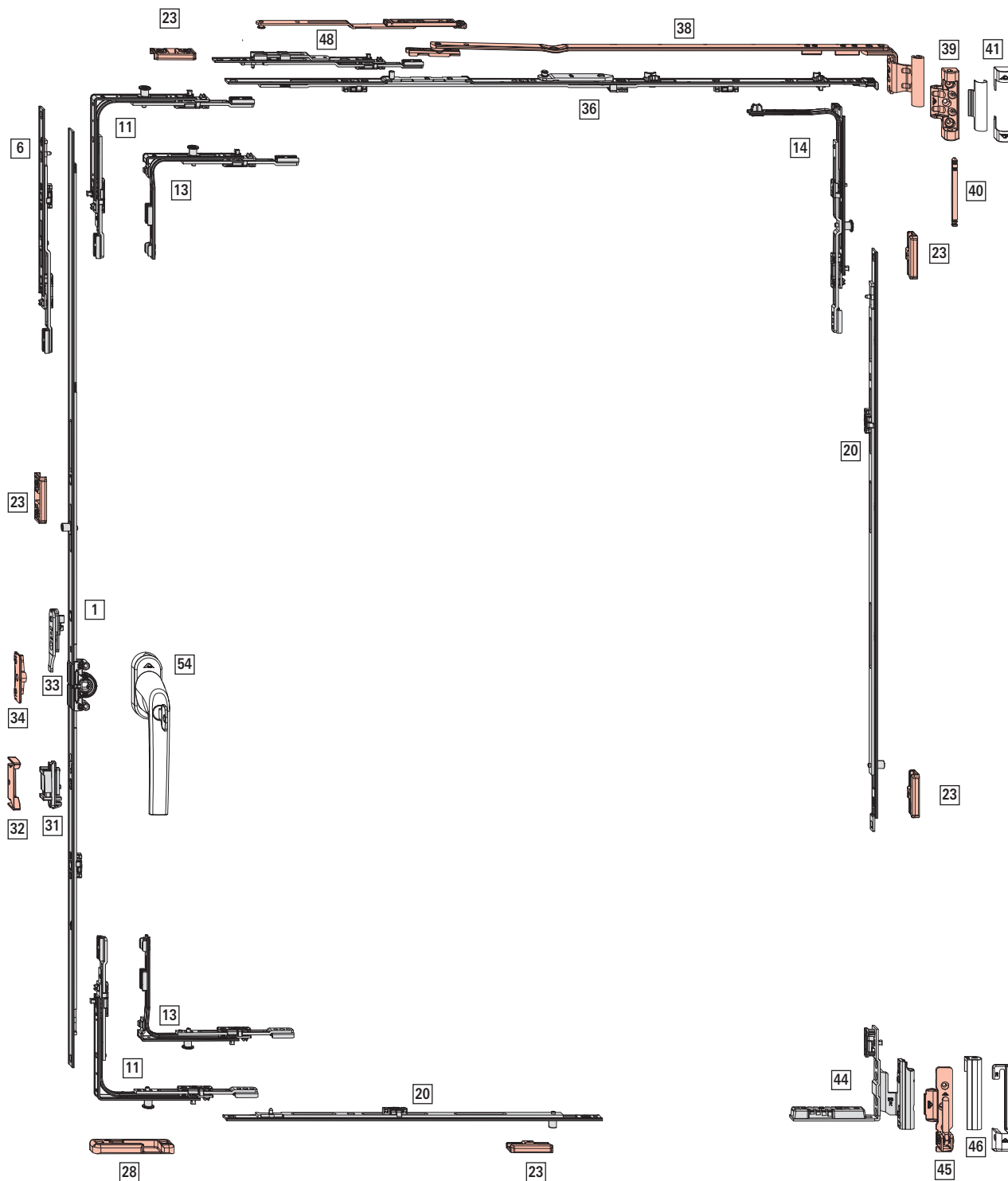
consisting of:

- 1 Arched sash stay
- 1 Retainer
- 1 Rebate run-up block



4.1.2 TiltFirst hardware

4.1.2.1 Basic security



**Application range****SRW:** 290 – 1600 mm**SRH:** 280 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

**INFO**

With SRH 280 – 290 mm, the screw guide must be removed (e.g. using pliers).

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

		Nº
1	E	260280
1	P	260282

For use with SRH ≤ 370 mm.

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

No sash stay corner drive is possible with SRH 280 – 320.

**INFO**

With SRH 321 – 360 mm, crop the sash stay corner drive.

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[28] Tilt striker TiltFirst → from page 195****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm TiltFirst, system 12/18-13

			Nº
290 – 410	150	Left	810160
290 – 410	150	Right	810161
411 – 600	250	Left	810162
411 – 600	250	Right	810163
601 – 800	350	Left	810164
601 – 800	350	Right	810165
801 – 1400	500	Left	810166
801 – 1400	500	Right	810167

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

**INFO**

With a size 150 sash stay, the tilt distance is 80 mm.

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm** TiltFirst (SRW ≥ 1401 mm)

	Nº
Frame and sash component	292022

[54] Handle → CTL_1**INFO**

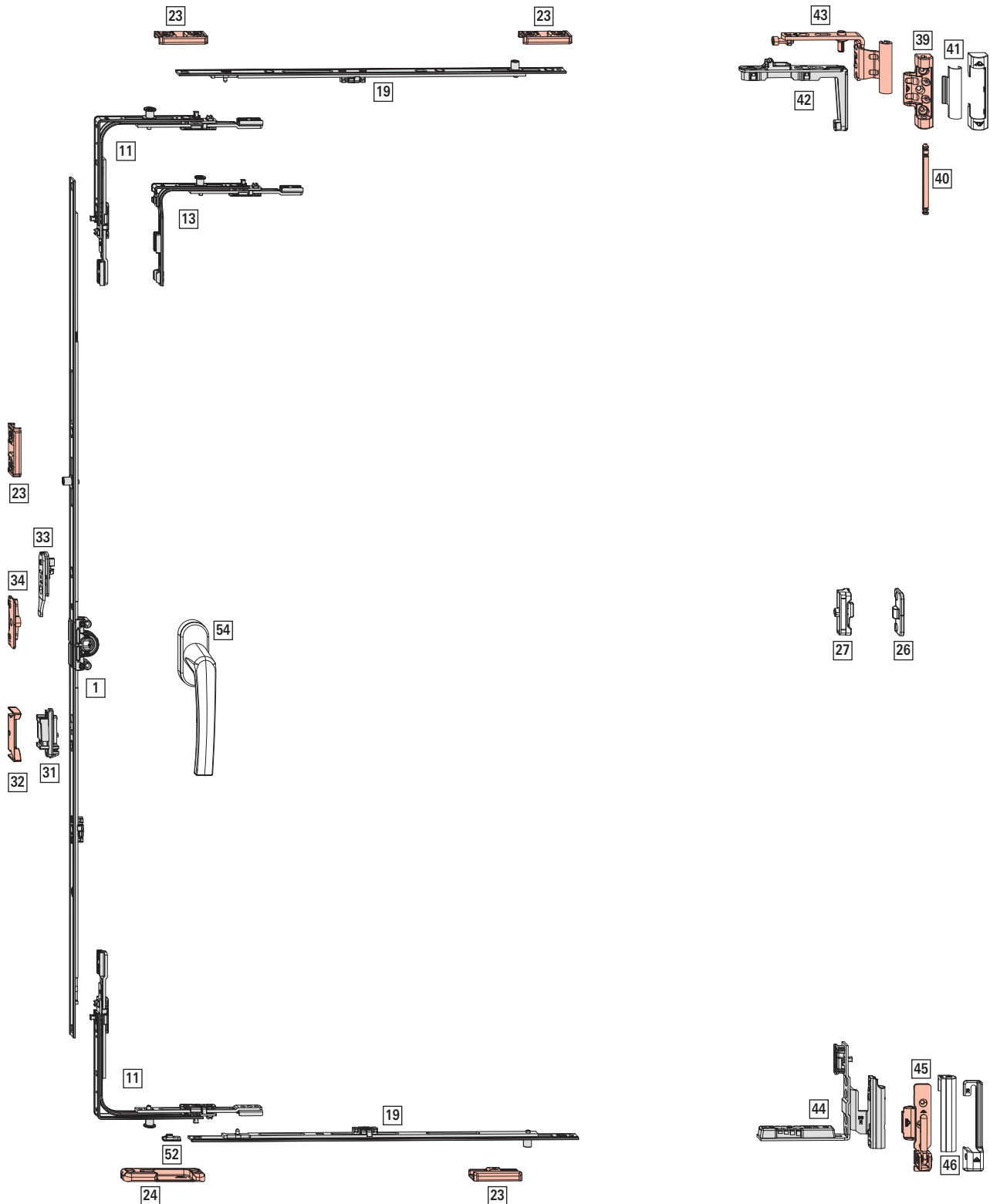
Use the lockable TiltFirst handle for child safe windows, see CTL_1.

Optional**Sash lifter → CTL_104**



4.1.3 Turn-Only hardware

4.1.3.1 Basic security



**Application range**

SRW: 290 – 1600 mm

SRH: 280 – 2800 mm

S.kg: max. 150 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

**INFO**

With SRH 280 – 290 mm, the screw guide must be removed (e.g. using pliers).

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

		Nº
1	E	260280
1	P	260282

For use with SRH ≤ 370 mm.

[19] Multipart centre lock – standard, horizontal

				Nº
1101 – 1600	600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****[26] Concealed centre closer frame component → CTL_104****[27] Concealed centre closer sash component → CTL_104****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[39] Stay bearing**

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest				
				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps →
CTL_104

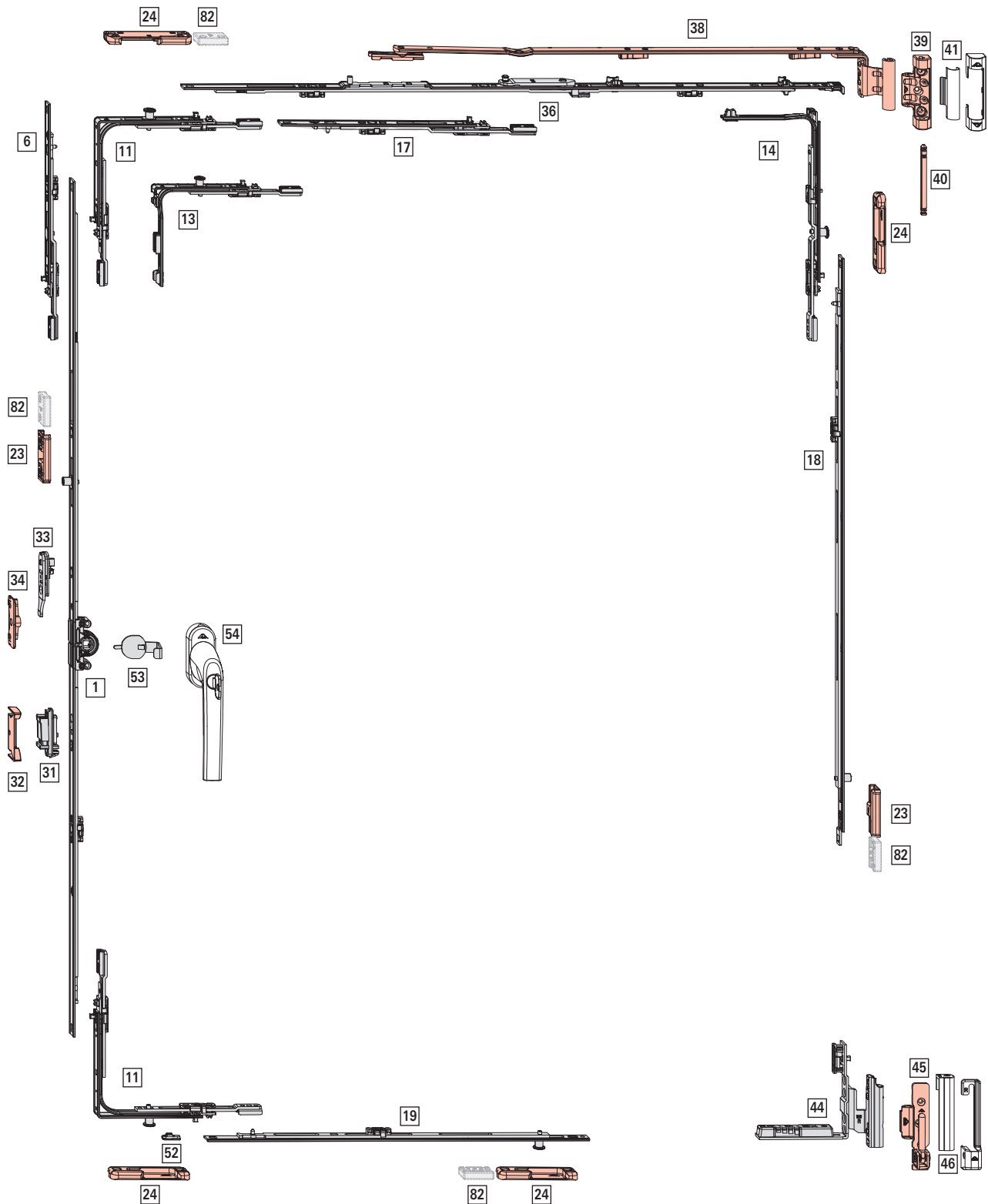
[52] 90° travel restrictor	
	Nº
Travel restrictor	264603

[54] Handle → CTL_1
Optional

Arrestable brake stay → CTL_104



4.1.3.2 RC 1 N



**Application range****SRW:** 400 – 1600 mm**SRH:** 320 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with SRH ≤ 370 mm.

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

With SRH 320 – 360 mm, crop the sash stay corner drive.

[17] Centre lock, multipart – standard, horizontal – top

				Nº
200	Y	–	–	308267

Size-specific combinations:

				Nº
1401 – 1600	200 KU	–	–	308267

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [3]	1	P	255286
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 [4]	1	P	255286

[23] Striker → from page 196**[24] Security striker → from page 196****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[3] With SRW 801 – 814 mm, crop centre lock 600.

[4] With SRW 1401 – 1414 mm, crop centre lock 600.

[32] Bullet-catch frame component (optional SRH
≥ 1601 mm) → *from page 201*

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component
→ *from page 203*

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps →
CTL_104

[52] 90° travel restrictor

	Nº
Travel restrictor	264603

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

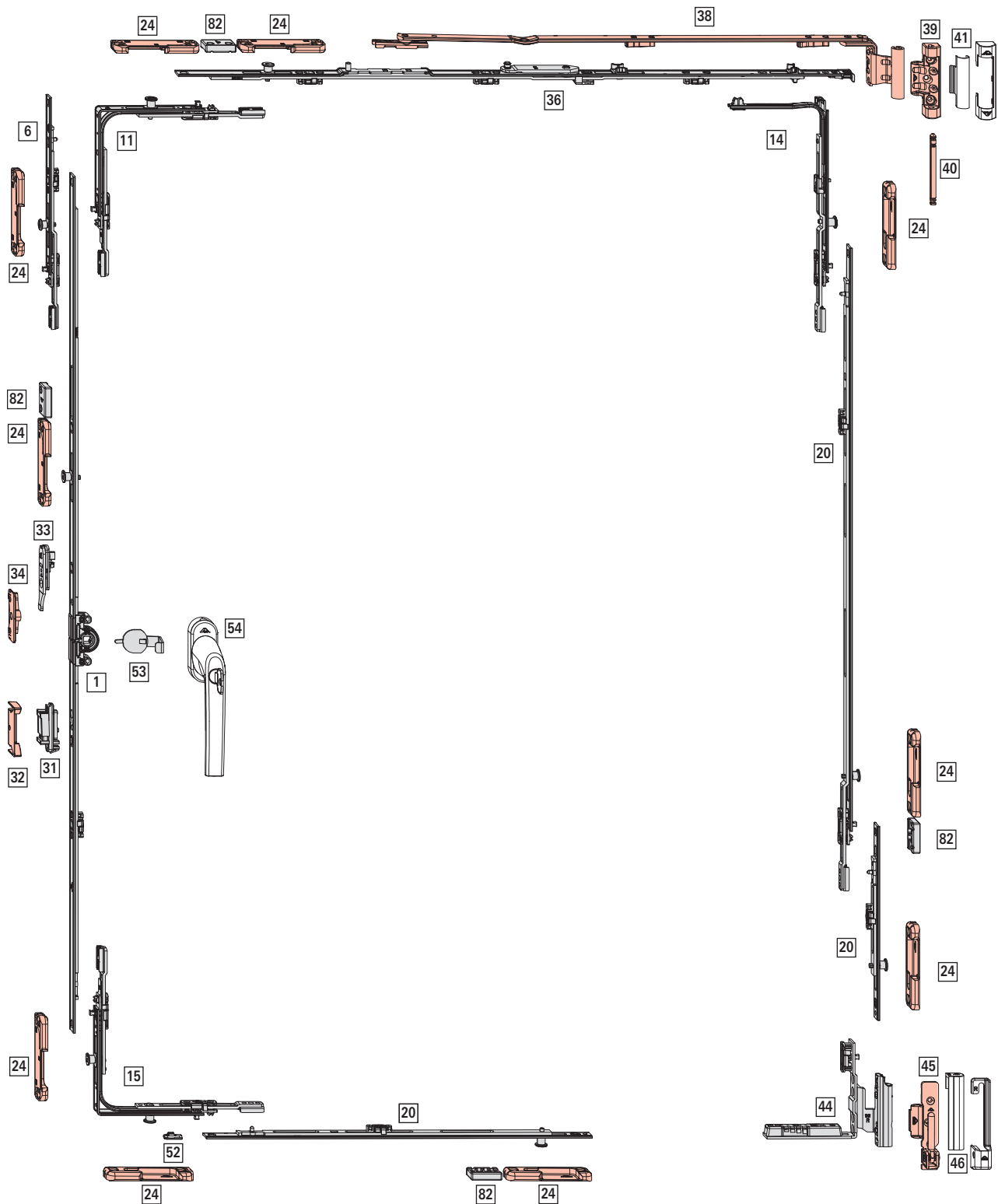
Optional

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715



4.1.3.3 RC 2 / RC 2 N





Application range

SRW: 490 – 1400 mm

SRH: 600 – 2800 mm

S.kg: max. 150 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	V	626542
1001 – 1200	513	1090	N	Y	1	V	626543
1201 – 1400	563	1290	N	Y	1	V	626544
1401 – 1600	563	1490	N	Y	2	V	626575
1601 – 1800	563	1690	N	Y	2	V	626576
1601 – 1800	1000	1690	N	Y	2	V	838324
1801 – 2000	1000	1890	N	Y	2	V	794641
2001 – 2200	1000	2090	N	Y	3	V	794642
2201 – 2400	1000	2290	N	Y	3	V	794643

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[11] Standard corner drive

		Nº
1	V	260272

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

					Nº
490 – 690	600 – 800	200	1	V	296853
691 – 890	801 – 1000	400	1	V	296854
891 – 1090	1001 – 1200	600	1	V	296855

					Nº
1091 – 1290	1201 – 1400	600 KU	1	V	337711
		200	1	V	296853
1291 – 1400	1401 – 1600	600 KU	1	V	337711
		400	1	V	296854
	1601 – 1800	600 KU	1	V	337711
		600	1	V	296855
	1801 – 2000	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
	2001 – 2200	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
	2201 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600	1	V	296855
	2401 – 2600	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854

[24] Security striker → from page 196**[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293

			Nº
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[52] 90° travel restrictor

	Nº
Travel restrictor	264603

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

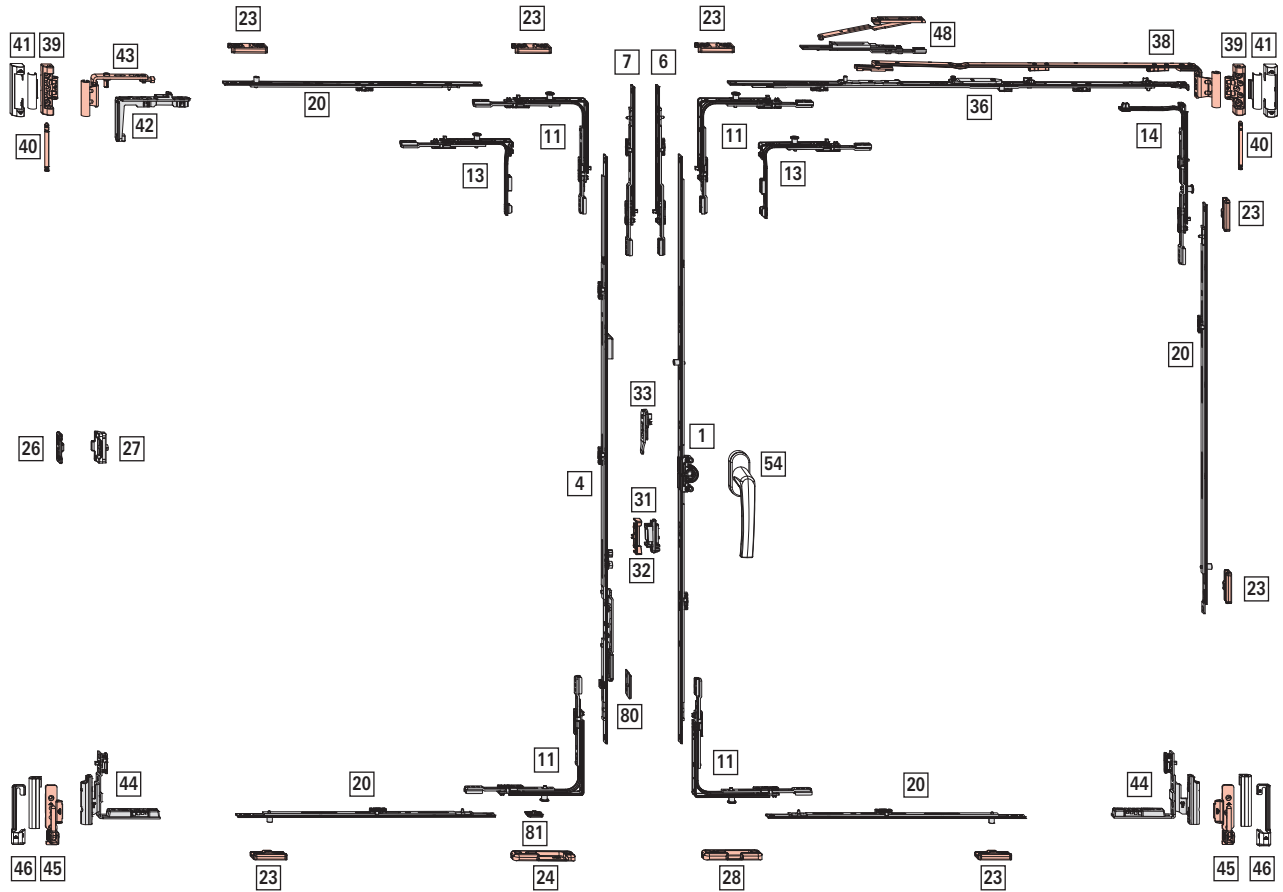
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715



4.1.4 Floating-mullion hardware

4.1.4.1 Standard – basic security



**Application range****SRW:** 290 – 1600 mm**SRH:** 280 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

[4] Lever-operated espagnolette, VT – fixed handle height, backset 15 mm

						Nº
280 – 555	156	445	–	Y	N	2003815
431 – 710	195	600	–	Y	Y	795462
601 – 800	300	690	–	N	Y	763116
801 – 1000	490	890	1	N	Y	763117
1001 – 1200	335	1090	1	N	Y	763118
1201 – 1400	335	1290	1	N	Y	763119
1401 – 1600	335	1490	2	N	Y	763120
1601 – 1800	335	1690	2	N	Y	795474
1801 – 2000	640	1890	2	N	Y	795476
2001 – 2200	640	2090	3	N	Y	795478
2201 – 2400	640	2290	3	N	Y	795480

Lever-operated espagnolette 2003815 must be secured with a fastening plate 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

		Nº
1	E	260280
1	P	260282

Use → “Possible combinations” from page 181

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

No sash stay corner drive is possible with SRH 280 – 320.

**INFO**

With SRH 321 – 360 mm, crop the sash stay corner drive.

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****INFO**

Lever-operated espagnolette, standard: A left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

[26] Concealed centre closer frame component → CTL_104**[27] Concealed centre closer sash component → CTL_104****[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

Nº

Bullet catch sash component	788363
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[32] Bullet catch (optional SRH ≥ 1601 mm)

Nº

Bullet catch for lever-operated espagnolette	Screw-on	788378
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[33] Lifting mishandling device sash component

Nº

Sash component for lifting mishandling device	795927
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[36] Stay guide – basic security

Nº

290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm, system 12 / 18-13

Nº

290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

Nº

12/18-9	–	max. 130 kg	787199
12/18-13			
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13			

[40] Stay-bearing pin

Nº

Stay-bearing pin	71	227354
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[41] Sash stay cover caps → CTL_104**[42] Rebate stay guide**

Nº

Rebate stay guide for hinge side P / T / A16	331488
--	--------

[43] Rebate stay arm, system 12 / 18-13

Nº

Left	810478
Right	810479

[44] Rebate corner hinge

Nº

12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

Nº

12/18-9	–	Left	max. 130 kg	449764
12/18-13		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm (SRW ≥ 1401 mm)**

Nº

Frame and sash component	200	255237
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[54] Handle → CTL_1**[80] Fastening plate**

Nº

Fastening plate with cam	255211
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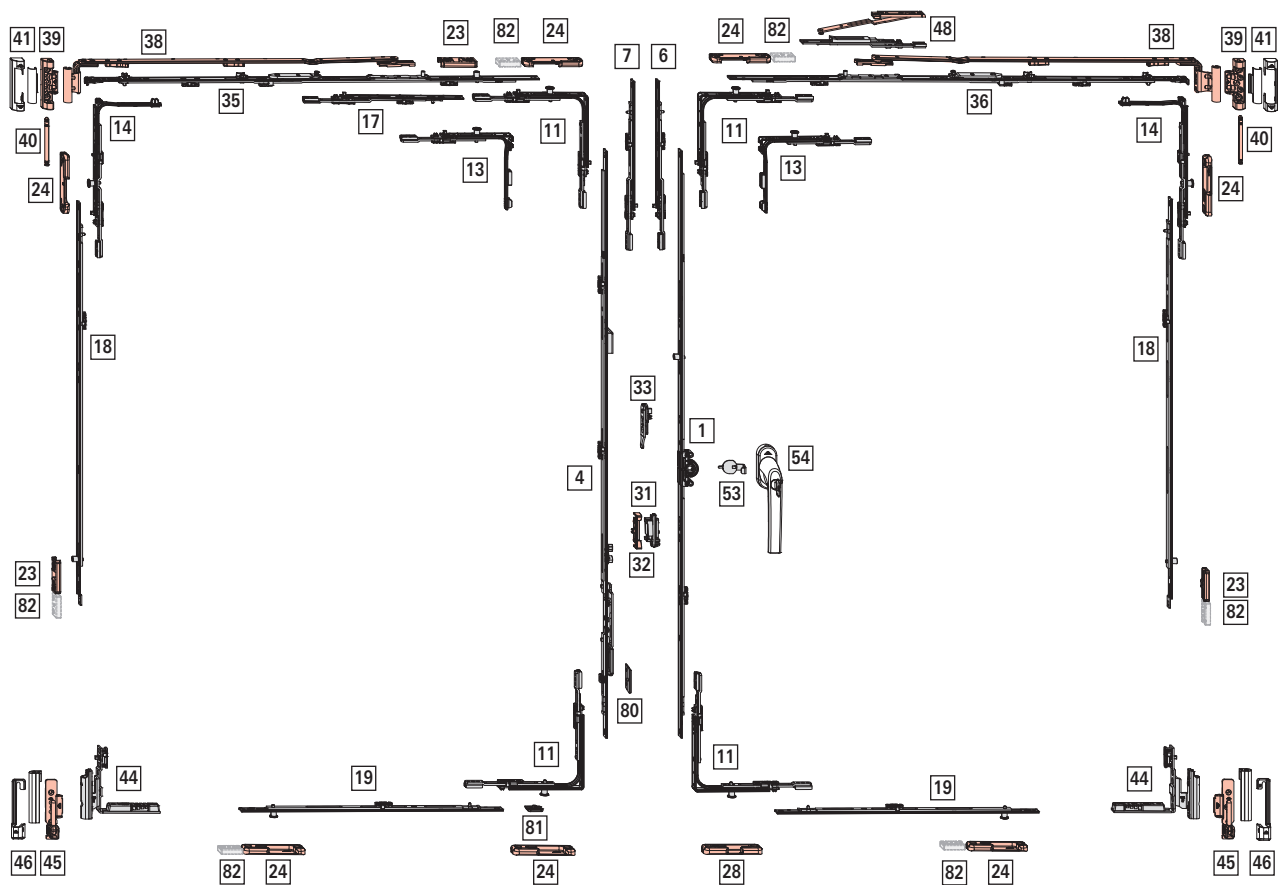
Can only be used in combination with lever-operated espagnolette 2003815.



[81] Run-up block → CTL_104

The run-up block depends on the striker used.

4.1.4.2 Standard – RC 1 N





Application range

SRW: 400 – 1600 mm

SRH: 320 – 2800 mm

S.kg: max. 150 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	2	E	795280
2201 – 2400	1000	2290	N	Y	2	E	795282
2201 – 2400	1000	2290	N	Y	3	E	794639

[4] Lever-operated espagnolette, VT – fixed handle height, backset 15 mm

						Nº
280 – 555	156	445	–	Y	N	2003815
431 – 710	195	600	–	Y	Y	795462
601 – 800	300	690	–	N	Y	763116
801 – 1000	490	890	1	N	Y	763117
1001 – 1200	335	1090	1	N	Y	763118
1201 – 1400	335	1290	1	N	Y	763119
1401 – 1600	335	1490	2	N	Y	763120
1601 – 1800	335	1690	2	N	Y	795474
1801 – 2000	640	1890	2	N	Y	795476
2001 – 2200	640	2090	3	N	Y	795478
2201 – 2400	640	2290	3	N	Y	795480

Lever-operated espagnolette 2003815 must be secured with a fastening plate 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

Use → “Possible combinations” from page 181

[14] Sash stay corner drive

		Nº
1	P	260286



INFO

With SRH 320 – 360 mm, crop the sash stay corner drive.

[17] Centre lock, multipart – standard, horizontal – top, Turn-Only sash

				Nº
200	Y	–	–	308267
400	Y	1	E	280346
600	Y	1	E	255282

Size-specific combinations:

				Nº
1001 – 1200	200 KU	–	–	308267
1201 – 1400	400 KU	1	E	280346
1401 – 1600	600 KU	1	E	255282

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [5]	1	P	255286
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 [6]	1	P	255286

[23] Striker → from page 196**[24] Security striker → from page 196****INFO**

Lever-operated espagnolette, standard: A left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

[28] Tilt striker → from page 193**[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[35] Turn-Only sash stay guide – basic security

					Nº
290 – 410	150	300	–	–	787366
411 – 600	250	490	–	–	787367
601 – 800	350	690	–	–	787368
801 – 1000	500	890	1	E	787369

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	–	–
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	–	–	–

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13	–	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[5] With SRW 801 – 814 mm, crop centre lock 600.

[6] With SRW 1401 – 1414 mm, crop centre lock 600.



[46] Corner hinge / pivot rest cover caps →
CTL_104

[48] Additional stay arm (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with lever-operated espagnolette 2003815.

[81] Run-up block → CTL_104

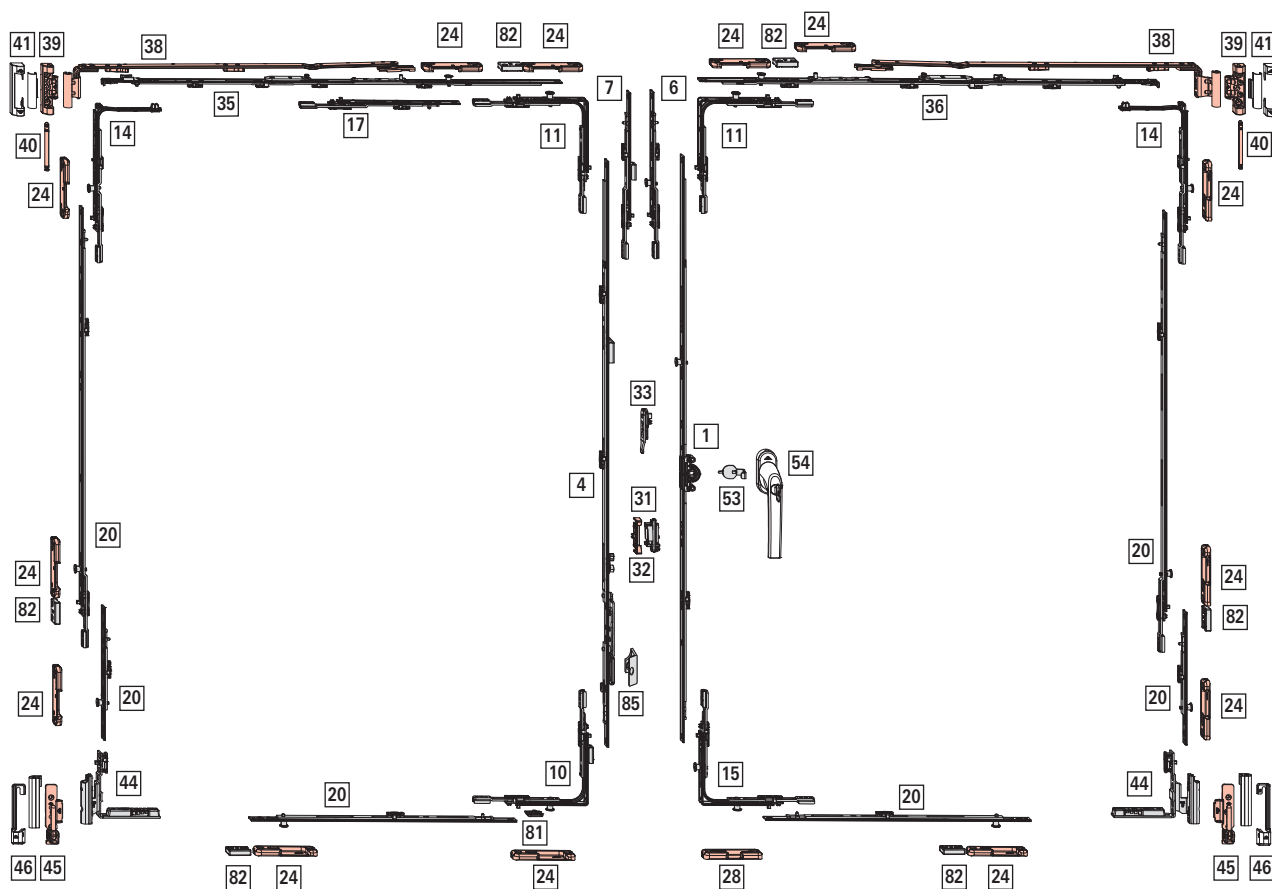
The run-up block depends on the striker used.

Optional

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

4.1.4.3 Standard – RC 2 / RC 2 N



**Application range****SRW:** 490 – 1400 mm**SRH:** 600 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

601 – 800	263	690	N	Y	–	619591
801 – 1000	413	890	N	Y	1	626542
1001 – 1200	513	1090	N	Y	1	626543
1201 – 1400	563	1290	N	Y	1	626544
1401 – 1600	563	1490	N	Y	2	626575
1601 – 1800	563	1690	N	Y	2	626576
1601 – 1800	1000	1690	N	Y	2	838324
1801 – 2000	1000	1890	N	Y	2	794641
2001 – 2200	1000	2090	N	Y	3	794642
2201 – 2400	1000	2290	N	Y	3	794643

[4] Lever-operated espagnolette, VT – fixed handle height, backset 15 mm

						Nº
601 – 800	300	690	–	N	Y	763116
801 – 1000	490	890	1	N	Y	763117
1001 – 1200	335	1090	1	N	Y	763118
1201 – 1400	335	1290	1	N	Y	763119
1401 – 1600	335	1490	2	N	Y	763120
1601 – 1800	335	1690	2	N	Y	795474
1801 – 2000	640	1890	2	N	Y	795476
2001 – 2200	640	2090	3	N	Y	795478
2201 – 2400	640	2290	3	N	Y	795480

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

200	Y	1	450822
400	Y	1	280345

Size-specific combinations:

2401 – 2600	200 KU	1	450822
2601 – 2800	400 KU	1	280345

[10] Floating mullion corner drive

					
Second opening sash	Bottom	1	1	V	367227

[11] Standard corner drive

		Nº
1	V	260272

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[17] Centre lock, multipart – security, horizontal – top, Turn-Only sash

				Nº
200	Y	—	—	308267
400	Y	1	V	337710

				Nº
1001 – 1200	200 KU	–	–	308267
1201 – 1400	400 KU	1	V	337710

[20] Multipart centre lock – security, horizontal and vertical

				
200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

					Nº
490 – 690	600 – 800	200	1	V	296853
691 – 890	801 – 1000	400	1	V	296854
891 – 1090	1001 – 1200	600	1	V	296855
1091 – 1290	1201 – 1400	600 KU	1	V	337711
		200	1	V	296853

					Nº
1291 – 1400	1401 – 1600	600 KU	1	V	337711
		400	1	V	296854
	1601 – 1800	600 KU	1	V	337711
		600	1	V	296855
	1801 – 2000	600 KU	1	V	337711
		600 KU	1	V	337711
	2001 – 2200	200	1	V	296853
		600 KU	1	V	337711
	2201 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
	2401 – 2600	600	1	V	296855
		600 KU	1	V	296855
2601 – 2800	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711

[24] Security striker → from page 196**INFO**

Lever-operated espagnolette, standard: A left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

[28] Tilt striker → from page 193**[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[35] Turn-Only sash stay guide – security

					Nº
411 – 600	250	490	–	–	787367
601 – 800	350	690	–	–	787368
801 – 1000	500	890	1	V	787370

[36] Stay guide – security

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13	–	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[53] Drilling protection**

	Nº
Drilling protection	797819



[54] **Handle**, lockable → CTL_1

[81] **Run-up block**→ CTL_104

The run-up block depends on the striker used.

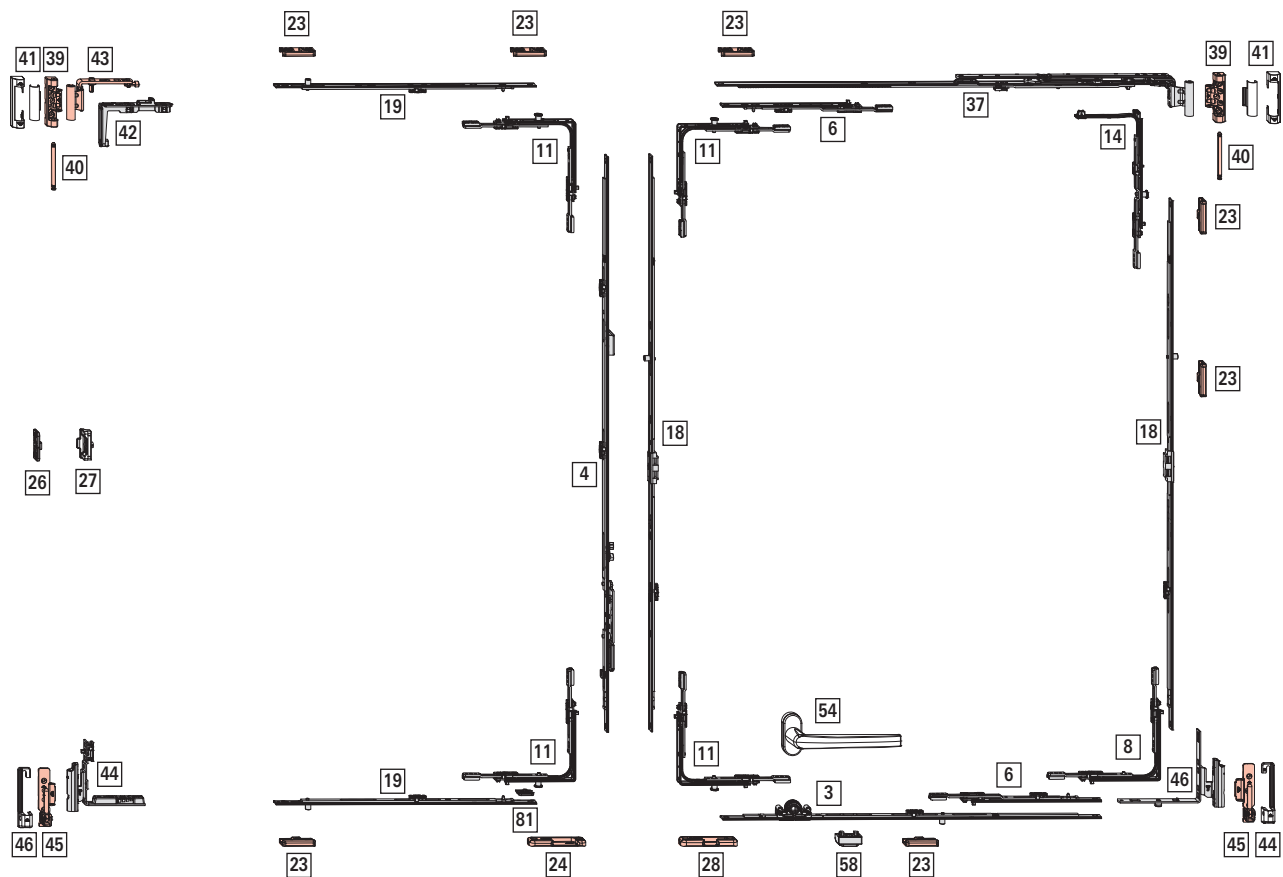
[82] **Anti-jemmy device**

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

[85] **Retainer clasp**

	Nº
Retainer clasp for lever-operated espagnolette, standard	314203

4.1.4.4 Standard – comfort – basic security





Application range

SRW: 520 – 1400 mm

SRH: 800 – 1600 mm

S.kg: max. 50 kg

[3] T&T espagnolette – comfort, fixed handle height backset 15 mm

				Nº
520 – 700	490	–	–	307029
701 – 900	690	1	E	307030

[4] Lever-operated espagnolette, VT – fixed handle height, backset 15 mm

				Nº
801 – 1000	490	890	1	763117
1001 – 1200	335	1090	1	763118
1201 – 1400	335	1290	1	763119
1401 – 1600	335	1490	2	763120

[6] Centre lock, multipart – horizontal

				Nº
200	Y	–	–	308267
400	Y	1	E	260193

Size-specific combinations:

					Nº
bottom	top				
901 – 1100	1001 – 1200	200	–	–	308267
1101 – 1300	1201 – 1400	400	1	E	260193
1301 – 1400	–	200	–	–	308267
		400	1	E	260193

[8] Corner drive, standard, without cam

		Nº
–	–	339785

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[14] Sash stay corner drive

		Nº
1	P	260286

[18] Multipart centre lock – standard, vertical

			Nº
380	–	–	812595
690	–	–	774165
890	1	E	774174
1090	1	E	774175
1290	1	E	774176
1490	2	E	774177

Size-specific combinations:

					Nº
–	800 – 870	690	–	–	774165
800 – 1000	871 – 1070	890	1	E	774174
1001 – 1200	1071 – 1270	1090	1	E	774175
1201 – 1400	1271 – 1470	1290	1	E	774176
1401 – 1600	1471 – 1600	1490	2	E	774177

[19] Multipart centre lock – standard, horizontal

				Nº
400	N	1	E	255280
600	N	1	E	255281

Size-specific combinations:

				Nº
801 – 1200	400	1	E	255280
1201 – 1400	600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****[26] Concealed centre closer frame component →**
CTL_105**[27] Concealed centre closer sash component →**
CTL_105**[28] Tilt striker → from page 193****[37] Scissor stay, forcibly controlled, system**
12/18-13

					Nº
520 – 600	490	Left	–	–	810190
		Right	–	–	810191
601 – 800	690	Left	–	–	810192
		Right	–	–	810193
801 – 1000	890	Left	1	E	810194
		Right	1	E	810195

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_105**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps →
CTL_105

[54] Handle → CTL_1

Handle under Roto Patio Alversa, Roto Patio Inowa: Roto Line design

[58] Run-up block with mishandling device

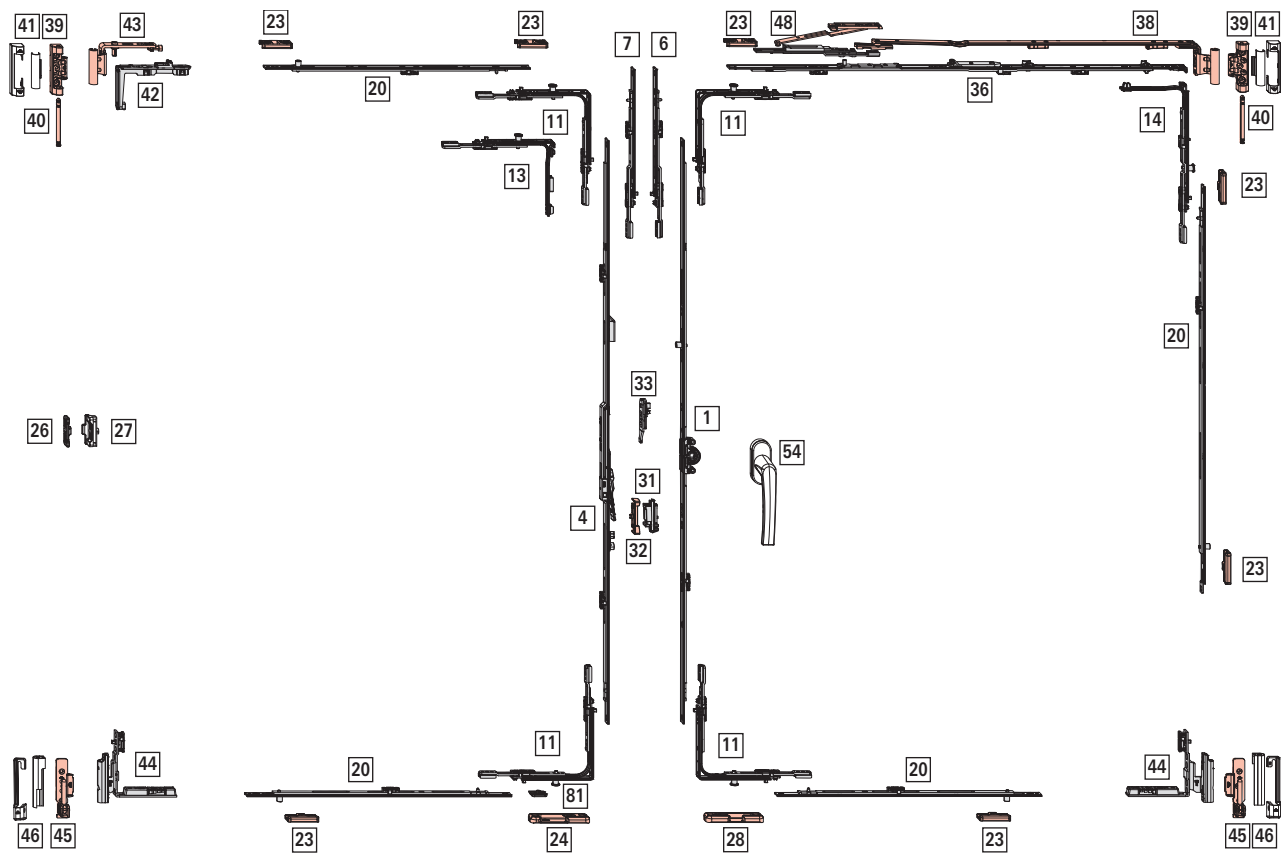
	Nº
Sash	307050

[81] Run-up block → CTL_104

The run-up block depends on the striker used.



4.1.4.5 Plus – basic security



**Application range****SRW:** 290 – 1600 mm**SRH:** 430 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	3	E	794638
2201 – 2400	1000	2290	N	Y	3	E	794639

[4] Lever-operated espagnolette Plus – VT, backset 15 mm

							Nº
431 – 710	144	600	Y	N	–	Y	2007106
601 – 800	234	690	Y	N	–	–	2007116
801 – 1000	496	890	Y	N	1	–	2007117
1001 – 1200	496	1090	Y	N	1	–	2007118
1201 – 1400	546	1290	Y	N	1	–	2007119
1401 – 1600	546	1490	Y	N	2	–	2007120
1601 – 1800	546	1690	Y	Y	2	–	2007121
1801 – 2000	546	1890	Y	Y	2	–	2007122
2001 – 2200	546	2090	Y	Y	3	–	2007123
2201 – 2400	546	2290	Y	Y	3	–	2007124

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

		Nº
1	E	260280
1	P	260282

Use → “Possible combinations” from page 187

[14] Sash stay corner drive

		Nº
1	P	260286

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****[26] Concealed centre closer frame component → CTL_104****[27] Concealed centre closer sash component → CTL_104****[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm (SRW ≥ 1401 mm)**

		Nº
Frame and sash component	200	255237

[54] Handle → CTL_1**[81] Run-up block**

The run-up block depends on the striker used.



The image displays two detailed technical diagrams of vehicle door assemblies, labeled 'FRONT' and 'REAR'. Each diagram shows the internal mechanical components of a door, including hinges, latches, and structural reinforcements, with various parts numbered for identification.

FRONT Door Assembly Components:

- Top edge components: 41, 39, 38, 23, 82, 24, 7, 6, 24, 82, 48, 38, 39, 41
- Left edge components: 40, 24, 82, 18, 23
- Internal components: 14, 17, 11, 13, 36, 4, 33, 31, 32, 11, 19, 81, 24, 82, 24
- Bottom edge components: 46, 45, 44, 24, 82, 24

REAR Door Assembly Components:

- Top edge components: 24, 82, 48, 38, 39, 41
- Left edge components: 11, 36, 14, 18, 23
- Internal components: 1, 54, 53, 31, 32, 11, 19, 28, 82, 24
- Bottom edge components: 44, 45, 46, 45, 46



Application range

SRW: 400 – 1600 mm

SRH: 430 – 2800 mm

S.kg: max. 150 kg

[1] T&T espagnolette, VT – fixed handle height, backset 15 mm

							Nº
280 – 570	120	460	Y	N	–	–	742199
511 – 710	170	600	Y	Y	–	–	795324
601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	E	619592
1001 – 1200	513	1090	N	Y	1	E	619593
1201 – 1400	563	1290	N	Y	1	E	619594
1401 – 1600	563	1490	N	Y	2	E	619595
1601 – 1800	563	1690	N	Y	2	E	619596
1601 – 1800	1000	1690	N	Y	2	E	838345
1801 – 2000	1000	1890	N	Y	2	E	794637
2001 – 2200	1000	2090	N	Y	3	E	794638
2201 – 2400	1000	2290	N	Y	3	E	794639

[4] Lever-operated espagnolette Plus – VT, backset 15 mm

							Nº
431 – 710	144	600	Y	N	–	Y	2007106
601 – 800	234	690	Y	N	–	–	2007116
801 – 1000	496	890	Y	N	1	–	2007117
1001 – 1200	496	1090	Y	N	1	–	2007118
1201 – 1400	546	1290	Y	N	1	–	2007119
1401 – 1600	546	1490	Y	N	2	–	2007120
1601 – 1800	546	1690	Y	Y	2	–	2007121
1801 – 2000	546	1890	Y	Y	2	–	2007122
2001 – 2200	546	2090	Y	Y	3	–	2007123
2201 – 2400	546	2290	Y	Y	3	–	2007124

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[7] With SRW 801 – 814 mm, crop centre lock 600.

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

Use → “Possible combinations” from page 187

[14] Sash stay corner drive

		Nº
1	P	260286

[17] Centre lock, multipart – standard, horizontal – top, Turn-Only sash

				Nº
200	Y	–	–	308267

Size-specific combinations:

				Nº
1401 – 1600	200 KU	–	–	308267

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [7]	1	P	255286

				Nº
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 [8]	1	P	255286

[23] **Striker** → from page 196

[24] **Security striker** → from page 196

[28] **Tilt striker** → from page 193

[31] **Bullet catch sash component** (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] **Bullet catch** (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] **Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[36] **Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] **Stay arm, system 12 / 18-13**

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296



INFO

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] **Stay bearing**

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] **Stay-bearing pin**

		Nº
Stay-bearing pin	71	227354

[41] **Sash stay cover caps** → CTL_104

[44] **Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] **Pivot rest**

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] **Corner hinge / pivot rest cover caps** → CTL_104

[48] **Additional stay arm** (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[53] **Drilling protection**

	Nº
Drilling protection	797819

[54] **Handle, lockable** → CTL_1

[81] **Run-up block**

The run-up block depends on the striker used.

Optional

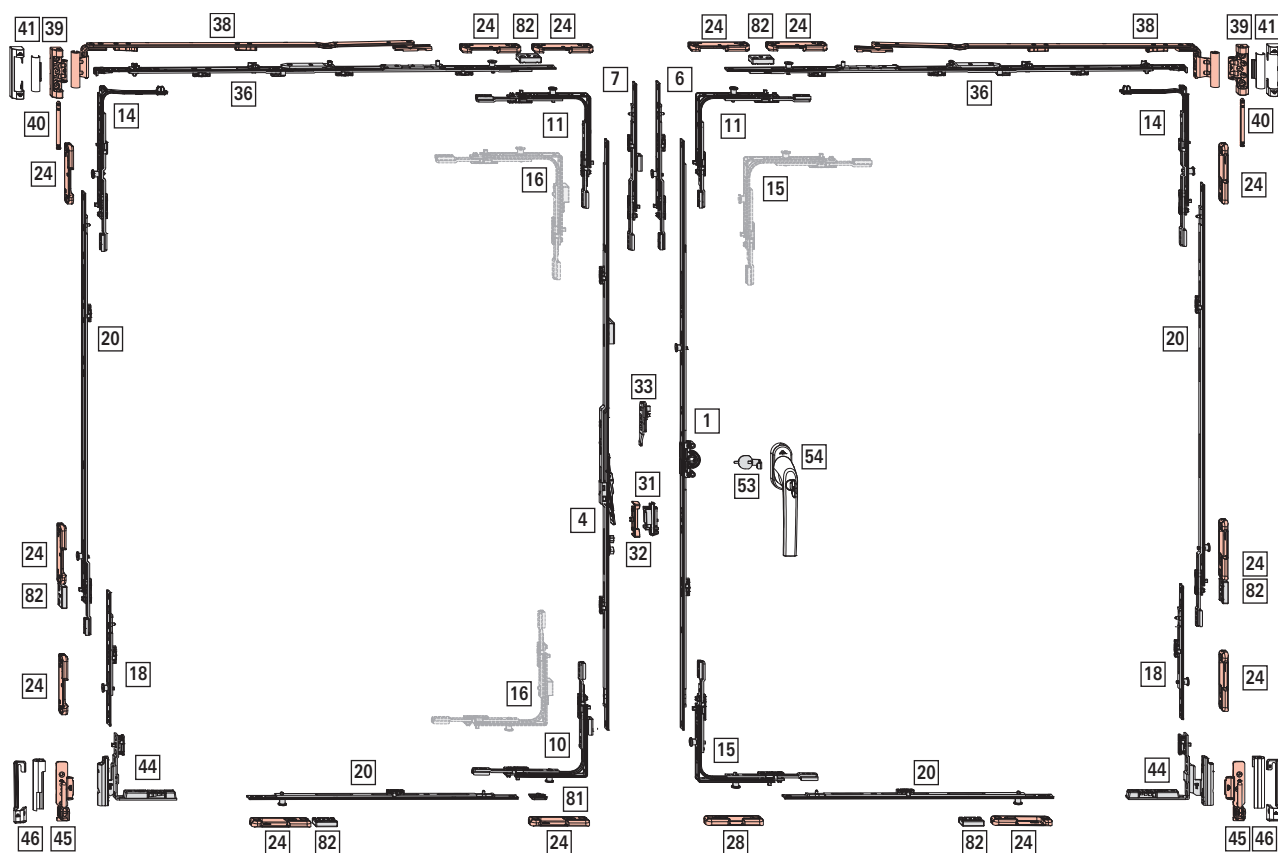
[82] **Anti-jemmy device**

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

[8] With SRW 1401 – 1414 mm, crop centre lock 600.



