Window and Door Technology

Roto Patio Lift

Hardware for versatile use
in Lift&Slide systems

Installation, maintenance and operation instructions
for PVC profiles

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1 General information

1.1 Version history

Version	Date	Changes
v0	13/11/2013	
v1	31/03/2021	Hardware overviews and parts lists changed. Slim versions added . Optional support block component added → *from page 97*. Diagram C floor striker added → *from page 117*. Info clip accessory added → *from page 74*. Espagnolette – fixed handle height, with round cylinder added → *from page 70*. Handles and recessed grips moved to CTL_1 and combinations added. Notes on final assembly added → *from page 119*. Application ranges changed. Connecting rod cropping dimensions changed . Striker position dimensions changed → *from page 114*. Screw cropping dimensions for handle and recessed grip changed → *from page 104*.
v2	11/10/2021	Term “BasicLocking” added. Routing drawing for roller unit with adapter added and changed → *from page 84*. RC 2 added for all design variants with fixed handle height espagnolette BS 27.5 / BS 37.5 → *from page 66*. Espagnolette extension with additional locking point added → *from page 71*. Topglider added → *from page 109*. Gasket bridge added → *from page 107*. Round connecting rod added . Round connecting rod support block added. Roller unit set for all standard 300 / 400 kg design variants changed. Roller unit upgrade set for all standard 300 / 400 kg design variants changed. Additional packer for roller unit added for all standard 300 / 400 kg design variants. Locking pin added. Striker incl. packer added for DesignLocking. Packer added for DesignLocking striker. Overview of profile systems added → *from page 68*. Rubber buffer accessory added → *from page 106*. Profile-related screw set accessory added → *from page 74*. Adapter for roller unit removed. Torque for installation of roller unit changed. Screw connection specifications changed → *from page 78*.

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:

- Handles catalogue: CTL_1

The following guidelines also apply:

Gütegemeinschaft Schlösser und Beschläge e.V.

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

VFF (German Window and Facade Association)

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

Additional guidelines

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

Storing the instructions

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

Explanation of the markings

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

Marking	Meaning
	Sash
	Frame
	Drill holes, routing or screw positions
	Unaffected components / indirectly affected components

Marking	Meaning
■	Components, arrows or movements that have just been described
1	Item number
[1]	Legend
[A]	Steps

INFO

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

INFO

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

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
	PVC
	Sash width
	Sash height
	Handle position vertically upwards
	Handle position vertically downwards

1.5 Product features

Symbol	Meaning
	Lockable
	Order quantity

Symbol	Meaning
	Description
	Width
	Call-out
	Backset
	Colour
	Colour code
	Sash width
	Sash height
	Sash weight
	Fixed handle height
	Height
	Information
	Length
	Material no.
	Surface
	Roto logo
	Number of screws
	Type of screws
	Integrated night ventilation

Symbol	Meaning
#	Piece(s)
	Packaging unit

1.6 Abbreviations

Abbreviation	Meaning
approx.	approximately
CTL	Catalogue
BS	Backset
IMO	Installation instructions
SW	Sash width
SH	Sash height
S.kg	Sash weight
HH	Handle height
kg	Kilograms
L	Left
Max.	Maximum
MUL	Mullion
Min.	At least
mm	Millimetres
R	Right
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

The hardware system described in these instructions is intended for installation in sliding sashes in windows and balcony doors. The hardware system is only intended for further processing on windows and balcony door sashes for vertical installation made from the materials described in these instructions. The hardware system opens sashes in windows and balcony doors and closes them tightly.

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 7*.

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

2.4 Stipulated use for end users

On windows or balcony doors with sliding hardware, window sashes or balcony door sashes can be moved horizontally or vertically by operating a handle.

On special structures, various sashes can additionally be brought into a turn position and / or into 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 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 7*.

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.
- Only use hardware components with the required materials and track shapes.
- Always have installation performed by a specialist company.

- Through sufficient sash coverage, the window manufacturer must ensure that the sash cannot fall out, even if the window or hardware components is / are operated incorrectly.

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 strain may cause damage 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 sashes improperly poses the risk of injury and property damage.

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

- When moving the sash, ensure that it will not slam against the frame or other sashes 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.

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 to the point that they can no longer function in a saline, aggressive or corrosive environment.

- 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 conditions for 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.

