



Roto NX

Hinge side Designo A16

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

Contact

Roto Frank

Fenster- und Türtechnologie GmbH

Wilhelm-Frank-Platz 1

70771 Leinfelden-Echterdingen

Germany

Phone +49 711 7598 0

Fax +49 711 7598 253

info@roto-frank.com

www.roto-frank.com



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1 General information

1.1 Version history

Ver- sion	Date	Changes
v2	09/02/2024	VT espagnolette added → <i>from page 34</i> Lever-operated espagnolette Plus added → <i>from page 128</i> New items and profiles → <i>from page 132</i> Installation of safety device for lever-operated espagnolette, standard added → <i>from page 206</i> Installation of fastening plate added → <i>from page 205</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 | Aluminium profiles with a 16 mm hardware groove: CTL_107
 - Roto Handles: CTL_1

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 leaf
	Leaf / components seated in the leaf
	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
	Aluminium

1.5 Product features

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



Symbol	Meaning
	Size
	Information
	Clamp strip version
	Couplable
	Length
Nº	Material number
	Installation type
	Lifting mishandling device
	Surface
	Position
	Profile
	Frame groove
	Number of locking cams
	Type of locking cams
	Security class
	System
	Adjustment

1.6 Abbreviations

Abbreviation	Meaning
GC	Gasket compression
approx.	approximately
CTL	Catalogue
DIN L / R	DIN left / right

Abbreviation	Meaning
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
m ²	Square metres
max.	Maximum
min.	Minimum
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
WAF	Width across flats
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, 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.



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 8*.

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 8*.

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.

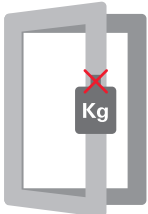
Depending on the outside temperature, relative humidity of the room air and installation situation of the windows and balcony doors, a temporary build-up of condensation may occur. This can lead to corrosion on the hardware and mould growth on the frame or wall. Ambient conditions that are too damp,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

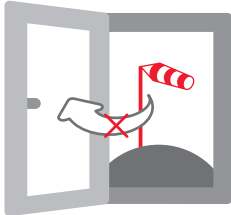
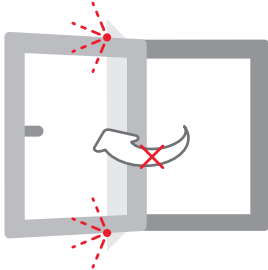
2.6 Operation

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

- Central locking system fully concealed in the sash rebate with single-handed operation:
 - Profiled faceplate
 - Effortless and low-wear operation thanks to adjustable locking cams guided over the surface
 - Can be used on aluminium profiles with a 16 mm hardware groove.
 - Hardware axes 9 (10) mm and 13 mm.
 - 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
 - Link-guided stay arm, as standard with:
 - Integrated anti-slam device (Tilt&Turn version only)
 - Safeguard against incorrect operation in the tilt position (Tilt&Turn version only)
 - Variable tilt depth restriction (80 – 140 mm, Tilt&Turn version only)
 - Hinge side can be clamped in frame groove using preassembled clamp strips with clamping blocks.
 - Integrated piercing screw to prevent horizontal movement.
 - Stay bearing and pivot rest fully concealed in the sash rebate.
 - 3D adjustment in the stay arm / corner hinge / pivot rest.
 - Lasting and reliable load relief on the pivot rest.
 - Form-fitting "Clip&Fit" connection.
 - With burglar inhibiting anti-jemmy device in the tilt striker as standard.
 - Installation of hinge side without jigs.
 - Low-maintenance thanks to grease deposit recesses.
 - Tested in accordance with EN 13126-8 and EN 1191 and certified in accordance with QM 328.
 - High-quality Roto Sil surface (matt silver) for maximum corrosion resistance (DIN EN 13126 / 8 and 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.
- 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

To install hardware components in aluminium profiles with a 16 mm hardware groove, Roto recommends using electrogalvanised and passivated steel self-tapping screws. Use screws with additional sealing in more challenging climatic conditions.

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



Sash weight	Tractive force in newtons (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

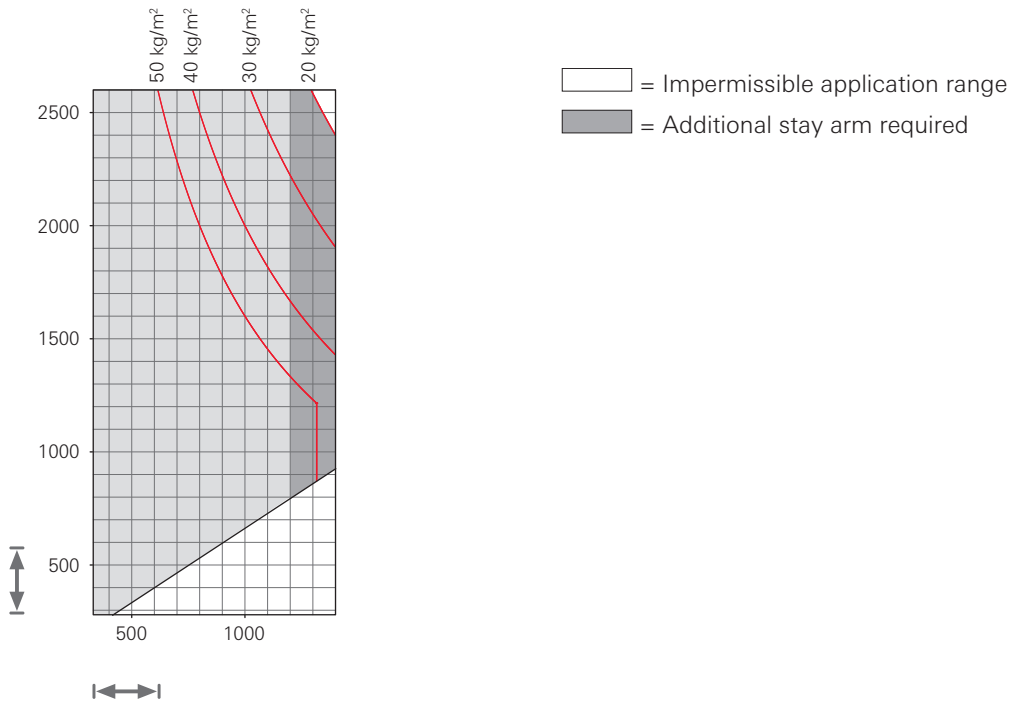
The individual application diagrams must strictly be complied with.

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

3.3.1.1 80 kg



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 RC 1 N	Security RC 2 / RC 2 N
	Sash rebate width	330 – 1400 mm	450 – 1400 mm	450 – 1400 mm
	Sash rebate height	280 – 2600 mm	280 – 2600 mm	490 – 2400 mm
	Sash weight	Max. 80 kg	Max. 80 kg	Max. 80 kg



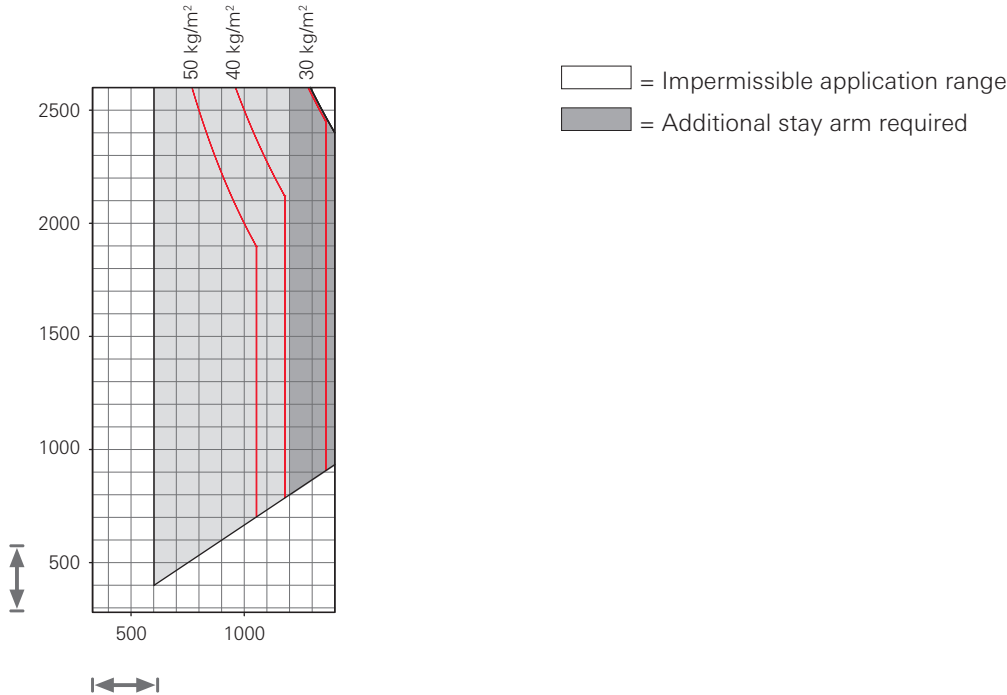
INFO

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

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



3.3.1.2 100 kg



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 RC 1 N	Security RC 2 / RC 2 N
	Sash rebate width	600 – 1400 mm	600 – 1400 mm	600 – 1400 mm
	Sash rebate height	400 – 2600 mm	400 – 2600 mm	490 – 2400 mm
	Sash weight	Max. 100 kg	Max. 100 kg	Max. 100 kg



INFO

When using stay arm 350 and with S.kg > 80 kg: set the tilt depth restriction to 80 mm.

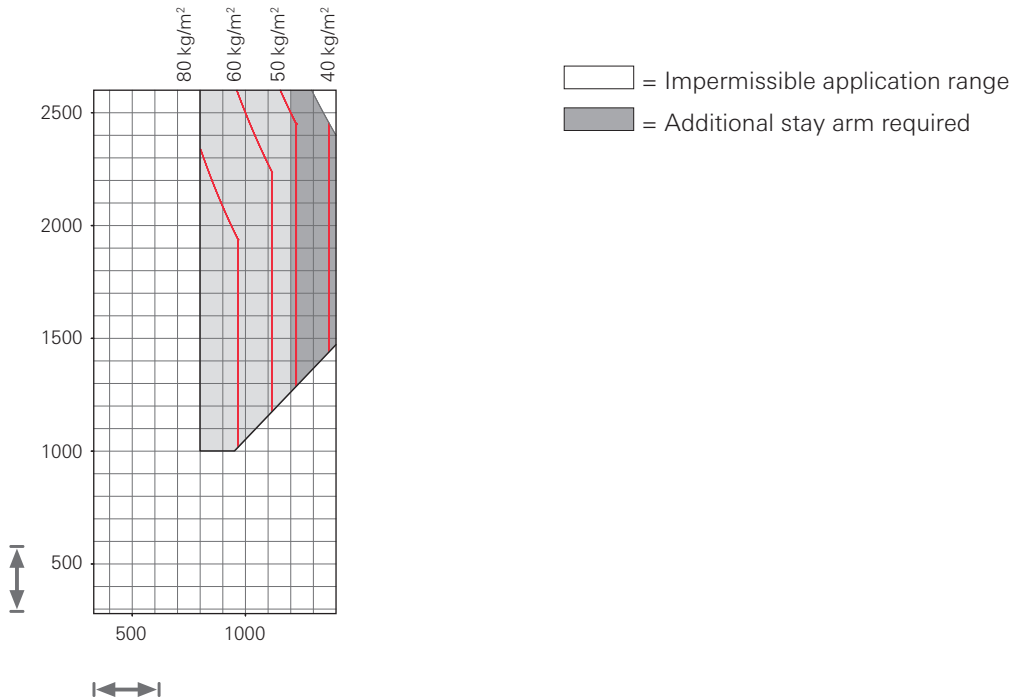


INFO

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

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

3.3.1.3 Load transfer from 80 to 150 kg



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 RC 1 N	Security RC 2 / RC 2 N
	Sash rebate width	800 – 1400 mm	800 – 1400 mm	800 – 1400 mm
	Sash rebate height	1000 – 2600 mm	1000 – 2600 mm	1000 – 2400 mm
	Sash weight	80 – 150 kg	80 – 150 kg	80 – 150 kg



INFO

When using stay arm 350 and with S.kg > 80 kg: set the tilt depth restriction to 80 mm.



INFO

Sash weight > 130 kg: set the tilt depth restriction of the stay arm to 80 mm.

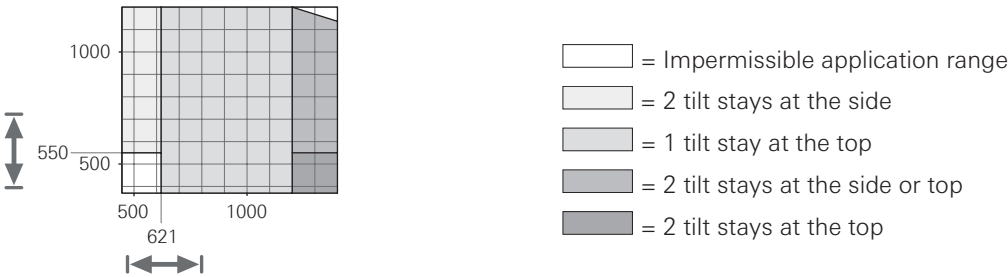


INFO

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 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	450 – 1400 mm
	Sash rebate height	370 – 1200 mm
	Sash weight	Max. 80 kg



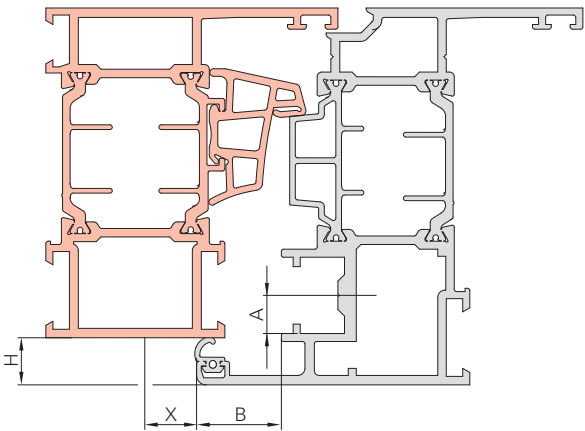
INFO

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

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

3.4 Frame clearances

3.4.1 Frame clearances with a 90° opening angle

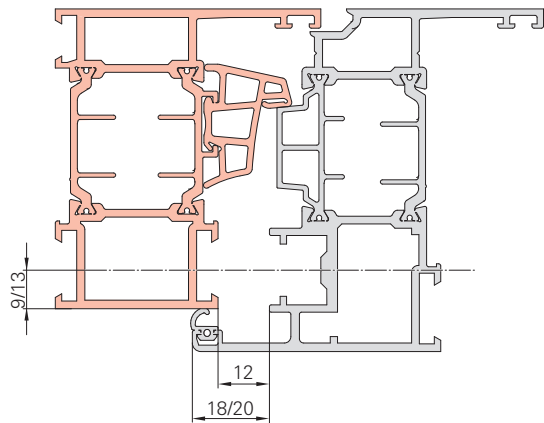


Hardware axis [A]	Overlap height [H]	Overlap width [B]	Frame clearance [X]
9	8	18	9.0
	9	18	9.5
	10	18	10.5
	8	20	7.0

Hardware axis [A]	Overlap height [H]	Overlap width [B]	Frame clearance [X]
13	9	18	10.0
	10	18	11.5
	8	22	8.0

3.4.2 Dimensions

System 12/18 (20/22)-9/13



Rebate depth: 24 / 30

Rebate clearance, horizontal at the bottom: 11 – 14 mm

Rebate clearance at the side: 10 – 14 mm

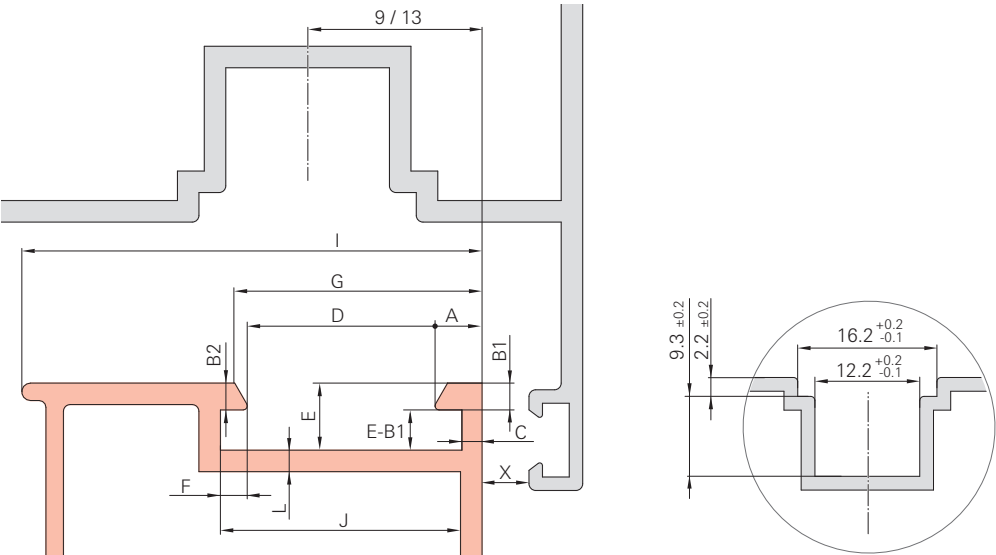
Rebate clearance at the top: 11 – 14 mm



3.5 Profile cross section

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

Hardware axis 9 / 13



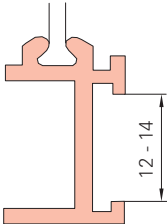
Assignment	Meaning	Min.	Max.
[A]	Flange width, front	3.5	4.3
[B1]	Flange thickness, front	1.5	2.0
[B2]	Flange thickness, rear	1.5	2.0
[C]	Profile leg thickness, front	1.5	2.0
[D]	Groove width	10.0	14.0
[E]	Groove depth	4.5	5.0
[F]	Rear flange overhang	1.7	2.5
[G]	Pivot rest supporting surface	13.2	18.5
[I]	Installation space (frame)	21.0	–
[J]	Groove inside width	14.4	18.6
[L]	Groove base thickness	1.5	2.0
[X]	Hinge passage	3.5	–



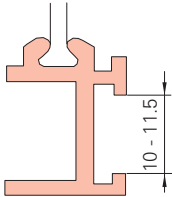
INFO

Hinge sides A16 and Designo A16 are designed for HA 9 mm and HA 13 mm. Before using different hardware axes, a separate profile assessment is recommended.

Groove versions



Groove version V.01



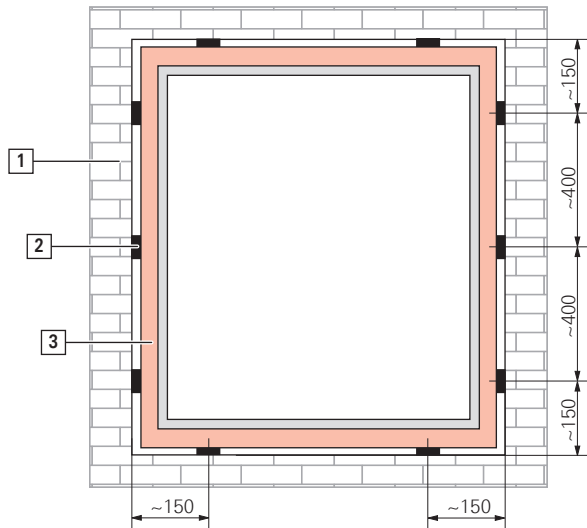
Groove version V.02



INFO

When ordering profile-related frame components, note the information about the groove versions → *from page 132.*

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.

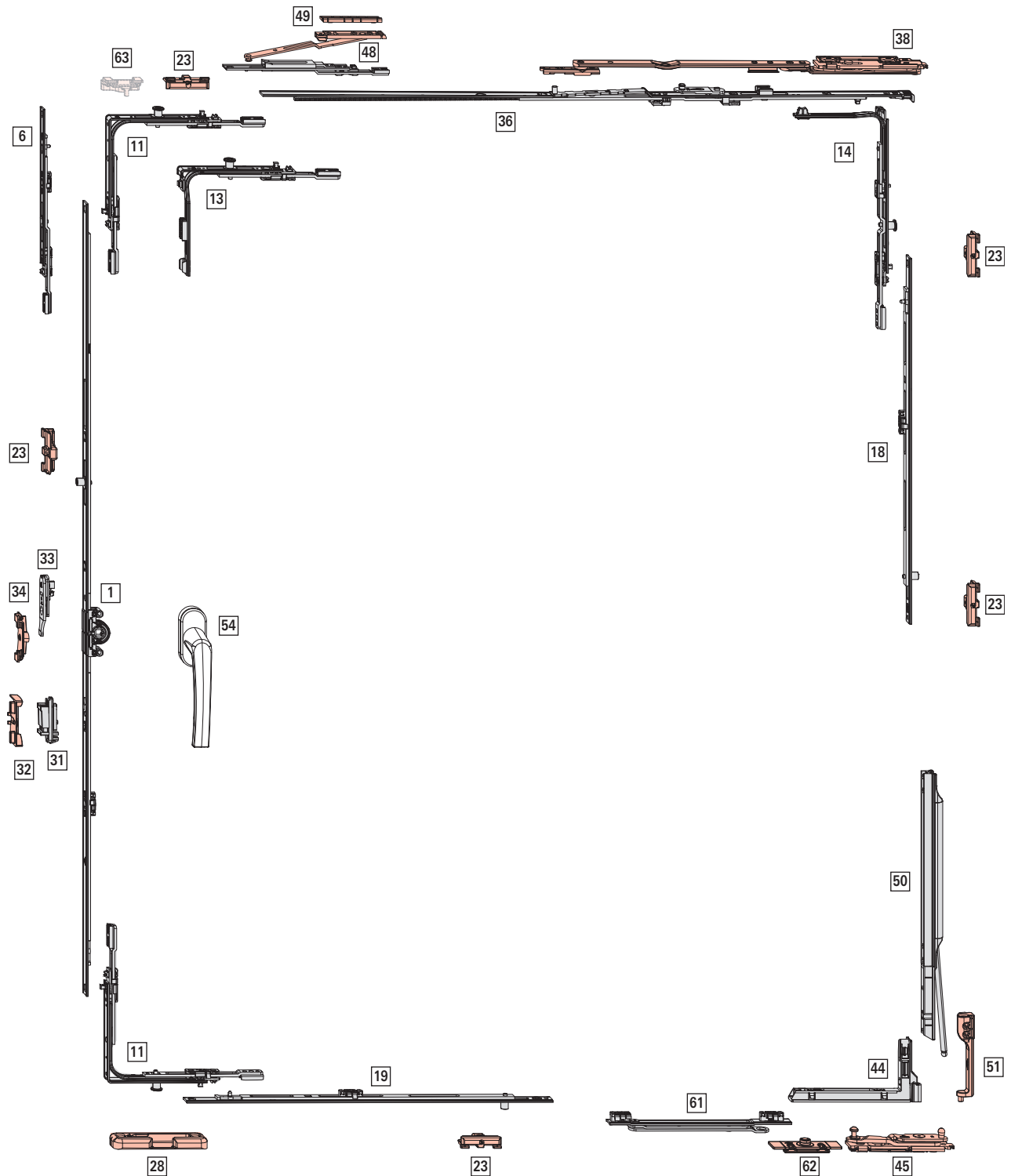


www.roto-frank.com

4.1 T&T espagnolette, VT – fixed handle height

4.1.1 Tilt&Turn hardware

4.1.1.1 Basic security





Application range

Without load transfer

SRW: 330 – 1400 mm

SRH: 280 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 mm

S.kg: max. 150 kg



INFO

SRW 330 – 430 mm from SRH 371 mm

SRH 280 – 370 mm from SRW 431 mm

[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

Size-specific combinations:

					Nº
2401 – 2600	200 KU	–	–	–	308267

[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:

SRW ≤ 430 mm

SRH ≤ 370 mm

[14] Sash stay corner drive

		Nº
1	P	260286



INFO

With SRH 280 – 330 mm, crop the sash stay corner drive (to do so, extend the connecting rod fully).

[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
Without load transfer	With load transfer					
–	1101 – 1150	400	1	E	–	255280
1101 – 1800	1151 – 1800	600	1	E	–	255281
1801 – 2400	1801 – 2400	600 KU	1	E	–	255282
		600	1	E	–	255281
2401 – 2600	2401 – 2600	600 KU	1	E	–	255282
		600 KU	1	E	–	255282
		400	1	E	–	255280

[19] Multipart centre lock – standard, horizontal

					Nº
600	N	1	E	–	255281

Size-specific combinations:

					Nº
1101 – 1400	600	1	E	–	255281

[23] Striker → from page 135

[28] Tilt striker → from page 132

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component
→ from page 139**[36] Stay guide – basic security**

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144**INFO**

From SRH < 600 mm, set the tilt depth to 80 mm (on windows without overlap gasket from SRH < 900 mm).

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

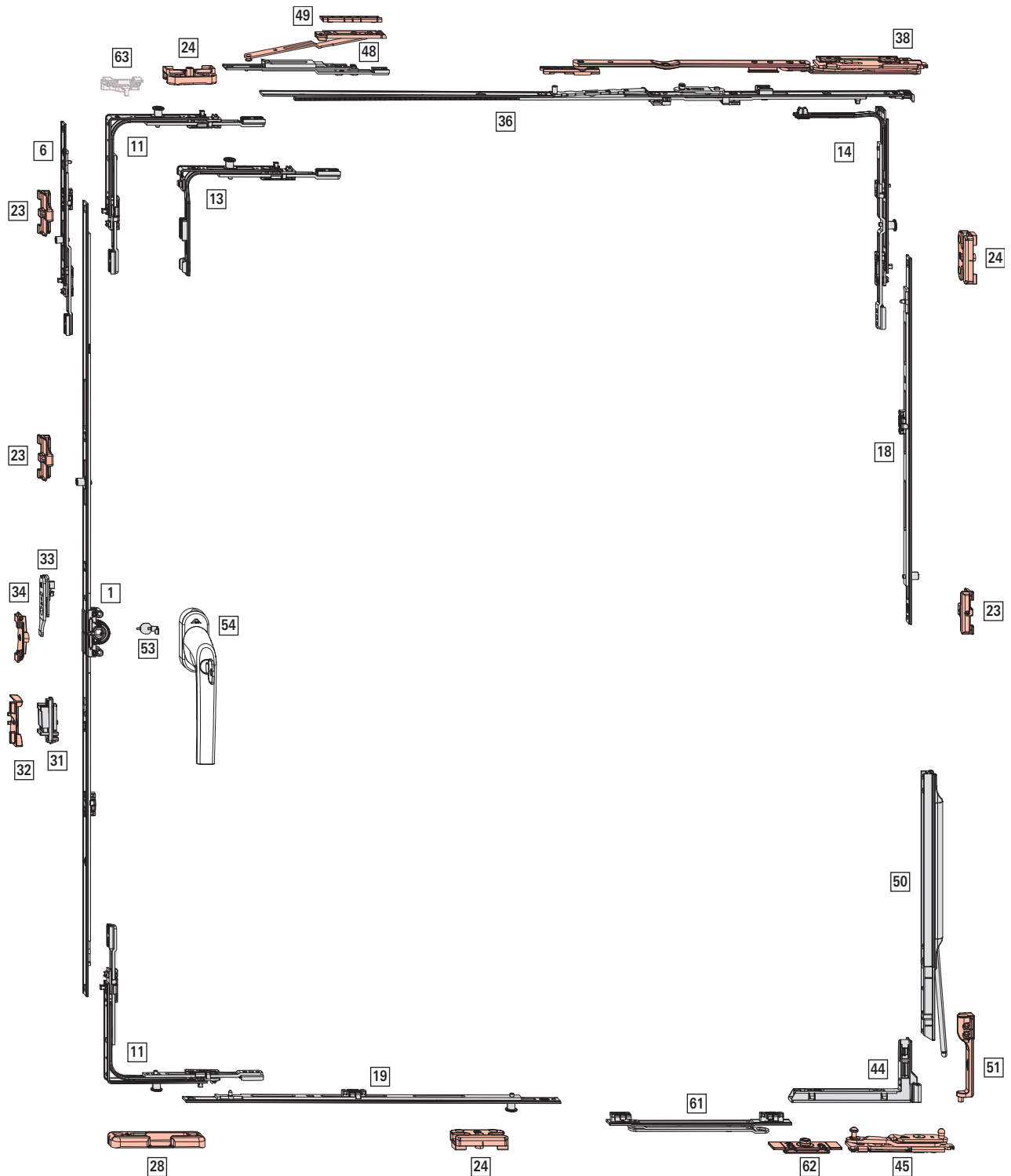
[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

Optional**[63] Night vent** → from page 140



4.1.1.2 RC 1 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 280 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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	1	E	450821

Size-specific combinations:

				Nº
2401 – 2600	200 KU	1	E	450821

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with SRH ≤ 360 mm.

[14] Sash stay corner drive

		Nº
1	P	260286



INFO

With SRH 280 – 330 mm, crop the sash stay corner drive (to do so, extend the connecting rod fully).

[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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[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
Without turn restrictor	With turn restrictor				
450 – 650	650 – 850	200	1	P	255284
651 – 850	851 – 1050	400	1	P	255285
851 – 1000	1051 – 1250	600 [1]	1	P	255286
	1251 – 1400	600 KU	1	E	255282
		200	1	P	255284

[23] Striker → from page 135

[24] Security striker → from page 136

[28] Tilt striker → from page 132

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[1] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053.

[34] Lifting mishandling device frame component
 → from page 139

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144

INFO

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143

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

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138

[50] Load transfer sash component
 (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
 (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591


INFO

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

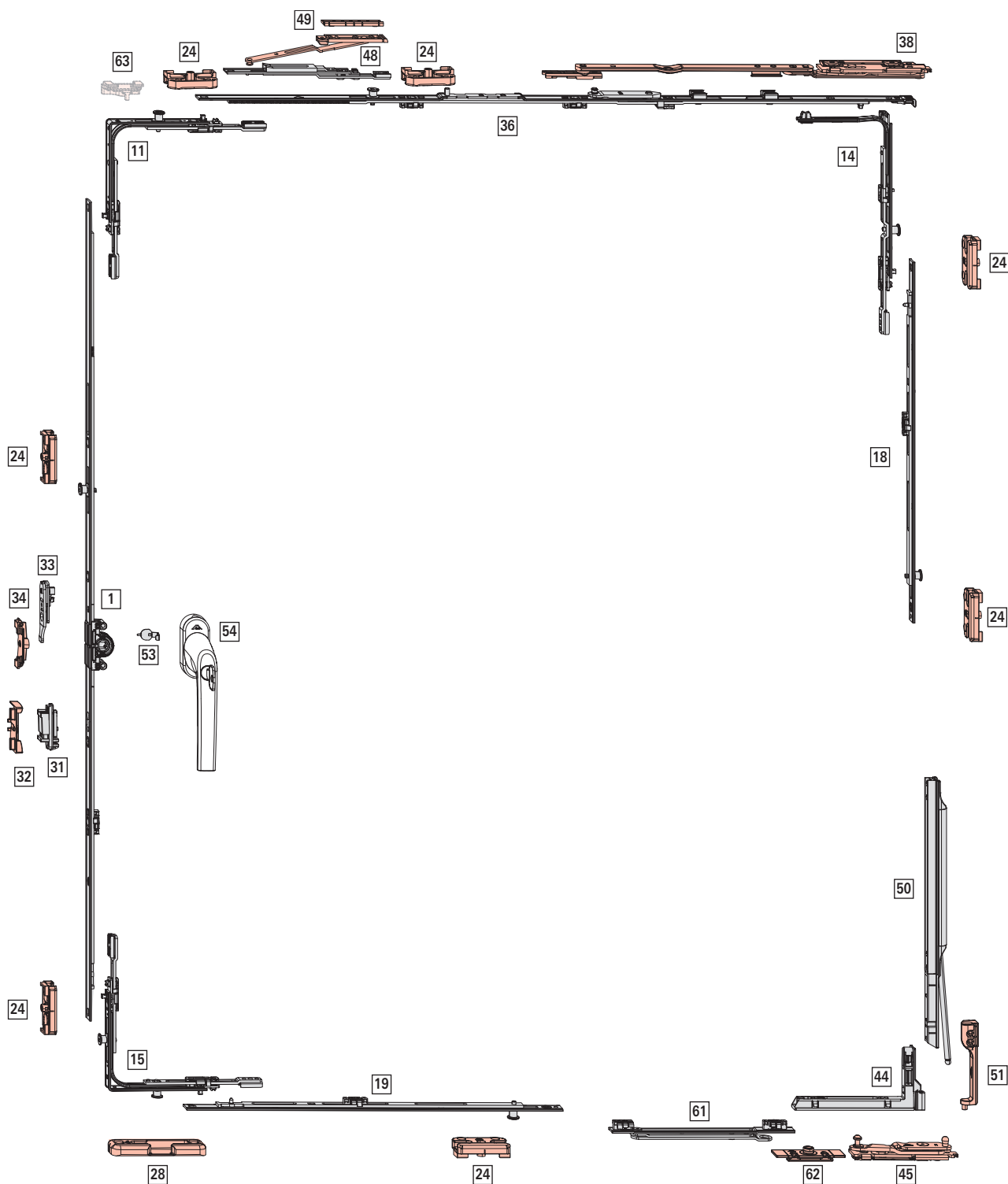
[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

Optional
[63] Night vent → from page 140



4.1.1.3 RC 2 / RC 2 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 600 – 2400 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2400 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

[11] Standard corner drive

1		V		260272

[14] Sash stay corner drive

1		V		260284

[15] Corner drive, standard (security)

2		V		260274

[18] Multipart centre lock – security, vertical

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

Size-specific combinations:

Without load transfer	With load transfer					
490 – 650	–	200	1	V		296853
651 – 850	1000 – 1150	400	1	V		296854
851 – 1050	1151 – 1350	600 [2]	1	V		296855
1051 – 1250	1351 – 1550	600 KU	1	V		337711
		200	1	V		296853
1251 – 1450	1551 – 1750	600 KU	1	V		337711
		400	1	V		296854

[2] Crop CL by 15 mm up to SRH 861; when using load transfer: crop CL by 15 mm with SRH 1151

[3] Crop CL by 15 mm up to SRH 1461; when using load transfer: crop CL by 15 mm with SRH 1751

[4] Crop CL by 15 mm up to SRH 2061; when using load transfer: crop CL by 15 mm with SRH 2351

[5] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053

Without load transfer	With load transfer					
1451 – 1650	1751 – 1950	600 KU	1	V		337711
		600 [3]	1	V		296855
1651 – 1850	1951 – 2150	600 KU	1	V		337711
		600 KU	1	V		337711
		200	1	V		296853
1851 – 2050	2151 – 2350	600 KU	1	V		337711
		600 KU	1	V		337711
		400	1	V		296854
2051 – 2250	2351 – 2400	600 KU	1	V		337711
		600 KU	1	V		337711
		600 [4]	1	V		296855
2251 – 2400	–	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

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

Size-specific combinations:

Without turn restrictor	With turn restrictor					
450 – 650	650 – 850	200	1	V		296853
651 – 850	851 – 1050	400	1	V		296854
851 – 1000	1051 – 1250	600 [5]	1	V		296855
	1251 – 1400	600 KU	1	V		337711
		200	1	V		296853

[24] Security striker → from page 136

[28] Tilt striker → from page 132

[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 138

[33] Lifting mishandling device sash component

Sash component for lifting mishandling device		795927

[34] Lifting mishandling device frame component
 → from page 139

[36] Stay guide – security

					Nº
330 – 600	490	250	–	–	385393
601 – 800	690	350	–	–	385394
801 – 1000	890	500	1	V	450373
1001 – 1200	1090	500	1	V	450374

[38] Stay arm → from page 144

INFO

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143

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

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138

[50] Load transfer sash component
 (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
 (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591


INFO

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

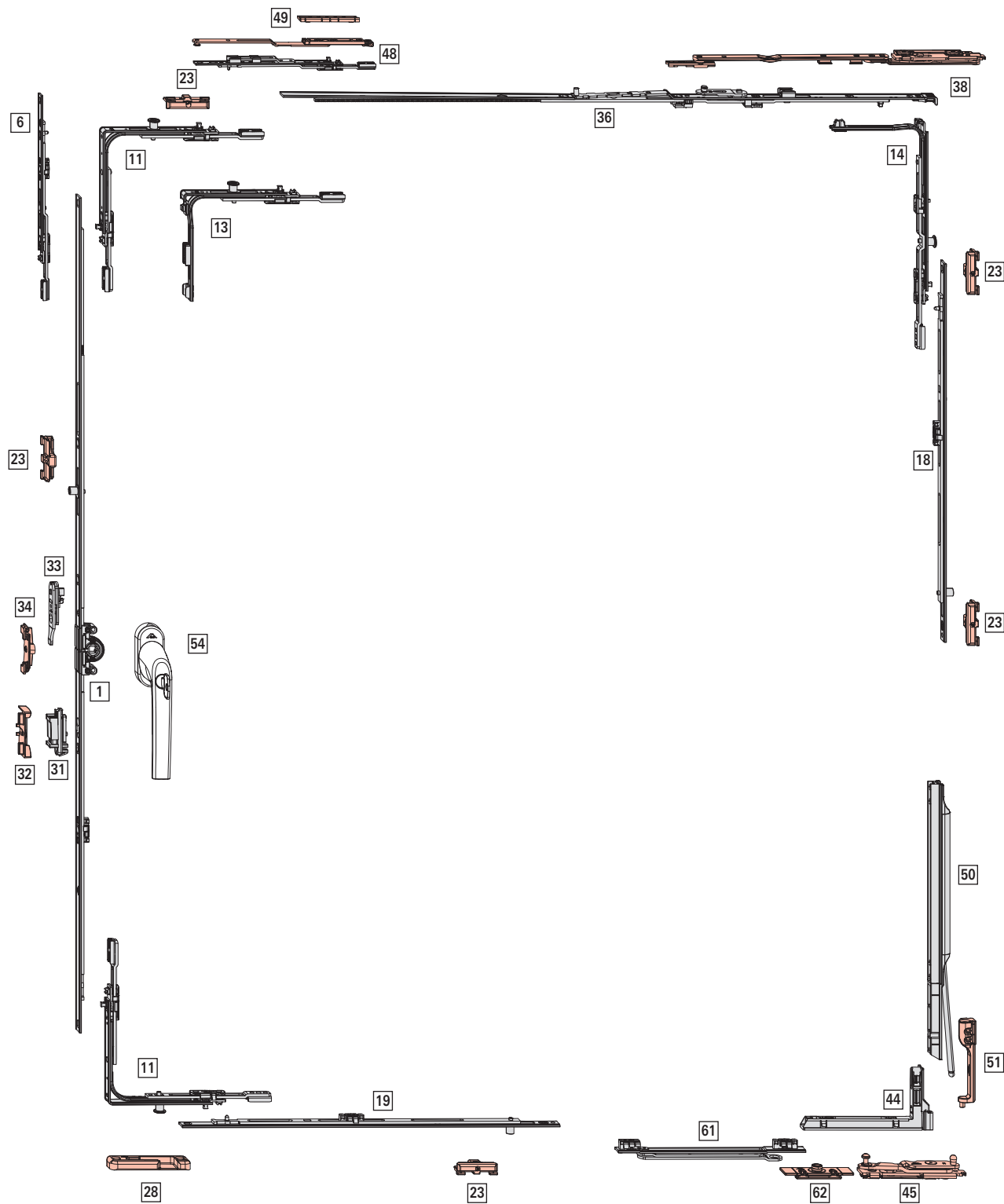
		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

Optional
[63] Night vent → from page 140



4.1.2 TiltFirst hardware

4.1.2.1 Basic security





Application range

Without load transfer

SRW: 330 – 1400 mm

SRH: 280 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 mm

S.kg: max. 150 kg



INFO

SRW 330 – 430 mm from SRH 361 mm

SRH 280 – 370 mm from SRW 431 mm

[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

Size-specific combinations:

					Nº
2401 – 2600	200 KU	–	–	–	308267

[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:

SRW ≤ 430 mm

SRH ≤ 370 mm

[14] Sash stay corner drive

		Nº
1	P	260286



INFO

With SRH 280 – 330 mm, crop the sash stay corner drive (to do so, extend the connecting rod fully).

[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
Without load transfer	With load transfer					
–	1101 – 1150	400	1	E	–	255280
1101 – 1800	1151 – 1800	600	1	E	–	255281
1801 – 2400	1801 – 2400	600 KU	1	E	–	255282
		600	1	E	–	255281
2401 – 2600	2401 – 2600	600 KU	1	E	–	255282
		600 KU	1	E	–	255282
		400	1	E	–	255280

[19] Multipart centre lock – standard, horizontal

					Nº
600	N	1	E	–	255281

Size-specific combinations:

					Nº
1101 – 1400	600	1	E	–	255281

[23] Striker → from page 135

[28] Tilt striker TiltFirst → from page 134

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component
→ from page 139**[36] Stay guide – basic security**

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm TiltFirst → from page 144**INFO**

From SRH < 600 mm, set the tilt depth to 80 mm (on windows without overlap gasket from SRH < 900 mm).

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm** TiltFirst (SRW ≥ 1201 mm)

	Nº
Frame and sash component	292022

[49] Packer → from page 138**[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle, lockable → CTL_1**INFO**

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

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

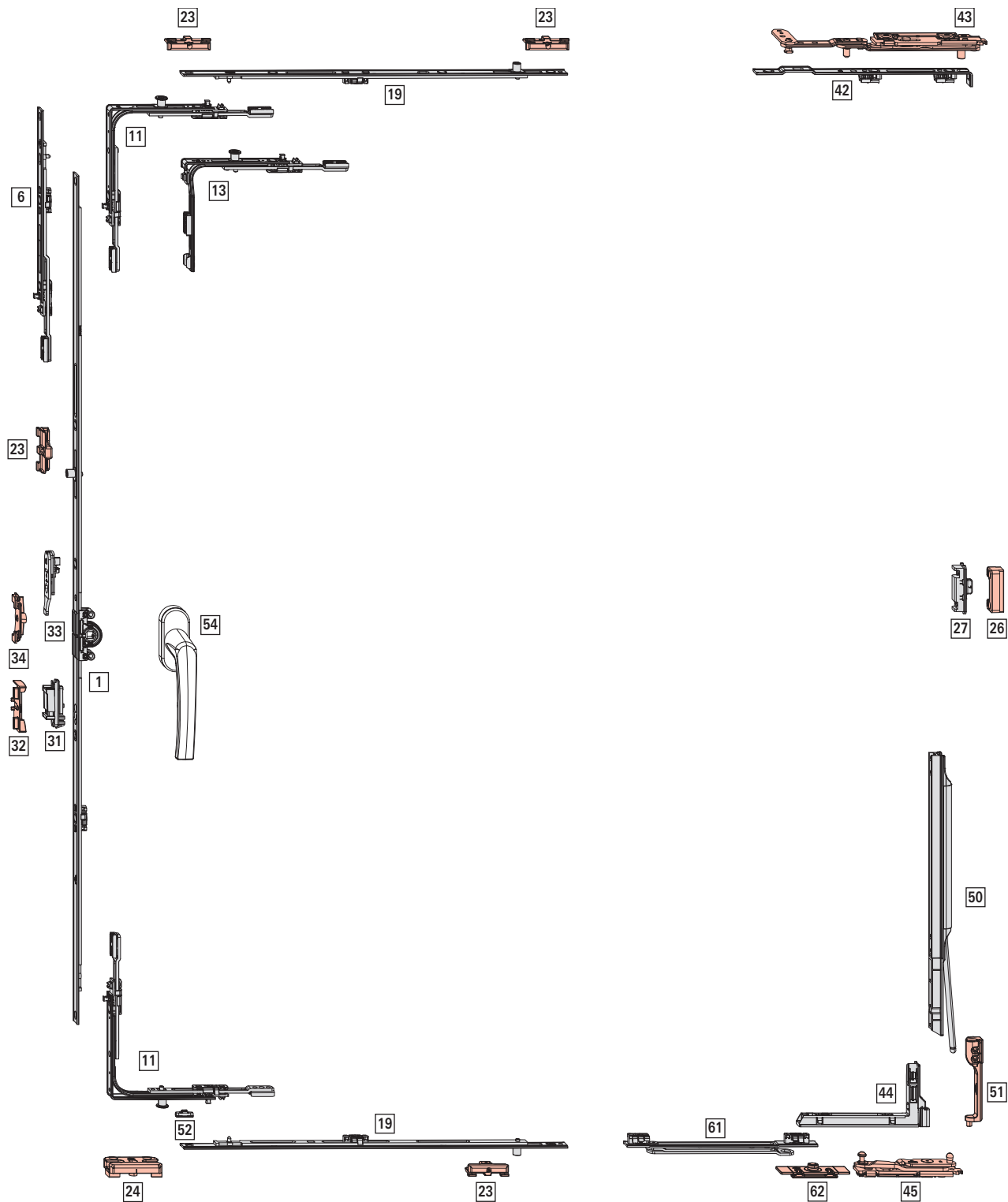
Optional

[*] **Night vent** Not sh.