4.1.4.7 Plus – RC 2 / RC 2 N



**Application range****SRW:** 490 – 1400 mm**SRH:** 600 – 2800 mm**S.kg:** max. 150 kg**[1] T&T espagnolette, VT – fixed handle height, backset 15 mm**

601 – 800	263	690	N	Y	–	–	619591
801 – 1000	413	890	N	Y	1	V	626542
1001 – 1200	513	1090	N	Y	1	V	626543
1201 – 1400	563	1290	N	Y	1	V	626544
1401 – 1600	563	1490	N	Y	2	V	626575
1601 – 1800	563	1690	N	Y	2	V	626576
1601 – 1800	1000	1690	N	Y	2	V	838324
1801 – 2000	1000	1890	N	Y	2	V	794641
2001 – 2200	1000	2090	N	Y	3	V	794642
2201 – 2400	1000	2290	N	Y	3	V	794643

[4] Lever-operated espagnolette Plus – VT, backset 15 mm

601 – 800	234	690	Y	N	–	2007116
801 – 1000	496	890	Y	N	1	2007117
1001 – 1200	496	1090	Y	N	1	2007118
1201 – 1400	546	1290	Y	N	1	2007119
1401 – 1600	546	1490	Y	N	2	2007120
1601 – 1800	546	1690	Y	Y	2	2007121
1801 – 2000	546	1890	Y	Y	2	2007122
2001 – 2200	546	2090	Y	Y	3	2007123
2201 – 2400	546	2290	Y	Y	3	2007124

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

200	Y	1	450822
400	Y	1	280345

Size-specific combinations:

2401 – 2600	200 KU	1	450822
2601 – 2800	400 KU	1	280345

[10] Floating mullion corner drive

					
Second opening sash	Bottom	1	1	V	367227

[11] Standard corner drive

1	V	260272

[14] Sash stay corner drive

1	V	260284

[15] Corner drive, standard (security)

2	V	260274

[20] Multipart centre lock – security, horizontal and vertical

200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

490 – 690	600 – 800	200	1	V	296853
691 – 890	801 – 1000	400	1	V	296854
891 – 1090	1001 – 1200	600	1	V	296855
1091 – 1290	1201 – 1400	600 KU	1	V	337711
		200	1	V	296853
1291 – 1400	1401 – 1600	600 KU	1	V	337711
		400	1	V	296854
	1601 – 1800	600 KU	1	V	337711
		600	1	V	296855
	1801 – 2000	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
	2001 – 2200	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
	2201 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600	1	V	296855
	2401 – 2600	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854

[24] Security striker → from page 196

[28] Tilt striker → from page 193

[31] Bullet catch sash component (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[36] Stay guide – security

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

		Nº
12/18-13 Left	Height and gasket-compression adjustable	815357
Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[81] Run-up block

The run-up block depends on the striker used.

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Optional

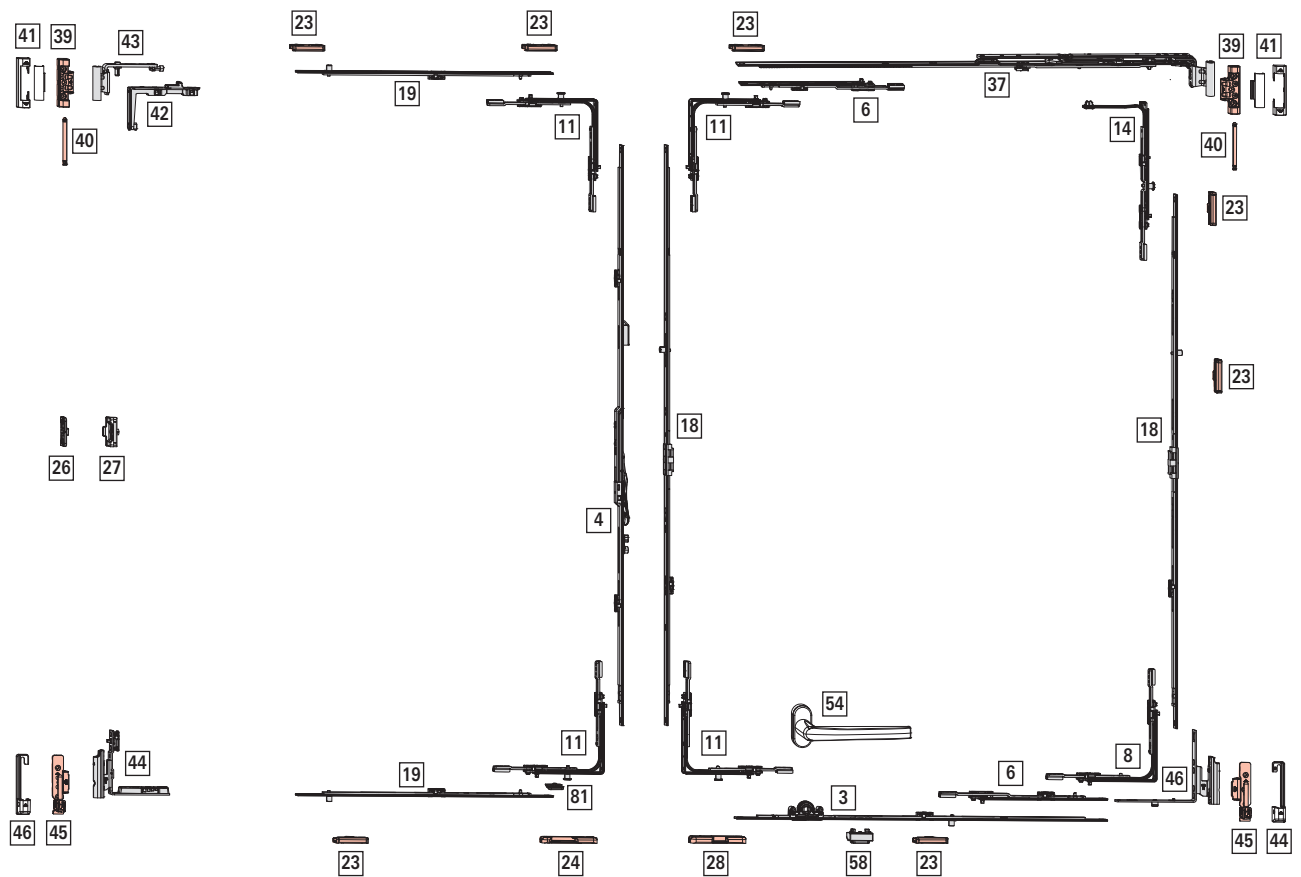
[16] Corner drive, slide guard

				Nº
Second opening sash / slide guard	Top	1	V	839223
	Bottom	1	V	839224

When using a corner drive with a slide guard, a standard corner drive (RC 3) is required on the first opening sash.



4.1.4.8 Plus – comfort – basic security





Application range

SRW: 520 – 1400 mm

SRH: 800 – 1600 mm

S.kg: max. 50 kg

[3] T&T espagnolette – comfort, fixed handle height backset 15 mm

				Nº
520 – 700	490	–	–	307029
701 – 900	690	1	E	307030

[4] Lever-operated espagnolette Plus – VT, backset 15 mm

				Nº
801 – 1000	496	890	1	2007117
1001 – 1200	496	1090	1	2007118
1201 – 1400	546	1290	1	2007119
1401 – 1600	546	1490	2	2007120

[6] Centre lock, multipart – horizontal

				Nº
200	Y	–	–	308267
400	Y	1	E	260193

Size-specific combinations:

					Nº
bottom	top				
901 – 1100	1001 – 1200	200	–	–	308267
1101 – 1300	1201 – 1400	400	1	E	260193
1301 – 1400	–	200	–	–	308267
		400	1	E	260193

[8] Corner drive, standard, without cam

		Nº
–	–	339785

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[14] Sash stay corner drive

		Nº
1	P	260286

[18] Multipart centre lock – standard, vertical

			Nº
380	–	–	812595
690	–	–	774165
890	1	E	774174
1090	1	E	774175
1290	1	E	774176
1490	2	E	774177

Size-specific combinations:

					Nº
–	800 – 870	690	–	–	774165
800 – 1000	871 – 1070	890	1	E	774174
1001 – 1200	1071 – 1270	1090	1	E	774175
1201 – 1400	1271 – 1470	1290	1	E	774176
1401 – 1600	1471 – 1600	1490	2	E	774177

[19] Multipart centre lock – standard, horizontal

				Nº
400	N	1	E	255280
600	N	1	E	255281

Size-specific combinations:

				Nº
801 – 1200	400	1	E	255280
1201 – 1400	600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****[26] Concealed centre closer frame component →**
CTL_105**[27] Concealed centre closer sash component →**
CTL_105**[28] Tilt striker → from page 193****[37] Scissor stay, forcibly controlled, system**
12/18-13

					Nº
520 – 600	490	Left	–	–	810190
		Right	–	–	810191
601 – 800	690	Left	–	–	810192
		Right	–	–	810193
801 – 1000	890	Left	1	E	810194
		Right	1	E	810195

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_105**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps →
CTL_105

[54] Handle → CTL_1

Handle under Roto Patio Alversa, Roto Patio Inowa: Roto Line design

[58] Run-up block with mishandling device

	Nº
Sash	307050

[81] Run-up block → CTL_104

The run-up block depends on the striker used.



4.2 T&T espagnolette – centred / variable handle height

4.2.1 Tilt&Turn hardware

4.2.1.1 Basic security



**Application range**

SRW: 290 – 1600 mm

SRH: 310 – 2800 mm

S.kg: max. 150 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

For use with SRH ≤ 450 mm.

[14] Sash stay corner drive, SRH ≥ 320 mm

		Nº
1	P	260286

**INFO**

No sash stay corner drive is possible with SRH 310 – 320.

**INFO**

With SRH 321 – 360 mm, crop the sash stay corner drive.

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296



INFO

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).



INFO

With a size 150 sash stay, the tilt distance is 80 mm.

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[48] Additional stay arm (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[54] Handle → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

Optional

[63] Night vent, SRW ≥ 801 mm → from page 204



INFO

Only for use in conjunction with P or V cam.

Sash lifter → CTL_104

Arrestable brake stay → CTL_104



4.2.1.2 RC 1 N



**Application range****SRW:** 400 – 1600 mm**SRH:** 320 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with SRH ≤ 450 mm.

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

With SRH 320 – 360 mm, crop the sash stay corner drive.

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [9]	1	P	255286
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 [10]	1	P	255286

[23] Striker → from page 196**[24] Security striker → from page 196****[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[9] With SRW 801 – 814 mm, crop centre lock 600.

[10] With SRW 1401 – 1414 mm, crop centre lock 600.

[34] Lifting mishandling device frame component
→ from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm (SRW ≥ 1401 mm)**

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[80] Fastening plate**

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

Optional**[63] Night vent, SRW ≥ 801 mm → from page 204****INFO**

Only for use in conjunction with P or V cam.

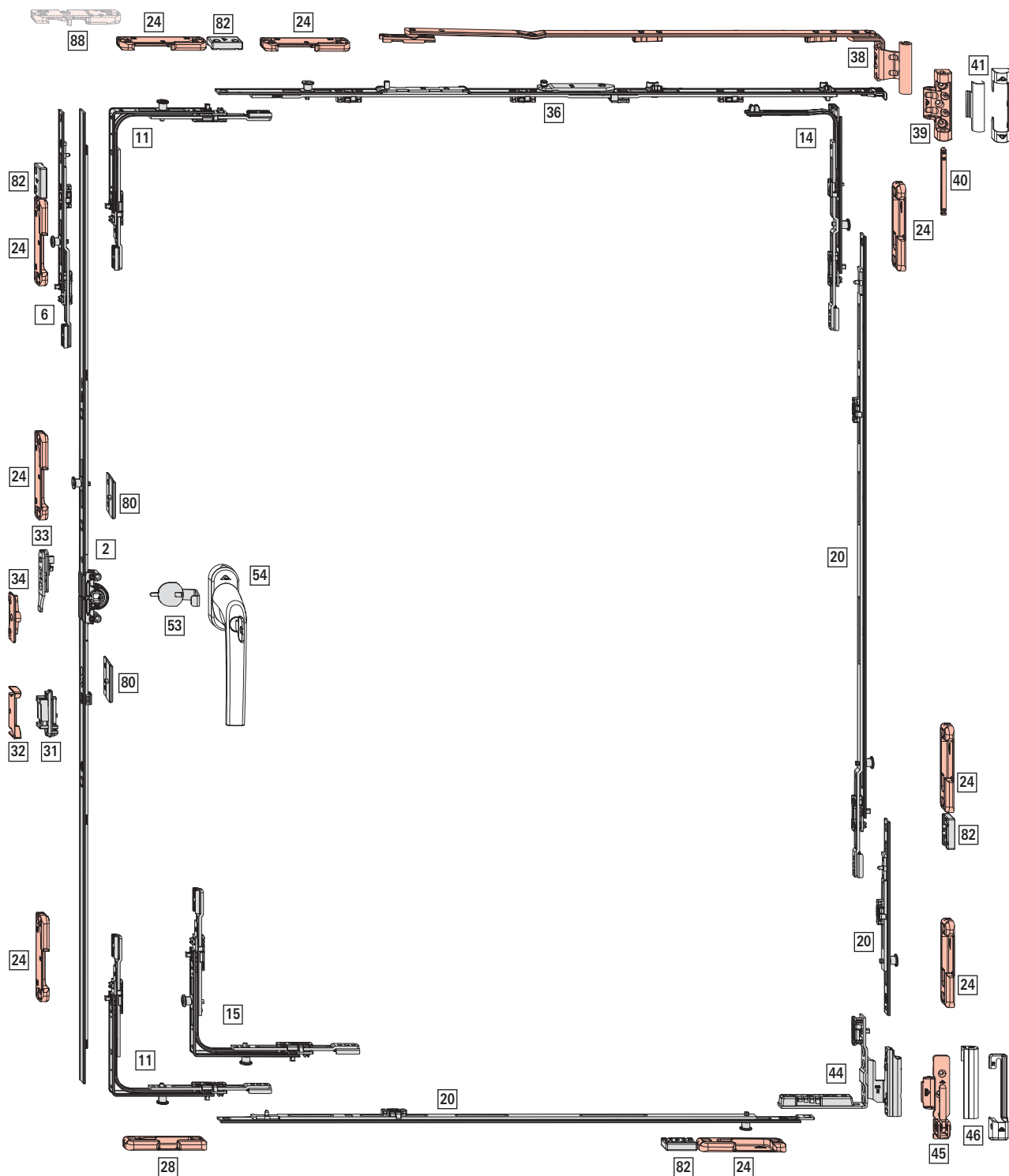
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Sash lifter → CTL_104



4.2.1.3 RC 2 / RC 2 N



**Application range****SRW:** 490 – 1400 mm**SRH:** 490 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	V	355743
801 – 1200	401 – 600	980	Y	1	V	355744
1201 – 1600	601 – 800	1380	Y	2	V	355745
1601 – 2000	801 – 1000	1780	Y	2	V	795390
2001 – 2400	1001 – 1200	2180	Y	4	V	795393

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[11] Standard corner drive

		Nº
1	V	260272

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

For use with SRH ≤ 620 mm.

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

					Nº
490 – 690	490 – 800	200	1	V	296853
691 – 890	801 – 1000	400	1	V	296854
891 – 1090	1001 – 1200	600	1	V	296855

					Nº
1091 – 1290	1201 – 1400	600 KU	1	V	337711
		200	1	V	296853
1291 – 1400	1401 – 1600	600 KU	1	V	337711
		400	1	V	296854
	1601 – 1800	600 KU	1	V	337711
		600	1	V	296855
	1801 – 2000	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
		600 KU	1	V	337711
2001 – 2200		600 KU	1	V	337711
		400	1	V	296854
2201 – 2400		600 KU	1	V	337711
		600 KU	1	V	337711
		600	1	V	296855
		600 KU	1	V	337711
2401 – 2600		600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
2601 – 2800		600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854

[24] Security striker → from page 196**[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296



INFO

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Optional

[63] Night vent, SRW ≥ 801 mm → from page 204



INFO

Only for use in conjunction with P or V cam.

Sash lifter → CTL_104



[illegible]

**Application range****SRW:** 490 – 1400 mm**SRH:** 490 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	V	355743
801 – 1200	401 – 600	980	Y	1	V	355744
1201 – 1600	601 – 800	1380	Y	2	V	355745
1601 – 2000	801 – 1000	1780	Y	2	V	795390
2001 – 2400	1001 – 1200	2180	Y	4	V	795393

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[17] Centre lock, multipart – standard, horizontal – top

				Nº
200	Y	1	V	337708

Size-specific combinations:

				Nº
1001 – 1400	200 KU	1	V	337708

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

					Nº
490 – 690	600 – 800	200 KU	1	V	337708
691 – 890	801 – 1000	200 KU	1	V	337708
		200 KU	1	V	337708
891 – 1090	1001 – 1200	200 KU	1	V	337708
		200 KU	1	V	337708
		200 KU	1	V	337708
1091 – 1290	1201 – 1400	200 KU	1	V	337708
		400 KU	1	V	337710
		200 KU	1	V	337708
1291 – 1400	1401 – 1600	200 KU	1	V	337708
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	1601 – 1800	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
	1801 – 2000	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	2001 – 2200	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
	2201 – 2400	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708
	2401 – 2600	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
	2601 – 2800	200 KU	1	V	337708
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		400 KU	1	V	337710
		200 KU	1	V	337708
		200 KU	1	V	337708

[24] Security striker → from page 198**[28] Tilt striker → from page 194****[31] Bullet catch sash component** (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	350	890	1	V	787358

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13	–	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
	2 x Ø 7 mm	Right	max. 150 kg	449795

[48] Additional stay arm (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[80] Fastening plate**

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

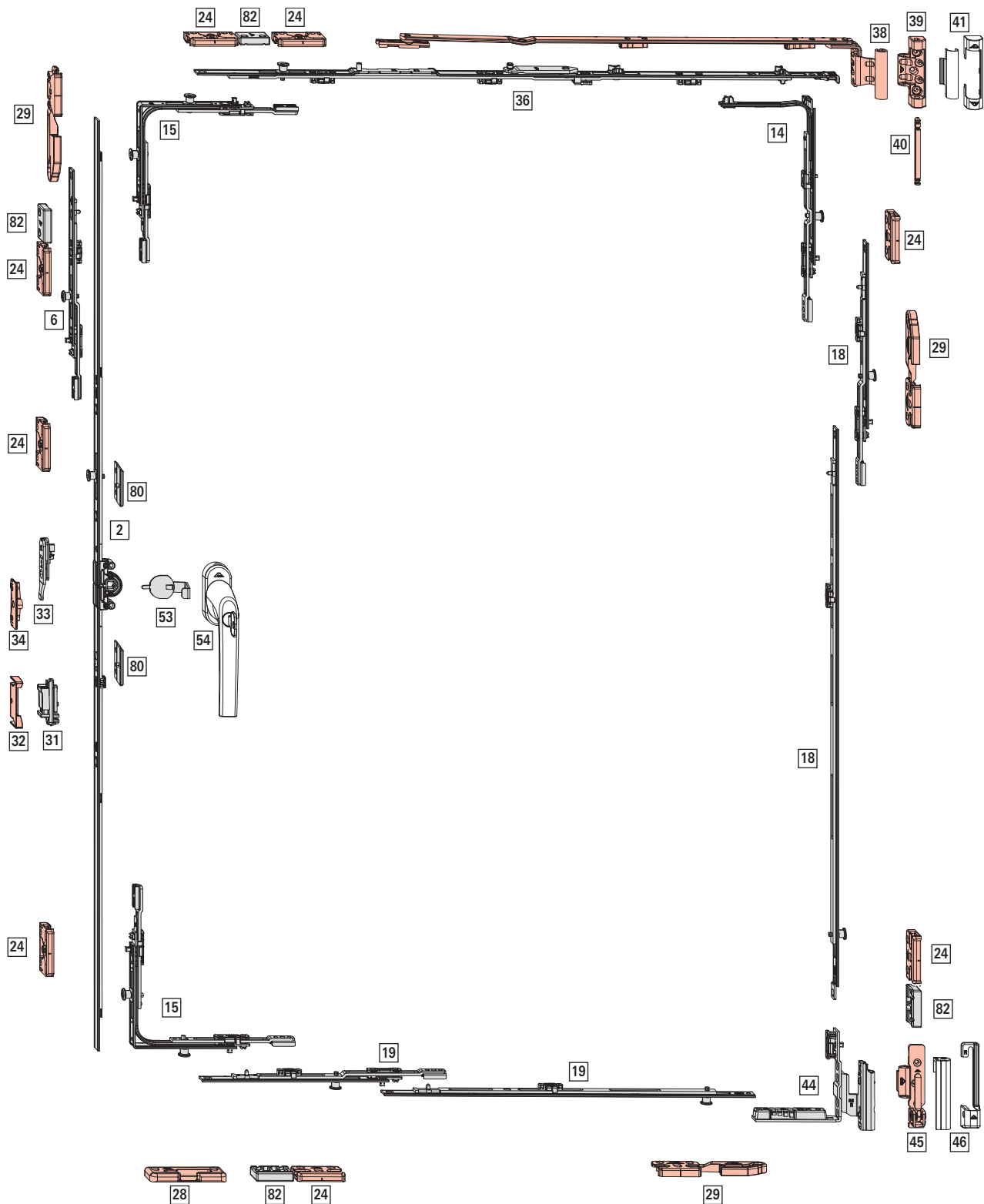
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Optional**[63] Night vent, SRW ≥ 801 mm → from page 204****Sash lifter → CTL_104**



4.2.1.5 TiltSafe RC 2 / RC 2 N



**Application range****SRW:** 490 – 1400 mm**SRH:** 490 – 2800 mm**S.kg:** max. 150 kg**INFO**

Only for hardware axis 13 and rebate depth 30 mm.

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	V	355743
801 – 1200	401 – 600	980	Y	1	V	355744
1201 – 1600	601 – 800	1380	Y	2	V	355745
1601 – 2000	801 – 1000	1780	Y	2	V	795390
2001 – 2400	1001 – 1200	2180	Y	4	V	795393

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[18] Multipart centre lock – security, vertical

				Nº
200	N	1	V	296853
200	Y	1	V	337708
400	N	1	V	296854
400	Y	1	V	337710
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

				Nº
490 – 800	200	1	V	296853
801 – 1000	200 KU	1	V	337708
	200	1	V	296853
1001 – 1200	200 KU	1	V	337708
	400	1	V	296854
1201 – 1400	200 KU	1	V	337708
	600	1	V	296855
1401 – 1600	200 KU	1	V	337708
	600 KU	1	V	337711
	200	1	V	296853
1601 – 1800	200 KU	1	V	337708
	600 KU	1	V	337711
	400	1	V	296854
1801 – 2000	200 KU	1	V	337708
	600 KU	1	V	337711
	600	1	V	296855
2001 – 2200	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
	200	1	V	296853
2201 – 2400	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
	400	1	V	296854
2401 – 2600	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
	600	1	V	296855
2601 – 2800	200 KU	1	V	337708
	600 KU	1	V	337711
	600 KU	1	V	337711
	600 KU	1	V	337711
	600 KU	1	V	337711
	200	1	V	296853

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	V	296853
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
490 – 690	200	1	V	296853
691 – 890	200 KU	1	V	337708
	200	1	V	296853
891 – 1090	200 KU	1	V	337708
	400 KU	1	V	337710

				Nº
1091 – 1290	200 KU	1	V	337708
	400 KU	1	V	337710
	200	1	V	296853
1291 – 1400	200 KU	1	V	337708
	400 KU	1	V	337710
	400 KU	1	V	337710

[24] Security striker → from page 196**[28] Tilt striker → from page 193****[29] Security striker for tilt ventilation → from page 198**

			Nº
13	30	Right	797027
13	30	Left	797026

[31] Bullet catch sash component (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – security**

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13	–	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
	2 x Ø 7 mm	Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[53] Drilling protection**

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[80] Fastening plate**

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

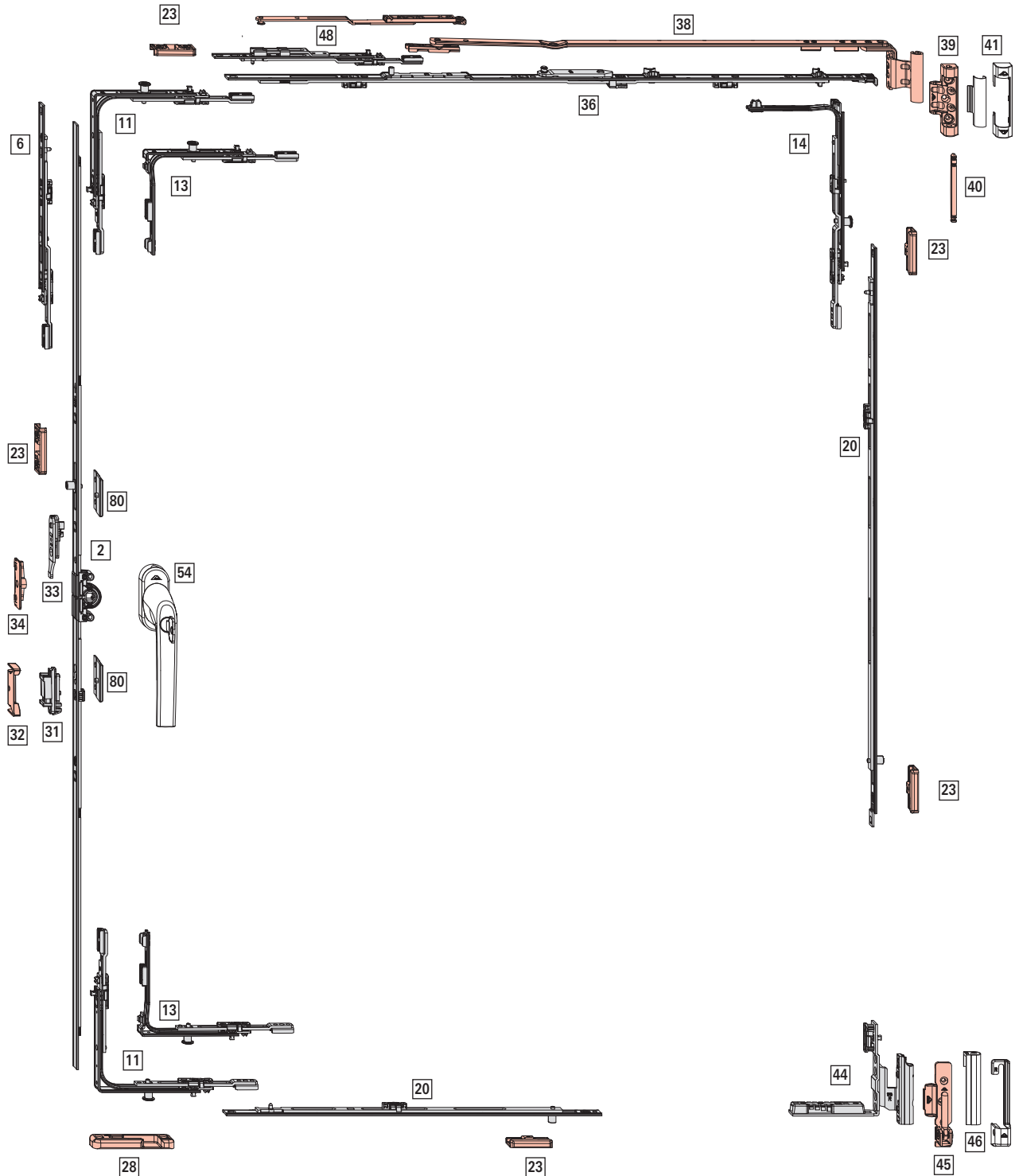
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715



4.2.2 TiltFirst hardware

4.2.2.1 Basic security



**Application range**

SRW: 290 – 1600 mm

SRH: 310 – 2800 mm

S.kg: max. 150 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

For use with SRH ≤ 450 mm.

[14] Sash stay corner drive, SRH ≥ 320 mm

		Nº
1	P	260286

**INFO**

No sash stay corner drive is possible with SRH 310 – 320.

**INFO**

With SRH 321 – 360 mm, crop the sash stay corner drive.

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[28] Tilt striker TiltFirst → from page 195****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	E	788617
1001 – 1200	500	1090	1	E	787349
1201 – 1400	500	1290	1	E	787351

[38] Stay arm TiltFirst, system 12/18-13

			Nº
290 – 410	150	Left	810160
290 – 410	150	Right	810161
411 – 600	250	Left	810162
411 – 600	250	Right	810163
601 – 800	350	Left	810164
601 – 800	350	Right	810165

			Nº
801 – 1400	500	Left	810166
801 – 1400	500	Right	810167



INFO

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[48] Additional stay arm TiltFirst (SRW ≥ 1401 mm)

	Nº
Frame and sash component	292022

[54] Handle → CTL_1



INFO

Use the lockable TiltFirst handle for child safe windows, see CTL_1.

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

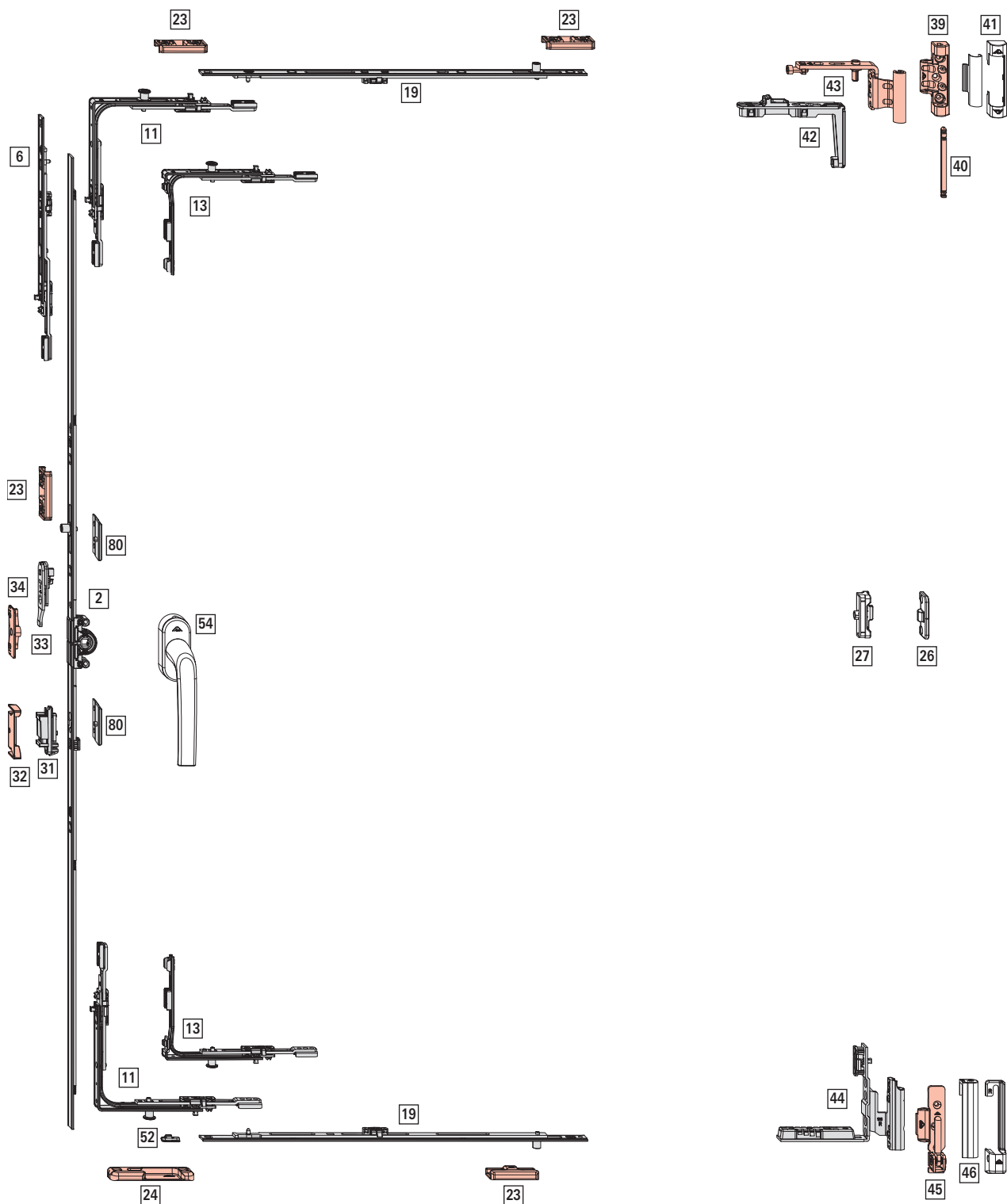
Optional

Sash lifter → CTL_104



4.2.3 Turn-Only hardware

4.2.3.1 Basic security



**Application range**

SRW: 290 – 1600 mm

SRH: 310 – 2800 mm

S.kg: max. 150 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

For use with SRH ≤ 450 mm.

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1600	600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****[26] Concealed centre closer frame component → CTL_104****[27] Concealed centre closer sash component → CTL_104****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203**[39] Stay bearing**

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Rebate corner hinge

	Nº
12/18-13 Left Height and gasket-compression adjustable	815357
Right Height and gasket-compression adjustable	815358

[45] Pivot rest				
				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps →
CTL_104

[52] 90° travel restrictor	
	Nº
Travel restrictor	264603

[54] Handle → CTL_1

[80] Fastening plate	
	Nº
Fastening plate with cam	255211

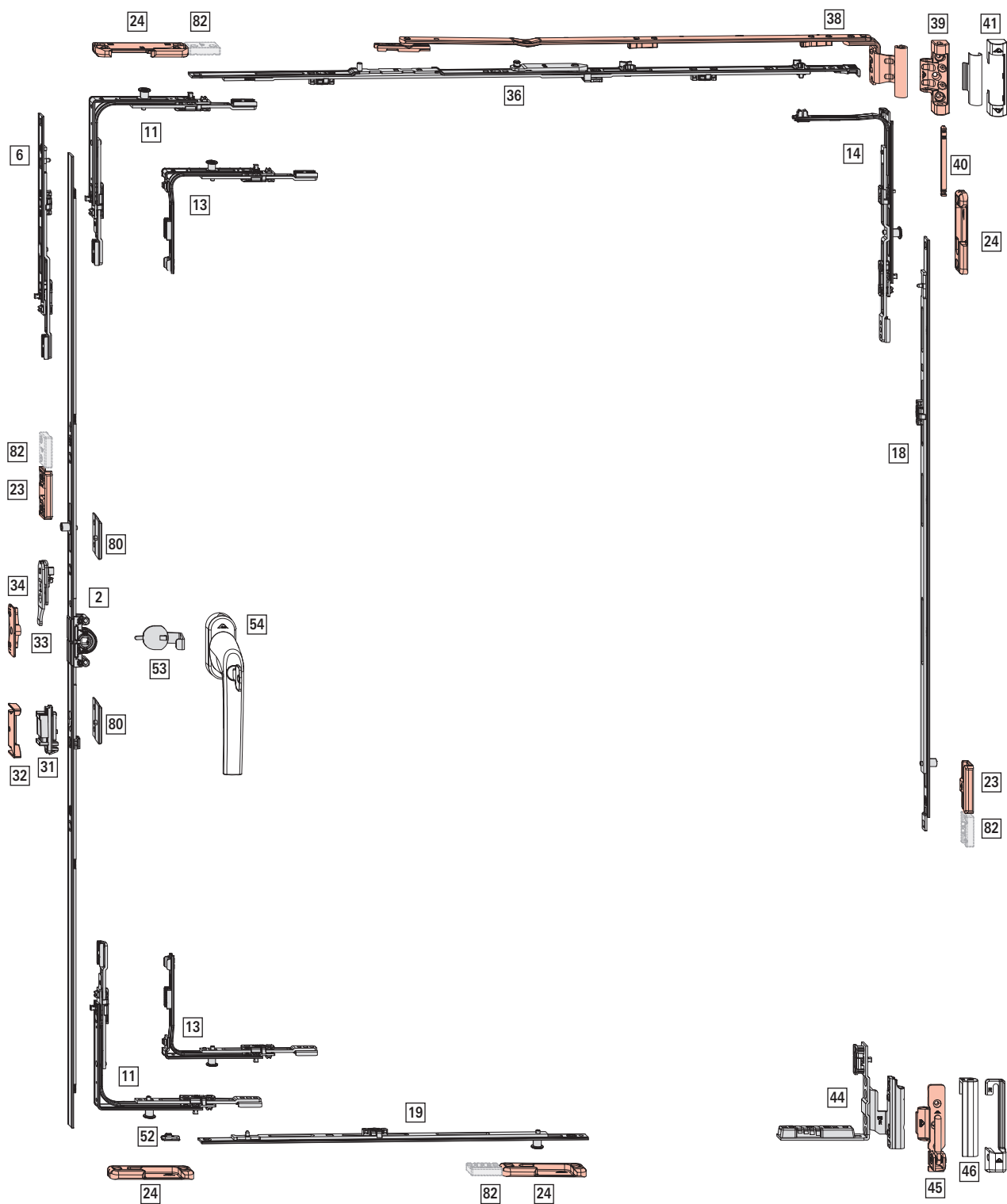
Can only be used in combination with T&T espagnolette 259717.

Optional

Arrestable brake stay → CTL_104



4.2.3.2 RC 1 N



**Application range****SRW:** 400 – 1600 mm**SRH:** 320 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with SRH ≤ 450 mm.

[14] Sash stay corner drive

		Nº
1	P	260286

**INFO**

With SRH 320 – 360 mm, crop the sash stay corner drive.

[18] Multipart centre lock – standard, vertical

				Nº
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 ^[11]	1	P	255286
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 ^[12]	1	P	255286

[23] Striker → from page 196**[24] Security striker → from page 196****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[11] With SRW 801 – 814 mm, crop centre lock 600.

[12] With SRW 1401 – 1414 mm, crop centre lock 600.

[34] Lifting mishandling device frame component
→ from page 203**[36] Stay guide – basic security**

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[52] 90° travel restrictor**

	Nº
Travel restrictor	264603

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[80] Fastening plate**

	Nº
Fastening plate with cam	255211

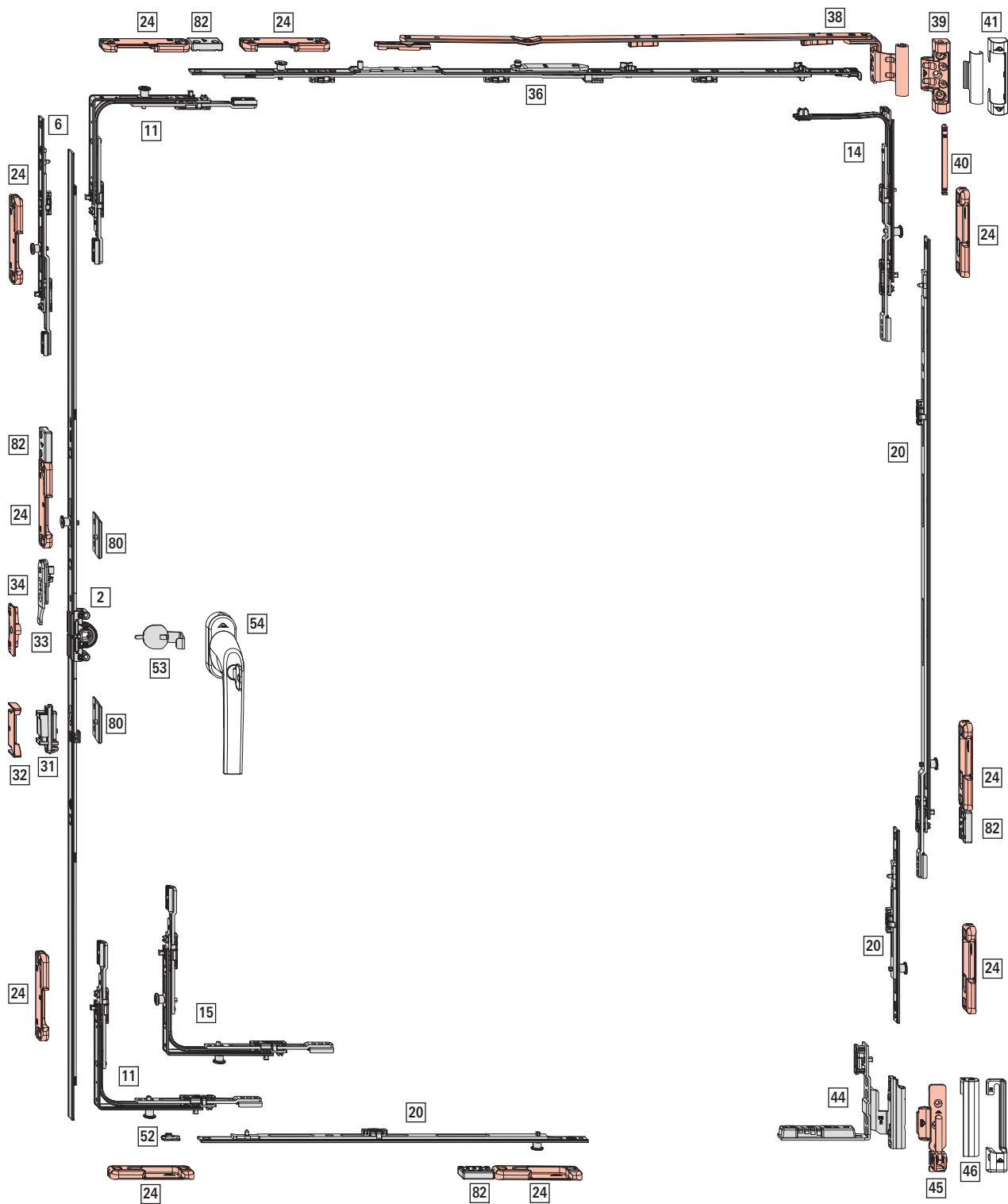
Can only be used in combination with T&T espagnolette 259717.

Optional**[82] Anti-jemmy device**

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715



4.2.3.3 RC 2 / RC 2 N





Application range

SRW: 490 – 1400 mm

SRH: 490 – 2800 mm

S.kg: max. 150 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	V	355743
801 – 1200	401 – 600	980	Y	1	V	355744
1201 – 1600	601 – 800	1380	Y	2	V	355745
1601 – 2000	801 – 1000	1780	Y	2	V	795390
2001 – 2400	1001 – 1200	2180	Y	4	V	795393

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[11] Standard corner drive

		Nº
1	V	260272

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

For use with SRH ≤ 620 mm.

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

					Nº
490 – 690	490 – 800	200	1	V	296853
691 – 890	801 – 1000	400	1	V	296854
891 – 1090	1001 – 1200	600	1	V	296855

					Nº
1091 – 1290	1201 – 1400	600 KU	1	V	337711
		200	1	V	296853
1291 – 1400	1401 – 1600	600 KU	1	V	337711
		400	1	V	296854
	1601 – 1800	600 KU	1	V	337711
		600	1	V	296855
	1801 – 2000	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
	2001 – 2200	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
	2201 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600	1	V	296855
	2401 – 2600	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854

[24] Security striker → from page 196

[31] Bullet catch sash component (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet-catch frame component (optional SRH ≥ 1601 mm) → from page 201

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 203

[36] Stay guide – security

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293

			Nº
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[52] 90° travel restrictor

	Nº
Travel restrictor	264603

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

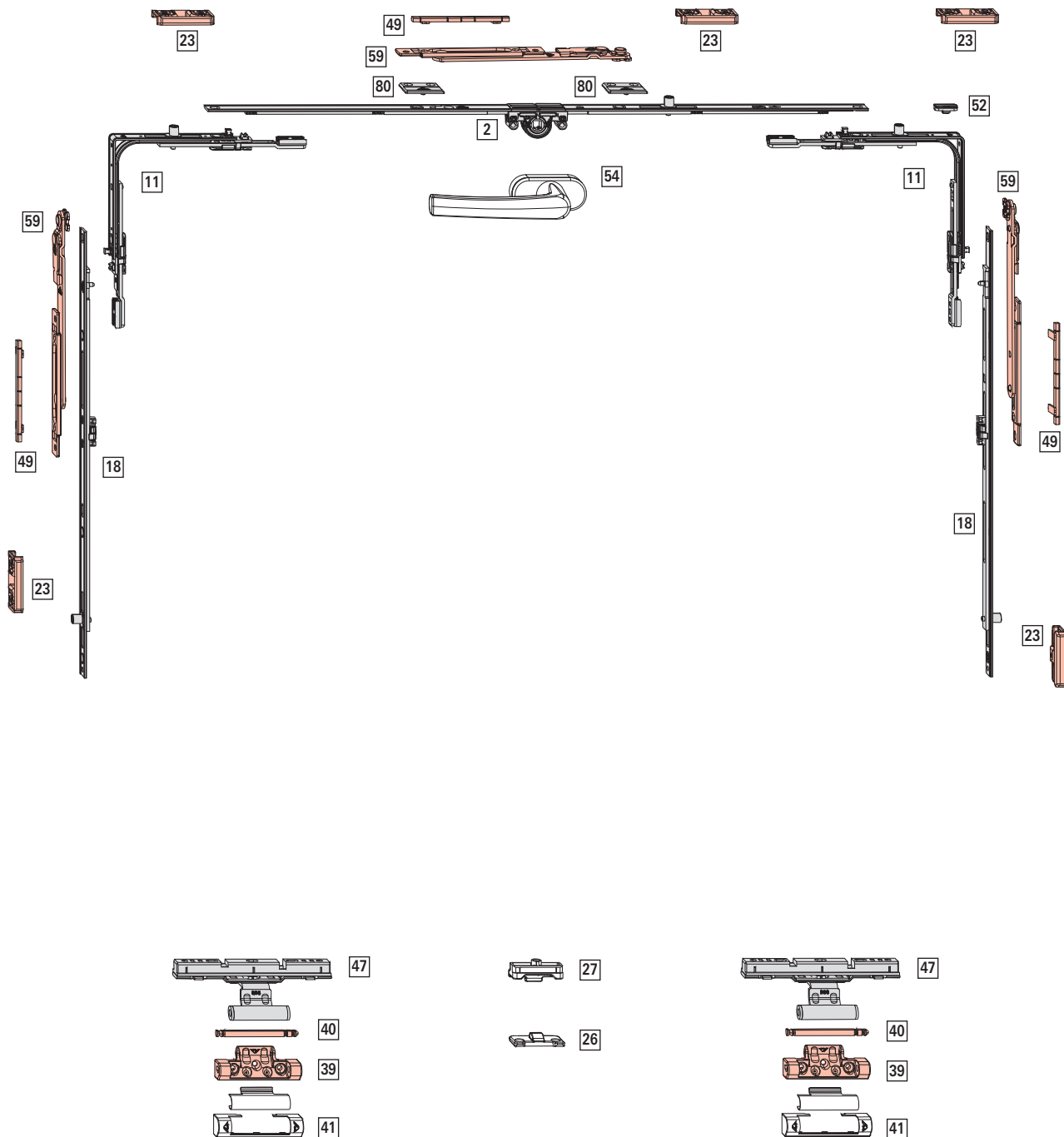
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715



4.2.4 Tilt-Only hardware

4.2.4.1 Standard



**Application range**

SRW: 450 – 2400 mm

SRH: 290 – 1200 mm

S.kg: max. 80 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[18] Multipart centre lock – standard, vertical

				Nº
N	400	1	E	255280

[23] Striker → from page 196**[26] Concealed centre closer frame component → CTL_104****[27] Concealed centre closer sash component → CTL_104****[39] Stay bearing, adjustable**

		Nº
12/18-9 12/18-13	–	810106
12/18-9 12/18-13	2 x Ø 7 mm	810107

[40] Stay-bearing pin

		Nº
Stay-bearing pin	86	834705

[41] Sash stay cover caps → CTL_104**[47] Turn-Only / Tilt-Only rebate hinge, system 12 / 18-13**

		Nº
With compensation	Y	810088
Without compensation	Y	810089

[49] Packer → from page 200**[52] 90° travel restrictor**

	Nº
Travel restrictor	264603

[54] Handle → CTL_1**[59] Tilt stay set for floating-mullion installation**

	Nº
Floating-mullion installation	482823

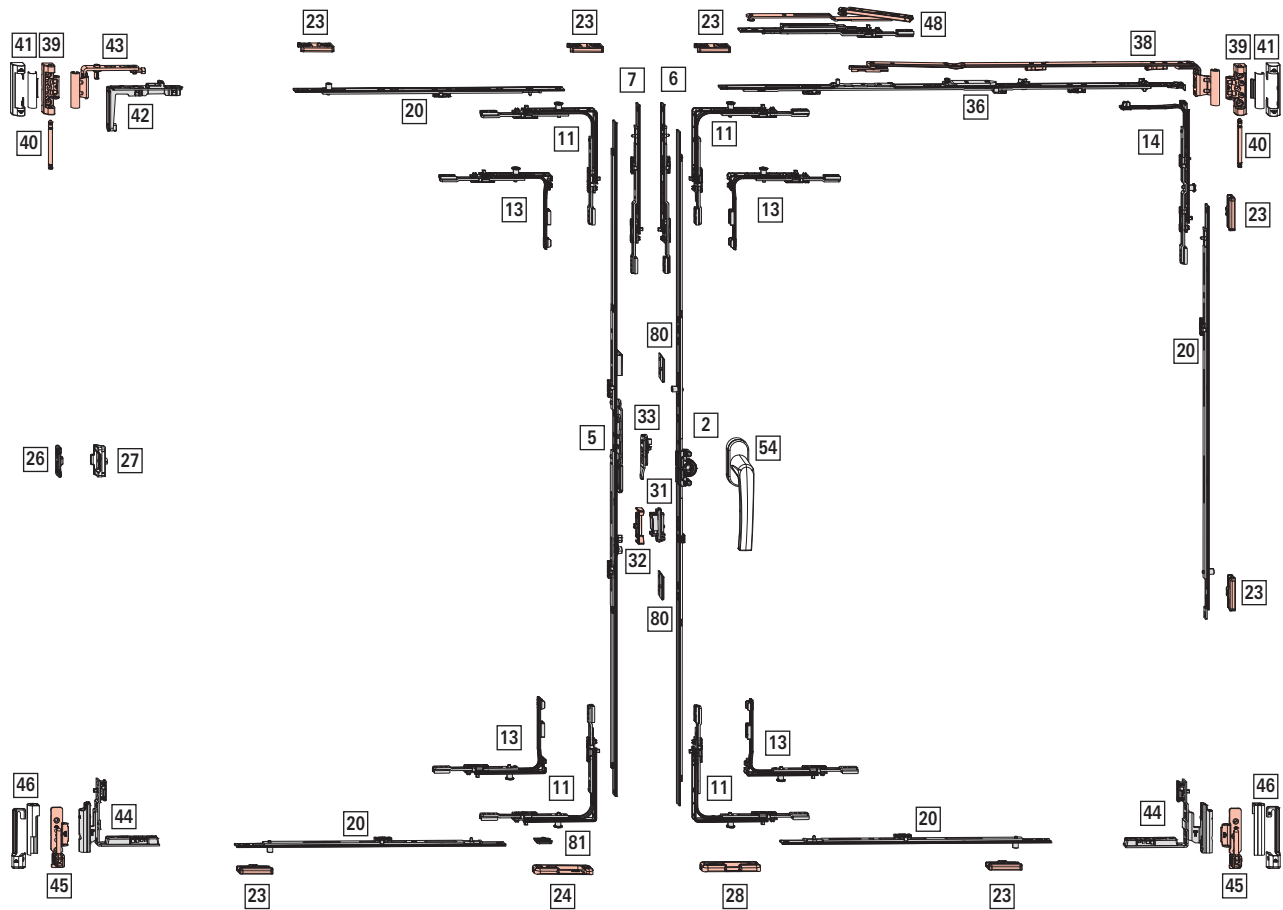
[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

4.2.5 Floating-mullion hardware

4.2.5.1 Standard – basic security



**Application range**

SRW: 290 – 1600 mm

SRH: 370 – 2800 mm

S.kg: max. 150 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[5] Floating-mullion espagnolette – centred / variable handle height, backset 15 mm

			Nº
431 – 620	225 – 350	500	233418
621 – 800	393 – 482	630	763125
801 – 1200	482 – 682	980	763126
1201 – 1600	448 – 658	1380	763127
1601 – 2000	680 – 880	1780	795482
2001 – 2400	880 – 1080	2180	795484

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

Use → 5.1.1.2 “Centred / variable handle height” from page 184

[14] Sash stay corner drive

		Nº
1	P	260286

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****INFO**

Lever-operated espagnolette, standard: A left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

[26] Concealed centre closer frame component → CTL_104**[27] Concealed centre closer sash component → CTL_104****[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left Right	787289 787290
411 – 600	250	Left Right	787291 787292
601 – 800	350	Left Right	787293 787294
801 – 1400	500	Left Right	787295 787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left Right	max. 130 kg max. 130 kg	449764 449763
	2 x Ø 7 mm	Left Right	max. 150 kg max. 150 kg	449796 449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm** (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → from page 200**[54] Handle → CTL_1****[80] Fastening plate**

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block → CTL_104

The run-up block depends on the striker used.