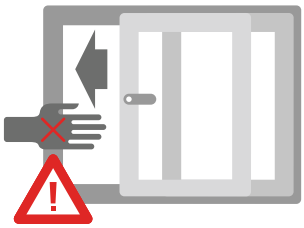
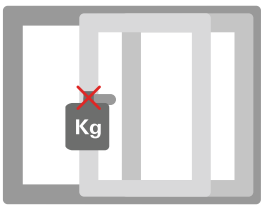
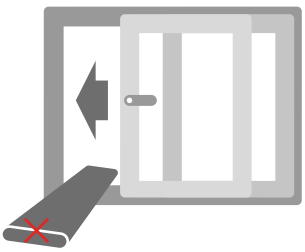
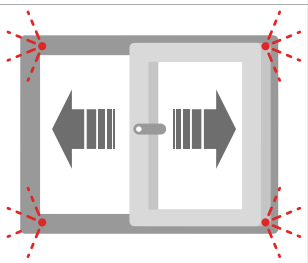
- Avoid preventing the circulation of air (e.g. due to deep reveals, curtains and unfavourable positioning of heaters or the like).
- Intensively air out the room several times per day.

  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
	Falls from open windows and balcony doors present an immediate risk of death and pose the risk of serious injuries. 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.** 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.
	**Placing additional loads on the sash may lead to minor injuries and property damage.** Do not place additional loads on windows and balcony door sashes.
	**Introducing obstacles into the opening between sash and frame may result in minor injuries and property damage.** Do not introduce any obstacles in the opening area between the frame and window or balcony door sashes.
	**Opening and closing the sash in an uncontrolled manner may result in minor injuries and property damage.** 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.

3 Information on the product

3.1 General hardware characteristics

- Lift&Slide system with Slim versions for narrow profiles.
- DesignLocking: espagnolette with locking cam and associated striker.
- Stainless steel Plus version for increased corrosion protection requirements.
- Quiet operation and outstanding running properties thanks to high-quality roller unit technology:
  - Ball-bearing-mounted rollers
  - Quiet bogies
- Durability thanks to the use of robust materials:
  - Rollers made from high-quality PVC
  - Roller unit side panels made from stainless steel
- Night ventilation is possible in conjunction with optional locking pin.
- Accessory: info clip for individual branding.

3.2 Application ranges

- SH:SW = max. 2.5:1
- Sash width: max. 3000 mm
- Sash height: max. 3100 mm
- Sash weight: max. 400 kg
- Sash arrangement according to diagrams A, C, D, F, G and K
- Operating range: -20 °C to +50 °C

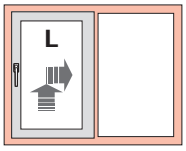
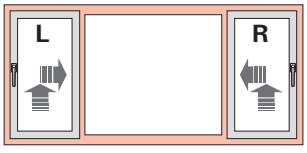
3.3 Design variants

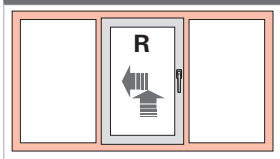
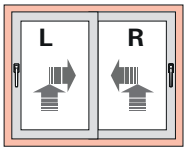
3.3.1 Note regarding the design variants

Combinations for constructing the hardware are assigned to the following diagrams.

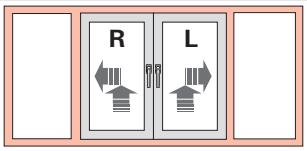
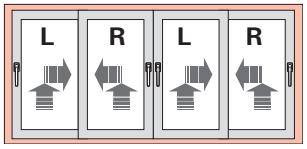
These combinations can be built in L and R.

3.3.2 Diagram A

Combinations	Further description
 1 Lift&Slide sash (L or R) 1 fixed glazing element	Diagram A
 1 Lift&Slide sash (L and R) 1 fixed glazing element	Diagram K

Combinations	Further description
 1 Lift&Slide sash (L or R) 2 fixed glazing elements	Diagram G
 2 Lift&Slide sashes (L and R)	Diagram D

3.3.3 Diagram C

Combinations	Further description
 2 Lift&Slide sashes (L and R) 2 fixed glazing elements	Diagram C
 4 Lift&Slide sashes (L and R)	Diagram F