4.1.3 Turn-Only hardware

4.1.3.1 Basic security





Application range

Without load transfer

SRW: 370 – 1400 mm

SRH: 280 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200	–	–	308267

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[13] Special short corner drive

		Nº
1	P	260282

For use with SRH ≤ 370 mm.



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1400	600	1	E	255281

[23] Striker → from page 135

[24] Security striker → from page 136

[26] Centre closer, concealed, frame component → from page 141

[27] Centre closer, concealed, sash component → from page 141

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 139

[42] Rebate stay guide

		Nº
Not for Tilt-Only windows	224 / 15	477255

[43] Rebate stay arm → from page 145

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143

[50] Load transfer sash component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[52] 90° travel restrictor

	Nº
Travel restrictor	264603

[54] Handle → CTL_1

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591



INFO

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

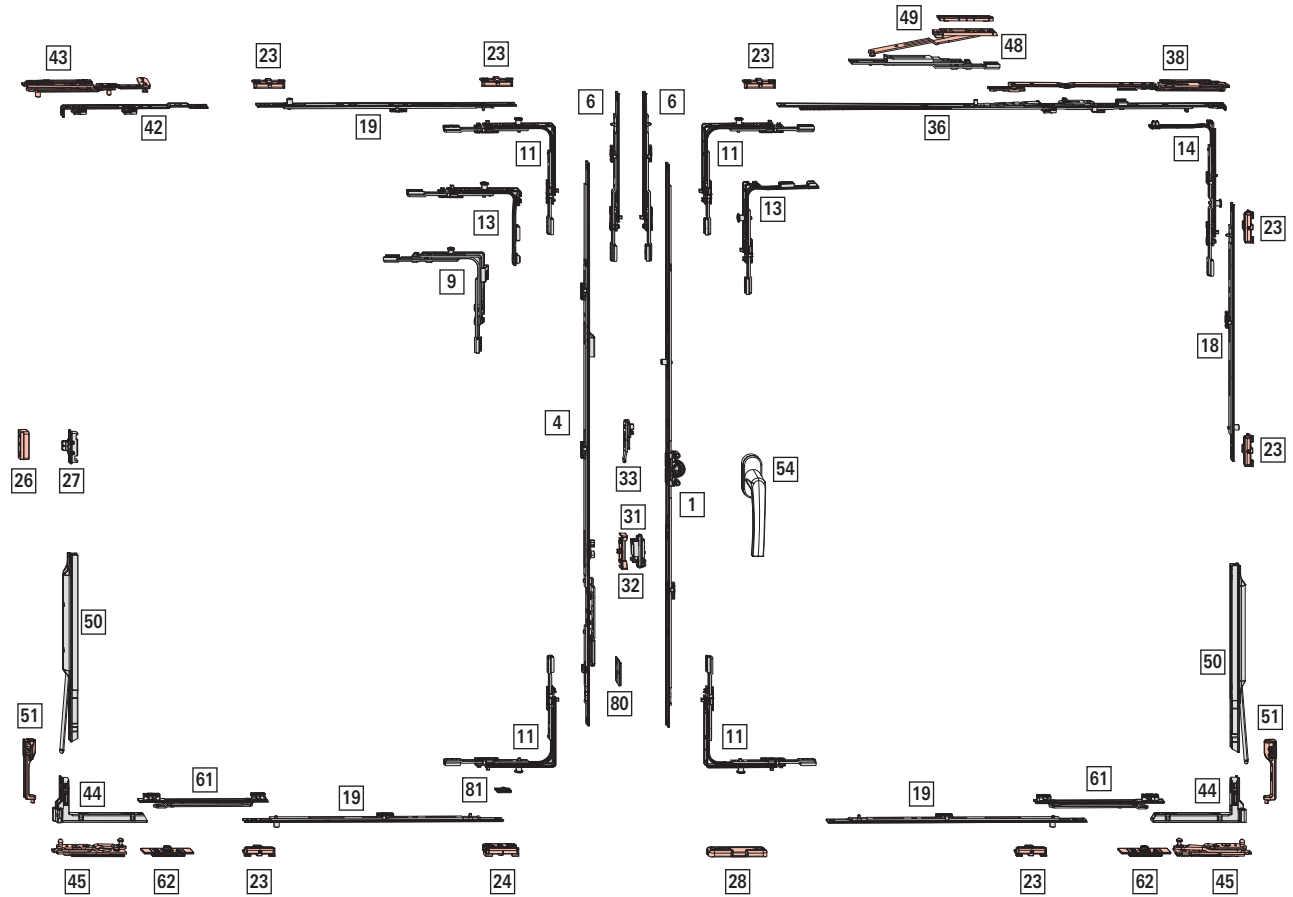
[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020



4.1.4 Floating-mullion hardware

4.1.4.1 Basic security





Application range

Without load transfer

SRW: 370 – 1400 mm

SRH: 430 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 mm

S.kg: max. 150 kg



INFO

SRW 370 – 430 mm from SRH 510 mm.

[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, 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)

200	Y	–	308267

Size-specific combinations:

2401 – 2600	200	–	–	308267

[9] Floating-mullion corner drive with security striker

					
Second opening sash	Top	1	1	V	313538

For use on the second opening sash: SRH ≤ 510 mm

[11] Standard corner drive

1	E	Top	260275
1	P	Top Bottom	260277



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[13] Special short corner drive

1	E	Top	260280
1	P	Top Bottom	260282

For use with:

Tilt&Turn sash SRW ≤ 430 mm

Floating-mullion sash SRH ≤ 510 mm



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[14] Sash stay corner drive

1	P	260286

[18] Multipart centre lock – standard, vertical

				
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282

Size-specific combinations:

Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

1101 – 1400	600	1	E	255281

[23] Striker → from page 135

[24] Security striker → from page 136

[26] Centre closer, concealed, frame component → from page 141

[27] Centre closer, concealed, sash component → from page 141

[28] Tilt striker → from page 132

[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
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144

**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[42] Rebate stay guide

		Nº
Not for Tilt-Only windows	224 / 15	477255

[43] Rebate stay arm → from page 145

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143

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

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138

[50] Load transfer sash component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle → CTL_1

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[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_107

The run-up block depends on the striker used.



This diagram shows the exploded view of a window frame assembly. The components are numbered as follows:

- Top Left:** 38 (top rail), 14 (vertical stile), 24 (corner joint), 18 (vertical stile), 23 (bottom joint).
- Top Right:** 38 (top rail), 14 (vertical stile), 18 (vertical stile), 23 (bottom joint), 24 (corner joint).
- Bottom Left:** 50 (vertical stile), 51 (corner joint), 44 (bottom rail), 61 (bottom rail), 19 (bottom rail), 81 (corner joint), 11 (corner joint), 45 (bottom rail), 62 (bottom rail), 24 (corner joint).
- Bottom Right:** 50 (vertical stile), 51 (corner joint), 44 (bottom rail), 61 (bottom rail), 19 (bottom rail), 24 (corner joint), 62 (bottom rail), 45 (bottom rail).
- Center:** 6 (vertical stile), 4 (vertical stile), 1 (corner joint), 33 (corner joint), 31 (corner joint), 32 (corner joint), 80 (corner joint), 11 (corner joint), 28 (corner joint).
- Other parts:** 35 (top rail), 17 (top rail), 13 (corner joint), 11 (corner joint), 36 (top rail), 49 (top rail), 48 (top rail), 53 (corner joint), 54 (corner joint).



Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 430 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use on the second opening sash: SRH ≤ 510 mm

[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
711 – 910	200 KU	–	–	308267
911 – 1110	400 KU	1	E	280346
1111 – 1310	600 KU	1	E	255282
1311 – 1400	600 KU	1	E	255282
	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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[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
Without turn restrictor	With turn restrictor				
450 – 650	650 – 850	200	1	P	255284
651 – 850	851 – 1050	400	1	P	255285
851 – 1000	1051 – 1250	600 [6]	1	P	255286
	1251 – 1400	600 KU	1	E	255282
		200	1	P	255284

[23] Striker → from page 135**[24] Security striker** → from page 136**[28] Tilt striker** → from page 132**[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
430 – 510	250	400	482571
511 – 710	250	600	815784

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

	Nº
Fastening plate with cam	255211

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

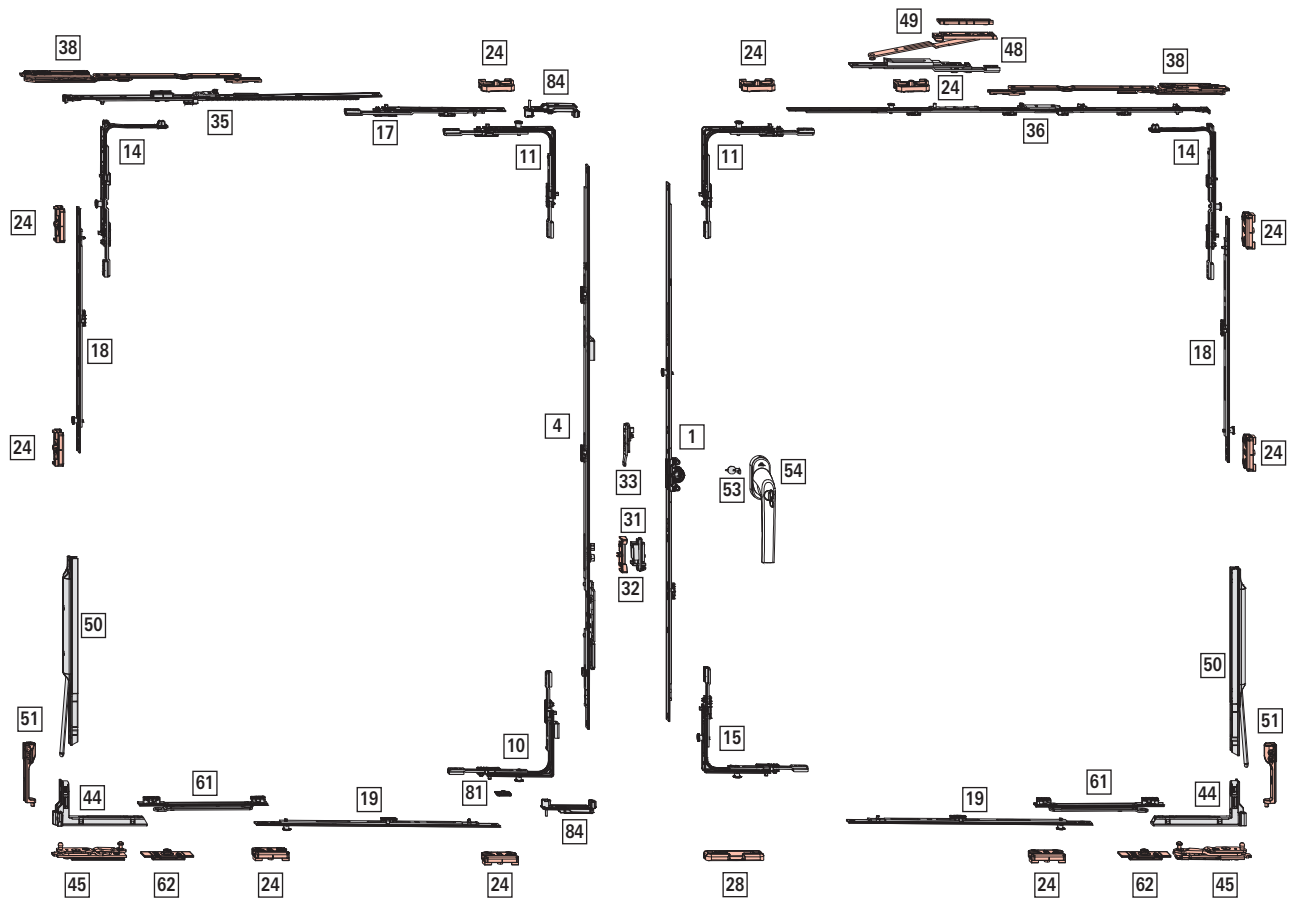
[81] Run-up block → CTL_107

The run-up block depends on the striker used.

[6] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053.



4.1.4.3 Standard – RC 2 / RC 2 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 600 – 2400 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2400 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

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

						Nº
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

[10] Floating mullion corner drive

					Nº
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	1	V	337708
400	Y	1	V	337710
600	Y	1	V	337711

Size-specific combinations:

				Nº
711 – 910	200 KU	1	V	337708
911 – 1110	400 KU	1	V	337710
1111 – 1310	600 KU	1	V	337711
1311 – 1400	600 KU	1	V	337711
	200 KU	1	V	337708

[18] Multipart centre lock – security, 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
Without load transfer	With load transfer				
600 – 650	–	200	1	V	296853
651 – 850	1000 – 1150	400	1	V	296854
851 – 1050	1151 – 1350	600 [7]	1	V	296855
1051 – 1250	1351 – 1550	600 KU	1	V	337711
		200	1	V	296853
1251 – 1450	1551 – 1750	600 KU	1	V	337711
		400	1	V	296854
1451 – 1650	1751 – 1950	600 KU	1	V	337711
		600 [8]	1	V	296855
1651 – 1850	1951 – 2150	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
1851 – 2050	2151 – 2350	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
2051 – 2250	2351 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600 [9]	1	V	296855
2251 – 2400	–	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853

[7] Crop CL by 15 mm up to SRH 861; when using load transfer: crop CL by 15 mm with SRH 1151

[8] Crop CL by 15 mm up to SRH 1461; when using load transfer: crop CL by 15 mm with SRH 1751

[9] Crop CL by 15 mm up to SRH 2061; when using load transfer: crop CL by 15 mm with SRH 2351

[19] Multipart centre lock – security, horizontal

				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
Without turn restrictor	With turn restrictor				
450 – 650	650 – 850	200	1	V	296853
651 – 850	851 – 1050	400	1	V	296854
851 – 1000	1051 – 1250	600 [10]	1	V	296855
–	1251 – 1400	600 KU	1	V	337711
		200	1	V	296853

[24] Security striker → from page 136**[28] Tilt striker → from page 132****[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
430 – 510	250	400	482571
511 – 710	250	600	815784

[36] Stay guide – security

					Nº
330 – 600	490	250	–	–	385393
601 – 800	690	350	–	–	385394
801 – 1000	890	500	1	V	450373
1001 – 1200	1090	500	1	V	450374

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm (SRW ≥ 1201 mm)**

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component (SRW ≥ 801 mm, SRH ≥ 1001 mm)**

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[81] Run-up block → CTL_107

The run-up block depends on the striker used.

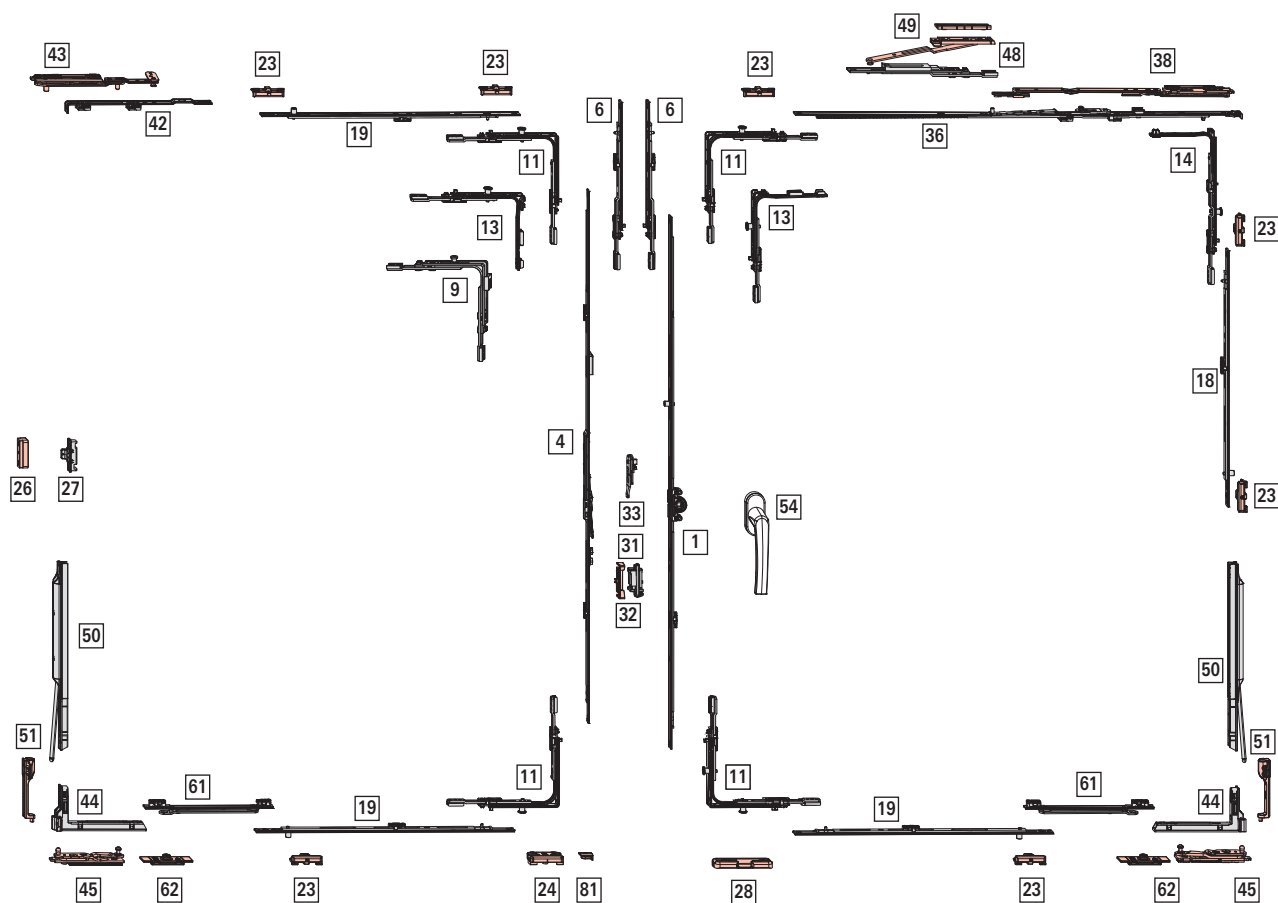
[84] Safety device for floating-mullion sashes

	Nº
Retaining element for floating-mullion sash	552392

[10] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRH 1053



4.1.4.4 Plus – basic security





Application range

Without load transfer

SRW: 370 – 1400 mm

SRH: 430 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 mm

S.kg: max. 150 kg



INFO

SRW 370 – 430 mm from SRH 510 mm.

[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

[9] Floating-mullion corner drive with security striker

					Nº
Second opening sash	Top	1	1	V	313538



INFO

SRW 370 – 410 mm: crop the corner drive at the top.

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

For use with:

Tilt&Turn sash SRW ≤ 430 mm

Floating-mullion sash SRH ≤ 510 mm



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[14] Sash stay corner drive

		Nº
1	P	260286

[18] Multipart centre lock – standard, vertical

				Nº
400	N	1	E	255280
600	N	1	E	255281
600	Y	1	E	255282
200	N	1	P	255284

Size-specific combinations:

						Nº
Without load transfer	With load transfer					
–	1101 – 1150	400	1	E		255280
1101 – 1800	1151 – 1800	600	1	E		255281
1801 – 2400	1801 – 2400	600 KU	1	E		255282
		600	1	E		255281
2401 – 2600	2401 – 2600	600 KU	1	E		255282
		600 KU	1	E		255282
		400	1	E		255280

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

					Nº
1101 – 1400	600	1	E		255281

[23] Striker → from page 135

[24] Security striker → from page 136

[26] Centre closer, concealed, frame component → from page 141

[27] Centre closer, concealed, sash component → from page 141

[28] Tilt striker → from page 132

[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
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144

**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[42] Rebate stay guide

		Nº
Not for Tilt-Only windows	224 / 15	477255

[43] Rebate stay arm → from page 145

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143

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

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138

[50] Load transfer sash component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle → CTL_1

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

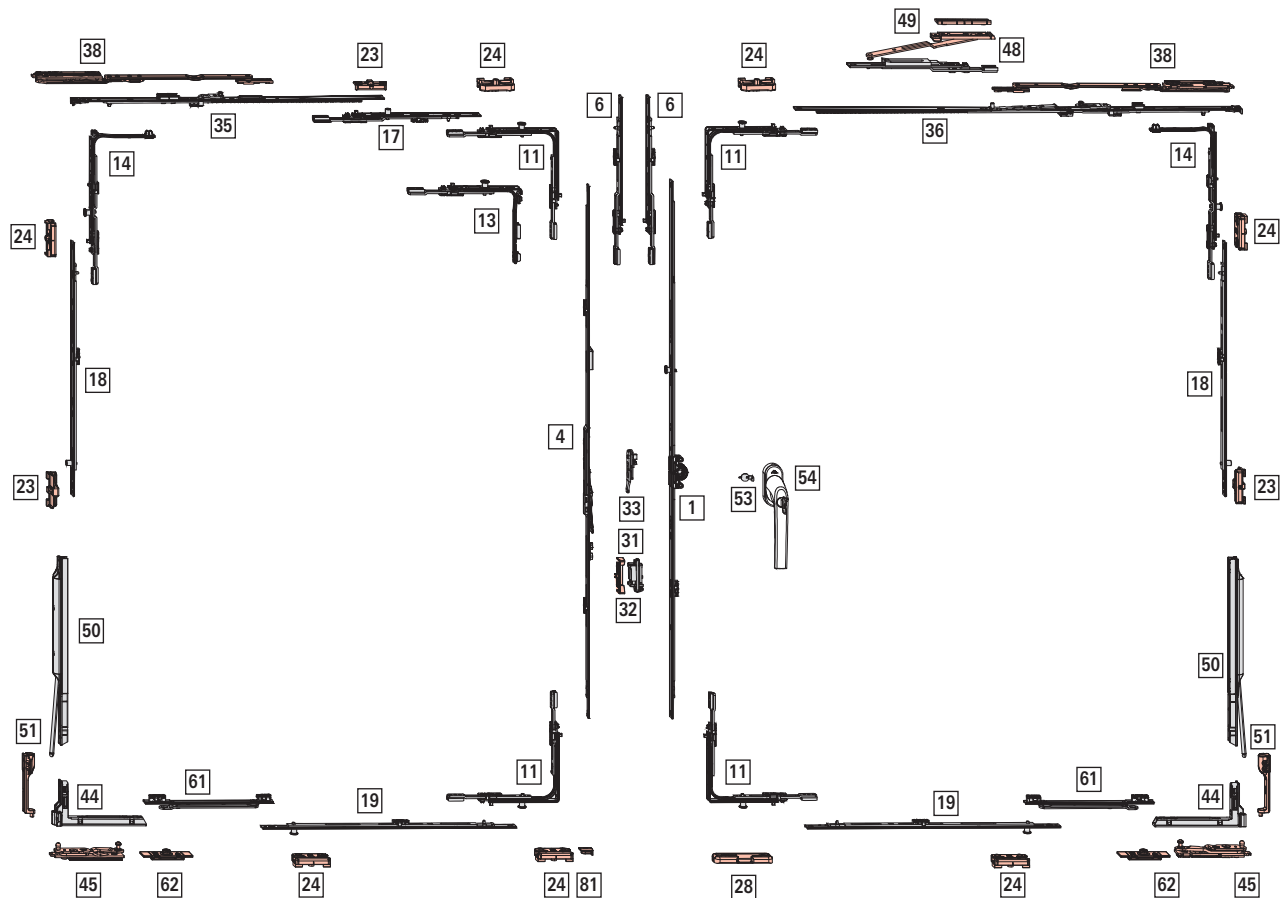
		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[81] Run-up block → CTL_107

The run-up block depends on the striker used.



4.1.4.5 Plus – RC 1 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 430 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use on the second opening sash: SRH ≤ 510 mm

[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
801 – 1000	200 KU	–	–	308267
1001 – 1200	400 KU	1	E	280346
1201 – 1400	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
Without load transfer	With load transfer					
–	1101 – 1150	400	1	E	–	255280
1101 – 1800	1151 – 1800	600	1	E	–	255281
1801 – 2400	1801 – 2400	600 KU	1	E	–	255282
		600	1	E	–	255281
2401 – 2600	2401 – 2600	600 KU	1	E	–	255282
		600 KU	1	E	–	255282
		400	1	E	–	255280

[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
Without turn restrictor	With turn restrictor					
450 – 650	650 – 850	200	1	P	–	255284
651 – 850	851 – 1050	400	1	P	–	255285
851 – 1000	1051 – 1250	600 [11]	1	P	–	255286
	1251 – 1400	600 KU	1	E	–	255282
		200	1	P	–	255284

[11] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053.

[23] Striker → from page 135**[24] Security striker → from page 136****[28] Tilt striker → from page 132****[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
330 – 600	250	490	385393
601 – 800	250	690	2003336

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component** (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

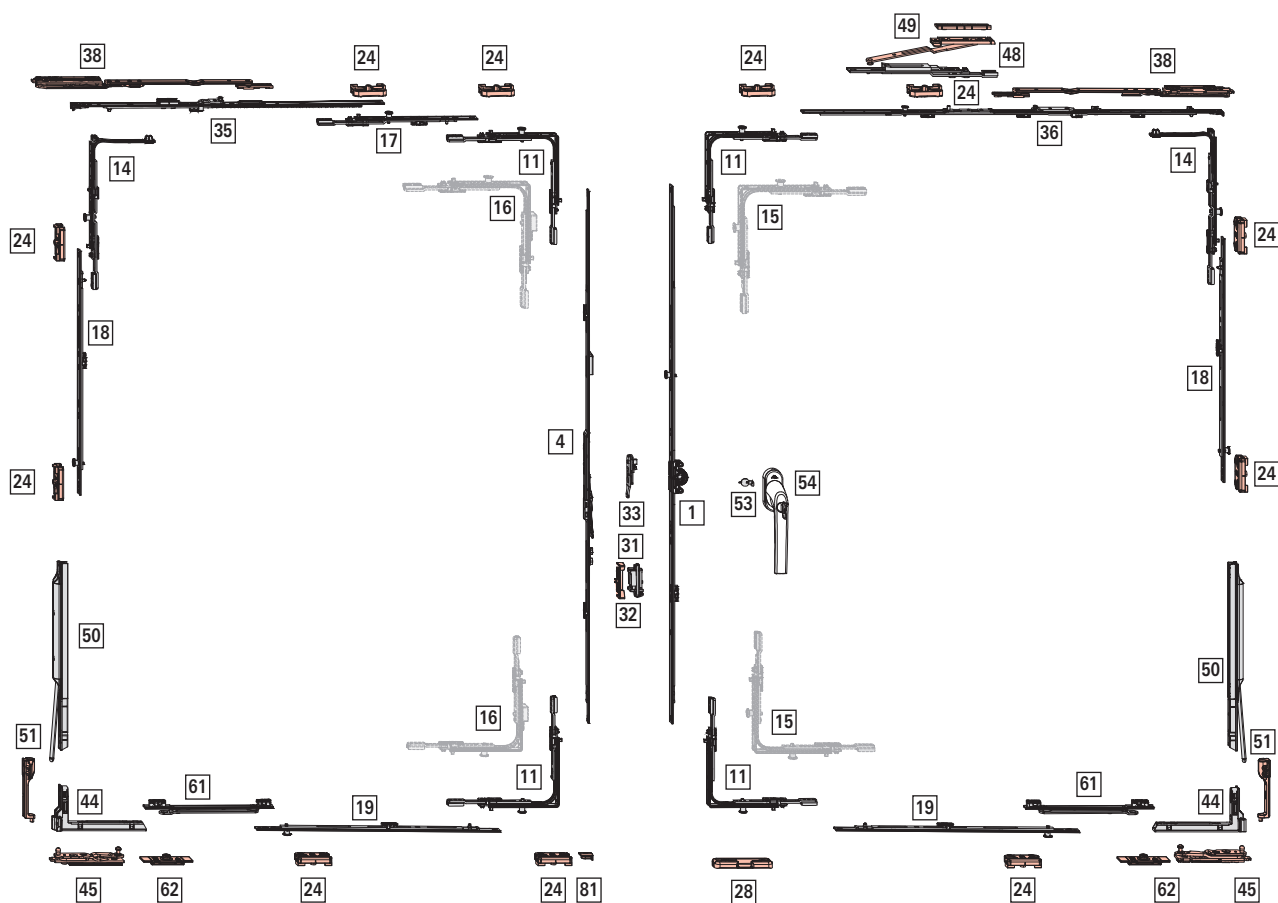
		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[81] Run-up block → CTL_107

The run-up block depends on the striker used.



4.1.4.6 Plus – RC 2 / RC 2 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 600 – 2400 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2400 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

[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

[11] Standard corner drive

		Nº
1	V	260272

[14] Sash stay corner drive

		Nº
1	V	260284

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

				Nº
200	Y	1	V	337708
400	Y	1	V	337710
600	Y	1	V	337711

Size-specific combinations:

				Nº
801 – 1000	200 KU	1	V	337708
1001 – 1200	400 KU	1	V	337710
1201 – 1400	600 KU	1	V	337711

[18] Multipart centre lock – security, 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
Without load transfer	With load transfer				
490 – 650	–	200	1	V	296853
651 – 850	1000 – 1150	400	1	V	296854
851 – 1050	1151 – 1350	600 [12]	1	V	296855
1051 – 1250	1351 – 1550	600 KU	1	V	337711
		200	1	V	296853
1251 – 1450	1551 – 1750	600 KU	1	V	337711
		400	1	V	296854
1451 – 1650	1751 – 1950	600 KU	1	V	337711
		600 [13]	1	V	296855
1651 – 1850	1951 – 2150	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
1851 – 2050	2151 – 2350	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
2051 – 2250	2351 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600 [14]	1	V	296855
2251 – 2400	–	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
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

[12] Crop CL by 15 mm up to SRH 861; when using load transfer: crop CL by 15 mm with SRH 1151

[13] Crop CL by 15 mm up to SRH 1461; when using load transfer: crop CL by 15 mm with SRH 1751

[14] Crop CL by 15 mm up to SRH 2061; when using load transfer: crop CL by 15 mm with SRH 2351

Size-specific combinations:

					Nº
Without turn restrictor	With turn restrictor				
450 – 650	801 – 850	200	1	V	296853
651 – 850	851 – 1050	400	1	V	296854
851 – 1000	1051 – 1250	600 [15]	1	V	296855
–	1251 – 1400	600 KU	1	V	337711
		200	1	V	296853

[24] Security striker → from page 136**[28] Tilt striker → from page 132****[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
330 – 600	250	490	–	–	385393
601 – 800	250	690	–	–	2003336

[36] Stay guide – security

					Nº
330 – 600	490	250	–	–	385393
601 – 800	690	350	–	–	385394
801 – 1000	890	500	1	V	450373
1001 – 1200	1090	500	1	V	450374

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm (SRW ≥ 1201 mm)**

		Nº
Frame and sash component	200	255237

[15] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053

[49] Packer → from page 138**[50] Load transfer sash component (SRW ≥ 801 mm, SRH ≥ 1001 mm)**

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	565254

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[81] Run-up block → CTL_107

The run-up block depends on the striker used.

Optional**[15] Corner drive, standard (security)**

		Nº
2	V	260274

[16] Corner drive, slide guard

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

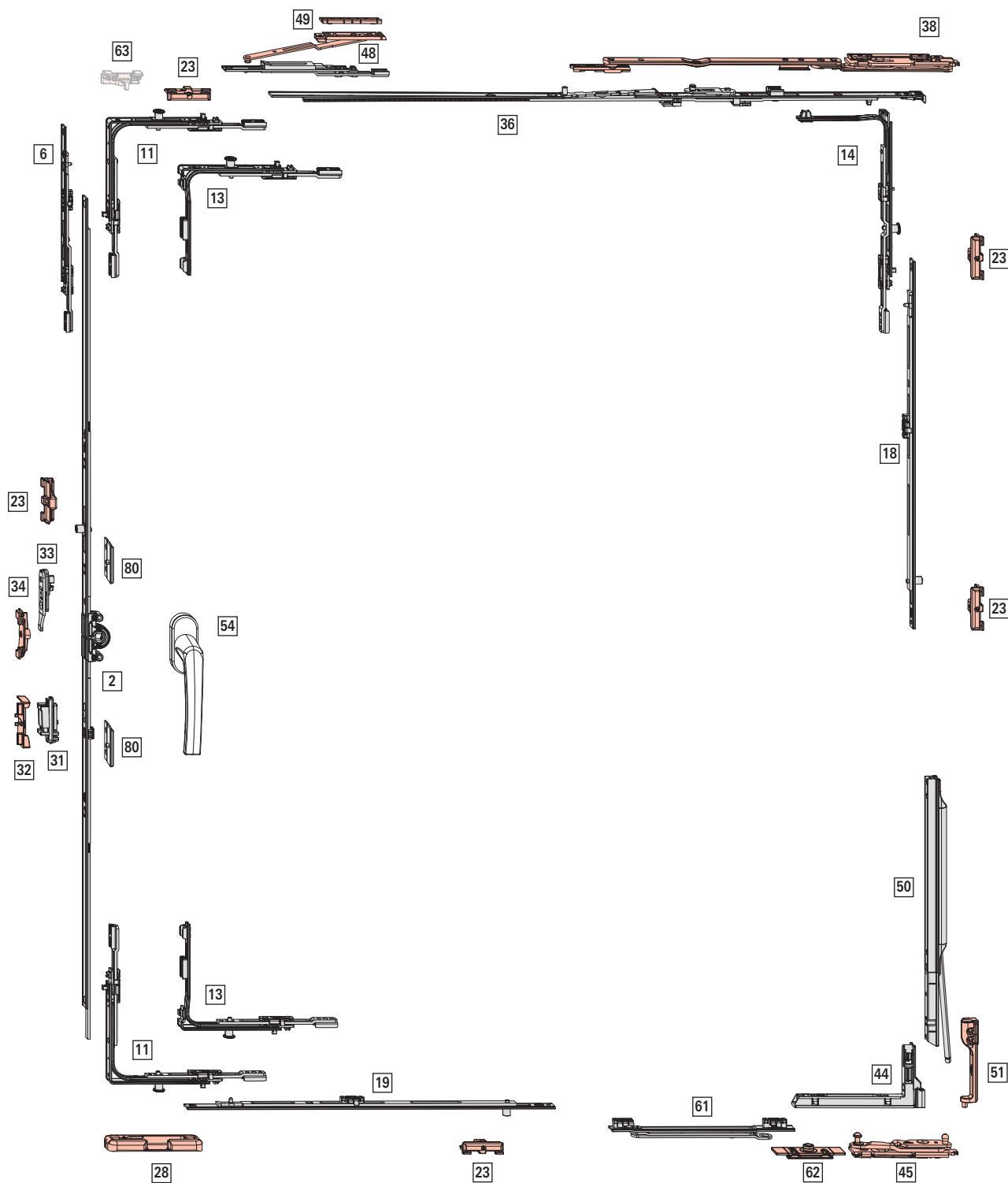
When using a corner drive with a slide guard, a standard corner drive (RC 3) is required on the first opening sash.



4.2 T&T espagnolette – centred / variable handle height

4.2.1 Tilt&Turn hardware

4.2.1.1 Basic security





Application range

Without load transfer

SRW: 330 – 1400 mm

SRH: 310 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[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:

SRW ≤ 430 mm

SRH ≤ 450 mm

[14] Sash stay corner drive

		Nº
1	P	260286



INFO

With SRH 280 – 330 mm, crop the sash stay corner drive (to do so, extend the connecting rod fully).

[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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1400	600	1	E	255281

[23] Striker → from page 135

[28] Tilt striker → from page 132

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 139

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → *from page 144***INFO**

From SRH < 600 mm, set the tilt depth to 80 mm (on windows without overlap gasket from SRH < 900 mm).

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → *from page 143***[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → *from page 138***[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → *from page 145.*

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

Nº

Fastening plate with cam

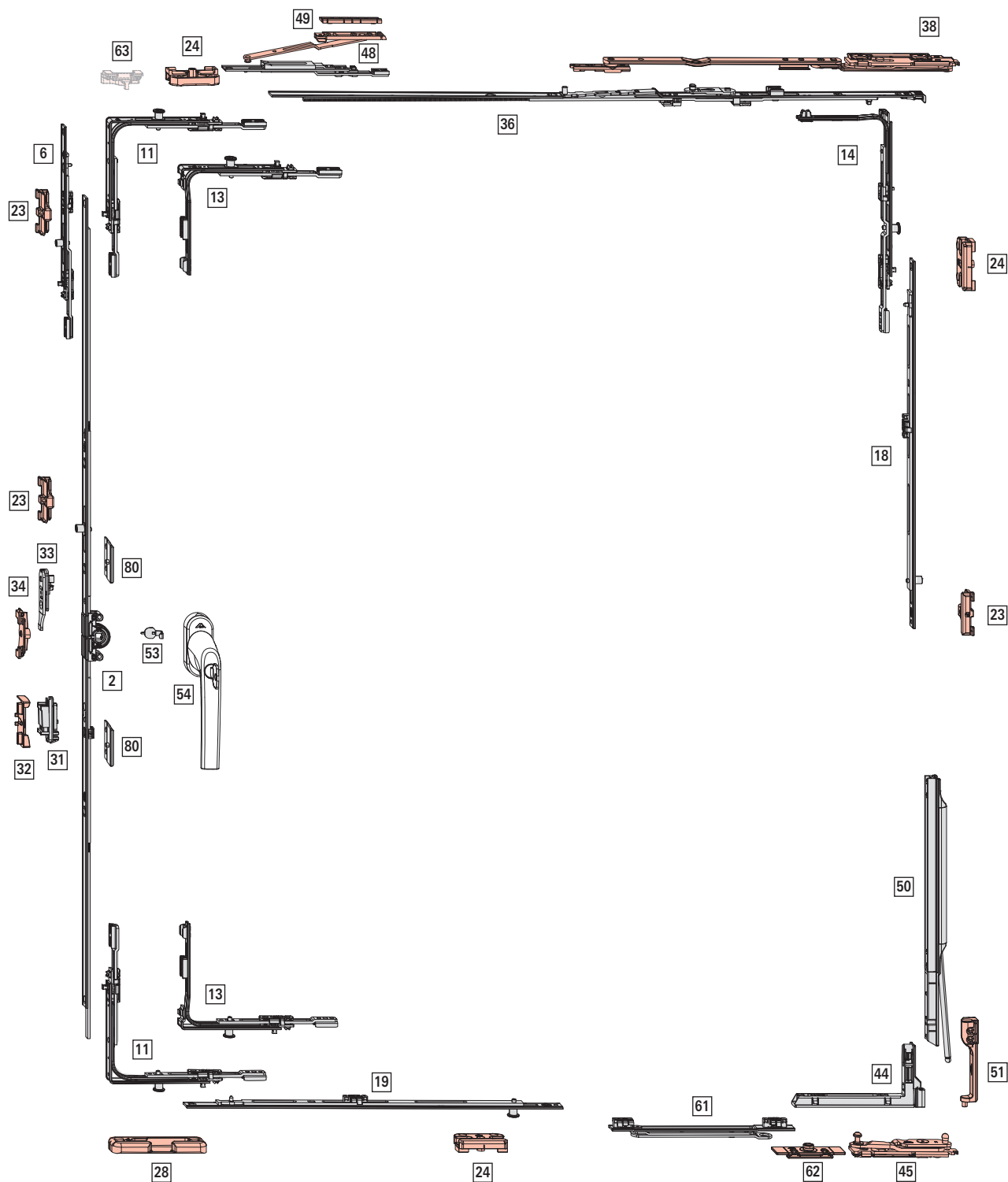
255211

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

Optional**[63] Night vent** → *from page 140*



4.2.1.2 RC 1 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 310 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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	1	E 450821

Size-specific combinations:

					Nº
2401 – 2600	200 KU	1	E		450821

[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 280 – 330 mm, crop the sash stay corner drive (to do so, extend the connecting rod fully).

[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
Without load transfer	With load transfer					
–	1101 – 1150	400	1	E		255280
1101 – 1800	1151 – 1800	600	1	E		255281
1801 – 2400	1801 – 2400	600 KU	1	E		255282
		600	1	E		255281
2401 – 2600	2401 – 2600	600 KU	1	E		255282
		600 KU	1	E		255282
		400	1	E		255280

[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
Without turn restrictor	With turn restrictor					
450 – 650	650 – 850	200	1	P		255284
651 – 850	851 – 1050	400	1	P		255285
851 – 1000	1051 – 1250	600 [16]	1	P		255286
	1251 – 1400	600 KU	1	E		255282
		200	1	P		255284

[23] Striker → from page 135**[24] Security striker → from page 136****[28] Tilt striker → from page 132****[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 138**[33] Lifting mishandling device sash component**

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 139**[36] Stay guide – basic security**

						Nº
330 – 600	250	490	–	–		385393
601 – 800	350	690	–	–		385394
801 – 1000	500	890	1	E		385415
1001 – 1200	500	1090	1	E		385416

[16] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053.