This diagram illustrates the exploded view of a window frame assembly, showing the relationship between various components. The parts are identified by numbered callouts:

- Frame and Sash Components:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54.
- Tracks and Guides:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54.
- Rollers and Hardware:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54.

The diagram shows the assembly sequence and the relative positions of these components, including the frame, sash, tracks, rollers, and various hardware elements like screws and pins.

**Application range**

SRW: 400 – 1600 mm

SRH: 370 – 2800 mm

S.kg: max. 150 kg

[2] T&T espagnolette – centred / variable handle height, backset 15 mm

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[5] Floating-mullion espagnolette – centred / variable handle height, backset 15 mm

			Nº
431 – 620	225 – 350	500	233418
621 – 800	393 – 482	630	763125
801 – 1200	482 – 682	980	763126
1201 – 1600	448 – 658	1380	763127
1601 – 2000	680 – 880	1780	795482
2001 – 2400	880 – 1080	2180	795484

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	1	450822
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

Use → 5.1.1.2 “Centred / variable handle height” from page 184

[14] Sash stay corner drive

		Nº
1	P	260286

[17] Centre lock, multipart – standard, horizontal – top, Turn-Only sash

				Nº
200	Y	–	–	308267
400	Y	1	E	280346
600	Y	1	E	255282

Size-specific combinations:

				Nº
1001 – 1200	200 KU	–	–	308267
1201 – 1400	400 KU	1	E	280346
1401 – 1600	600 KU	1	E	255282

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [13]	1	P	255286

[13] With SRW 801 – 814 mm, crop centre lock 600.

				Nº
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 ^[14]	1	P	255286

[23] Striker → from page 196

[24] Security striker → from page 196



INFO

Lever-operated espagnolette, standard: A left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

[28] Tilt striker → from page 193

[31] Bullet catch sash component (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[35] Turn-Only sash stay guide – basic security

					Nº
290 – 410	150	300	–	–	787366
411 – 600	250	490	–	–	787367
601 – 800	350	690	–	–	787368
801 – 1000	500	890	1	E	787369

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292

[14] With SRW 1401 – 1414 mm, crop centre lock 600.

			Nº
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296



INFO

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[48] Additional stay arm (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.



[81] Run-up block→ CTL_104

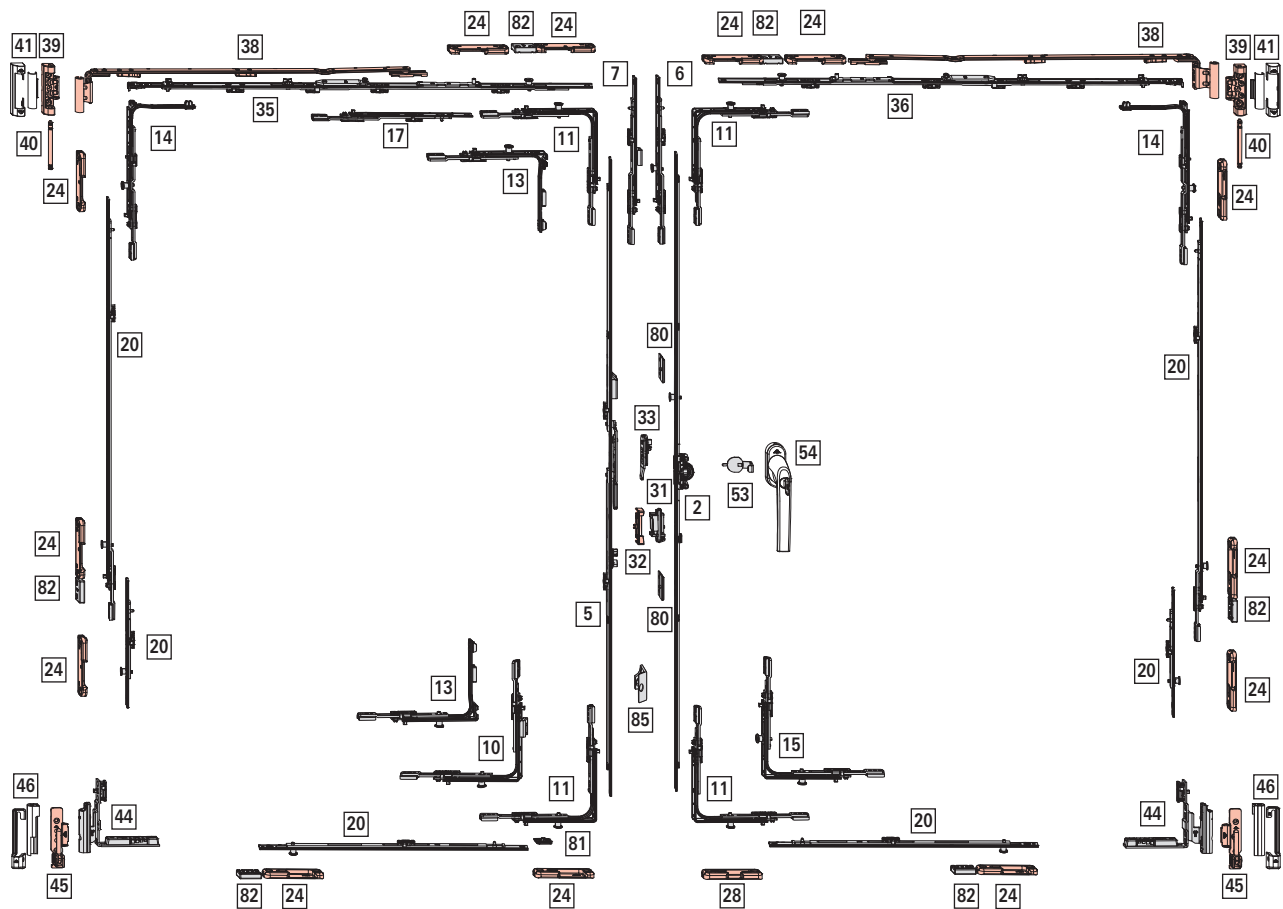
The run-up block depends on the striker used.

Optional

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

4.2.5.3 Standard – RC 2 / RC 2 N



**Application range****SRW:** 490 – 1400 mm**SRH:** 520 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	V	355743
801 – 1200	401 – 600	980	Y	1	V	355744
1201 – 1600	601 – 800	1380	Y	2	V	355745
1601 – 2000	801 – 1000	1780	Y	2	V	795390
2001 – 2400	1001 – 1200	2180	Y	4	V	795393

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[5] Floating-mullion espagnolette – centred / variable handle height, backset 15 mm

			Nº
431 – 620	225 – 350	500	233418
621 – 800	393 – 482	630	763125
801 – 1200	482 – 682	980	763126
1201 – 1600	448 – 658	1380	763127
1601 – 2000	680 – 880	1780	795482
2001 – 2400	880 – 1080	2180	795484

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	1	450822
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	1	450822
2601 – 2800	400 KU	1	280345

[10] Floating mullion corner drive

					Nº
Second opening sash	Bottom	1	1	V	367227

[11] Standard corner drive

		Nº
1	V	260272

[13] Special short corner drive

		Nº
1	V	281288

Use → 5.1.1.2 “Centred / variable handle height” from page 184

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[17] Centre lock, multipart – standard, horizontal – top, Turn-Only sash

				Nº
200	Y	–	–	308267
400	Y	1	V	337710

Size-specific combinations:

				Nº
1001 – 1200	200 KU	–	–	308267
1201 – 1400	400 KU	1	V	337710

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

					Nº
490 – 690	520 – 800	200	1	V	296853
691 – 890	801 – 1000	400	1	V	296854
891 – 1090	1001 – 1200	600	1	V	296855
1091 – 1290	1201 – 1400	600 KU	1	V	337711
		200	1	V	296853

					Nº
1291 – 1400	1401 – 1600	600 KU	1	V	337711
		400	1	V	296854
	1601 – 1800	600 KU	1	V	337711
		600	1	V	296855
	1801 – 2000	600 KU	1	V	337711
		600 KU	1	V	337711
	2001 – 2200	200	1	V	296853
		600 KU	1	V	337711
	2201 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
	2401 – 2600	600	1	V	296855
		600 KU	1	V	337711
2601 – 2800	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711
	2601 – 2800	600 KU	1	V	337711
		600 KU	1	V	337711

[24] Security striker → from page 196**INFO**

Lever-operated espagnolette, standard: A left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

[28] Tilt striker → from page 193**[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[35] Turn-Only sash stay guide – security

					Nº
411 – 600	250	490	–	–	787367
601 – 800	350	690	–	–	787368
801 – 1000	500	890	1	V	787370

[36] Stay guide – security

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9	–	max. 130 kg	787199
12/18-13	–	max. 130 kg	787199
12/18-9	2 x Ø 7 mm	max. 150 kg	787200
12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

			Nº	
12/18-9	—	Left	max. 130 kg	449764
12/18-13	—	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[53] Drilling protection**

	Nº
Drilling protection	797819



[54] Handle, lockable → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block→ CTL_104

The run-up block depends on the striker used.

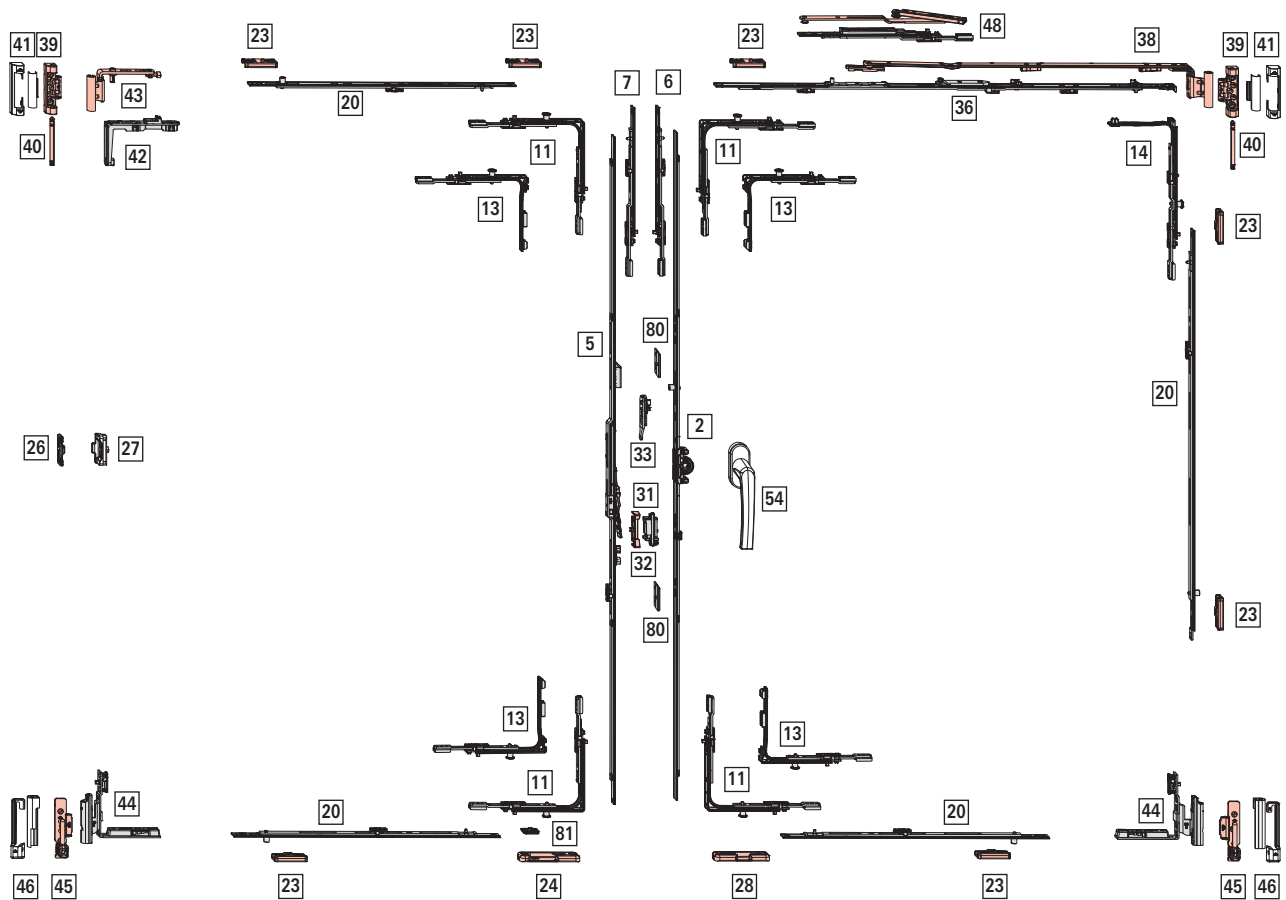
[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

[85] Retainer clasp

	Nº
Retainer clasp for lever-operated espagnolette, standard	314203

4.2.5.4 Plus – basic security



**Application range****SRW:** 290 – 1600 mm**SRH:** 420 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[5] Floating-mullion espagnolette, Plus – centred / variable handle height, backset 15 mm

						Nº
431 – 620	194 – 289	400	N	N	–	2007128
621 – 800	290 – 379	680	Y	N	1	2007129
801 – 1200	380 – 579	980	Y	N	1	2007130
1001 – 1400	480 – 679	1180	Y	N	1	2007131
1201 – 1600	580 – 779	1380	Y	N	2	2007132
1601 – 2000	780 – 979	1780	Y	Y	2	2007133
2001 – 2400	980 – 1179	2180	Y	Y	4	2007134

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

Use → “Possible combinations” from page 190

[14] Sash stay corner drive

		Nº
1	P	260286

[20] Multipart centre lock – standard, horizontal and vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

					Nº
1101 – 1600	1101 – 1800	600	1	E	255281
	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280
	2601 – 2800	600 KU	1	E	255282
		600 KU	1	E	255282
		600	1	E	255281

[23] Striker → from page 196**[24] Security striker → from page 196****[26] Concealed centre closer frame component → CTL_104****[27] Concealed centre closer sash component → CTL_104****[28] Tilt striker → from page 193****[31] Bullet catch sash component (optional SRH ≥ 1601 mm)**

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

**INFO**

With SRW < 310 mm, remove the assembly clip.

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side P / T / A16	331488

[43] Rebate stay arm, system 12 / 18-13

	Nº
Left	810478
Right	810479

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[48] Additional stay arm (SRW ≥ 1401 mm)**

		Nº
Frame and sash component	200	255237

[54] Handle → CTL_1**[80] Fastening plate**

	Nº
Fastening plate with cam	255211

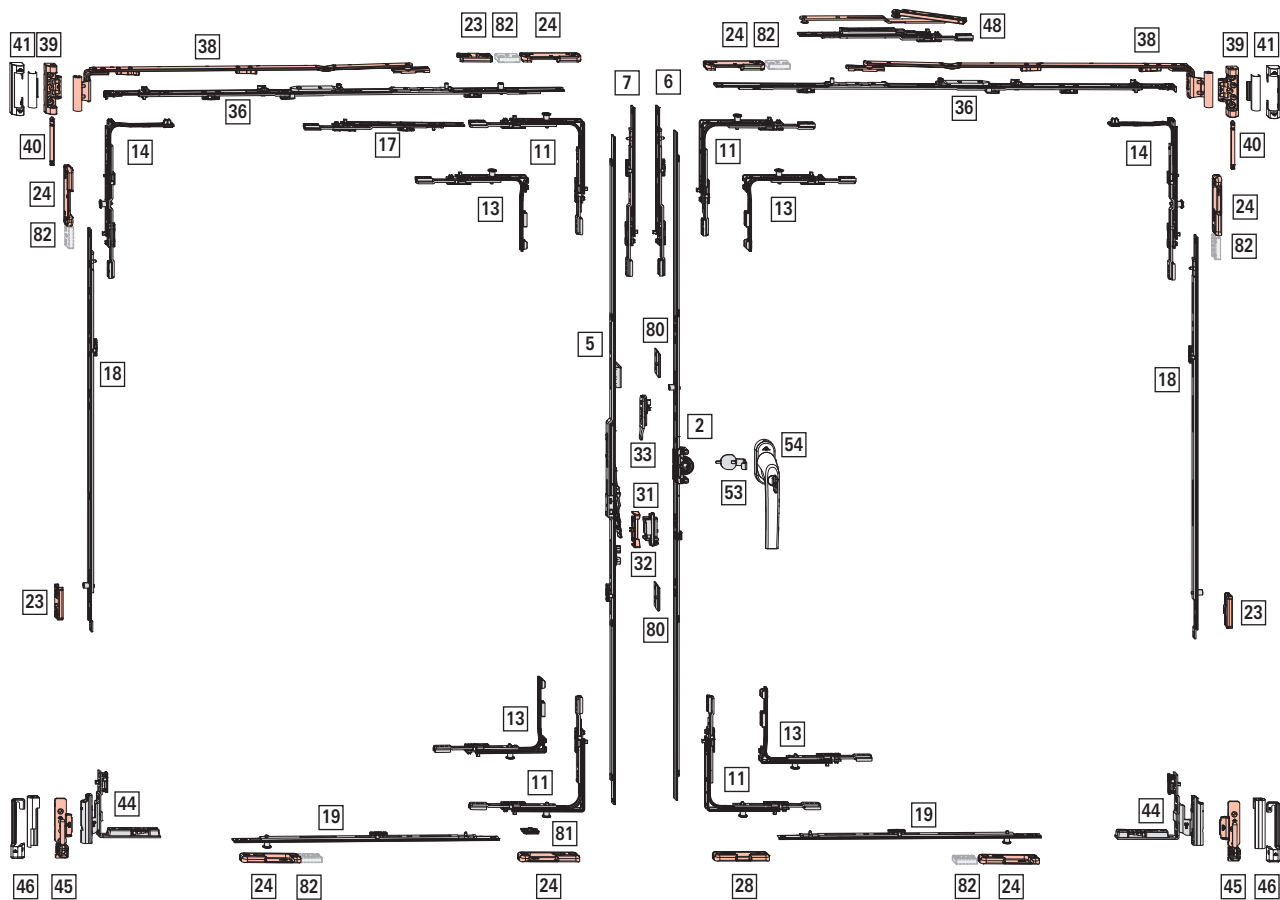
Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block

The run-up block depends on the striker used.



4.2.5.5 Plus – RC 1 N



**Application range****SRW:** 400 – 1600 mm**SRH:** 420 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	E	259719
801 – 1200	401 – 600	980	Y	1	E	259720
1201 – 1600	601 – 800	1380	Y	2	E	259721
1601 – 2000	801 – 1000	1780	Y	2	E	795389
2001 – 2400	1001 – 1200	2180	Y	4	E	795392

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[5] Floating-mullion espagnolette, Plus – centred / variable handle height, backset 15 mm

						Nº
431 – 620	194 – 289	400	N	N	–	2007128
621 – 800	290 – 379	680	Y	N	1	2007129
801 – 1200	380 – 579	980	Y	N	1	2007130
1001 – 1400	480 – 679	1180	Y	N	1	2007131
1201 – 1600	580 – 779	1380	Y	N	2	2007132
1601 – 2000	780 – 979	1780	Y	Y	2	2007133
2001 – 2400	980 – 1179	2180	Y	Y	4	2007134

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	–	–	308267
400	Y	1	E	280346

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267
2601 – 2800	400 KU	1	E	280346

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	–	308267
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	–	308267
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

Use → “Possible combinations” from page 190

[14] Sash stay corner drive

		Nº
1	P	260286

[17] Centre lock, multipart – standard, horizontal – top, Turn-Only sash

				Nº
200	Y	1	E	450821

Size-specific combinations:

				Nº
1401 – 1600	200 KU	1	E	308267

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

				Nº
1101 – 1800	600	1	E	255281
1801 – 2400	600 KU	1	E	255282
	600	1	E	255281
2401 – 2600	600 KU	1	E	255282
	600 KU	1	E	255282
	400	1	E	255280
2601 – 2800	600 KU	1	E	255282
	600 KU	1	E	255282
	600	1	E	255281

[19] Multipart centre lock – security, horizontal

				Nº
200	N	1	P	255284
400	N	1	P	255285
600	N	1	P	255286
600	Y	1	E	255282

Size-specific combinations:

				Nº
400 – 600	200	1	P	255284
601 – 800	400	1	P	255285
801 – 1000	600 [15]	1	P	255286
1001 – 1200	600 KU	1	E	255282
	200	1	P	255284

[15] With SRW 801 – 814 mm, crop centre lock 600.

				Nº
1201 – 1400	600 KU	1	E	255282
	400	1	P	255285
1401 – 1600	600 KU	1	E	255282
	600 ^[16]	1	P	255286

[23] Striker → from page 196

[24] Security striker → from page 196

[28] Tilt striker → from page 193

[31] Bullet catch sash component (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[36] Stay guide – basic security

					Nº
290 – 410	150	300	–	–	787345
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	–	–	787348
1001 – 1200	500	1090	–	–	787350
1201 – 1400	500	1290	1	E	787351

[38] Stay arm, system 12 / 18-13

			Nº
290 – 410	150	Left	787289
		Right	787290
411 – 600	250	Left	787291
		Right	787292
601 – 800	350	Left	787293
		Right	787294
801 – 1400	500	Left	787295
		Right	787296



INFO

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104

[44] Rebate corner hinge

			Nº
12/18-13	Left	Height and gasket-compression adjustable	815357
	Right	Height and gasket-compression adjustable	815358

[45] Pivot rest

				Nº
12/18-9	–	Left	max. 130 kg	449764
12/18-13	–	Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104

[48] Additional stay arm (SRW ≥ 1401 mm)

		Nº
Frame and sash component	200	255237

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[80] Fastening plate

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block

The run-up block depends on the striker used.

[16] With SRW 1401 – 1414 mm, crop centre lock 600.



This diagram illustrates the exploded view of a rectangular metal frame assembly. The components are numbered as follows:

- Top Rail:** 38 (main rail), 24 (corner brackets), 39 (end caps), 41 (end caps).
- Right Rail:** 38 (main rail), 24 (corner brackets), 39 (end caps), 41 (end caps).
- Bottom Rail:** 20 (main rail), 24 (corner brackets), 44 (end caps), 45 (end caps).
- Left Rail:** 20 (main rail), 24 (corner brackets), 44 (end caps), 45 (end caps).
- Vertical Supports:** 14 (top), 20 (middle), 24 (bottom).
- Internal Bracing:** 11, 13, 15, 16, 28, 31, 32, 33, 46, 48.
- Fasteners:** 2, 5, 6, 7, 8, 10, 12, 17, 18, 19, 21, 22, 23, 25, 26, 27, 29, 30, 34, 35, 36, 37, 40, 42, 43, 47, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

**Application range****SRW:** 490 – 1400 mm**SRH:** 520 – 2800 mm**S.kg:** max. 150 kg**[2] T&T espagnolette – centred / variable handle height, backset 15 mm**

						Nº
310 – 620	155 – 225	430	N	–	–	259717
621 – 800	311 – 400	580	Y	1	V	355743
801 – 1200	401 – 600	980	Y	1	V	355744
1201 – 1600	601 – 800	1380	Y	2	V	355745
1601 – 2000	801 – 1000	1780	Y	2	V	795390
2001 – 2400	1001 – 1200	2180	Y	4	V	795393

T&T espagnolette 259717 must be secured with two fastening plates 255211.

[5] Floating-mullion espagnolette, Plus – centred / variable handle height, backset 15 mm

						Nº
431 – 620	194 – 289	400	N	N	–	2007128
621 – 800	290 – 379	680	Y	N	1	2007129
801 – 1200	380 – 579	980	Y	N	1	2007130
1001 – 1400	480 – 679	1180	Y	N	1	2007131
1201 – 1600	580 – 779	1380	Y	N	2	2007132
1601 – 2000	780 – 979	1780	Y	Y	2	2007133
2001 – 2400	980 – 1179	2180	Y	Y	4	2007134

[6] Centre lock, multipart, (SRH ≥ 2401 mm)

				Nº
200	Y	1	V	337708
400	Y	1	V	337710

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	V	337708
2601 – 2800	400 KU	1	V	337710

[7] Centre lock, multipart – floating mullion, (SRH ≥ 2401 mm)

			Nº
200	Y	1	450822
400	Y	1	280345

Size-specific combinations:

			Nº
2401 – 2600	200 KU	1	450822
2601 – 2800	400 KU	1	280345

[11] Standard corner drive

		Nº
1	V	260272

[13] Special short corner drive

		Nº
1	V	281288

Use → “Possible combinations” from page 190

[14] Sash stay corner drive

		Nº
1	V	260284

[15] Corner drive, standard (security)

		Nº
2	V	260274

[20] Multipart centre lock – security, horizontal and vertical

				Nº
200	N	1	V	296853
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

				Nº
490 – 690	520 – 800	200	1 V	296853
691 – 890	801 – 1000	400	1 V	296854
891 – 1090	1001 – 1200	600	1 V	296855
1091 – 1290	1201 – 1400	600 KU	1 V	337711
		200	1 V	296853
1291 – 1400	1401 – 1600	600 KU	1 V	337711
		400	1 V	296854
	1601 – 1800	600 KU	1 V	337711
		600	1 V	296855
	1801 – 2000	600 KU	1 V	337711
		600 KU	1 V	337711
		200	1 V	296853
2001 – 2200		600 KU	1 V	337711
		600 KU	1 V	337711
		400	1 V	296854
2201 – 2400		600 KU	1 V	337711
		600 KU	1 V	337711
		600	1 V	296855
2401 – 2600		600 KU	1 V	337711
		600 KU	1 V	337711
		600 KU	1 V	337711
		200	1 V	296853
2601 – 2800		600 KU	1 V	337711
		600 KU	1 V	337711
		600 KU	1 V	337711
		400	1 V	296854

[24] Security striker → from page 196**[28] Tilt striker → from page 193****[31] Bullet catch sash component** (optional SRH ≥ 1601 mm)

	Nº
Bullet catch sash component	788363

[32] Bullet catch (optional SRH ≥ 1601 mm)

		Nº
Bullet catch for lever-operated espagnolette	Screw-on	788378

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[36] Stay guide – security

					Nº
411 – 600	250	490	–	–	787346
601 – 800	350	690	–	–	787347
801 – 1000	500	890	1	V	787360
1001 – 1200	500	1090	1	V	787361
1201 – 1400	500	1290	1	V	787362

[38] Stay arm, system 12 / 18-13

			Nº
411 – 600	250	Left	787291
411 – 600	250	Right	787292
601 – 800	350	Left	787293
601 – 800	350	Right	787294
801 – 1400	500	Left	787295
801 – 1400	500	Right	787296

**INFO**

With SRH < 500 mm, set the tilt depth to 80 mm (with sash stay from size 250 and above).

[39] Stay bearing

			Nº
12/18-9 12/18-13	–	max. 130 kg	787199
12/18-9 12/18-13	2 x Ø 7 mm	max. 150 kg	787200

[40] Stay-bearing pin

		Nº
Stay-bearing pin	71	227354

[41] Sash stay cover caps → CTL_104**[44] Rebate corner hinge**

		Nº
12/18-13	Left	Height and gasket-compression adjustable
	Right	Height and gasket-compression adjustable

[45] Pivot rest

				Nº
12/18-9 12/18-13	–	Left	max. 130 kg	449764
		Right	max. 130 kg	449763
	2 x Ø 7 mm	Left	max. 150 kg	449796
		Right	max. 150 kg	449795

[46] Corner hinge / pivot rest cover caps → CTL_104**[53] Drilling protection**

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[80] Fastening plate**

	Nº
Fastening plate with cam	255211

Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block

The run-up block depends on the striker used.

[82] Anti-jemmy device

		Nº
Anti-jemmy device	From rebate depth 26 mm	811715

Optional**[16] Corner drive, slide guard**

				Nº
Second opening sash / slide guard	Top	1	V	839223
	Bottom	1	V	839224

When using a corner drive with a slide guard, a standard corner drive (RC 3) is required on the first opening sash.



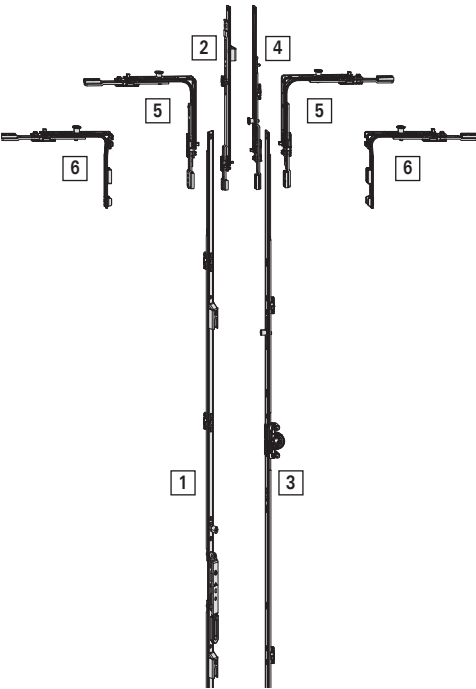
5 T&T espagnolette / floating-mullion sash espagnolette

5.1 Floating-mullion sash espagnolette

5.1.1 Standard

5.1.1.1 VT – fixed handle height

Possible combinations



Assignment	Meaning
[1]	Lever-operated espagnolette, standard VT
[2]	Floating-mullion centre lock
[3]	T&T espagnolette, VT – fixed handle height
[4]	Centre lock, standard
[5]	Corner drive, standard
[6]	Special corner drive, short

Determining the espagnolettes

1. Determine the element's sash rebate height (SRH).



INFO

Refer to the tables below for possible combinations and the required corner drive [5] + [6].

2. Select the lever-operated espagnolette, standard VT [1] using the *sash rebate height (SRH)* and *length of the component*.

Optional: determine the floating-mullion centre lock [2].

3. Select the T&T espagnolette, VT – fixed handle height [3] using the *length of the component*.

- ☐ T&T espagnolette, VT – fixed handle height, backset 8 mm
- ☐ T&T espagnolette, VT – fixed handle height, backset 15 mm
- ☐ T&T espagnolette, VT – fixed handle height, backset 25, 30, 35, 40, 45, 50 mm

T&T espagnolette / floating-mullion sash espagnolette
Floating-mullion sash espagnolette
Standard

Optional: determine the centre lock, standard [4] .

Backset 8 mm

Application range				T&T espagnolette, VT			
SRH	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMD	Corner drive type
431 – 510	600	233	Special corner drive, short	490	120	N	Corner drive, standard
511 – 600			Corner drive, standard	600	170	N	Corner drive, standard
601 – 800	690	325	Corner drive, standard	690	263	N	Corner drive, standard
801 – 1000	890	335	Corner drive, standard	890	413	Y	Corner drive, standard
1001 – 1200	1090	335	Corner drive, standard	1090	513	Y	Corner drive, standard
1201 – 1400	1290	335	Corner drive, standard	1290	563	Y	Corner drive, standard
1401 – 1600	1490	335	Corner drive, standard	1490	563	Y	Corner drive, standard
1601 – 1800	1690	335	Corner drive, standard	1690	563 / 1000	Y	Corner drive, standard
1801 – 2000	1890	640	Corner drive, standard	1890	1000	Y	Corner drive, standard
2001 – 2200	2090	640	Corner drive, standard	2090	1000	Y	Corner drive, standard
2201 – 2400	2290	640	Corner drive, standard	2290	1000	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset of 15 mm and above

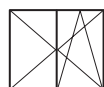
Application range				T&T espagnolette, VT			
SRH	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMD	Corner drive type
280 – 370	445	156	Special corner drive, short	460	120	N	Special corner drive, short
371 – 555	445	156	Corner drive, standard	460	120	N	Corner drive, standard
431 – 510	600	195	Special corner drive, short	460	120	N	Corner drive, standard
511 – 600			Corner drive, standard	600	170	Y	Corner drive, standard
601 – 800	690	300	Corner drive, standard	690	263	Y	Corner drive, standard
801 – 1000	890	490	Corner drive, standard	890	413	Y	Corner drive, standard
1001 – 1200	1090	335	Corner drive, standard	1090	513	Y	Corner drive, standard
1201 – 1400	1290	335	Corner drive, standard	1290	563	Y	Corner drive, standard
1401 – 1600	1490	335	Corner drive, standard	1490	563	Y	Corner drive, standard
1601 – 1800	1690	335	Corner drive, standard	1690	563 / 1000	Y	Corner drive, standard
1801 – 2000	1890	640	Corner drive, standard	1890	1000	Y	Corner drive, standard
2001 – 2200	2090	640	Corner drive, standard	2090	1000	Y	Corner drive, standard
2201 – 2400	2290	640	Corner drive, standard	2290	1000	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset 8 to 50 mm



8	431 – 710	600	200	233	N	N	–	Y	– / 1	– / P	Roto Sil	810974
	601 – 800	690	200	325	N	N	–	N	–	–	Roto Sil	771953
	801 – 1000	890	200	335	N	N	1	N	–	–	Roto Sil	771954



												Nº
15	280 – 555	445	200	156	N	N	–	Y	– / 1	– / P	Roto Sil	2003815
25	431 – 710	600	200	195	Y	N	–	Y	– / 1	– / P	Roto Sil	795462
30	601 – 800	690	200	300	Y	N	–	N	–	–	Roto Sil	763116
35	801 – 1000	890	200	490	Y	N	1	N	–	–	Roto Sil	763117
40												
45												
50												
8	1001 – 1200	1090	200	335	Y	N	1	N	–	–	Roto Sil	763118
15	1201 – 1400	1290	200	335	Y	N	1	N	–	–	Roto Sil	763119
25	1401 – 1600	1490	200	335	Y	N	2	N	–	–	Roto Sil	763120
30	1601 – 1800	1690	200	335	Y	Y	2	N	–	–	Roto Sil	795474
35	1801 – 2000	1890	200	640	Y	Y	2	N	–	–	Roto Sil	795476
40	2001 – 2200	2090	200	640	Y	Y	3	N	–	–	Roto Sil	795478
45												
50	2201 – 2400	2290	200	640	Y	Y	3	N	–	–	Roto Sil	795480



INFO

Lifting mishandling device (stop for floating-mullion sash espagnolette) preassembled as standard.

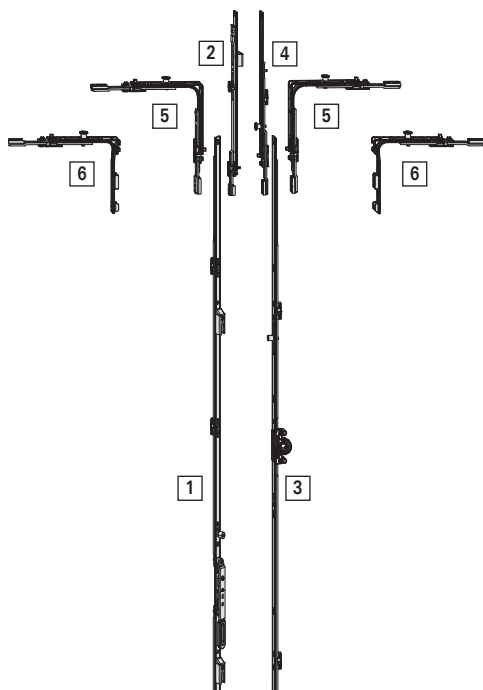


INFO

When using the lever-operated espagnolette, standard (RC 1 N, RC 2, RC 2 N), fit the stay guide for Turn-Only sashes

5.1.1.2 Centred / variable handle height

Possible combinations



Assignment	Meaning
[1]	Lever-operated espagnolette, standard
[2]	Floating-mullion centre lock
[3]	T&T espagnolette – centred / variable handle height
[4]	Centre lock, standard
[5]	Corner drive, standard
[6]	Special corner drive, short

Determining the espagnolettes

1. Determine the element's sash rebate height (SRH).



INFO

Refer to the tables below for possible combinations and the required corner drive [5] + [6].

2. Select the lever-operated espagnolette, standard [1] using the *sash rebate height (SRH)* and *length of the component*.

Optional: determine the floating-mullion centre lock [2].

3. Select the T&T espagnolette – centred / variable handle height [3] using the *length of the component*.

- ☐ T&T espagnolette – centred / variable handle height, backset 8 mm
- ☐ T&T espagnolette – centred / variable handle height, backset 15 mm
- ☐ T&T espagnolette – centred / variable handle height, backset 25, 30, 35, 40, 45, 50 mm

Optional: determine the centre lock, standard [4].



Backset 8 mm

Application range		Lever-operated espagnolette, standard		T&T espagnolette			
SRH	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMC	Corner drive type
621 – 800	680	235 – 275	Special corner drive, short	800	311 – 510	N	Corner drive, standard
801 – 900		276 – 335	Corner drive, standard	980	351 – 400	N	Corner drive, standard
901 – 1200	980	249 – 448	Corner drive, standard		401 – 600	Y	Corner drive, standard
1201 – 1600	1380	448 – 658	Corner drive, standard	1380	601 – 800	Y	Corner drive, standard
1601 – 2000	1780	680 – 880	Corner drive, standard	1780	801 – 1000	Y	Corner drive, standard
2001 – 2400	2180	880 – 1080	Corner drive, standard	2180	1001 – 1200	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset of 15 mm and above

Application range		Lever-operated espagnolette, standard		T&T espagnolette			
SRH	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMC	Corner drive type
370 – 450	400	255 – 265	Special corner drive, short	430	215 – 225	N	Special corner drive, short
451 – 520		266 – 300	Special corner drive, short		226 – 260	N	Corner drive, standard
521 – 620		301 – 350	Corner drive, standard		261 – 310	N	Corner drive, standard
621 – 650	680	393 – 407	Special corner drive, short	580	311 – 400	Y	Corner drive, standard
651 – 800		408 – 482	Corner drive, standard				
801 – 1200	980	482 – 682	Corner drive, standard	980	401 – 600	Y	Corner drive, standard
1201 – 1600	1380	448 – 648	Corner drive, standard	1380	601 – 800	Y	Corner drive, standard
1601 – 2000	1780	680 – 880	Corner drive, standard	1780	801 – 1000	Y	Corner drive, standard
2001 – 2400	2180	880 – 1080	Corner drive, standard	2180	1001 – 1200	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset 8 to 50 mm



8	621 – 900	680	125 / 120	236 – 375	N	N	1	Roto Sil	242726
	901 – 1200	980	200 / 200	298 – 448	Y	N	1	Roto Sil	791986
15 25 30 35 40 45 50	431 – 620	500	100 / 100	225 – 350	N	N	–	Roto Sil	233418
	621 – 800	630	100 / 100	393 – 482	Y	N	1	Roto Sil	763125
	801 – 1200	980	200 / 200	482 – 682	Y	N	1	Roto Sil	763126

T&T espagnolette / floating-mullion sash espagnolette
Floating-mullion sash espagnolette
Standard

									
8	1201 – 1600	1380	200 / 200	448 – 658	Y	N	2	Roto Sil	763127
15	1601 – 2000	1780	200 / 200	680 – 880	Y	Y	2	Roto Sil	795482
25	2001 – 2400	2180	200 / 200	880 – 1080	Y	Y	4	Roto Sil	795484
30									
35									
40									
45									
50									



INFO

A retainer clasp is mandatory for lever-operated espagnolettes on RC 2 / RC 2 N double-sashed windows.
See .



INFO

Lifting mishandling device (stop for floating-mullion sash espagnolette) preassembled as standard.



INFO

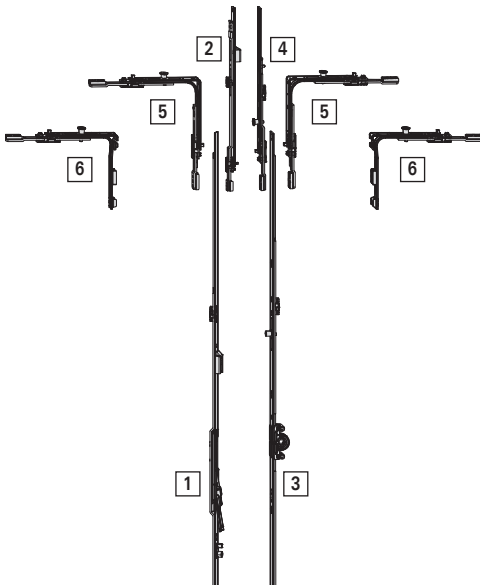
When using the lever-operated espagnolette, standard (RC 1 N, RC 2, RC 2 N), fit the stay guide for Turn-Only sashes



5.1.2 Plus

5.1.2.1 VT – fixed handle height

Possible combinations



Assignment	Meaning
[1]	Lever-operated espagnolette Plus, VT
[2]	Floating-mullion centre lock
[3]	T&T espagnolette, VT – fixed handle height
[4]	Centre lock, standard
[5]	Corner drive, standard
[6]	Special corner drive, short

Determining the espagnolettes

1. Determine the element's sash rebate height (SRH).



INFO

Refer to the tables below for possible combinations and the required corner drive [5] + [6].

2. Select the lever-operated espagnolette Plus, VT [1] using the *sash rebate height (SRH)* and *length of the component*.

Optional: determine the floating-mullion centre lock [2].

3. Select the T&T espagnolette, VT – fixed handle height [3] using the *length of the component*.

- ☐ T&T espagnolette, VT – fixed handle height, backset 8 mm
- ☐ T&T espagnolette, VT – fixed handle height, backset 15 mm
- ☐ T&T espagnolette, VT – fixed handle height, backset 25, 30, 35, 40, 45, 50 mm

Optional: determine the centre lock, standard [4].

T&T espagnolette / floating-mullion sash espagnolette
Floating-mullion sash espagnolette
Plus

Backset 8 mm

Application range SRH	Lever-operated espagnolette Plus, VT			T&T espagnolette, VT			
	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMD	Corner drive type
431 – 510	600	233	Special corner drive, short	490	120	N	Corner drive, standard
511 – 600			Corner drive, standard	600	170	N	Corner drive, standard
601 – 800	690	325	Corner drive, standard	690	263	N	Corner drive, standard
801 – 1000	890	335	Corner drive, standard	890	413	Y	Corner drive, standard
1001 – 1200	1090	335	Corner drive, standard	1090	513	Y	Corner drive, standard
1201 – 1400	1290	335	Corner drive, standard	1290	563	Y	Corner drive, standard
1401 – 1600	1490	335	Corner drive, standard	1490	563	Y	Corner drive, standard
1601 – 1800	1690	335	Corner drive, standard	1690	563 / 1000	Y	Corner drive, standard
1801 – 2000	1890	640	Corner drive, standard	1890	1000	Y	Corner drive, standard
2001 – 2200	2090	640	Corner drive, standard	2090	1000	Y	Corner drive, standard
2201 – 2400	2290	640	Corner drive, standard	2290	1000	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset of 15 mm and above

Application range SRH	Lever-operated espagnolette Plus, VT			T&T espagnolette, VT			
	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMD	Corner drive type
431 – 510	600	195	Special corner drive, short	460	120	N	Corner drive, standard
511 – 600			Corner drive, standard	600	170	Y	Corner drive, standard
601 – 800	690	300	Corner drive, standard	690	263	Y	Corner drive, standard
801 – 1000	890	490	Corner drive, standard	890	413	Y	Corner drive, standard
1001 – 1200	1090	335	Corner drive, standard	1090	513	Y	Corner drive, standard
1201 – 1400	1290	335	Corner drive, standard	1290	563	Y	Corner drive, standard
1401 – 1600	1490	335	Corner drive, standard	1490	563	Y	Corner drive, standard
1601 – 1800	1690	335	Corner drive, standard	1690	563 / 1000	Y	Corner drive, standard
1801 – 2000	1890	640	Corner drive, standard	1890	1000	Y	Corner drive, standard
2001 – 2200	2090	640	Corner drive, standard	2090	1000	Y	Corner drive, standard
2201 – 2400	2290	640	Corner drive, standard	2290	1000	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.



Backset 8 to 50 mm



												Nº
8	431 – 710	600	200	144	Y	N	–	Y	– / 1	– / P	Roto Sil	2007106
15	601 – 800	690	200	234	Y	N	–	–	–	–	Roto Sil	2007116
25	801 – 1000	890	200	496	Y	N	1	–	–	–	Roto Sil	2007117
30	1001 – 1200	1090	200	496	Y	N	1	–	–	–	Roto Sil	2007118
35	1201 – 1400	1290	200	546	Y	N	1	–	–	–	Roto Sil	2007119
40	1401 – 1600	1490	200	546	Y	N	2	–	–	–	Roto Sil	2007120
45	1601 – 1800	1690	200	546	Y	Y	2	–	–	–	Roto Sil	2007121
50	1801 – 2000	1890	200	546	Y	Y	2	–	–	–	Roto Sil	2007122
	2001 – 2200	2090	200	546	Y	Y	3	–	–	–	Roto Sil	2007123
	2201 – 2400	2290	200	546	Y	Y	3	–	–	–	Roto Sil	2007124



INFO

Lifting mishandling device (stop for floating-mullion sash espagnolette) preassembled as standard.

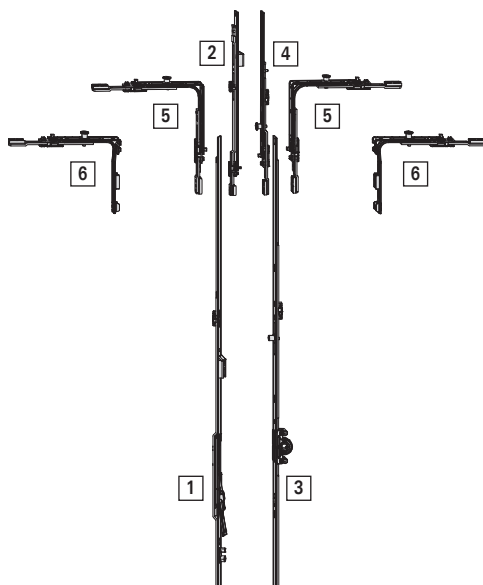


INFO

When using the lever-operated espagnolette Plus (RC 1 N, RC 2, RC 2 N), fit the basic security stay guide (Tilt&Turn) or security stay guide (Tilt&Turn)

5.1.2.2 Centred / variable handle height

Possible combinations



Assignment	Meaning
[1]	Lever-operated espagnolette Plus
[2]	Floating-mullion centre lock
[3]	T&T espagnolette – centred / variable handle height
[4]	Centre lock, standard
[5]	Corner drive, standard
[6]	Special corner drive, short

Determining the espagnolettes

1. Determine the element's sash rebate height (SRH).



INFO

Refer to the tables below for possible combinations and the required corner drive [5] + [6].

2. Select the lever-operated espagnolette Plus [1] using the *sash rebate height (SRH)* and *length of the component*.
Optional: determine the floating-mullion centre lock [2].
3. Select the T&T espagnolette – centred / variable handle height [3] using the *length of the component*.
 - ☐ T&T espagnolette – centred / variable handle height, backset 8 mm
 - ☐ T&T espagnolette – centred / variable handle height, backset 15 mm
 - ☐ T&T espagnolette – centred / variable handle height, backset 25, 30, 35, 40, 45, 50 mm**Optional:** determine the centre lock, standard [4].



Backset 8 mm

Application range SRH	Lever-operated espagnolette Plus			T&T espagnolette			
	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMD	Corner drive type
431 – 520	400	194 – 239	Special corner drive, short	500	215 – 260	N	Special corner drive, short
521 – 620		240 – 289	Corner drive, standard		261 – 310	N	Corner drive, standard
621 – 720	680	290 – 329	Special corner drive, short	800	311 – 510	Y	Corner drive, standard
721 – 800		330 – 379	Corner drive, standard				
801 – 1200	980	380 – 579	Corner drive, standard	980	401 – 600	Y	Corner drive, standard
1201 – 1600	1380	580 – 779	Corner drive, standard	1380	601 – 800	Y	Corner drive, standard
1601 – 2000	1780	780 – 979	Corner drive, standard	1780	801 – 1000	Y	Corner drive, standard
2001 – 2400	2180	980 – 1179	Corner drive, standard	2180	1001 – 1200	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset of 15 mm and above

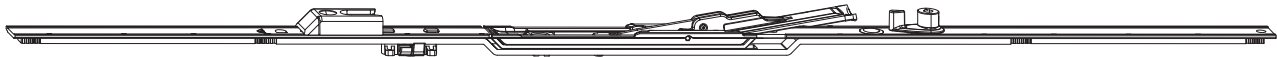
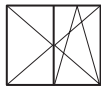
Application range SRH	Lever-operated espagnolette Plus			T&T espagnolette			
	Component length	Toggle lever position	Corner drive type	Component length	Handle height	LMD	Corner drive type
431 – 450	400	194 – 204	Special corner drive, short	430	215 – 225	N	Special corner drive, short
451 – 520		205 – 239	Special corner drive, short		226 – 260	N	Corner drive, standard
521 – 620		240 – 289	Corner drive, standard		261 – 310	N	Corner drive, standard
621 – 700	680	290 – 329	Special corner drive, short	580	311 – 400	Y	Corner drive, standard
701 – 800		330 – 379	Corner drive, standard				
801 – 1200	980	380 – 579	Corner drive, standard	980	401 – 600	Y	Corner drive, standard
1201 – 1600	1380	580 – 779	Corner drive, standard	1380	601 – 800	Y	Corner drive, standard
1601 – 2000	1780	780 – 979	Corner drive, standard	1780	801 – 1000	Y	Corner drive, standard
2001 – 2400	2180	980 – 1179	Corner drive, standard	2180	1001 – 1200	Y	Corner drive, standard



INFO

A centre lock is required from SRH 2401 mm.

Backset 8 to 50 mm



									
8	431 – 620	400	100 / 100	194 – 289	N	N	–	Roto Sil	2007128
15	621 – 800	680	100 / 100	290 – 379	Y	N	1	Roto Sil	2007129
25	801 – 1200	980	200 / 200	380 – 579	Y	N	1	Roto Sil	2007130
30	1001 – 1400	1180	200 / 200	480 – 679	Y	N	1	Roto Sil	2007131
35	1201 – 1600	1380	200 / 200	580 – 779	Y	N	2	Roto Sil	2007132
40	1601 – 2000	1780	200 / 200	780 – 979	Y	Y	2	Roto Sil	2007133
45	2001 – 2400	2180	200 / 200	980 – 1179	Y	Y	4	Roto Sil	2007134



INFO
Lifting mishandling device (stop for floating-mullion sash espagnolette) preassembled as standard.



INFO
When using the lever-operated espagnolette Plus (RC 1 N, RC 2, RC 2 N), fit the basic security stay guide (Tilt&Turn) or security stay guide (Tilt&Turn)



6 Frame components

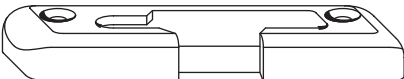


INFO

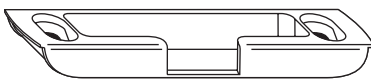
Further frame components are available upon request.

6.1 Tilt strikers

6.1.1 Zinc



A



B

Assignment	Meaning
[A]	Tilt striker, screw-on
[B]	Tilt striker, to be routed in

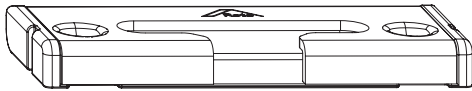
											Nº
–	18	4	Can be routed in	N	–	–	9	Y	Roto Sil	–	318319
		5	Can be routed in	N	–	–	13	Y	Roto Sil	Left	627984
		5	Can be routed in	N	–	–	13	Y	Roto Sil	Right	627986
Eurofalz	18	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	260479
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	260480
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Left	260481
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Right	260482
	20	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	260483
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	260484
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Left	260485
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Right	260486
	24	12	Screw-on	N	–	with packer	13	Y	Roto Sil	Left	261943
		12	Screw-on	N	–	with packer	13	Y	Roto Sil	Right	262927
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	Left	261944
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	Right	262929
	30	12	Screw-on	N	–	–	13	Y	Roto Sil	Left	631525
		12	Screw-on	N	–	–	13	Y	Roto Sil	Right	631526
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	Left	631502
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	Right	631504
Euronut 7/8	18	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	260487
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	260488
Euronut 11/8	24	12	Screw-on	N	–	–	13	Y	Roto Sil	Left	378464
		12	Screw-on	N	–	–	13	Y	Roto Sil	Right	378457



INFO

Other versions are available upon request.

6.1.2 Steel



									Nº
–	18	4	Can be routed in	N	–	9	Y	Roto Sil	856829
Eurofalz	18	12	Screw-on	N	–	9	Y	Roto Sil	856827
		12	Screw-on	Y	2 x Ø 8 mm	9	Y	Roto Sil	2027171
		12	Screw-on	N	–	9	Y	Roto Sil	856824
	20	12	Screw-on	N	–	9	Y	Roto Sil	856824
		12	Screw-on	Y	2 x Ø 8 mm	9	Y	Roto Sil	856825
	24	12	Screw-on	N	–	13	Y	Roto Sil	858213
		12	Screw-on	Y	2 x Ø 8 mm	13	Y	Roto Sil	856833
	30	12	Screw-on	N	–	13	Y	Roto Sil	856835
		12	Screw-on	Y	2 x Ø 8 mm	13	Y	Roto Sil	856834
Euronut 7/8	18	12	Screw-on	N	–	9	Y	Roto Sil	856828
	20	12	Screw-on	N	–	9	Y	Roto Sil	856826

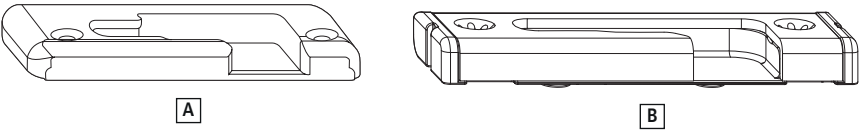


INFO

Other versions are available upon request.