3.3.4 Design variants – overview

Slim

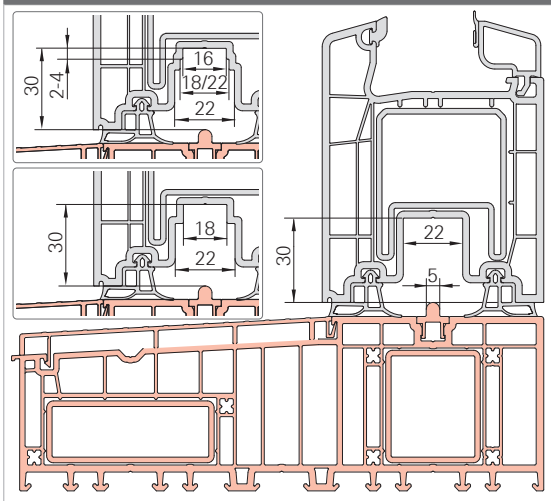
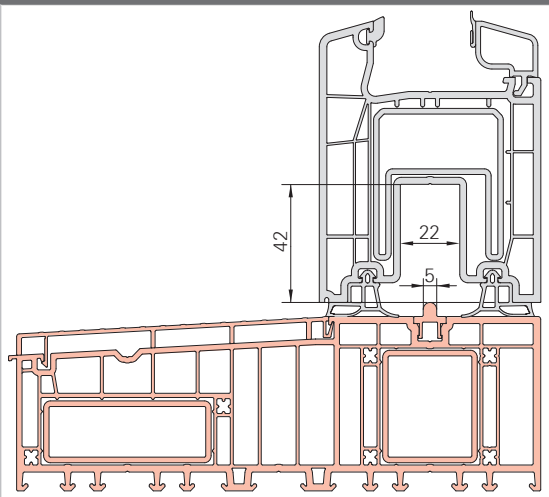
Weight	Roller unit			Roller unit upgrade set	Fixed handle height espagnolette		
	16	18	22		BS 25	BS 27.5	
					Without damper	Without damper	With damper
≤ 150 kg	■	■	■	–	■	–	–
≤ 200 kg	■	■	■	–	–	■	–
> 200 – ≤ 300 kg	–	■	■	■	–	■	–
> 300 – 400 kg	–	■	■	■	–	–	■

Standard

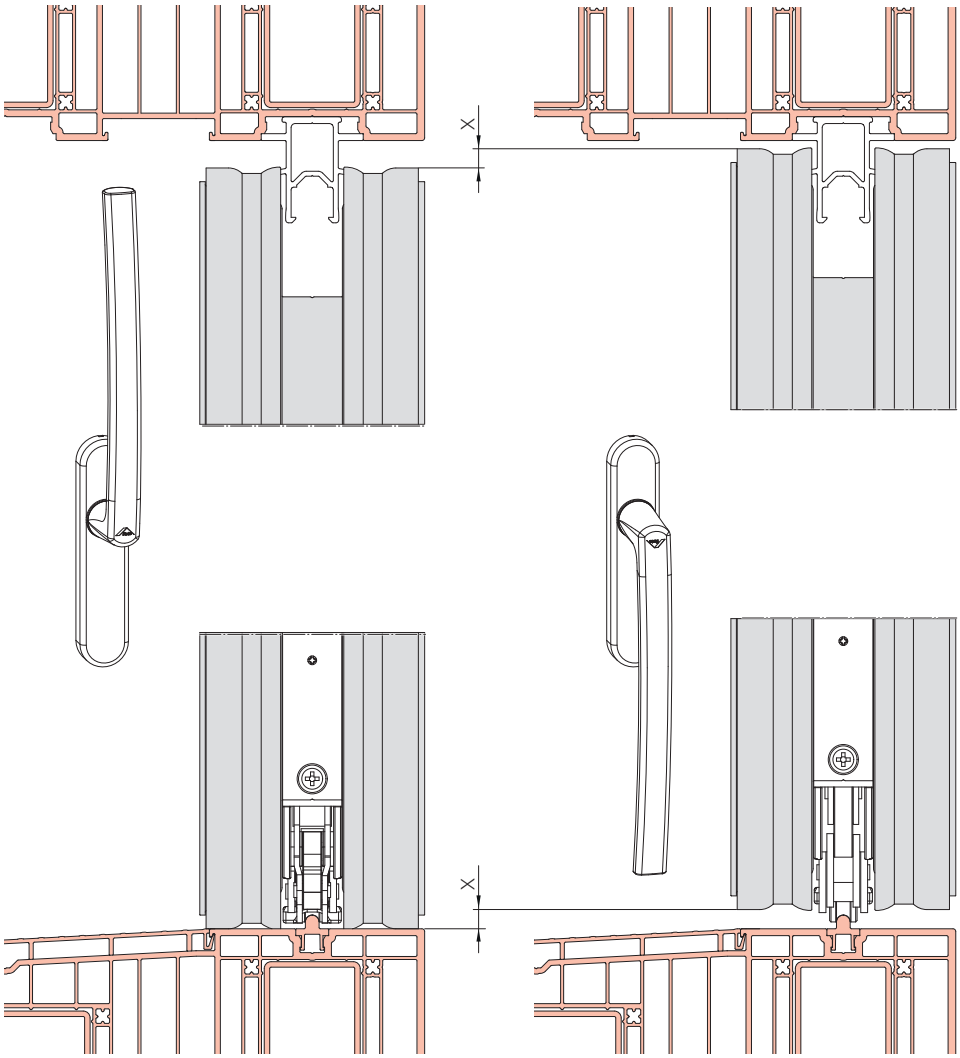
Weight	Roller unit	Roller unit upgrade set	Fixed handle height espagnolette BS 37.5	
	22		Without damper	With damper
≤ 300 kg	■	–	■	–
> 300 – 400 kg	■	■	–	■