[38] Stay arm → *from page 144***INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

Nº

Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → *from page 143***[48] Additional stay arm** (SRW ≥ 1201 mm)

Nº

Frame and sash component	200	255237
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[49] Packer → *from page 138***[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

Nº

max. 150 kg		567972
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Short load transfer → *from page 145.*

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

Nº

V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection**[54] Handle**, lockable → CTL_1**[61] Turn restrictor 198**, sash component

Nº

Designo hinge side		485591
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**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

Nº

V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

Nº

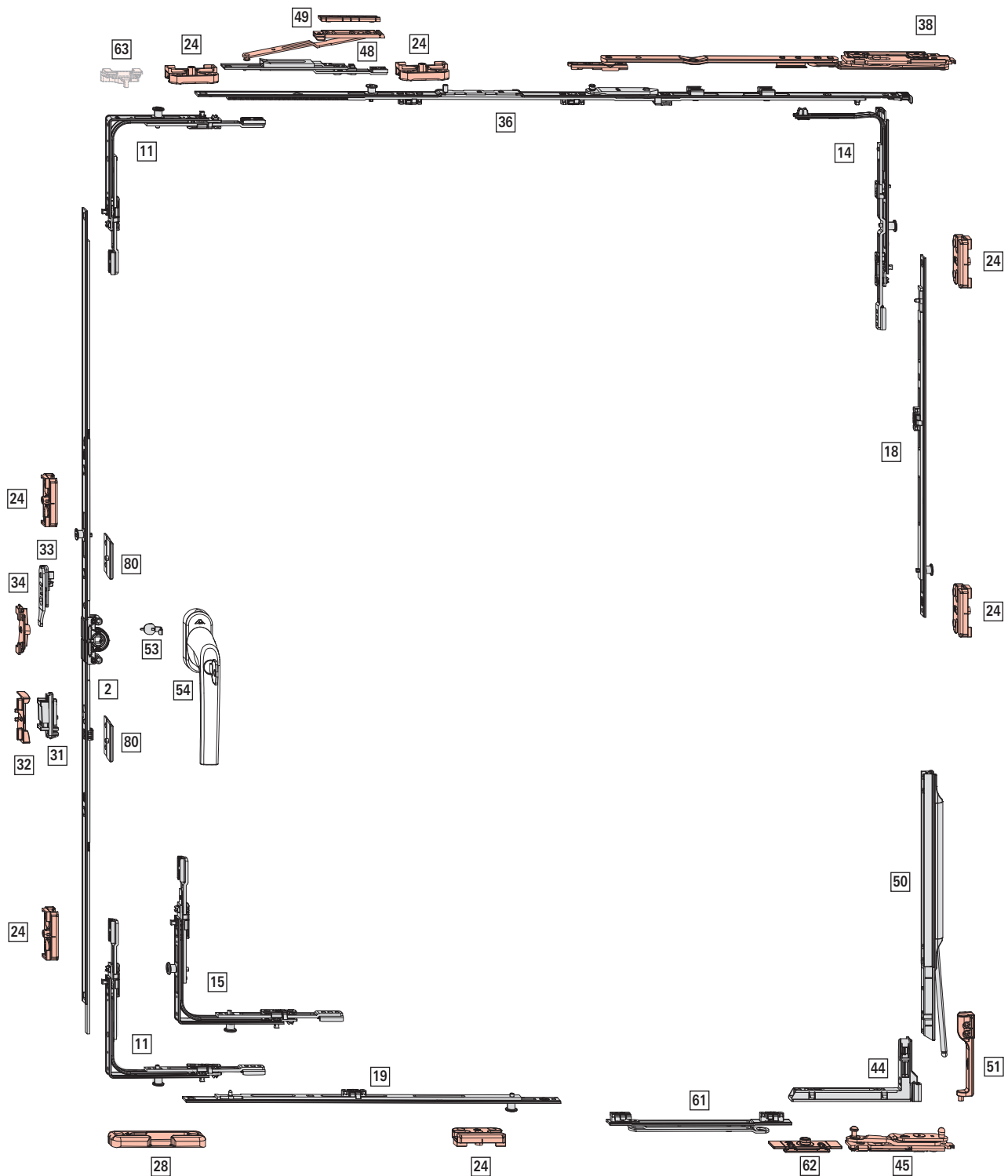
Fastening plate with cam	255211
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Can only be used in combination with T&T espagnolette 259717.

Optional**[63] Night vent** → *from page 140*



4.2.1.3 RC 2 / RC 2 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 490 – 2400 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2400 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.

[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 490 – 620 mm

[18] Multipart centre lock – security, 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
Without load transfer	With load transfer				
490 – 650	–	200	1	V	296853
651 – 850	1000 – 1150	400	1	V	296854
851 – 1050	1151 – 1350	600 [17]	1	V	296855
1051 – 1250	1351 – 1550	600 KU	1	V	337711
		200	1	V	296853
1251 – 1450	1551 – 1750	600 KU	1	V	337711
		400	1	V	296854

[17] Crop CL by 15 mm up to SRH 861; when using load transfer: crop CL by 15 mm with SRH 1151

[18] Crop CL by 15 mm up to SRH 1461; when using load transfer: crop CL by 15 mm with SRH 1751

[19] Crop CL by 15 mm up to SRH 2061; when using load transfer: crop CL by 15 mm with SRH 2351

[20] Crop CL by 15 mm up to SRW 854; when using load transfer: crop CL by 15 mm up to SRW 1053

					Nº
Without load transfer	With load transfer				
1451 – 1650	1751 – 1950	600 KU	1	V	337711
		600 [18]	1	V	296855
1651 – 1850	1951 – 2150	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
1851 – 2050	2151 – 2350	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
2051 – 2250	2351 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600 [19]	1	V	296855
2251 – 2400	–	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
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

Size-specific combinations:

					Nº
Without turn restrictor	With turn restrictor				
450 – 650	650 – 850	200	1	V	296853
651 – 850	851 – 1050	400 [20]	1	V	296854
851 – 1000	1051 – 1250	600	1	V	296855
	1251 – 1400	600 KU	1	V	337711
		200	1	V	296853

[24] Security striker → from page 136

[28] Tilt striker → from page 132

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component
→ from page 139**[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 → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

	Nº
Fastening plate with cam	255211

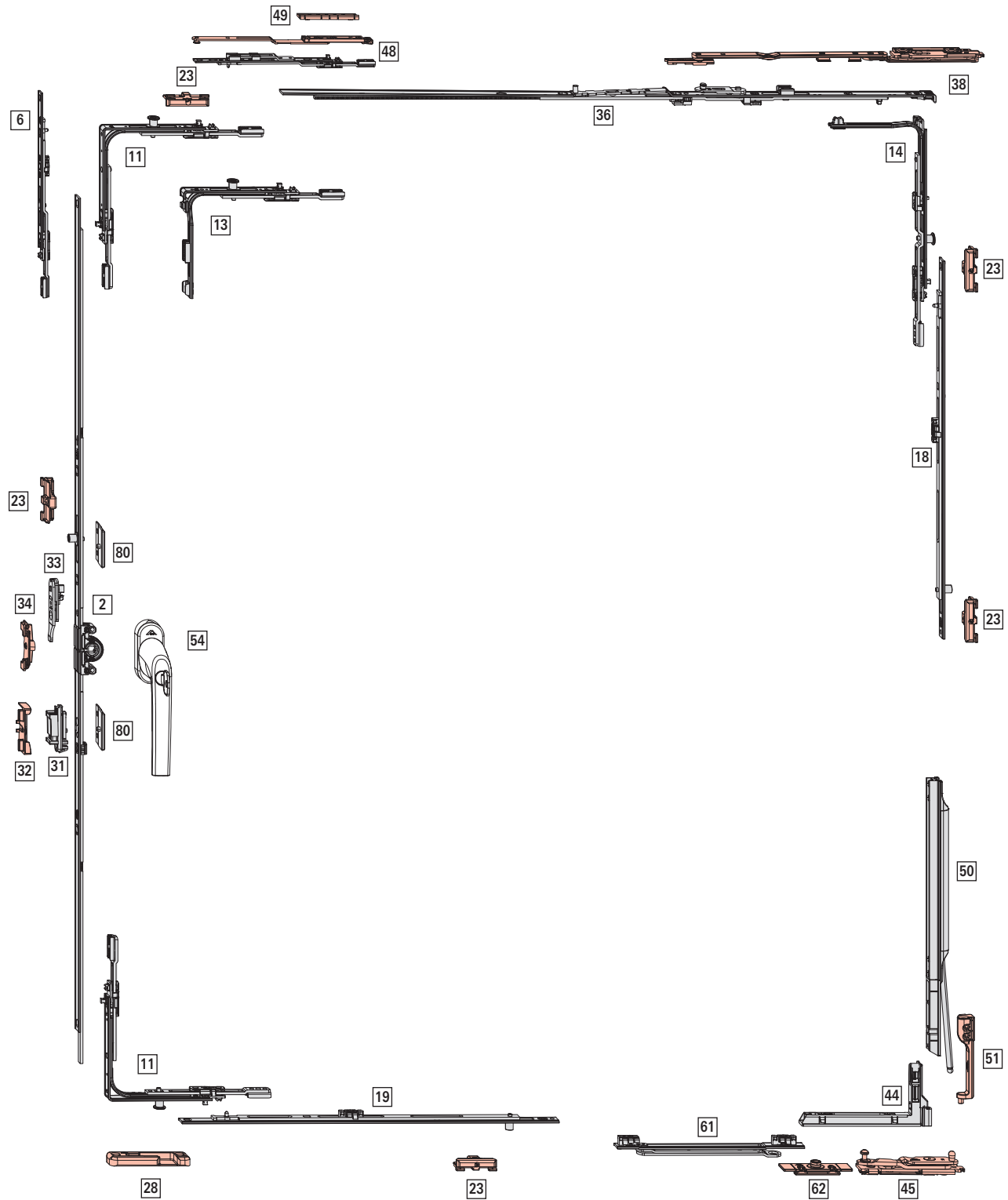
Can only be used in combination with T&T espagnolette 259717.

Optional**[63] Night vent** → from page 140



4.2.2 TiltFirst hardware

4.2.2.1 Basic security





Application range

Without load transfer

SRW: 330 – 1400 mm

SRH: 310 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 mm

S.kg: max. 150 kg

SRW 330 – 430 mm from SRH 361 mm

SRH 310 – 370 mm from SRW 431 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	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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[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:

SRW ≤ 430 mm

SRH ≤ 450 mm

[14] Sash stay corner drive

		Nº
1	P	260286



INFO

With SRH 280 – 330 mm, crop the sash stay corner drive (to do so, extend the connecting rod fully).

[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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1400	600	1	E	255281

[23] Striker → from page 135

[28] Tilt striker TiltFirst → from page 134

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 139

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm TiltFirst → *from page 144***INFO**

From SRH < 600 mm, set the tilt depth to 80 mm (on windows without overlap gasket from SRH < 900 mm).

[44] Corner hinge

Nº

Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → *from page 143***[48] Additional stay arm** TiltFirst (SRW ≥ 1201 mm)

Nº

Frame and sash component	292022
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[49] Packer → *from page 138***[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

Nº

max. 150 kg	567972
-------------	--------

Short load transfer → *from page 145.*

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

Nº

V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle, lockable → CTL_1**INFO**

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

[61] Turn restrictor 198, sash component

Nº

Designo hinge side	485591
--------------------	--------

**INFO**

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

Nº

V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

Nº

Fastening plate with cam	255211
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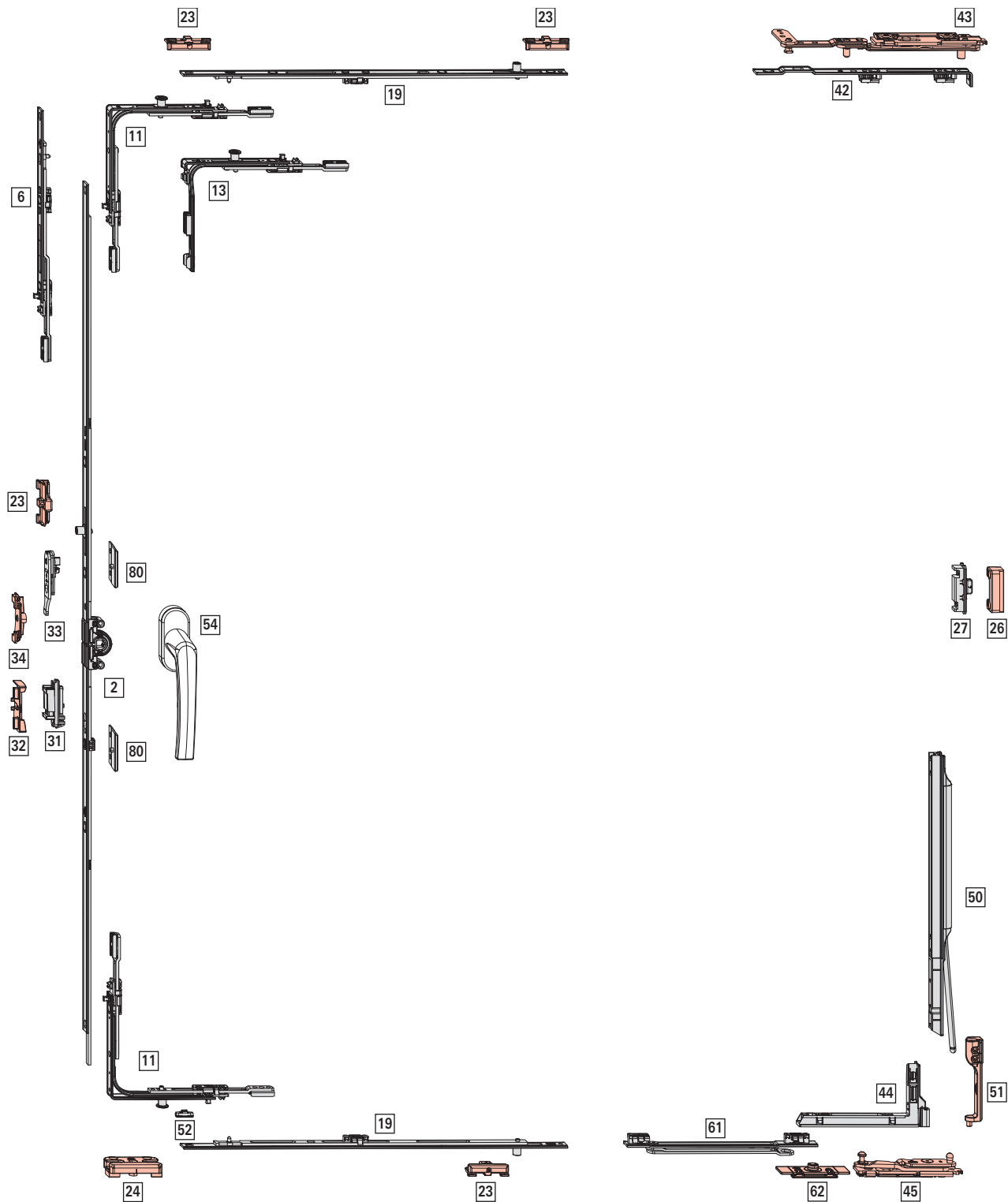
Can only be used in combination with T&T espagnolette 259717.

Optional**[*] Night vent** Not sh.



4.2.3 Turn-Only hardware

4.2.3.1 Basic security





Application range

Without load transfer

SRW: 370 – 1400 mm

SRH: 310 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

For use with:

SRH ≤ 450 mm



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1400	600	1	E	255281

[23] Striker → from page 135

[24] Security striker → from page 136

[26] Centre closer, concealed, frame component → from page 141

[27] Centre closer, concealed, sash component → from page 141

[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 138

[33] Lifting mishandling device sash component

	Nº
Sash component for lifting mishandling device	795927

[34] Lifting mishandling device frame component → from page 139

[42] Rebate stay guide

		Nº
Not for Tilt-Only windows	224 / 15	477255

[43] Rebate stay arm → from page 145

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

Corner hinge with alternative screw position → from page 142.

[45] Pivot rest → from page 143

[50] Load transfer sash component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[52] 90° travel restrictor

	Nº
Travel restrictor	264603

[54] Handle, lockable → CTL_1

[61] Turn restrictor 198, sash component

	Nº
Designo hinge side	485591



INFO

Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

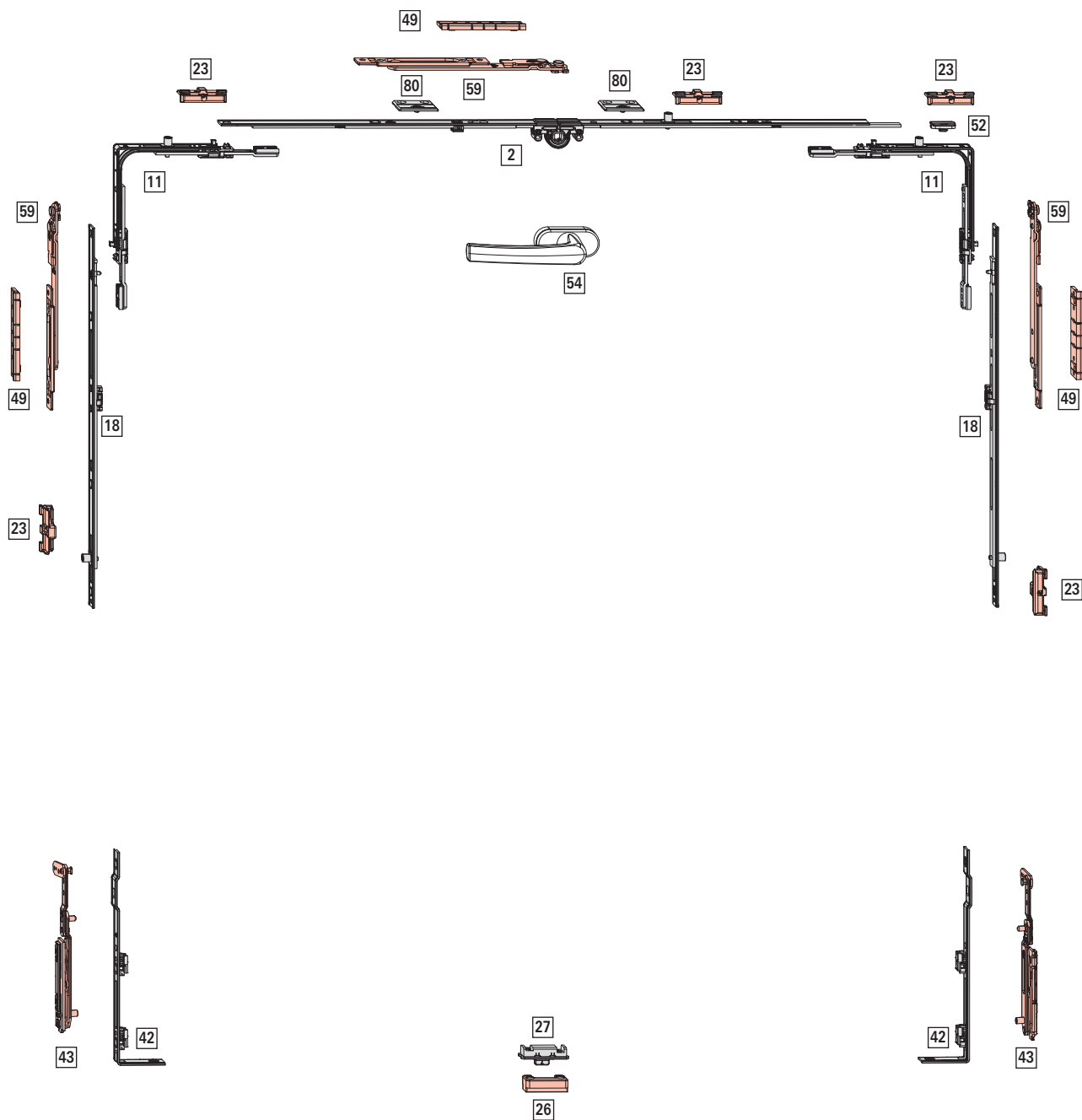
	Nº
Fastening plate with cam	255211

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



4.2.4 Tilt-Only hardware

4.2.4.1 Basic security



**Application range****SRW:** 450 – 1400 mm**SRH:** 370 – 1200 mm**S.kg:** max. 80 kg

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

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

				Nº
310 – 620	430	–	–	259717
621 – 800	580	1	E	259719
801 – 1200	980	1	E	259720
1201 – 1600	1380	2	E	259721

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

**INFO**

SRH 370 – 410 mm: crop the corner drive at the side.

[18] Multipart centre lock – standard, vertical

				Nº
N	400	1	E	255280

For use from SRH 801 mm.

[23] Striker → from page 135**[26] Centre closer, concealed, frame component → from page 141****[27] Centre closer, concealed, sash component → from page 141****[42] Rebate stay guide**

	Nº
Rebate stay guide for hinge side Designo (HA 9 / HA 13)	640563

[43] Rebate stay arm → from page 145**[52] 90° travel restrictor****[54] Handle → CTL_1****[59] Tilt stay set for floating-mullion installation**

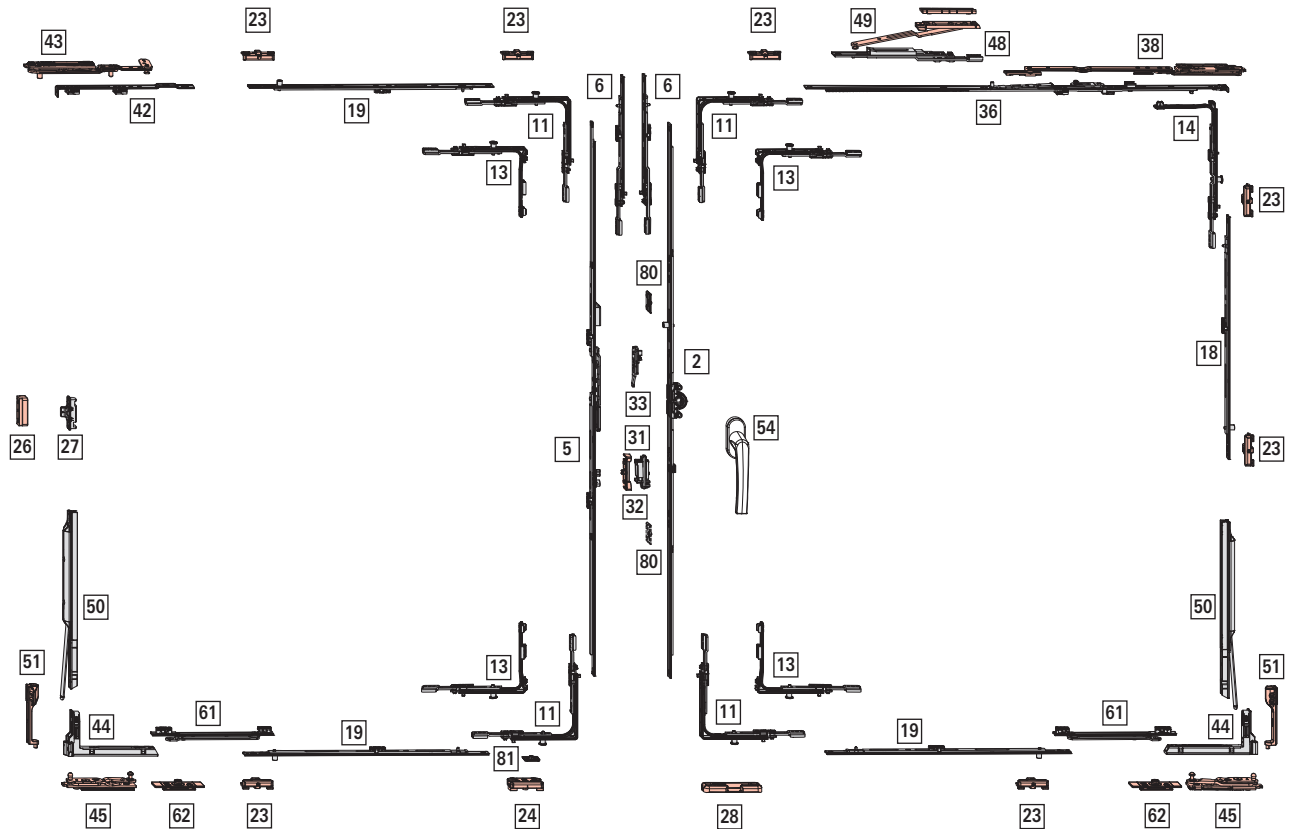
	Nº
Floating-mullion installation	482823

[80] Fastening plate

	Nº
Fastening plate with cam	255211

4.2.5 Floating-mullion hardware

4.2.5.1 Basic security





Application range

Without load transfer

SRW: 370 – 1400 mm

SRH: 370 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[13] Special short corner drive

			Nº
1	E	Top	260280
1	P	Top Bottom	260282

For use with:

SRW ≤ 430 mm

Tilt&Turn sash: SRH ≤ 450 mm

Turn-Only sash: SRH ≤ 520 mm



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[14] Sash stay corner drive

		Nº
1	P	260286

[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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1400	600	1	E	255281

[23] Striker → from page 135**[24] Security striker → from page 136****[26] Centre closer, concealed, frame component → from page 141****[27] Centre closer, concealed, sash component → from page 141****[28] Tilt striker → from page 132****[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
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → *from page 144*

	INFO
With SRH < 600 mm, set the tilt depth to 80 mm.	

[42] Rebate stay guide

		Nº
Not for Tilt-Only windows		224 / 15 477255

[43] Rebate stay arm → *from page 145***[44] Corner hinge**

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → *from page 143***[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component		200 255237

[49] Packer → *from page 138***[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → *from page 145.***[51] Load transfer frame component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinae side	485591

	INFO
Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.	

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

	Nº
Fastening plate with cam	255211

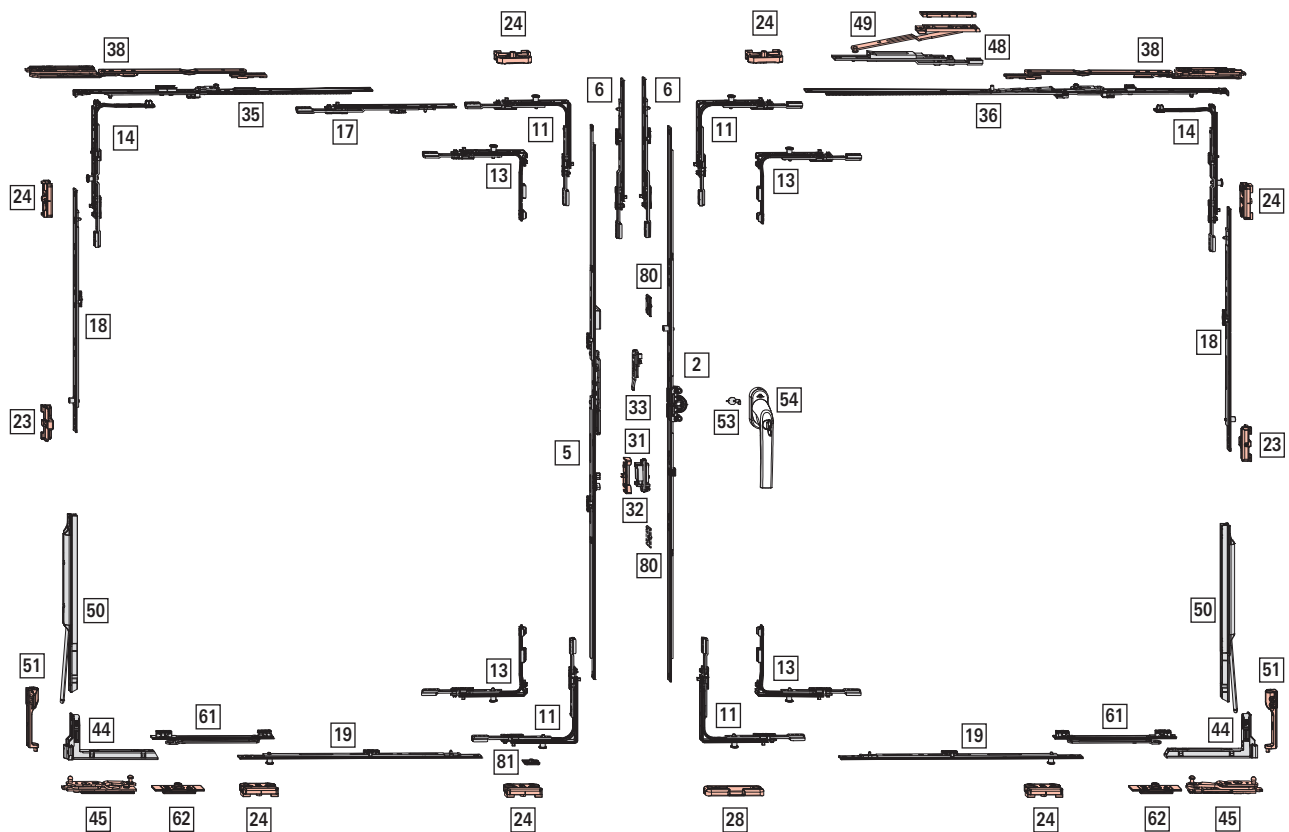
Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block → CTL_107

The run-up block depends on the striker used.



4.2.5.2 Standard – RC 1 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 370 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with:

Tilt&Turn sash: SRH ≤ 450 mm

Turn-Only sash: SRH ≤ 520 mm

[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
711 – 910	200 KU	–	–	308267
911 – 1110	400 KU	1	E	280346
1111 – 1310	600 KU	1	E	255282
1311 – 1400	600 KU	1	E	255282
	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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
400	N	1	E	255280
600	N	1	E	255281
200	N	1	P	255284

Size-specific combinations:

					Nº
Without turn restrictor	With turn restrictor				
450 – 650	801 – 850	200	1	P	255284
651 – 850	851 – 1050	400	1	E	255280
851 – 1000	1051 – 1250	600 [21]	1	E	255281
	1251 – 1400	600 KU	1	E	255282
		200	1	P	255284

[21] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053.

[23] Striker → from page 135**[24] Security striker → from page 136****[28] Tilt striker → from page 132****[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
430 – 510	250	400	482571
511 – 710	250	600	815784

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component** (SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

	Nº
Fastening plate with cam	255211

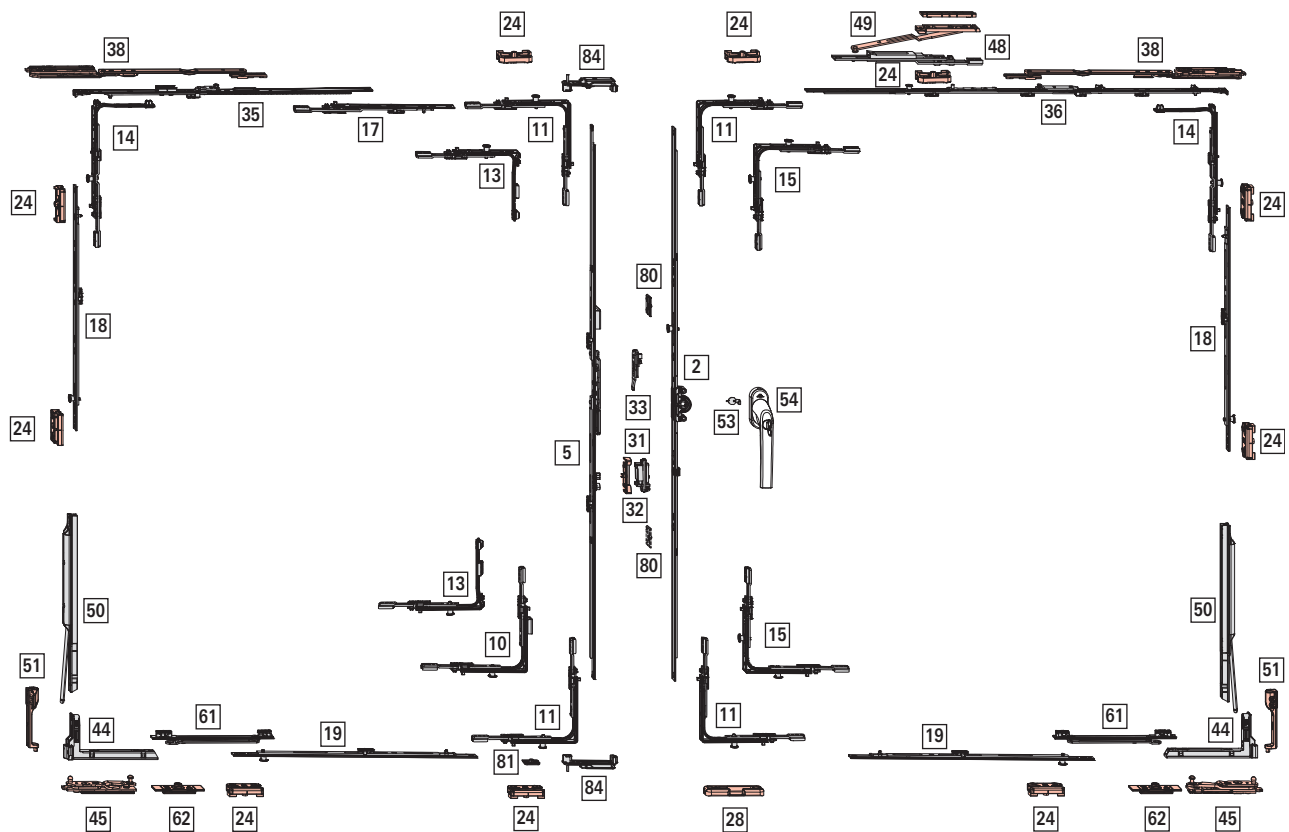
Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block → CTL_107

The run-up block depends on the striker used.



4.2.5.3 Standard – RC 2 / RC 2 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 520 – 2400 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2400 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

[10] Floating mullion corner drive

					Nº
Second opening sash	Bottom	1	1	V	367227

For use with:

SRH: 520 – 620 mm

[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: 520 – 620 mm

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

				Nº
200	Y	1	V	337708
400	Y	1	V	337710
600	Y	1	V	337711

Size-specific combinations:

				Nº
711 – 910	200 KU	1	V	337708
911 – 1110	400 KU	1	V	337710
1111 – 1310	600 KU	1	V	337711
1311 – 1400	600 KU	1	V	337711
	200 KU	1	V	337708

[18] Multipart centre lock – security, 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
Without load transfer	With load transfer				
510 – 650	–	200	1	V	296853
651 – 850	1000 – 1150	400	1	V	296854
851 – 1050	1151 – 1350	600 [22]	1	V	296855
1051 – 1250	1351 – 1550	600 KU	1	V	337711
		200	1	V	296853
1251 – 1450	1551 – 1750	600 KU	1	V	337711
		400	1	V	296854
1451 – 1650	1751 – 1950	600 KU	1	V	337711
		600 [23]	1	V	296855
1651 – 1850	1951 – 2150	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
1851 – 2050	2151 – 2350	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
2051 – 2250	2351 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600 [24]	1	V	296855
2251 – 2400	–	600 KU	1	V	337711
		600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853

[22] Crop CL by 15 mm up to SRH 861; when using load transfer: crop CL by 15 mm with SRH 1151

[23] Crop CL by 15 mm up to SRH 1461; when using load transfer: crop CL by 15 mm with SRH 1751

[24] Crop CL by 15 mm up to SRH 2061; when using load transfer: crop CL by 15 mm with SRH 2351

[19] Multipart centre lock – security, horizontal

				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
Without turn restrictor	With turn restrictor				
450 – 650	801 – 850	200	1	V	296853
651 – 850	851 – 1050	400	1	V	296854
851 – 1000	1051 – 1250	600 [25]	1	V	296855
–	1251 – 1400	600 KU	1	V	337711
		200	1	V	296853

[24] Security striker → from page 136**[28] Tilt striker → from page 132****[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
430 – 510	250	400	482571
511 – 710	250	600	815784

[36] Stay guide – security

					Nº
330 – 600	490	250	–	–	385393
601 – 800	690	350	–	–	385394
801 – 1000	890	500	1	V	450373
1001 – 1200	1090	500	1	V	450374

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm (SRW ≥ 1201 mm)**

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component (SRW ≥ 801 mm, SRH ≥ 1001 mm)**

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[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_107

The run-up block depends on the striker used.

[25] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRH 1053



[84] Safety device for floating-mullion sashes

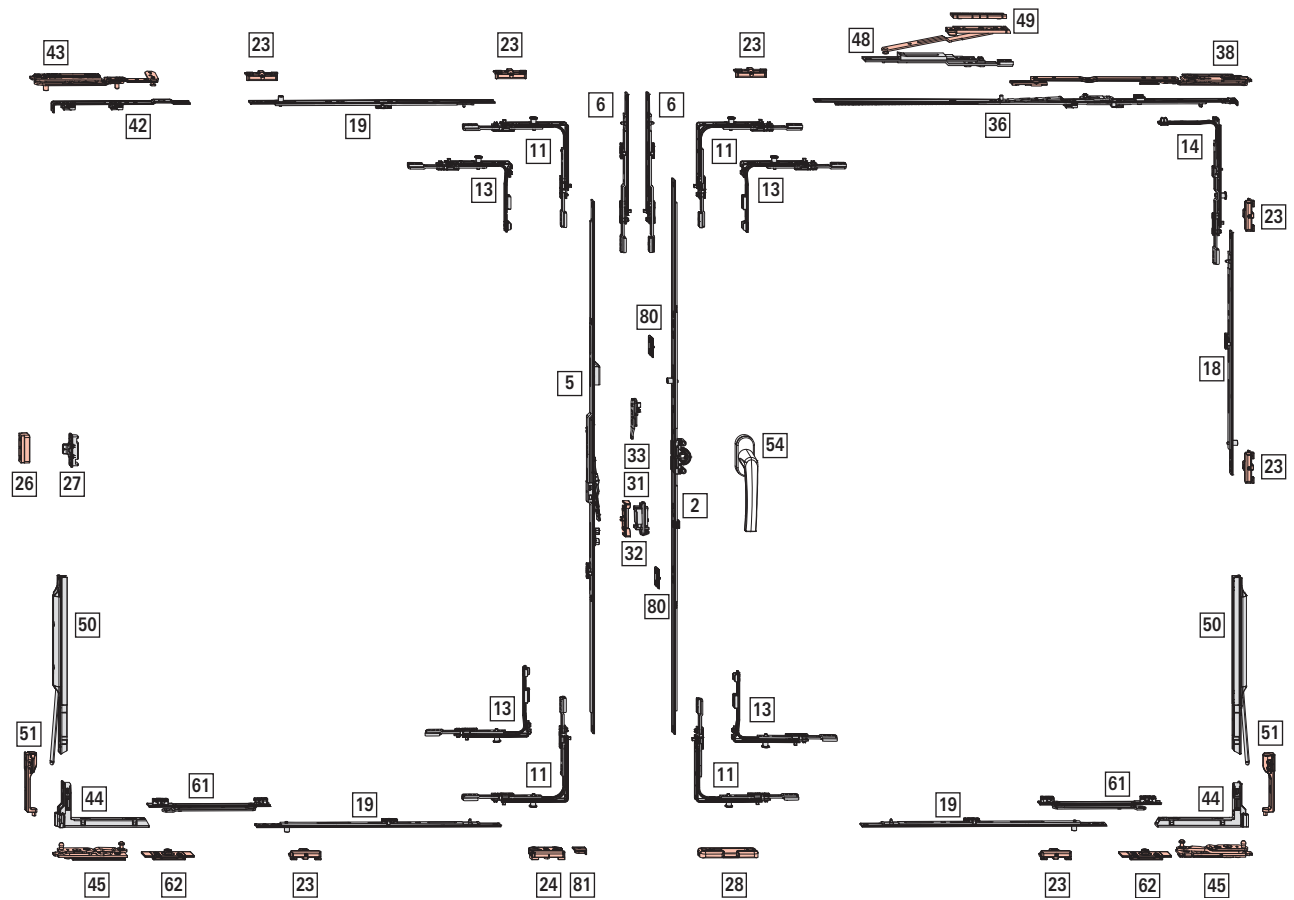


Nº

Retaining element for floating-mullion sash

552392

4.2.5.4 Plus – basic security





Application range

Without load transfer

SRW: 370 – 1400 mm

SRH: 430 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

			Nº
1	E	Top	260275
1	P	Top Bottom	260277



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[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 126



INFO

SRW 370 – 410 mm: For Turn-Only sashes, crop the top corner drive.

[14] Sash stay corner drive

		Nº
1	P	260286

[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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
600	N	1	E	255281

Size-specific combinations:

				Nº
1101 – 1400	600	1	E	255281

[23] Striker → from page 135**[24] Security striker → from page 136****[26] Centre closer, concealed, frame component → from page 141****[27] Centre closer, concealed, sash component → from page 141****[28] Tilt striker → from page 132****[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
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

[38] Stay arm → from page 144

	INFO
With SRH < 600 mm, set the tilt depth to 80 mm.	

[42] Rebate stay guide

		Nº
Not for Tilt-Only windows	224 / 15	477255

[43] Rebate stay arm → from page 145**[44] Corner hinge**

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm (SRW ≥ 1201 mm)**

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[54] Handle → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

	INFO
Turn restrictor possible from SRW 525 mm, mandatory for SRW > 1000 mm and when load transfer is used.	

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

	Nº
Fastening plate with cam	255211

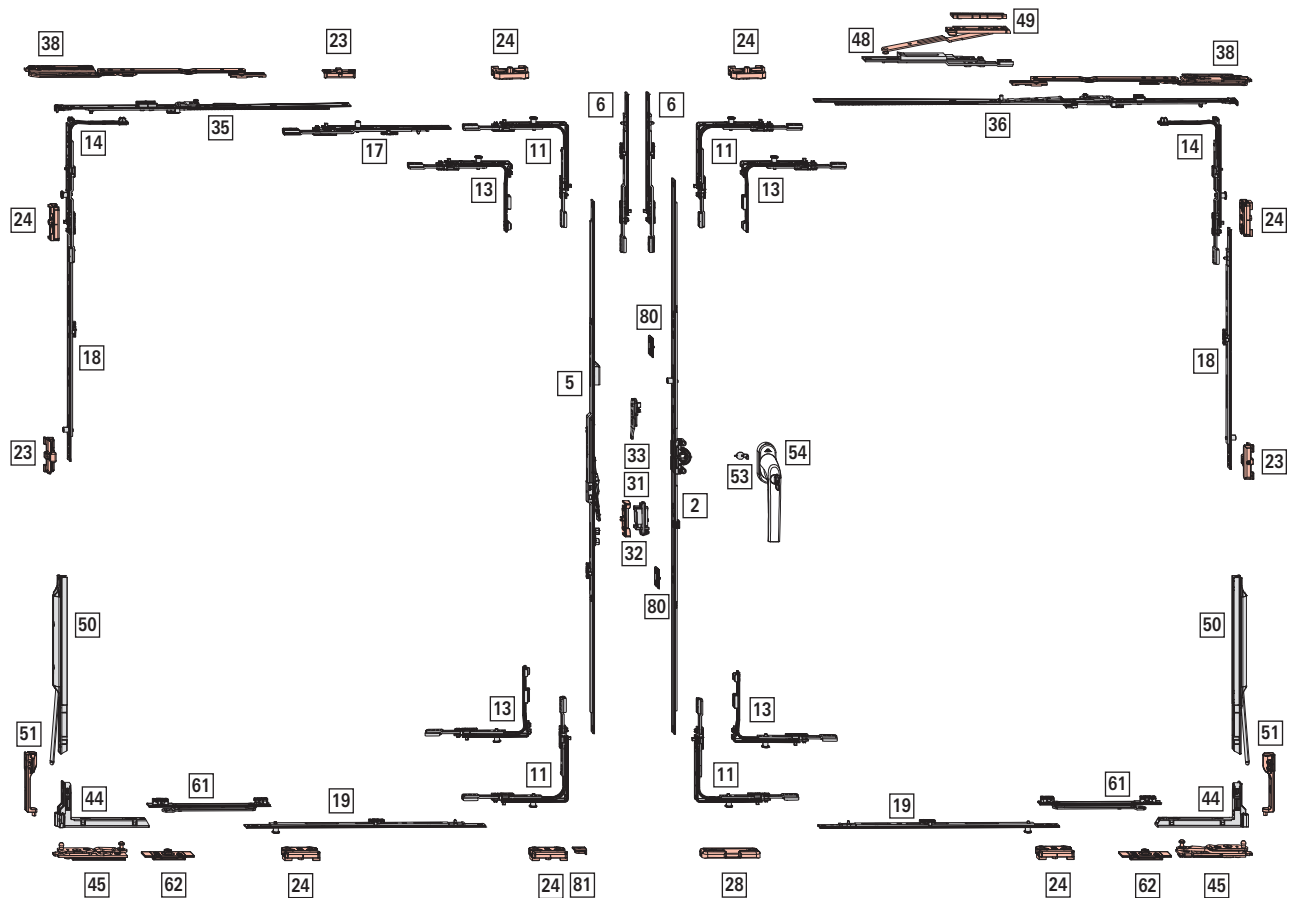
Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block → CTL_107

The run-up block depends on the striker used.