6.1.3 TiltFirst (TF)



Assignment	Meaning
[A]	Zinc
[B]	Steel, with PVC packer

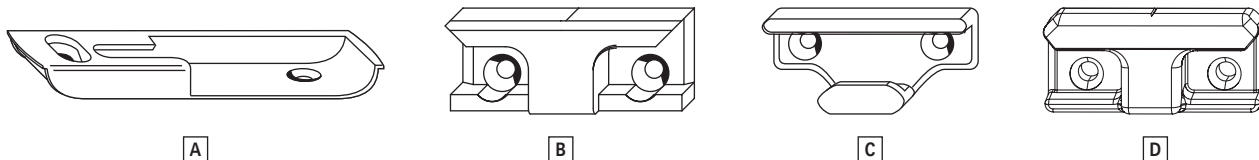
											Nº
Eurofalz	18	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	287915
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	287916
	20	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	287590
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	287591
	24	12	Screw-on	Y	2 x Ø 8 mm	Made from steel, with PVC packer	13	Y	Roto Sil	Left	856830
		12	Screw-on	Y	2 x Ø 8 mm	Made from steel, with PVC packer	13	Y	Roto Sil	Right	856831
		12	Screw-on	N	–	–	13	Y	Roto Sil	Left	632132
		12	Screw-on	N	–	–	13	Y	Roto Sil	Right	632133
	30	12	Screw-on	N	–	Position 2 mm from the frame edge	13	Y	Roto Sil	Left	602788
		12	Screw-on	N	–	Position 2 mm from the frame edge	13	Y	Roto Sil	Right	602789
		12	Screw-on	Y	2 x Ø 8 mm	Made from steel, with PVC packer	13	Y	Roto Sil	Left	2021656
		12	Screw-on	Y	2 x Ø 8 mm	Made from steel, with PVC packer	13	Y	Roto Sil	Right	2021655
		12	Screw-on	N	–	Made from steel, with PVC packer	13	Y	Roto Sil	Left	2021659
		12	Screw-on	N	–	Made from steel, with PVC packer	13	Y	Roto Sil	Right	2021658
Euronut 7/8	18	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	287917
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	287918
Euronut 11/8	24	12	Screw-on	N	–	–	13	Y	Roto Sil	Left	456956
		12	Screw-on	N	–	–	13	Y	Roto Sil	Right	456955



INFO
Other versions are available upon request.

6.2 Strikers

6.2.1 Standard



Assignment	Meaning
[A]	Can be routed in
[B]	Hardware axis 9 (Euro-rebate / Euro-groove)
[C]	Hardware axis 13 (Euro-rebate / Euro-groove)
[D]	Hardware axis 13 (Euro-rebate, reinforced version)

											
–	18	4	Can be routed in	N	–	–	9	Y	Roto Sil	Left	289320
		4	Can be routed in	N	–	–	9	Y	Roto Sil	Right	289321
	25	5	Can be routed in	N	–	–	13	Y	Roto Sil	Left	627988
		5	Can be routed in	N	–	–	13	Y	Roto Sil	Right	627990
Eurofalz	18	12	Screw-on	N	–	–	9	Y	Roto Sil	–	260360
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	–	260361
	20	12	Screw-on	N	–	–	9	Y	Roto Sil	–	260362
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	–	260363
	24	12	Screw-on	N	–	–	13	Y	Roto Sil	–	261933
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	–	261934
		12	Screw-on	N	–	Reinforced version	13	Y	Roto Sil	–	532873
		12	Screw-on	Y	2 x Ø 8 mm	Reinforced version	13	Y	Roto Sil	–	624076
	30	12	Screw-on	N	–	–	13	N	Roto Sil	–	599651
	12	Screw-on	Y	2 x Ø 8 mm	–	13	N	Roto Sil	–	599652	
Euronut 7/8	18	12	Screw-on	N	–	–	9	Y	Roto Sil	–	378462
Euronut 11/8	24	12	Screw-on	N	–	–	13	Y	Roto Sil	–	378467



INFO

Reinforced version, not compatible with existing jig system.

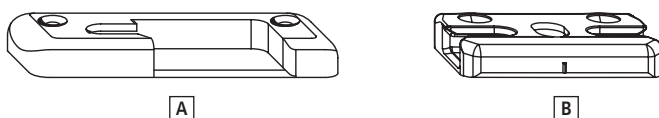


INFO

Other versions are available upon request.

6.2.2 Security

6.2.2.1 Zinc



Assignment	Meaning
[A]	Striker, right / left



Assignment	Meaning
[B]	Striker, symmetrical

[B] Symmetrical striker can only be used with a 13 mm hardware axis and from a rebate depth of 30.

Lever-operated espagnolette Standard: a left second opening sash with asymmetrical strikers always requires right strikers horizontally at the bottom – and vice versa.

											Nº
–	18	4	Can be routed in	N	–	–	9	Y	Roto Sil	Left	289320
		4	Can be routed in	N	–	–	9	Y	Roto Sil	Right	289321
	25	5	Can be routed in	N	–	–	13	Y	Roto Sil	Left	627988
		5	Can be routed in	N	–	–	13	Y	Roto Sil	Right	627990
Eurofalz	18	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	260382
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	260383
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Left	260384
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Right	260385
	20	12	Screw-on	N	–	–	9 10	Y	Roto Sil	Left	260386
		12	Screw-on	N	–	–	9 10	Y	Roto Sil	Right	260387
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Left	259592
		12	Screw-on	Y	2 x Ø 8 mm	–	9	Y	Roto Sil	Right	259593
	24	12	Screw-on	N	–	–	13	Y	Roto Sil	Left	261935
		12	Screw-on	N	–	–	13	Y	Roto Sil	Right	262930
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	Left	261936
		12	Screw-on	Y	2 x Ø 8 mm	–	13	Y	Roto Sil	Right	262931
	30	12	Screw-on	N	–	–	13	Y	Roto Sil	–	631527
Euronut 7/8	18	12	Screw-on	N	–	–	9	Y	Roto Sil	Left	260388
		12	Screw-on	N	–	–	9	Y	Roto Sil	Right	260389
Euronut 11/8	24	12	Screw-on	N	–	–	13	Y	Roto Sil	Left	378465
		12	Screw-on	N	–	–	13	Y	Roto Sil	Right	378466

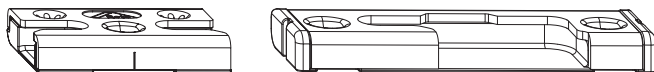
Zinc security strikers for hardware axis 9 only permitted up to RC 1.



INFO

Other versions are available upon request.

6.2.2.2 Steel



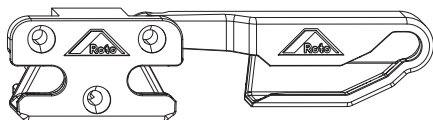
										Nº
–	18	4	Can be routed in	N	–	9	Y	Roto Sil	Left	856987
		4	Can be routed in	N	–	9	Y	Roto Sil	Right	856986
Eurofalz		12	Screw-on	N	–	9	N	Roto Sil	Left	2021662
			Screw-on	N	–	9	N	Roto Sil	Right	2021663
			Screw-on	N	–	9	Y	Roto Sil	Left	856982
			Screw-on	N	–	9	Y	Roto Sil	Right	856981
			Screw-on	Y	2 x Ø 8 mm	9	N	Roto Sil	Left	2034468
			Screw-on	Y	2 x Ø 8 mm	9	N	Roto Sil	Right	2034467
	Screw-on		Y	2 x Ø 8 mm	9	Y	Roto Sil	Left	856988	
	Screw-on		Y	2 x Ø 8 mm	9	Y	Roto Sil	Right	856989	
	20	12	Screw-on	N	–	9	N	Roto Sil	Right	2021668
		12	Screw-on	N	–	9	N	Roto Sil	Left	2021669
		12	Screw-on	N	–	9	Y	Roto Sil	Left	856991
		12	Screw-on	N	–	9	Y	Roto Sil	Right	856990
		12	Screw-on	Y	2 x Ø 8 mm	9	N	Roto Sil	Left	2034466
		12	Screw-on	Y	2 x Ø 8 mm	9	N	Roto Sil	Right	2034465
		12	Screw-on	Y	2 x Ø 8 mm	9	Y	Roto Sil	Left	856993
		12	Screw-on	Y	2 x Ø 8 mm	9	Y	Roto Sil	Right	856992
24	12	Screw-on	N	–	13	Y	Roto Sil	Left	856999	
	12	Screw-on	N	–	13	Y	Roto Sil	Right	856998	
	12	Screw-on	Y	2 x Ø 8 mm	13	Y	Roto Sil	Left	856996	
	12	Screw-on	Y	2 x Ø 8 mm	13	Y	Roto Sil	Right	856997	
30	12	Screw-on	N	–	13	Y	Roto Sil	–	856746	
	12	Screw-on	Y	2 x Ø 8 mm	13	Y	Roto Sil	–	838711	
Euronut 7/8	18	12	Screw-on	N	–	9	Y	Roto Sil	Left	856984
		12	Screw-on	N	–	9	Y	Roto Sil	Right	856983
	20	12	Screw-on	N	–	9	Y	Roto Sil	Left	856995
		12	Screw-on	N	–	9	Y	Roto Sil	Right	856994



INFO

Other versions are available upon request.

6.2.2.3 Tilt ventilation (TiltSafe)

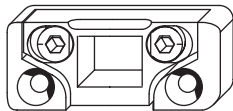


										
Eurofalz	30	12	Screw-on	N	—	13	N	Roto Sil	Left	797026
		12	Screw-on	N	—	13	N	Roto Sil	Right	797027

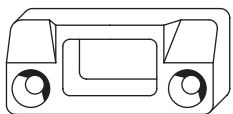


6.2.3 Double-leafed door

6.2.3.1 1-hole

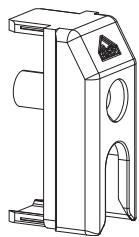


										Nº
Eurofalz	18	12	Screw-on	N	–	Point of entry 4.3 mm, for opposite hardware groove	Gasket compression adjustable	9	Roto Sil	260450
		12	Screw-on	Y	2 x Ø 8 mm	Point of entry 4.3 mm, for opposite hardware groove	Gasket compression adjustable	9	Roto Sil	260451
	20	12	Screw-on	N	–	Point of entry 4.3 mm, for opposite hardware groove	Gasket compression adjustable	9	Roto Sil	260452
		12	Screw-on	Y	2 x Ø 8 mm	Point of entry 4.3 mm, for opposite hardware groove	Gasket compression adjustable	9	Roto Sil	260453
		12	Screw-on	N	–	Point of entry 6.3 mm, for floating-mullion sash Euro-groove 7 / 8	Gasket compression adjustable	9	Roto Sil	456894

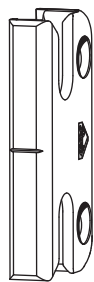


										Nº
Eurofalz	18	12	Screw-on	N	–	Point of entry 4.3 mm, for opposite hardware groove	–	9	Roto Sil	260455
		12	Screw-on	Y	2 x Ø 8 mm	Point of entry 4.3 mm, for opposite hardware groove	–	9	Roto Sil	257825
		12	Screw-on	N	–	Point of entry 6.3 mm, for floating-mullion sash Euro-groove 7 / 8	–	9	Roto Sil	606757
	20	12	Screw-on	N	–	Point of entry 4.3 mm, for opposite hardware groove	–	9	Roto Sil	260456
		12	Screw-on	Y	2 x Ø 8 mm	Point of entry 4.3 mm, for opposite hardware groove	–	9	Roto Sil	257826
	24	12	Screw-on	N	–	Point of entry 8.3 mm, for opposite hardware groove	–	13	Roto Sil	261938
		12	Screw-on	Y	2 x Ø 8 mm	Point of entry 8.3 mm, for opposite hardware groove	–	13	Roto Sil	261940
Euronut 7/8	18	12	Screw-on	N	–	Point of entry 6.3 mm, for floating-mullion sash Euro-groove 7 / 8	–	9	Roto Sil	606756

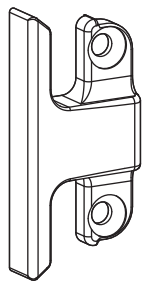
6.2.4 Faceplate



		Nº
V cam	Roto Sil	260359

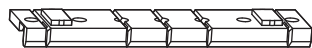


		Nº
Screw-on striker for lever-operated espagnolette (Euro-groove 7 / 8)	Roto Sil	382825



		Nº
Screw-on striker for lever-operated espagnolette (variable handle height)	Roto Sil	339395

6.3 Packers



	Nº
Support for Euro-groove 7 / 8	375930



		Nº
Packer for rebate corner hinge T / E5		630191

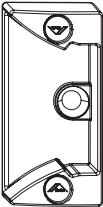


INFO

The packer makes it possible to use T / E5 rebate corner hinges with system 12/18-9 in profile systems with system 4/15-9.

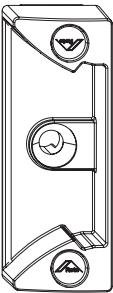
6.4 Bullet catches

6.4.1 Frame components

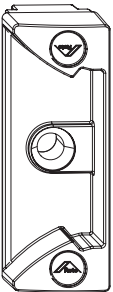


								Nº
–	18	4	Can be routed in	N	–	9	Roto Sil	788376
	24	4	Can be routed in	N	–	13	Roto Sil	788377
Eurofalz	18	12	Screw-on	N	–	9	Roto Sil	788365
		12	Screw-on	Y	2 x Ø 8 mm	9	Roto Sil	788369
	20	12	Screw-on	N	–	9	Roto Sil	788366
		12	Screw-on	Y	2 x Ø 8 mm	9	Roto Sil	788370
	24	12	Screw-on	N	–	13	Roto Sil	788367
		12	Screw-on	Y	2 x Ø 8 mm	13	Roto Sil	788371
	30	12	Screw-on	N	–	13	Roto Sil	788368
		12	Screw-on	Y	2 x Ø 8 mm	13	Roto Sil	788372
Euronut 7/8	18	12	Screw-on	N	–	9	Roto Sil	788373
	20	12	Screw-on	N	–	9	Roto Sil	788374
	24	12	Screw-on	N	–	9	Roto Sil	788375

6.4.2 Floating mullion

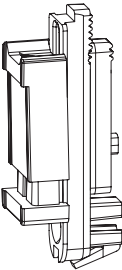


				Nº
Bullet catch for lever-operated espagnolette		Screw-on	Roto Sil	788378



			Nº
Bullet catch for opposite hardware groove		Roto Sil	788507

6.4.3 Sash components



			Nº
Bullet catch sash component		Roto Sil	788363

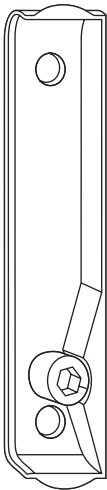


		Nº
Bullet-catch sash component support (upper / lower horizontal hardware groove)		794997

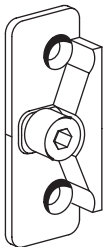


6.5 Lifting mishandling devices

6.5.1 Frame components



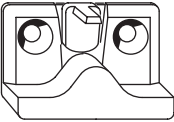
									Nº
–	18	4	Can be routed in	N	–	9	Roto Sil	Left	280120
		4	Can be routed in	N	–	9	Roto Sil	Right	280121
	24	5	Can be routed in	N	–	13	Roto Sil	Left	551744
		5	Can be routed in	N	–	13	Roto Sil	Right	551743



									Nº
Eurofalz	18	12	Screw-on	N	–	9	Roto Sil	–	260540
		12	Screw-on	Y	2 x Ø 8 mm	9	Roto Sil	–	260541
	20	12	Screw-on	N	–	9	Roto Sil	–	260542
		12	Screw-on	Y	2 x Ø 8 mm	9	Roto Sil	–	260543
	24	12	Screw-on	N	–	13	Roto Sil	–	261947
		12	Screw-on	Y	2 x Ø 8 mm	13	Roto Sil	–	261948
	30	12	Screw-on	N	–	13	Roto Sil	–	578785
		12	Screw-on	Y	2 x Ø 8 mm	13	Roto Sil	–	578786
Euronut 7/8	18	12	Screw-on	N	–	9	Roto Sil	–	383281

6.6 Night vents

6.6.1 Frame components

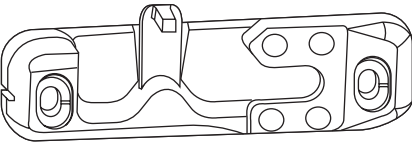


								Nº
Eurofalz	18	12	N	–	9	Roto Sil	–	256633
	20	12	N	–	9	Roto Sil	–	260527
	30	12	N	–	13	Roto Sil	–	595679
Euronut 7/8	18	12	N	–	9	Roto Sil	–	256584



INFO

The component can only be used in conjunction with a corner drive (P or V cam).



								Nº
Eurofalz	24	12	N	–	13	Roto Sil	Left	261945
		12	N	–	13	Roto Sil	Right	262932
		12	Y	2 x Ø 8 mm	13	Roto Sil	Left	261946
		12	Y	2 x Ø 8 mm	13	Roto Sil	Right	262933



INFO

The component can only be used in conjunction with a corner drive (P or V cam).



INFO

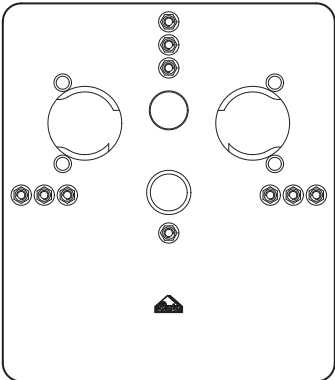
Can only be used for tested security in conjunction with an asymmetrical security striker.



7 Jigs

7.1 Drilling jigs

7.1.1 Stay bearing

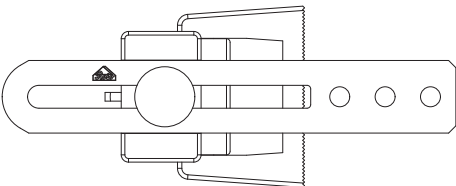


			Nº
Stay bearing	12/18-9	–	787215
Stay bearing and pivot rest	12/18-13	2 x Ø 7 mm	230713
Stay bearing	12/20-9	–	787213
Stay bearing and pivot rest	12/20-13	2 x Ø 7 mm	230716



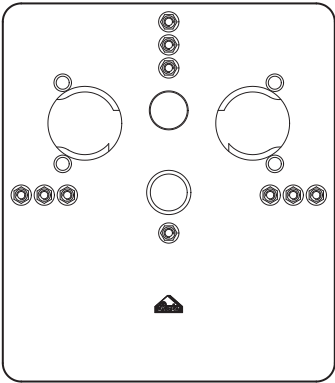
INFO

In the case of jigs without a drill hole, use supporting pins for the stay bearing only.



	Nº
Clamping fixture for stay bearing and pivot rest drilling jig	208616

7.1.2 Pivot rest

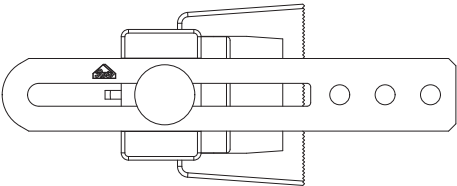


			Nº
Pivot rest	12/18-9	–	230712
Stay bearing and pivot rest	12/18-13	2 x Ø 7 mm	230713
Pivot rest	12/20-9	–	230715
Stay bearing and pivot rest	12/20-13	2 x Ø 7 mm	230716



INFO

In the case of jigs with a drill hole, use supporting pins for the pivot rest only.

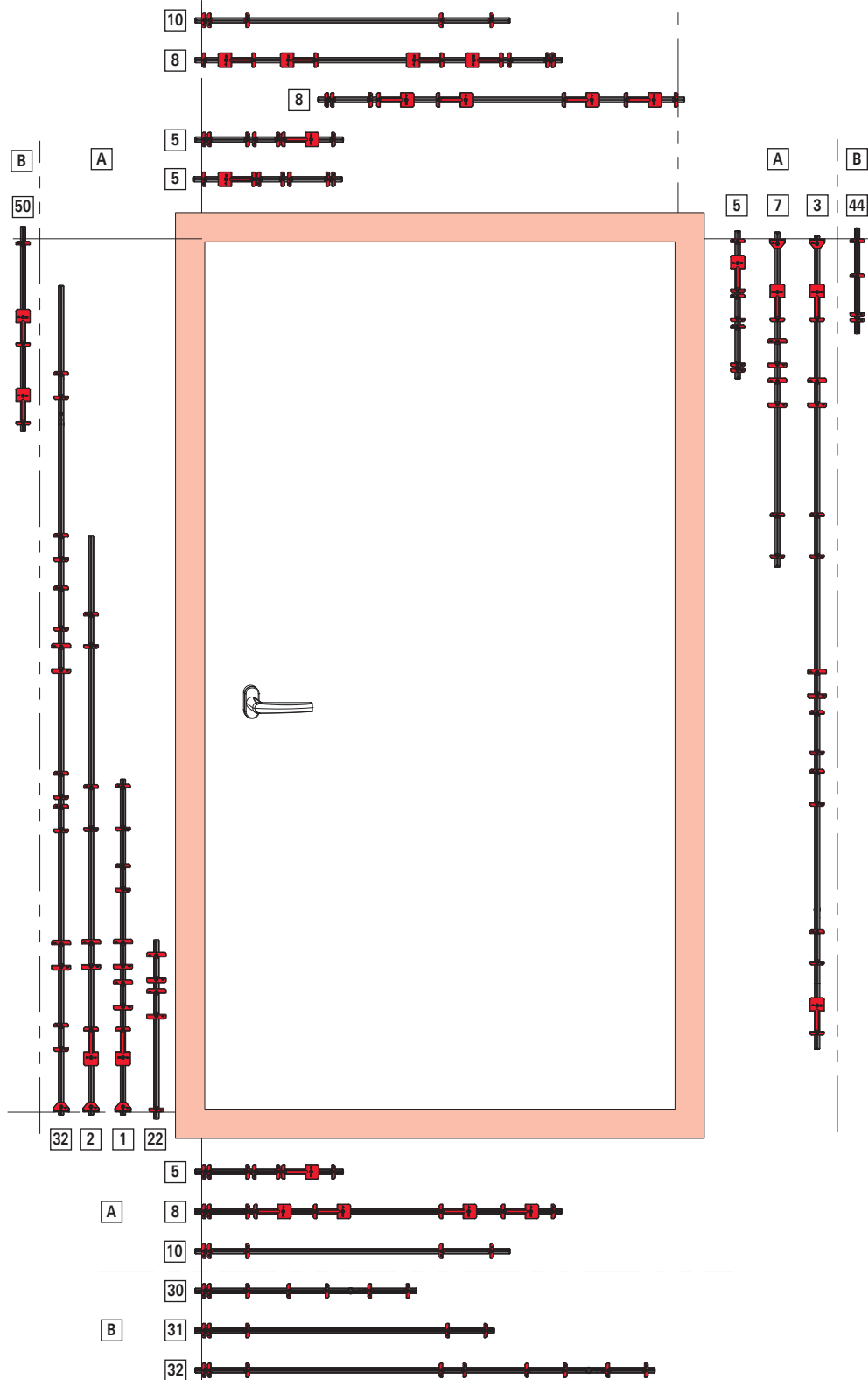


	Nº
Clamping fixture for stay bearing and pivot rest drilling jig	208616



7.2 Positioning jigs

7.2.1 T&T espagnolette – fixed handle height



[A] BSec

[B] RC 1 N

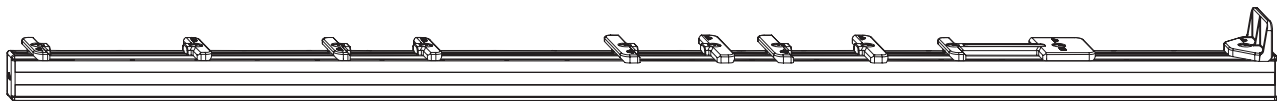
Jigs

Positioning jigs

T&T espagnolette – fixed handle height

Assignment	Position	Application range	T&T		T-O	Single jig
			BSec	RC 1 N	BSec	
[22]	Espagnolette side	SRH 511 – 600 mm	■	■	■	Standard → <i>from page 208</i>
[1]		SRH 801 – 1400 mm	■	■	■	
[2]		SRH 1401 – 1600 mm	■	■	■	
[32]		SRH 1601 – 2800 mm	■	■	■	
[50]		SRH 2601 – 2800 mm	■	–	■	
[5]	Hinge side	SRH 315 – 1100 mm	■	■	–	Tilt striker / corner drive → <i>from page 208</i>
[7]		SRH 1101 – 1800 mm	■	■	–	Standard
[3]		SRH 1801 – 2800 mm	■	■	■	
[44] ^[17]		SRH 320 – 2800 mm	–	■	–	
[5]	Horizontal at the top	SRW 315 – 1200	■	■	■	Tilt striker / corner drive → <i>from page 208</i>
[8]		BSec: SRW 1201 – 1600 mm	■	■	–	Centre lock → <i>from page 209</i>
		RC 1 N: SRW 1201 – 1400 mm				
[10]		SRW 1101 – 1600 mm	–	–	■	Turn-Only sash → <i>from page 209</i>
[5]	Horizontal at the bottom	SRW 315 – 1100 mm	■	–	■	Tilt striker / corner drive → <i>from page 208</i>
[8]		SRW 1101 – 1600 mm	■	–	–	Centre lock → <i>from page 209</i>
[10]		SRW 1101 – 1600 mm	–	–	■	Turn-Only sash → <i>from page 209</i>
[30]		SRW 400 – 800 mm	–	■	–	RC 1 N centre lock → <i>from page 209</i>
[31]		SRW 801 – 1000 mm	–	■	–	
[32]		SRW 1001 – 1400 mm	–	■	–	

7.2.1.1 Standard



Espagnolette side

			
Standard	511 – 800	No. 22	2033841
Standard	801 – 1400	No. 1	290048
Standard	1401 – 1600	No. 2	290049
Standard	1601 – 2800	No. 32	798211
Standard	2401 – 2800	No. 55	808454

Hinge side

			Nº
Tilt striker / corner drive	320 – 2600	No. 44	640450
Standard	801 – 1600	No. 7	290074
Standard	1601 – 2600	No. 3	290050

7.2.1.2 Tilt striker / corner drive

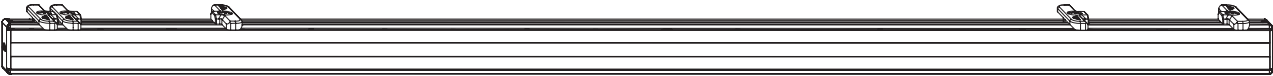


				Nº
Tilt striker / corner drive	315 – 1100	315 – 1200	Top Bottom Hinge side	No. 5 290072

[17] Is used for the top locking point only.

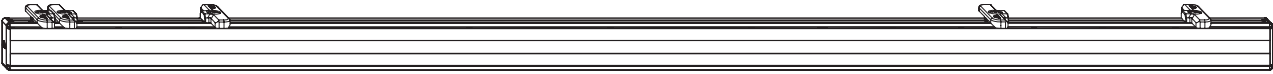


7.2.1.3 Centre lock



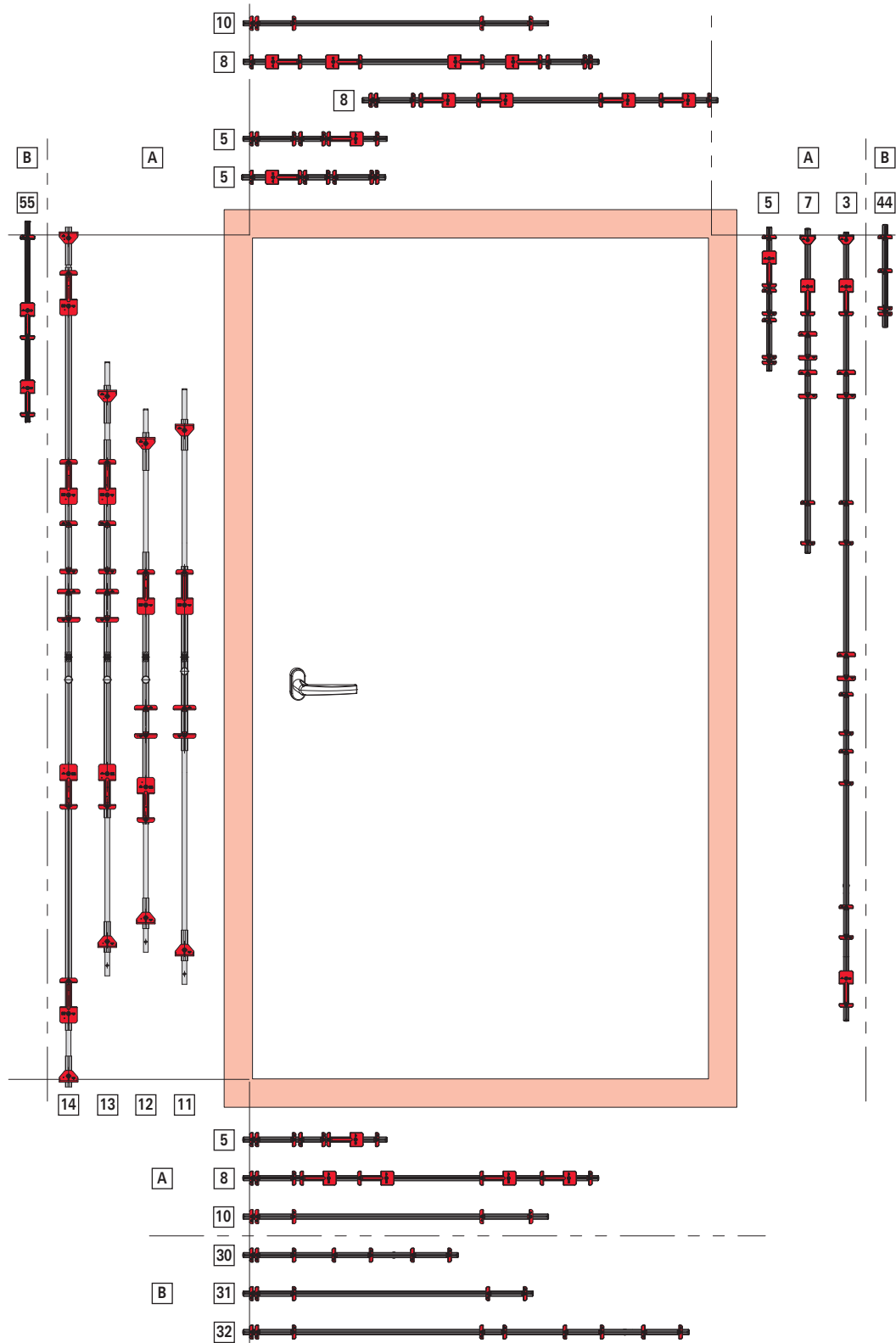
					Nº
Centre lock	Basic security RC 1 N	1201 – 1600	Top Bottom	No. 8	290075
	RC 1 N	400 – 800	Bottom	No. 30	268931
		801 – 1000	Bottom	No. 31	268932
		1001 – 1400	Bottom	No. 32	268933

7.2.1.4 Turn-Only sash



				Nº
Turn-Only sash	1101 – 1600	Top Bottom	No. 10	290081

7.2.2 T&T espagnolette – centred / variable handle height



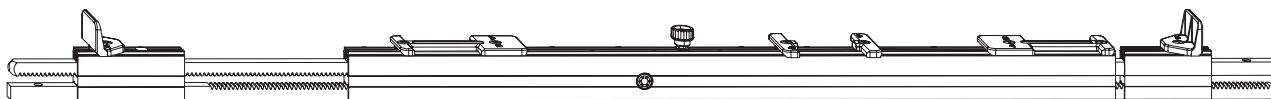
[A] BSec

[B] RC1 N



Assignment	Position	Application range	T&T		T-O	Single jig
			BSec	RC1 N	BSec	
[11]	Espagnolette side	SRH 621 – 1200 mm	■	■	■	Standard
[12]		SRH 1201 – 1600 mm	■	■	■	
[13]		SRH 1601 – 2000 mm	■	■	■	
[14]		SRH 2001 – 2400 mm	■	■	■	
[55]		SRH 2401 – 2800 mm	–	■	–	
[5]	Hinge side	SRH 315 – 1100 mm	■	■	–	Tilt striker / corner drive → <i>from page 208</i>
[7]		SRH 1101 – 1800 mm	■	■	–	Standard
[3]		SRH 1801 – 2800 mm	■	■	■	
[44] ^[18]		SRH 320 – 2800 mm	–	■	–	
[5]	Horizontal at the top	SRW 315 – 1200	■	■	■	Tilt striker / corner drive → <i>from page 208</i>
[8]		BSec: SRW 1201 – 1600 mm	■	■	–	Centre lock → <i>from page 209</i>
		RC1 N: SRW 1201 – 1400 mm				
[10]		SRW 1101 – 1600 mm	–	–	■	Turn-Only sash → <i>from page 209</i>
[5]	Horizontal at the bottom	SRW 315 – 1100 mm	■	–	■	Tilt striker / corner drive → <i>from page 208</i>
[8]		SRW 1101 – 1600 mm	■	–	–	Centre lock → <i>from page 209</i>
[10]		SRW 1101 – 1600 mm	–	–	■	Turn-Only sash → <i>from page 209</i>
[30]		SRW 400 – 800 mm	–	■	–	RC1 N centre lock → <i>from page 209</i>
[31]		SRW 801 – 1000 m	–	■	–	
[32]		SRW 1001 – 1400 mm	–	■	–	

7.2.2.1 Standard



Espagnolette side

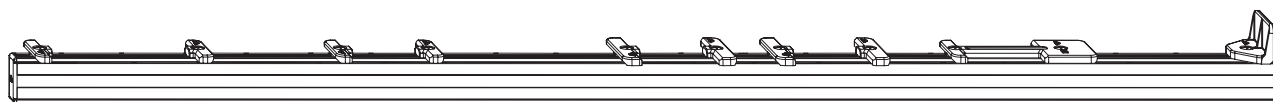
					Nº
Standard	Basic security RC 1 N	621 – 1200	Espagnolette side	No. 11	268943
	Basic security RC 1 N	1001 – 1600	Espagnolette side	No. 12	798480
	Basic security RC 1 N	1601 – 2000	Espagnolette side	No. 13	787401
	Basic security RC 1 N	2001 – 2400	Espagnolette side	No. 14	787402
	Basic security RC 1 N	2401 – 2800	Espagnolette side	No. 55	808454

[18] Is used for the top locking point only.

Jigs

Positioning jigs

T&T espagnolette – centred / variable handle height



Hinge side

					Nº
Tilt striker / corner drive	RC 1 N	320 – 2600	Hinge side	No. 44	640450
Standard	Basic security RC 1 N	801 – 1600	Espagnolette side Hinge side	No. 7	290074
	Basic security RC 1 N	1601 – 2600	Espagnolette side Hinge side	No. 3	290050



INFO

With T&T espagnolettes – centred / variable handle height, use jigs on the hinge side only.

7.2.2.2 Tilt striker / corner drive



					Nº
Tilt striker / corner drive	315 – 1100	315 – 1200	Top Bottom Hinge side	No. 5	290072

7.2.2.3 Centre lock



					Nº
Centre lock	Basic security RC 1 N	1201 – 1600	Top Bottom	No. 8	290075
		400 – 800	Bottom	No. 30	268931
	RC 1 N	801 – 1000	Bottom	No. 31	268932
		1001 – 1400	Bottom	No. 32	268933

7.2.2.4 Turn-Only sash



				Nº
Turn-Only sash	1101 – 1600	Top Bottom	No. 10	290081



8 Installation

8.1 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.

Installation surfaces

The frame and sash grooves must be free from construction materials (such as plaster, gypsum). The sash groove must be free from welding residue to ensure an optimum supporting surface for the hardware components.

8.2 Screw fixing

Electrogalvanised and passivated steel fenestration screws (Ø 3.9 – 4.2 x ...) are to be used to fasten the hardware components; in more challenging climatic conditions, use fenestration screws with additional sealing.

When attaching security-relevant, load-bearing hardware components (hinge sides), the manufacturer of windows and balcony doors must prove the specified forces in accordance with the table below (excerpt from Directive TBDK issued by the Gütegemeinschaft Schlösser und Beschläge e. V.) by means of testing and ensure them on their product.

Sash weight in kg	Tractive force in N [19]
60	1650
70	1900
80	2200
90	2450
100	2700
110	3000
120	3250
130	3500
140	3900
150	4200



INFO

Observe directive TDBK for tractive force values as a function of the sash weights.

Further information can be found at www.beschlagindustrie.de.

The spacer block guidelines for glazing methods must be complied with.

8.3 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.

8.4 Fastening suggestion for security windows

Fastening SEC strikers

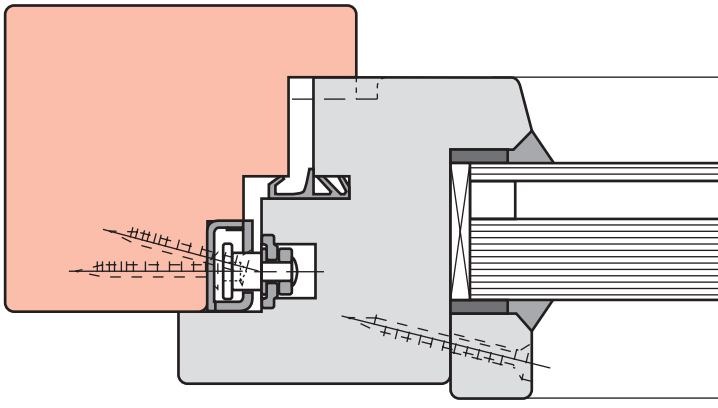
3 pcs. screws 4x ...

[19] Permissible tolerance -10%

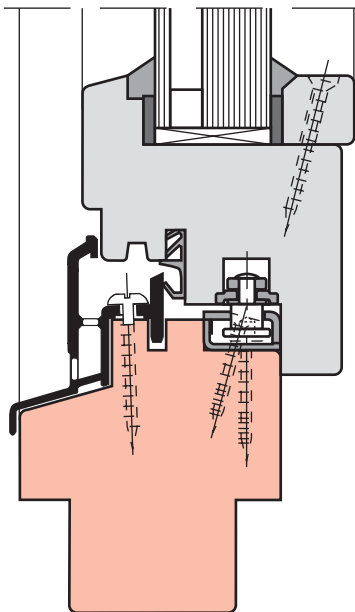


Glazing bead attachment

With screws if required.



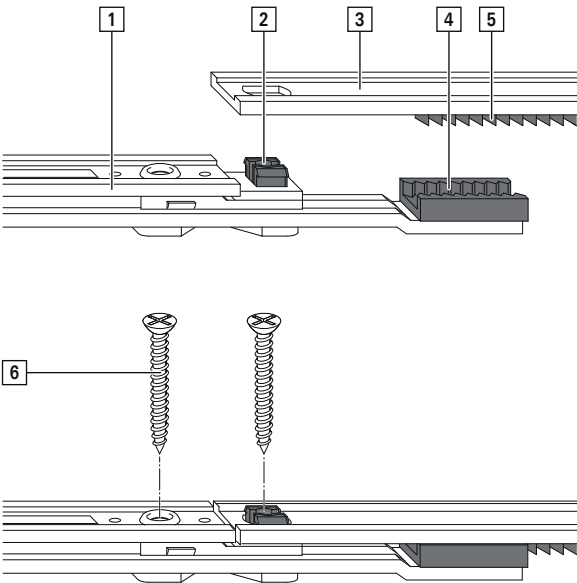
Horizontal cross section M 1:2



Vertical cross section M 1:2

8.5 Force-fit connection

Couplable hardware components always require a force-fit connection.



Assignment	Description
[1]	Component A
[2]	Screw guide with clamp
[3]	Component B
[4]	Component A toothed segment
[5]	Component B toothed segment
[6]	Screw

Force-fit connections are formed by screwing down components A and B so that forces and movements are transferred without loss.



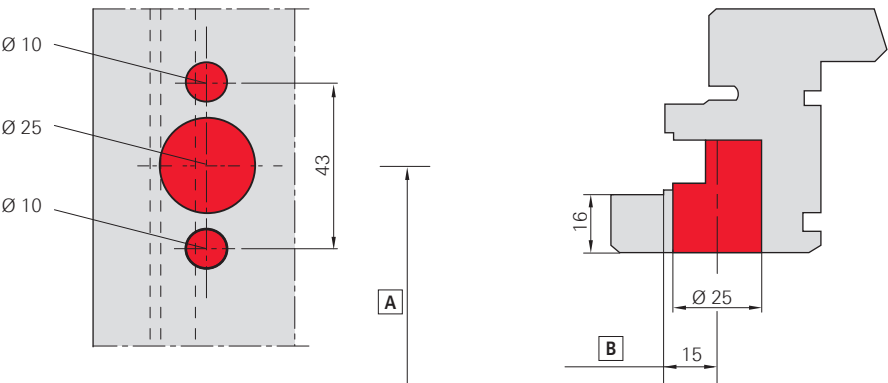
INFO

All couplable components are delivered attached in the centre.

8.6 Drilling and routing dimensions

8.6.1 T&T espagnolette

8.6.1.1 Drilling and routing pattern



Assignment	Meaning
[A]	Handle height

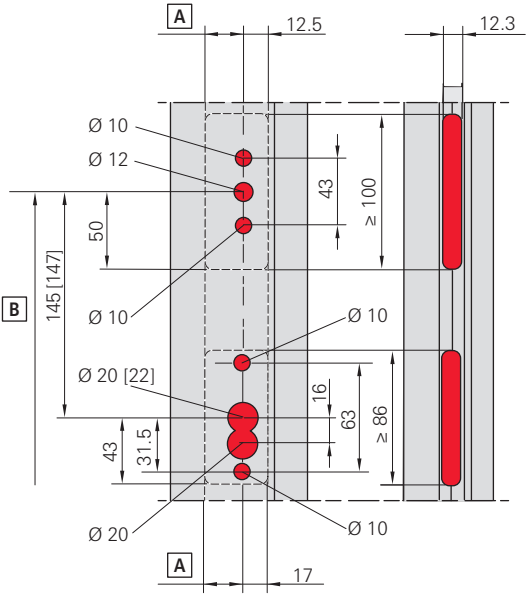
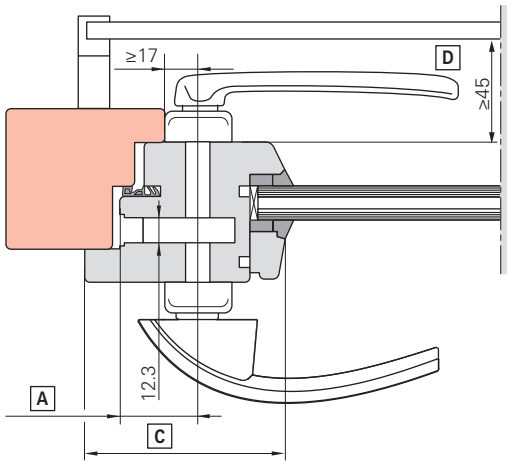


Assignment	Meaning
[B]	Backset



INFO
 Ø 10 drilling depth 33 mm (for 16 mm overlap) for countersunk screws M5 x ... DIN EN ISO 7046.

8.6.2 High backset espagnolette



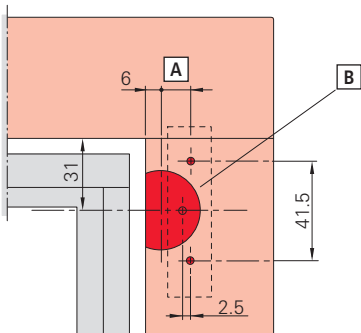
Assignment	Meaning	Backset
[A]	Backset	-
[B]	Handle height	-
[C]	82 mm	25 mm
	87 mm	30 mm
	92 mm	35 mm
	97 mm	40 mm
	102 mm	45 mm
	107 mm	50 mm
[D]	On roller shutters	-



INFO
 Cross section: doors (inward opening).

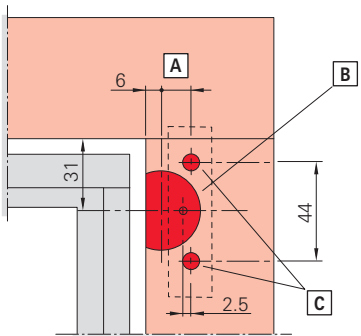
8.6.3 Stay bearing

without supporting pin



Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-

with supporting pin

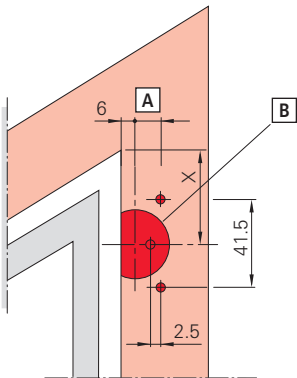


Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-
[C]	Drill hole Ø 7 mm, 5 mm deep	-



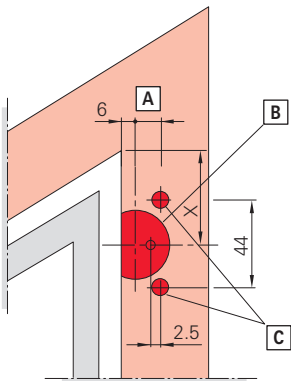
8.6.4 Stay bearing – pitched window

without supporting pin



Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-

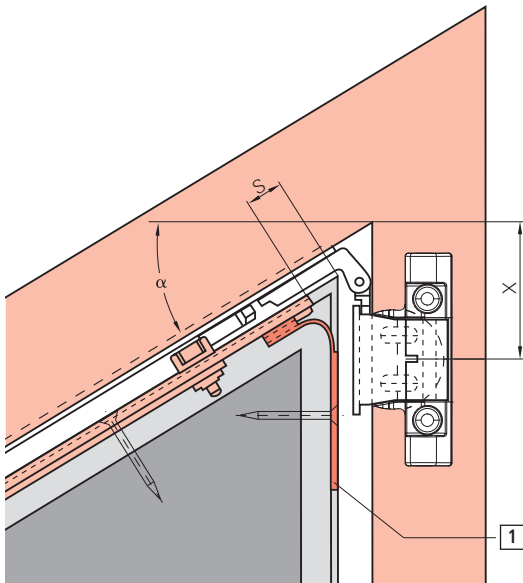
with supporting pin



Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-
[C]	Drill hole Ø 7 mm, 5 mm deep	-

Installation
Drilling and routing dimensions
 Stay bearing – pitched window

Pitched stay arm – pitched angle

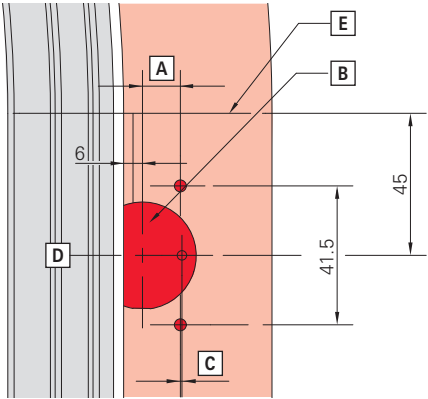


Pitched angle α	50°	45°	40°	35°	30°	25°	20°	15°	10°	5°	0°	-5°	-10°	-15°
Floating-mullion position S	13	13.5	13.8	14	14.1	14.1	14.1	14	13.8	13.6	13.4	12.9	12.5	12
Connection bracket	without	without	without	without	without	without	without	without	without	without	with	without	without	without
End piece [1]	with	with	with	with	with	with	with	without	without	without	without	without	without	without
Distance dimension [X]	54.6	51.7	49.3	47.5	46	44.8	43.8	43	42.3	41.8	41.4	41.1	41	40.9



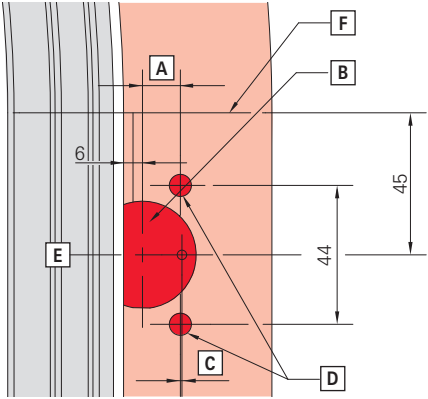
8.6.5 Stay bearing, adjustable – arched window

without supporting pin



Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-
[C]	0.5 mm	12/18-9, 12/18-13
	-1.5 mm	12/20-9, 12/20-13
[D]	Stay bearing centre	-
[E]	Start of arch	-

with supporting pin



Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-
[C]	0.5 mm	12/18-9, 12/18-13
	1.5 mm	12/20-9, 12/20-13
[D]	Drill hole Ø 7 mm, 5 mm deep	-
[E]	Stay bearing centre	-
[F]	Start of arch	-

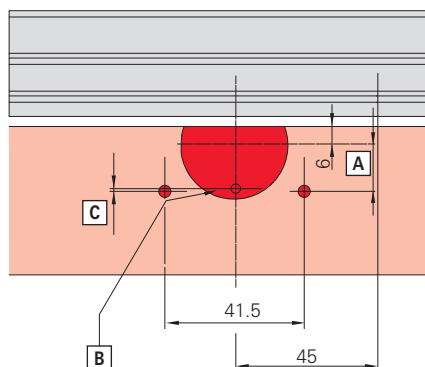
Installation

Drilling and routing dimensions

Stay bearing, adjustable – Tilt-Only sash

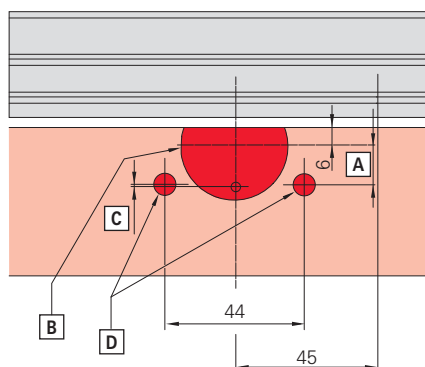
8.6.6 Stay bearing, adjustable – Tilt-Only sash

without supporting pin



Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-
[C]	0.5 mm	12/18-9, 12/18-13
	-1.5 mm	12/20-9, 12/20-13

with supporting pin

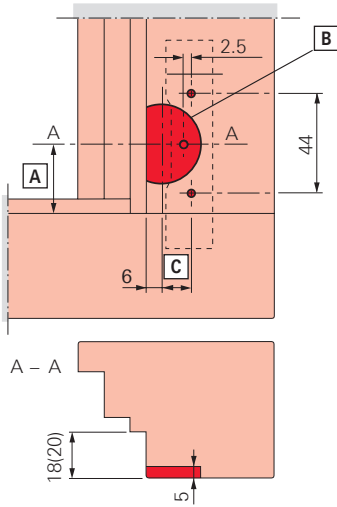


Assignment	Meaning	System
[A]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13
[B]	Drill hole Ø 34 mm, 5 mm deep	-
[C]	0.5 mm	12/18-9, 12/18-13
	1.5 mm	12/20-9, 12/20-13
[D]	Drill hole Ø 7 mm, 5 mm deep	-



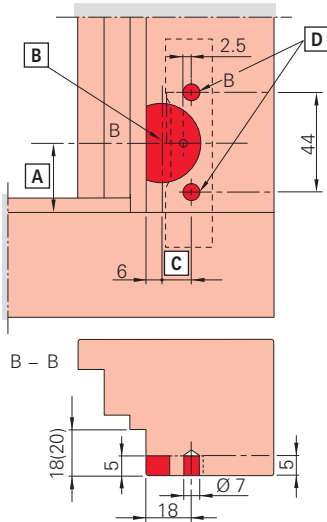
8.6.7 Pivot rest

Without supporting pin



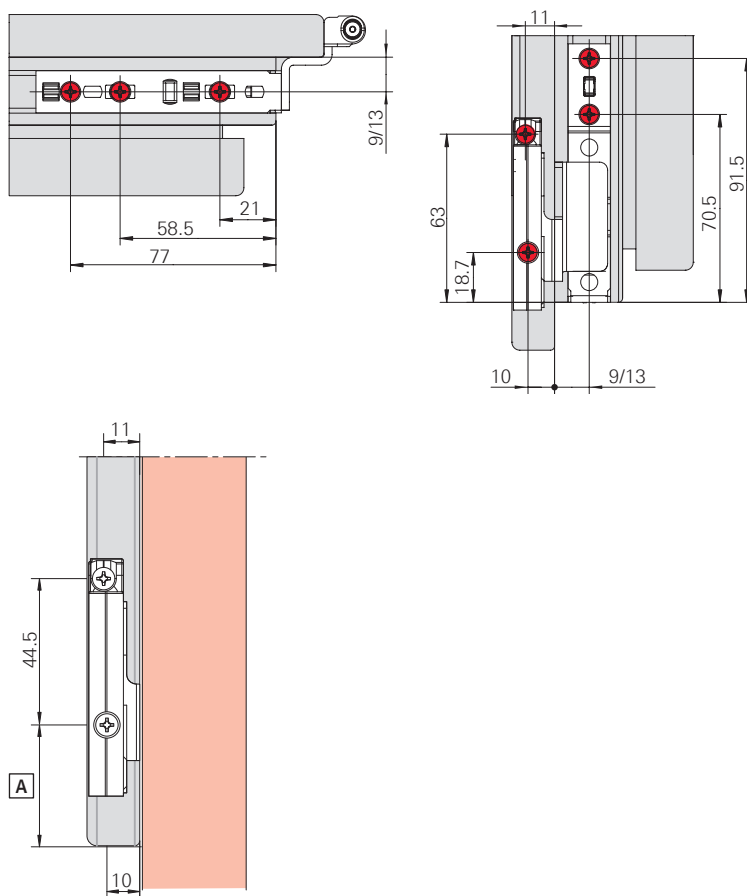
Assignment	Meaning	Version
[A]	31.0 mm	Standard
	39.0 mm	Threshold (39.0)
	51.5 mm	Threshold (51.5)
[B]	Drill hole Ø 34 mm, 5 mm deep	–
[C]	12.0 mm	12/18-9, 12/18-13
	14.0 mm	12/20-9, 12/20-13

With supporting pin



Assignment	Meaning	Version
[A]	31.0 mm	Standard
	39.0 mm	Threshold (39.0)
	51.5 mm	Threshold (51.5)
[B]	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	–

8.6.8 Rebate corner hinge



Assignment	Meaning	System
[A]	36.5 mm	Standard; 12/18-9, 12/18-13
	38.5 mm	Standard; 12/20-9, 12/20-13
	44.5 mm	Threshold (39.0); 12/18-9, 12/18-13
	46.5 mm	Threshold (39.0); 12/20-9, 12/20-13
	57.0 mm	Threshold (51.5); 12/18-9, 12/18-13
	59.0 mm	Threshold (51.5); 12/20-9, 12/20-13



INFO

Connecting thresholds

The following document provides a detailed description of how to connect thresholds to the Roto NX hardware system.