3.4 Space requirement for hardware

Note the following space requirement:

Groove for Slim version	Groove for standard version
	
Shown: open groove which does not have to be routed.	Shown: open groove which does not have to be routed.

Travel illustration



X Travel max. 7 mm

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.

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

The actual composition of the hardware depends on:

INFO
Profile properties

Design the profile optimally for the corresponding weights. Proper load transfer must be ensured by the profile manufacturer / fabricator.

Ensure that the rollers on the roller track run smoothly. Keep the roller track clean, do not powder coat or paint it.

The currently valid Roto profile assessment drawing for the specific profile and the applicable documents described in said drawing must be observed.

Please request these details from your responsible Roto sales representative.

Recommended handles can be found in the 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 Diagram A | Slim | BasicLocking | 150 kg

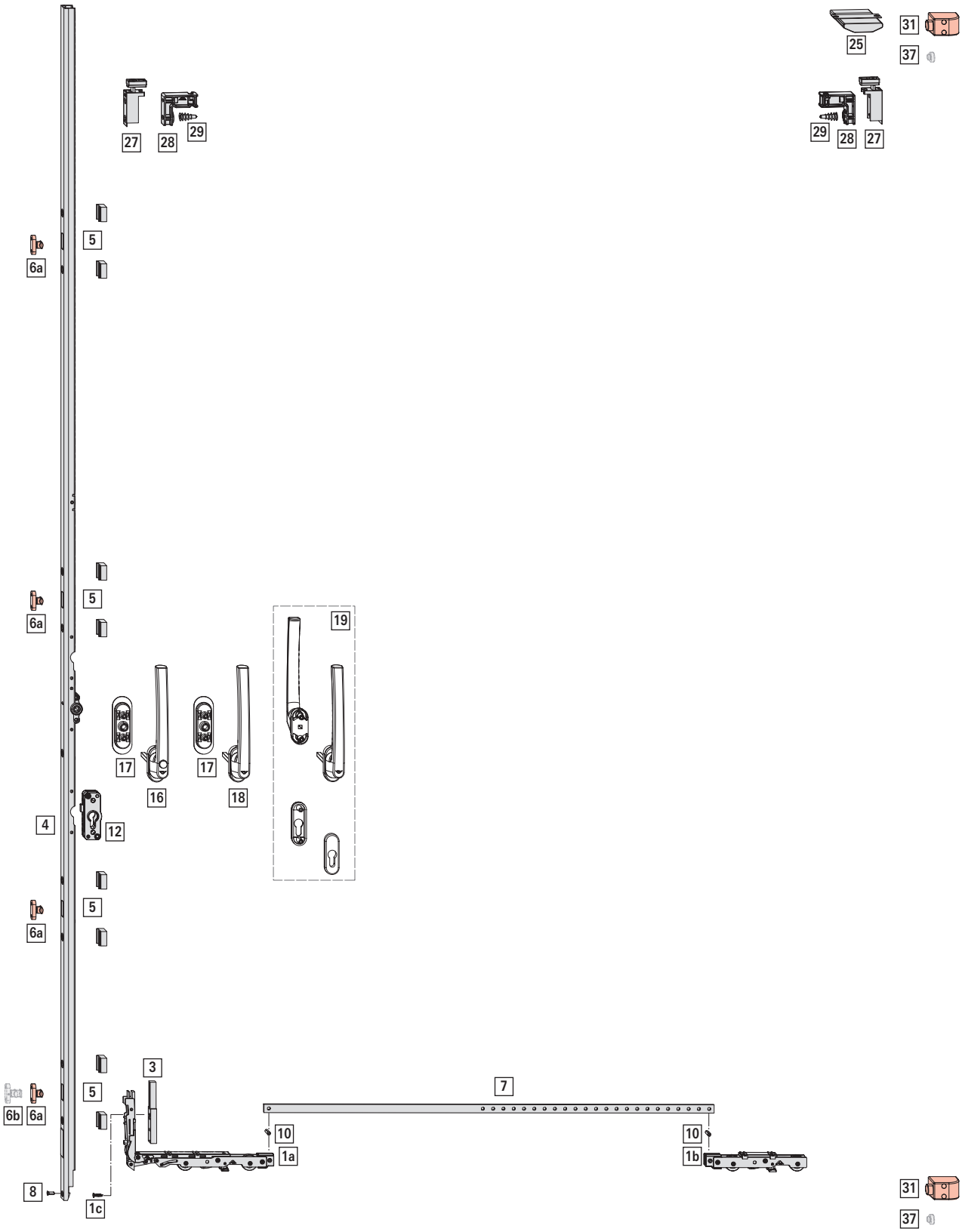


Fig. 4.1: Shown: left version; SW 1400 mm; SH 2400 mm; S.kg 150 kg

Application range

SW: 720 - 2800 mm

SH: 1801 - 2600 mm

S.kg: max. 150 kg

[*] Roller unit set — 1

		№
16	–	840191
18	–	840771
	Stainless steel Plus	734289
22	–	840193
	Stainless steel Plus	734290

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 1

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[4] Espagnolette – fixed handle height — 1

					№
25	max. 150 kg	1801 – 2200	965	2185	633426
		2201 – 2600	965	2375	633427

[*] Lock casing set — 1

	№
max. 150 kg	631368

[*]		#
[12]	Lock casing	1
	Spring pin 5 x 22	2

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 2600	8	1
> 2600	10	2

[6a] Locking pin without night ventilation

	№
11	595652
13.5	639864
14.5	639863
15	595650
16	635126
17	635128
22	600508
24.5	639875
24	639896

≤ 2600	4
> 2600	5

[7] Flat connecting rod — 1

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

≤ 1400	895
1401 – 1700	1200
1701 – 2000	1500
2001 – 2300	1800
> 2300	2300

[16] Sliding door handles – interior handles; 200 mm – push-to-open (incl. square spindle 7 x 7 mm) → CTL_1 — 1

[17] Recessed grip; oval 16 mm (43 mm screw spacing) → CTL_1 — 1

Alternatively:

[18] Sliding door handles – interior handles; 200 mm (incl. square spindle 7 x 7 mm) → CTL_1

[19] Handle set with escutcheon version; 200 mm → CTL_1

[31] End stop — 2

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[25] Gasket bridge				1
		#		№
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related	1
	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

[*] **Screw set (not sh.)**; profile-related; for mounting the espagnolette, roller unit and locking pin → *8.4 "Screw sets" from page 74*

Optional

[6b] Locking pin with night ventilation (alternatively at the lowest position)	1
	№
13.5	862390
15	595651
16	2005652
17	639862