4.2.5.5 Plus – RC 1 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 430 – 2600 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2600 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

Size-specific combinations:

				Nº
2401 – 2600	200 KU	–	–	308267

[11] Standard corner drive

		Nº
1	P	260277

[13] Special short corner drive

		Nº
1	P	260282

For use with:

Tilt&Turn sash: SRH ≤ 450 mm

Turn-Only sash: SRH ≤ 520 mm

[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
801 – 1000	200 KU	–	–	308267
1001 – 1200	400 KU	1	E	280346
1201 – 1400	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
Without load transfer	With load transfer				
–	1101 – 1150	400	1	E	255280
1101 – 1800	1151 – 1800	600	1	E	255281
1801 – 2400	1801 – 2400	600 KU	1	E	255282
		600	1	E	255281
2401 – 2600	2401 – 2600	600 KU	1	E	255282
		600 KU	1	E	255282
		400	1	E	255280

[19] Multipart centre lock – standard, horizontal

				Nº
400	N	1	E	255280
600	N	1	E	255281
200	N	1	P	255284

Size-specific combinations:

					Nº
Without turn restrictor	With turn restrictor				
450 – 650	801 – 850	200	1	P	255284
651 – 850	851 – 1050	400	1	E	255280
851 – 1000	1051 – 1250	600 [26]	1	E	255281
	1251 – 1400	600 KU	1	E	255282
		200	1	P	255284

[23] Striker → from page 135

[24] Security striker → from page 136

[28] Tilt striker → from page 132

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

	Nº
Bullet catch sash component	788363

[26] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRW 1053.

[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
330 – 600	250	490	385393
601 – 800	250	690	2003336

[36] Stay guide – basic security

					Nº
330 – 600	250	490	–	–	385393
601 – 800	350	690	–	–	385394
801 – 1000	500	890	1	E	385415
1001 – 1200	500	1090	1	E	385416

For use from SRW 450 mm

[38] Stay arm → *from page 144***INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → *from page 143***[48] Additional stay arm** (SRW ≥ 1201 mm)

		Nº
Frame and sash component	200	255237

[49] Packer → *from page 138***[50] Load transfer sash component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

	Nº
max. 150 kg	567972

Short load transfer → *from page 145.***[51] Load transfer frame component**
(SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[80] Fastening plate

	Nº
Fastening plate with cam	255211

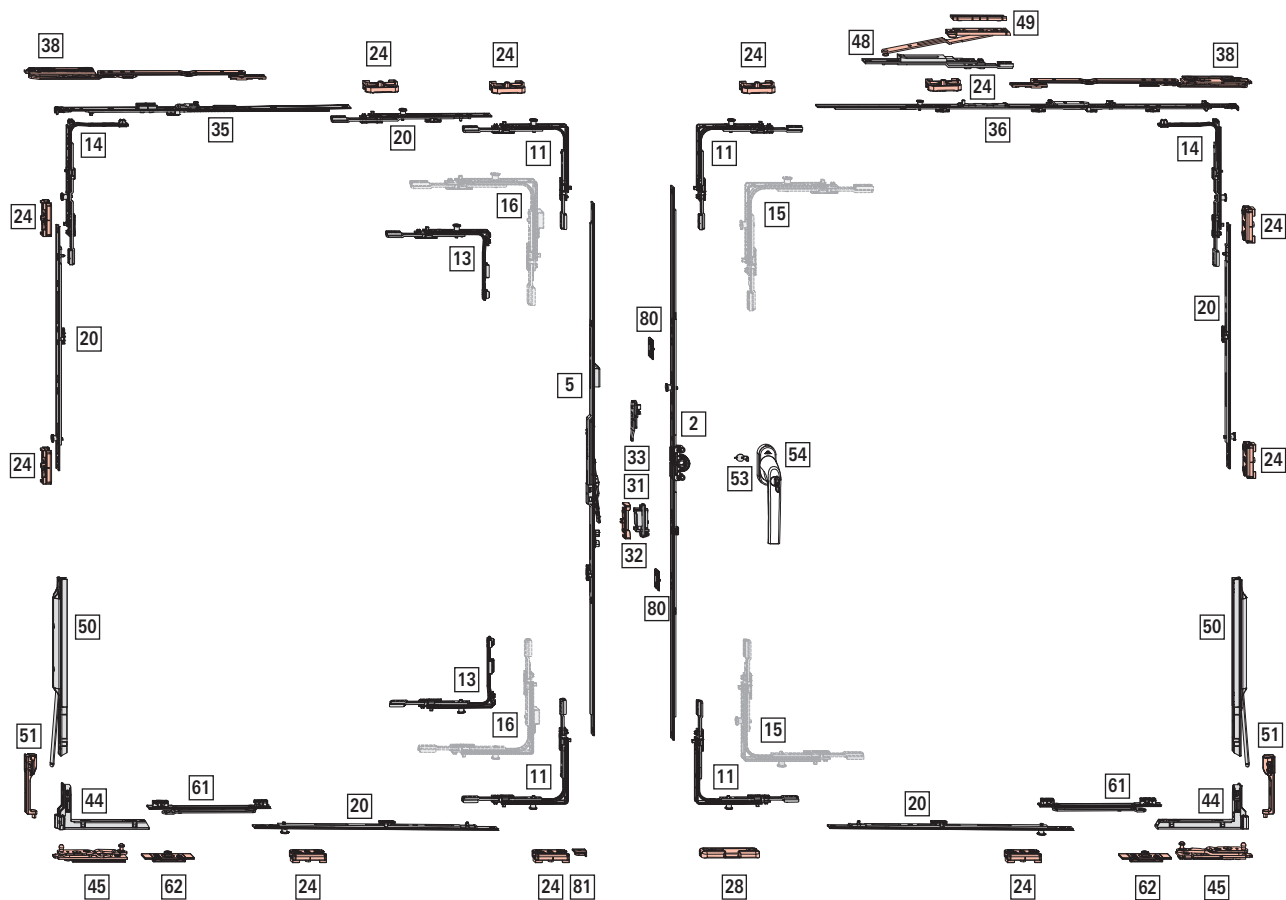
Can only be used in combination with T&T espagnolette 259717.

[81] Run-up block → CTL_107

The run-up block depends on the striker used.



4.2.5.6 Plus – RC 2 / RC 2 N





Application range

Without load transfer

SRW: 450 – 1400 mm

SRH: 520 – 2400 mm

S.kg: max. 100 kg

With load transfer

SRW: 800 – 1400 mm

SRH: 1000 – 2400 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

[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 126

[14] Sash stay corner drive

		Nº
1	V	260284

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

				Nº
200	Y	1	V	337708
400	Y	1	V	337710
600	Y	1	V	337711

Size-specific combinations:

				Nº
801 – 1000	200 KU	1	V	337708
1001 – 1200	400 KU	1	V	337710
1201 – 1400	600 KU	1	V	337711

[18] Multipart centre lock – security, 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
Without load transfer	With load transfer				
490 – 650	–	200	1	V	296853
651 – 850	1000 – 1150	400	1	V	296854
851 – 1050	1151 – 1350	600 [27]	1	V	296855
1051 – 1250	1351 – 1550	600 KU	1	V	337711
		200	1	V	296853
1251 – 1450	1551 – 1750	600 KU	1	V	337711
		400	1	V	296854
1451 – 1650	1751 – 1950	600 KU	1	V	337711
		600 [28]	1	V	296855
1651 – 1850	1951 – 2150	600 KU	1	V	337711
		600 KU	1	V	337711
		200	1	V	296853
1851 – 2050	2151 – 2350	600 KU	1	V	337711
		600 KU	1	V	337711
		400	1	V	296854
2051 – 2250	2351 – 2400	600 KU	1	V	337711
		600 KU	1	V	337711
		600 [29]	1	V	296855
2251 – 2400	–	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
400	N	1	V	296854
600	N	1	V	296855
600	Y	1	V	337711

[27] Crop CL by 15 mm up to SRH 861; when using load transfer: crop CL by 15 mm with SRH 1151

[28] Crop CL by 15 mm up to SRH 1461; when using load transfer: crop CL by 15 mm with SRH 1751

[29] Crop CL by 15 mm up to SRH 2061; when using load transfer: crop CL by 15 mm with SRH 2351

Size-specific combinations:

					Nº
Without turn restrictor	With turn restrictor				
450 – 650	801 – 850	200	1	V	296853
651 – 850	851 – 1050	400	1	V	296854
851 – 1000	1051 – 1250	600 ^[30]	1	V	296855
–	1251 – 1400	600 KU	1	V	337711
		200	1	V	296853

[24] Security striker → from page 136**[28] Tilt striker → from page 132****[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
330 – 600	250	490	–	–	385393
601 – 1400	250	690	–	–	2003336

[36] Stay guide – security

					Nº
330 – 600	490	250	–	–	385393
601 – 800	690	350	–	–	385394
801 – 1000	890	500	1	V	450373
1001 – 1200	1090	500	1	V	450374

For use from SRW 450 mm

[38] Stay arm → from page 144**INFO**

With SRH < 600 mm, set the tilt depth to 80 mm.

[44] Corner hinge

		Nº
Roto Sil	Left	740073
Roto Sil	Right	740072

[45] Pivot rest → from page 143**[48] Additional stay arm (SRW ≥ 1201 mm)**

		Nº
Frame and sash component	200	255237

[49] Packer → from page 138**[50] Load transfer sash component (SRW ≥ 801 mm, SRH ≥ 1001 mm)**

	Nº
max. 150 kg	567972

Short load transfer → from page 145.

[51] Load transfer frame component (SRW ≥ 801 mm, SRH ≥ 1001 mm)

		Nº
V.01	Left	625015
	Right	624924
V.02	Left	623851
	Right	623850

[53] Drilling protection

	Nº
Drilling protection	797819

[54] Handle, lockable → CTL_1**[61] Turn restrictor 198, sash component**

	Nº
Designo hinge side	485591

[62] Turn restrictor frame component

		Nº
V.01	Roto Sil	623852
V.02	Roto Sil	625020

[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_107

The run-up block depends on the striker used.

Optional**[15] Corner drive, standard (security)**

		Nº
2	V	260274

For use with:

SRH: 520 – 620 mm

^[30] Crop CL by 15 mm up to SRW 854; when using a turn restrictor: crop CL by 15 mm up to SRH 1053



[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.

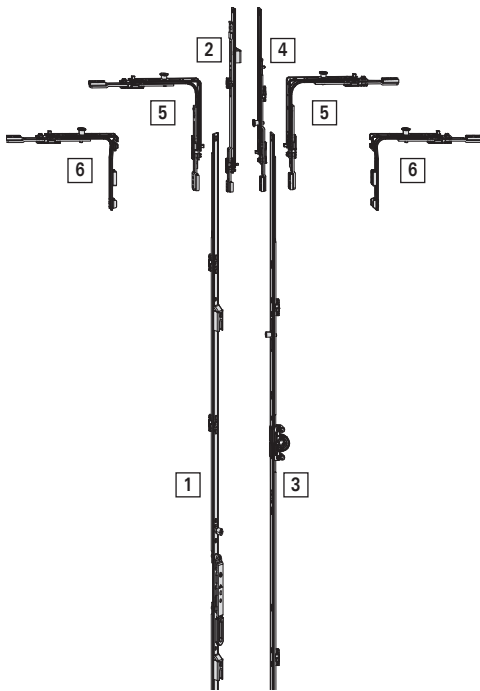
5 T&T espagnolette / floating-mullion sash espagnolette

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



Optional: determine the centre lock, standard [4] .

Backset 8 mm

Application range SRH	Lever-operated espagnolette, standard 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, standard VT			T&T espagnolette, VT			
	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

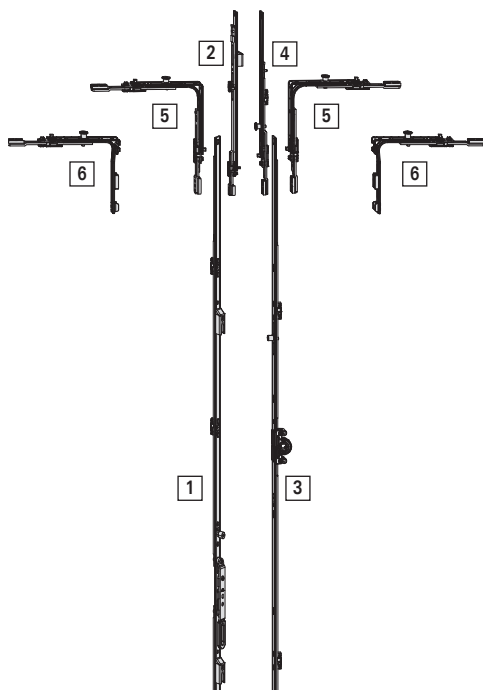


INFO

A centre lock is required from SRH 2401 mm.

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	LMD	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	LMD	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



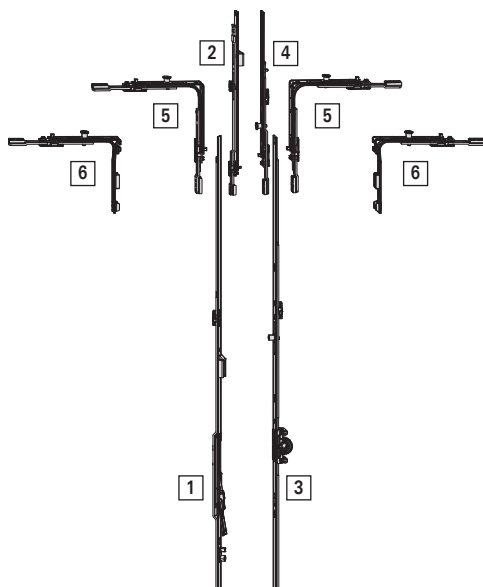
INFO

A centre lock is required from SRH 2401 mm.

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].



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

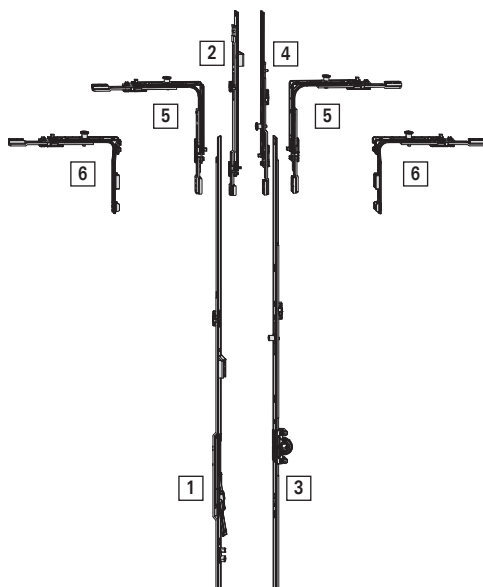


INFO

A centre lock is required from SRH 2401 mm.

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.

6 Frame components



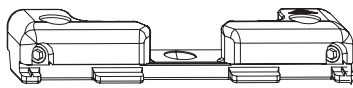
INFO

Further frame components are available upon request.

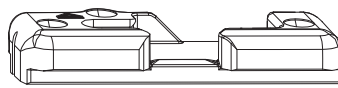
6.1 Tilt strikers

6.1.1 Standard

6.1.1.1 Zinc



A



B

Assignment	Meaning
[A]	Clampable
[B]	Screw-on

							Nº	
Aliplast Benelux Elvial 4600 AluK b-Quick Deceuninck Decalu	9	Screw-on	–	–	Left	Roto Sil	260523	
			–	–	Right	Roto Sil	260524	
HansenMillenium			–	–	Left	Roto Sil	260479	
			–	–	Right	Roto Sil	260480	
Exlabesa RS-65 Sapa Avantis van Beveren Optima	13		–	with packer	Left	Roto Sil	261943	
			–	with packer	Right	Roto Sil	262927	
Aluminco 570 Dynamic			–	–	Left	Roto Sil	451092	
			–	–	Right	Roto Sil	451007	
heroyal W 72 Kawneer RT heroyal W 65			–	–	Left	Roto Sil	284235	
			–	–	Right	Roto Sil	284236	
AluK 67FR Reynaers IndusLine 68			V.02	–	–	Roto Sil	860966	
Aliplast Benelux Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu AluK 58BW			9	V.01	–	–	Roto Sil	627150
heroyal W 72 Kawneer RT heroyal W 65				V.02	–	–	Roto Sil	629914
Aliplast Star			10	V.01	–	Left	Roto Sil	339432
				V.01	–	Right	Roto Sil	339433
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima			13	V.01	–	–	Roto Sil	494938



Do not use clampable tilt strikers for any security levels.

Packer for 261943 and 262927

		Nº
Exlabesa RS-65 Sapa Avantis	13	599215

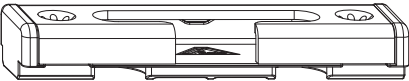


INFO

Other versions are available upon request.

Compatible packers → *from page 138.*

6.1.1.2 Steel



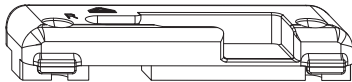
						Nº
Aliplast Benelux Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 4150 HV AluK b-Quick Deceuninck Decalu	9	Screw-on	—	—	Roto Sil	2003961
heroal W 72 heroal W 65			—	—	Roto Sil	856826
HansenMillenium			—	—	Roto Sil	856827
Aliplast Star	10		—	—	Roto Sil	2031830



INFO

Other versions are available upon request.

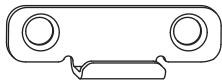
6.1.2 TiltFirst (TF)



						Nº			
Aliplast Benelux Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu	9	Screw-on	–	Left	Roto Sil	473190			
			–	Right	Roto Sil	473189			
			–	Left	Roto Sil	737709			
			–	Right	Roto Sil	737710			
			–	Left	Roto Sil	838045			
			–	Right	Roto Sil	838046			
			–	Left	Roto Sil	287915			
			–	Right	Roto Sil	287916			
			–	Left	Roto Sil	774799			
			–	Right	Roto Sil	774800			
			heroyal W 72 Kawneer RT heroyal W 65	13	Screw-on	–	Left	Roto Sil	737709
			AluK 58BW			–	Right	Roto Sil	737710
			HansenMillenium			–	Left	Roto Sil	838045
–	Right	Roto Sil				838046			
Aluminco 570 Dynamic Sapa Avantis van Beveren Optima	–	Left	Roto Sil			287915			
	–	Right	Roto Sil			287916			
Aluminco 570 Dynamic Sapa Avantis van Beveren Optima	–	Left	Roto Sil			774799			
	–	Right	Roto Sil			774800			
Aluminco 570 Dynamic Sapa Avantis van Beveren Optima	–	Left	Roto Sil			774799			
	–	Right	Roto Sil			774800			



INFO
Other versions are available upon request.



				Nº
Aliplast Benelux AluK b-Quick Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Deceuninck Decalu HansenMillenium	TiltFirst adapter for security strikers (steel)	9	Roto Sil	456941

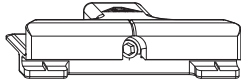


INFO
Only in conjunction with steel SEC striker, mat. no. 2009237 and 2009238.



6.2 Strikers

6.2.1 Standard



					Nº
Aliplast Benelux Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Sapa 4150 HV AluK b-Quick Deceuninck Decalu	9	Screw-on	–	Roto Sil	346971
heroal W 72 Kawneer RT			–	Roto Sil	891331
heroal W 72 Kawneer RT heroal W 65			–	Roto Sil	284233
AluK 58BW			–	Roto Sil	260363
AluK 67FR Reynaers IndusLine 68			–	Roto Sil	860949
HansenMillenium			–	Roto Sil	260360
Exlabesa RS-65	13		–	Roto Sil	491060
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima			–	Roto Sil	451008
Aliplast Benelux Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu AluK 58BW	9	Clampable	V.01	Roto Sil	627148
heroal W 72 Kawneer RT heroal W 65			V.02	Roto Sil	629913
Aliplast Star	10		V.01	Roto Sil	339434
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima	13		V.01	Roto Sil	494937

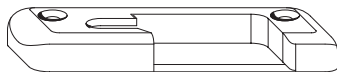


INFO

Other versions are available upon request.

6.2.2 Security

6.2.2.1 Zinc



A



B

Assignment	Meaning
[A]	Striker, right / left
[B]	Striker, symmetrical

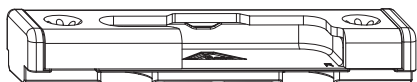
						Nº
Aliplast Benelux Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Elvial 4600 Sapa 4150 HV AluK b-Quick Deceuninck Decalu	9	Screw-on	–	–	Roto Sil	346972
heroal W 72 Kawneer RT heroal W 65			–	–	Roto Sil	284234
HansenMillenium			–	Left	Roto Sil	260382
			–	Right	Roto Sil	260383
Aluminco 570 Dynamic	13		–	–	Roto Sil	451009
Exlabesa RS-65			–	Left	Roto Sil	261935
Sapa Avantis			–	Right	Roto Sil	262930
van Beveren Optima			–			



INFO

Other versions are available upon request.

6.2.2.2 Steel



						Nº
Aliplast Benelux Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 4150 HV AluK b-Quick Deceuninck Decalu	9	Screw-on	V.01	Left	Roto Sil	2003963
		Screw-on	V.01	Right	Roto Sil	2003962
AluK 58BW		Screw-on	V.01	Left	Roto Sil	856764
		Screw-on	V.01	Right	Roto Sil	856765
heroal W 72 Kawneer RT heroal W 65		Screw-on	V.02	–	Roto Sil	856759
HansenMillenium		Screw-on	–	Left	Roto Sil	856982
		Screw-on	–	Right	Roto Sil	856981



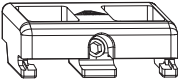
						Nº
Aliplast Star	10	Screw-on	–	Left	Roto Sil	2031829
		Screw-on	–	Right	Roto Sil	2031828



INFO

Other versions are available upon request.

6.2.3 Striker for double-sashed window



					Nº
Aliplast Benelux Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu	9	Clampable	V.01	Roto Sil	627149
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima	13		–	Roto Sil	494940
Aliplast Star Alumil Ecoflex Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Elvial 4600 Ponzio PE78	9 10		V.01	Roto Sil	339438
Aliplast Benelux AluK b-Quick Deceuninck Decalu	9	Screw-on	–	Roto Sil	346976
AluK 67FR	13		V.02	Roto Sil	860965



INFO

Other versions are available upon request.

6.3 Packers

6.3.1 Packers



			Nº
Aliplast Benelux Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu	Frame	9	348148
heroal W 72 Kawneer RT AluK 67FR heroal W 65			294541
AluK 58BW			838047
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima		13	491064
Exlabesa RS-65 Sapa Avantis			599215

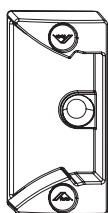


INFO

Other versions are available upon request.

6.4 Bullet catches

6.4.1 Bullet catch



				Nº
Aliplast Benelux AluK b-Quick Deceuninck Decalu	9	Clampable	Roto Sil	897075
HansenMillenium		Screw-on	Roto Sil	788365
Aluminco 570 Dynamic Sapa Avantis van Beveren Optima	13		Roto Sil	839393

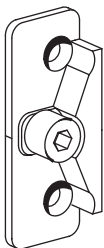


INFO

Other versions are available upon request.

6.5 Lifting mishandling devices

6.5.1 Frame component



					Nº
Aliplast Benelux Elvial 4600 AluK b-Quick Deceuninck Decalu	Screw-on	9	–	Roto Sil	260561
heroal W 72 Kawneer RT heroal W 65			–	Roto Sil	284237
AluK 58BW			V.01	Roto Sil	260543
AluK 67FR Reynaers IndusLine 68			V.02	Roto Sil	860967
HansenMillenium			–	Roto Sil	260540
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima	Clampable	13	–	Roto Sil	451006
Aliplast Benelux Aliplast Star Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 Al2 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu AluK 58BW			V.01	Roto Sil	339436
heroal W 72 Kawneer RT heroal W 65			V.02	Roto Sil	629925
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima			V.01	Roto Sil	494942

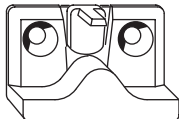


INFO

Other versions are available upon request.

6.6 Night vents

6.6.1 Single-stepped



							Nº
Aliplast Benelux Alumil Ecoflex Aluprof MB-60 Aluprof MB-70 Elvial Iconic W77 A12 Elvial 4600 AluK b-Quick Deceuninck Decalu	Screw-on	9	–	–	–	Roto Sil	259255
heroyal W 72 Kawneer RT heroyal W 65			–	–	–	Roto Sil	348365
HansenMillenium			–	–	–	Roto Sil	256633
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis		13	–	with packer	Left	Roto Sil	261945
Aluminco 570 Dynamic Exlabesa RS-65 Sapa Avantis van Beveren Optima			–	with packer	Right	Roto Sil	262932
Aliplast Benelux Aliplast Star Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Aluron AS 75 Elvial Iconic W77 A12 Elvial 4600 Ponzio PE78 Sapa 70FPI Sapa 4150 HV AluK b-Quick Deceuninck Decalu	Clampable	9 10	V.01	–	–	Roto Sil	339437



INFO

Only for use in conjunction with P or V cam.



INFO

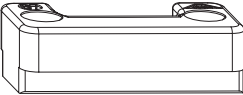
Other versions are available upon request.

Compatible packers → *from page 138.*



6.7 Centre closers

6.7.1 Frame component



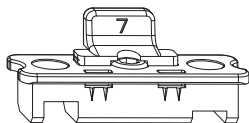
			Nº
Aliplast Star Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Elvial 4600 Sapa 70FPI AluK b-Quick	9 10	Screw-on	632885
AluK 67FR Reynaers IndusLine 68	9		860968
Kawneer RT heroal W 65			502324
Aliplast Benelux Deceuninck Decalu			814621
Aluminco 570 Dynamic Sapa Avantis van Beveren Optima	13		632824



INFO

Other versions are available upon request.

6.7.2 Sash component



				Nº
Aliplast Benelux Aluprof MB-60 Aluprof MB-70 Aluprof MB-86 Ponzio PE78 heroal W 72 Kawneer RT AluK b-Quick Deceuninck Decalu heroal W 65		9	Screw-on	333121
AluK 67FR Reynaers IndusLine 68				860968
Aliplast Benelux Aliplast Star Alumil Ecoflex Aluminco 450 Brisa Aluminios Sistema NT 18/9 Elvial 4600 Sapa 70FPI Kawneer RT Aluminco 570 Dynamic Sapa Avantis AluK b-Quick Deceuninck Decalu AluK 67FR heroal W 65 Reynaers IndusLine 68 van Beveren Optima		9 13		450984

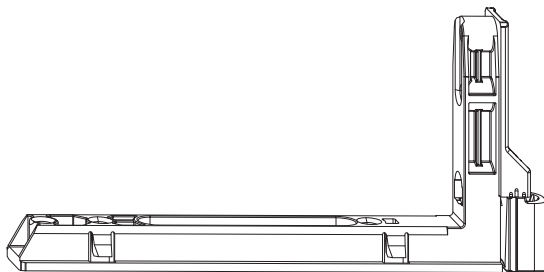


INFO

Other versions are available upon request.

6.8 Corner hinges

6.8.1 Corner hinge



			Nº
5 screw holes	Roto Sil	Left	740073
5 screw holes	Roto Sil	Right	740072

Can also be used on sash profiles with corner connectors which do not permit the corner hinge to be fixed using screws.

In conjunction with short load transfer → *from page 145*



6.8.2 Corner hinge extension

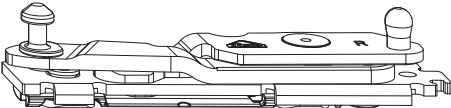


		Nº
Corner hinge extension	For additional screw positions	740074

Corner hinge extension for an additional vertical screw position on sash profiles with corner connectors which do not permit the corner hinge to be fixed using screws. In conjunction with short load transfer → *from page 145*.

6.9 Pivot rests

6.9.1 Pivot rest



					Nº
9 10	No. 1	V.02	Roto Sil	Left	628300
			Roto Sil	Right	628299
13			Roto Sil	Left	819180
			Roto Sil	Right	819181
9 10	No. 4	V.01	Roto Sil	Left	624513
			Roto Sil	Right	624512
13			Roto Sil	Left	624523
			Roto Sil	Right	624522



INFO

Hinge sides A16 and Designo A16 are designed for HA 9 mm and HA 13 mm. Before using different hardware axes, a separate profile assessment is recommended.

Compatible corner hinge → *from page 142*

6.10 Stay arm

6.10.1 Stay arm



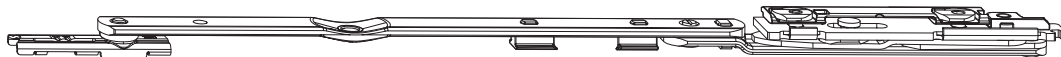
						Nº
9 10	No. 1	V.02	250	Roto Sil	Left	628272
				Roto Sil	Right	628271
			350	Roto Sil	Left	628274
				Roto Sil	Right	628273
			500	Roto Sil	Left	628296
				Roto Sil	Right	628295
	No. 4	V.01	250	Roto Sil	Left	624507
				Roto Sil	Right	624506
			350	Roto Sil	Left	624509
				Roto Sil	Right	624508
			500	Roto Sil	Left	624511
				Roto Sil	Right	624510
13	No. 1	V.02	250	Roto Sil	Left	819164
				Roto Sil	Right	819175
			350	Roto Sil	Left	819176
				Roto Sil	Right	819177
			500	Roto Sil	Left	819178
				Roto Sil	Right	819179
	No. 4	V.01	250	Roto Sil	Left	624517
				Roto Sil	Right	624516
			350	Roto Sil	Left	624519
				Roto Sil	Right	624518
			500	Roto Sil	Left	624521
				Roto Sil	Right	624520



INFO

Hinge sides A16 and Designo A16 are designed for HA 9 mm and HA 13 mm. Before using different hardware axes, a separate profile assessment is recommended.

6.10.2 TiltFirst stay arm (TF)



						Nº
9 10	No. 4	V.01	250	Roto Sil	Left	630781
			250	Roto Sil	Right	630780
			350	Roto Sil	Left	630783
			350	Roto Sil	Right	630782
			500	Roto Sil	Left	630795
			500	Roto Sil	Right	630784
	No. 1	V.02	250	Roto Sil	Left	735554
			250	Roto Sil	Right	735553
			350	Roto Sil	Left	735556
			350	Roto Sil	Right	735555
			500	Roto Sil	Left	735558
			500	Roto Sil	Right	735557



						Nº
13	No. 4	V.01	250	Roto Sil	Left	736910
			250	Roto Sil	Right	736909
			350	Roto Sil	Left	736912
			350	Roto Sil	Right	736911
			500	Roto Sil	Left	736914
			500	Roto Sil	Right	736913

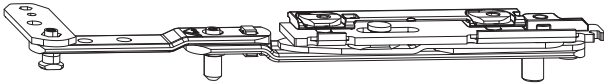


INFO

Hinge sides A16 and Designo A16 are designed for HA 9 mm and HA 13 mm. Before using different hardware axes, a separate profile assessment is recommended.

6.11 Rebate stay arm

6.11.1 Hinge side Designo A16



					Nº
9 10	No. 4	V.01	Roto Sil	Left	624505
			Roto Sil	Right	624504
	No. 1	V.02	Roto Sil	Left	628298
			Roto Sil	Right	628297
13	No. 4	V.01	Roto Sil	Left	624515
			Roto Sil	Right	624514
	No. 1	V.02	Roto Sil	Left	819182
			Roto Sil	Right	819183



INFO

Hinge sides A16 and Designo A16 are designed for HA 9 mm and HA 13 mm. Before using different hardware axes, a separate profile assessment is recommended.

For the compatible rebate stay guide, see → *from page 50*.

6.12 Load transfer

6.12.1 Short load transfer



				Nº
Short load transfer	Sash	max. 150 kg	Roto Sil	740125

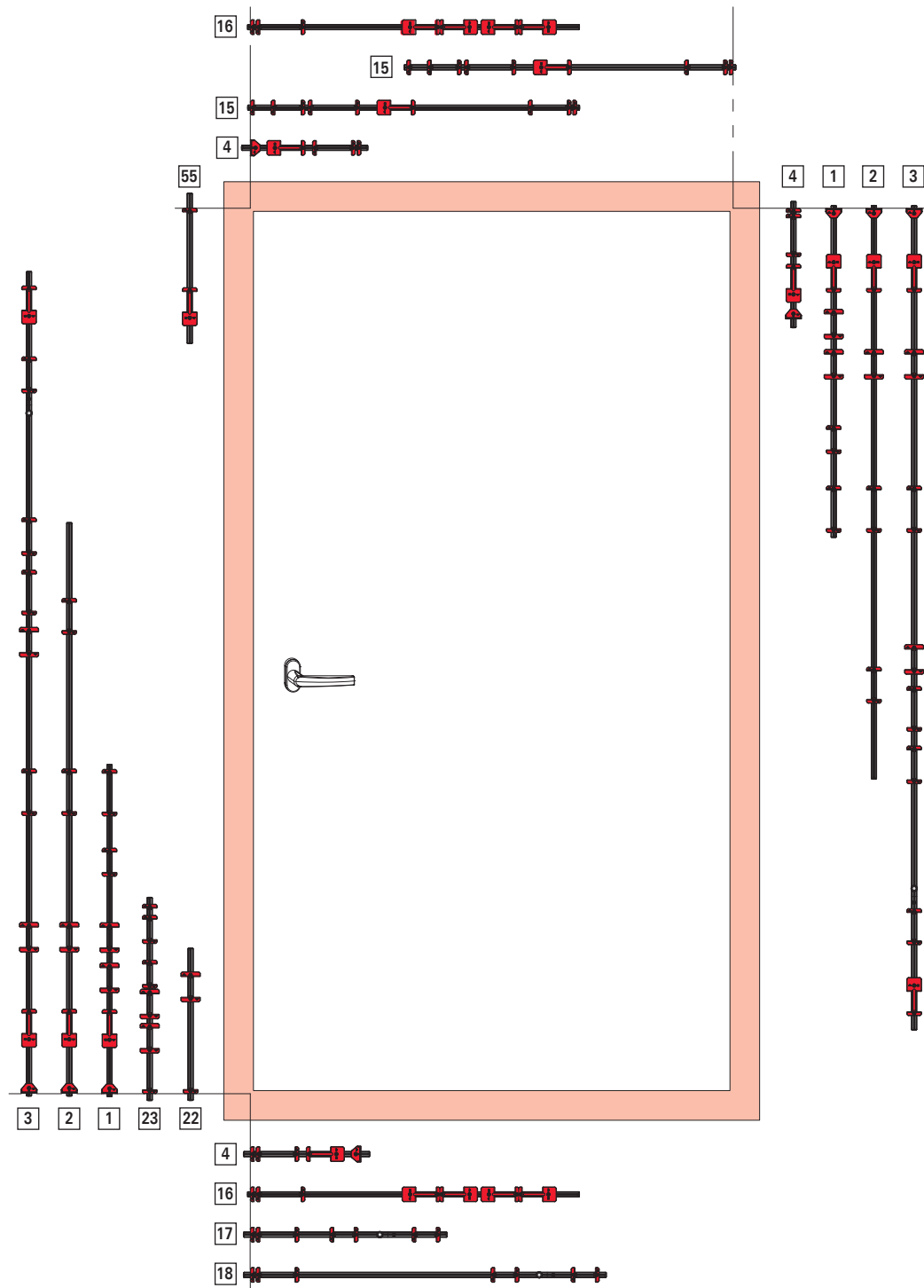
Corner hinge extension → *from page 143*.

The corner hinge extension can be used as a locating aid for the short load transfer.

7 Jigs

7.1 Positioning jigs

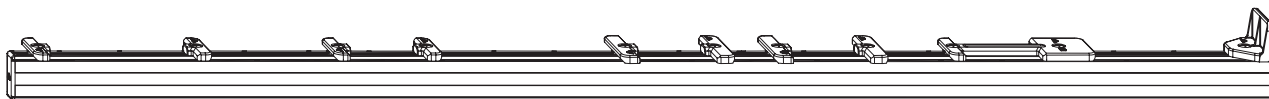
7.1.1 T&T espagnolette – fixed handle height





Assignment	Position	Application range	T&T		T-O	Single jig
			BSec	RC1 N	BSec	
[22]	Espagnolette side	SRH 511 – 710 mm	■	■	■	Standard → <i>from page 147</i>
[23]		SRH 601 – 800 mm	■	■	■	
[1]		SRH 801 – 1400 mm	■	■	■	
[2]		SRH 1401 – 1600 mm	■	■	■	
[3]		SRH 1601 – 2600 mm	■	■	■	
[55]		SRH 2401 – 2600 mm	–	■	–	
[4]	Hinge side	SRH 290 – 800 mm	■	■	–	Tilt striker / corner drive → <i>from page 147</i>
[1]		SRH 801 – 1400 mm	■	■	■	Standard → <i>from page 147</i>
[2]		SRH 1401 – 1800 mm	■	■	■	
[3]		SRH 1801 – 2600 mm	■	■	■	
[4]	Horizontal at the top	SRW 330 – 800	■	■	■	Tilt striker / corner drive → <i>from page 147</i>
[15]		SRW 801 – 1400 mm	■	■	–	Centre lock → <i>from page 148</i>
[16]		SRW 801 – 1400 mm	–	–	■	Turn-Only sash → <i>from page 148</i>
[4]	Horizontal at the bottom	SRW 330 – 800 mm	■	–	–	Tilt striker / corner drive → <i>from page 147</i>
[16]		SRW 801 – 1400 mm	–	–	■	Turn-Only sash → <i>from page 148</i>
[17]		BSec: SRW 801 – 1200 mm	■	■	–	Centre lock → <i>from page 148</i>
		RC1 N: 450 – 850 mm				
[18]		BSec: SRW 1201 – 1400 mm	■	■	–	
		RC1 N: 851 – 1000 mm				

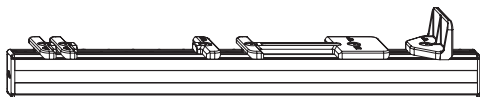
7.1.1.1 Standard



Espagnolette side and hinge side

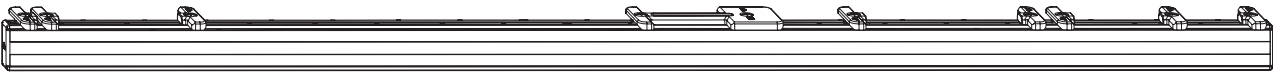
				Nº
Standard	481 – 800	Espagnolette side	No. 23	263338
	511 – 800	Espagnolette side	No. 22	2033841
	801 – 1400	Espagnolette side Hinge side	No. 1	290048
	1401 – 1600	Espagnolette side Hinge side	No. 2	290049
	1601 – 2600	Espagnolette side Hinge side	No. 3	290050
	2401 – 2600	Espagnolette side	No. 55	640440

7.1.1.2 Tilt striker / corner drive



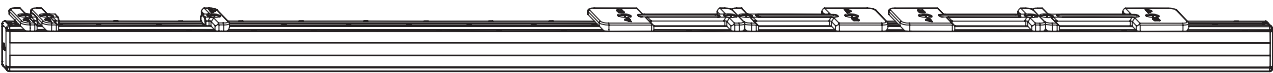
					Nº
Tilt striker / corner drive	280 – 800	290 – 800	Top Bottom Hinge side	No. 4	290051

7.1.1.3 Centre lock



				Nº
Centre lock	801 – 1600	Top Bottom	No. 15	311892
	320 – 730	Bottom	No. 17	263335
	731 – 1130	Bottom	No. 18	263336

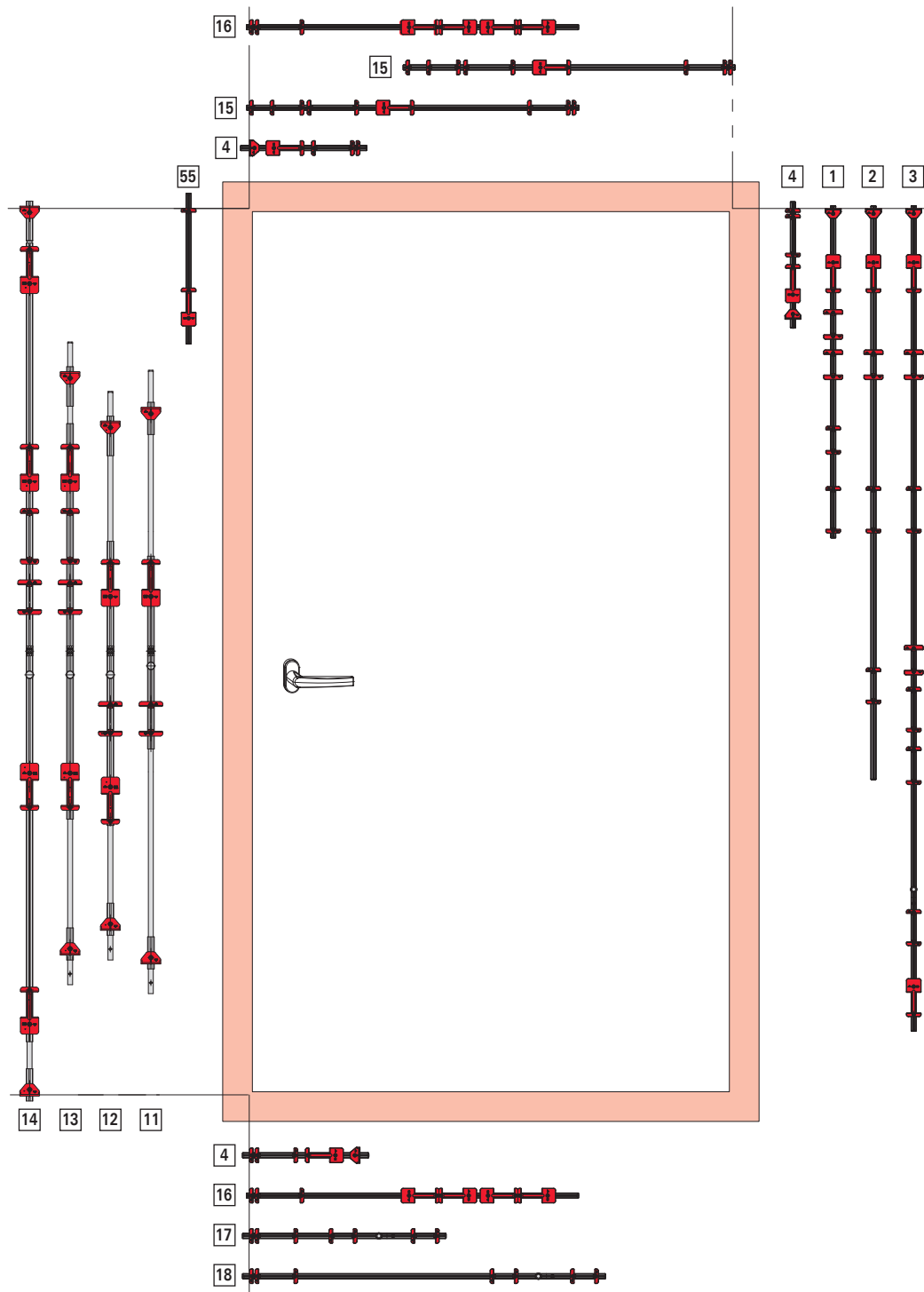
7.1.1.4 Turn-Only sash



				Nº
Turn-Only sash	801 – 1400	Top Bottom	No. 16	311893



7.1.2 T&T espagnolette – centred / variable handle height



Assignment	Position	Application range	T&T		T-O	Single jig
			BSec	RC1 N	BSec	
[11]	Espagnolette side	SRH 621 – 1200 mm	■	■	■	Standard → <i>from page 150</i>
[12]		SRH 1201 – 1600 mm	■	■	■	
[13]		SRH 1601 – 2000 mm	■	■	■	
[14]		SRH 2001 – 2400 mm	■	■	■	
[55]		SRH 2401 – 2600 mm	–	■	–	
[4]	Hinge side	SRH 290 – 800 mm	■	■	–	Tilt striker / corner drive → <i>from page 147</i>
[1]		SRH 801 – 1400 mm	■	■	■	Standard → <i>from page 150</i>
[2]		SRH 1401 – 1800 mm	■	■	■	
[3]		SRH 1801 – 2600 mm	■	■	■	

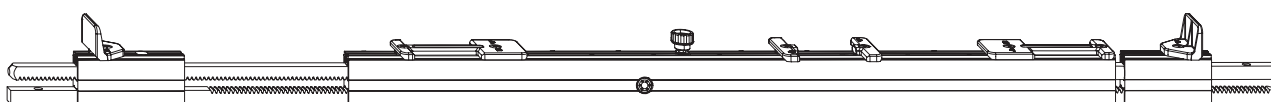
Jigs

Positioning jigs

T&T espagnolette – centred / variable handle height

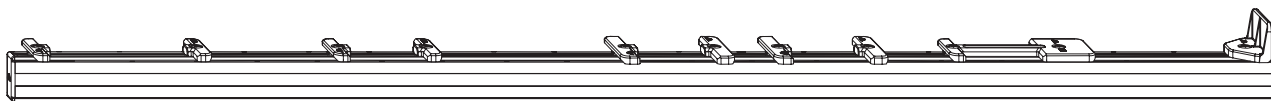
Assignment	Position	Application range	T&T		T-O	Single jig
			BSec	RC1 N	BSec	
[4]	Horizontal at the top	SRW 330 – 800	■	■	■	Tilt striker / corner drive → <i>from page 147</i>
[15]		SRW 801 – 1400 mm	■	■	–	Centre lock → <i>from page 148</i>
[16]		SRW 801 – 1400 mm	–	–	■	Turn-Only sash → <i>from page 148</i>
[4]	Horizontal at the bottom	SRW 330 – 800 mm	■	–	–	Tilt striker / corner drive → <i>from page 147</i>
[16]		SRW 801 – 1400 mm	–	–	■	Turn-Only sash → <i>from page 148</i>
[17]		BSec: SRW 801 – 1200 mm	■	■	–	Centre lock → <i>from page 148</i>
[18]		RC1 N: 450 – 850 mm				
		BSec: SRW 1201 – 1400 mm	■	■	–	
		RC1 N: 851 – 1000 mm				

7.1.2.1 Standard



Espagnolette side

				Nº
Standard	621 – 1200	Espagnolette side	No. 11	268943
	1001 – 1600	Espagnolette side	No. 12	798480
	1601 – 2000	Espagnolette side	No. 13	787401
	2001 – 2400	Espagnolette side	No. 14	787402
	2401 – 2600	Espagnolette side	No. 55	640440



Hinge side

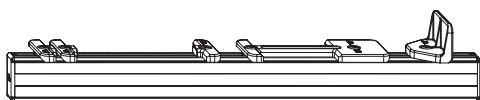
				Nº
Standard	801 – 1400	Espagnolette side Hinge side	No. 1	290048
	1401 – 1600	Espagnolette side Hinge side	No. 2	290049
	1601 – 2600	Espagnolette side Hinge side	No. 3	290050



INFO

With T&T espagnolettes – centred / variable handle height, use jigs on the hinge side only.