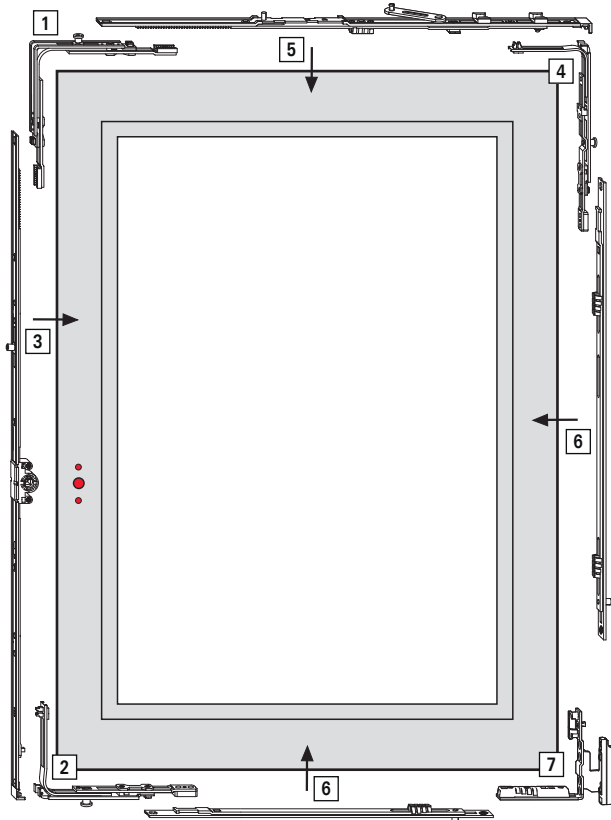
IMO 347



8.7 Sash

8.7.1 Installation sequence

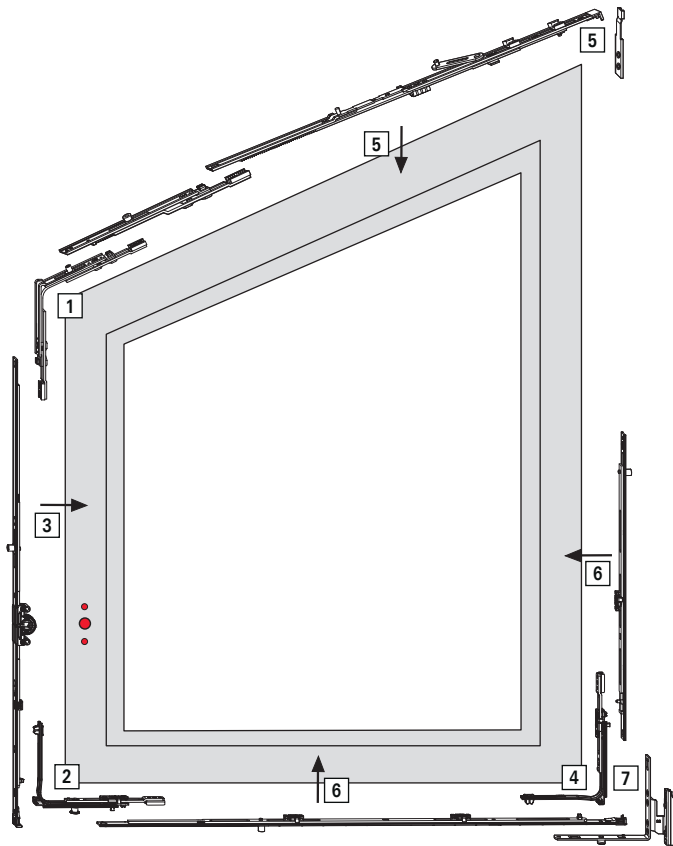
Rectangular window



Installation sequence (suggestion)

- [1] Corner drive
- [2] Corner drive
- [3] T&T espagnolette
- [4] Sash stay corner drive
- [5] Stay guide
- [6] Vertical and horizontal centre lock
- [7] Rebate corner hinge

Pitched window

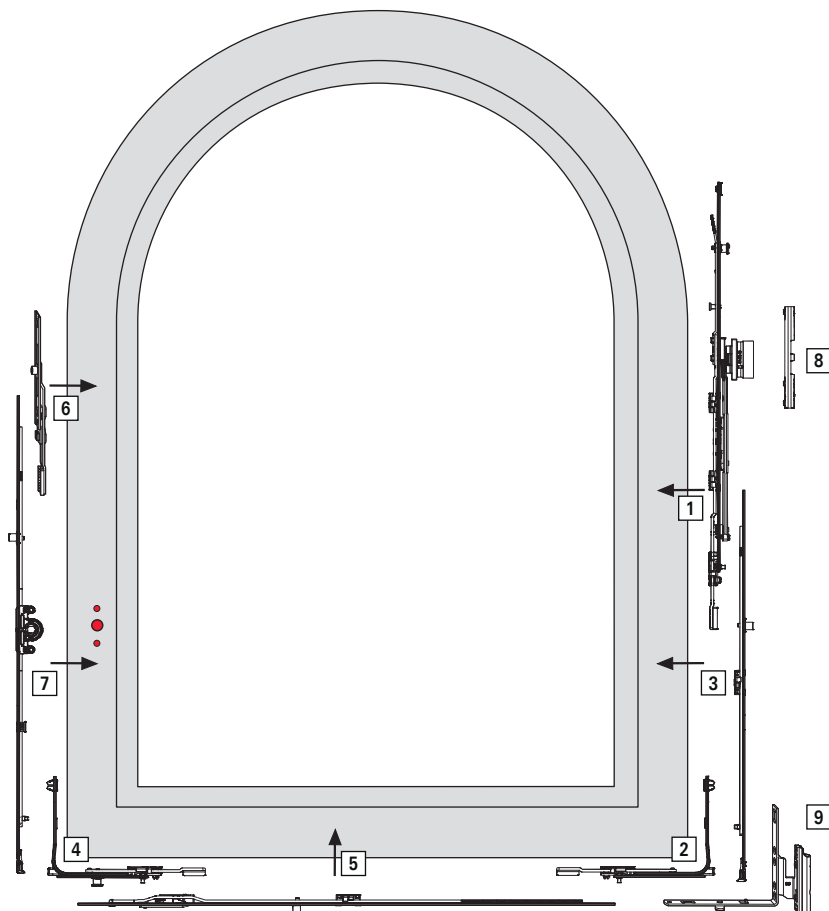


Installation sequence (suggestion)

- [1] Corner drive for pitched windows
- [2] Corner drive
- [3] T&T espagnolette
- [4] Corner drive for arched windows
- [5] Stay guide with pitched stay guide end piece
- [6] Vertical and horizontal centre lock
- [7] Rebate corner hinge



Arched window



Installation sequence (suggestion)

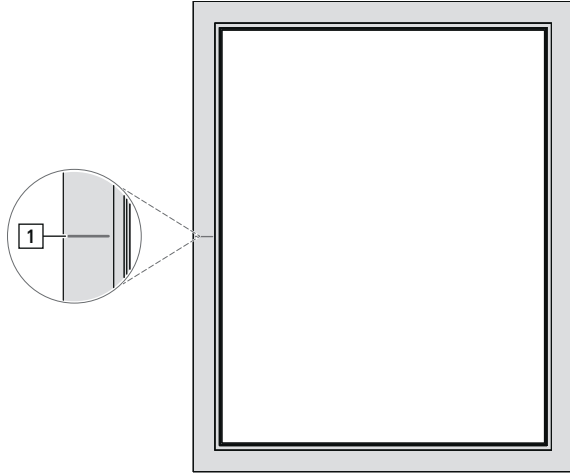
- [1] Arched sash stay
- [2] Corner drive for arched windows
- [3] Arched component, vertical
- [4] Corner drive
- [5] Arched component, horizontal
- [6] Arched espagnolette connector
- [7] T&T espagnolette
- [8] Retainer
- [9] Rebate corner hinge

8.7.2 Preparing the sash for the T&T espagnolette

8.7.2.1 Handle drill holes

Drilling the holes for the handle

1. Mark the handle height on the inside of the sash [1].



2. Drill holes.
Note any different drilling dimensions. → 8.6
"Drilling and routing dimensions" from page 216
3. Deburr the drill holes.

8.7.2.2 Gearbox cutout

Routing the gearbox cutout

1. Route the espagnolette cutout.
Observe the routing dimensions. → 8.6 *"Drilling and routing dimensions" from page 216*
2. Deburr the espagnolette cutout.

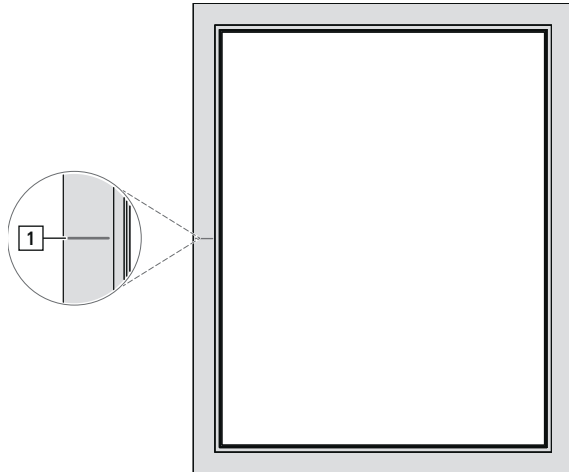


8.7.3 Preparing the sash for a lockable T&T espagnolette

8.7.3.1 Handle drill holes

Drilling the holes for the handle

1. Mark the handle height on the inside of the sash [1].



2. Drill holes.
Note any different drilling dimensions. → 8.6
"Drilling and routing dimensions" from page 216
3. Deburr the drill holes.

8.7.3.2 Gearbox cutout with lock casing

Routing the gearbox cutout with lock casing

1. Route the espagnolette cutout.
Observe the routing dimensions. → 8.6 *"Drilling and routing dimensions" from page 216*
2. Deburr the espagnolette cutout.

8.7.4 Cropping the hardware components



ATTENTION

Incorrect cropping methods may result in property damage.

Do not insert the hardware components into the sash before they have been cropped. The screw guide engages and can be destroyed when it is removed.

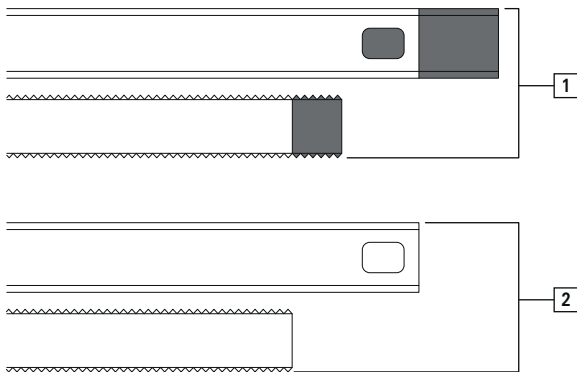
- Only lay out the hardware components and do not insert them into the sash before they have been cropped.

The following hardware components are cropped:

- Espagnolette
- Centre locks

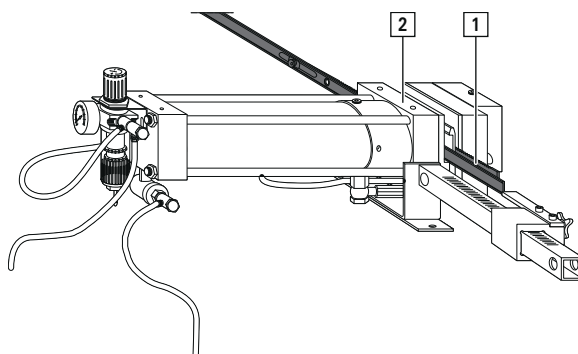
Cropping with a pneumatic punch (hole punching)

Hardware components are delivered 10 mm longer than the nominal dimension.



Assignment	Description
[1]	Hardware delivery state
[2]	Hardware, cropped

1. Place the hardware component in the required position.
2. Mark the length on the hardware component.
3. Insert the hardware component [1] into the pneumatic punch [2].



4. Align the hardware component.
5. Crop the hardware component.



8.7.5 Corner drives



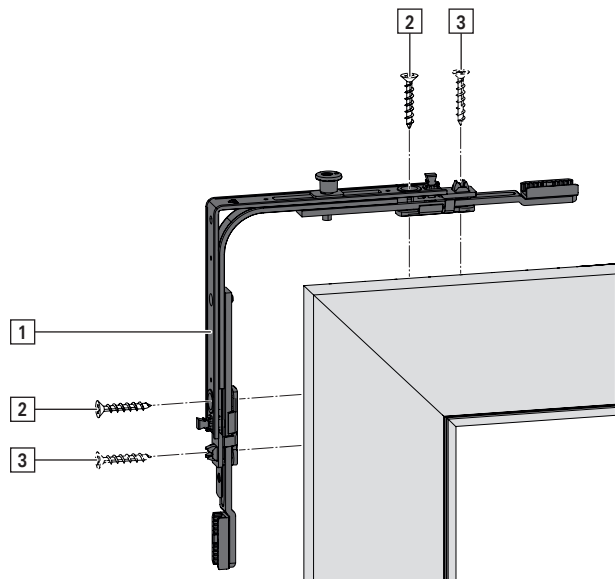
INFO

All components are manufactured with centre fixing.

8.7.5.1 Corner drive

Installing the corner drive

1. Insert the corner drives [1] and screw them down with two screws [2].



2. After all of the connector components have been installed, screw down the corner drives with a further two screws [3]. → 8.5 "Force-fit connection" from page 216

8.7.6 T&T espagnolettes

8.7.6.1 Fixed handle height

Installing the T&T espagnolette

1. Place the espagnolette in the required position, mark the length on one side and crop it → 8.7.4 "Cropping the hardware components" from page 230.
2. Insert the espagnolette with the cropped side facing upwards and create a force-fit connection. → 8.5 "Force-fit connection" from page 216



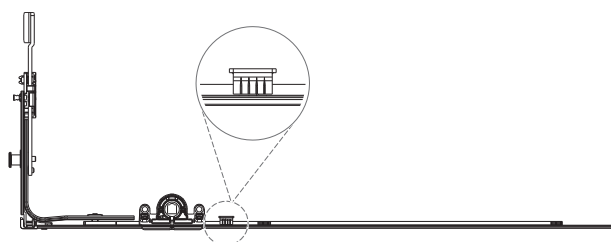
PRECONDITION

At an SRH of > 2400 mm, insert the multipart centre lock at the top on the locking side and create a force-fit connection.



INFO

With SRH 280 – 290 mm, the screw guide must be removed (e.g. using pliers).





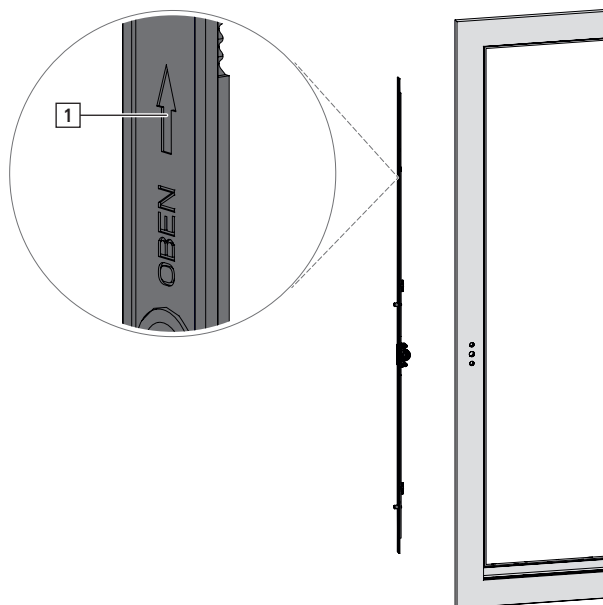
8.7.6.2 Centred / variable handle height

Installing the T&T espagnolette

1. Place the espagnolette in the required position, mark the length on both sides, remove it and crop it → 8.7.4 "Cropping the hardware components" from page 230.

2. Insert the espagnolette. Ensure it is installed in the correct direction, with the arrow [1] pointing upwards.

Create a force-fit connection. → 8.5 "Force-fit connection" from page 216



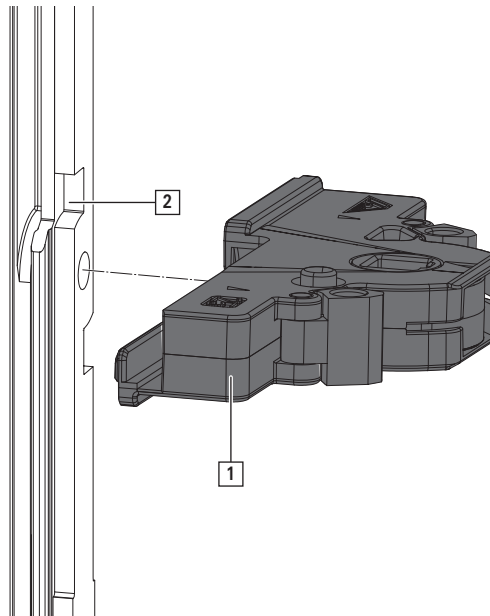
PRECONDITION

With SRH > 2400 mm, insert the centre lock, multipart, at the top on the locking side and create a force-fit connection.

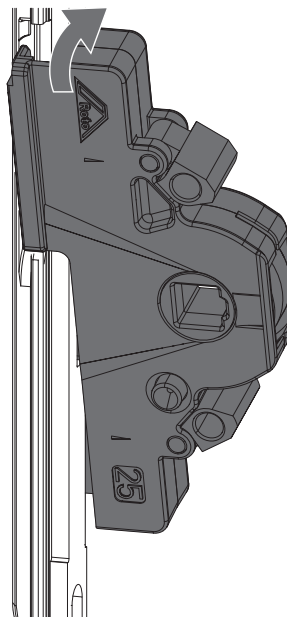
8.7.7 High backset espagnolette

Gearbox

1. Insert the gearbox [1] into the espagnolette faceplate [2] rotated by 90°. While doing so, insert the cam into the hole provided.



2. Turn the gearbox clockwise until the gearbox clicks into place.
The gearbox is positioned flush with the espagnolette faceplate.



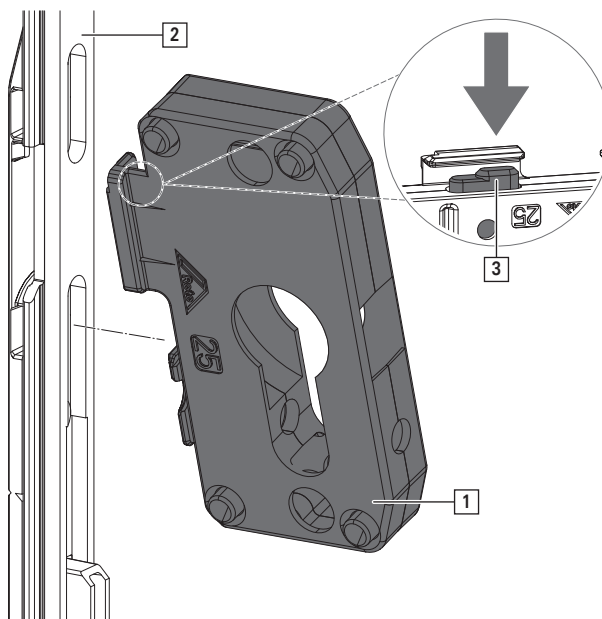
3. For dismantling, turn the gearbox anticlockwise until the gearbox comes out of the groove. Remove from the espagnolette faceplate.



Lock casing

1. If the locking lug [3] is protruding, push it back into the lock casing [1].

Turn the lock casing slightly before inserting it into the espagnolette faceplate [2].



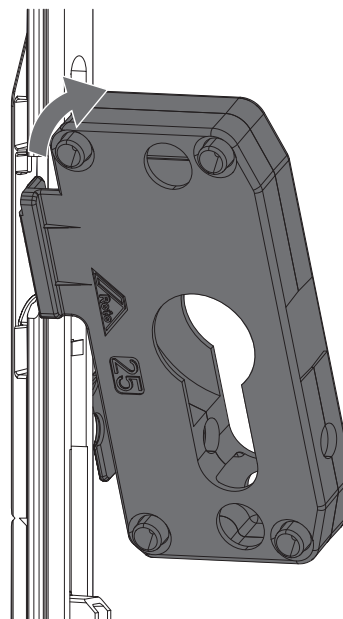
2. Insert the lock casing into the groove and turn clockwise until the lock casing clicks into place. The lock casing is positioned flush with the espagnolette faceplate.



ATTENTION **Improper installation of the lock casing may cause property damage.**

Turning the lock casing in incorrectly can damage the links.

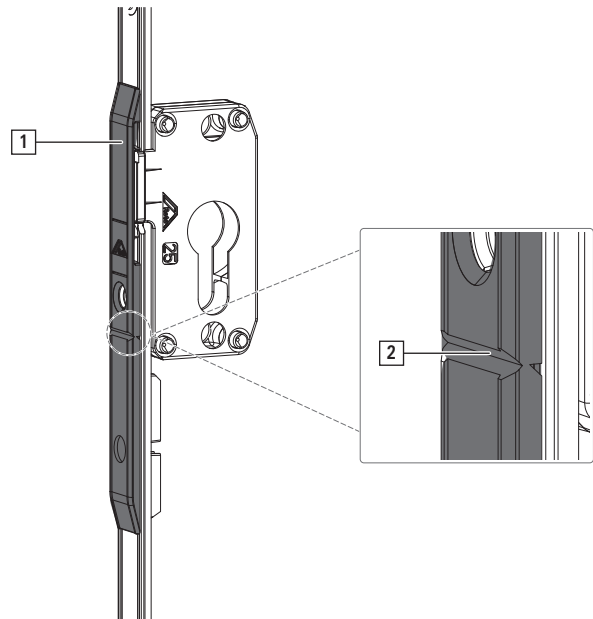
- ▶ Ensure ease of movement when turning in.
- ▶ Reposition the lock casing if excessive force is required.



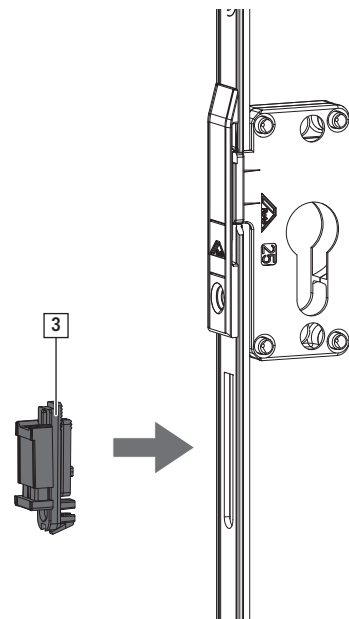
3. For dismantling, turn the lock casing anticlockwise until the lock casing comes out of the groove. Remove from the espagnolette faceplate.

Bullet catch

1. Snap the cover [1] apart at the notch [2].
Remove the lower part of the cover.



2. Insert the bullet catch [3].

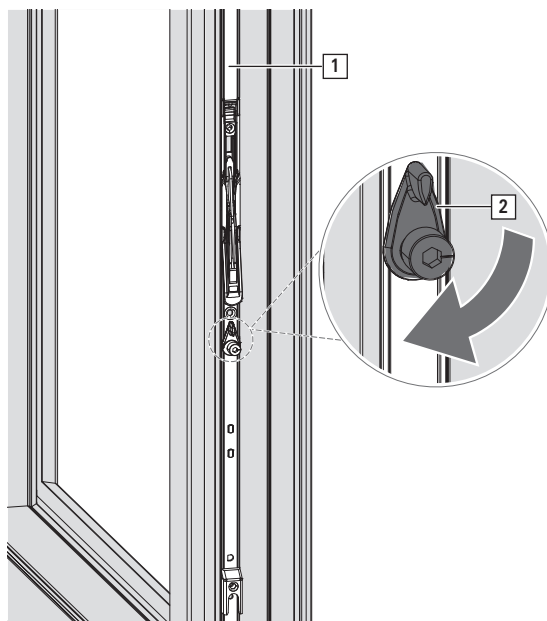




8.7.8 Lever-operated espagnolette Plus

1. Insert the lever-operated espagnolette [1] into the sash groove.

For installation in the right-hand sash, turn the eccentric bolt [2] 180°.

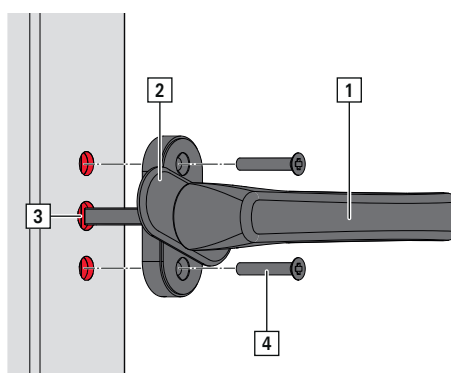


2. Mount the second opening sash with the lever-operated espagnolette open (as delivered).

8.7.9 Handle

8.7.9.1 Handle – T&T espagnolette

1. Move the handle [1] to the turn position (horizontally aligned with the escutcheon).
2. Rotate the cover [2] on the handle 90°.



3. Insert the handle into the sash [3].
4. Screw down the handle using screws [4].
5. Rotate the cover on the handle back 90°.

8.7.9.2 Centre fixing



INFO

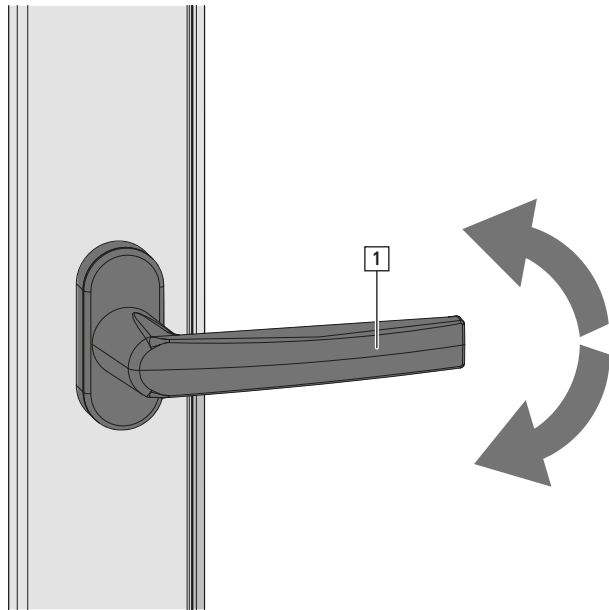
All coupleable components are delivered attached in the centre.

Undoing the centre fixing

Turning the handle undoes the centre fixing of the hardware components. Undo the centre fixing with the sash open.

1. Turn the handle [1] in one direction as far as it will go.

Audible cracking noise.



2. Turn the handle in the opposite direction as far as it will go.

Audible cracking noise.

3. Turn the handle in both directions again and check for ease of movement.



8.7.10 Stay guide

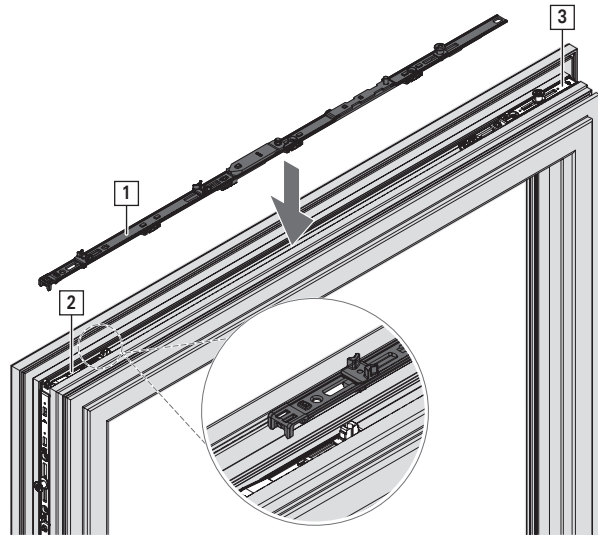
8.7.10.1 Installing the stay guide



INFO

With SRW < 310 mm, the assembly clip must be removed.

1. Insert the stay guide [1] into the sash groove and clip it into the sash stay corner drive [2].



2. Connect the stay guide to the corner drive [3].
Creating a force-fit connection → *from page 216*

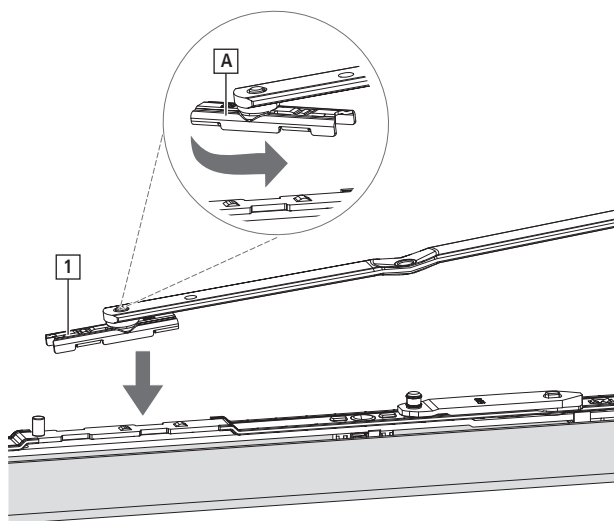
8.7.10.2 Mounting the stay arm

1. Position the slider [1] of the stay arm on the stay guide.

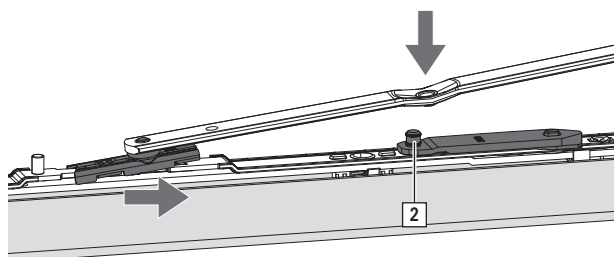


INFO

With $SRH < 500$ mm, the tilt distance must be limited to 80 mm. Turn the slider 180° to limit the tilt distance to 80 mm [A].



2. Move the stay arm and clip it onto the supporting arm bolt [2].



INFO

Anti-slam protection is achieved automatically by tilting the sash.



8.7.11 Arched sash stay



INFO

The frame (wall connection) should be attached with several screws in the area of the sash stay.

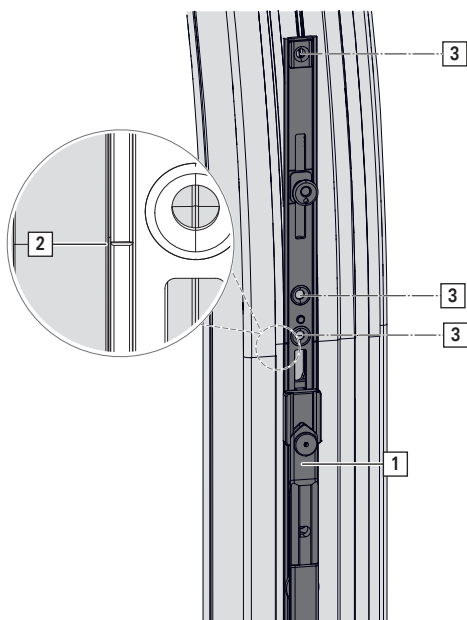


INFO

To prevent rebate clearance problems on the espagnolette side, we recommend adhering the window pane to the sash profile. If it is not possible to adhere the entire window, the hinge side must be adhered as a minimum.

For information on adhering or spacer blocking the pane, see Glazing Guide FLY_11.

1. Install the arched sash stay [1] with notch [2] at the start of the arch and fasten with three screws [3].



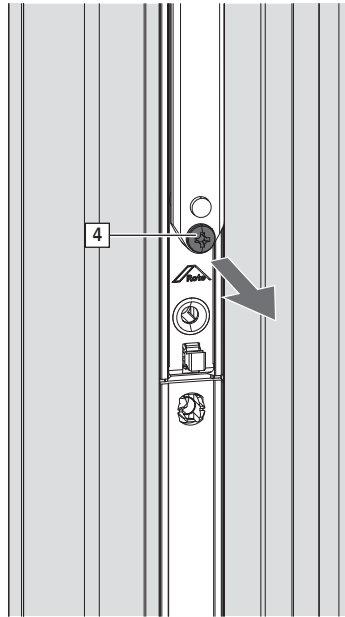
2. Install the hardware in its entirety. Note the installation sequence → *from page 225*.

Installation

Sash

Arched sash stay

3. Remove the locking screw [4] from the arched sash stay.

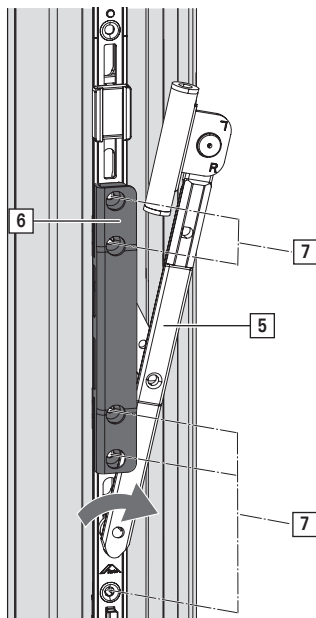


4. Fold out the stay arm [5] and fit the retainer [6]. Fasten the remaining screws [7].



INFO

Install the retainer with screws of a maximum length.

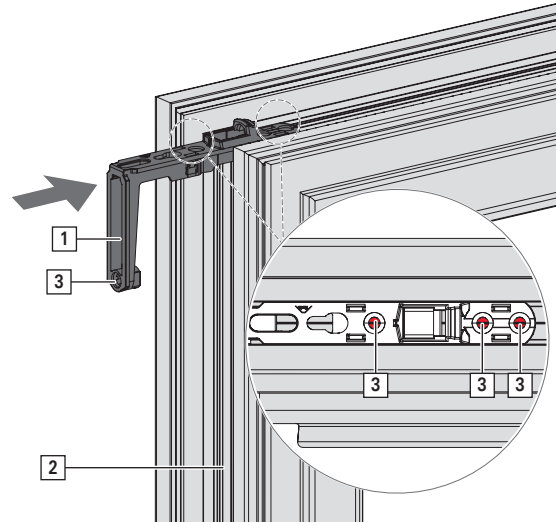




8.7.12 Rebate sash stay

Installing the rebate stay guide

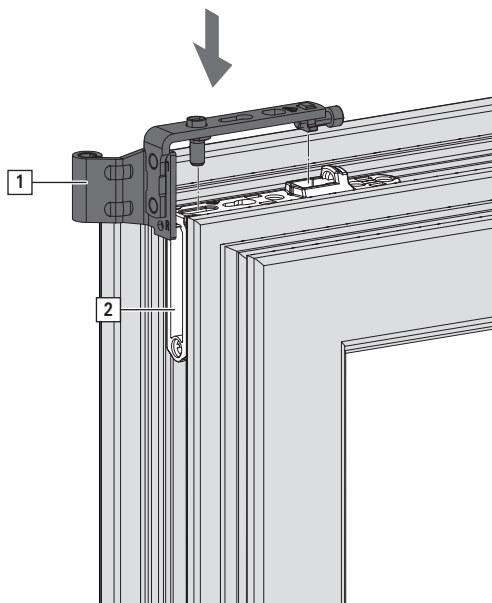
1. Insert the rebate stay guide [1] into the sash groove [2].
Check that it is seated flush.



2. Fasten with four screws [3].

Installing the rebate stay arm

1. Place the rebate stay arm [1] on the rebate stay guide [2] from above at a slight angle.

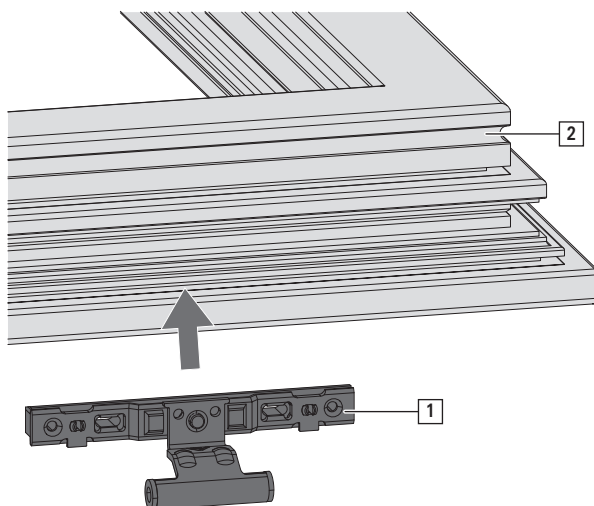


8.7.13 Turn-Only / Tilt-Only rebate hinge

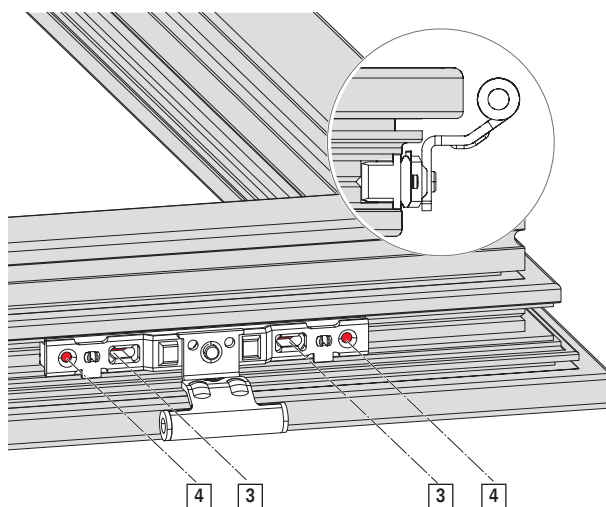
**INFO**

If two or more Turn-Only / Tilt-Only rebate hinges are used, only one hinge without alignment must ever be used.

1. Insert the Turn-Only / Tilt-Only rebate hinge [1] into the sash groove [2] and put it into position.



2. Fasten with two screws [3].
If required, align the Turn-Only / Tilt-Only rebate hinge with the stay bearing at the slots.



3. Then screw in another two screws [4].
Tighten all four screws.

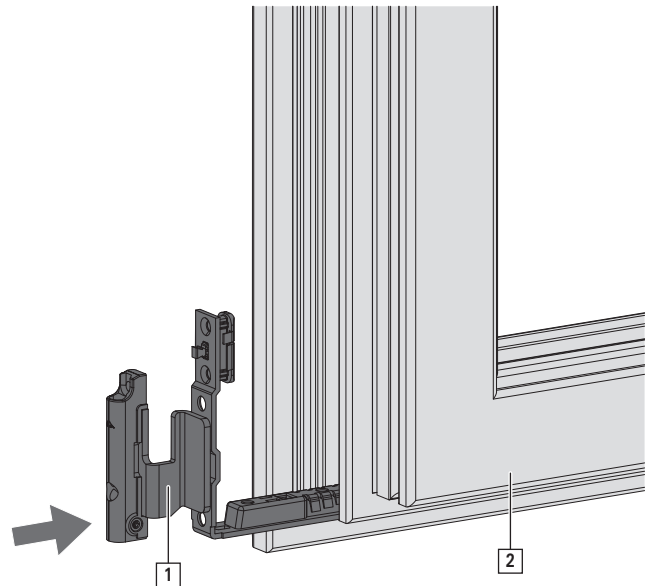
**INFO**

At least three hinges are required from SRW 1200 mm.

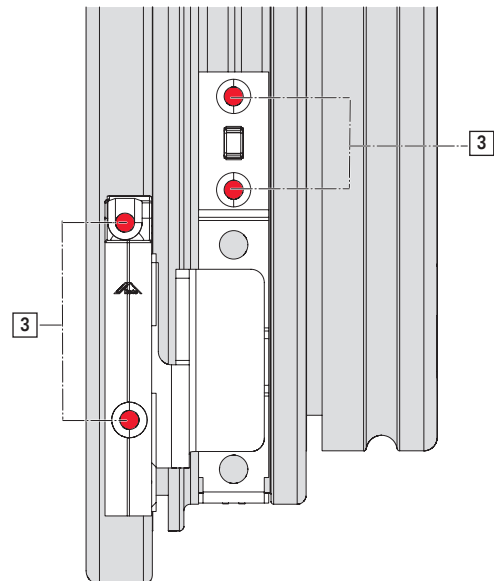
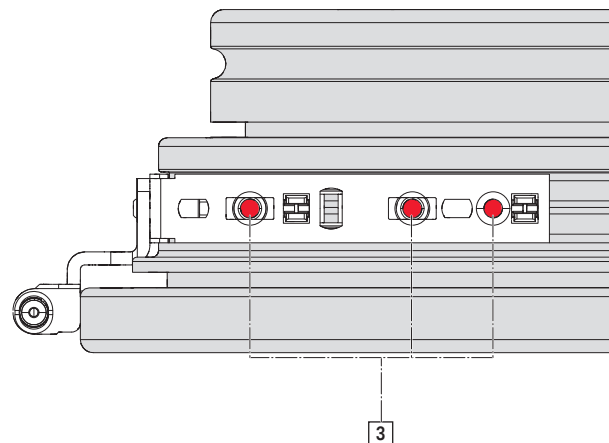


8.7.14 Rebate corner hinge

1. Place the corner hinge [1] on the sash [2].



2. Secure the corner hinge with seven screws [3].

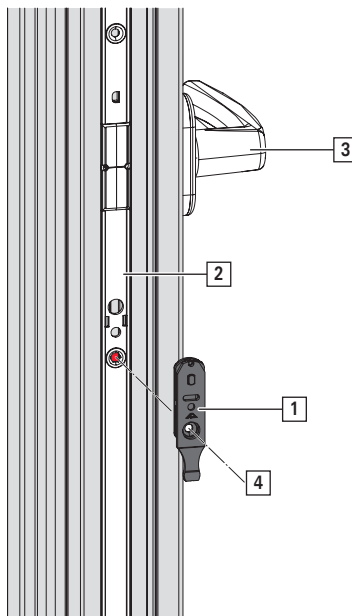


8.7.15 Lifting mishandling device / sash lifter

**INFO**

The sash lifter is installed in the same way as the lifting mishandling device. The installation of the lifting mishandling device is shown here.

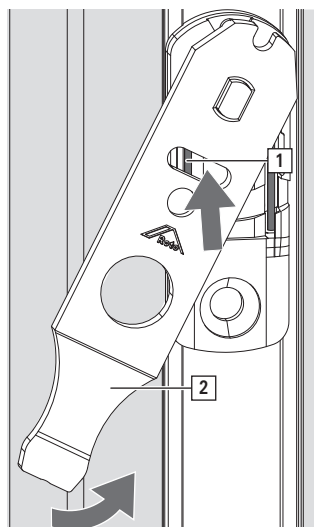
1. Clip the lifting mishandling device [1] into the hole pattern provided in the espagnolette [2]. Position near the handle [3].



2. Fasten with a screw [4].
3. Activate the lifting mishandling device by pushing the arm in the required direction until the arm cam snaps past the spring. Do not push the arm cam beyond the housing. The lifting mishandling device's centre fixing is undone.

Restoring the neutral position

1. Use a suitable tool, for example a screwdriver, to push down on the spring [1] beneath the slot.

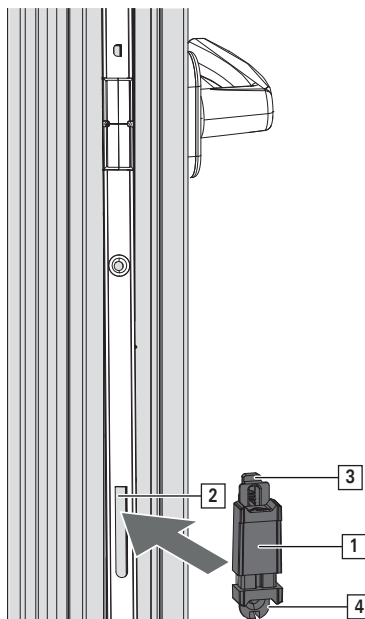




2. Keep the spring held down and turn the arm [2] back to 0°.
The lifting mishandling device returns to the neutral position and can be reactivated.

8.7.16 Bullet catch

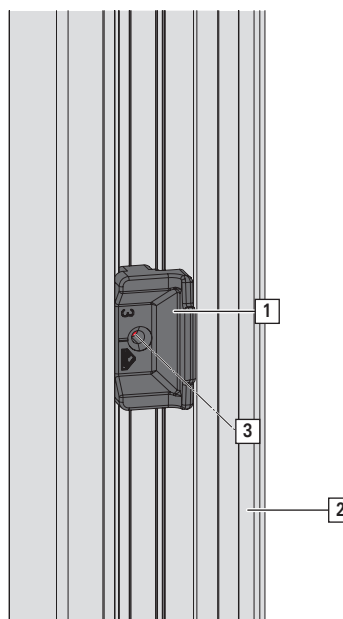
1. Insert the bullet-catch sash component [1] into the espagnolette recess [2].
To do so, insert the nose of the bullet catch [3] into the flat side of the espagnolette recess and clip the bullet catch into place.



2. Secure with screw [4].

8.7.17 Centre closer, concealed

1. Place the centre closer [1] in the sash groove [2].
For positioning, see → *from page 262*



2. Fasten with a screw [3].

8.8 Frame



INFO

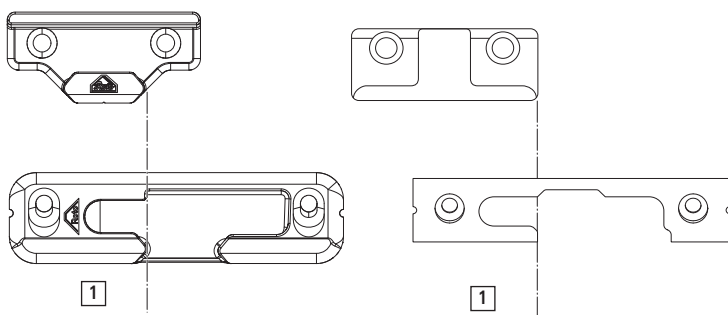
Install the frame components when the frame is horizontal (workshop).

Once the frame is fitted, the reveal may prevent frame components from being installed correctly.

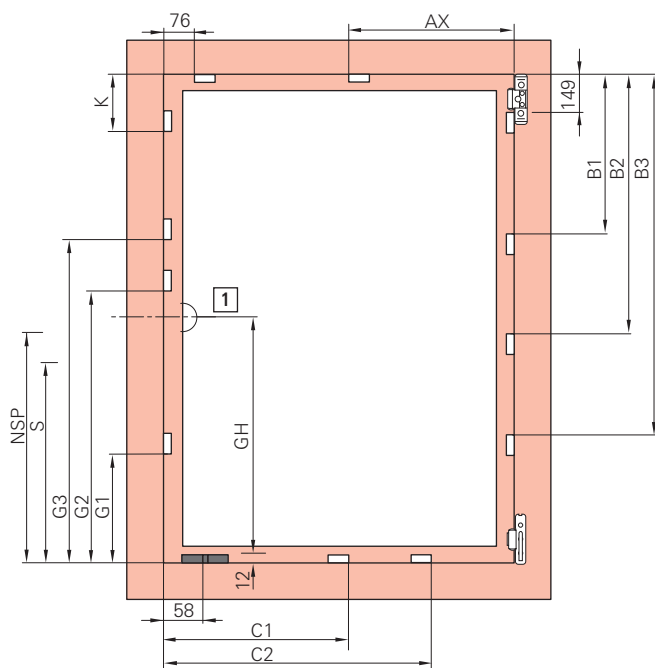
8.8.1 Position of strikers and tilt strikers

8.8.1.1 Striker positions and tilt strikers

Positioning of the strikers and tilt strikers on the basis of the point of entry [1] of the cams:



8.8.1.2 Tilt&Turn hardware / TiltFirst hardware – basic security



[1] Handle centre

□ Striker e.g.

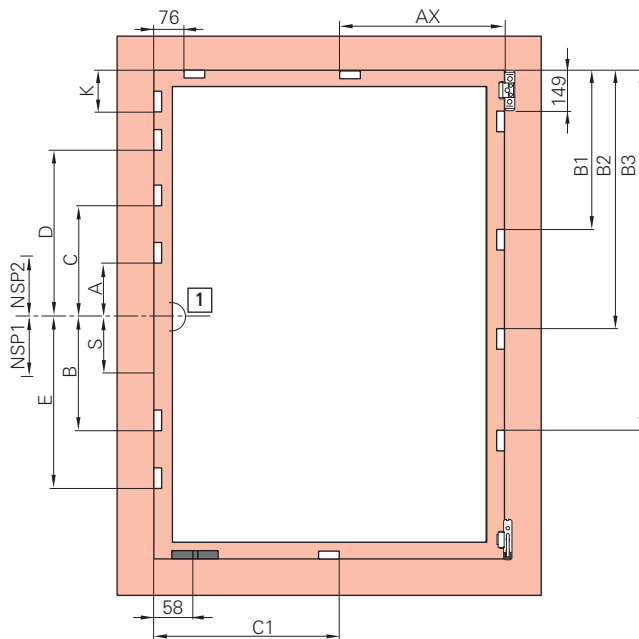
■ Tilt striker e.g.

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
280 – 570	120	–	–	–	–	–	–
511 – 600	170	–	–	–	–	262	–
601 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–



SRH [mm]	GH	G1	G2	G3	K	NSP	S
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807
1801 – 2400	1000	700	1370	–	–	1121	807
2401 – 2600	1000	700	1370	1770	–	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

□ Striker e.g. 

■ Tilt striker e.g. 

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
310 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2400	–	312	358	758	740	–	–	109	395
2401 – 2600	–	312	358	758	740	–	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

Stay guide

SRW [mm]	AX	Size
1201 – 1400	750	500 / 1290
1401 – 1600	750	500 / 1290 ^[20]

Centre lock, vertical

SRH [mm]	B1	B2	B3	Centre lock
1101 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E
2401 – 2600	746	1346	1750	2x CL 600 E KU + CL 400 E
2601 – 2800	746	1346	1946	2x CL 600 E KU + CL 600 E

[20] with additional stay arm

Installation

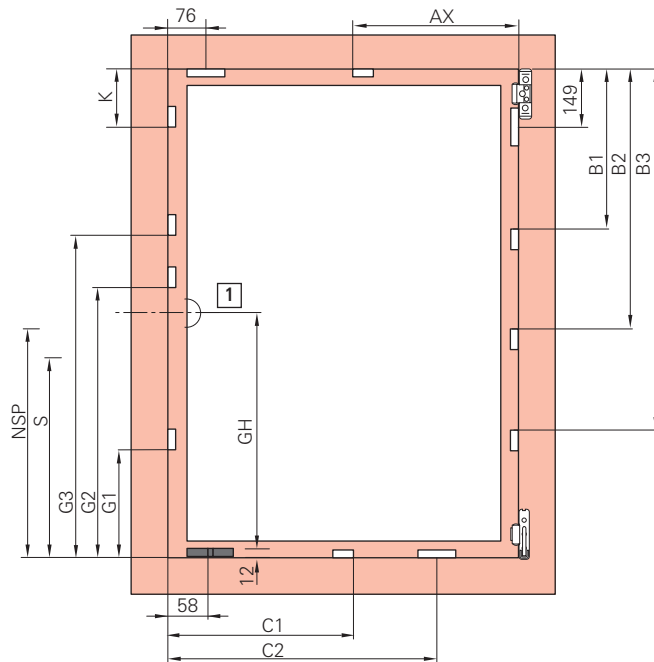
Frame

Position of strikers and tilt strikers

Centre lock, horizontal

SRW [mm]	C1	Centre lock
1101 – 1600	658	CL 600 E

8.8.1.3 Tilt&Turn hardware – RC 1 N



[1] Handle centre

□ Striker e.g. 

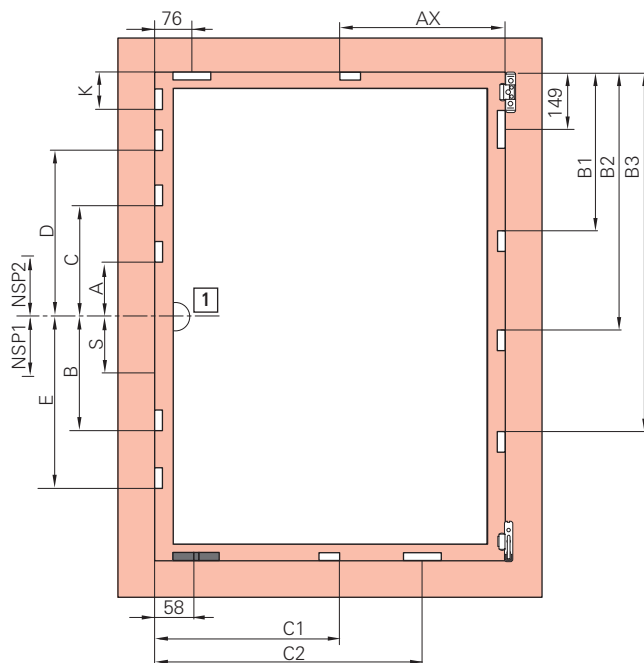
■ Tilt striker e.g. 

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
280 – 570	120	–	–	–	–	–	–
511 – 600	170	–	–	–	–	262	–
601 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807
1801 – 2000	1000	700	1370	–	–	1121	807
2001 – 2200	1000	700	1370	1770	–	1121	807
2201 – 2400	1000	700	1370	1770	–	1121	807



SRH [mm]	GH	G1	G2	G3	K	NSP	S
2401 – 2600	1000	700	1370	1770	–	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
310 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2400	–	312	358	758	740	–	–	109	395
2401 – 2600	–	312	358	758	740	–	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

Stay guide

SRW [mm]	AX	Size
1201 – 1400	750	500 / 1290
1401 – 1600	750	500 / 1290 ^[21]

Centre lock, vertical

SRH [mm]	B1	B2	B3	Centre lock
1101 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E
2401 – 2600	746	1346	1750	2x CL 600 E KU + CL 400 E
2601 – 2800	746	1346	1946	2x CL 600 E KU + CL 600 E

[21] with additional stay arm

Installation

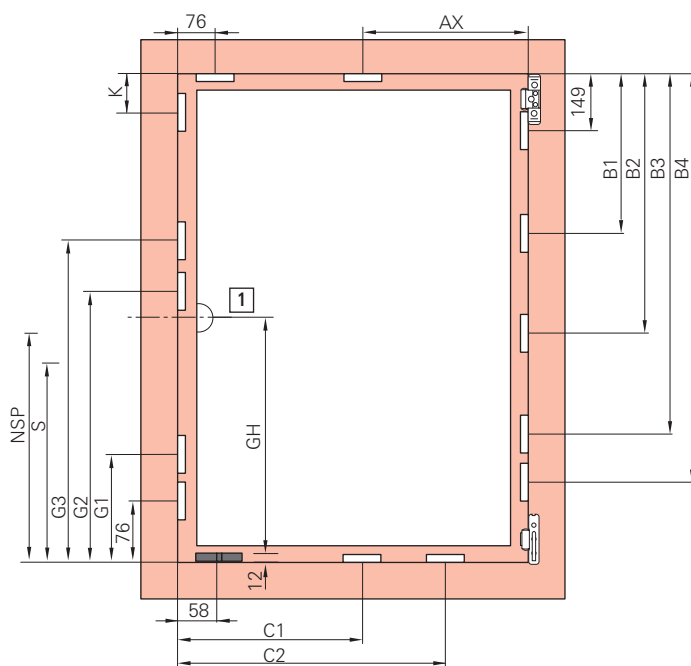
Frame

Position of strikers and tilt strikers

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
400 – 600	258	–	CL 200 P
601 – 800	462	–	CL 400 P
801 – 1000	658	–	CL 600 P
1001 – 1200	658	858	CL 600 E KU + CL 200 P
1201 – 1400	658	1062	CL 600 E KU + CL 400 P
1401 – 1600	658	1258	2x CL 600 E KU

8.8.1.4 Tilt&Turn hardware – RC 2 / RC 2 N



[1] Handle centre

□ Striker e.g. 