4.2 Diagram A | Slim | BasicLocking | 200 / 400 kg

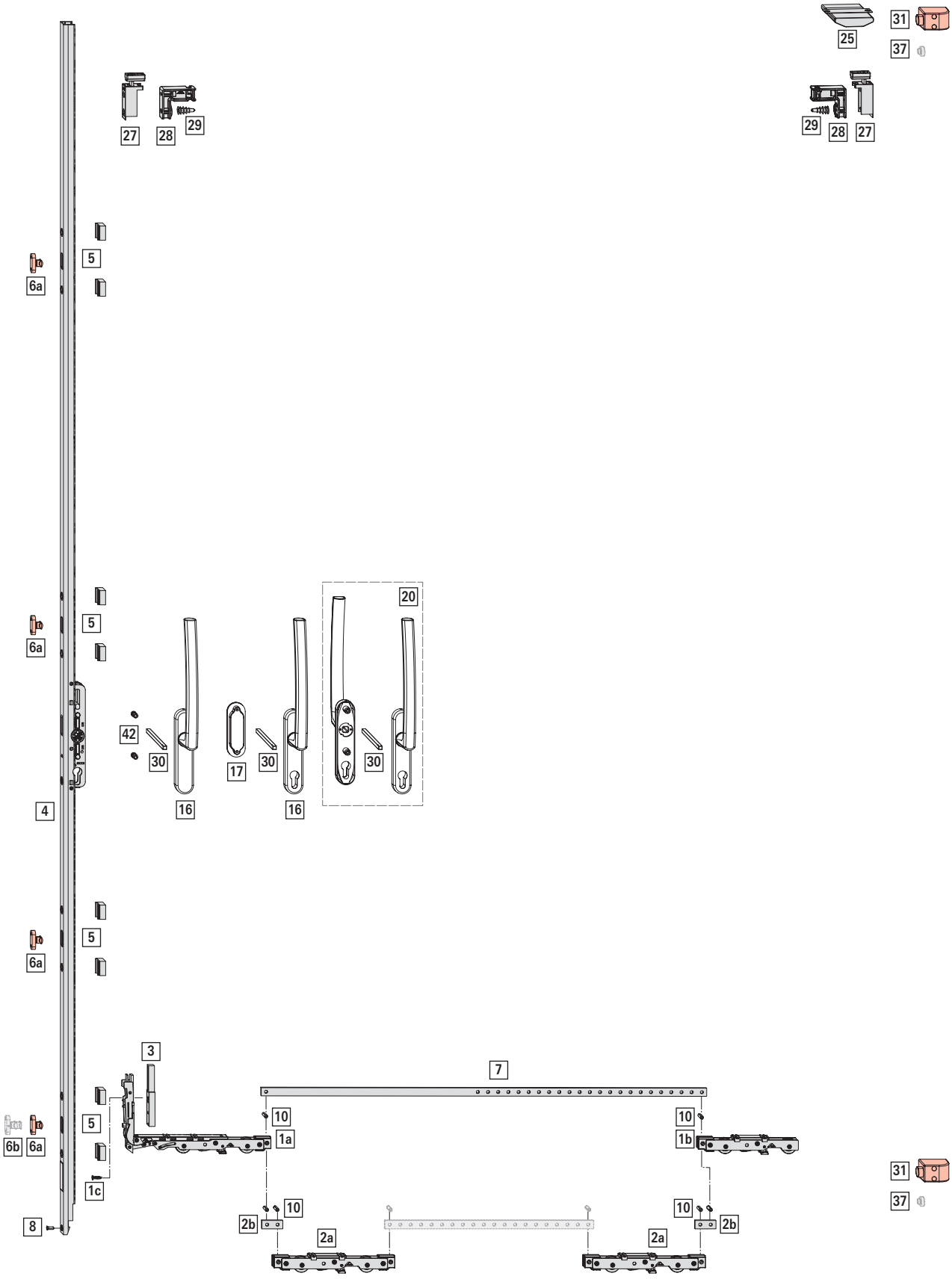


Fig. 4.2: Shown: left version; SW 1400 mm; SH 2400 mm; S.kg 200 / 400 kg

Application range

SW: 720 - 3000 mm [1]
SH: 1801 - 3100 mm
S.kg: max. 400 kg

[*] Roller unit set — 1

			№
max. 200 kg	16	–	840191
	18	–	840771
		Stainless steel Plus	734289
	22	–	840193
		Stainless steel Plus	734290

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 1

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[*] Roller unit upgrade set; S.kg > 200 kg — 1

		№
18	–	840773
	Stainless steel Plus	840772
22	–	840243
	Stainless steel Plus	840242

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4] Espagnolette – fixed handle height — 1