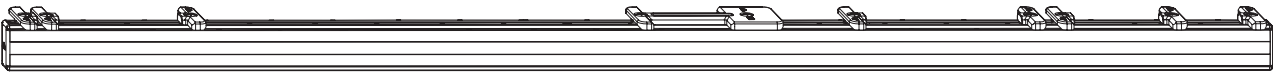
7.1.2.2 Tilt striker / corner drive



					Nº
Tilt striker / corner drive	280 – 800	290 – 800	Top Bottom Hinge side	No. 4	290051

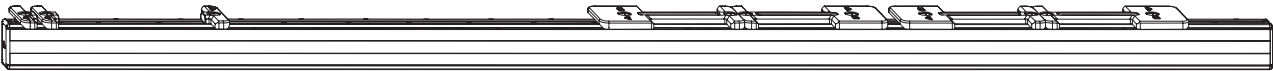


7.1.2.3 Centre lock



				Nº
Centre lock	801 – 1600	Top Bottom	No. 15	311892
	320 – 730	Bottom	No. 17	263335
	731 – 1130	Bottom	No. 18	263336

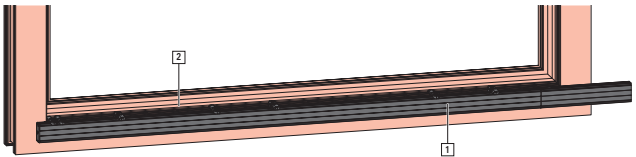
7.1.2.4 Turn-Only sash



				Nº
Turn-Only sash	801 – 1400	Top Bottom	No. 16	311893

7.1.3 Positioning jigs

1. Place the positioning jig [1] on the frame [2].



2. Position the frame components.

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 [31]
60	1650
70	1900
80	2200
90	2450
100	2700
110	3000
120	3250
130	3500
140	3900
150	4200



INFO

Observe directive TBDK 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.

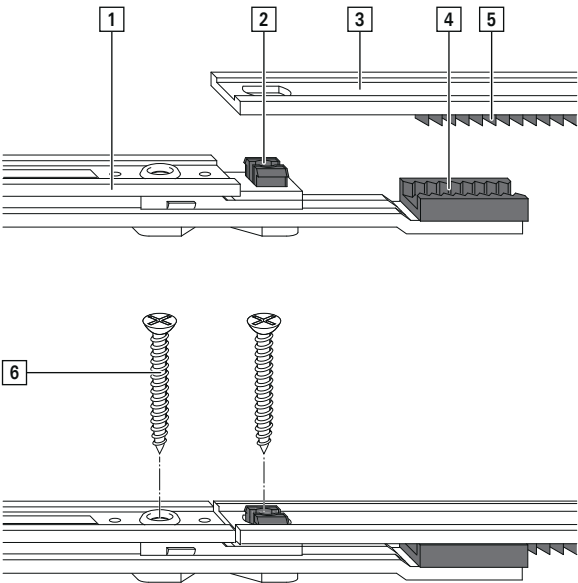
Improper screw fixings may damage the components and the element as a whole, and stop them from working properly.

- ▶ 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.

[31] Permissible tolerance -10%

8.4 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.



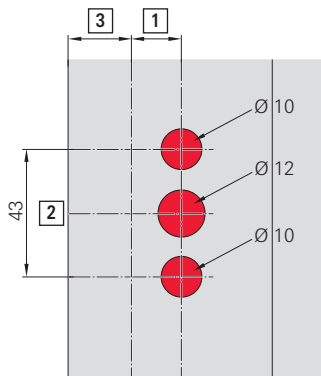
INFO

All couplable components are delivered attached in the centre.



8.5 Drilling and routing dimensions

8.5.1 T&T espagnolette



Drill holes for sprocket and handle lugs

- [1] Backset
- [2] Handle height
- [3] Overlap width
- [4] Overlap height

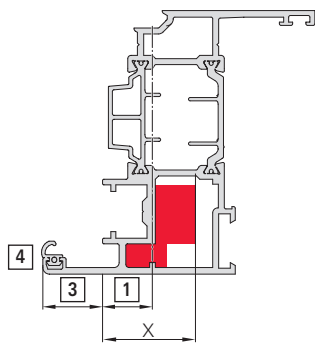
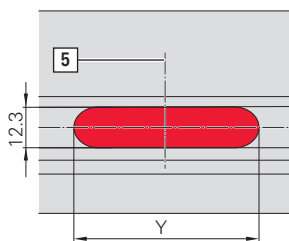
16 to 22 mm

Drill hole Ø 10: drilling depth = overlap height + 17 mm for countersunk screws (ISO 7046-1 M5 x ...)

Drill hole Ø 12: drilling depth = overlap height + 17 mm

- [X] Routing depth

X min. = backset + 12.5 mm



Gearbox routing

- [Y] Routing length

Backset 8 = min. 30 mm

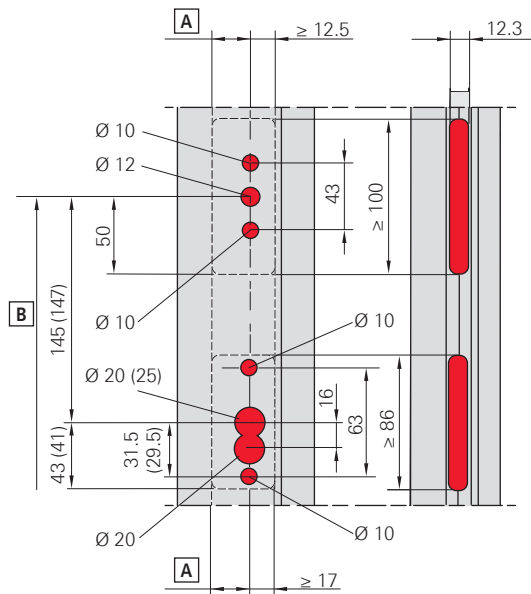
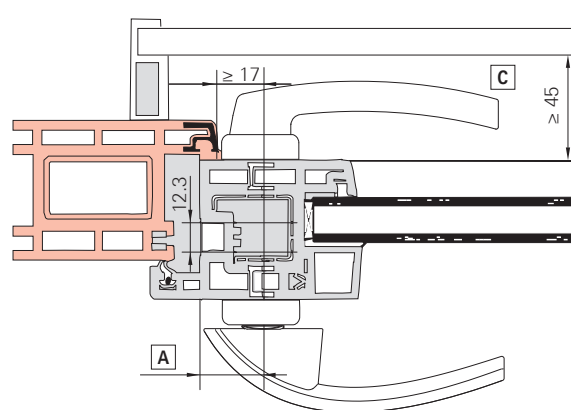
Backset 15 = min. 65 mm

Backset 25 to backset 50 = min. 100 mm

- [5] Centre of gearbox

Routing depth min. 28 mm

8.5.2 High backset espagnolette



Values in brackets for round cylinder.

Assignment	Meaning
[A]	Backset
[B]	Handle height
[C]	On roller shutters



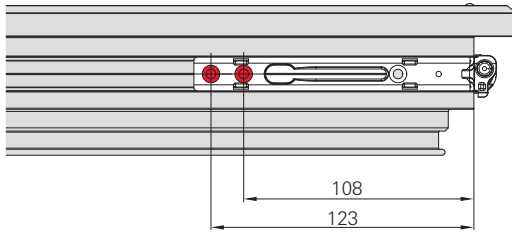
INFO

Cross section: doors (inward opening).

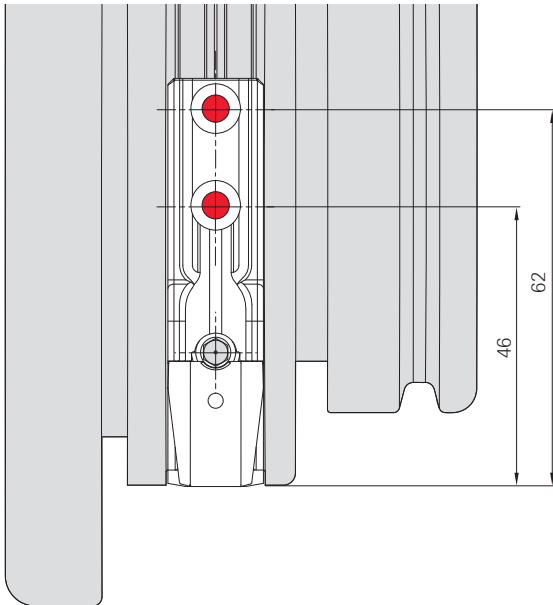


8.5.3 Corner hinge and load transfer

Corner hinge



If both vertical screw positions are occupied, the screw position at 123 mm can be omitted.

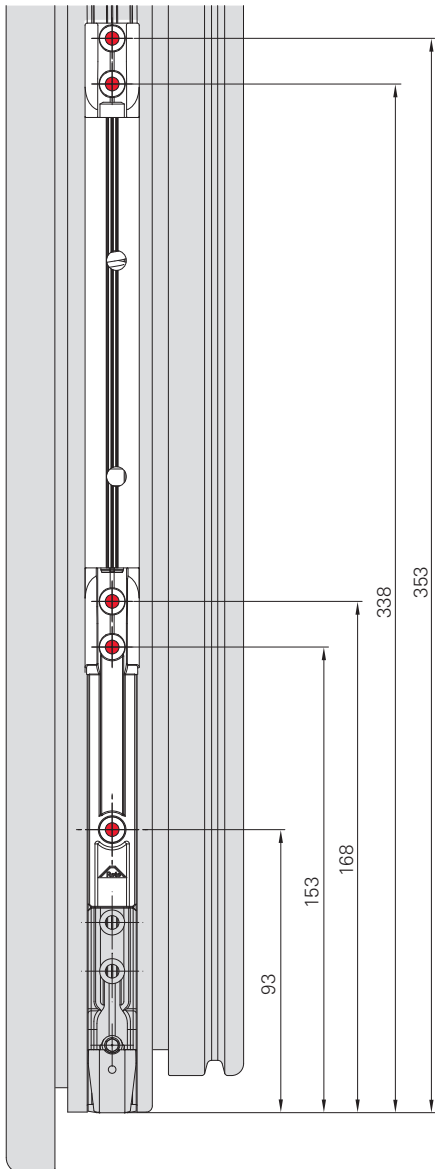


Installation

Drilling and routing dimensions

Corner hinge and load transfer

Load transfer





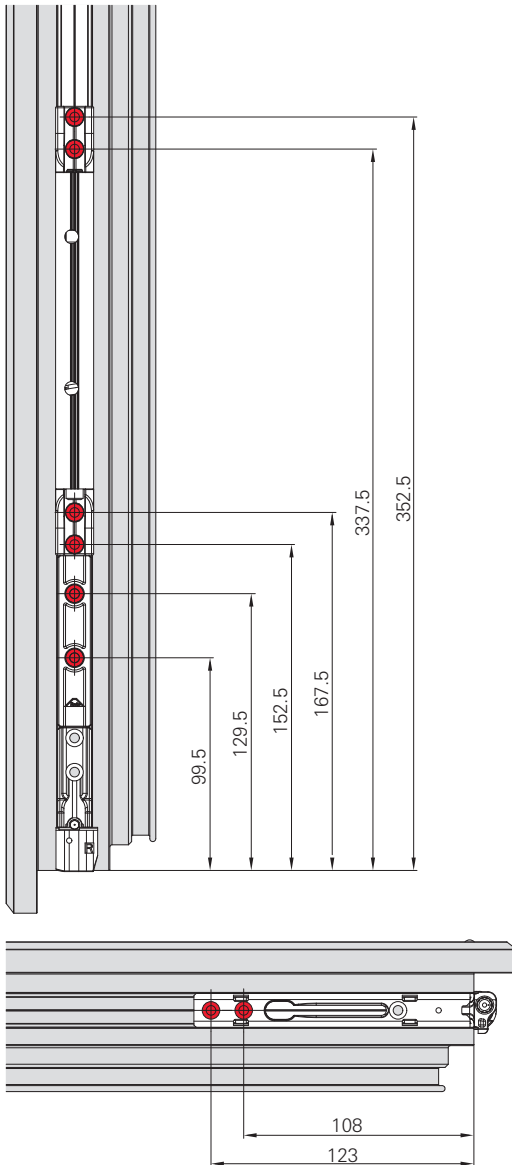
8.5.4 Short load transfer and corner hinge extension



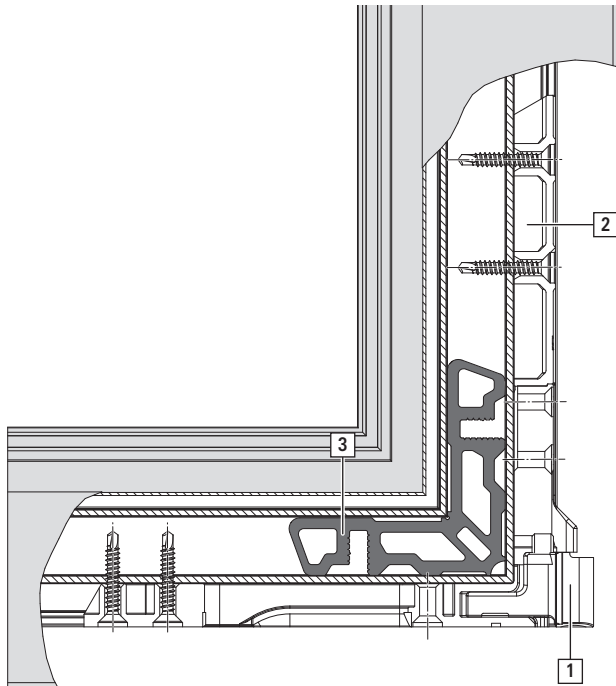
INFO

If the corner hinge screws cannot be used (corner connector), the following components are mandatory:

- Corner hinge extension → *from page 143*
- Short load transfer → *from page 145*



Example of corner hinge extension



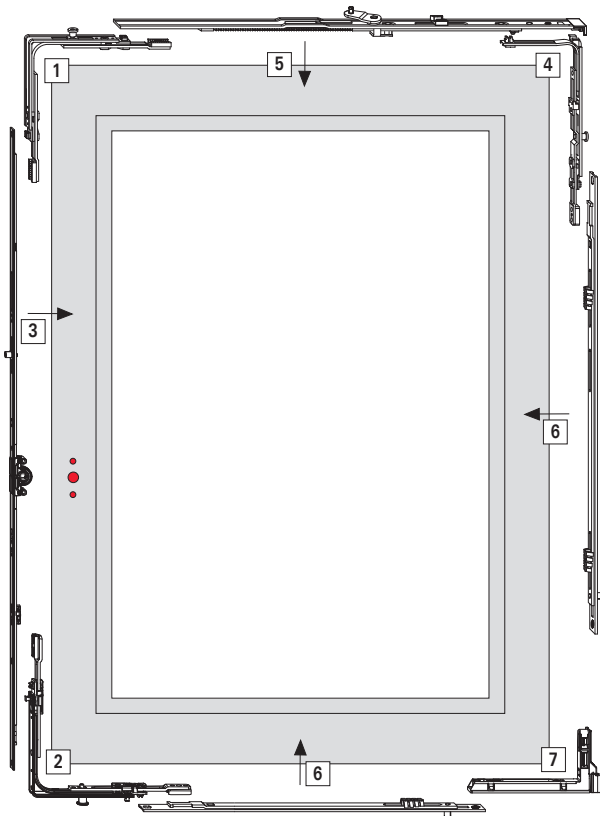
- [1] Corner hinge
- [2] Extension
- [3] Corner connector

8.6 Leaf

8.6.1 Installation sequence

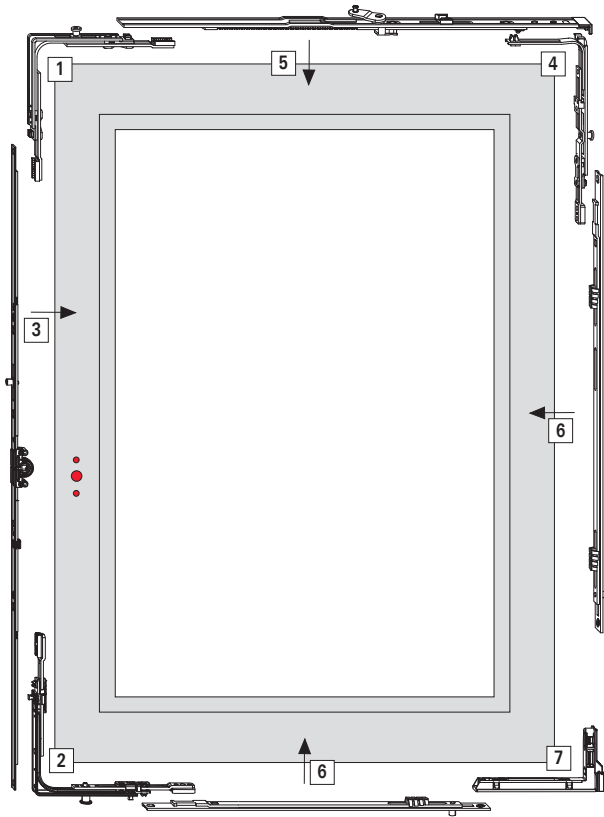
T&T espagnolette, VT – fixed handle height

Installation sequence (suggestion)



- [1] Corner drive, standard
- [2] Corner drive, standard
- [3] T&T espagnolette
- [4] Sash stay corner drive
- [5] Stay guide
- [6] Centre lock, vertical and horizontal
- [7] Rebate corner hinge

T&T espagnolette – centred / variable handle height



Installation sequence (suggestion)

- [1] Corner drive, standard
- [2] Corner drive, standard
- [3] T&T espagnolette
- [4] Sash stay corner drive
- [5] Stay guide
- [6] Centre lock, vertical and horizontal
- [7] Rebate corner hinge

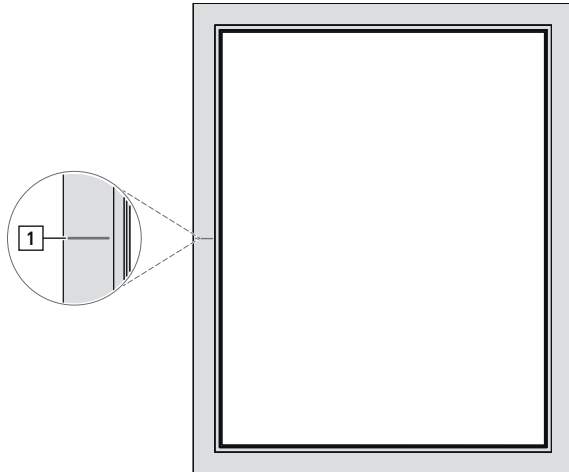


8.6.2 Preparing the sash for the T&T espagnolette

8.6.2.1 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. → 8.5
"Drilling and routing dimensions" from page 155
3. Deburr the drill holes.

8.6.2.2 Gearbox cutout

Routing the gearbox cutout

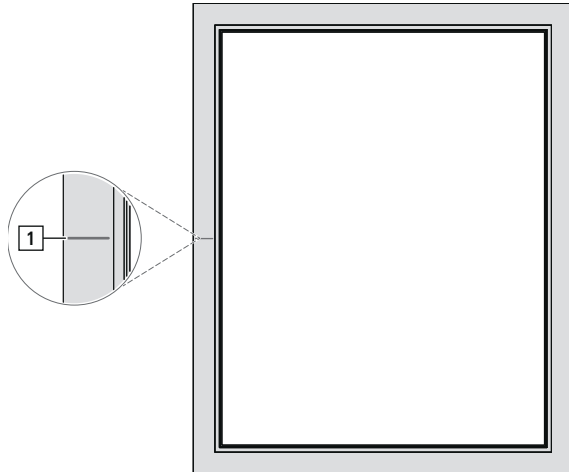
1. Route the espagnolette cutout.
Observe the routing dimensions. → 8.5 *"Drilling and routing dimensions" from page 155*
2. Deburr the espagnolette cutout.

8.6.3 Preparing the sash for a lockable T&T espagnolette

8.6.3.1 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. → 8.5
"Drilling and routing dimensions" from page 155
3. Deburr the drill holes.

8.6.3.2 Gearbox cutout with lock casing

Routing the gearbox cutout with lock casing

1. Route the espagnolette cutout.
Observe the routing dimensions. → 8.5 *"Drilling and routing dimensions" from page 155*
2. Deburr the espagnolette cutout.



8.6.4 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.

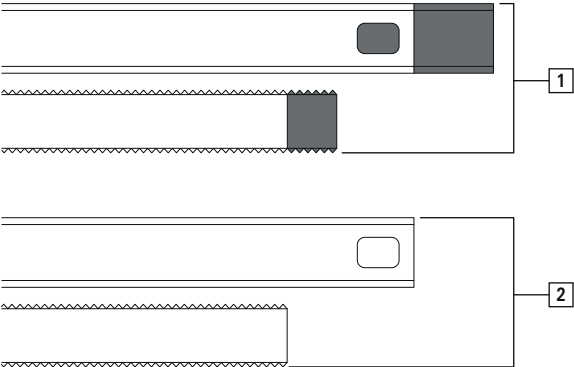
- Only lay out the hardware components and do not insert them into the sash before they have been cropped.

The following hardware components are cropped:

- Espagnolette
- Centre locks

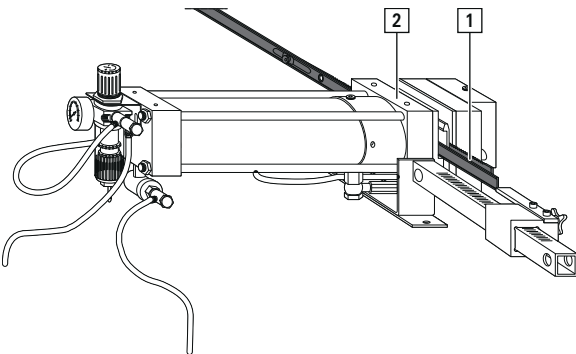
Cropping with a pneumatic punch (hole punching)

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].

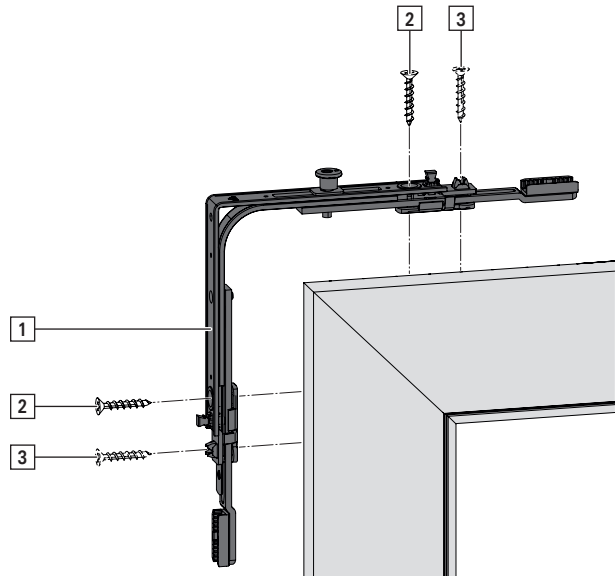


4. Align the hardware component.
5. Crop the hardware component.

8.6.5 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]. → 8.4 "Force-fit connection" from page 154

8.6.6 T&T espagnolettes

8.6.6.1 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 → 8.6.4 "Cropping the hardware components" from page 165.
2. Insert the espagnolette with the cropped side facing upwards and create a force-fit connection. → 8.4 "Force-fit connection" from page 154



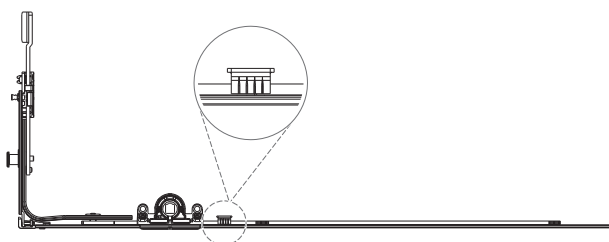
PRECONDITION

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).





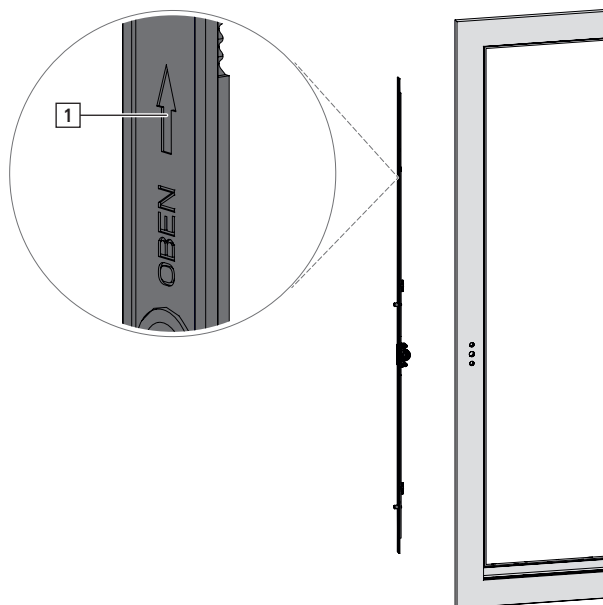
8.6.6.2 Centred / variable handle height

Installing the T&T espagnolette

1. Place the espagnolette in the required position, mark the length on both sides, remove it and crop it → 8.6.4 "Cropping the hardware components" from page 165.

2. Insert the espagnolette. Ensure it is installed in the correct direction, with the arrow [1] pointing upwards.

Create a force-fit connection. → 8.4 "Force-fit connection" from page 154



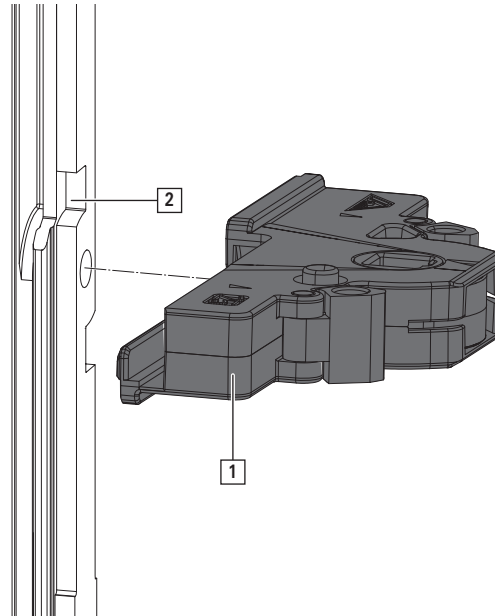
PRECONDITION

With SRH > 2400 mm, insert the centre lock, multipart, at the top on the locking side and create a force-fit connection.

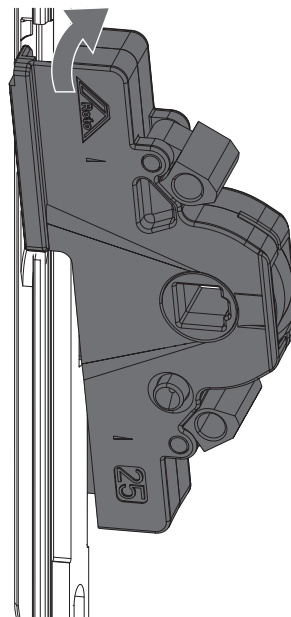
8.6.7 High backset espagnolette

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.



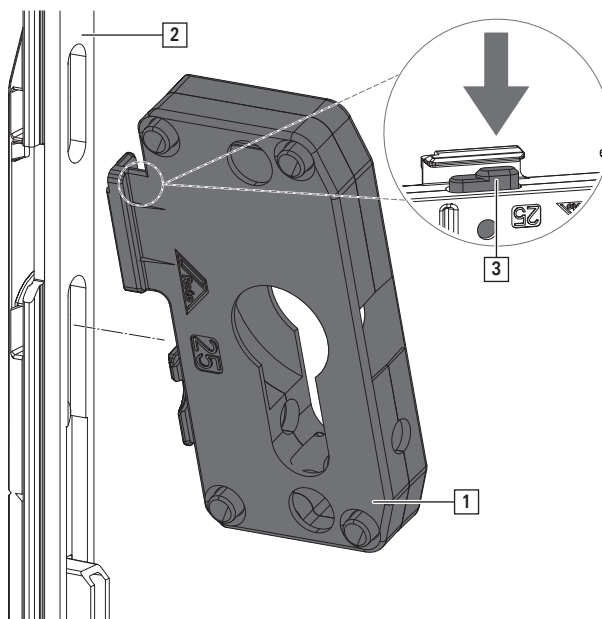
3. For dismantling, turn the gearbox anticlockwise until the gearbox comes out of the groove. Remove from the espagnolette faceplate.



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].



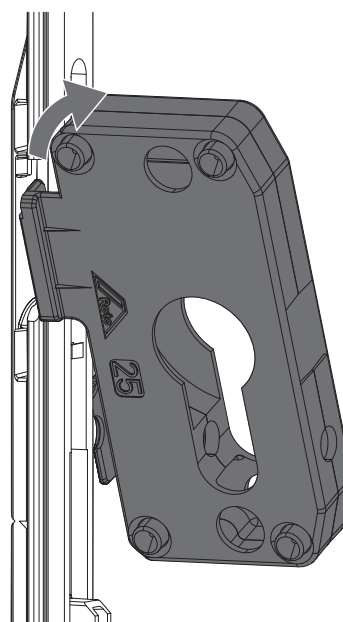
2. Insert the lock casing into the groove and turn clockwise until the lock casing clicks into place. The lock casing is positioned flush with the espagnolette faceplate.



ATTENTION **Improper installation of the lock casing may cause property damage.**

Turning the lock casing in incorrectly can damage the links.

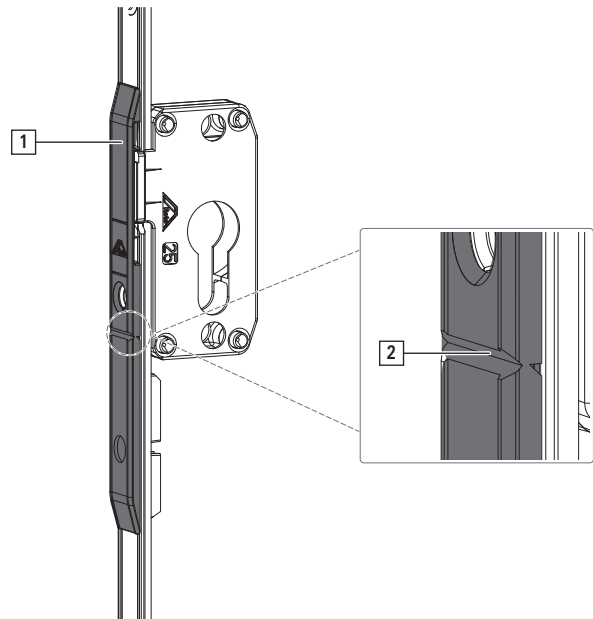
- ▶ Ensure ease of movement when turning in.
- ▶ Reposition the lock casing if excessive force is required.



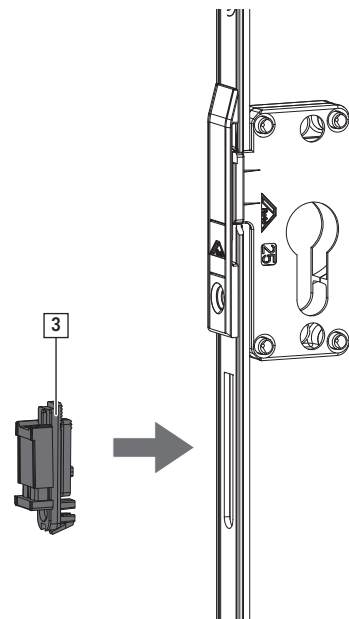
3. For dismantling, turn the lock casing anticlockwise until the lock casing comes out of the groove. Remove from the espagnolette faceplate.

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].

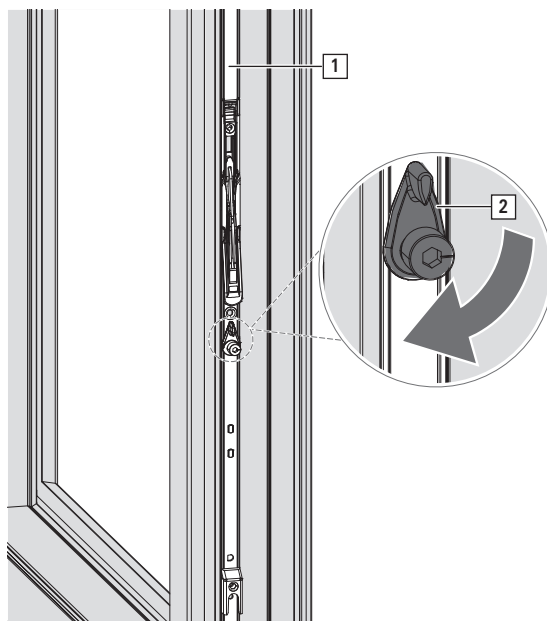




8.6.8 Lever-operated espagnolette Plus

1. Insert the lever-operated espagnolette [1] into the sash groove.

For installation in the right-hand sash, turn the eccentric bolt [2] 180°.

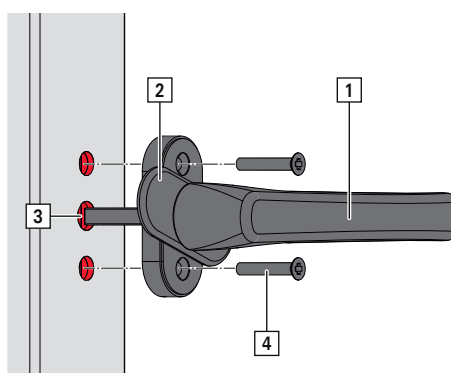


2. Mount the second opening sash with the lever-operated espagnolette open (as delivered).

8.6.9 Handle

8.6.9.1 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°.

8.6.9.2 Centre fixing



INFO

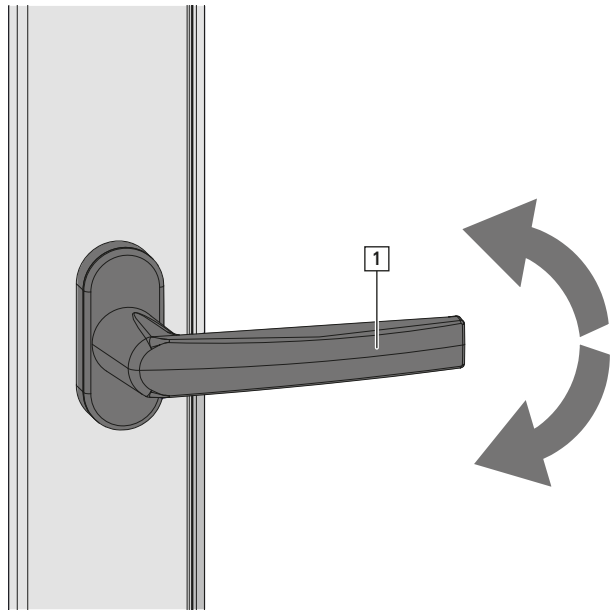
All coupleable components are delivered attached in the centre.

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.

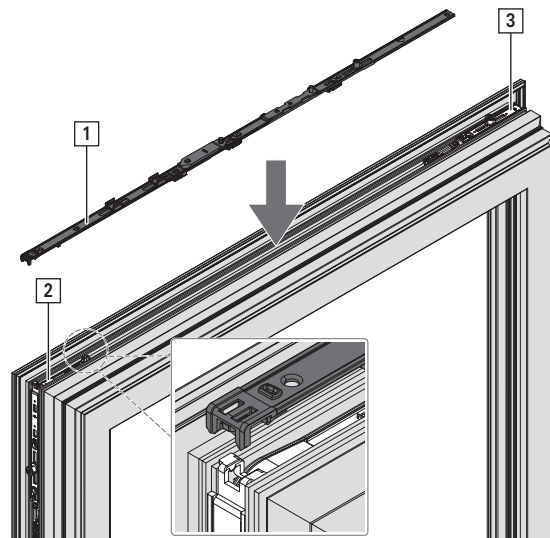
Audible cracking noise.

3. Turn the handle in both directions again and check for ease of movement.



8.6.10 Stay guide

1. Insert the stay guide [1] into the sash groove and clip it into the sash stay corner drive [2].

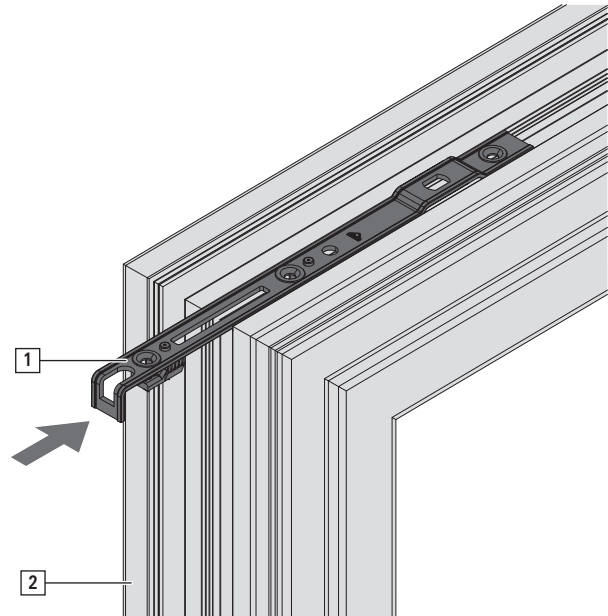


2. Connect the stay guide to the corner drive [3].
Creating a force-fit connection → *from page 154*

8.6.11 Rebate sash stay

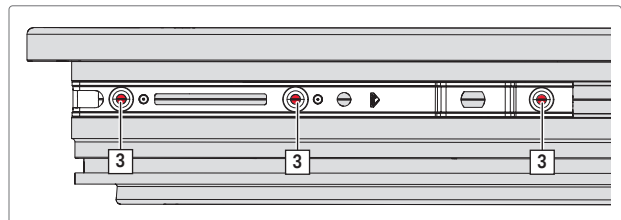
Installing the rebate stay guide

1. Insert the rebate stay guide [1] into the sash groove [2].
Check that it is seated flush.



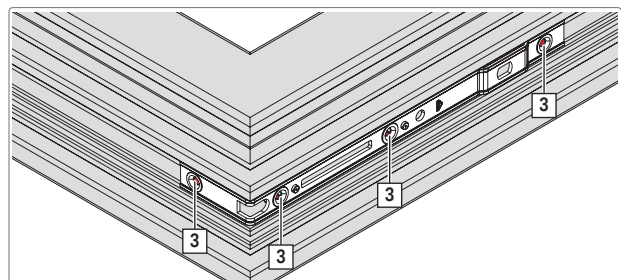
2. Turn-Only sash

Fasten with three screws [3].



3. Tilt-Only sash

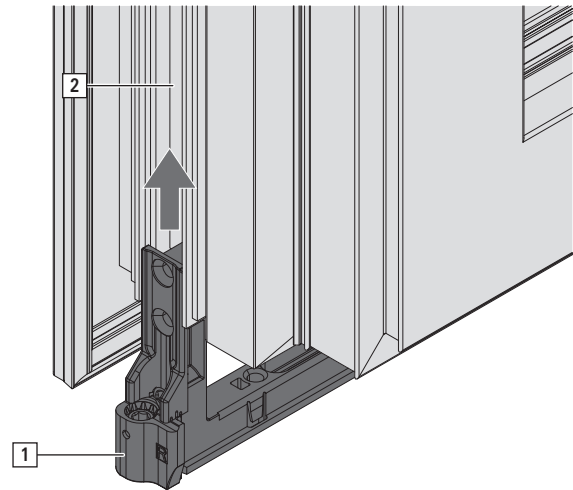
Fasten with four screws [3].





8.6.12 Corner hinge

1. Insert the corner hinge [1] into the sash groove [2].

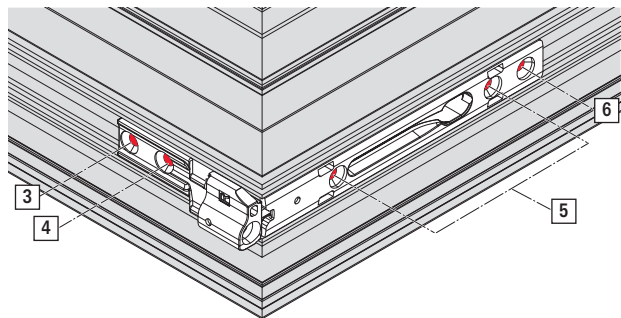


2. Fasten with four or five screws [3].



INFO

If screw positions [3] and [4] can be occupied, screw position [6] does not have to be occupied.