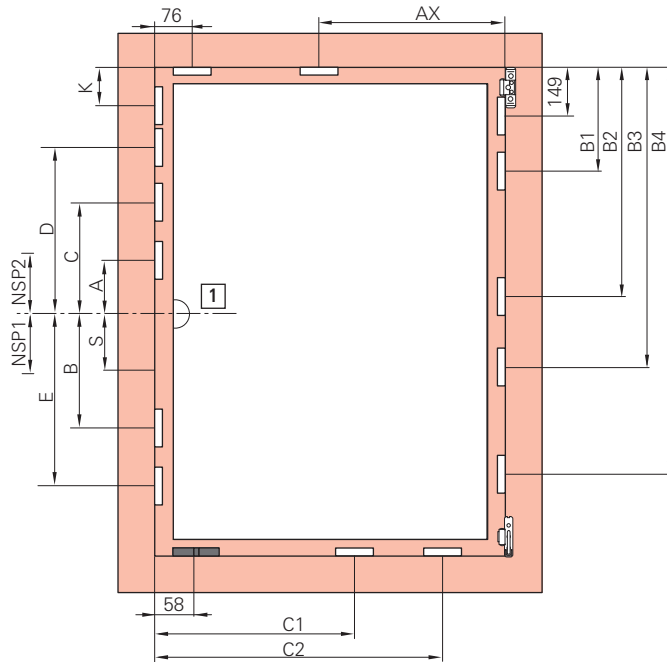
■ Tilt striker e.g. 

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
600 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807
1801 – 2000	1000	700	1370	–	–	1121	807
2001 – 2200	1000	700	1370	1770	–	1121	807
2201 – 2400	1000	700	1370	1770	–	1121	807



SRH [mm]	GH	G1	G2	G3	K	NSP	S
2401 – 2600	1000	700	1370	1770	258	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

□ Striker e.g. 

■ Tilt striker e.g. 

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
490 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2400	–	312	358	758	740	–	–	109	395
2401 – 2600	–	312	358	758	740	258	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1200	600	500 / 1090
1201 – 1400	600	500 / 1290

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	Centre lock
490 – 800	346	–	–	–	CL 200 V
801 – 1000	550	–	–	–	CL 400 V
1001 – 1200	746	–	–	–	CL 600 V
1201 – 1400	746	946	–	–	CL 600 V KU + CL 200 V
1401 – 1600	746	1150	–	–	CL 600 V KU + CL 400 V
1601 – 1800	746	1346	–	–	CL 600 V KU + CL 600 V
1801 – 2000	746	1346	1546	–	2x CL 600 V KU + CL 200 V
2001 – 2200	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2201 – 2400	746	1346	1946	–	2x CL 600 V KU + CL 600 V

Installation

Frame

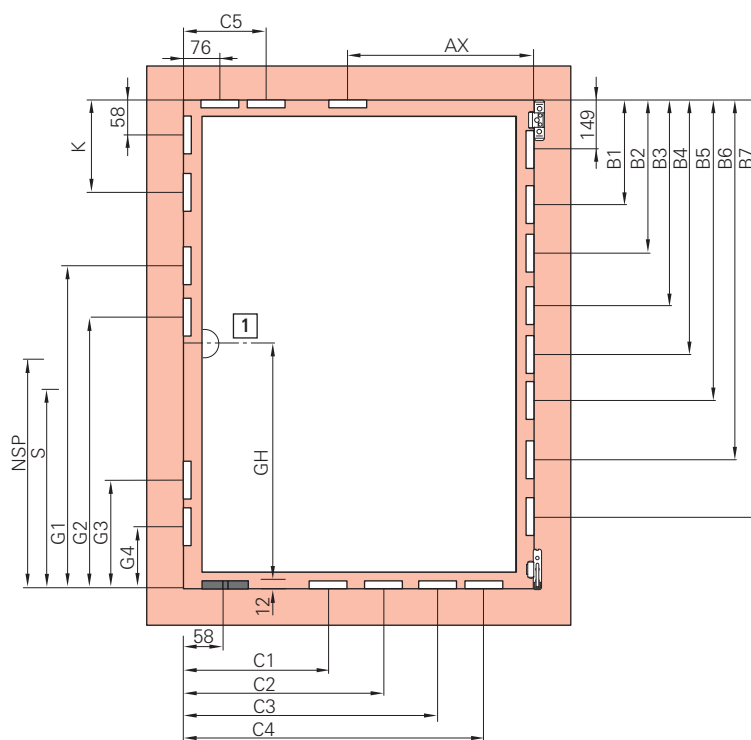
Position of strikers and tilt strikers

SRH [mm]	B1	B2	B3	B4	Centre lock
2401 – 2600	746	1346	1946	2146	3x CL 600 V KU + CL 200 V
2601 – 2800	746	1346	1946	2350	3x CL 600 V KU + CL 400 V

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
490 – 690	258	–	CL 200 V
691 – 890	462	–	CL 400 V
891 – 1090	658	–	CL 600 V
1091 – 1290	658	858	CL 600 V KU + CL 200 V
1291 – 1400	658	1062	CL 600 V KU + CL 400 V

8.8.1.5 Tilt&Turn hardware – RC 3



[1] Handle centre

□ Striker e.g. 

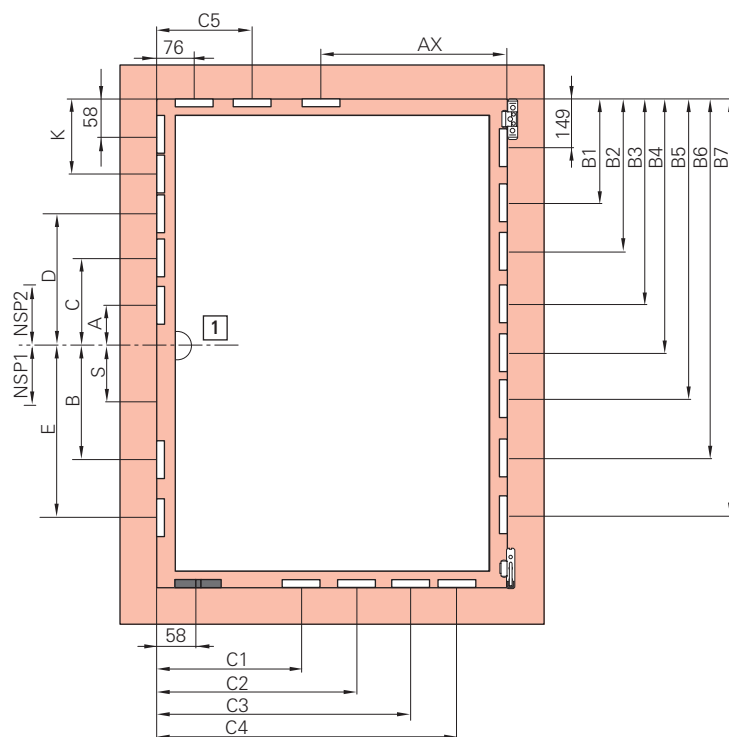
■ Tilt striker e.g. 

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
600 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807
1801 – 2000	1000	700	1370	–	–	1121	807
2001 – 2200	1000	700	1370	1770	–	1121	807
2201 – 2400	1000	700	1370	1770	–	1121	807



SRH [mm]	GH	G1	G2	G3	K	NSP	S
2401 – 2600	1000	700	1370	1770	258	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
600 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2400	–	312	358	758	740	–	–	109	395
2401 – 2600	–	312	358	758	740	258	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

Stay guide

SRW [mm]	AX	Size
801 – 1000	444	350 / 890
1001 – 1200	444	350 / 890
1201 – 1400	444	350 / 890

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	B5	B6	B7	Centre lock
600 – 800	346	–	–	–	–	–	–	CL 200 V KU
801 – 1000	346	546	–	–	–	–	–	2x CL 200 V KU
1001 – 1200	346	546	746	–	–	–	–	3x CL 200 V KU
1201 – 1400	346	746	946	–	–	–	–	CL 200 V KU + CL 400 V KU + CL 200 V KU
1401 – 1600	346	746	946	1146	–	–	–	CL 200 V KU + CL 400 V KU + 2x CL 200 V KU
1601 – 1800	346	746	1146	1346	–	–	–	CL 200 V KU + 2x CL 400 V KU + CL 200 V KU
1801 – 2000	346	746	1146	1346	1546	–	–	CL 200 V KU + 2x CL 400 V KU + 2x CL 200 V KU

Installation

Frame

Position of strikers and tilt strikers

SRH [mm]	B1	B2	B3	B4	B5	B6	B7	Centre lock
2001 – 2200	346	746	1146	1546	1746	–	–	CL 200 V KU + 3x CL 400 V KU + CL 200 V KU
2201 – 2400	346	746	1146	1546	1746	1946	–	CL 200 V KU + 3x CL 400 V KU + 2x CL 200 V KU
2401 – 2600	346	746	1146	1546	1946	2146	–	CL 200 V KU + 4x CL 400 V KU + CL 200 V KU
2601 – 2800	346	746	1146	1546	1946	2146	2346	CL 200 V KU + 4x CL 400 V KU + 2x CL 200 V KU

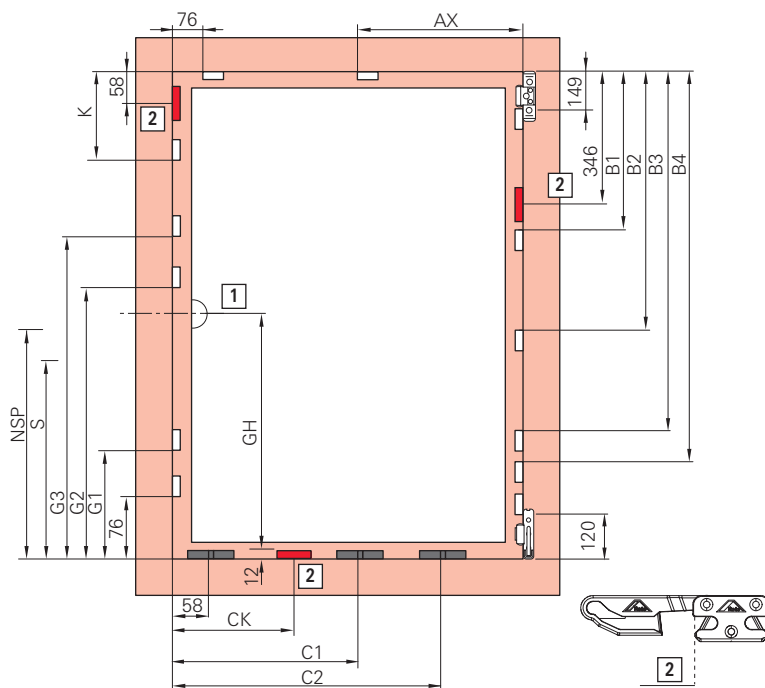
Centre lock, top horizontal

SRW [mm]	C5	Centre lock
1001 – 1200	276	CL 200 V KU
1201 – 1400	476	Additional stay arm + CL 200 V KU

Centre lock, horizontal

SRW [mm]	C1	C2	C3	C4	Centre lock
490 – 690	258	–	–	–	CL 200 V KU
691 – 890	258	458	–	–	2x CL 200 V KU
891 – 1090	258	458	658	–	3x CL 200 V KU
1091 – 1290	258	658	858	–	CL 200 V KU + CL 400 V KU + CL 200 V KU
1291 – 1400	258	658	858	1058	CL 200 V KU + CL 400 V KU + 2x CL 200 V KU

8.8.1.6 Tilt&Turn hardware – TiltSafe RC 2 / RC 2 N



[1] Handle centre

[2] Striker's point of entry

□ Striker e.g.

■ Tilt striker e.g.

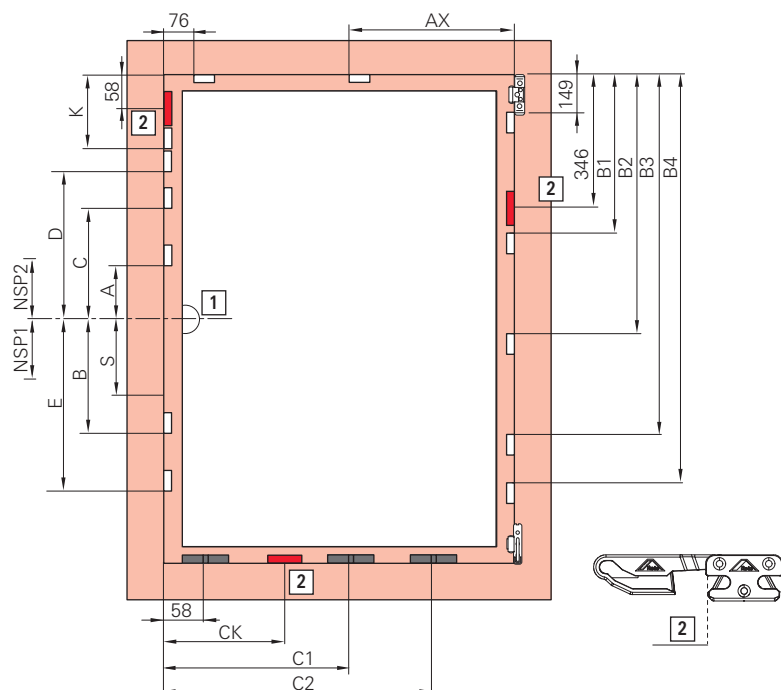
■ Security striker for tilt ventilation

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
600 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807



SRH [mm]	GH	G1	G2	G3	K	NSP	S
1801 – 2000	1000	700	1370	–	–	1121	807
2001 – 2200	1000	700	1370	1770	–	1121	807
2201 – 2400	1000	700	1370	1770	–	1121	807
2401 – 2600	1000	700	1370	1770	258	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

[2] Striker's point of entry

□ Striker e.g.

■ Tilt striker e.g.

■ Security striker for tilt ventilation

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
490 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2400	–	312	358	758	740	–	–	109	395
2401 – 2600	–	312	358	758	740	258	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1200	600	500 / 1090
1201 – 1400	600	500 / 1290

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	Centre lock
490 – 800	–	–	–	–	CL 200 V KU
701 – 900	546	–	–	–	CL 200 V KU + CL 200 V
901 – 1100	750	–	–	–	CL 200 V KU + CL 400 V

Installation

Frame

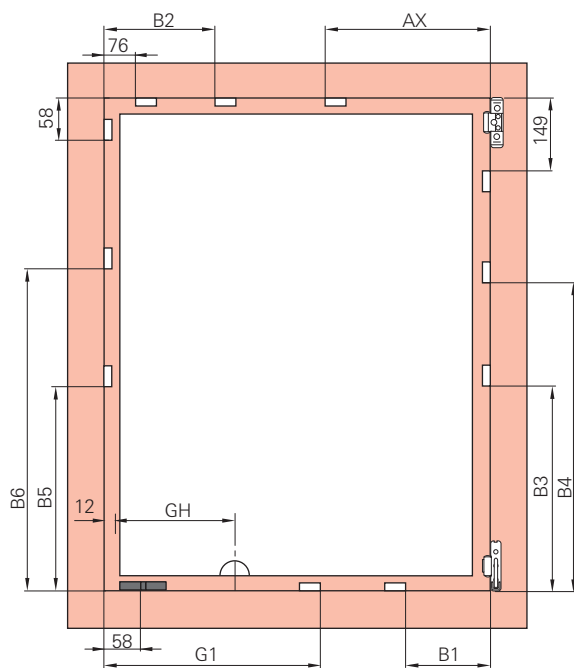
Position of strikers and tilt strikers

SRH [mm]	B1	B2	B3	B4	Centre lock
1101 – 1300	946	–	–	–	CL 200 V KU + CL 600 V
1301 – 1500	946	1146	–	–	CL 200 V KU + CL 600 V KU+ CL 200 V
1501 – 1700	946	1350	–	–	CL 200 V KU + CL 600 V KU+ CL 400 V
1701 – 1900	946	1546	–	–	CL 200 V KU + CL 600 V KU+ CL 600 V
1901 – 2100	946	1546	1746	–	CL 200 V KU + 2x CL V 600 KU + CL 200 V
2101 – 2300	946	1546	1950	–	CL 200 V KU + CL 600 V KU + CL 400 V KU + CL 400 V
2301 – 2500	946	1546	2146	–	CL 200 V KU + 2x CL 600 V KU+ CL 600 V
2501 – 2700	946	1546	2146	2346	CL 200 V KU + 3x CL 600 V KU + CL 200 V
2701 – 2800	946	1546	2146	2350	CL 200 V KU + 3x CL 600 V KU + CL 400 V

Centre lock, horizontal

SRW [mm]	CK	C1	C2	Centre lock
490 – 690	258	–	–	CL 200 V KU
691 – 890	258	458	–	CL 200 V KU + CL 200 V
891 – 1090	658	258	–	CL 200 V KU + CL 400 V KU
1091 – 1290	658	258	858	CL 200 V KU + CL 400 V KU + CL 200 V
1291 – 1400	658	258	1058	CL 200 V KU + 2x CL 400 V KU

8.8.1.7 Comfort Tilt&Turn hardware – basic security



□ Striker e.g. 

■ Tilt striker e.g. 

Comfort T&T espagnolette

SRW [mm]	GH	G1
520 – 700	220	–
701 – 900	220	452
901 – 1100	220	452
1101 – 1300	220	452
1301 – 1400	220	452

Comfort scissor stay

SRW [mm]	AX
801 – 1000	600
1001 – 1200	600
1201 – 1400	600


Centre lock, bottom horizontal

SRW [mm]	B1	Centre lock
1101 – 1300	276	CL 400 E KU
1301 – 1400	476	CL 400 E KU + CL 200 KU

Centre lock, top horizontal

SRW [mm]	B1	Centre lock
1201 – 1400	276	CL 400 E KU

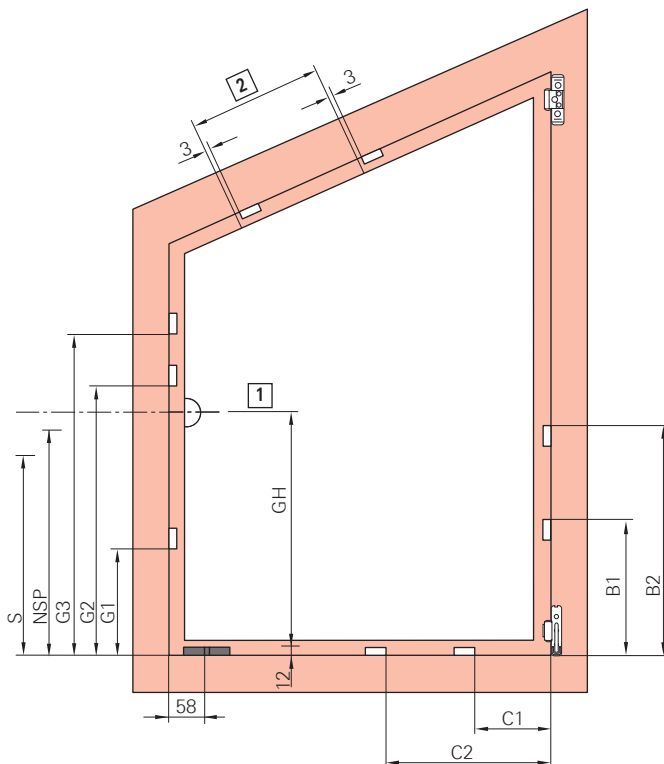
Centre lock, vertical, hinge side

SRH [mm]	B3	B4
871 – 1070	532	–
1071 – 1270	682	–
1271 – 1470	682	–
1471 – 1600	682	1152

Centre lock, vertical

SRH [mm]	B5	B6
801 – 1000	550	–
1001 – 1200	700	–
1201 – 1400	700	–
1401 – 1600	700	1170

8.8.1.8 Pitched window – basic security



Fixed handle height

[1] Handle centre

[2] Mark the striker's point of entry

□ Striker e.g. 5x5

■ Tilt striker e.g. 15x25

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	NSP	S
370 – 510	120	–	–	–	–
511 – 600	170	–	–	262	–
601 – 800	263	–	–	350	–
801 – 1000	413	–	–	288	–
1001 – 1200	513	700	–	388	–
1201 – 1400	563	700	–	388	–
1401 – 1600	563	700	–	388	–
1601 – 1800	563	700	1370	388	–
1601 – 1800	1000	700	1370	1121	807
1801 – 2000	1000	700	1370	1121	807
2001 – 2200	1000	700	1370	1121	807
2201 – 2400	1000	700	1370	1121	807

Centre lock, vertical

SRH [mm]	B1	B2	Size
1101 – 1800	658	–	542
1801 – 2400	658	1258	1212

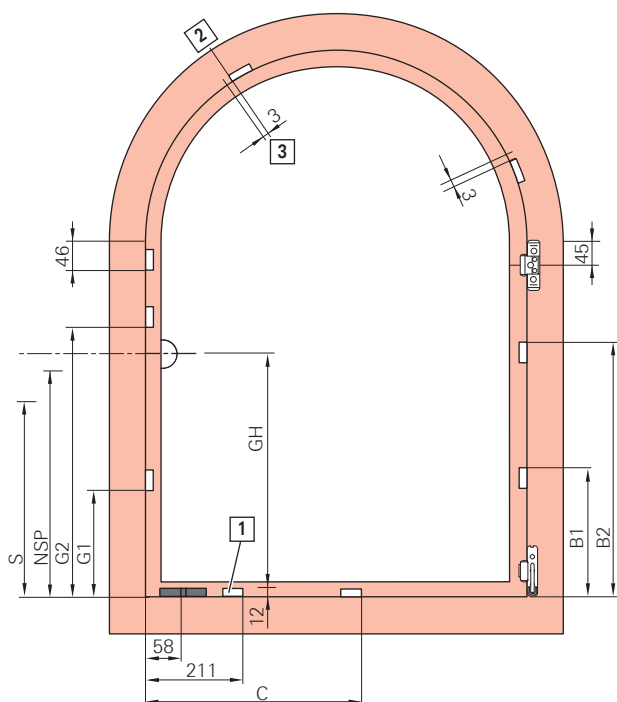
Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
340 – 530	–	–	CL 420
531 – 730	298	–	CL 620 E
731 – 930	498	–	CL 820 E



SRH [mm]	C1	C2	Centre lock
931 – 1130	698	–	CL 1020 E
1131 – 1300	298	898	CL 1220 2xE

8.8.1.9 Tilt&Turn hardware for arched windows – basic security



[1] Arched rebate run-up block

[2] Mark the striker's point of entry

[3] Radius of min. 300 mm when an arched CL is installed

□ Striker e.g.

■ Tilt striker e.g.

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	NSP	S
500 – 600	170	–	–	262	–
601 – 800	263	383	–	350	–
801 – 1000	413	550	–	288	–
1001 – 1200	513	700	–	388	–
1201 – 1400	563	700	–	388	–
1401 – 1600	563	700	1170	388	–
1601 – 1800	563	700	1370	388	–
1601 – 1800	1000	700	1370	1121	807
1801 – 2000	1000	700	1370	1121	807

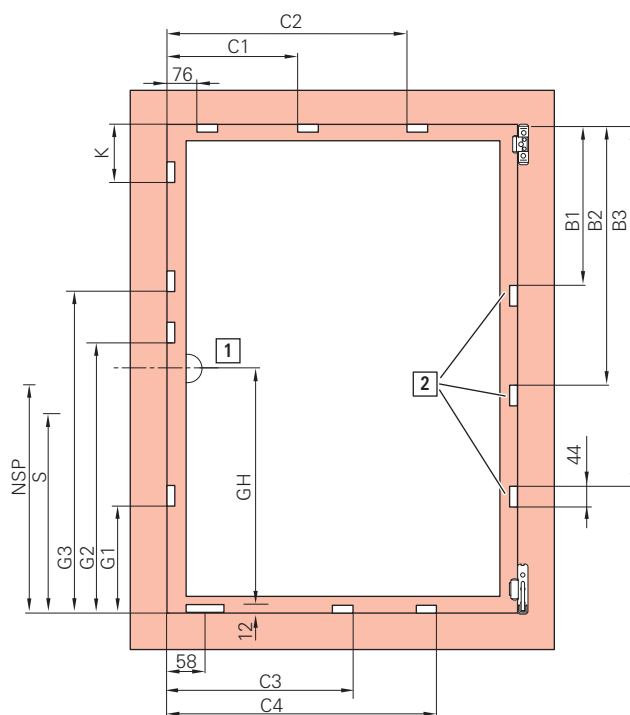
Centre lock, vertical

SRH [mm]	B1	B2
500 – 700	–	–
701 – 900	280	–
901 – 1100	480	–
1101 – 1300	680	–
1301 – 1500	280	880
1501 – 1700	680	1080
1701 – 1900	680	1280

Centre lock, horizontal

SRW [mm]	C
400 – 500	–
501 – 700	–
701 – 900	350
901 – 1100	480
1101 – 1300	680

8.8.1.10 Turn-Only hardware – basic security



[1] Handle centre

[2] Concealed centre closers

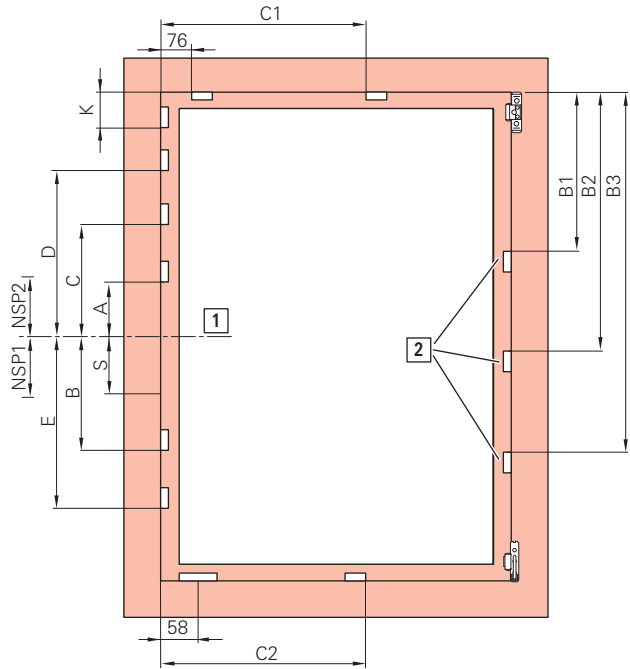
□ Striker e.g. 543

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
280 – 510	120	–	–	–	–	–	–
511 – 600	170	–	–	–	–	262	–
601 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807
1801 – 2000	1000	700	1370	–	–	1121	807



SRH [mm]	GH	G1	G2	G3	K	NSP	S
2001 – 2600	1000	700	1370	1770	–	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

[2] Concealed centre closers

 Striker e.g. 

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
310 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2600	–	312	358	758	740	–	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

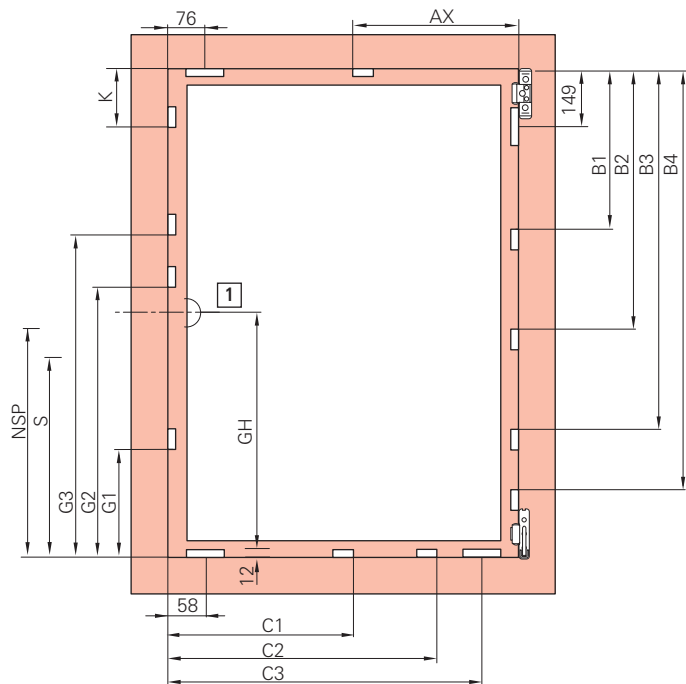
Centre closer, concealed

SRH [mm]	B1	B2	B3
1101 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1750
2601 – 2800	746	1346	1946

Centre lock, horizontal

SRW [mm]	C1	C2	Bottom / top
1101 – 1600	676	658	CL 600 E

8.8.1.11 Turn-Only hardware – RC 1 N

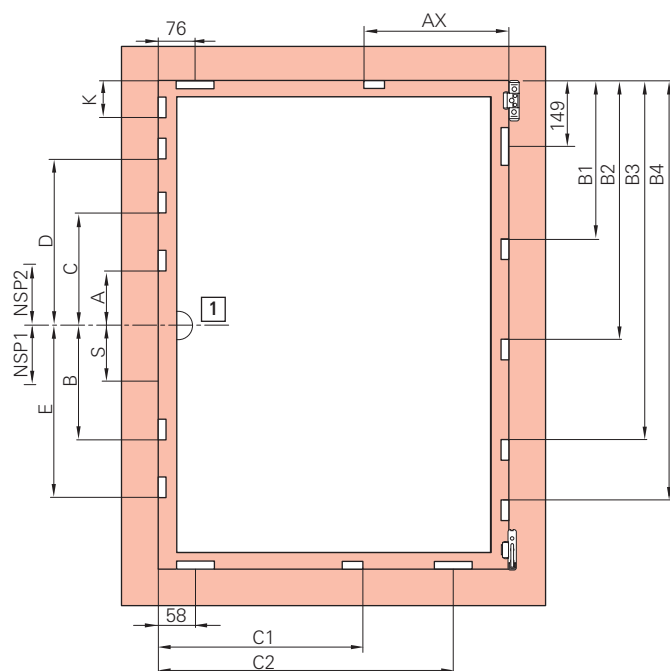


[1] Handle centre

□ Striker e.g. 

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
280 – 510	120	–	–	–	–	–	–
511 – 600	170	–	–	–	–	262	–
601 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	807
1801 – 2000	1000	700	1370	–	–	1121	807
2001 – 2200	1000	700	1370	–	–	1121	807
2201 – 2400	1000	700	1370	1770	–	1121	807
2401 – 2600	1000	700	1370	1770	258	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

□ Striker e.g. 

■ Tilt striker e.g. 

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	K	NSP 1	NSP 2	S
310 – 450	–	–	–	–	–	–	–	–	–
451 – 620	–	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	–	109	395
2001 – 2400	–	312	358	758	740	–	–	109	395
2401 – 2600	–	312	358	758	740	258	–	109	395
2601 – 2800	–	312	358	758	740	458	–	109	395

Stay guide

SRW [mm]	AX	Size
800 – 1000	–	500 / 890
1001 – 1200	–	500 / 1090
1201 – 1400	750	500 / 1290

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	Centre lock
1101 – 1800	746	–	–	–	CL 600 E
1801 – 2400	746	1346	–	–	CL 600 E KU + CL 600 E
2401 – 2600	746	1346	1750	–	2x CL 600 E KU + CL 400 E
2601 – 2800	746	1346	1750	2350	2x CL 600 E KU + CL 600 E

Centre lock, horizontal

SRW [mm]	C1	C2	C3	Centre lock
400 – 600	258	–	–	CL 200 P
601 – 800	462	–	–	CL 400 P
801 – 1000	658	–	–	CL 600 P
1001 – 1200	658	858	–	CL 600 E KU + CL 200 P

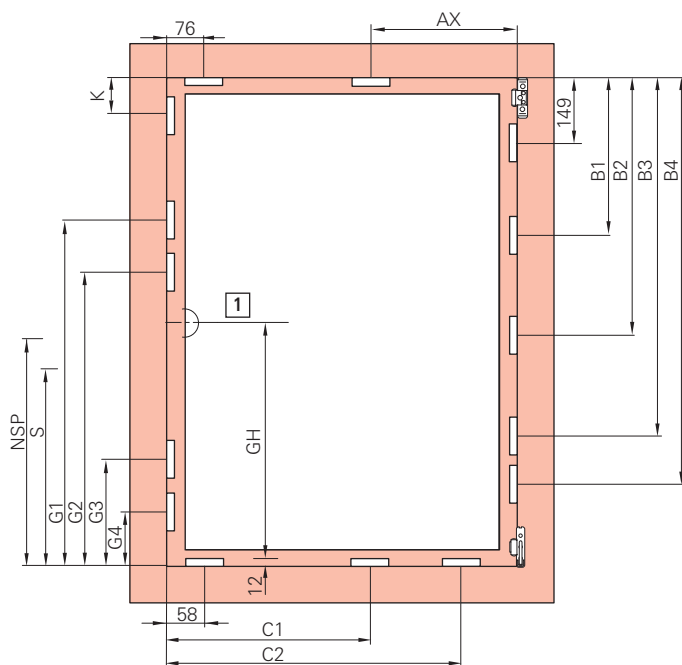
Installation

Frame

Position of strikers and tilt strikers

SRW [mm]	C1	C2	C3	Centre lock
1201 – 1400	658	1062	–	CL 600 E KU + CL 400 P
1401 – 1600	658	1062	1458	CL 600 E KU + CL 600 P

8.8.1.12 Turn-Only hardware – RC 2 N / RC 2



[1] Handle centre

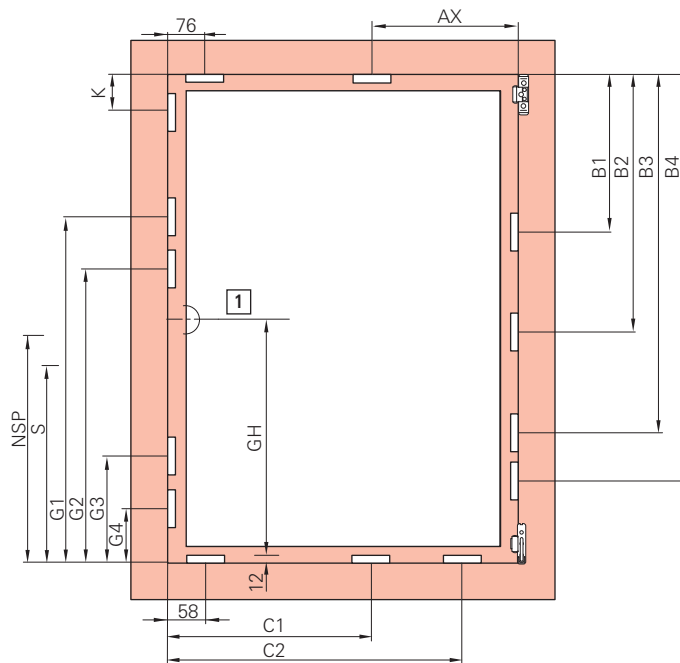
□ Striker e.g. 

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	K	NSP	S
600 – 800	263	–	–	–	–	350	–
801 – 1000	413	550	–	–	–	288	–
1001 – 1200	513	700	–	–	–	388	–
1201 – 1400	563	700	–	–	–	388	–
1401 – 1600	563	700	1170	–	–	388	–
1601 – 1800	563	700	1370	–	–	388	–
1601 – 1800	1000	700	1370	–	–	1121	807
1801 – 2000	1000	700	1370	–	–	1121	807
2001 – 2200	1000	700	1370	1770	–	1121	807
2201 – 2400	1000	700	1370	1770	–	1121	807



SRH [mm]	GH	G1	G2	G3	K	NSP	S
2401 – 2600	1000	700	1370	1770	258	1121	807
2601 – 2800	1000	700	1370	1770	458	1121	807



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	NSP 1	NSP 2	S
490 – 620	–	–	–	–	–	–	–	–
621 – 800	125	–	–	–	–	137	–	–
801 – 1200	125	–	–	–	–	137	–	–
1201 – 1600	125	340	–	–	–	137	–	–
1601 – 2000	–	312	358	–	–	–	109	398
2001 – 2400	–	312	358	758	740	–	109	398
2401 – 2800	–	312	358	758	740	–	109	398

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1200	600	500 / 1090
1201 – 1400	600	500 / 1290

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	Centre lock
490 – 800	346	–	–	–	CL 200 V
801 – 1000	550	–	–	–	CL 400 V
1001 – 1200	746	–	–	–	CL 600 V
1201 – 1400	746	946	–	–	CL 600 V KU + CL 200 V
1401 – 1600	746	1150	–	–	CL 600 V KU + CL 400 V
1601 – 1800	746	1346	–	–	CL 600 V KU + CL 600 V
1801 – 2000	746	1346	1546	–	2x CL 600 V KU + CL 200 V
2001 – 2200	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2201 – 2400	746	1346	1946	–	2x CL 600 V KU + CL 600 V
2401 – 2600	746	1346	1946	2146	3x CL 600 V KU + CL 200 V
2601 – 2800	746	1346	1946	2350	3x CL 600 V KU + CL 400 V

Installation

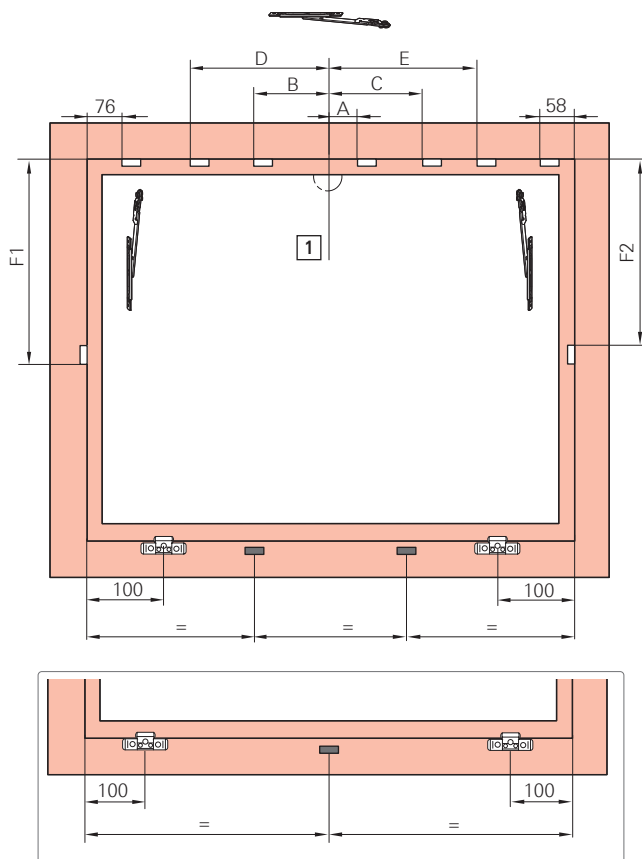
Frame

Position of strikers and tilt strikers

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
490 – 690	258	–	CL 200 V
691 – 890	462	–	CL 400 V
891 – 1090	658	–	CL 600 V
1091 – 1290	658	858	CL 600 V KU + CL 200 V
1291 – 1400	658	1062	CL 600 V KU + CL 400 V

8.8.1.13 Tilt-Only hardware



[1] Tilt-Only sash with T&T espagnolette, centred / variable handle height with tilt stay

□ Striker e.g. 

With SRW $\geq$ 1201, place the centre closer in the middle

With SRW $\geq$ 2201, place two centre closers at an equal distance from each other

T&T espagnolette – centred / variable handle height

SRW [mm]	A	B	C	D	E
451 – 620	–	–	–	–	–
621 – 800	125	–	–	–	–
801 – 1200	125	–	–	–	–
1201 – 1600	125	340	–	–	–
1601 – 2000	–	312	358	–	–
2001 – 2400	–	312	358	740	758

Centre lock, vertical

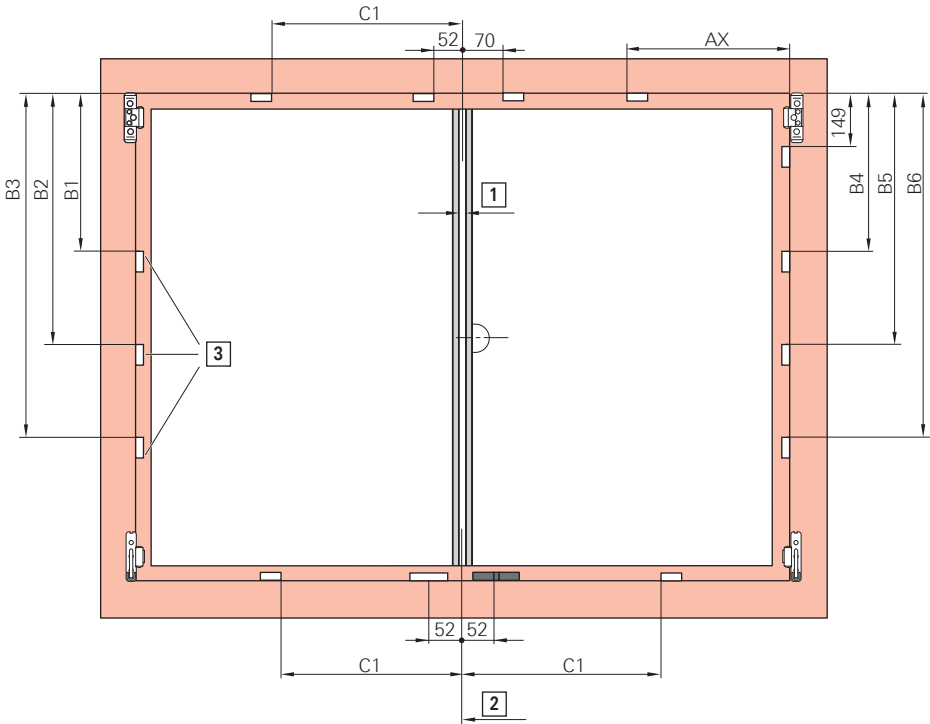
SRH [mm]	F1	F2	Left / right
801 – 1200	462	480	CL 400 E



INFO

Put pressure-proof packers between glass and frame in the area of the centre lock.

8.8.1.14 Floating-mullion hardware, standard – basic security



[1] 12 mm rebate clearance between the sashes

[2] Rebate clearance centre

[3] Concealed centre closers

□ Striker e.g. 

■ Tilt striker e.g. 

Centre closer, vertical, concealed

SRH [mm]	B1	B2	B3
1101 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1750
2601 – 2800	746	1346	1946

Centre lock, vertical

SRH [mm]	B4	B5	B6	Centre lock
1101 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E
2401 – 2600	746	1346	1750	2x CL 600 E KU + CL 600 E
2601 – 2800	746	1346	1946	2x CL 600 E KU + CL 600 E

Centre lock, horizontal

SRW [mm]	C1	Top / bottom
1101 – 1600	652	CL 600 E

Stay guide

SRW [mm]	AX	Size
1201 – 1400	750	500 / 1090

Installation

Frame

Position of strikers and tilt strikers

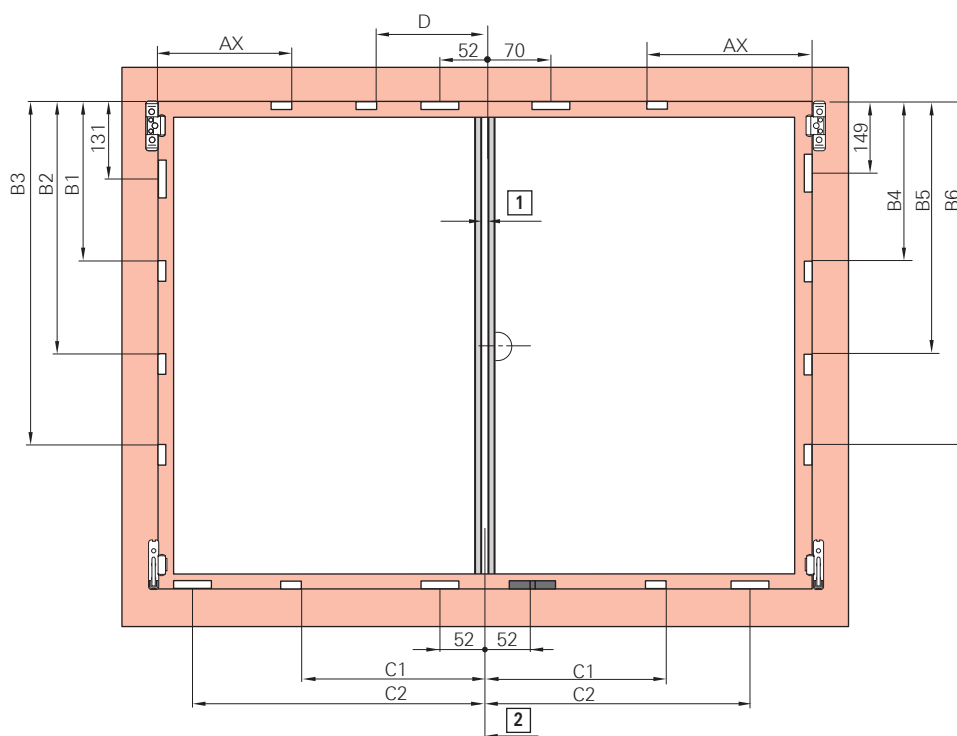
SRW [mm]	AX	Size
1401 – 1600	750	500 / 1290 [22]



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.8.1.15 Floating-mullion hardware, standard – RC 1 N



[1] 12 mm rebate clearance between the sashes

[2] Rebate clearance centre

□ Striker e.g.

■ Tilt striker e.g.

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	B5	B6	Centre lock
1101 – 1800	728	–	–	746	–	–	CL 600 E
1801 – 2400	728	1328	–	746	1346	–	CL 600 E KU + CL 600 E
2401 – 2600	728	1328	1732	746	1346	1750	2x CL 600 E KU + CL 600 E
2601 – 2800	728	1328	1928	746	1346	1946	

Centre lock, horizontal

SRW [mm]	C1	C2	Centre lock
400 – 600	252	–	CL 200 P
601 – 800	456	–	CL 400 P
801 – 1000	652	–	CL 600 P
1001 – 1200	652	852	CL 600 E KU + CL 200 P
1201 – 1400	652	1056	CL 600 E KU + CL 400 P
1401 – 1600	652	1252	CL 600 E KU + CL 600 P

Turn-Only sash stay guide

SRW [mm]	AX	D	Size	Centre lock
801 – 1000	618	–	500 / 890	–

[22] with additional stay arm



SRW [mm]	AX	D	Size	Centre lock
1001 – 1200	618	–	500 / 890	CL 200 KU
1201 – 1400	618	452	500 / 890	CL 400 E KU
1401 – 1600	618	652	500 / 890	CL 600 E KU

Stay guide

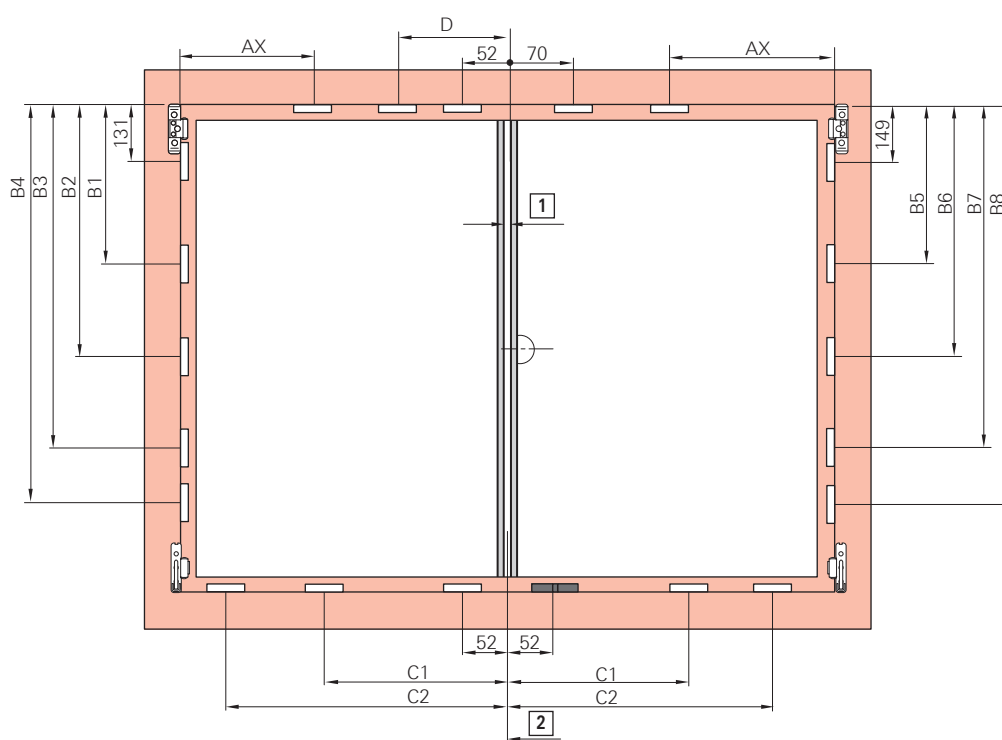
SRW [mm]	AX	Size
1201 – 1400	750	500 / 1290
1401 – 1600	750	500 / 1290 [23]



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.8.1.16 Floating-mullion hardware, standard – RC 2 / RC 2 N



[1] 12 mm rebate clearance between the sashes

[2] Rebate clearance centre

□ Striker e.g.

■ Tilt striker e.g.

Centre lock, vertical

SRH [mm]	B1	B2	B3	B4	B5	B6	B7	B8	Centre lock
600 – 800	328	–	–	–	346	–	–	–	CL 200 V
801- 1000	532	–	–	–	550	–	–	–	CL 400 V
1001 – 1200	728	–	–	–	746	–	–	–	CL 600 V
1201 – 1400	728	928	–	–	746	946	–	–	CL 600 V KU + CL 200 V
1401 – 1600	728	1132	–	–	746	1150	–	–	CL 600 V KU + CL 400 V
1601 – 1800	728	1328	–	–	746	1346	–	–	CL 600 V KU + CL 600 V
1801 – 2000	728	1328	1528	–	746	1346	1546	–	2x CL 600 V KU + CL 200 V
2001 – 2200	728	1328	1732	–	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2201 – 2400	728	1328	1928	–	746	1346	1946	–	2x CL 600 V KU + CL 600 V

[23] with additional stay arm

Installation

Frame

Position of strikers and tilt strikers

SRH [mm]	B1	B2	B3	B4	B5	B6	B7	B8	Centre lock
2401 – 2600	728	1328	1928	2128	746	1346	1946	2146	3x CL 600 V KU + CL 200 V
2601 – 2800	728	1328	1928	2332	746	1346	1946	2350	3x CL 600 V KU + CL 400 V

Centre lock, horizontal

SRW [mm]	C1	C2	Centre lock
490 – 690	252	–	CL 200 V
691 – 890	456	–	CL 400 V
891 – 1090	652	–	CL 600 V
1091 – 1290	652	852	CL 600 V KU + CL 200 V
1291 – 1400	652	1056	CL 600 V KU + CL 400 V

Turn-Only sash stay guide

SRW [mm]	AX	D	Size	Centre lock
801 – 1000	618	–	500 / 890	–
1001 – 1200	618	–	500 / 890	CL 200 KU
1201 – 1400	618	452	500 / 890	CL 400 KU

Stay guide

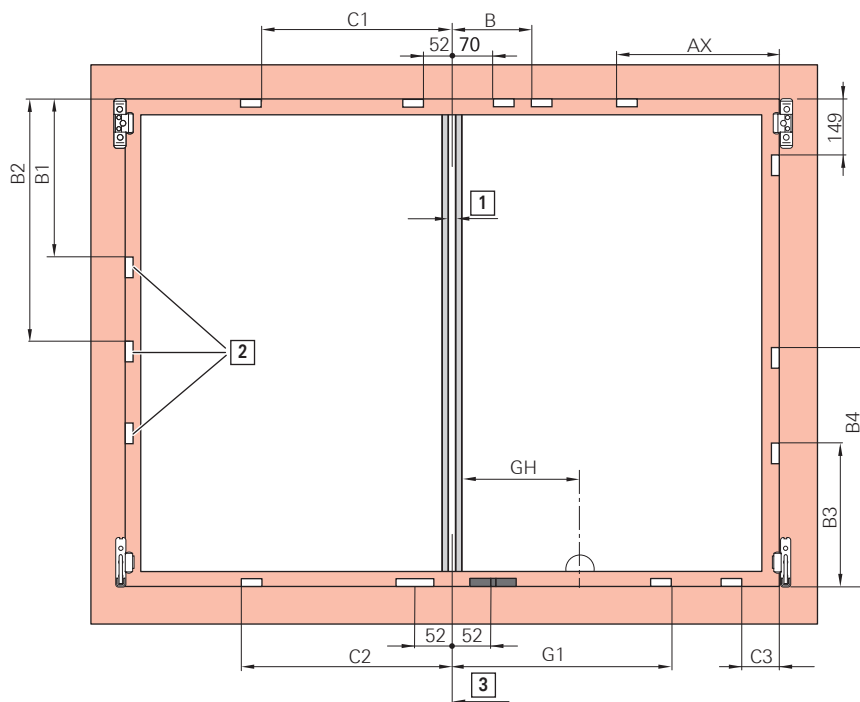
SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1200	600	500 / 1090
1201 – 1400	600	500 / 1290



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.8.1.17 Floating-mullion hardware, standard comfort – basic security





[1] 12 mm rebate clearance between the sashes

[2] Concealed centre closer

[3] Rebate clearance centre

 Striker e.g. 

 Tilt striker e.g. 