							№
27.5	–	max. 300 kg	1801 – 2200	965	2185	Y	840251
			2201 – 2600	965	2375	Y	2001815
			2601 – 3100	965	3000	Y	840253
	Min. 300 kg	Max. 400 kg	1801 – 2200	965	2185	Y	840248
			2201 – 2600	965	2375	Y	2001816
			2601 – 3100	965	3000	Y	840250

[42] Threaded insert, for espagnolette — 2

	№
27.5	840782

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 2600	8	1
> 2600	10	2

[6a] Locking pin without night ventilation

	№
11	595652
13.5	639864
14.5	639863
15	595650
16	635126
17	635128
22	600508
24.5	639875
24	639896

≤ 2600	4
> 2600	5

[7] Flat connecting rod — 1

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:

≤ 200 kg

≤ 1400	895
1401 – 1700	1200
1701 – 2000	1500
2001 – 2300	1800
> 2300	2300

> 200 kg with roller unit upgrade set

1080 – 1900	895
1901 – 2200	1200

[1] ≤ 200 kg: $SW_{max.}$ = 2800 mm

2201 – 2500	1500
2501 – 2800	1800
> 2800	2300

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 — 1

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 — 1

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 — 1

[31] End stop — 2

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[*] Topglider set, profile-related — 1

	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

[25] Gasket bridge — 1

		#		№
100	17	2	ST4,2x32	2000128

[*] **Screw set (not sh.)**; profile-related; for mounting the espagnolette, roller unit and locking pin → *8.4 "Screw sets" from page 74*

Optional

[6b] Locking pin with night ventilation (alternatively at the lowest position) — 1