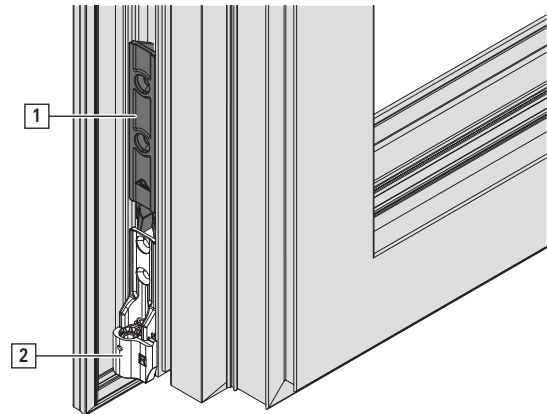


8.6.13 Corner hinge extension

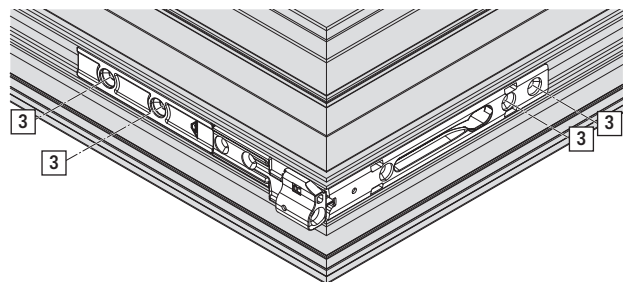
**INFO**

Can be used on sash profiles with corner connectors which do not permit the corner hinge to be fixed using screws. Installation only in conjunction with → *from page 142*.

1. Attach the corner hinge extension [1] to the corner hinge [2].



2. Insert the corner hinge with extension into the sash groove [2].
3. Fasten with four screws [3].





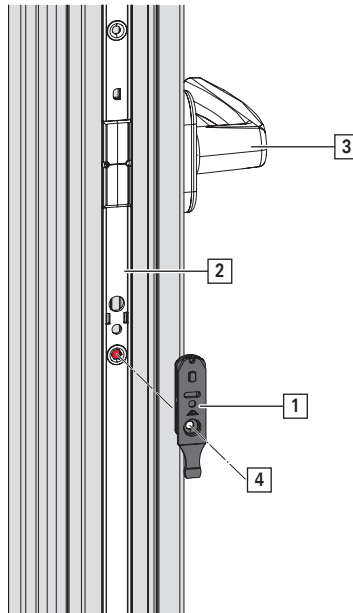
8.6.14 Lifting mishandling device / sash lifter



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.

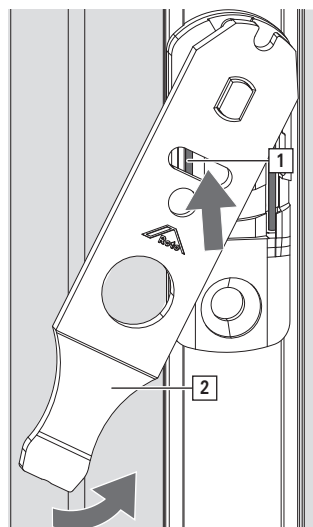
1. Clip the lifting mishandling device [1] into the hole pattern provided in the espagnolette [2]. Position near the handle [3].



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.



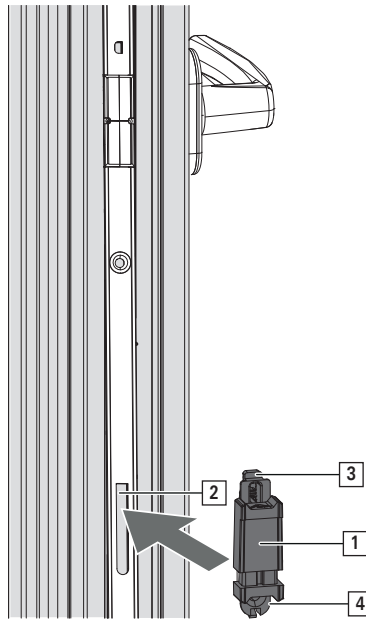
2. Keep the spring held down and turn the arm [2] back to 0°.

The lifting mishandling device returns to the neutral position and can be reactivated.

8.6.15 Bullet catch

1. Insert the bullet-catch sash component [1] into the espagnolette recess [2].

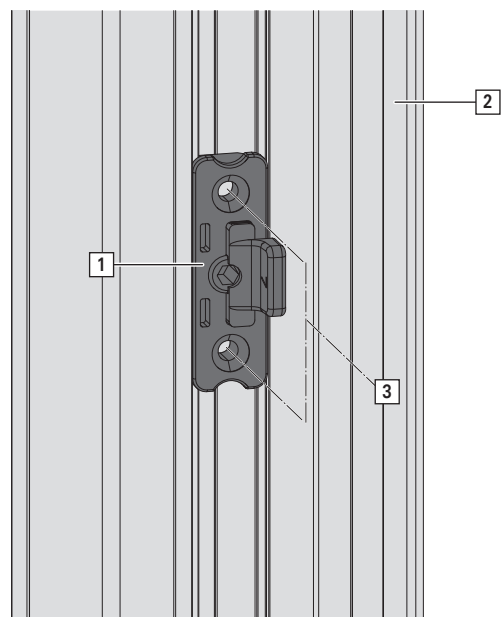
To do so, insert the nose of the bullet catch [3] into the flat side of the espagnolette recess and clip the bullet catch into place.



2. Secure with screw [4].

8.6.16 Concealed centre closer

1. Place the centre closer [1] in the sash groove [2].
For positioning, see → *from page 179*



2. Fasten with two screws [3].

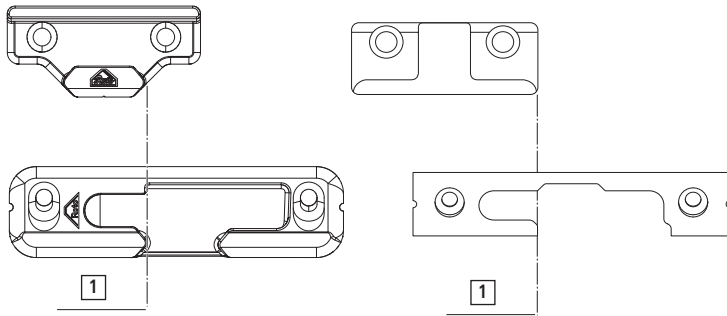


8.7 Frame

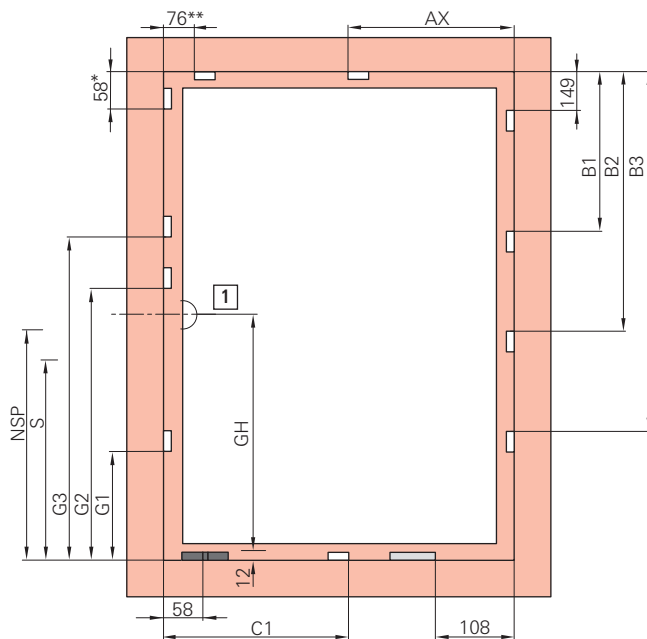
8.7.1 Position of strikers and tilt strikers

8.7.1.1 Striker positions and tilt strikers

Positioning of the strikers and tilt strikers on the basis of the point of entry [1] of the cams:



8.7.1.2 Tilt&Turn hardware / TiltFirst hardware – basic security



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

□ Turn restrictor, e.g.

T&T espagnolette, VT – fixed handle height

SRH [mm]	GH	G1	G2	G3	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

Installation

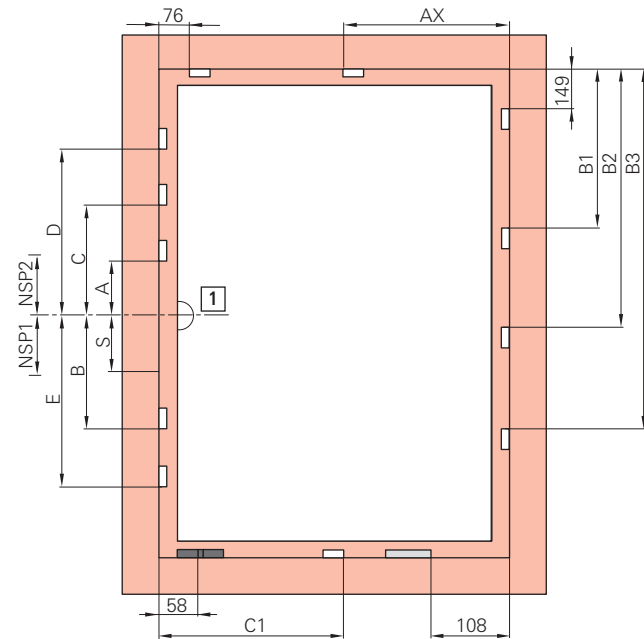
Frame

Position of strikers and tilt strikers

SRH [mm]	GH	G1	G2	G3	NSP	S
2001 – 2400	1000	700	1370	–	1121	807
2401 – 2600	1000	700	1370	1770	1121	807

* Fit a striker up to SRW 430 mm

** Fit a striker from SRW 431 mm



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

□ Turn restrictor, e.g.

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	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	–	109	395

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	750	500 / 1090

Centre lock, vertical, without load transfer

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



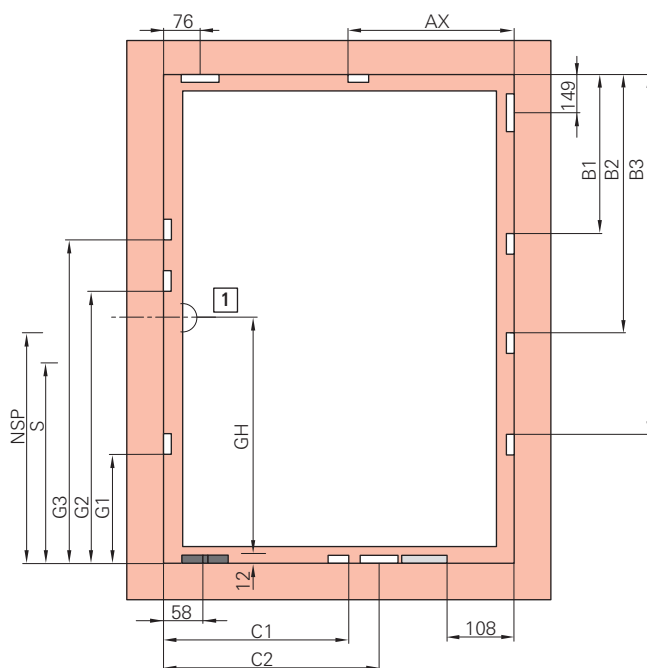
Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	Centre lock
1101 – 1150	550	–	–	CL 400 E
1151 – 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

Centre lock, horizontal

SRW [mm]	C1	Centre lock
1101 – 1400	658	CL 600 E

8.7.1.3 Tilt&Turn hardware – RC 1 N



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

▨ Turn restrictor, e.g.

T&T espagnolette, VT – fixed handle height

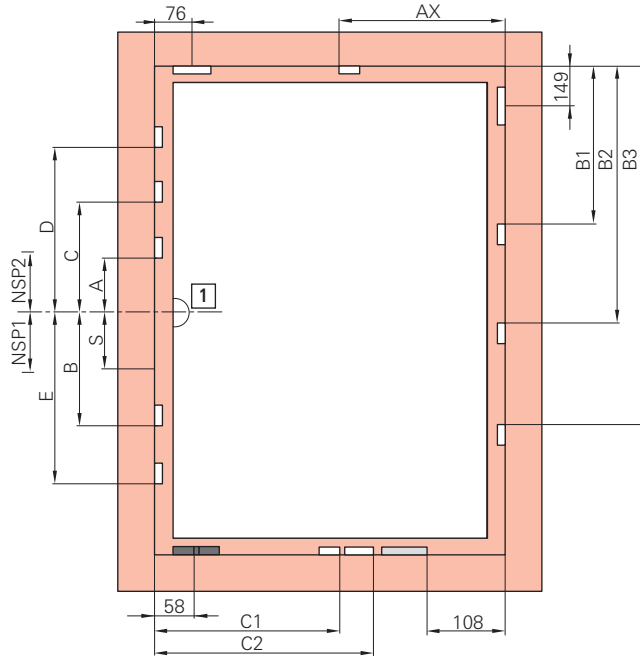
SRH [mm]	GH	G1	G2	G3	NSP	S
280 – 510	120	–	–	–	–	–
511 – 600	170	–	–	–	262	–
601 – 800	263	–	–	–	350	–
801 – 1000	413	550	–	–	288	–
1001 – 1200	513	700	–	–	388	–
1201 – 1400	563	700	–	–	388	–
1401 – 1600	563	700	1170	–	388	–
1601 – 1800	563	700	1370	–	388	807
1601 – 1800	1000	700	1370	–	1121	807
1801 – 2000	1000	700	1370	–	1121	807
2001 – 2200	1000	700	1370	–	1121	807

Installation

Frame

Position of strikers and tilt strikers

SRH [mm]	GH	G1	G2	G3	NSP	S
2201 – 2400	1000	700	1370	–	1121	807
2401 – 2600	1000	700	1370	1770	1121	807



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

□ Turn restrictor, e.g.

T&T espagnolette – centred / variable handle height

SRH [mm]	A	B	C	D	E	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	–	109	395

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	750	500 / 1090

Centre lock, vertical, without load transfer

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

Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	Centre lock
1101 – 1150	550	–	–	CL 400 E
1151 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E



SRH [mm]	B1	B2	B3	Centre lock
2401 – 2400	746	1346	1750	2x CL 600 E KU + CL 400 E

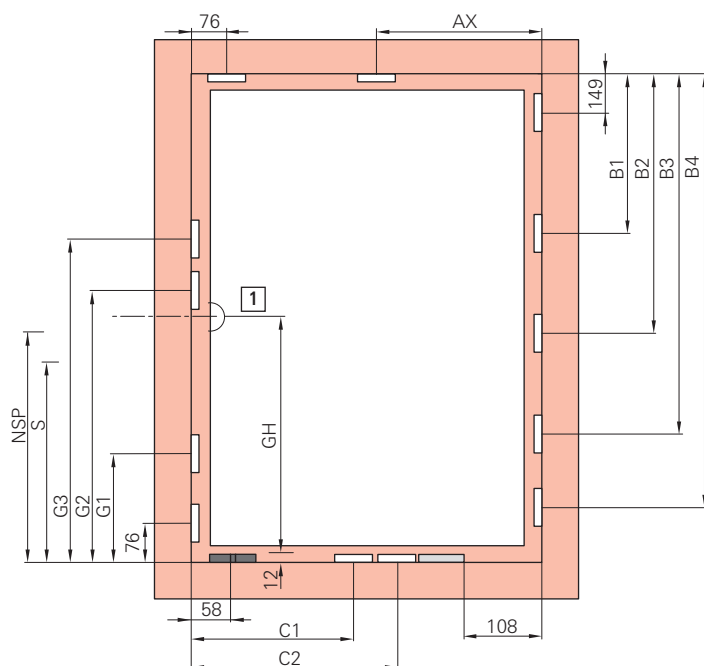
Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	C2	Centre lock
450 – 650	258	–	CL 200 P
651 – 850	462	–	CL 400 P
851 – 1000	658	–	CL 600 P

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Centre lock
650 – 850	258	–	CL 200 P
851 – 1050	462	–	CL 400 P
1051 – 1250	658	–	CL 600 P
1251 – 1400	658	858	CL 600 E KU + CL 200 P

8.7.1.4 Tilt&Turn hardware – RC 2 / RC 2 N



[1] Handle centre

□ Striker e.g. 

■ Tilt striker e.g. 

□ Turn restrictor, e.g. 

T&T espagnolette, VT – fixed handle height

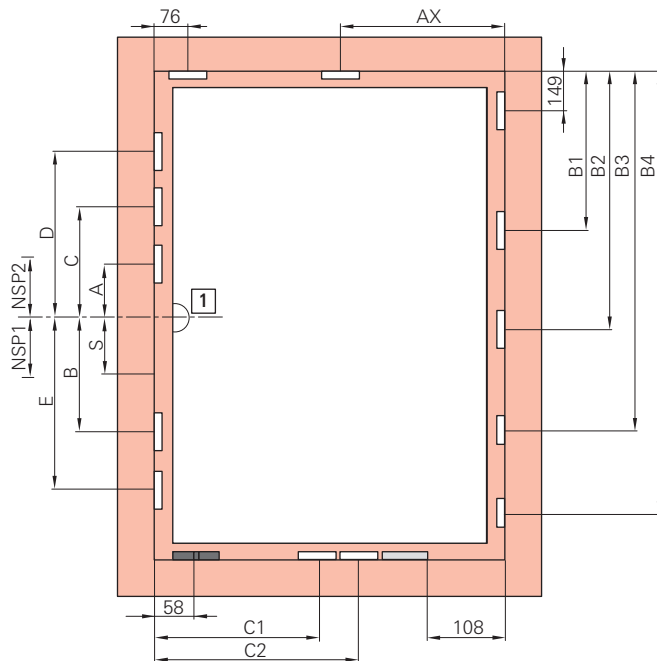
SRH [mm]	GH	G1	G2	G3	NSP	S
600 – 800	263	–	–	–	350	–
801 – 1000	413	550	–	–	288	–
1001 – 1200	513	700	–	–	388	–
1201 – 1400	563	700	–	–	388	–
1401 – 1600	563	700	1170	–	388	–
1601 – 1800	563	700	1370	–	388	807
1601 – 1800	1000	700	1370	–	1121	807
1801 – 2000	1000	700	1370	–	1121	807

Installation

Frame

Position of strikers and tilt strikers

SRH [mm]	GH	G1	G2	G3	NSP	S
2001 – 2200	1000	700	1370	1770	1121	807
2201 – 2400	1000	700	1370	1770	1121	807



[1] Handle centre

□ Striker e.g.

■ Tilt striker e.g.

▨ Turn restrictor, 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	395
2001 – 2400	–	312	358	758	740	–	109	395

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	600	500 / 1090

Centre lock, vertical, without load transfer

SRH [mm]	B1	B2	B3	B4	Centre lock
490 – 650	346	–	–	–	CL 200 V
651 – 850	550	–	–	–	CL 400 V
851 – 1050	746	–	–	–	CL 600 V
1051 – 1250	746	946	–	–	CL 600 V KU + CL 200 V
1251 – 1450	746	1150	–	–	CL 600 V KU + CL 400 V
1451 – 1650	746	1346	–	–	CL 600 V KU + CL 600 V
1651 – 1850	746	1346	1546	–	2x CL 600 V KU + CL 200 V
1851 – 2050	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2051 – 2250	746	1346	1946	–	2x CL 600 V KU + CL 600 V
2251 – 2400	746	1346	1946	2146	3x CL 600 V KU + CL 200 V



Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	B4	Centre lock
1000 – 1150	550	–	–	–	CL 400 V
1151 – 1350	746	–	–	–	CL 600 V
1351 – 1550	746	946	–	–	CL 600 V KU + CL 200 V
1551 – 1750	746	1150	–	–	CL 600 V KU + CL 400 V
1751 – 1950	746	1346	–	–	CL 600 V KU + CL 600 V
1951 – 2150	746	1346	1546	–	2x CL 600 V KU + CL 200 V
2151 – 2350	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2351 – 2400	746	1346	1946	–	2x CL 600 V KU + CL 600 V

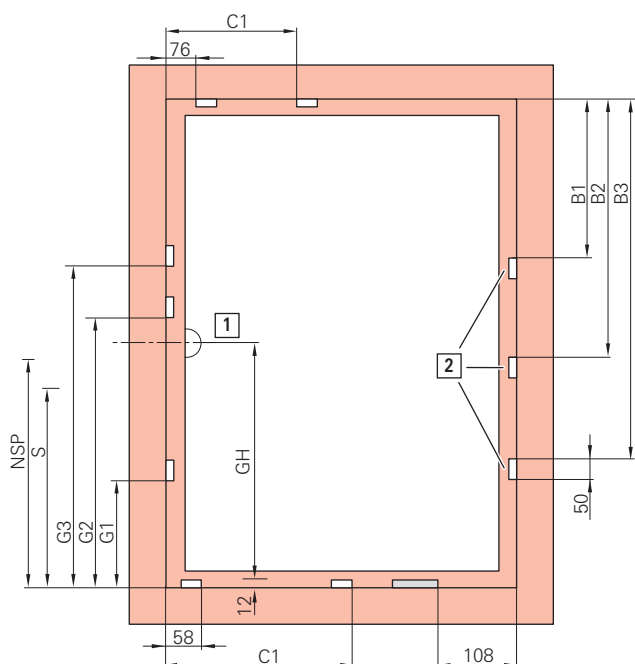
Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	C2	Centre lock
450 – 650	258	–	CL 200 V
651 – 850	462	–	CL 400 V
851 – 1000	658	–	CL 600 V

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Centre lock
650 – 850	258	–	CL 200 V
851 – 1050	462	–	CL 400 V
1051 – 1250	658	–	CL 600 V
1251 – 1400	658	858	CL 600 V KU + CL 200 V

8.7.1.5 Turn-Only hardware – basic security



- [1] Handle centre
 [2] Concealed centre closers

T&T espagnolette, VT – fixed handle height

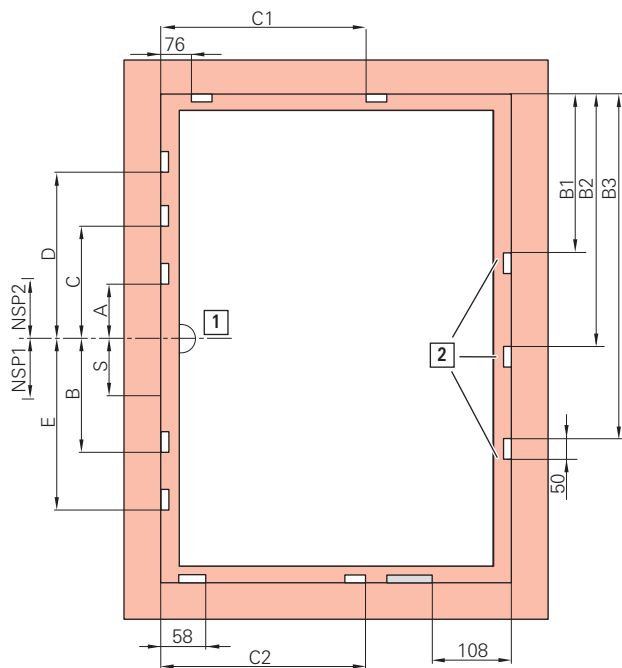
SRH [mm]	GH	G1	G2	G3	NSP	S
280 – 510	120	–	–	–	–	–
511 – 600	170	–	–	–	262	–
601 – 800	263	–	–	–	350	–

Installation

Frame

Position of strikers and tilt strikers

SRH [mm]	GH	G1	G2	G3	NSP	S
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
1601 – 1800	1000	700	1370	–	1121	807
1801 – 2000	1000	700	1370	–	1121	807
2001 – 2400	1000	700	1370	–	1121	807
2401 – 2600	1000	700	1370	1770	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	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

Centre closer, vertical, concealed, without load transfer

SRH [mm]	B1	B2	B3
1001 – 1201	550	–	–
1201 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1946

Centre closer, vertical, concealed, with load transfer

SRH [mm]	B1	B2	B3
1001 – 1201	550	–	–
1201 – 1800	746	–	–
1801 – 2400	746	1346	–



SRH [mm]	B1	B2	B3
2401 – 2600	746	1346	1946

Centre lock, horizontal

SRW [mm]	C1	C2	Top
1101 – 1400	676	658	CL 600 E

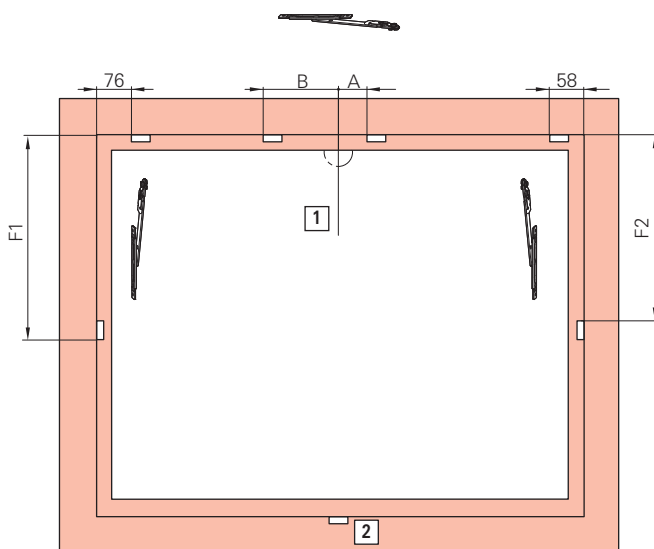
Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	C2	Bottom
370 – 1000	–	–	–

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Bottom
1101 – 1400	–	658	CL 600 E

8.7.1.6 Tilt-Only hardware – basic security



[1] Handle centre

[2] Concealed centre closer

□ Striker e.g.

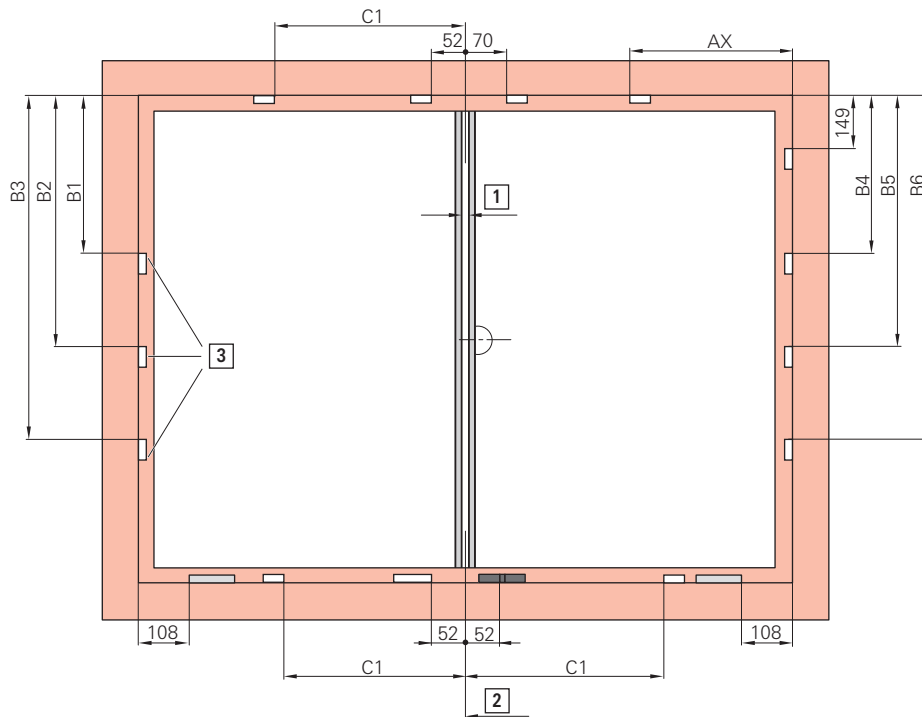
T&T espagnolette – centred / variable handle height

SRW [mm]	A	B
451 – 620	–	–
621 – 800	125	–
801 – 1200	125	–
1201 – 1400	125	340

Centre lock, vertical

SRH [mm]	F1	F2	Left / right
801 – 1200	462	480	CL 400 E

8.7.1.7 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.

▨ Turn restrictor, e.g.

Centre closer, vertical, concealed, without load transfer

SRH [mm]	B1	B2	B3
1001 – 1200	550	–	–
1201 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1946

Centre closer, vertical, concealed, with load transfer

SRH [mm]	B1	B2	B3
1001 – 1200	550	–	–
1201 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1946

Centre lock, vertical, without load transfer

SRH [mm]	B4	B5	B6	Centre lock
1001 – 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

Centre lock, vertical, with load transfer

SRH [mm]	B4	B5	B6	Centre lock
1101 – 1150	550	–	–	CL 400 E
1151 – 1800	746	–	–	CL 600 E
1801 – 2400	746	1346	–	CL 600 E KU + CL 600 E



SRH [mm]	B4	B5	B6	Centre lock
2401 – 2600	746	1346	1750	2x CL 600 E KU + CL 400 E

Centre lock, horizontal

SRW [mm]	C1	Top
1101 – 1400	652	CL 600 E

Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	Bottom
370 – 1000	–	–

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	Bottom
1101 – 1400	652	CL 600 E

Stay guide

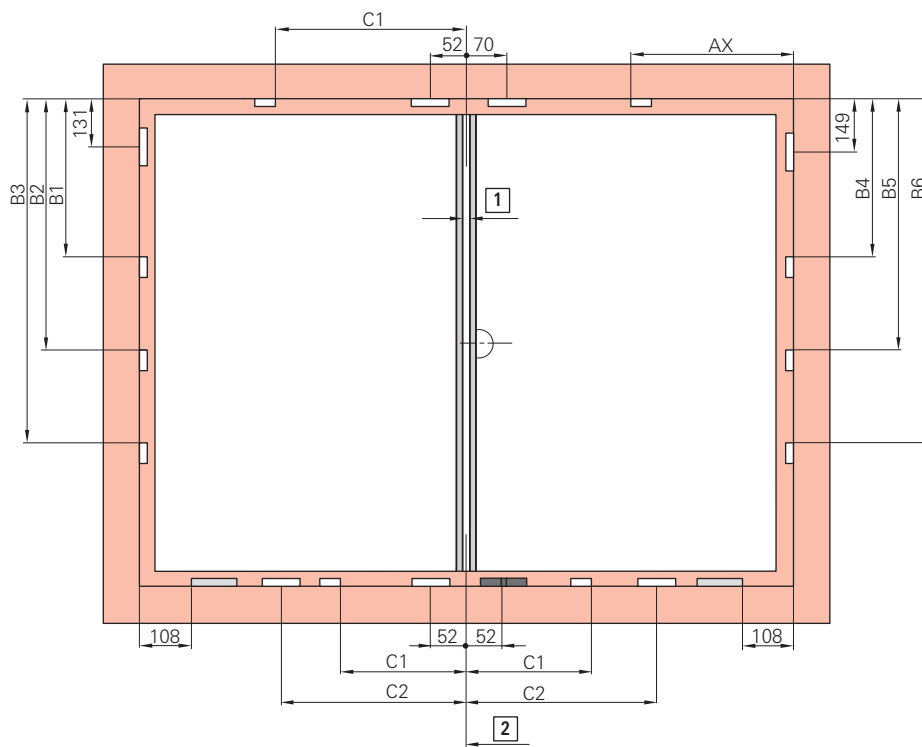
SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	750	500 / 1090



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.7.1.8 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.

□ Turn restrictor, e.g.

Installation

Frame

Position of strikers and tilt strikers

Centre lock, vertical, without load transfer

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	CL 600 E KU + CL 400 E

Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	B4	B5	B6	Centre lock
1101 – 1150	532	–	–	550	–	–	CL 400 E
1151 – 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 400 E

Centre lock, horizontal

SRW [mm]	C1	Top
911 – 1110	452	CL 400 E KU
1111 – 1310	652	CL 600 E KU
1311 – 1400	652	CL 600 E KU + CL 200 KU

Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	Bottom
450 – 650	252	CL 200 P
651 – 850	456	CL 400 P
851 – 1000	652	CL 600 P

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Bottom
650 – 850	252	–	CL 200 P
851 – 1050	456	–	CL 400 P
1051 – 1250	652	–	CL 600 P
1251 – 1400	652	852	CL 600 E KU + CL 200 P

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	750	500 / 1090

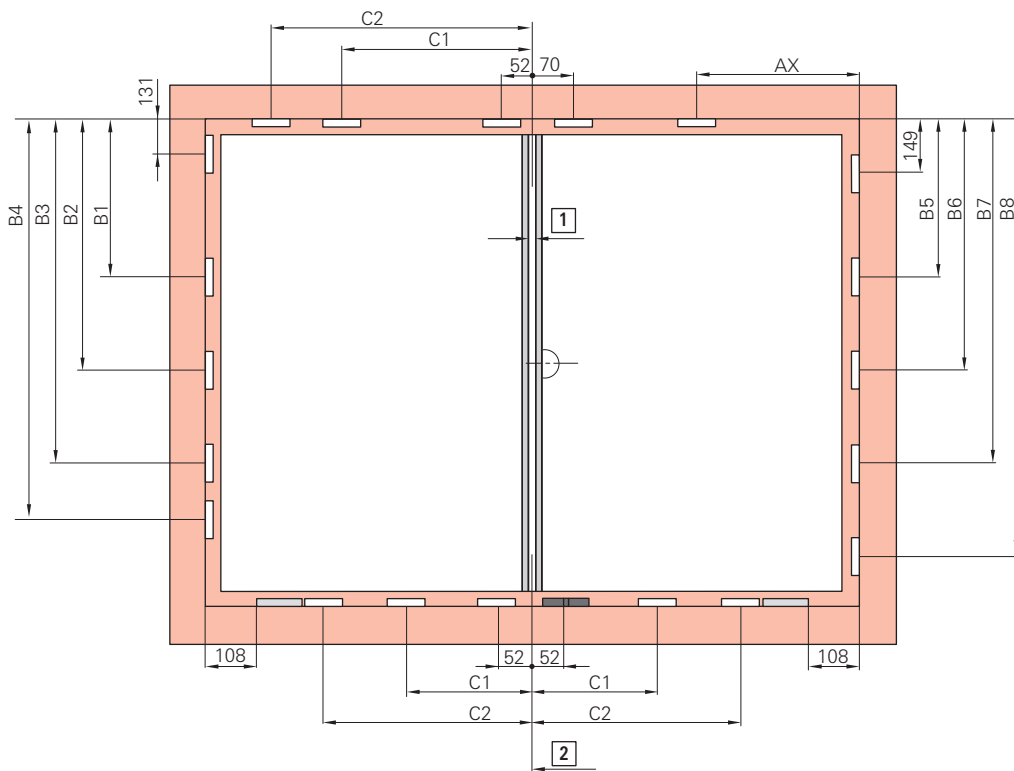


INFO

Mount the second opening sash with the lever-operated espagnolette open.



8.7.1.9 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.

▨ Turn restrictor, e.g.

Centre lock, vertical, without load transfer

SRH [mm]	B1	B2	B3	B4	B5	B6	B7	B8	Centre lock
490 – 650	328	–	–	–	346	–	–	–	CL 200 V
651 – 850	532	–	–	–	550	–	–	–	CL 400 V
851 – 1050	728	–	–	–	746	–	–	–	CL 600 V
1051 – 1250	728	928	–	–	746	946	–	–	CL 600 V KU + CL 200 V
1251 – 1450	728	1132	–	–	746	1150	–	–	CL 600 V KU + CL 400 V
1451 – 1650	728	1328	–	–	746	1346	–	–	CL 600 V KU + CL 600 V
1651 – 1850	728	1328	1528	–	746	1346	1546	–	2x CL 600 V KU + CL 200 V
1851 – 2050	728	1328	1732	–	746	1346	1750	–	2x CL 600 V KU + CL 400 V
2051 – 2250	728	1328	1928	–	746	1346	1946	–	2x CL 600 V KU + CL 600 V
2251 – 2400	728	1328	1928	2128	746	1346	1946	2146	3x CL 600 V KU + CL 200 V

Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	B4	B5	B6	Centre lock
1000 – 1150	532	–	–	550	–	–	CL 400 V
1151 – 1350	728	–	–	746	–	–	CL 600 V
1351 – 1550	728	928	–	746	946	–	CL 600 V KU + CL 200 V
1551 – 1750	728	1132	–	746	1150	–	CL 600 V KU + CL 400 V
1751 – 1950	728	1328	–	746	1346	–	CL 600 V KU + CL 600 V
1951 – 2150	728	1328	1528	746	1346	1546	2x CL 600 V KU + CL 200 V
2151 – 2350	728	1328	1732	746	1346	1750	2x CL 600 V KU + CL 400 V
2351 – 2400	728	1328	1928	746	1346	1946	2x CL 600 V KU + CL 600 V

Centre lock, horizontal

SRW [mm]	C1	C2	Top
711 – 910	252	–	CL 200 KU
911 – 1110	452	–	CL 400 KU
1111 – 1310	652	–	CL 600 V KU
1311 – 1400	652	852	CL 600 V KU + CL 200 KU

Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	Bottom
450 – 650	252	CL 200 V
651 – 850	456	CL 400 V
851 – 1000	652	CL 600 V

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Bottom
650 – 850	252	–	CL 200 V
851 – 1050	456	–	CL 400 V
1051 – 1250	652	–	CL 600 V
1251 – 1400	652	852	CL 600 V KU + CL 200 V

Stay guide

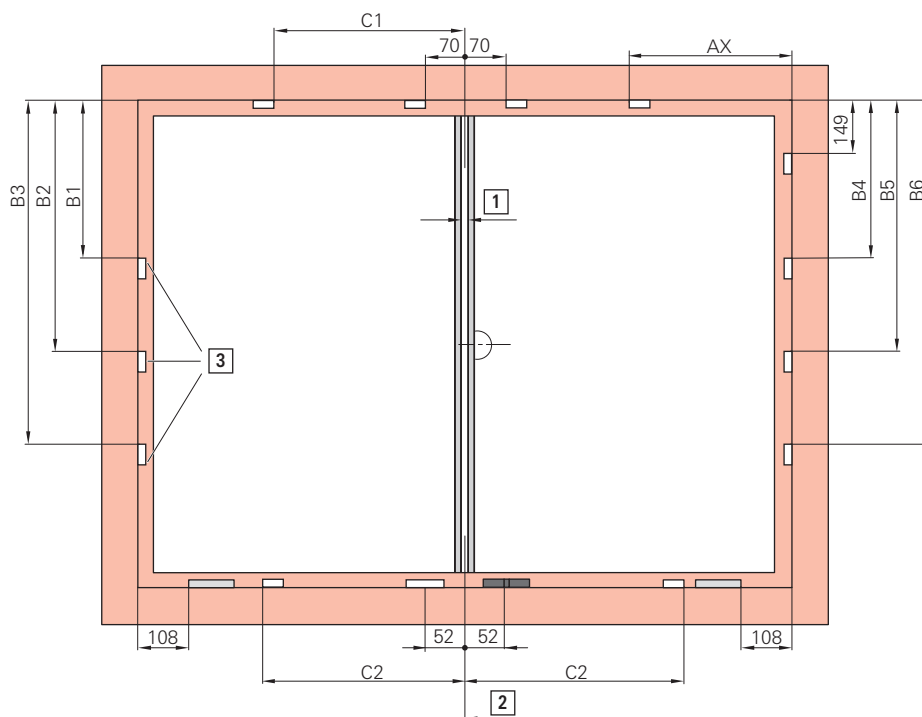
SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	600	500 / 1090



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.7.1.10 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. 

 Turn restrictor, e.g. 

Centre closer, vertical, concealed, without load transfer

SRH [mm]	B1	B2	B3
1001 – 1200	550	–	–
1201 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1946

Centre closer, vertical, concealed, with load transfer

SRH [mm]	B1	B2	B3
1001 – 1200	550	–	–
1201 – 1800	746	–	–
1801 – 2400	746	1346	–
2401 – 2600	746	1346	1946

Centre lock, vertical, without load transfer

SRH [mm]	B4	B5	B6	Centre lock
1001 – 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

Centre lock, vertical, with load transfer

SRH [mm]	B4	B5	B6	Centre lock
1101 – 1150	550	–	–	CL 400 E
1151 – 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

Centre lock, horizontal

SRW [mm]	C1	Top
1101 – 1400	670	CL 600 E

Centre lock, horizontal, without turn restrictor

SRW [mm]	C2	Bottom
370 – 1000	–	–

Centre lock, horizontal, with turn restrictor

SRW [mm]	C2	Bottom
1101 – 1400	652	CL 600 E

Stay guide

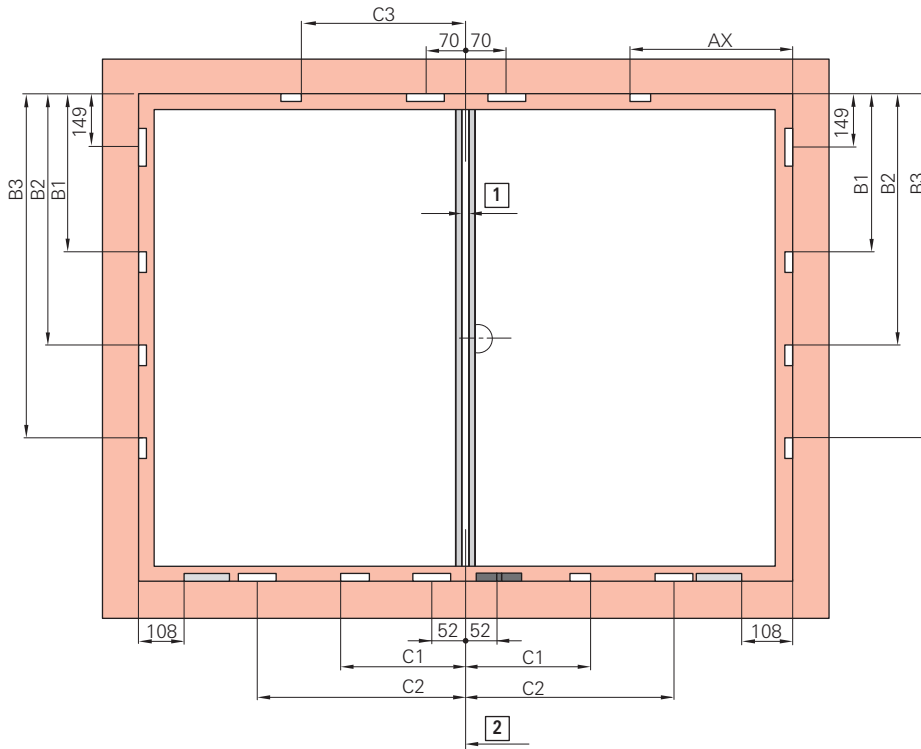
SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	750	500 / 1090



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.7.1.11 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. 

□ Turn restrictor, e.g. 