Comfort T&T espagnolette

SRW [mm]	HH	G1
520 – 700	220	–
701 – 900	220	446
901 – 1100	220	446
1101 – 1300	220	446
1301 – 1400	220	446

Comfort scissor stay

SRW [mm]	AX
801 – 1000	600
1001 – 1200	600
1201 – 1400	600

Centre closer, vertical, concealed

SRH [mm]	B1	B2
800 – 1200	550	–
1201 – 1400	746	–
1401 – 1600	746	1150

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
801 – 1200	456	456	CL 400 E
1201 – 1400	652	652	CL 600 E

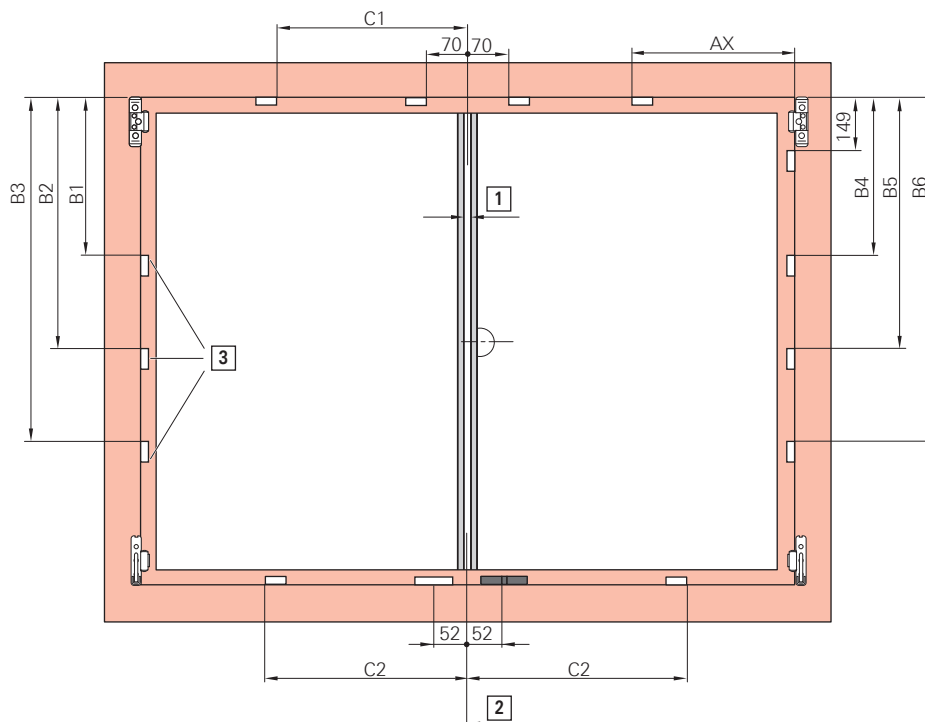
Centre lock, bottom horizontal

SRH [mm]	C3	Centre lock
1101 – 1300	276	CL 400 E KU
1301 – 1400	476	CL 400 E KU + CL 200 KU

Centre lock, vertical, hinge side

SRH [mm]	B3	B4
800 – 1070	532	–
1071 – 1270	682	–
1271 – 1470	682	–
1471 – 1600	682	1152

8.8.1.18 Floating-mullion hardware Plus – basic security



[1] 12 mm rebate clearance between the sashes

[2] Rebate clearance centre

[3] Concealed centre closers

□ Striker e.g. 

■ Tilt striker e.g. 

Centre closer, vertical, concealed

SRH [mm]	B1	B2	B3
1101 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1750
2601 – 2800	746	1346	1946

Centre lock, vertical

SRH [mm]	B4	B5	B6	Centre lock
1101 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E
2401 – 2600	746	1346	1750	2x CL 600 E KU + CL 400 E
2601 – 2800	746	1346	1946	2x CL 600 E KU + CL 600 E

Centre lock, horizontal

SRW [mm]	C1	Top
1101 – 1600	670	CL 600 E

Centre lock, horizontal

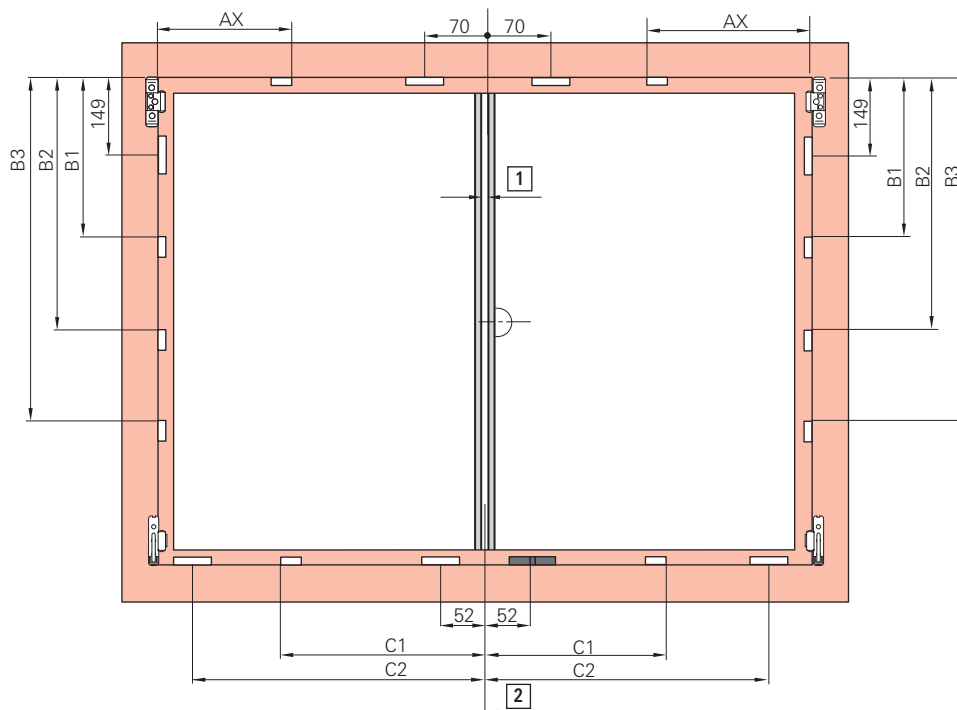
SRW [mm]	C2	Bottom
1101 – 1600	652	CL 600 E

Stay guide

SRW [mm]	AX	Size
1201 – 1400	750	500 / 1290
1401 – 1600	750	500 / 1290 ^[24]



8.8.1.19 Floating-mullion hardware Plus – RC 1 N



[1] 12 mm rebate clearance between the sashes

[2] Rebate clearance centre

□ Striker e.g. 

■ Tilt striker e.g. 

Centre lock, vertical

SRH [mm]	B1	B2	B3	Centre lock
1101 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E
2401 – 2600	746	1346	1750	2x CL 600 E KU + CL 400 E
2461 – 2800	746	1346	1946	2x CL 600 E KU + CL 600 E

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
400 – 600	252	–	CL 200 P
601 – 800	456	–	CL 400 P
801 – 1000	652	–	CL 600 P
1001 – 1200	652	852	CL 600 E KU + CL 200 P
1201 – 1400	652	1056	CL 600 E KU + CL 400 P
1401 – 1600	652	1252	CL 600 E KU + CL 600 P

Stay guide

SRW [mm]	AX	Size
1201 – 1400	750	500 / 1290
1401 – 1600	750	500 / 1290 [25]



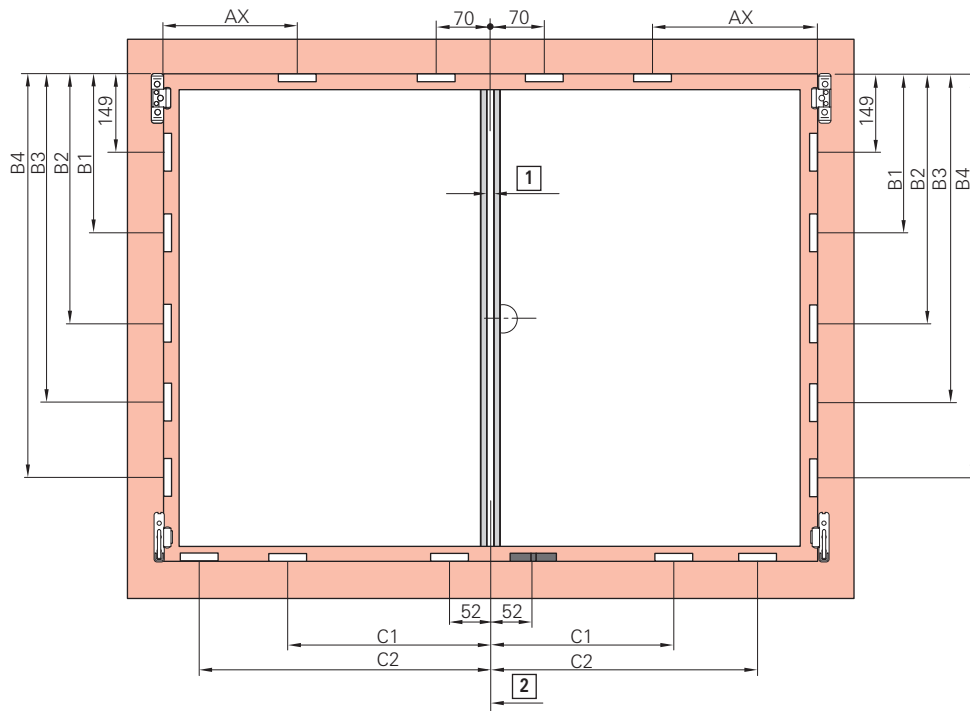
INFO

Mount the second opening sash with the lever-operated espagnolette open.

[24] ^[4] with additional stay arm

[25] with additional stay arm

8.8.1.20 Floating-mullion hardware Plus – RC 2 / RC 2 N



[1] 12 mm rebate clearance between the sashes

[2] Rebate clearance centre

□ Striker e.g. 

■ Tilt striker e.g. 

Centre lock, vertical

SRH [mm]	B1	B2	B3		Centre lock
520 – 800	346	–	–	–	CL 200 V
801 – 1000	550	–	–	–	CL 400 V
1001 – 1200	746	–	–	–	CL 600 V
1201 – 1400	746	946	–	–	CL 600 V KU + CL 200 V
1401 – 1600	746	1150	–	–	CL 600 V KU + CL 400 V
1601 – 1800	746	1346	–	–	CL 600 V KU + CL 600 V
1801 – 2000	746	1346	1546	–	2x CL 600 V KU + CL 200 V
2001 – 2200	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2201 – 2400	746	1346	1946	–	2x CL 600 V KU + CL 600 V
2401 – 2600	746	1346	1946	2146	3x CL 600 V KU + CL 200 V
2601 – 2800	746	1346	1946	2350	3x CL 600 V KU + CL 400 V

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
490 – 690	252	–	CL 200 V
691 – 890	456	–	CL 400 V
891 – 1090	652	–	CL 600 V
1091 – 1290	652	852	CL 600 V KU + CL 200 V
1291 – 1400	652	1056	CL 600 V KU + CL 400 V

Stay guide

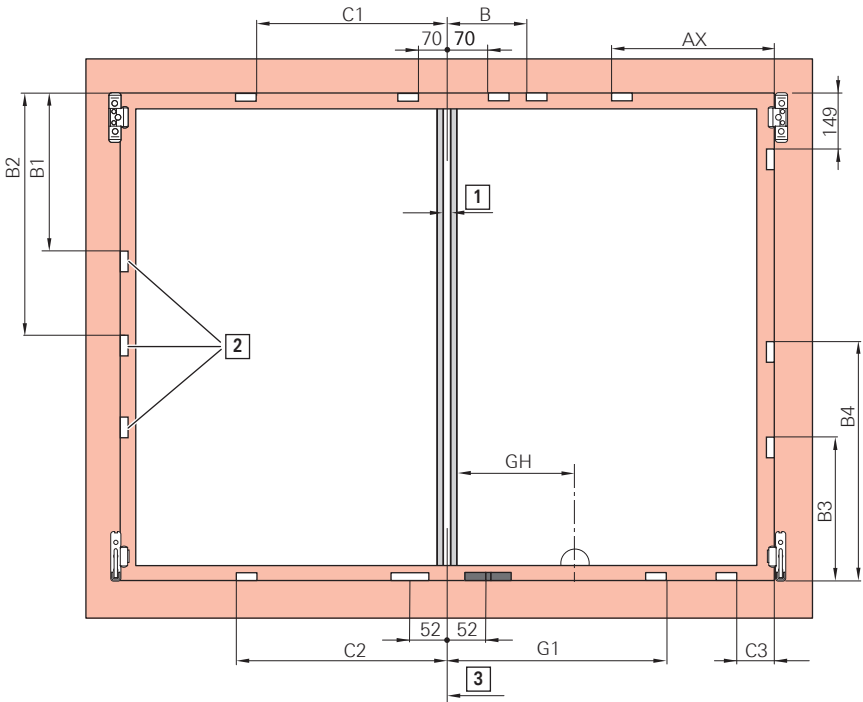
SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1200	600	500 / 1090
1201 – 1400	600	500 / 1290



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.8.1.21 Floating-mullion hardware Plus comfort – basic security



[1] 12 mm rebate clearance between the sashes

[2] Concealed centre closer

[3] Rebate clearance centre

□ Striker e.g. 

■ Tilt striker e.g. 

Comfort T&T espagnolette

SRW [mm]	HH	G1
520 – 700	220	–
701 – 900	220	446
901 – 1100	220	446
1101 – 1300	220	446
1301 – 1400	220	446

Comfort scissor stay

SRW [mm]	AX
801 – 1000	600
1001 – 1200	600
1201 – 1400	600

Centre closer, vertical, concealed

SRH [mm]	B1	B2
800 – 1200	550	–
1201 – 1400	746	–
1401 – 1600	746	1150

Installation

Frame

Position of strikers and tilt strikers

Centre lock, horizontal

SRH [mm]	C1	C2	Centre lock
801 – 1200	456	456	CL 400 E
1201 – 1400	652	652	CL 600 E

Centre lock, bottom horizontal

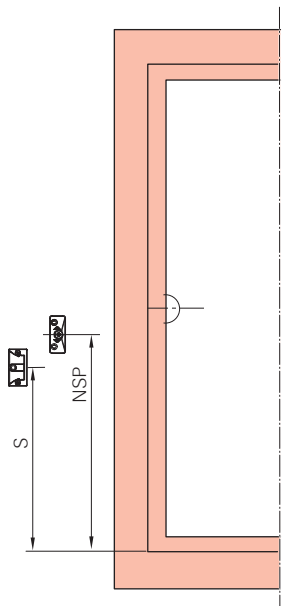
SRH [mm]	C3	Centre lock
1101 – 1300	276	CL 400 E KU
1301 – 1400	476	CL 400 E KU + CL 200 KU

Centre lock, vertical, hinge side

SRH [mm]	B3	B4
871 – 1070	532	–
1071 – 1270	682	–
1271 – 1470	682	–
1471 – 1600	682	1152



8.8.2 Position of the lifting mishandling device and bullet catch



[LMD] Lifting mishandling device

[BC] Bullet catch

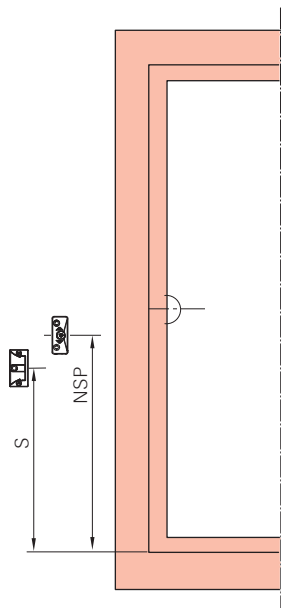
T&T espagnolette, VT – fixed handle height

SRH / mm	NSP	S
280 – 480	–	–
481 – 600	262	–
601 – 800	350	–
801 – 1000	288	–
1001 – 1200	388	–
1201 – 1400	388	–
1401 – 1600	388	–
1601 – 1800	388	–
1601 – 1800	1121	807
1801 – 2000	1121	807
2001 – 2600	1121	807
2601 – 2800	1121	807

Installation

Frame

Position of the lifting mishandling device and bullet catch

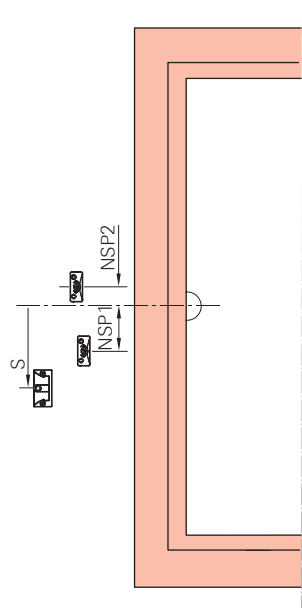


[LMD] = Lifting mishandling device

[BC] Bullet catch

T&T espagnolette – fixed handle height

SRH / mm	NSP	S
280 – 480	–	–
481 – 600	262	–
601 – 800	138	–
801 – 1000	288	–
1001 – 1200	388	–
1201 – 1400	388	–
1401 – 1600	388	–
1601 – 1800	388	–
1601 – 1800	1121	807
1801 – 2000	1121	807
2001 – 2200	1121	807
2201 – 2400	1121	807
2401 – 2600	1121	807
2601 – 2800	1121	807



[LMD] = Lifting mishandling device

[BC] Bullet catch

T&T espagnolette – centred / variable handle height

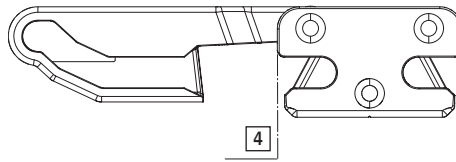
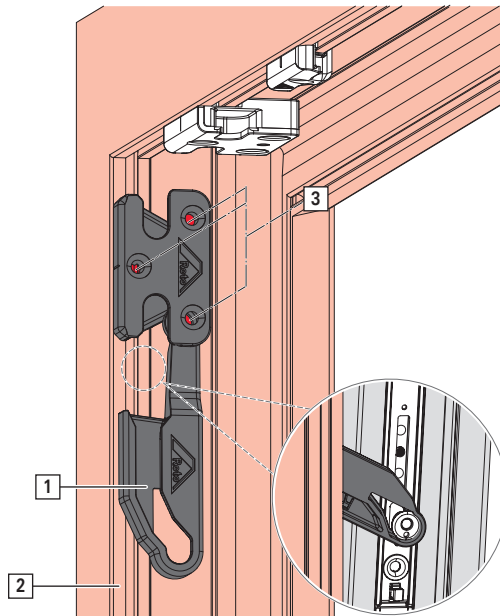
SRH / mm	NSP 1	NSP 2	S
450 – 620	–	–	–
621 – 800	137	–	–
801 – 1200	137	–	–
1201 – 1600	137	–	–
1601 – 2000	–	109	395
2001 – 2400	–	109	395
2401 – 2600	–	109	395
2601 – 2800	–	109	395

8.8.3 Security striker for tilt ventilation (TiltSafe)

1. Position the security striker for tilt ventilation [1] on the frame [2].

In the turn position, the entering cam must be positioned in the same way as a standard striker.

Striker point of entry [4]



2. Secure with three single-use screws [3].

**INFO**

Single-use screws can be tightened but not undone.

**INFO**

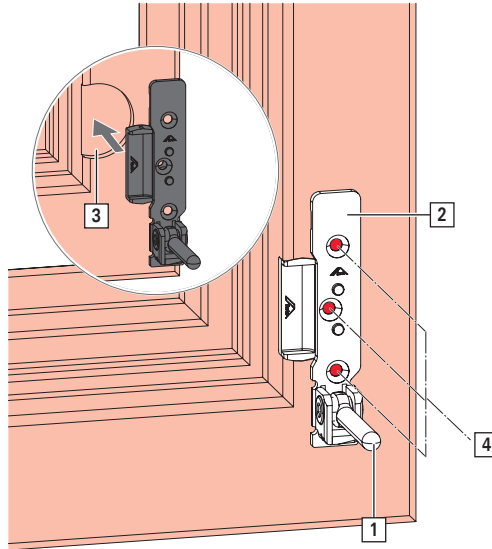
RC 2 protection cannot be achieved in the 135° handle position (night ventilation). To achieve RC 2 protection:

1. Tilt the window
2. Lock the handle
3. Remove the key.



8.8.4 Pivot rest

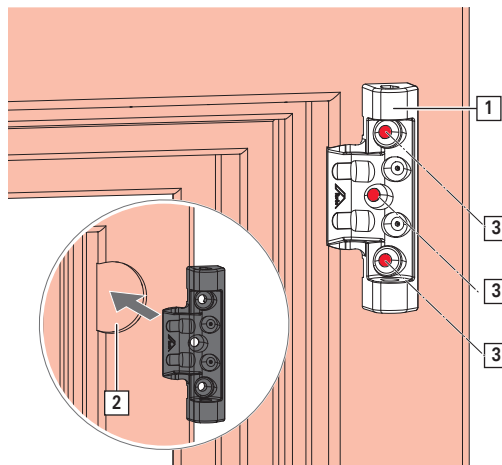
1. Open the pivot-rest pin [1].



2. Place the pivot rest [2] in the pre-routed recess [3].
3. Secure with three screws [4].

8.8.5 Stay bearing, standard

1. Place the stay bearing [1] in the pre-routed recess [2] in the frame.



2. Fasten with three screws [3].

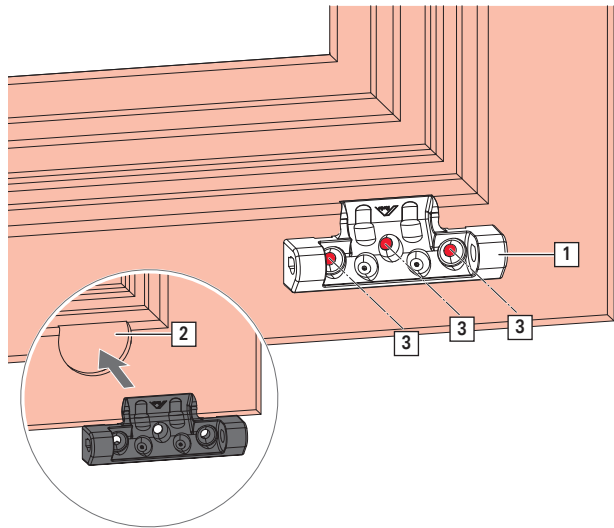


INFO

With S.kg > 100 kg, fasten with five screws.

8.8.6 Tilt-Only sash stay bearing

1. Place the stay bearing [1] in the pre-routed recess [2] in the frame.

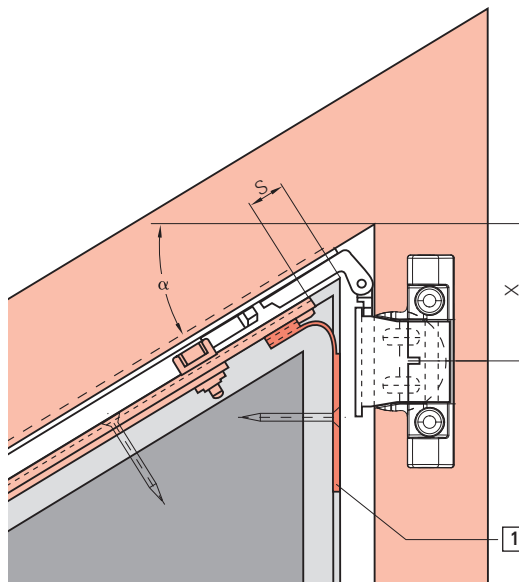


2. Secure with three screws [3].

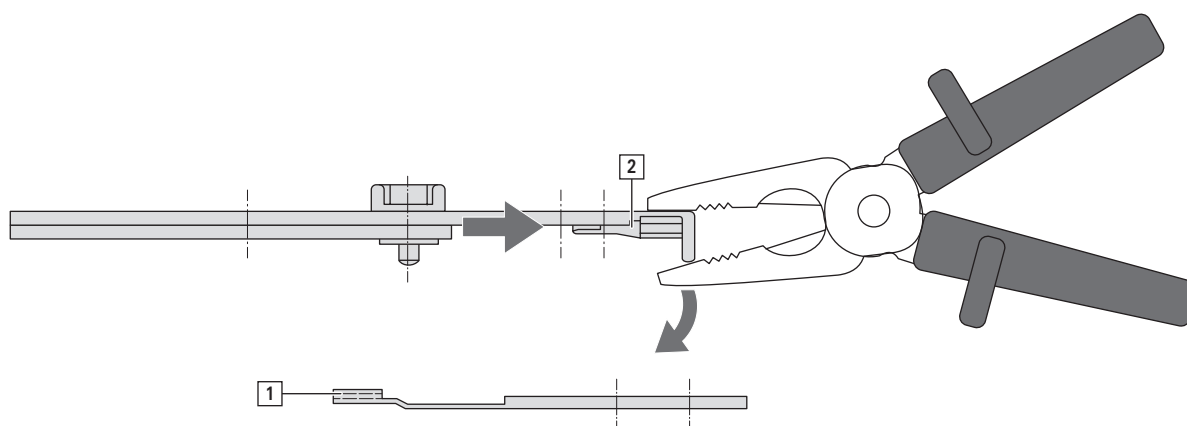


8.8.7 Pitched stay arm

1. Stay arm routing = pitched angle α , for additional values, see → *from page 218*
 For a deep sash rebate, chamfer this near the corner.
 Clear the corner area for negative pitched angles.

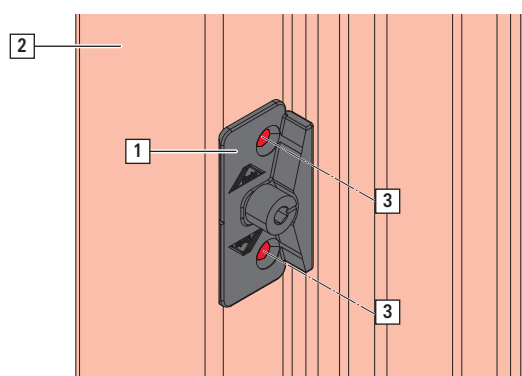


2. Insert the end piece [1] in the direction of the arrow and bend it according to the pitched angle.
 Break the connection bracket [2] **in a downwards direction** at every sash angle using pliers.



8.8.8 Lifting mishandling device

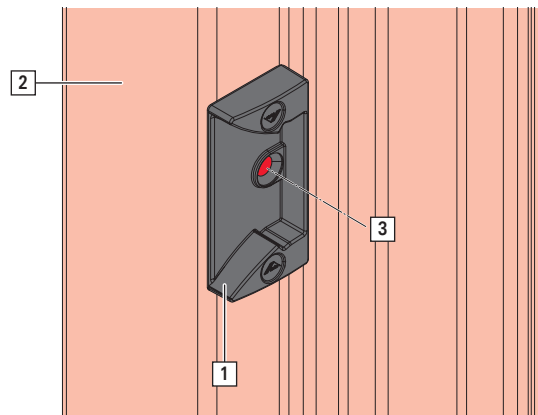
1. Position the lifting mishandling device frame component [1] in the frame [2].



2. Secure with two screws [3].

8.8.9 Bullet catch

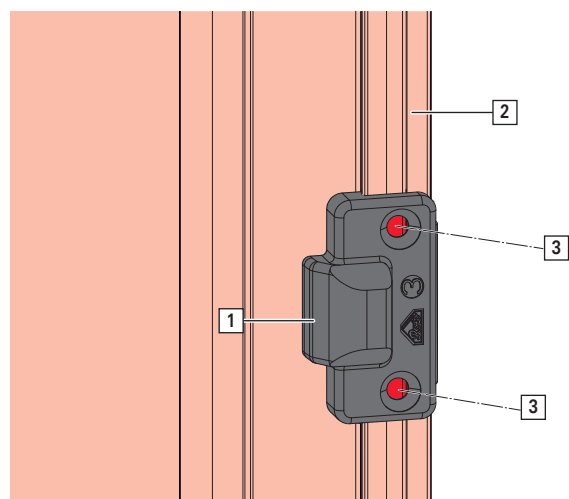
1. Position the bullet-catch frame component [1] in the frame [2].



2. Fasten with a screw [3].

8.8.10 Concealed centre closer

1. Position the centre closer [1] in the frame [2].



2. Secure with two screws [3].



INFO

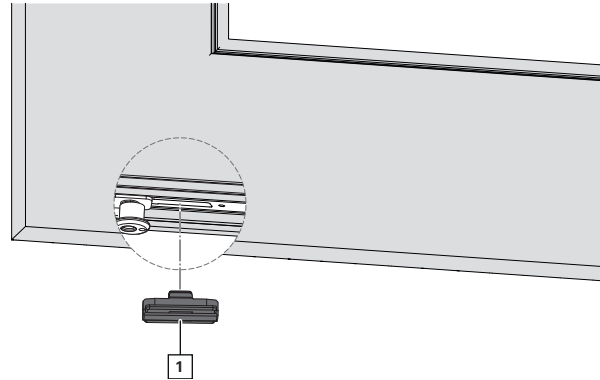
Put pressure-proof packers between glass and frame in the area of the centre closers.



8.9 Accessories

8.9.1 Travel restrictor

1. Clip the travel restrictor [1] into the locking cam groove.



8.9.2 Anti-jemmy device

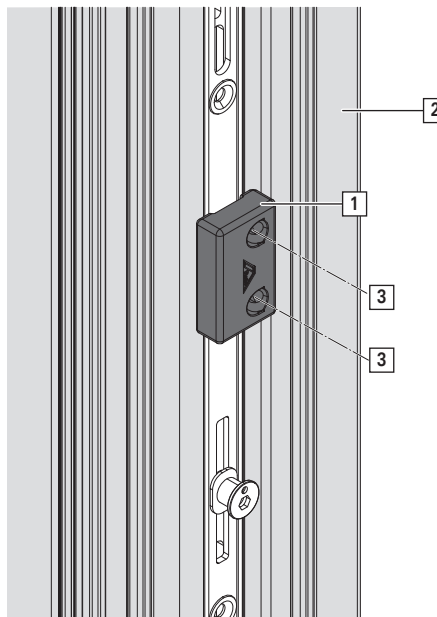


INFO

Only possible for hardware axis 13.

Rebate depth at least 24 mm.

1. Position the anti-jemmy device [1] on the sash [2].

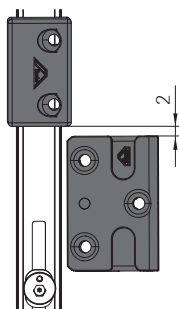


2. Fasten with two screws [3] at an angle in the direction of the overlap.

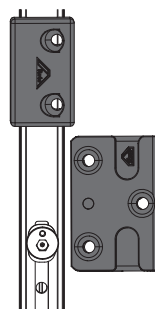
Positioning

The anti-jemmy device runs in approx. 2 mm behind the striker.

Opening position



Locked position



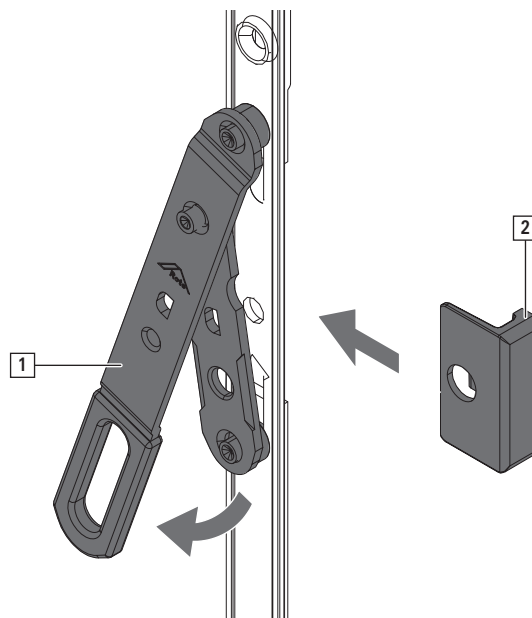
Fit an anti-jemmy device on four sides:

- Hinge side – second-last locking point above the pivot rest.
- Locking side – top locking point.
- Horizontally at the top – on the corner drive, standard
- Horizontally at the bottom – first locking point after the tilt striker.

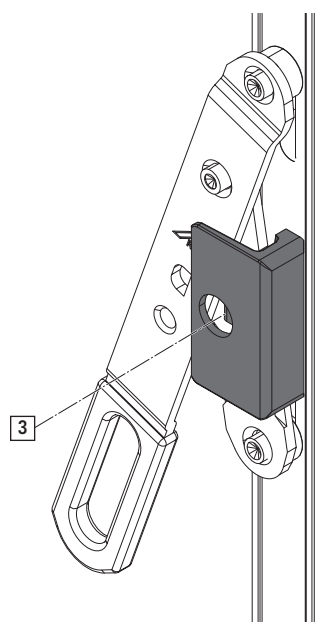


8.9.3 Retainer clasp

1. Open the red toggle lever [1].
2. Insert the retainer clasp [2].



3. Fasten the retainer clasp with a screw [3].

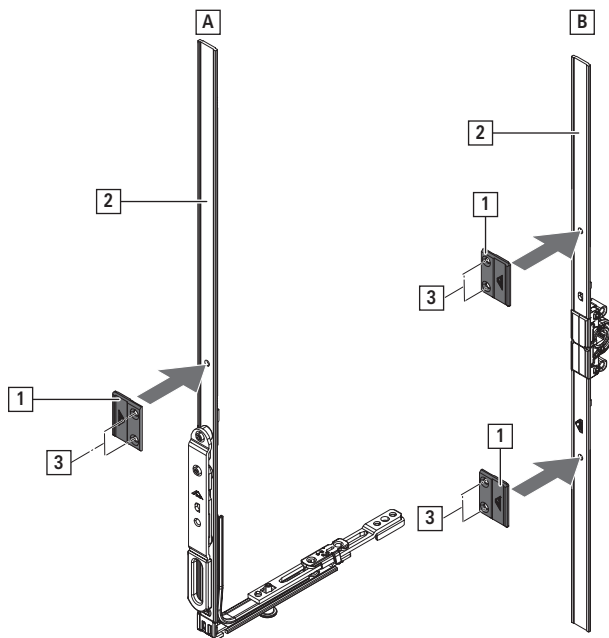


4. Close the red toggle lever.

8.9.4 Fastening plate

In conjunction with lever-operated espagnolette, standard 2003815 [A] or with T&T espagnolette, centred / variable handle height 259717 [B].

1. Fit the fastening plate [1] to the espagnolette face-plate [2].



2. Fasten with two screws [3].



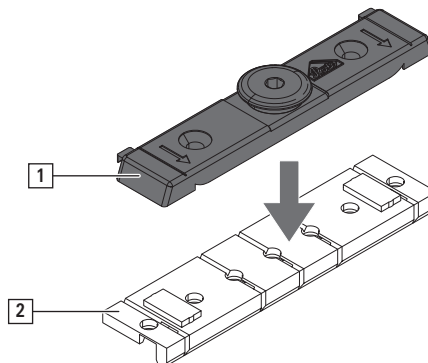
8.9.5 Rebate run-up block – arch

1. Press the rebate run-up block [1] onto the packer [2].

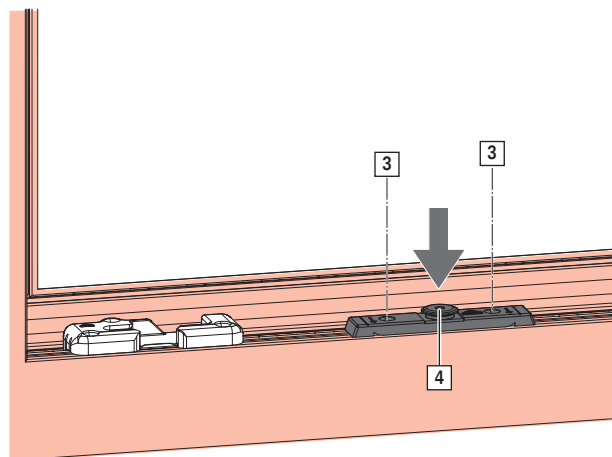


INFO

With a smooth rebate, no packers are required.



2. Position the rebate run-up block and packer in the frame groove.



3. Fasten with two screws [3].
4. Use the screw [4] to perform adjustments.



INFO

When the sash is pressed from the tilt position to the locked position, the arched sash stay must run in without coming into contact with any other components.

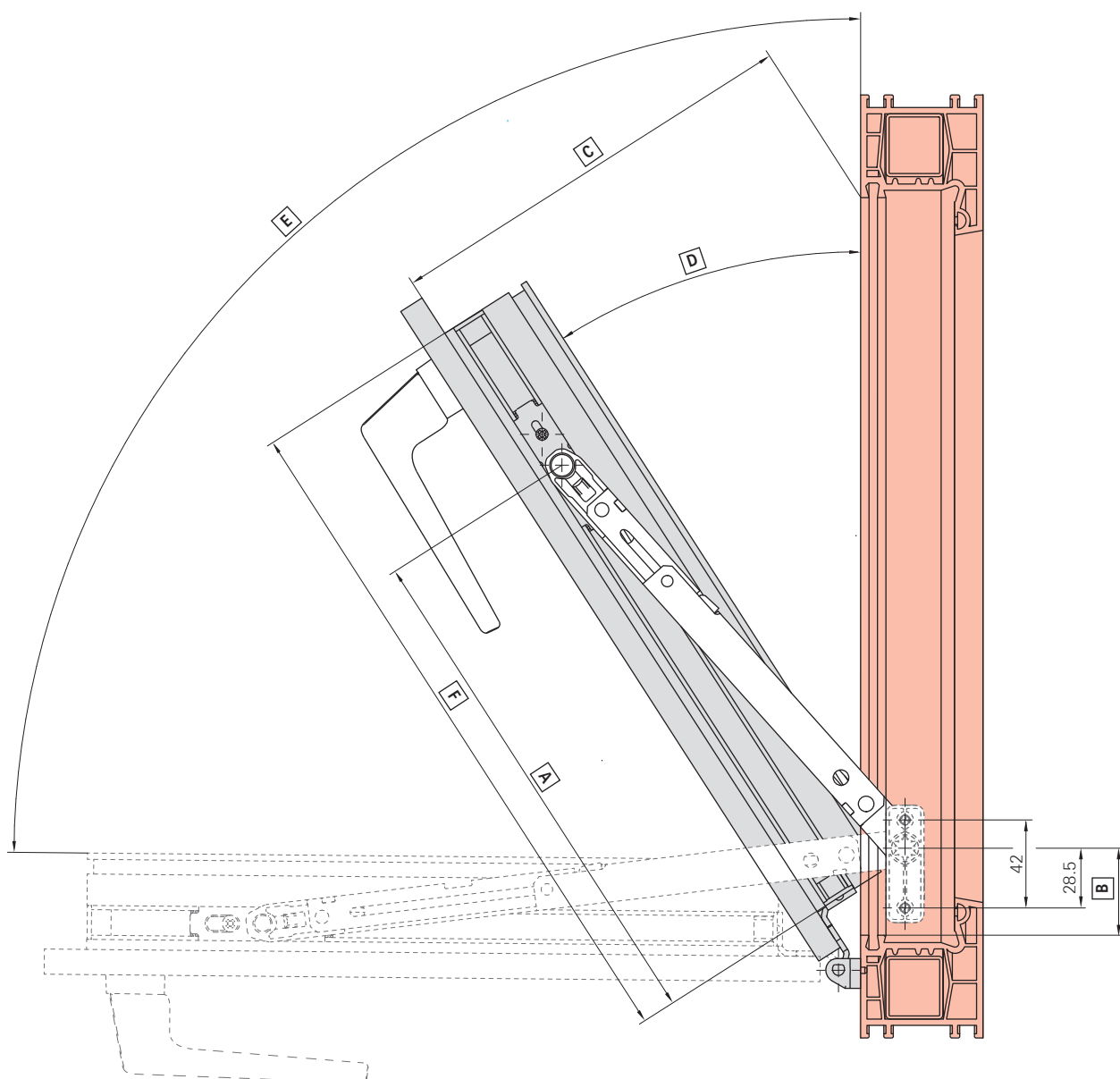
8.9.6 Restrictor and cleaning stay



INFO

A restrictor and cleaning stay must be installed for fanlights.

8.9.6.1 Positioning



- [A] Position of sash bearing
- [B] Position of frame bearing
- [C] Tilt depth restrictor position
- [D] Opening angle restrictor position
- [E] Opening angle cleaning position
- [F] Sash rebate height (SRH)



SRH	Type	[A]	[B]	[C]	[D]	[E]
290 – 400	1	250	45	180 – 245	33°	90°
401 – 560	1	280	75	205 – 275	27°	67°
561 – 700	2	525	170	225 – 277	22°	88°
701 – 850	2	575	220	244 – 292	19°	72°
851 – 1200	2	625	270	261 – 363	17°	62°

8.9.6.2 Sash component

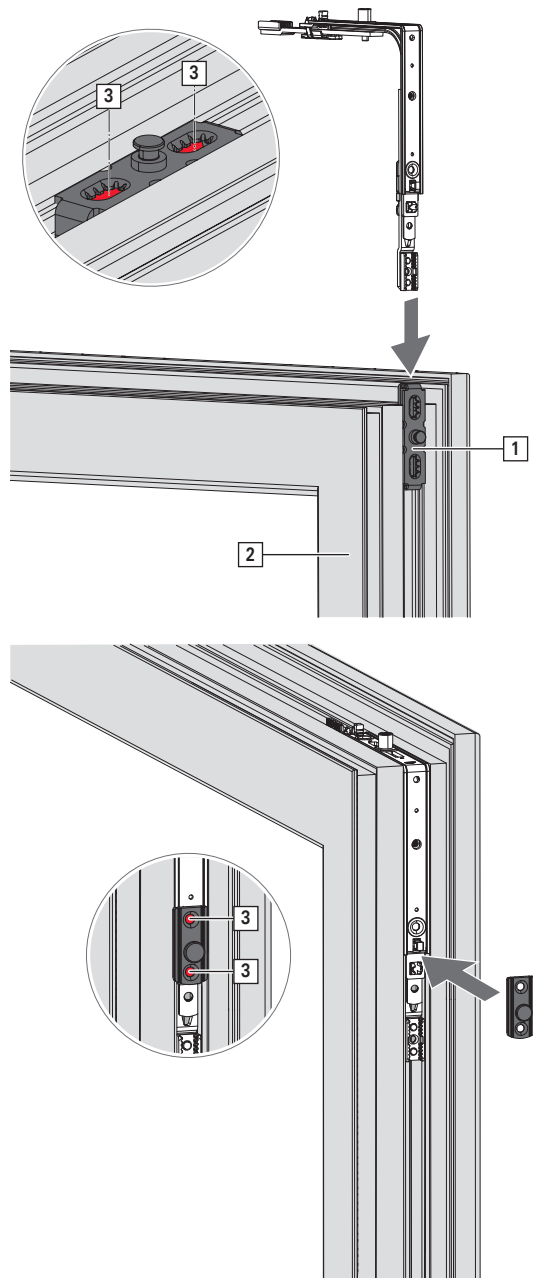
1. Sash installation

Insert the sash bearing [1] into the sash groove [2].

Position the sash bearing correctly.

Floating-mullion installation

When installing the floating mullion, place the sash bearing on the corner drive.



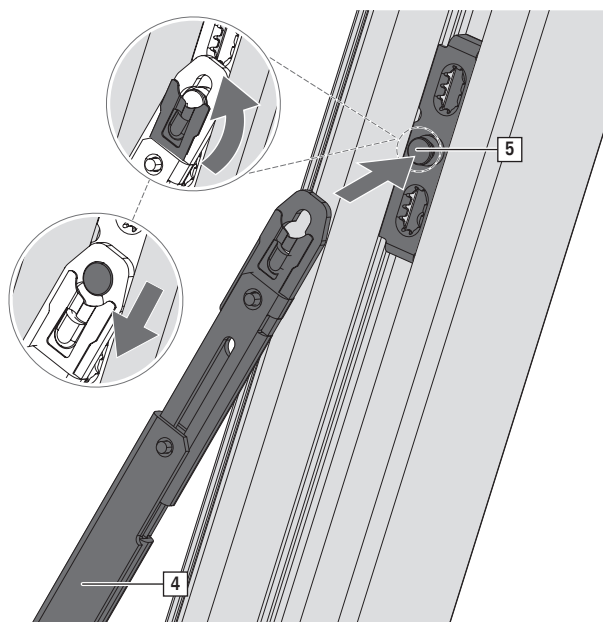
2. Fasten with two screws [3].



3. Install the scissor stay on the frame and secure it in position → *from page 295*.

Press the arm [4] of the scissor stay onto the bolt [5].

Move the arm until the bolt locks into place.



8.9.6.3 Frame component

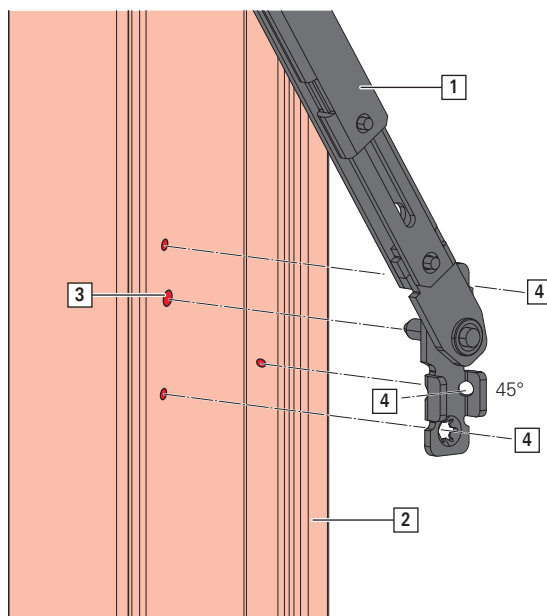


INFO

Tilt stays and tilt distance restrictors may still have to be used even when restrictor and cleaning stays are used.

Two scissor stays must always be used per sash.

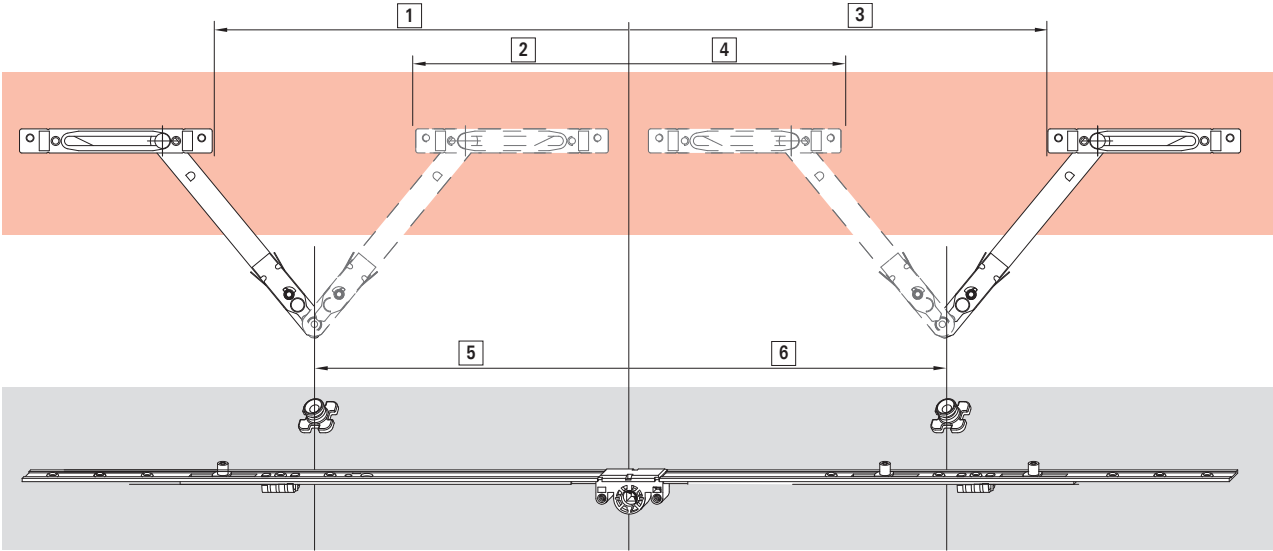
1. Position the restrictor and cleaning stay [1] on the frame [2].



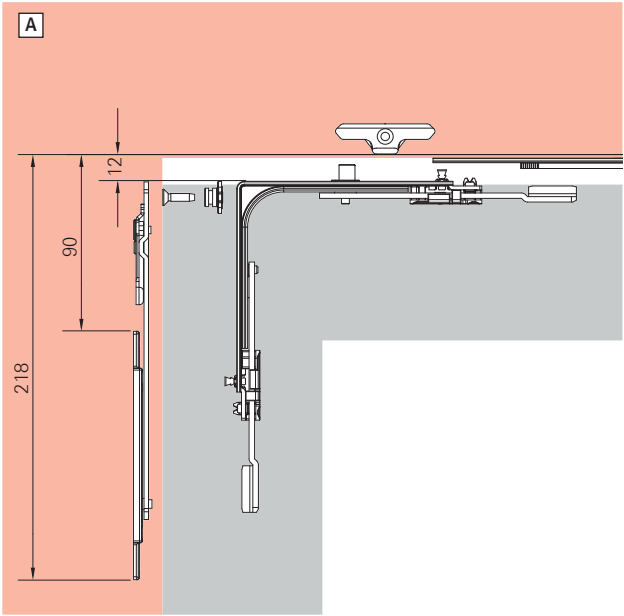
2. Insert the cam into the predrilled hole [3].
3. Fasten with three screws [4].

8.9.7 Tilt stay

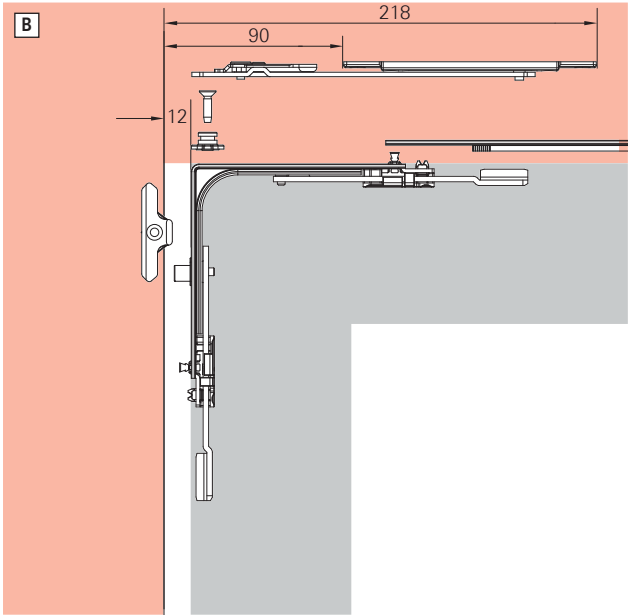
8.9.7.1 Installation dimensions



SRW	[1]	[2]	[3]	[4]	[5]	[6]	BS
621 – 800	–	–	–	4	–	73	15
801 – 1200	–	–	–	4	–	73	15
1200 – 1600	15	–	195	–	212	392	8 / 15
1601 – 2000	433	–	109	–	364	306	8 / 15
2001 – 2400	433	–	509	–	364	706	8 / 15



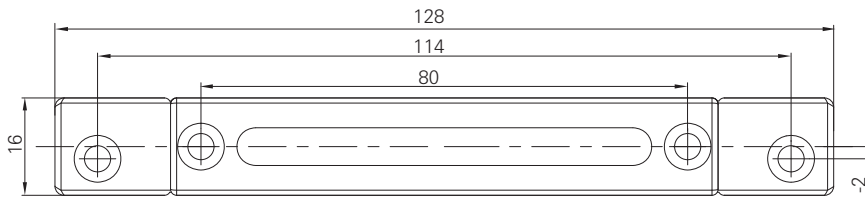
[A] Installation of tilt stay at the side



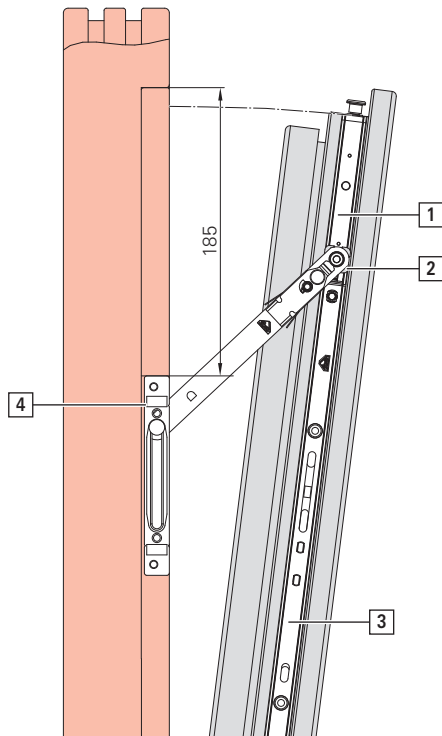
[B] Installation of tilt stay at the top



Frame component dimensions

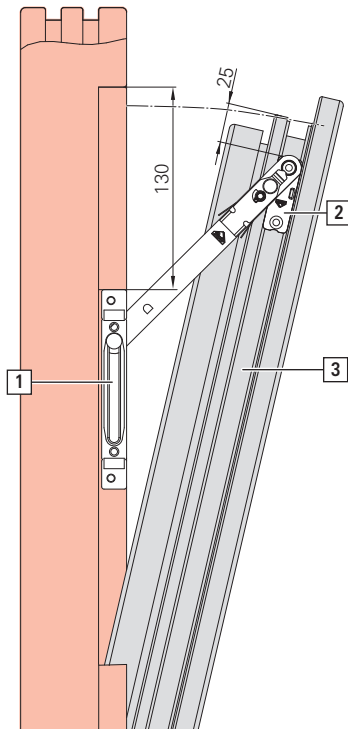


Installation at the side with sash bearing cam at the coupling point



- [1] Corner drive
- [2] Sash bearing cam
- [3] Centre lock
- [4] Tilt stay frame component

Installation, groove mounting



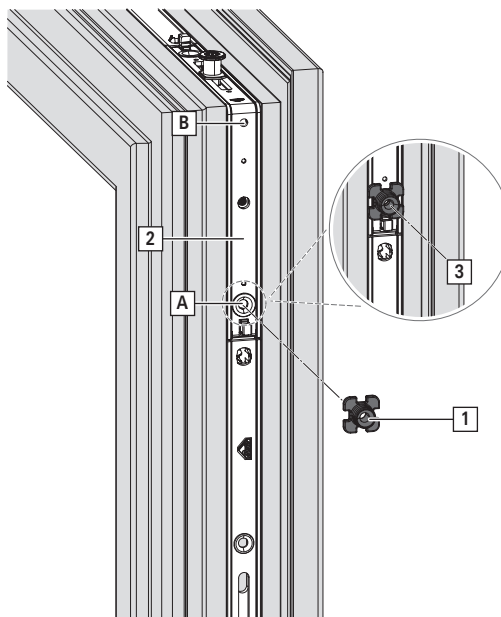
- [1] Tilt stay frame component
- [2] Tilt stay sash component
- [3] Sash groove



8.9.7.2 Sash component

Position at the side

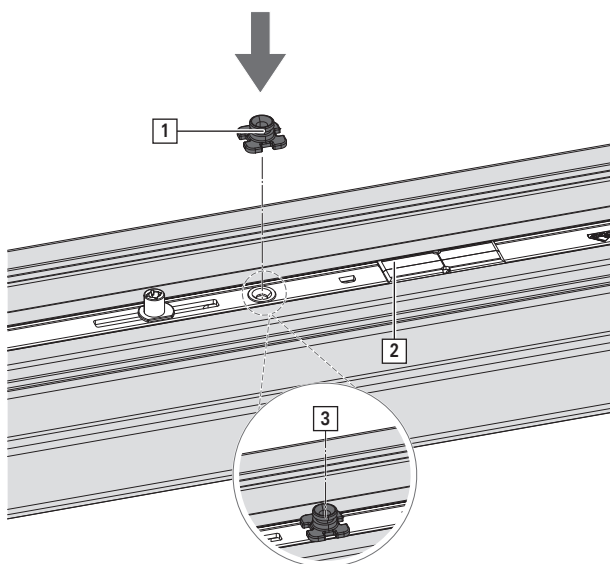
1. Place the sash component [1] on the corner drive [2] (position [A] or [B]).