	№
13.5	862390
15	595651
16	2005652
17	639862

4.3 Diagram A | Slim | DesignLocking | 200 / 400 kg

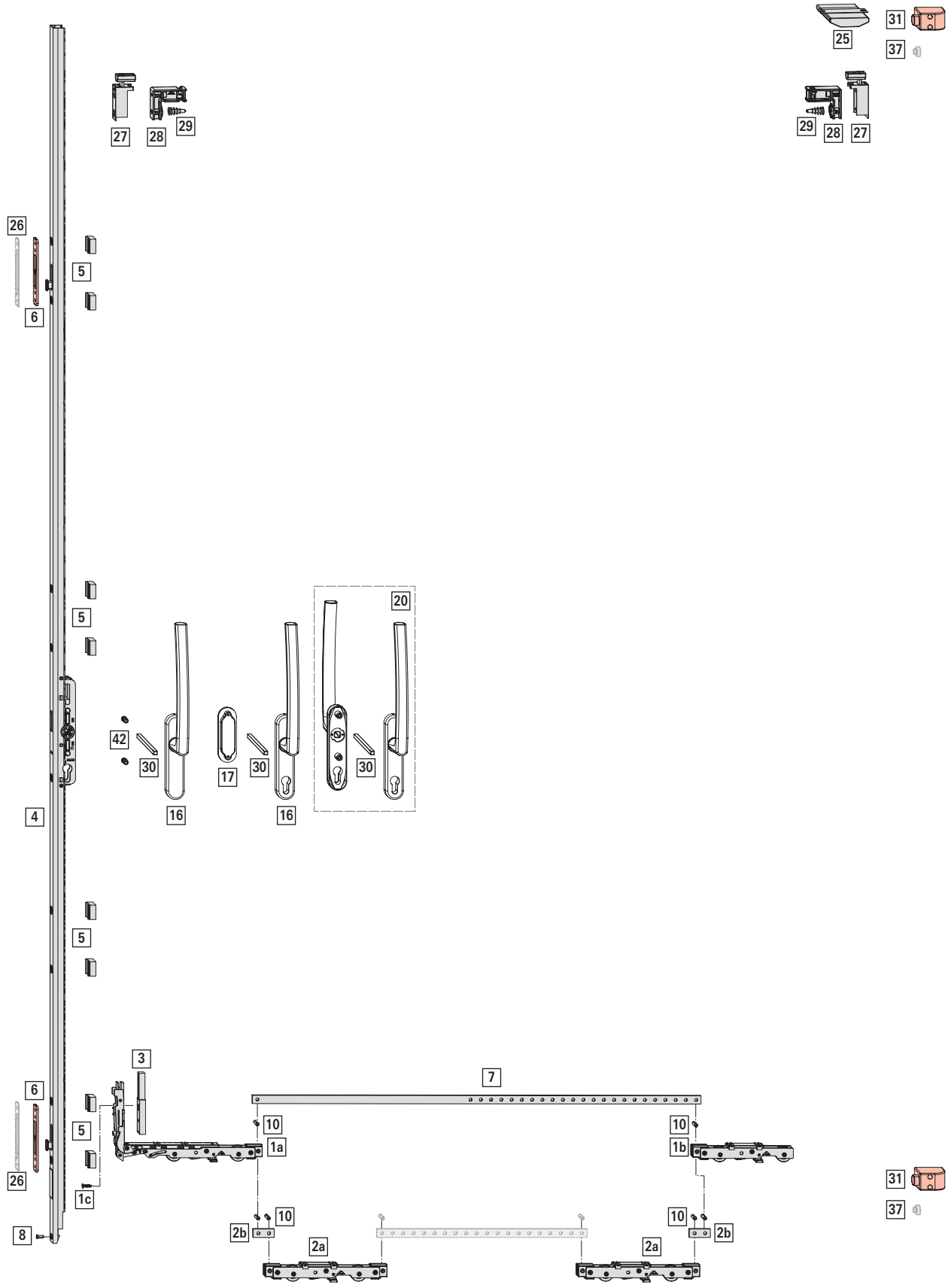


Fig. 4.3: Shown: left version; SW 1400 mm; SH 2400 mm; S.kg 200 / 400 kg

Application range

SW: 720 - 3000 mm [2]
SH: 1801 - 3100 mm
S.kg: max. 400 kg

[*] Roller unit set — 1

			№
max. 200 kg	16	–	840191
	18	–	840771
		Stainless steel Plus	734289
	22	–	840193
		Stainless steel Plus	734290

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 1

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[*] Roller unit upgrade set; S.kg > 200 kg — 1

		№
18	–	840773
	Stainless steel Plus	840772
22	–	840243
	Stainless steel Plus	840242

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4] Espagnolette – fixed handle height — 1

							№
27.5	–	max. 300 kg	1801 – 2200	965	2185	Y	840254
			2201 – 2600	965	2375	Y	840255
			2601 – 3100	965	3000	Y	840256
	Min. 300 kg	Max. 400 kg	1801 – 2200	965	2185	Y	840257
			2201 – 2600	965	2375	Y	840258
			2601 – 3100	965	3000	Y	840390

[42] Threaded insert, for espagnolette — 2

	№
27.5	840782

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 2600	8	1
> 2600	10	2

[6] Striker

		№
20	12.8	890955
	14	2005651
	16.5	2005650
	18	2000134