Centre lock, vertical, without load transfer

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

Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	Centre lock
1101 – 1150	550	–	–	CL 400 E
1151 – 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

Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	Bottom
450 – 650	252	CL 200 P
651 – 850	456	CL 400 P
851 – 1000	652	CL 600 P

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Bottom
650 – 850	252	–	CL 200 P
851 – 1050	456	–	CL 400 P
1051 – 1250	652	–	CL 600 P
1251 – 1400	652	852	CL 600 E KU + CL 200 P



Centre lock, horizontal, Turn-Only sash

SRW [mm]	C3	Top
1001 – 1200	470	CL 400 E
1201 – 1400	670	CL 600 E

Stay guide

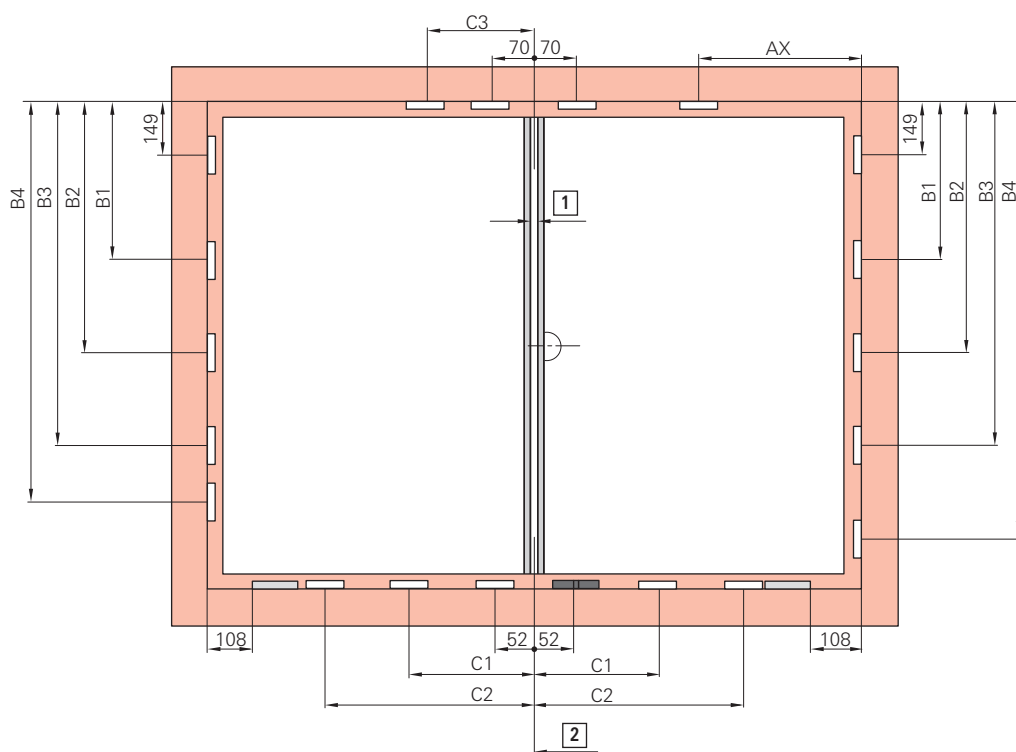
SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	750	500 / 1090



INFO

Mount the second opening sash with the lever-operated espagnolette open.

8.7.1.12 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.

 Turn restrictor, e.g.

Centre lock, vertical, without load transfer

SRH [mm]	B1	B2	B3	B4	Centre lock
490 – 650	346	–	–	–	CL 200 V
651 – 850	550	–	–	–	CL 400 V
851 – 1050	746	–	–	–	CL 600 V
1051 – 1250	746	946	–	–	CL 600 V KU + CL 200 V
1251 – 1450	746	1150	–	–	CL 600 V KU + CL 400 V
1451 – 1650	746	1346	–	–	CL 600 V KU + CL 600 V
1651 – 1850	746	1346	1546	–	2x CL 600 V KU + CL 200 V
1851 – 2050	746	1346	1750	–	2x CL 600 V KU + CL 400 V

Installation

Frame

Position of strikers and tilt strikers

SRH [mm]	B1	B2	B3	B4	Centre lock
2051 – 2250	746	1346	1946	–	2x CL 600 V KU + CL 600 V
2251 – 2400	746	1346	1946	2146	3x CL 600 V KU + CL 200 V

Centre lock, vertical, with load transfer

SRH [mm]	B1	B2	B3	Centre lock
1000 – 1150	550	–	–	CL 400 V
1151 – 1350	746	–	–	CL 600 V
1351 – 1550	746	946	–	CL 600 V KU + CL 200 V
1551 – 1750	746	1150	–	CL 600 V KU + CL 400 V
1751 – 1950	746	1346	–	CL 600 V KU + CL 600 V
1951 – 2150	746	1346	1546	2x CL 600 V KU + CL 200 V
2151 – 2350	746	1346	1750	2x CL 600 V KU + CL 400 V
2351 – 2400	746	1346	1946	2x CL 600 V KU + CL 600 V

Centre lock, horizontal, without turn restrictor

SRW [mm]	C1	Bottom
450 – 650	252	CL 200 V
651 – 850	456	CL 400 V
851 – 1000	652	CL 600 V

Centre lock, horizontal, with turn restrictor

SRW [mm]	C1	C2	Bottom
650 – 850	252	–	CL 200 V
851 – 1050	456	–	CL 400 V
1051 – 1250	652	–	CL 600 V
1251 – 1400	652	852	CL 600 V KU + CL 200 V

Centre lock, horizontal, Turn-Only sash

SRW [mm]	C3	Top
801 – 1000	270	CL 200 V
1001 – 1200	470	CL 400 V
1201 – 1400	670	CL 600 V

Stay guide

SRW [mm]	AX	Size
801 – 1000	600	500 / 890
1001 – 1400	600	500 / 1090

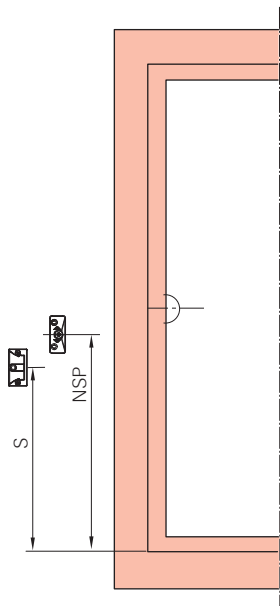


INFO

Mount the second opening sash with the lever-operated espagnolette open.



8.7.2 Position of the lifting mishandling device and bullet catch



[NSP] Lifting mishandling device

[S] Bullet catch

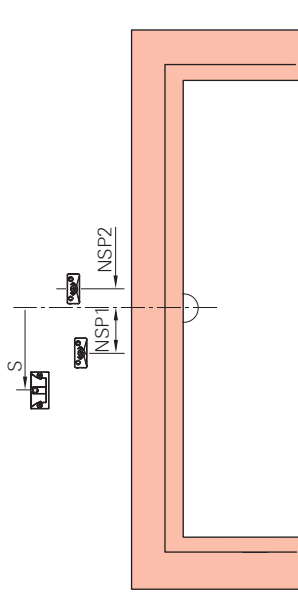
T&T espagnolette, VT – fixed handle height

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 – 2200	1121	807
2201 – 2600	1121	807

Installation

Frame

Position of the lifting mishandling device and bullet catch



[NSP] = Lifting mishandling device

[S] Bullet catch

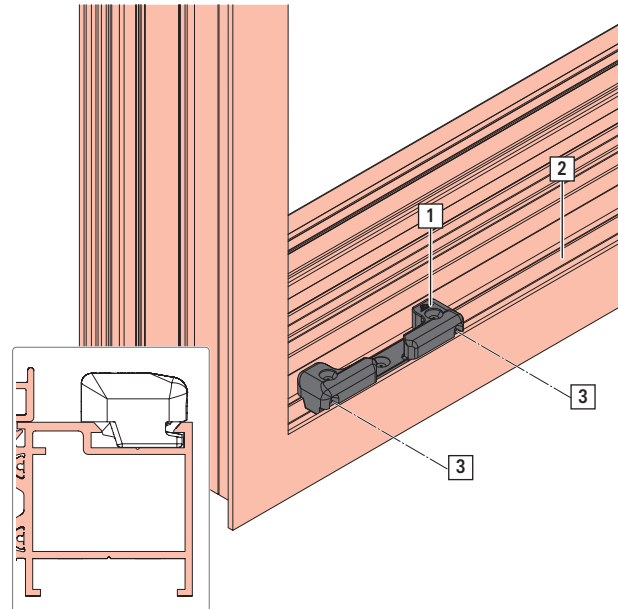
T&T espagnolette – centred / variable handle height

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



8.7.3 Tilt striker (clampable)

1. Determine the tilt striker position → *from page 179*.
2. Position the tilt striker [1] in the frame groove [2].
The tilt striker must engage behind the profile.



3. Tighten the threaded pins [3].
Torque: 2 – 2.5 Nm

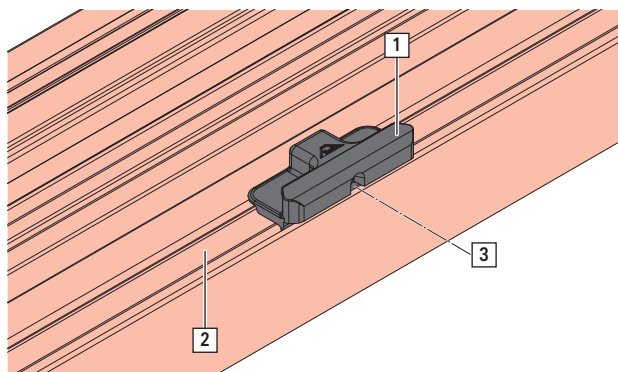
8.7.4 Striker, standard (clampable)



INFO

Security strikers are not clamped, but screwed into place.

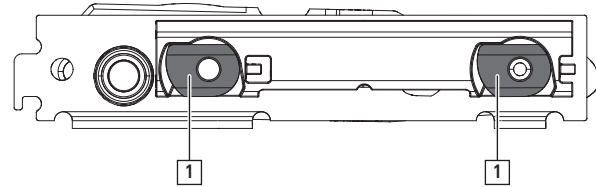
1. Determine the striker position → *from page 179*.
2. Position the striker [1] in the frame groove [2]. The
striker must engage behind the profile.



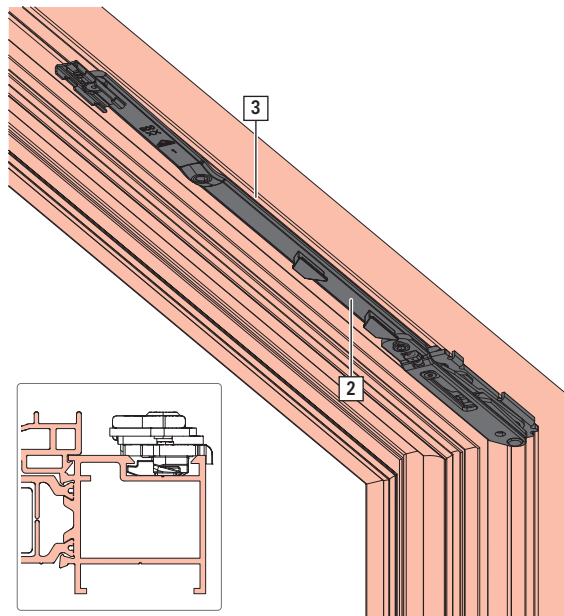
3. Tighten the threaded pin [3].
Torque: 2 – 2.5 Nm
Check that the striker is fitted securely.

8.7.5 Sash stay / rebate sash stay

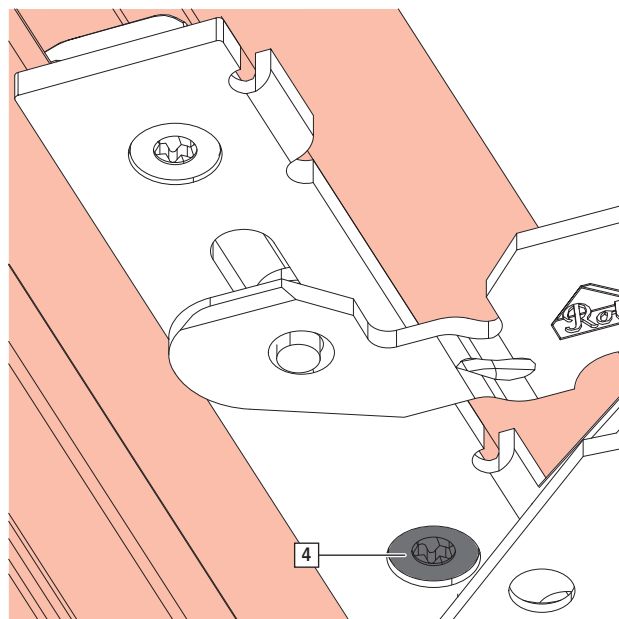
1. Align the clamping blocks [1].



2. Insert the sash stay [2] into the frame groove [3]. The clamp strip and baseplate must engage behind the profile.



3. Push the baseplate onto the profile so that it is completely level. Tighten the screw [4].
Tool: T20 hexalobular socket screwdriver
Torque: max. 5.5 Nm





4. Tighten the screw [5].

Tool: T20 hexalobular socket screwdriver

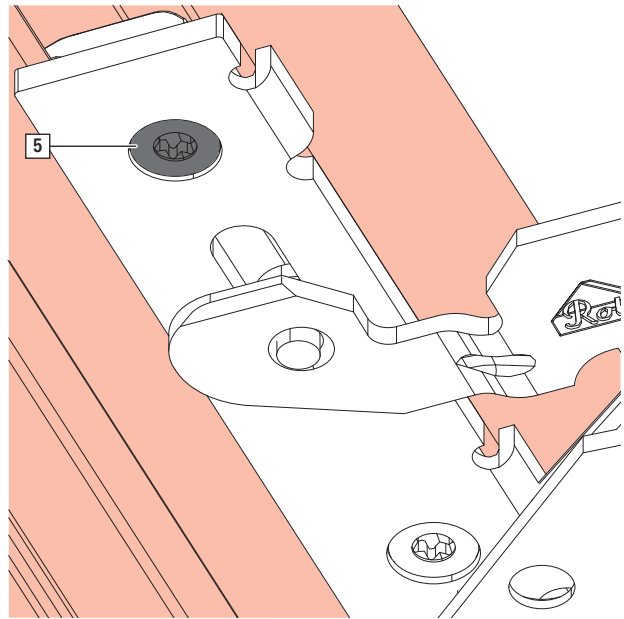
Torque: max. 5.5 Nm

Check that the bearing is fitted securely.

**INFO**

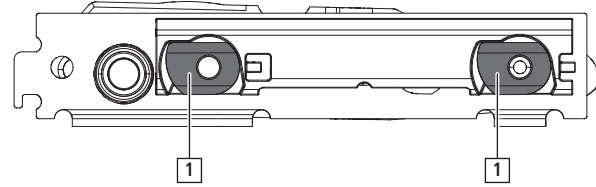
Do not leave a gap between the bearing and profile.

The bearing must be positioned securely on the profile without any gaps.

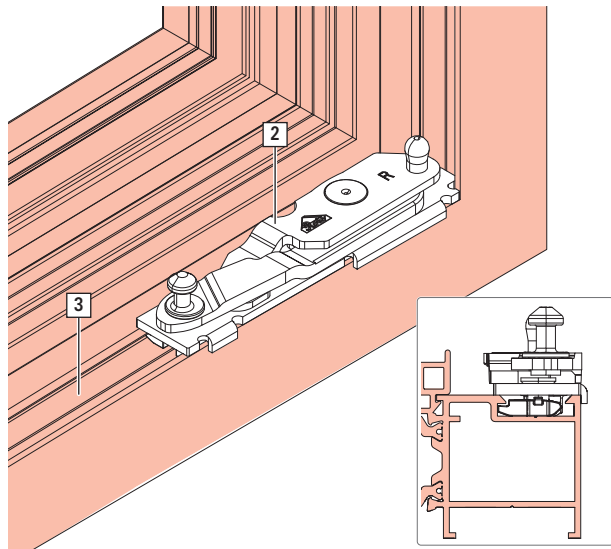


8.7.6 Pivot rest

1. Align the clamping blocks [1].

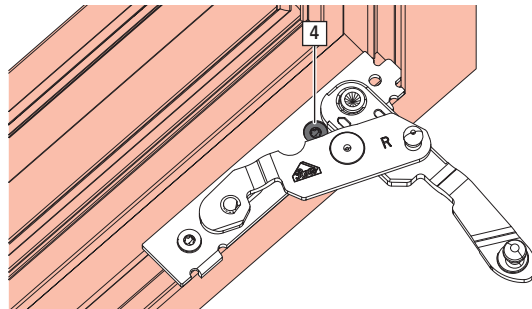


2. Insert the pivot rest [2] into the frame groove [3].
The clamp strip and baseplate must engage behind the profile.



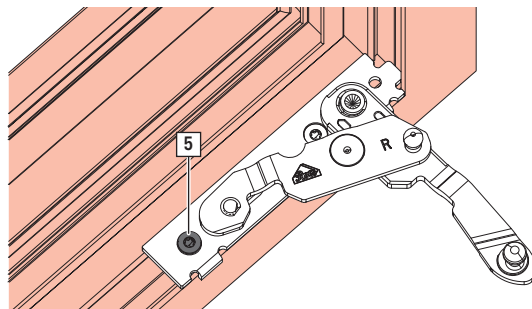
3. Push the baseplate onto the profile so that it is completely level. Tighten the screw [4].

Tool: T20 hexalobular socket screwdriver
Torque: max. 5.5 Nm



4. Tighten the screw [5].

Tool: T20 hexalobular socket screwdriver
Torque: max. 5.5 Nm
Check that the bearing is fitted securely.



INFO

Do not leave a gap between the bearing and profile.

The bearing must be positioned securely on the profile without any gaps.



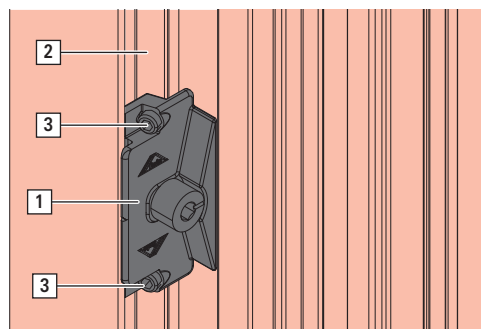
INFO

Install and remove the bearing a maximum of two times.



8.7.7 Lifting mishandling device

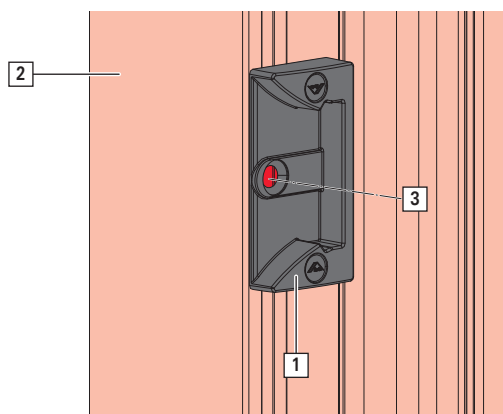
1. Position the lifting mishandling device frame component [1] in the frame groove [2]. The frame component must engage behind the profile.



2. Tighten the threaded pins [3].
Torque: 2 – 2.5 Nm
Check that the lifting mishandling device is fitted securely.

8.7.8 Bullet catch

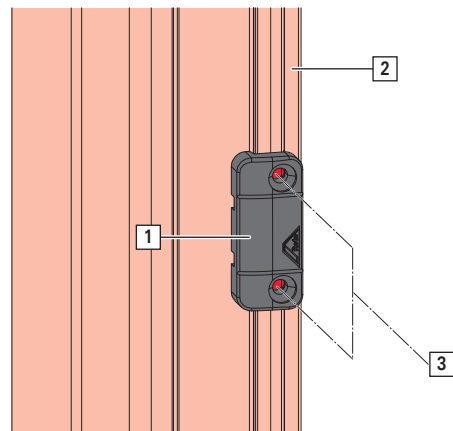
1. Position the bullet-catch frame component [1] in the frame [2].



2. Fasten with a screw [3].

8.7.9 Centre closer, concealed

1. Position the centre closer [1] in the frame groove [2].



2. Fasten with two screws [3].



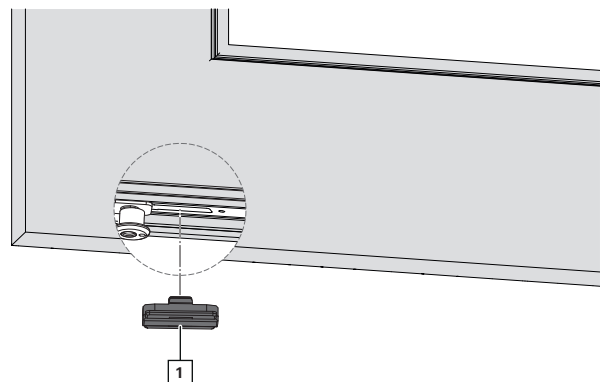
INFO

Put pressure-proof packers between glass and frame in the area of the centre closers.

8.8 Accessories

8.8.1 Travel restrictor

1. Clip the travel restrictor [1] into the locking cam groove.

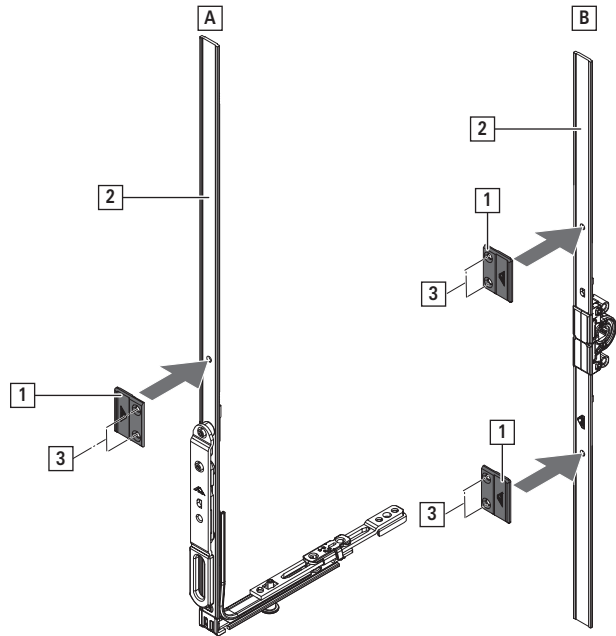




8.8.2 Fastening plate

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].

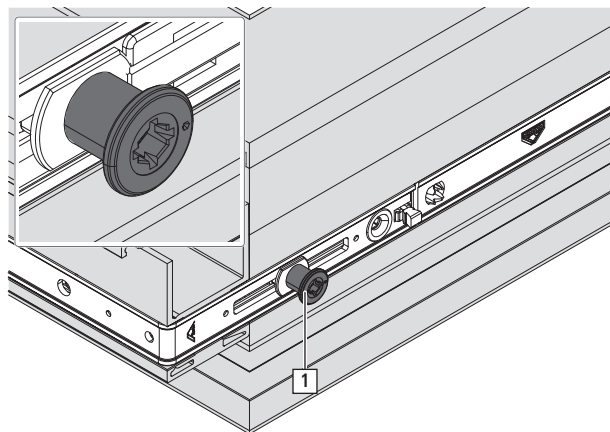
8.8.3 Safety device for lever-operated espagnolette, standard

⇒ Installation

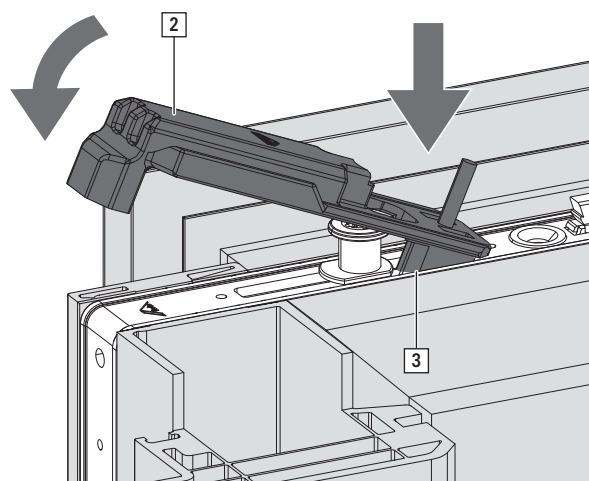
- Turn-Only sash: SEC striker 50 mm
- Tilt&Turn sash: tilt striker 86.5 mm
- Rebate clearance ≥ 10 mm

Installation at the top and bottom of the floating-mullion sash

1. The P or V cam [1] must be aligned in the direction of the hinge side.

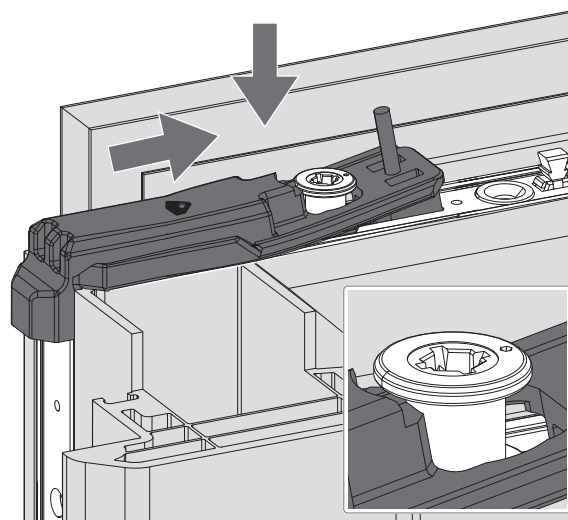


2. Press the safety device [2] into the cam groove of the corner drive [3] and move it above the P or V cam.

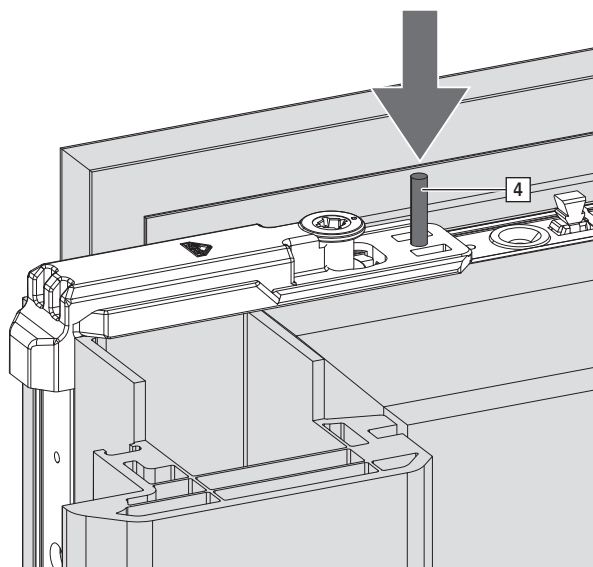




3. Press the safety device onto the floating mullion of the corner drive and slide it below the cam.



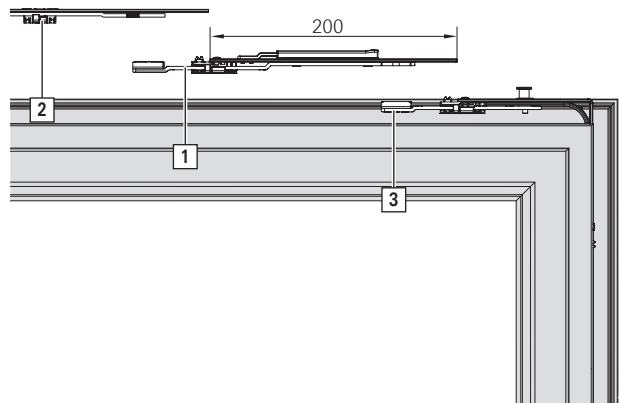
4. Press the safety device fully into the cam groove of the corner drive and insert the locking pin [4].



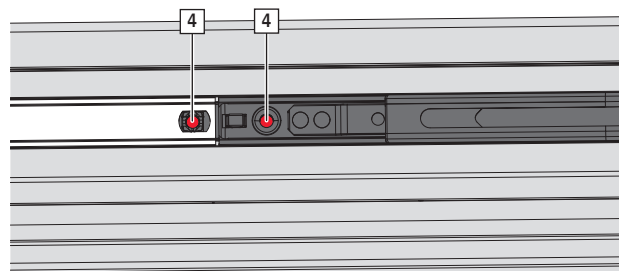
8.8.4 Additional stay arm

8.8.4.1 Sash component

1. Connect the additional stay arm sash component [1] to the corner drive [3]. Creating a force-fit connection → *from page 154*



2. Fit the stay guide [2].
3. Secure with two screws [4].





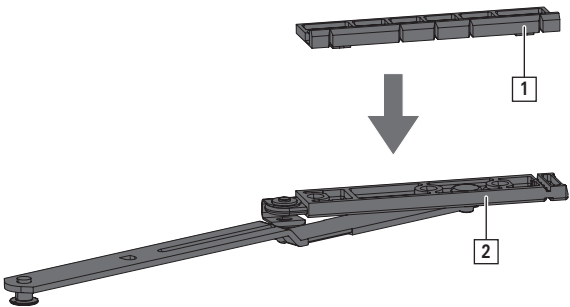
8.8.4.2 Frame component

1. Push the packer [1] into the frame component [2].
Ensure that it is firmly seated.

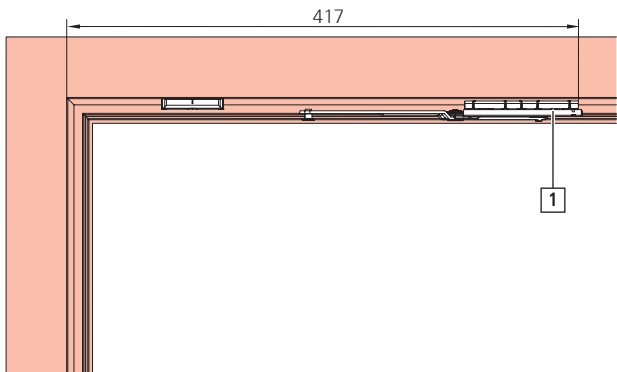


INFO

With a smooth rebate, no packers are required.



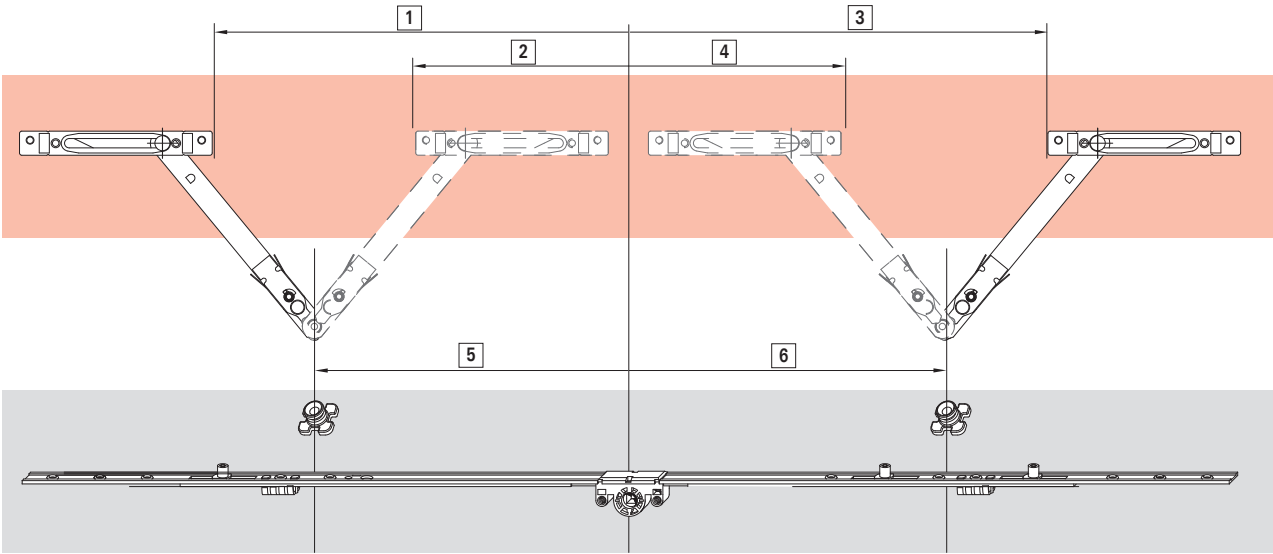
2. Insert the frame component with packer [1] into the frame profile.
The distance between the frame rebate and frame component is 417 mm.



3. Fasten with three screws.

8.8.5 Tilt stay

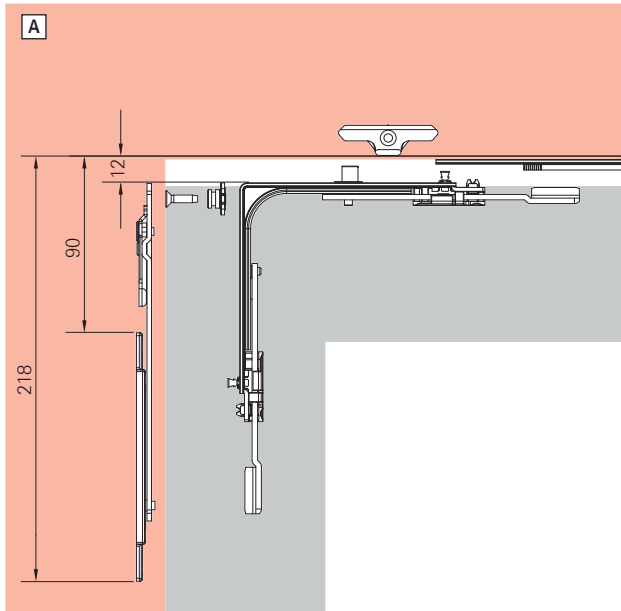
8.8.5.1 Installation dimensions



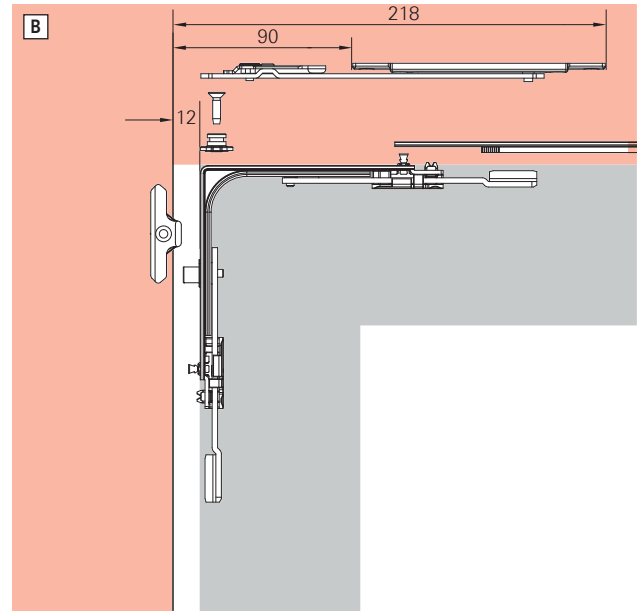
SRW	[1]	[2]	[3]	[4]	[5]	[6]	BS
621 – 800	–	–	–	4	–	73	15
801 – 1200	–	–	–	4	–	73	15
1200 – 1600	15	–	195	–	212	392	8 / 15

Installation
Accessories
Tilt stay

SRW	[1]	[2]	[3]	[4]	[5]	[6]	BS
1601 – 2000	433	–	109	–	364	306	8 / 15
2001 – 2400	433	–	509	–	364	706	8 / 15

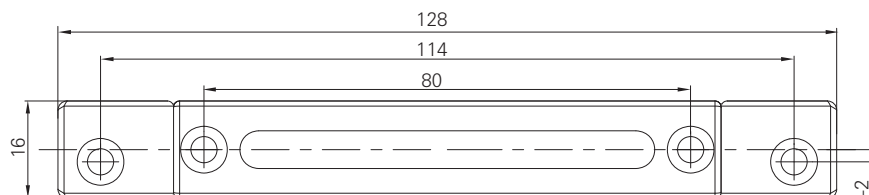


[A] Installation of tilt stay at the side



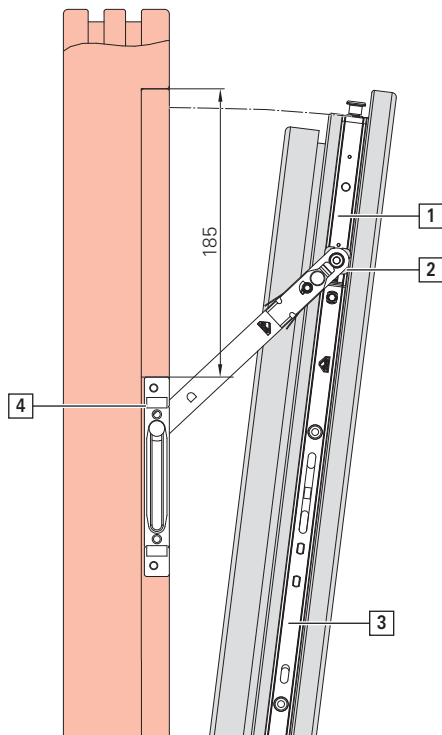
[B] Installation of tilt stay at the top

Frame component dimensions



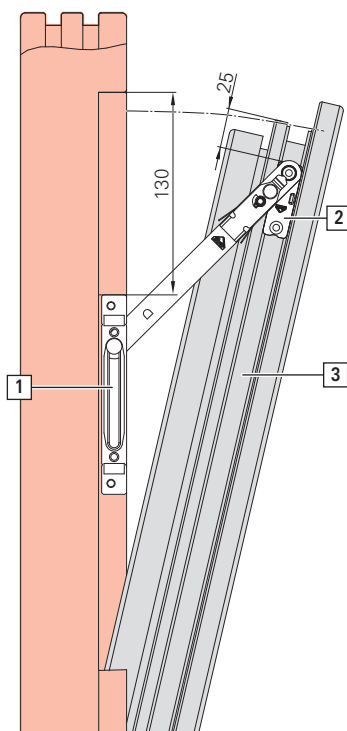


Installation at the side with sash bearing cam at the coupling point



- [1] Corner drive
- [2] Sash bearing cam
- [3] Centre lock
- [4] Tilt stay frame component

Installation, groove mounting



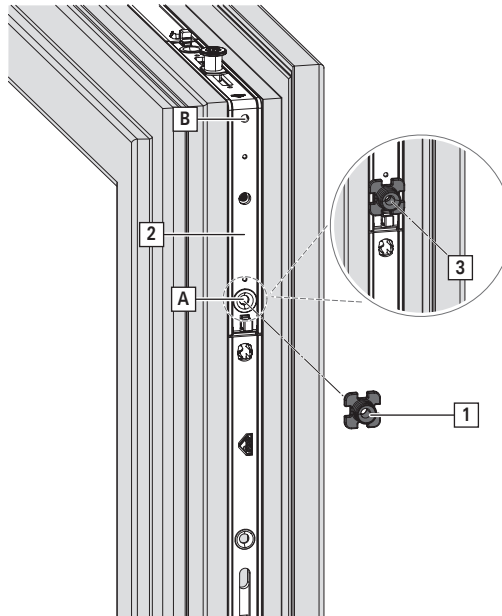
- [1] Tilt stay frame component
- [2] Tilt stay sash component

[3] Sash groove

8.8.5.2 Sash component

Position at the side

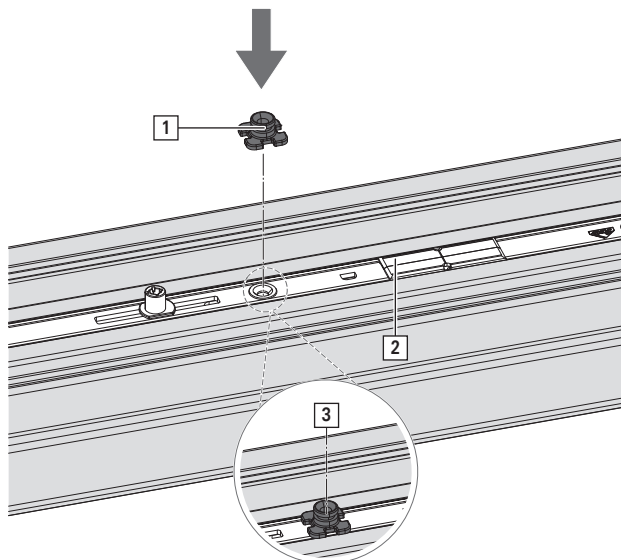
1. Place the sash component [1] on the corner drive [2] (position [A] or [B]).



2. Secure with screw [3].

Position at the top

1. Place the sash component [1] on the espagnolette [2].



2. Secure with screw [3].



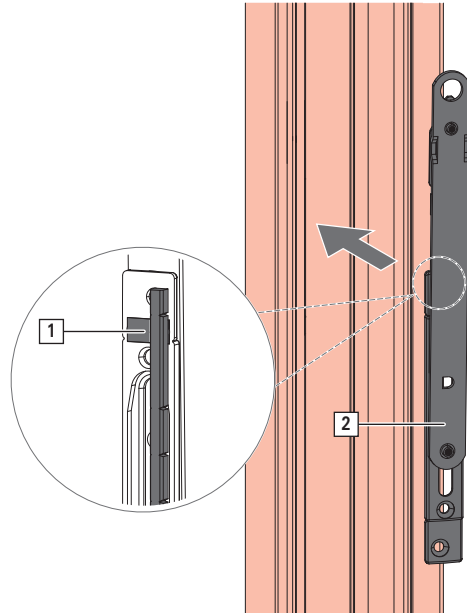
8.8.5.3 Frame component

1. Break the packer [1] apart in the centre.
2. Push the tilt stay [2] onto the packer.

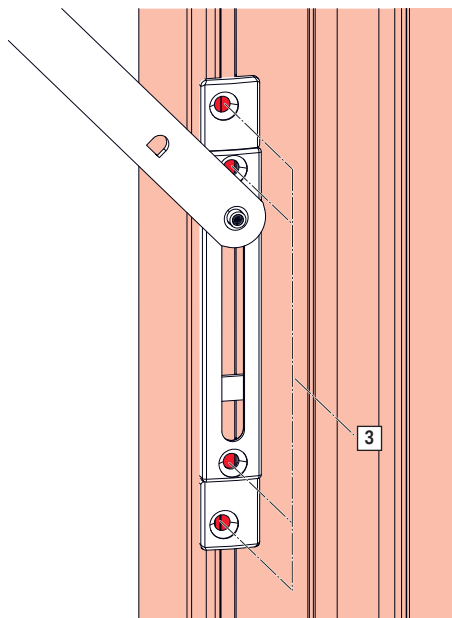


INFO

With a smooth rebate, no packers are required.



3. Position the tilt stay in the rebate.
4. Secure with four screws [3].



8.8.6 Load transfer

8.8.6.1 Sash component



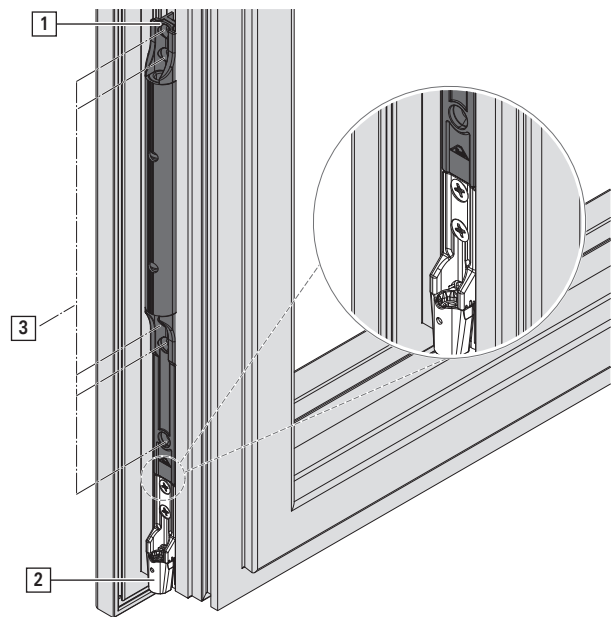
INFO

No load transfer for sash weights < 80 kg, as this may lead to malfunctions.