2. Secure with screw [3].

Position at the top

1. Place the sash component [1] on the espagnolette [2].



2. Secure with screw [3].

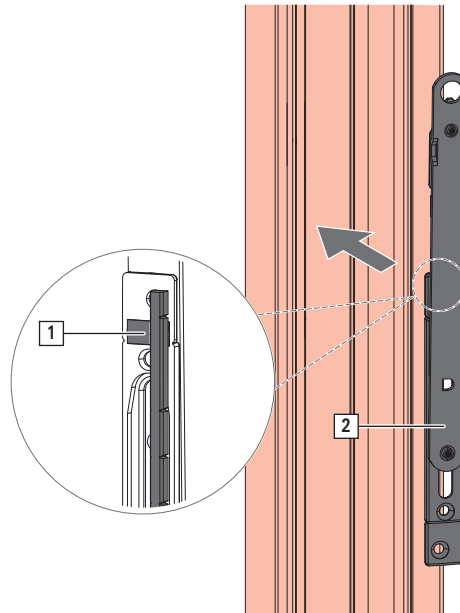
8.9.7.3 Frame component

1. Break the packer [1] apart in the centre.
2. Push the tilt stay [2] onto the packer.

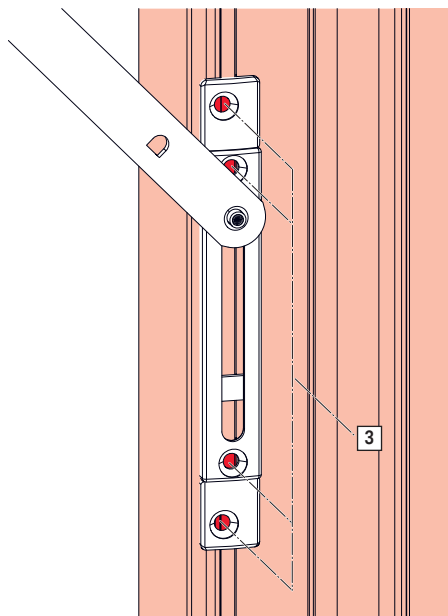


INFO

With a smooth rebate, no packers are required.



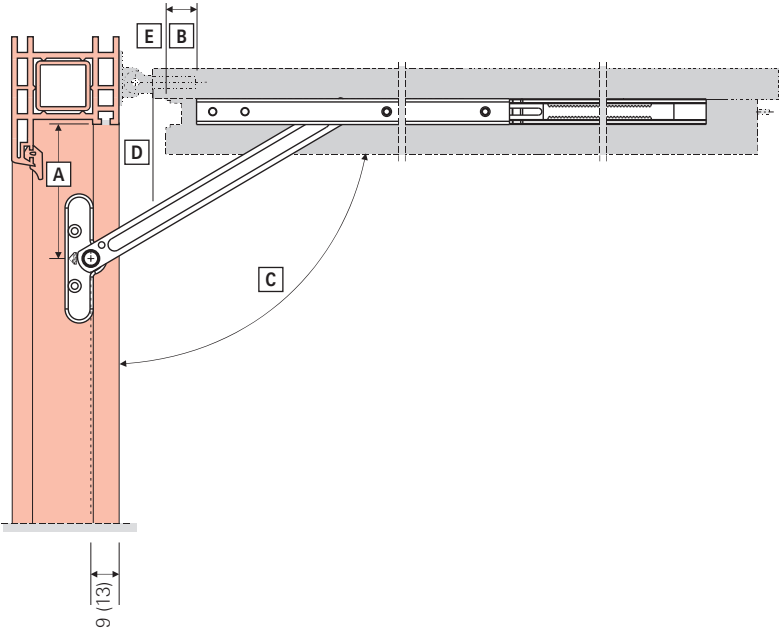
3. Position the tilt stay in the rebate.
4. Secure with four screws [3].





8.9.8 Arrestable brake stay

8.9.8.1 Installation dimensions



Assignment	Meaning
[A]	Frame dimensions
[B]	Sash dimensions
[C]	Opening angle 90°
[D]	Overlap edge
[E]	Sash rebate edge



INFO

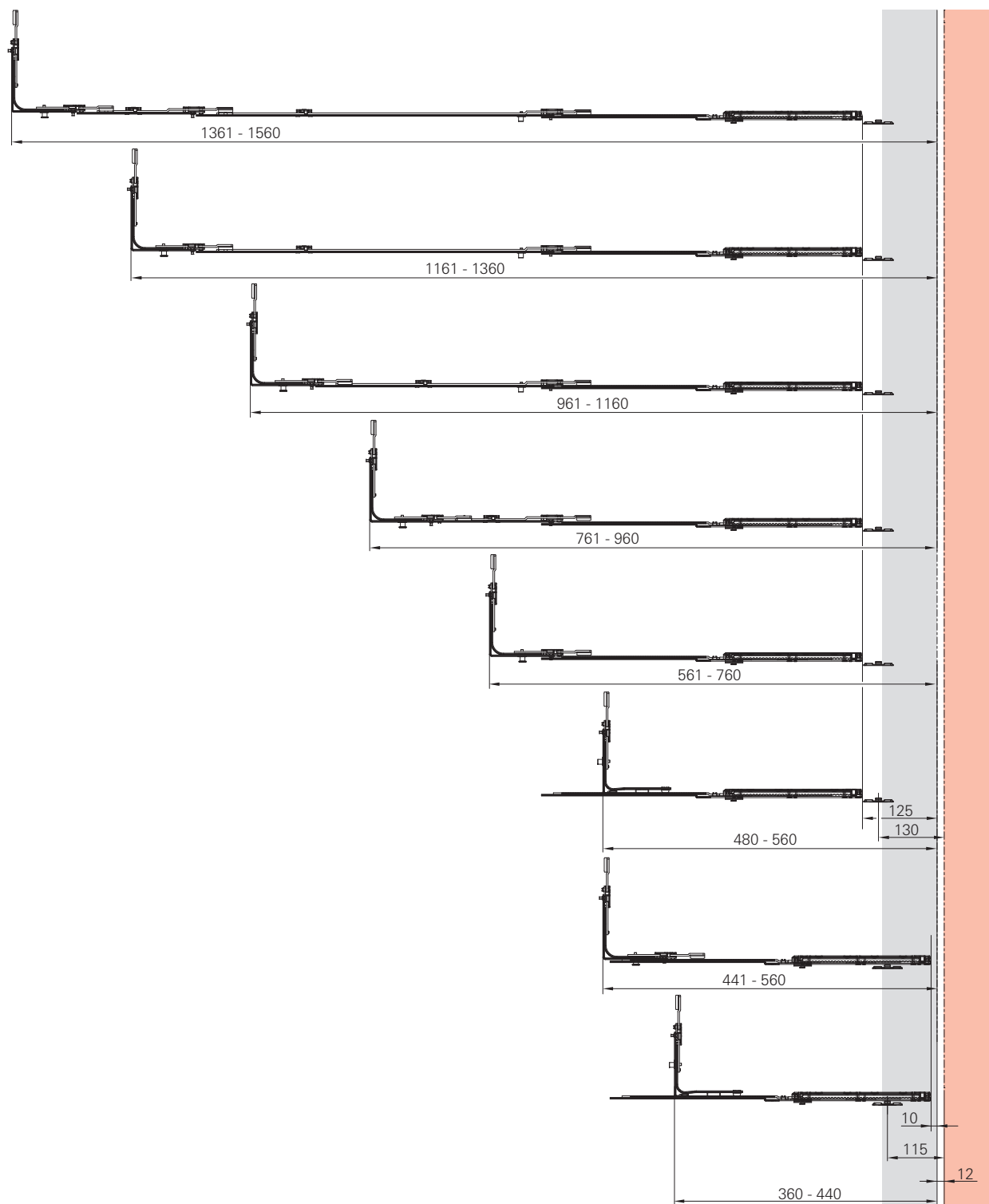
Only the sash lifter and not the lifting mishandling device can be used in conjunction with the arrestable brake stay.

8.9.8.2 Application range 360 – 1560 mm



INFO

Check the suitability of the hinges used on a case-by-case basis depending on the available space.





Application range	Corner drive	Centre lock	Arrestable brake stay	Arm	Frame dimension	Sash dimension
360 – 450 [26][27]	Special corner drive	–	486820	486821	115	10
451 – 560 [28]	Corner drive, standard	–	486820	486821	115	10
480 – 560	Special corner drive	–	486820	492757	130	125
561 – 760	Corner drive, standard	–	486820	492757	130	125
761 – 960	Corner drive, standard	CL 200 KU	486820	492757	130	125
961 – 1160	Corner drive, standard	CL 400 KU	486820	492757	130	125
1161 – 1360	Corner drive, standard	CL 600 KU	486820	492757	130	125
1361 – 1560	Corner drive, standard	CL 200 KU CL 600 KU	486820	492757	130	125

[26] Only in conjunction with frame component with reduced installation height. Only in conjunction with hinges that are not screwed into the horizontal sash groove.

[27] Turn-Only sash only

[28] Only in conjunction with frame component with reduced installation height. Only in conjunction with hinges that are not screwed into the horizontal sash groove.

8.9.8.3 Sash component

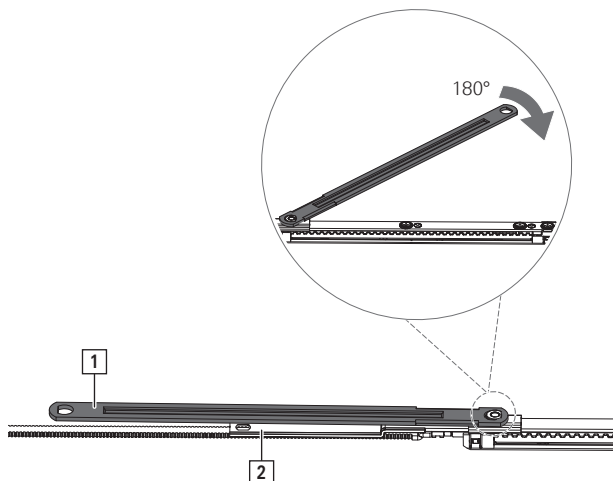


INFO

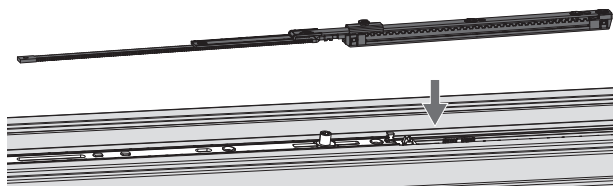
Only the sash lifter and not the lifting mishandling device can be used in conjunction with the arrestable brake stay.

1. Place the scissor stay arm [1] on the arrestable brake stay [2].

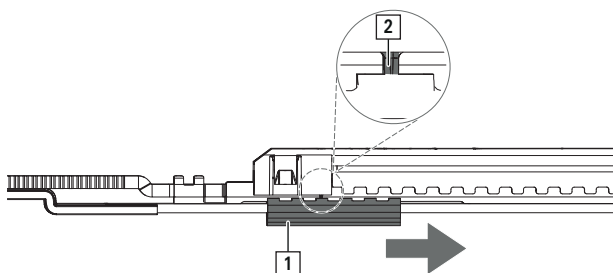
Turn the arm 180°. The arm is fixed in position.



2. Position the arrestable brake stay on the sash and connect it to the centre lock or corner drive. For dimensions, see → *from page 301*.



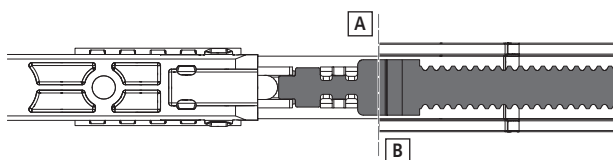
3. Move the slider [1] in jerks to move the assembly fixture out of the final position. While doing so, strike the cam [2].



4. Once the centre fixing is undone, the centre position of the push rod can be adjusted by moving the bend of the push rod to the position of the punching on the floating mullion.

[A] Punching on the floating mullion

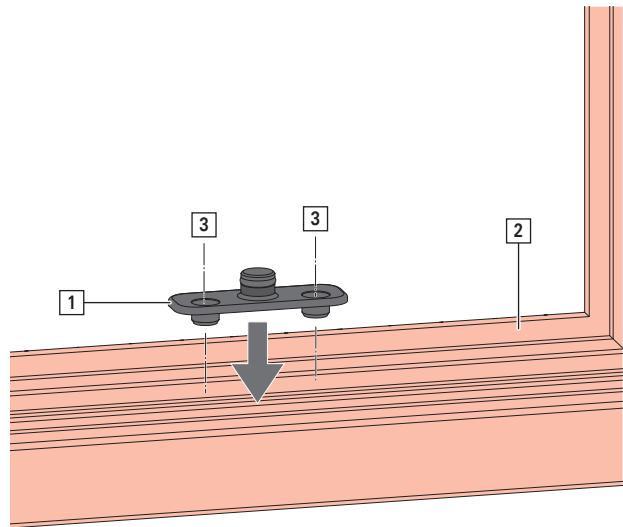
[B] Bend of the push rod





8.9.8.4 Frame component

1. Position the frame component [1] in the frame [2].

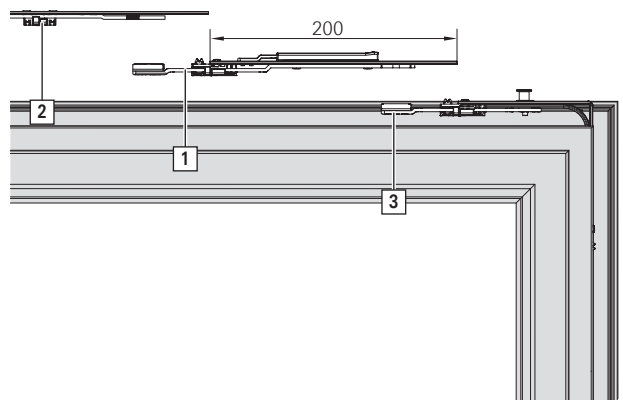


2. Fasten with two screws [3].

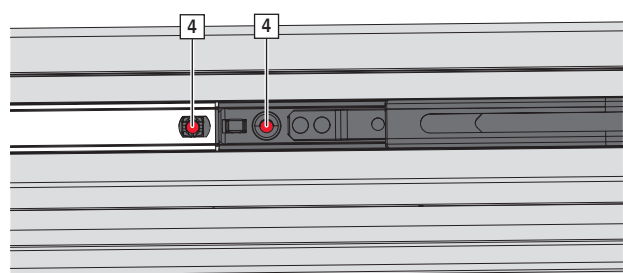
8.9.9 Additional stay arm

8.9.9.1 Sash component

1. Connect the additional stay arm sash component [1] to the corner drive [3]. Creating a force-fit connection → *from page 216*



2. Fit the stay guide [2].
3. Secure with two screws [4].



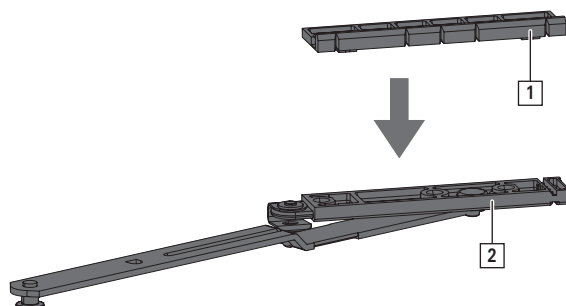
8.9.9.2 Frame component

1. Push the packer [1] into the frame component [2].
Ensure that it is firmly seated.

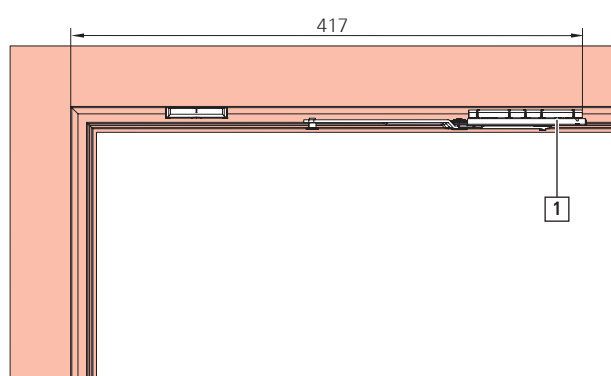


INFO

With a smooth rebate, no packers are required.



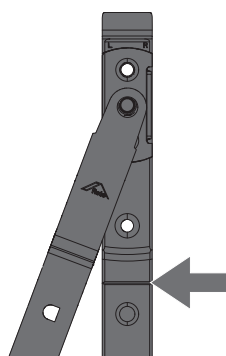
2. Insert the frame component with packer [1] into the frame profile.
The distance between the frame rebate and frame component is 417 mm.



3. Secure with three screws.

Additional stay arm for arched windows

1. Break the frame component at the notch.

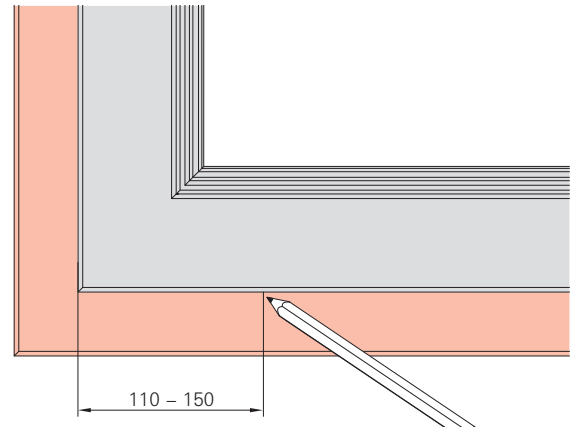


2. Insert the frame component into the frame profile.
3. Secure with three screws.



8.9.10 Turn lock

1. Mark the position (depending on the SRW).



2. Align the turn lock [1] with the centre of the marking and push it onto the sash overlap and frame.

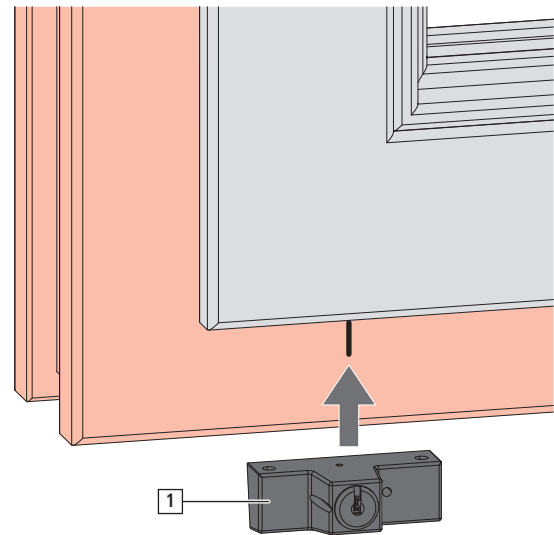


INFO

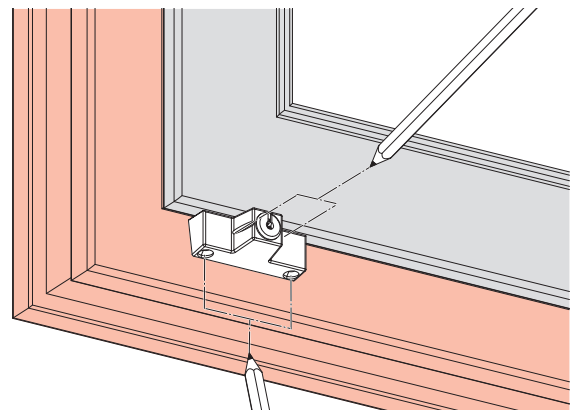
If the overlap is at angled, press the packer for the housing onto the housing beforehand.

With an overlap width of < 16 mm, use a packer (2 mm) for the angular bracket.

For timber windows with an overlap gasket, use a packer (4 mm) for the angular bracket.

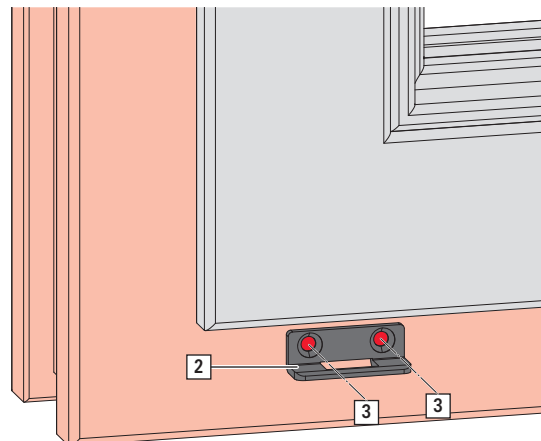


3. Mark the drill holes.

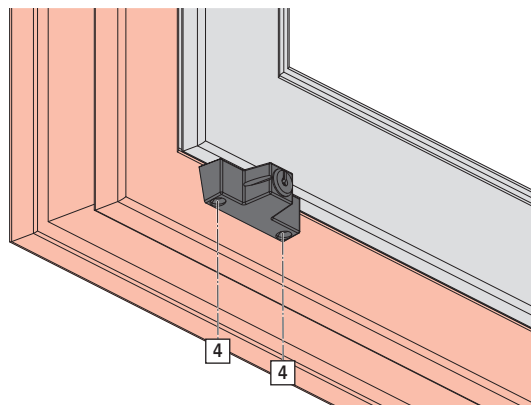


4. Remove the turn lock and drill holes, $\varnothing 3$ mm.

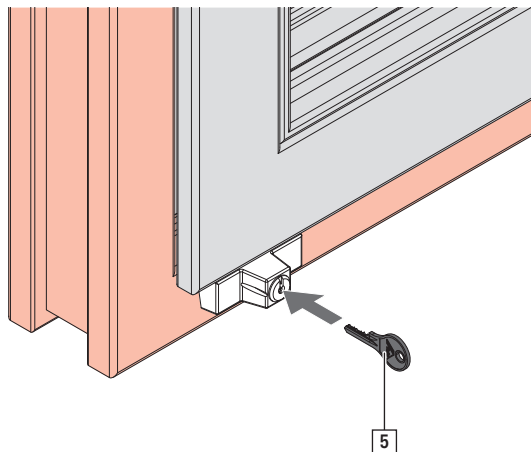
5. Fasten the angular bracket [2] with two screws [3].



6. Fasten the turn lock with two screws [4].



7. Insert the key [5] into the turn lock. Locked position of the key in the horizontal position.
Turn the key in the locking direction. The sash can now only move to the tilt position and no longer to the turned, open position.



8.10 Joining the sash and frame



CAUTION

Heavy loads pose the risk of injury and property damage.

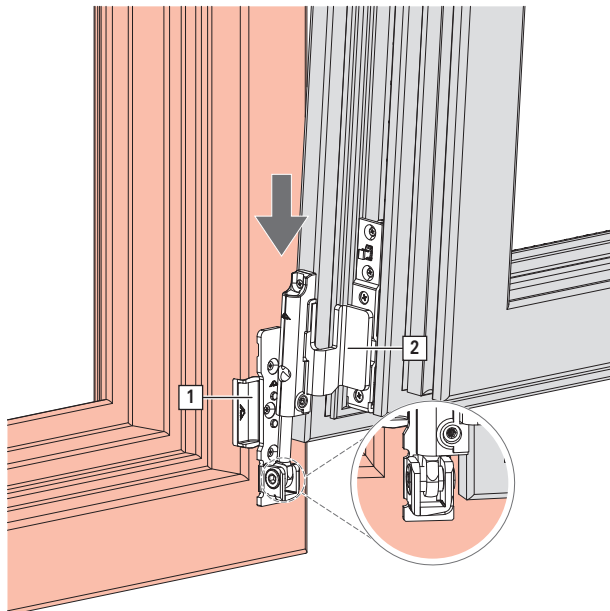
Lifting and carrying heavy loads in an uncontrolled manner may lead to physical injury and property damage.

- Transport and installation must be carried out by at least two people.
- Use transportation means. → 13 "Transport" from page 330



8.10.1 Connecting the corner hinge to the pivot rest

1. Handle in turn position.
2. With the sash slightly tilted inwards, guide it along the frame in a downwards direction until you feel the pivot-rest pin [1] engage in the corner hinge [2].

**INFO**

The frame grooves and sash grooves, as well as the components installed in them, must be free from construction materials.

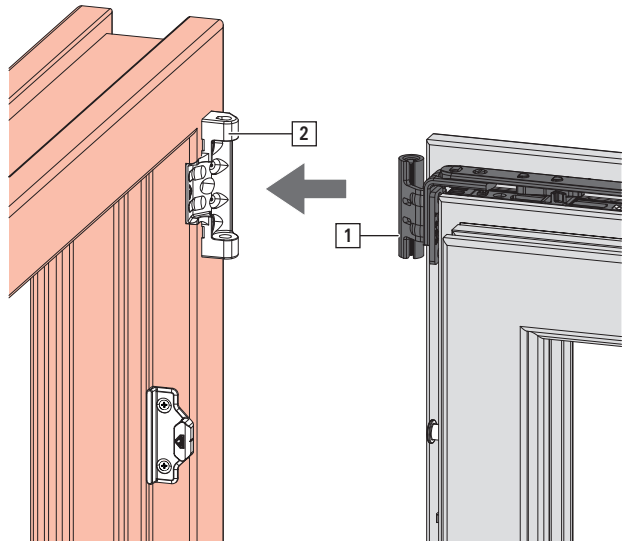
Installation

Joining the sash and frame

Connecting the stay hinge to the stay bearing

8.10.2 Connecting the stay hinge to the stay bearing

1. Insert the sash with stay hinge [1] into the stay bearing [2].



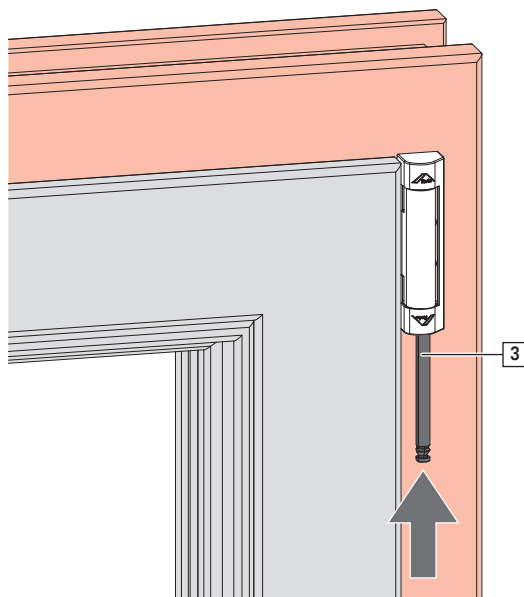
Installing the stay-bearing pin

1. Close the sash.
2. Fully insert the stay-bearing pin [3] into the stay bearing from below.



INFO

Do not hit in the stay-bearing pin using a hammer.



WARNING

An unsecured sash may pose a risk of death!

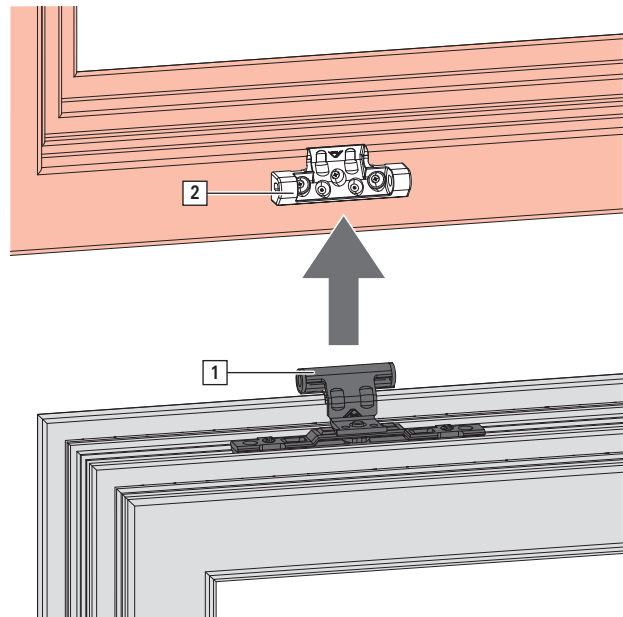
The sash may fall if the stay-bearing pin joining the stay bearing and the stay hinge is not secure.

- ▶ Secure the sash to prevent it from falling, e.g. by using two people.
- ▶ Check that the pin is seated flush with the bearing.



8.10.3 Turn-Only / Tilt-Only rebate hinge

1. Insert the sash with hinge [1] between the bearings [2].



2. Close the sash.
3. Insert the pin [3] from the side until it is seated flush.



INFO

Push the pin fully into the bearing.

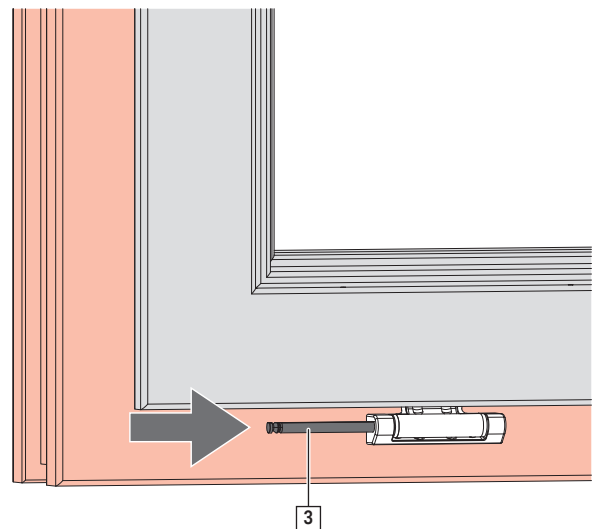


WARNING

An unsecured sash may pose a risk of death!

The sash may fall if the stay-bearing pin joining the stay bearing and the stay hinge is not secure.

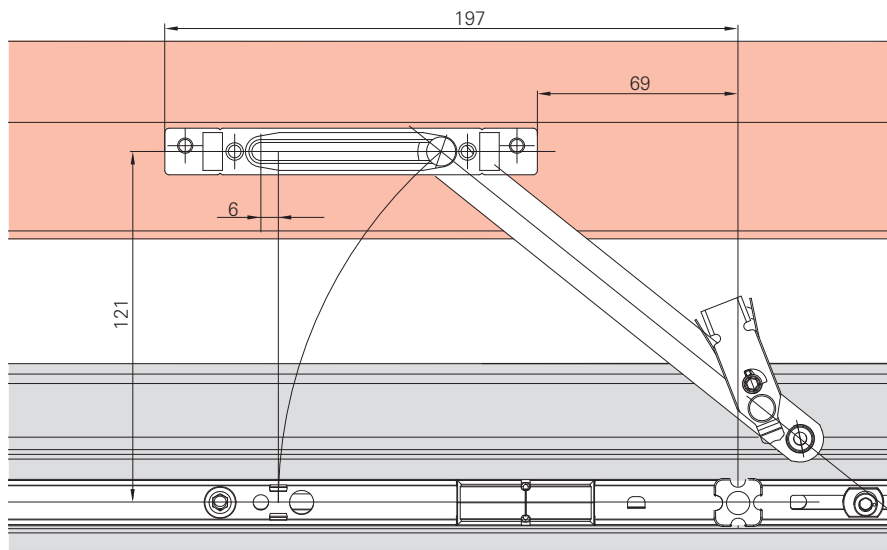
- Secure the sash to prevent it from falling, e.g. by using two people.
- Check that the pin is seated flush with the bearing.



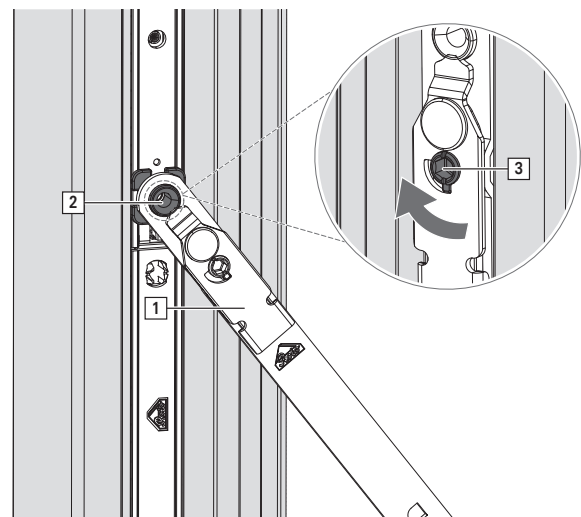
INFO

Unless otherwise stated, dismantling is performed in reverse order to installation.

8.10.4 Tilt stay



1. Mount the tilt stay frame component [1] in the sash component [2].

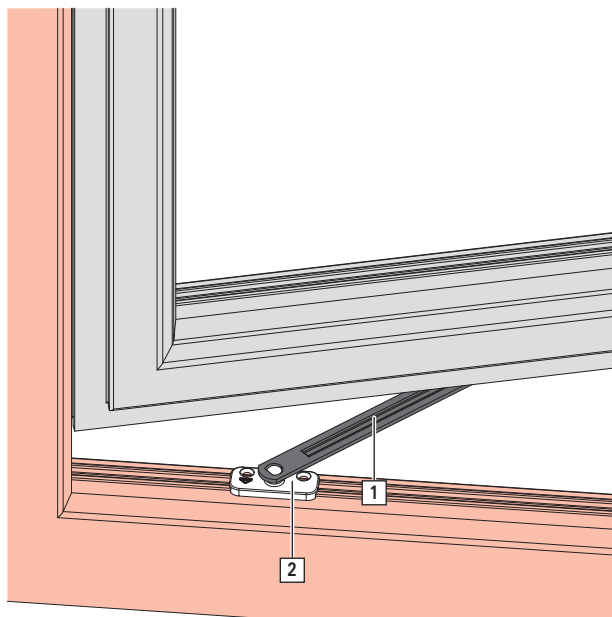


2. Turn the locking screw [3] 90° to lock the mounting mechanism.



8.10.5 Arrestable brake stay

1. Mount the scissor stay arm [1] in the frame component [2].



8.10.6 Covers

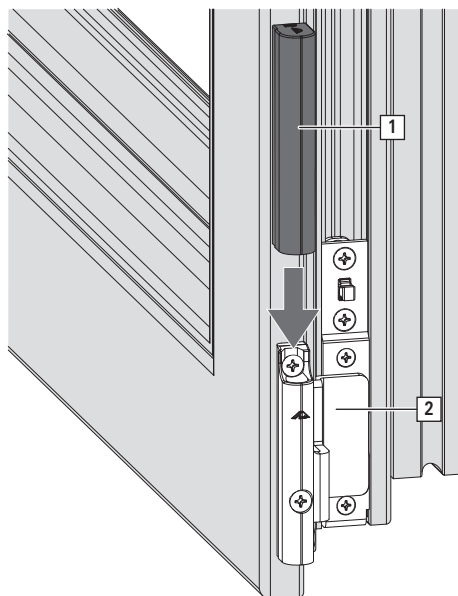
8.10.6.1 Corner hinge cover



INFO

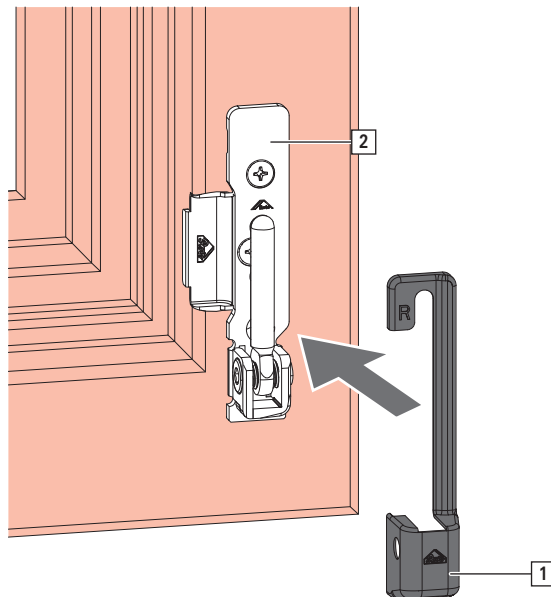
Carry out the necessary adjustments before installing the cover cap → *from page 316.*

1. Slide the pivot rest cover cap [1] onto the corner hinge [2] as far as it will go.



8.10.6.2 Pivot rest cover

1. Secure the pivot rest cover cap [1] to the corner hinge [2] from the front.





9 Adjustment

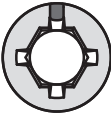
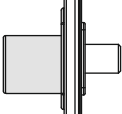
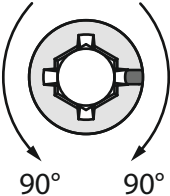
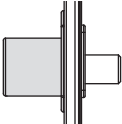


INFO

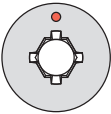
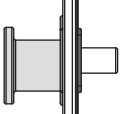
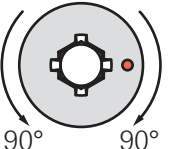
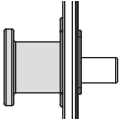
Roto hardware components may only be adjusted by authorised professionals when the element is installed.

9.1 Locking cam

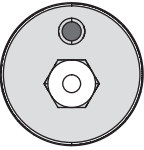
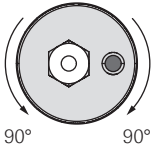
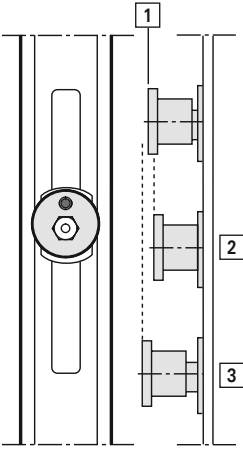
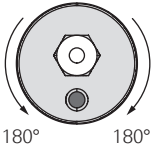
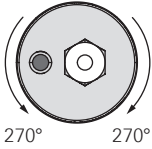
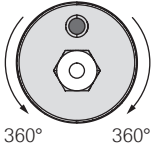
E cam

E cam	Adjustment distance	Gasket compression adjustment [mm]	Height	Side view
				
	 90° 90°	±0.8 mm		

P cam

P cam	Adjustment distance	Gasket compression adjustment [mm]	Height	Side view
				
	 90° 90°	±0.8 mm		

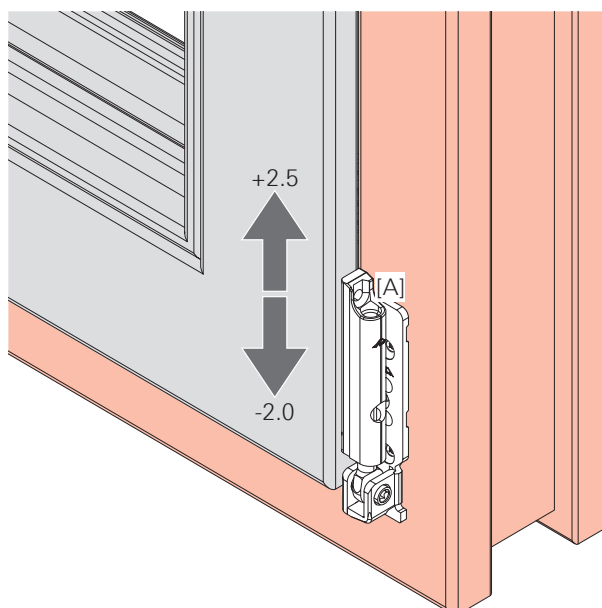
V cam

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

9.2 Pivot rest and corner hinge

Height adjustment

1. Remove the cover cap.
Move the handle to the turn position.
2. Height adjustment -2.0 / +2.5 mm via screw [A] in the corner hinge.
Tool: hex key WAF 4.

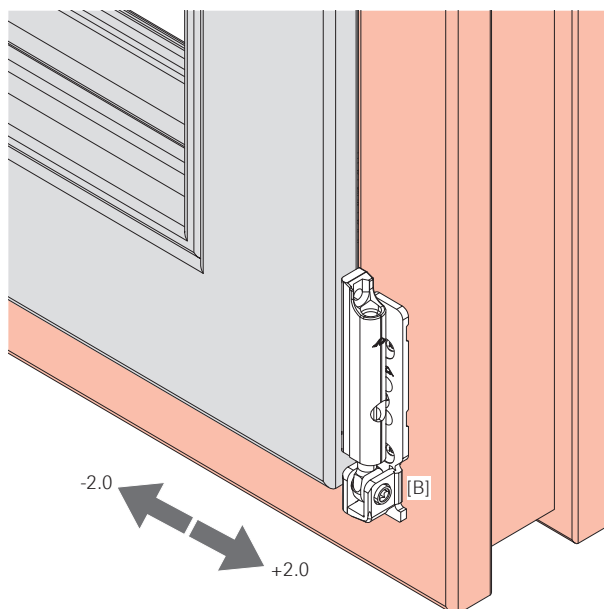




3. Fit the cover cap.

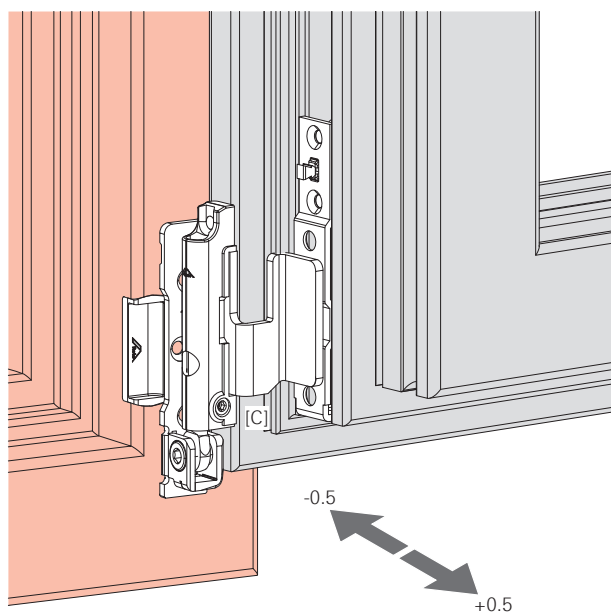
Lateral adjustment

1. Move the handle to the turn position.
2. Lateral adjustment ± 2.0 mm via screw [B] in the pivot rest.
Tool: hex key WAF 4.



Gasket compression adjustment

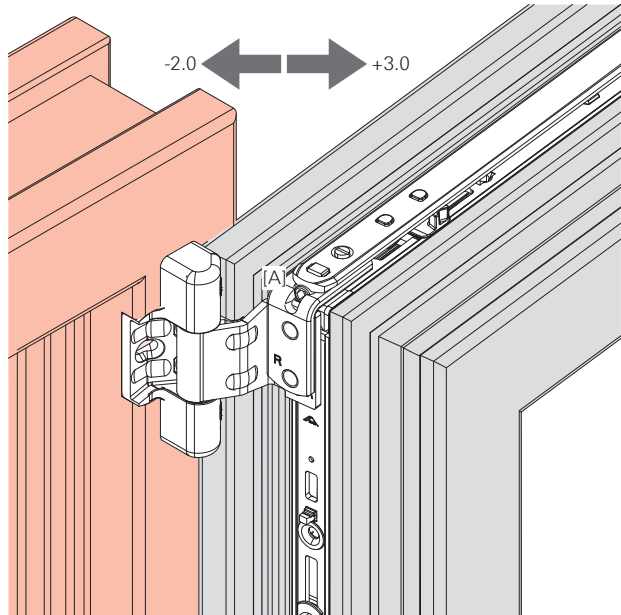
1. Open the sash 180°.
2. Lateral adjustment ± 0.5 mm via eccentric [C] in the corner hinge.
Tool: hex key WAF 2.5.



9.3 Sash stay

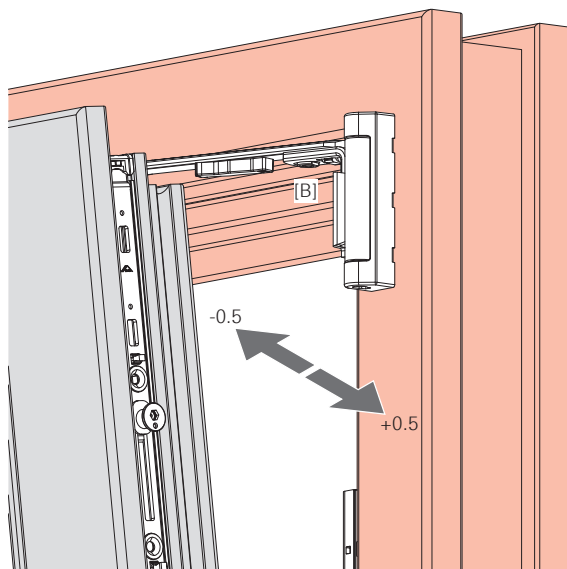
Lateral adjustment

1. Open the sash.
2. Lateral adjustment $-2.0 / +3.0$ mm via screw [A] in the sash stay.
Tool: 4 mm hex key.



Gasket compression adjustment

1. Move the sash to the tilt position.
2. Open the sash.
Press down on the lifting mishandling device.
Move the handle to the tilt position.
Under normal circumstances, this constitutes incorrect operation of the hardware, but it is a necessary step in this case.
3. Gasket compression adjustment ± 0.5 mm via eccentric [B] in the sash stay.
Tool: 4 mm hex key.





9.4 Stay bearing, adjustable

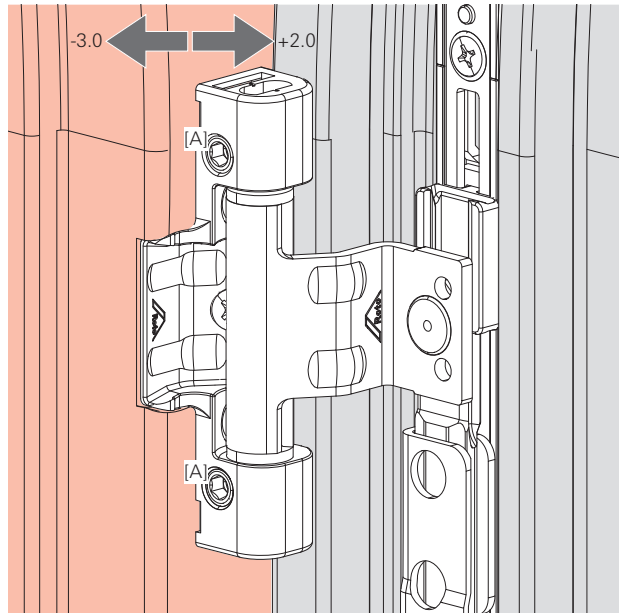
Lateral adjustment

1. Open the sash.
2. Lateral adjustment -3.0 / +2.0 mm via screws in the stay bearing [A].
Tool: 4 mm hex key.



INFO

Ensure that the adjustment is equal.



10 Operation

10.1 Operating information

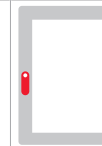
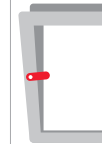
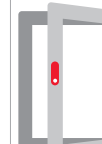
The windows and balcony doors are operated using a handle.

The following symbols illustrate the different handle positions and the resultant sash positions of the windows and balcony doors.

10.1.1 Handle position with Tilt&Turn hardware

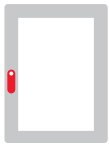
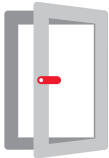
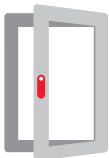
Handle position	Sash position	Meaning
		Sash in closed position.
		Sash in turned, open position.
		Sash in night ventilation position.
		Sash in tilted, open position.

10.1.2 Handle position with TiltFirst hardware

Handle position	Sash position	Meaning
		Sash in closed position.
		Sash in tilted, open position.
		Sash in turned, open position.

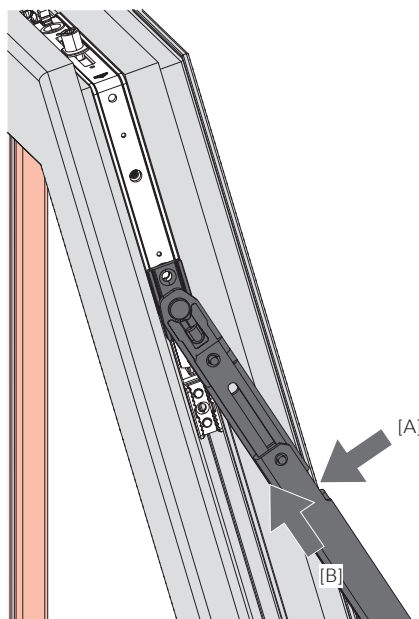


10.1.3 Handle position for arrestable brake stay

Handle position	Sash position	Meaning
		Sash in closed position.
		Sash in turned, open position.
		Sash in fixed position.
		Release the fixed position.
		Sash in turned, open position.

10.1.4 Restrictor and cleaning stay

1. Move the window to the tilt position.
2. Unhinge the tilt stay or other tilt distance restrictors.
3. Move the window to the restrictor position.
4. Push the lock-in position [A] against the restrictor and cleaning stay and move the sash to the cleaning position [B].



5. After cleaning, move the window to the tilt position and remount the tilt stay or other tilt distance restrictors.

10.2 Fault assistance

Fault	Cause	Corrective action	To be carried out by
Handle is difficult to turn.	Frame components have not been greased.	Grease the frame components.	☐
	Handle is damaged.	Replace the handle.	■
	Handle screwed into place too tightly.	Undo the screw fixing slightly.	■
	Sash components with slanting screws.	Screw the sash components in straight.	■
	Sash components are damaged.	Replace the sash components.	■
	Incorrect striker positions.	Adapt the striker positions.	■
	Sash stay gasket compression is too strong (accumulation of gaskets).	Adjust the sash stay gasket compression or clean the gasket.	■
Handle cannot be turned 180°.	Sash components hinged or installed incorrectly.	Check the setting in the turn position (potentially rehang – start from the T&T espagnolette).	■
Sash falls into the tilt position when in the turn position.	Excessive clearance at the top.	Check the fit of the corner hinge.	■
		Check the fit of the pivot rest.	■
		Adjust the corner hinge so that it is positioned higher (pay attention to the tilt striker).	■
Sash falls into the turn position when in the tilt position.	Tilt striker damaged.	Replace the tilt striker.	■
Sash scrapes in the tilt position.	Insufficient clearance at the top.	Lower the corner hinge (pay attention to the tilt striker).	■
Locking cam is rubbing against the striker.	Sash mounted incorrectly.	Rehang the sash.	■
	Incorrect striker position.	Adapt the striker position.	■



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

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

11 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 324
Cleaning		→ from page 325
Clean hardware	☐	
Care		→ from page 325
Lubricate movable parts	☐	
Lubricate locking points	☐	
Performance test		→ from page 327
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 327
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

11.1 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.



11.2 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. → 11.3 "Care" from page 325
- ▶ Apply a thin protective film to the hardware, for example using a cloth soaked in oil.

11.3 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

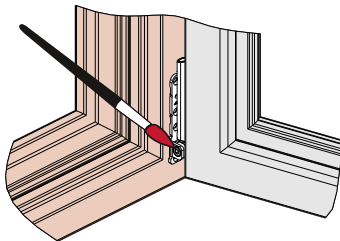
- Roto NX / NT grease



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.

11.3.1 Lubrication points



- [2] Grease



11.4 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.

11.5 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.

12 Dismantling



WARNING

Improper dismantling may pose a risk of death!

The sash may fall during dismantling.

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



CAUTION

Physical strain may cause injury and damage to health.

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

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



INFO

Unless otherwise stated, dismantling is performed in reverse order to installation.

12.1 Sash



WARNING

Heavy loads pose the risk of injury and property damage.

Lifting and carrying heavy loads in an uncontrolled manner may lead to physical injury and property damage.

- ▶ Transport and removal must be carried out by at least two people.
- ▶ Use transportation means. → 13 "Transport" from page 330

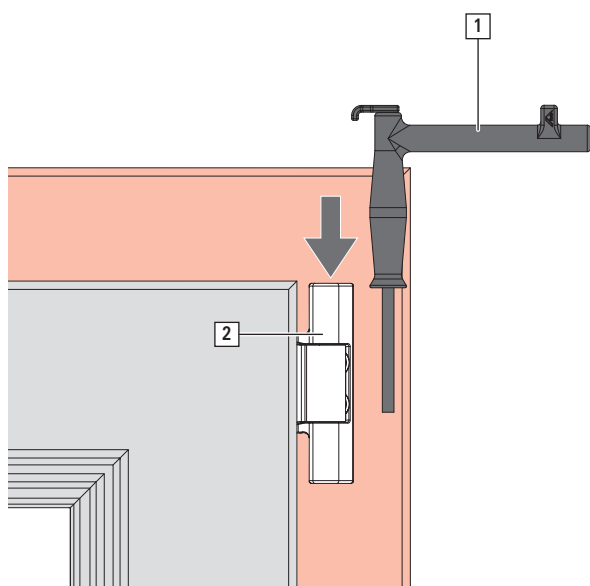
Unhinging the sash

1. Close the window.
2. Use the pulling tool [1] to gently push the stay-bearing pin [2] downwards from above.



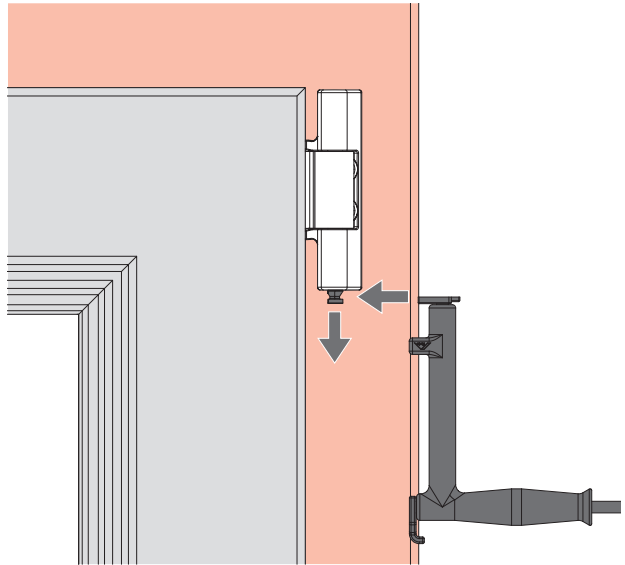
INFO

Secure the sash to prevent it from falling.





3. Place the pulling tool against the stay-bearing pin and remove the stay-bearing pin by pulling it vertically downwards.



4. Lift and unhinge the sash.

12.2 Hardware components

Removing hardware components

1. Undo all screw connections.
2. Remove the hardware components.
3. Dispose of the hardware components properly.

13 Transport

13.1 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.

13.2 Storing the hardware

Store all hardware components as follows until they are installed:

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

14 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.

14.1 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.

14.2 Disposing of hardware

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

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

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



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