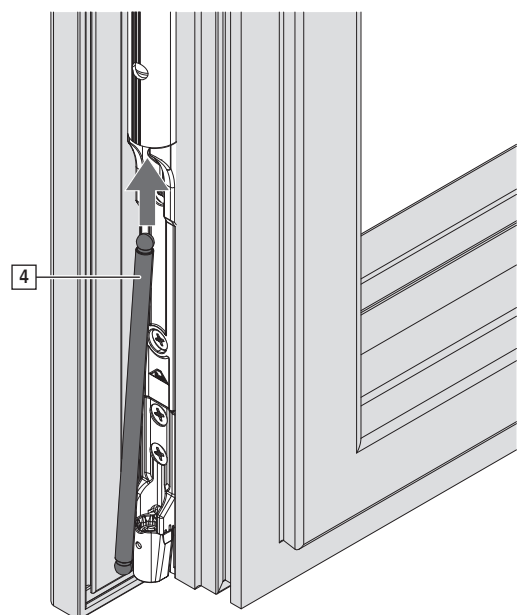
The use of a turn restrictor is mandatory.

If the sash is transported mounted in the frame, the load transfer spring can be pre-tensioned even in the workshop. This is only useful, however, if the sash is fitted with the full glass weight.

1. Insert the load transfer sash component [1] up to the stop to the corner hinge [2].



2. Fasten with five screws [3].
3. Push the support rod [4] into the load transfer.





8.8.6.2 Frame component



INFO

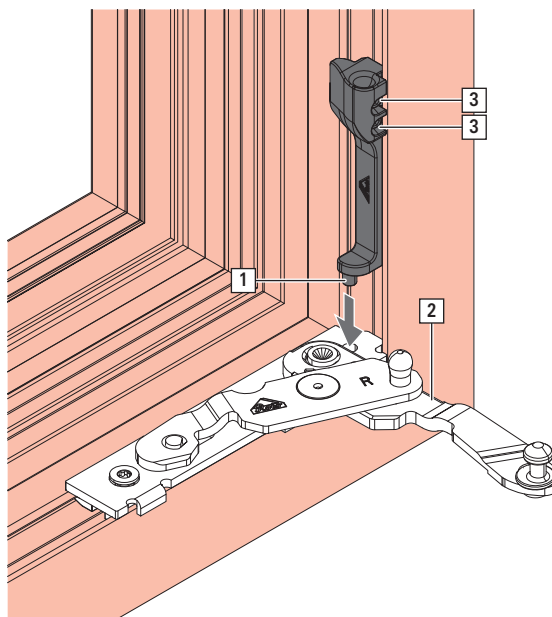
No load transfer for sash weights < 80 kg, as this may lead to malfunctions.

The use of a turn restrictor is mandatory.

If the sash is transported mounted in the frame, the load transfer spring can be pre-tensioned even in the workshop. This is only useful, however, if the sash is fitted with the full glass weight.

1. Position the load transfer frame component [1] in the frame groove.

The frame component must engage behind the profile.



2. Insert the load transfer frame component into the recess in the pivot rest [2].

The frame component must lie flat on the pivot rest.

3. Tighten the threaded pins [3].

Tool: 2.5 mm hex key

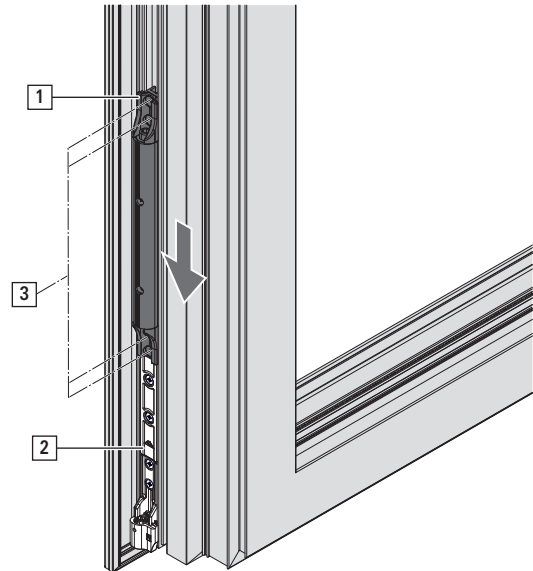
Torque: 2 – 2.5 Nm

Check that the load transfer is fitted securely.

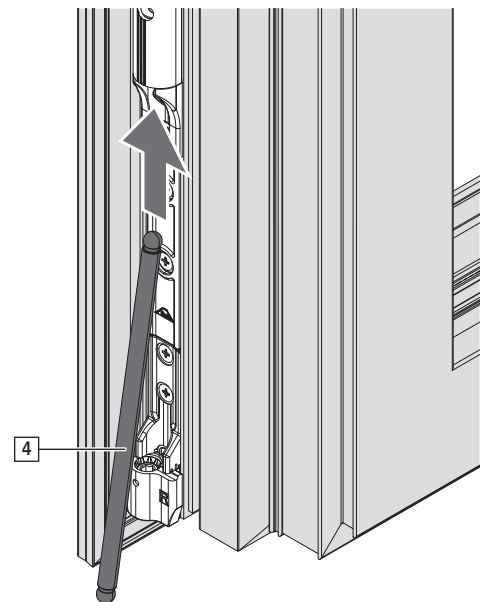
8.8.7 Short load transfer

⇒ The corner hinge and corner hinge extension are installed.

1. Insert the short load transfer sash component [1] up to the stop to the corner hinge extension [2].



2. Fasten with four screws [3].
3. Push the support rod [4] into the short load transfer.





8.8.8 Turn restrictors

8.8.8.1 Drilling and routing dimensions

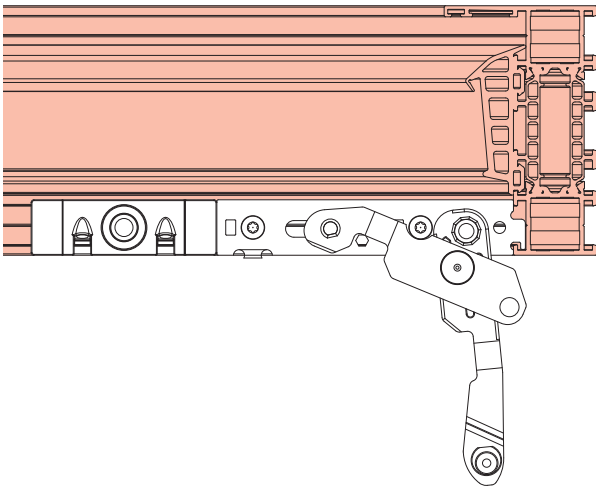


INFO

The turn restrictor is an additional component designed to provide extra convenience; it is not a security component.

Frame component

Positioning the 90° turn restrictor



Sash component

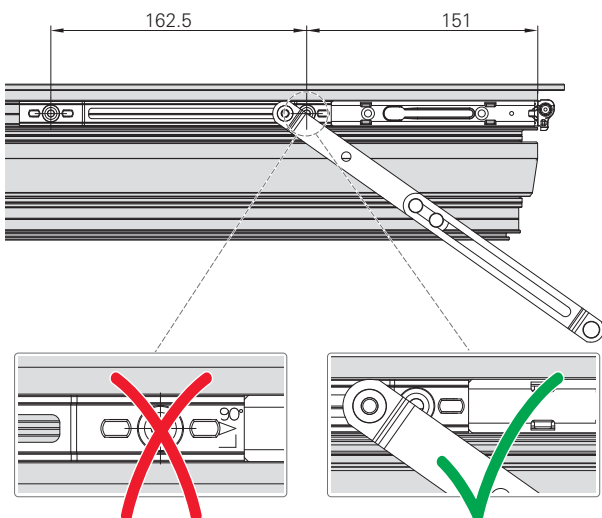


ATTENTION

Improper installation may cause property damage.

Incorrect installation of the sash component destroys the pivot rest.

- The 90° imprint must **not** point towards the corner hinge.



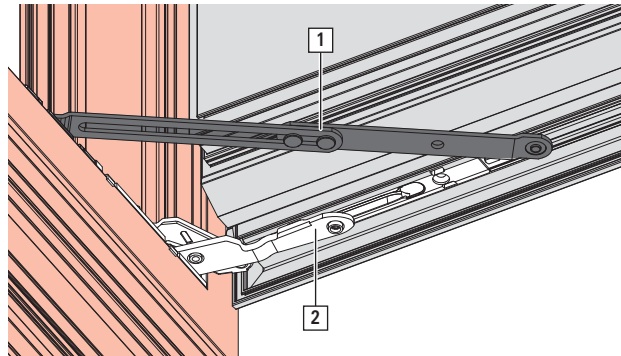
8.8.8.2 Sash component

1. Let the sash component [1] come into contact with the corner hinge [2].



ATTENTION
Improper installation may cause property damage.

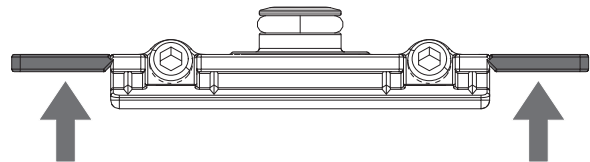
- Incorrect installation of the sash component destroys the pivot rest.
- The 90° imprint must **not** point towards the corner hinge.



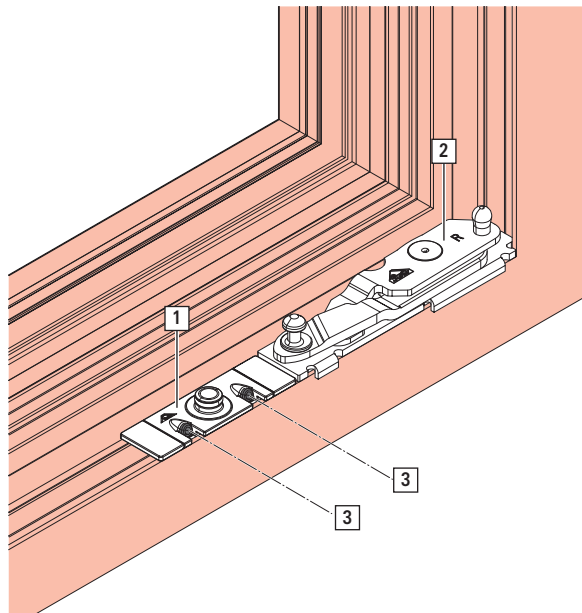
2. Fasten with two screws.

8.8.8.3 Frame component

1. For an opening width of 94°, break either the right or left sash of the turn restrictor frame component before installation.



2. Let the frame component [1] come into contact with the pivot rest [2].



3. Tighten the threaded pins [3].
Tool: 2.5 mm hex key
Torque: 2 – 2.5 Nm



8.9 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 242*
-

8.9.1 Mounting the stay arm

**ATTENTION**

High operating forces may cause property damage.

If the sash is difficult to move from the tilted, open position to the closed position, the stay arm might bend out of shape.

- Reduce the tilt depth to 80 mm.

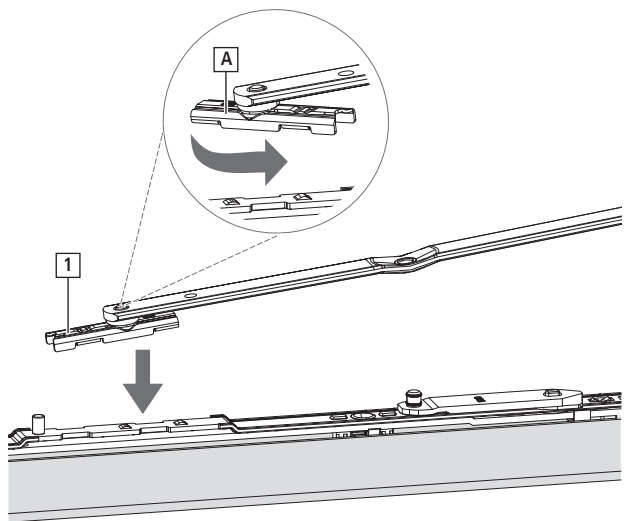
Sash stay 350 / 500

⇒ Corner hinge connected to the pivot rest.

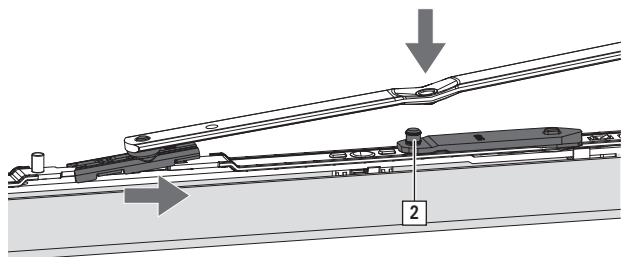
1. Open the sash.
2. Position the slider [1] of the stay arm on the stay guide.

**INFO**

With SRH < 600 mm, the tilt depth must be limited to 80 mm. Turn the slider 180° to limit the tilt depth to 80 mm [A].



3. Move the stay arm and clip it onto the supporting arm bolt [2].





4. Push down on the lifting mishandling device (if fitted).

Turn the handle to the turn position.

Turn the handle to the locked position.

Turn the handle to the turn position.



INFO

Sash stay 350: if the sash is difficult to close from the tilt position, reduce the tilt depth to 80 mm.



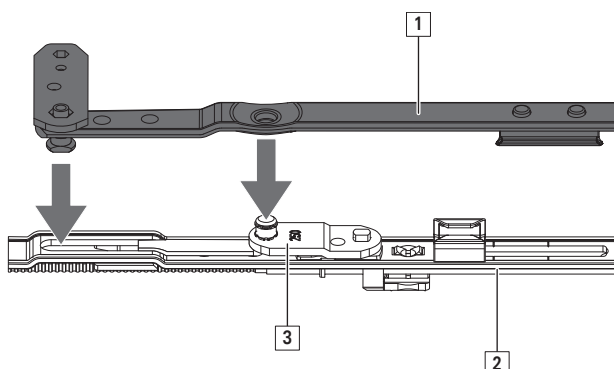
INFO

The slider final position (= anti-slam device) is automatically reached by tilting the sash.

Sash stay 250

⇒ Corner hinge connected to the pivot rest.

1. Open the sash.
2. Push the stay arm [1] onto the stay guide [2] and supporting arm [3].

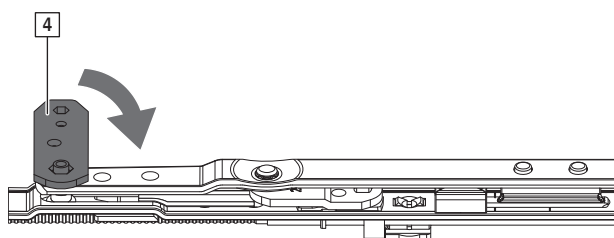


3. Close the retainer clasp [4] using a tool (e.g. hex key).



INFO

For a tilt depth set to 80 mm, use an anti-slam device (mat. no. 487206).



4. Push down on the lifting mishandling device (if fitted).

Turn the handle to the turn position.

Turn the handle to the locked position.

Turn the handle to the turn position.



INFO

Sash stay 250: if the sash is difficult to close from the tilt position, reduce the tilt depth to 80 mm.

Installation

Joining the sash and frame

Connecting the corner hinge to the pivot rest

8.9.2 Connecting the corner hinge to the pivot rest

⇒ Pivot rest in initial position

1. Push down on the lifting mishandling device (if fitted).
2. Handle in turn position.

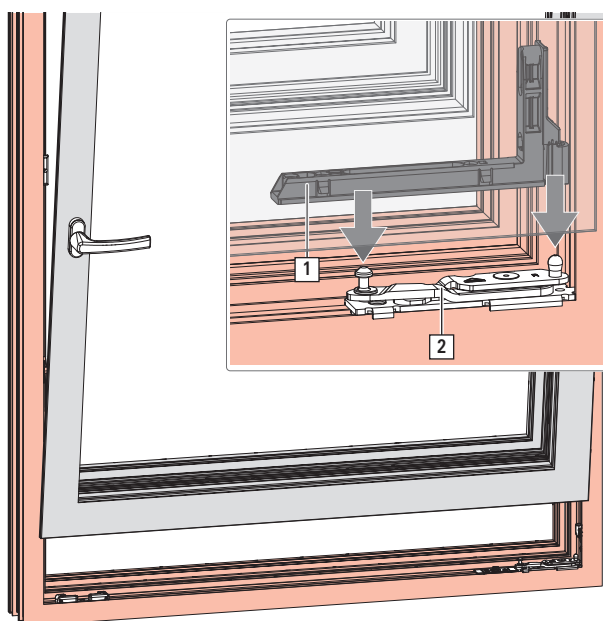
Tilt&Turn hardware



TiltFirst hardware



3. With the sash slightly tilted, guide it along the frame in a downwards direction until you feel the pivot rest [1] engage in the corner hinge [2].



4. Secure the sash to prevent it from falling.



WARNING

An unsecured sash may pose a risk of death!

The sash may fall during installation if it is not securely connected to the frame.

- Secure the sash to prevent it from falling, e.g. by using two people.

5. Push down on the lifting mishandling device (if fitted).



6. Move the handle to the tilt position.

Tilt&Turn hardware



TiltFirst hardware



INFO

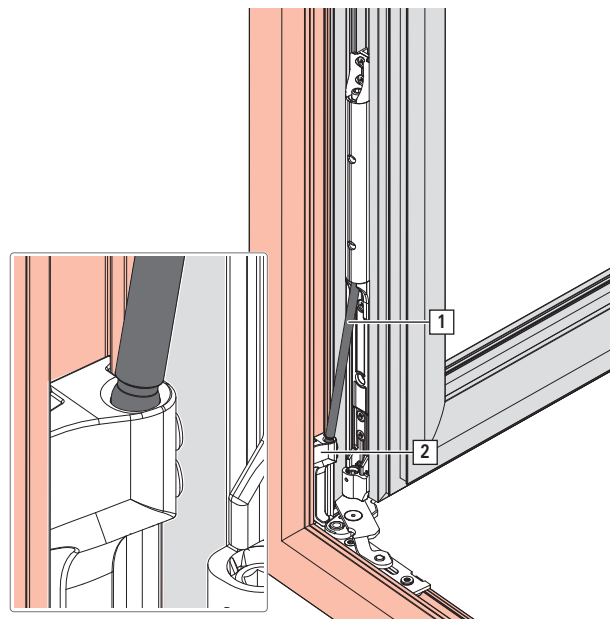
Under normal circumstances, this constitutes incorrect operation of the hardware, but it is a necessary step in this case.

7. Connect the sash stay .

8.9.3 Load transfer

⇒ Sash mounted.

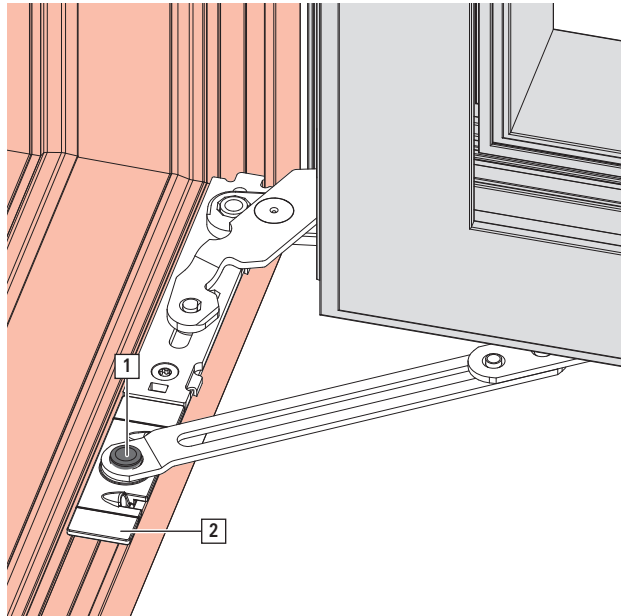
1. Open the sash 90°.
2. Connect the support rod [1] to the sash component and insert into the recess in the frame component [2].



8.9.4 Turn restrictor

⇒ Sash mounted.

1. Open the sash.
2. Push the hole in the end of the sash component over the rubber ring [1] of the bolt on the frame component [2].





9 Adjustment

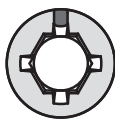
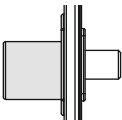
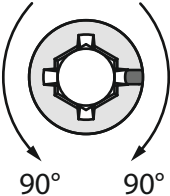
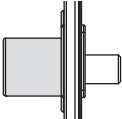


INFO

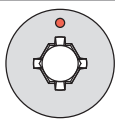
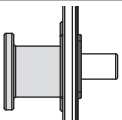
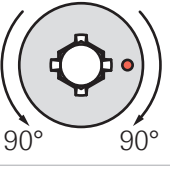
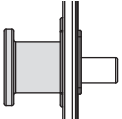
Roto hardware components may only be adjusted by authorised professionals when the element is installed.

9.1 Locking cam

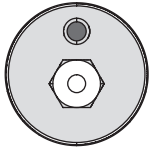
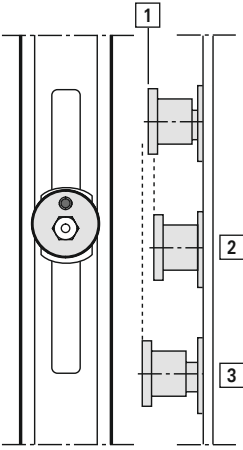
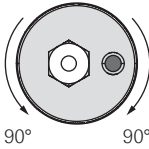
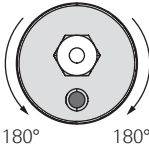
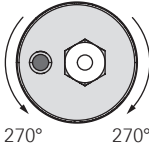
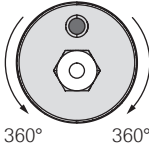
E cam

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		

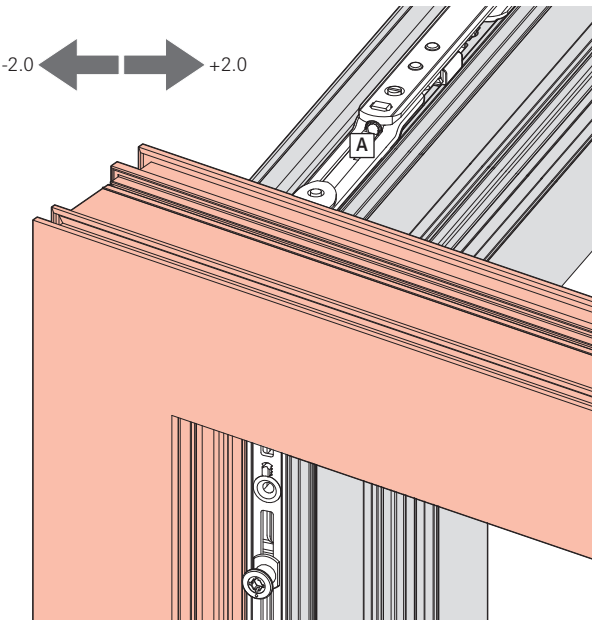
V cam

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

9.2 Sash stay

Lateral adjustment

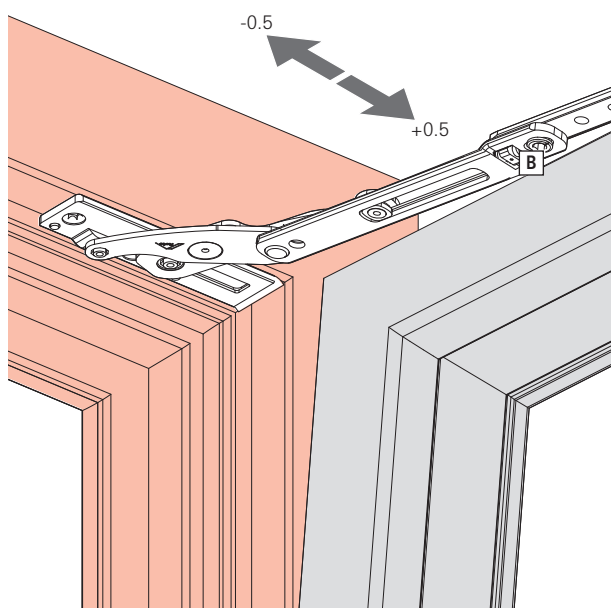
1. Open the sash.
2. Lateral adjustment -2.0 / +2.0 mm via screw in the sash stay [A].
Tool: 4 mm hex key.





Gasket compression adjustment

1. Open the sash.
2. Press down on the lifting mishandling device.
3. 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.
4. Gasket compression adjustment ± 0.5 mm via screw in the sash stay [B].
Tool: 4 mm hex key.



9.3 Pivot rest and corner hinge

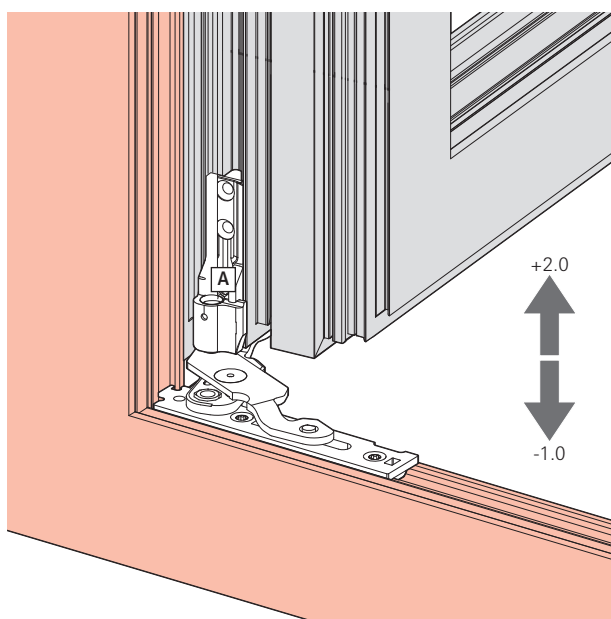
Height adjustment

1. Open the sash.
2. Height adjustment $+2.0$ / -1.0 mm via screw in the corner hinge [A].
Tool: 4 mm hex key.



INFO

Readjust the load transfer after adjusting the height.

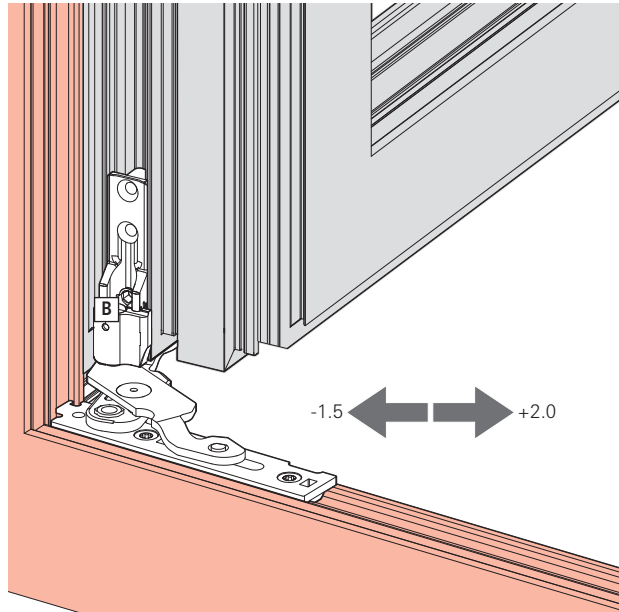


Adjustment

Pivot rest and corner hinge

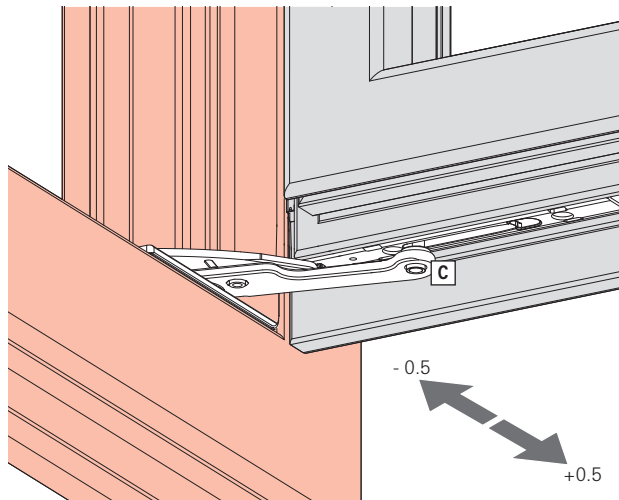
Lateral adjustment

1. Open the sash.
2. Lateral adjustment $+2.0$ / -1.5 mm via screw in the corner hinge [B].
Tool: 4 mm hex key.



Gasket compression adjustment

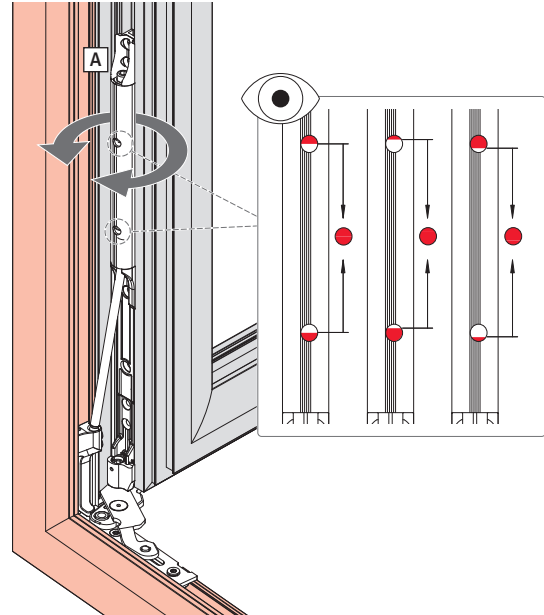
1. Open the sash.
2. Gasket compression adjustment ± 0.5 mm via screw in the pivot rest [C].
Tool: 4 mm hex key.





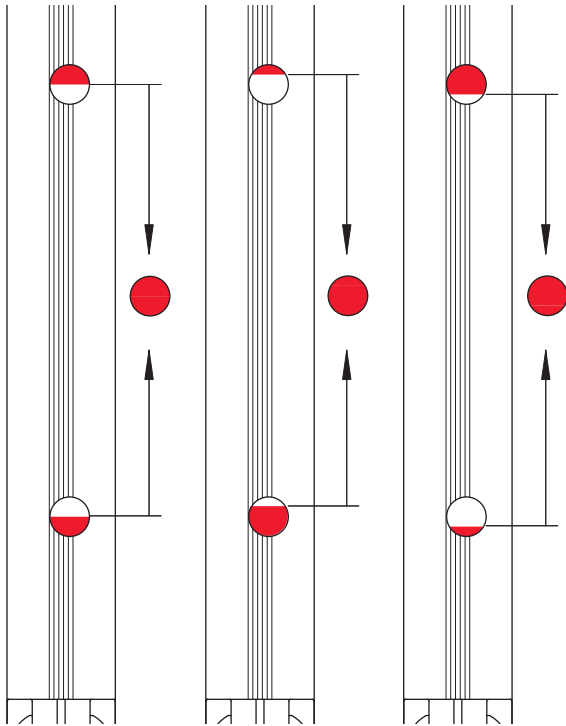
9.4 Load transfer

1. Open the sash.
2. Using the adjusting screw [A], adjust the red partial circle so that a whole circle is produced by adding together the red partial circles.
Tool: 4 mm hex key

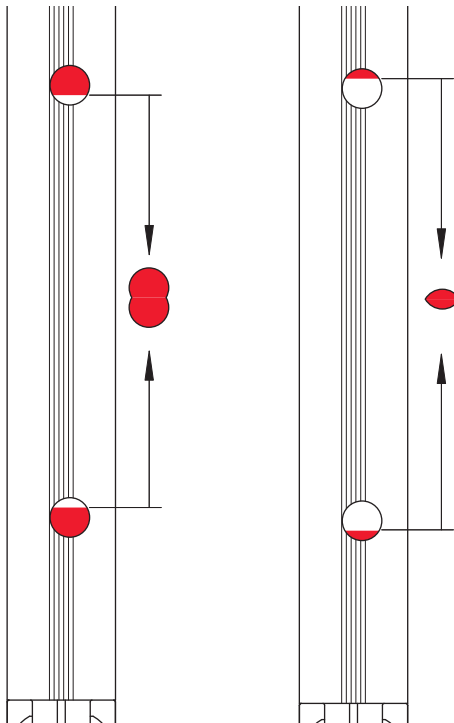


Check at the view windows.

Full circle = right



No circle = wrong





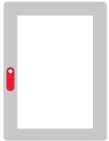
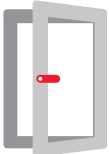
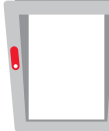
10 Operation

10.1 Operating information

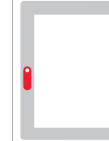
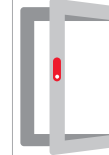
The windows and balcony doors are operated using a handle.

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.

10.2 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 233
Cleaning		→ from page 234
Clean hardware	☐	
Care		→ from page 234
Lubricate movable parts	☐	
Lubricate locking points	☐	
Performance test		→ from page 236
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 236
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 234
- ▶ 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

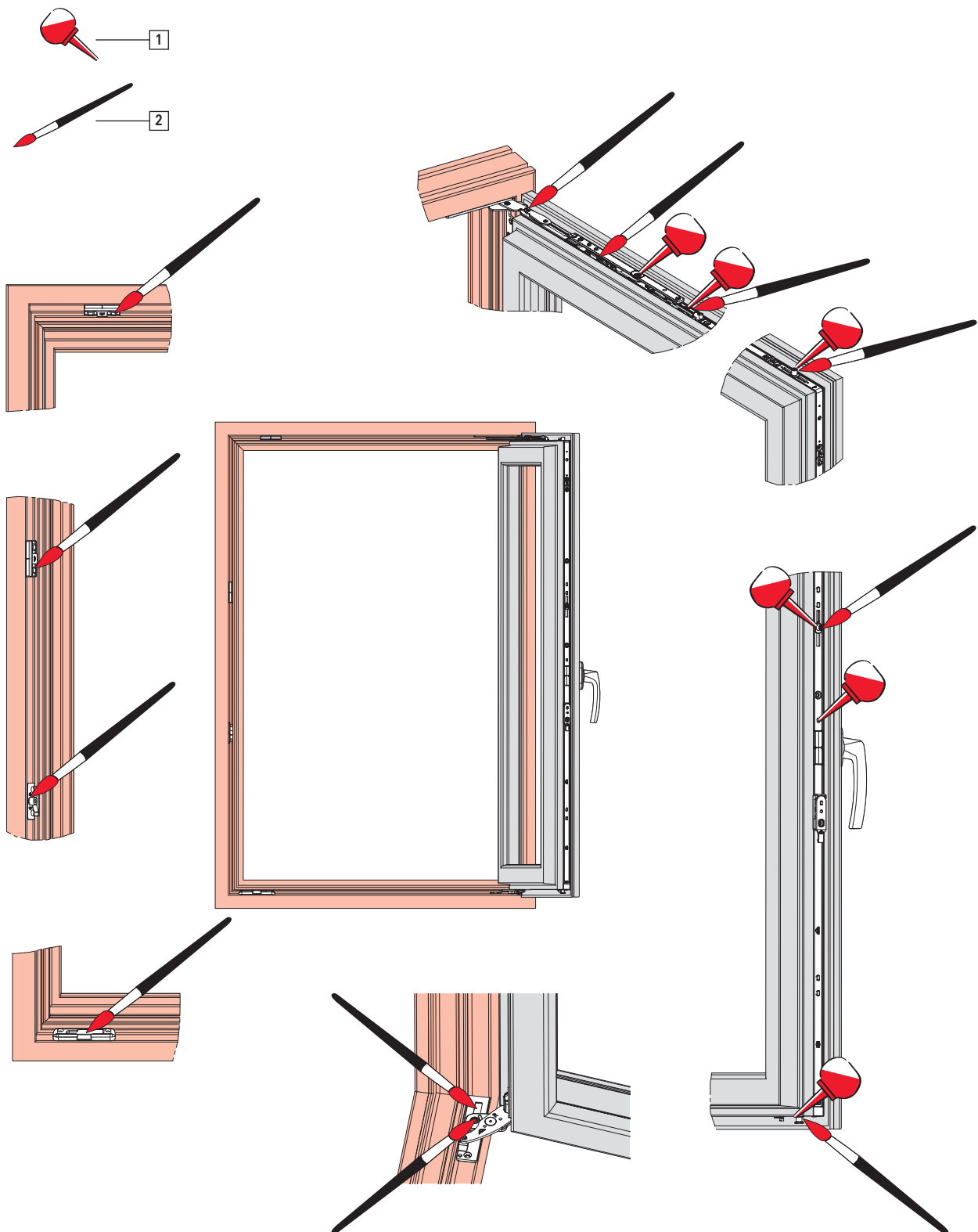


INFO

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



[1] Oil

[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 Unhinging a sash with load transfer

1. Move the handle to the turn position.

Tilt&Turn hardware



TiltFirst hardware



2. Open the sash.

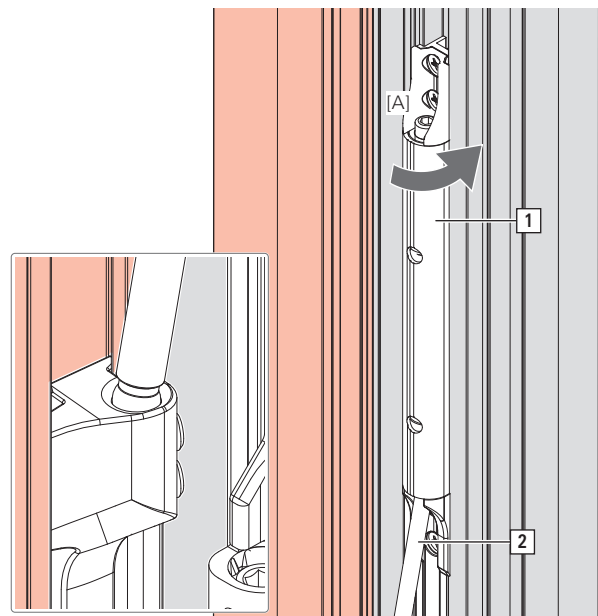
Relieve the load on the load transfer [1] [A] until the support rod [2] lies loosely in the frame component.



INFO

Unscrew the load transfer adjusting screw until the spring is fully released (the support rod becomes loose).

If the spring is not fully released, the sash cannot be rehinged.



3. Push down on the lifting mishandling device (if fitted).

Move the handle to the tilt position.

Tilt&Turn hardware



TiltFirst hardware



4. Secure the sash to prevent it from falling.



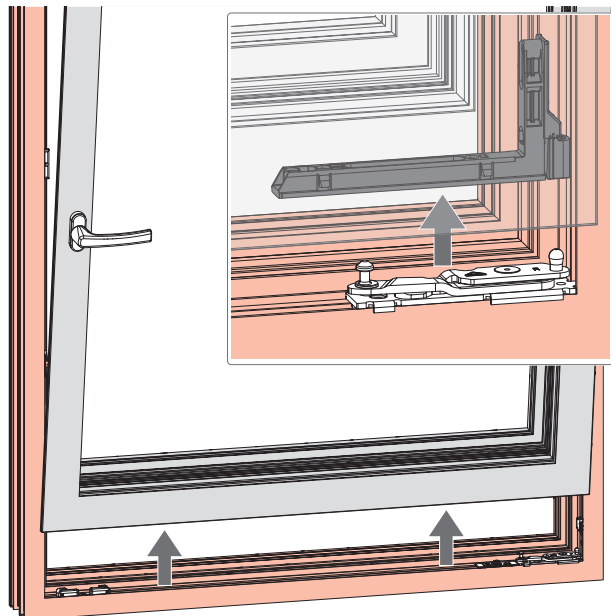
WARNING

An unsecured sash may pose a risk of death!

The sash may fall during installation if it is not securely connected to the frame.

- Secure the sash to prevent it from falling, e.g. by using two people.

5. Unhinge the sash stay → *from page 239*.
6. Push down on the lifting mishandling device and move the handle to the turn position.
7. Close the sash.
8. With the sash slightly tilted, lift it out of the pivot rest.

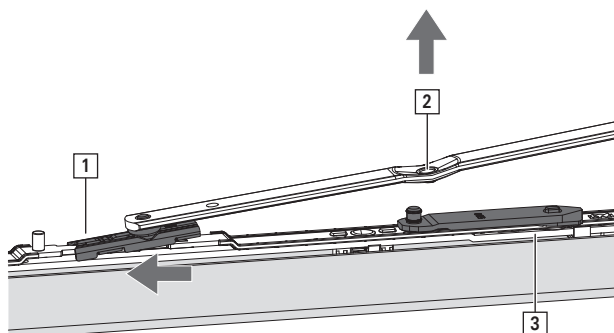




12.2 Unhinging the sash stay

Sash stay 350 and 500

1. Open the sash.
2. Detach the slider [1] and stay arm [2] from the stay guide [3].



3. Push down on the lifting mishandling device (if fitted) and move the handle to the tilt position.
4. Unhinge the sash stay and secure the sash to prevent it from falling.

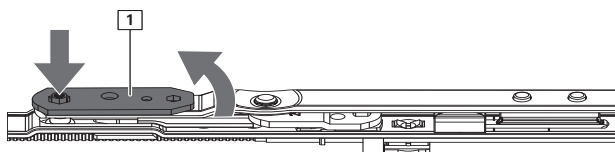


INFO

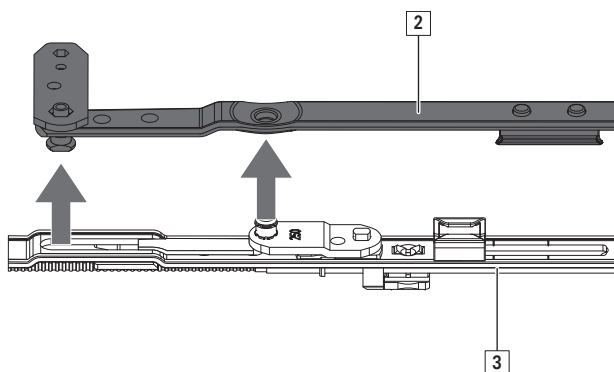
It is only possible to unhinge the sash once the anti-slam device has been removed.

Sash stay 250

1. Open the sash.
2. Open the retainer clasp [1] using a tool (e.g. hex key).



3. Detach the stay arm [2] from the stay guide [3].



12.3 Unhinging a sash without load transfer

1. Move the handle to the turn position.

Tilt&Turn hardware



TiltFirst hardware



2. Push down on the lifting mishandling device (if fitted).

Move the handle to the tilt position.

Tilt&Turn hardware



TiltFirst hardware



3. Secure the sash to prevent it from falling.



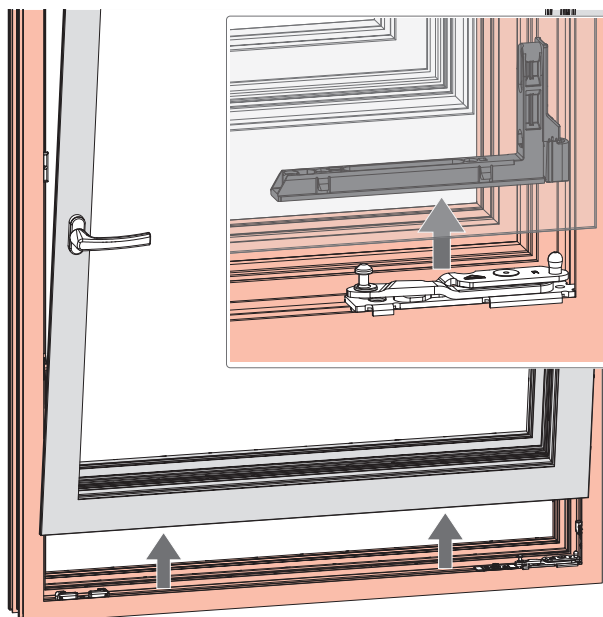
WARNING

An unsecured sash may pose a risk of death!

The sash may fall during installation if it is not securely connected to the frame.

- Secure the sash to prevent it from falling, e.g. by using two people.

4. Unhinge the sash stay → *from page 239*.
5. Push down on the lifting mishandling device and move the handle to the turn position.
6. Close the sash.
7. With the sash slightly tilted, lift it out of the pivot rest.





12.4 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

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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