23	3	2000136

≤ 2600	2
> 2600	3

[7] Flat connecting rod — 1

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:

≤ 200 kg

≤ 1400	895
1401 – 1700	1200
1701 – 2000	1500
2001 – 2300	1800
> 2300	2300

> 200 kg with roller unit upgrade set

1080 – 1900	895
1901 – 2200	1200
2201 – 2500	1500
2501 – 2800	1800
> 2800	2300

[2] ≤ 200 kg: $SW_{max.}$ = 2800 mm

[16]	**Lift&Slide door handles – interior handle; 240 mm** (without square spindle and without / with profile cylinder hole) → CTL_1	1
[17]	**Lift&Slide door handles – recessed grip on the outside; oval / square** (80 mm screw spacing) → CTL_1	1
	Alternatively:	
[20]	Handle set; 240 mm → CTL_1	
[30]	**Square spindle** (10 x 10 mm) → CTL_1	1

[31]	**End stop**	2
	Alternatively:	
[37]	Rubber buffer → *from page 73*	

	#		№
27	2	ST4,2x60	2000288

[25] **Gasket bridge**				1
		#		№
100	17	2	ST4,2x32	2000128

[*] **Topglider set**, profile-related	1
	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

Optional

[26] **Packer** for striker			
			№
20	5	Can only be used with 2000134, 2005650 and 2005651	2000135
23	1	Can only be used with 2000136	2003691
23	5	Can only be used with 2000136	2000137

≤ 2600	2
> 2600	3

4.4 Diagram A | Standard | BasicLocking | 300 / 400 kg

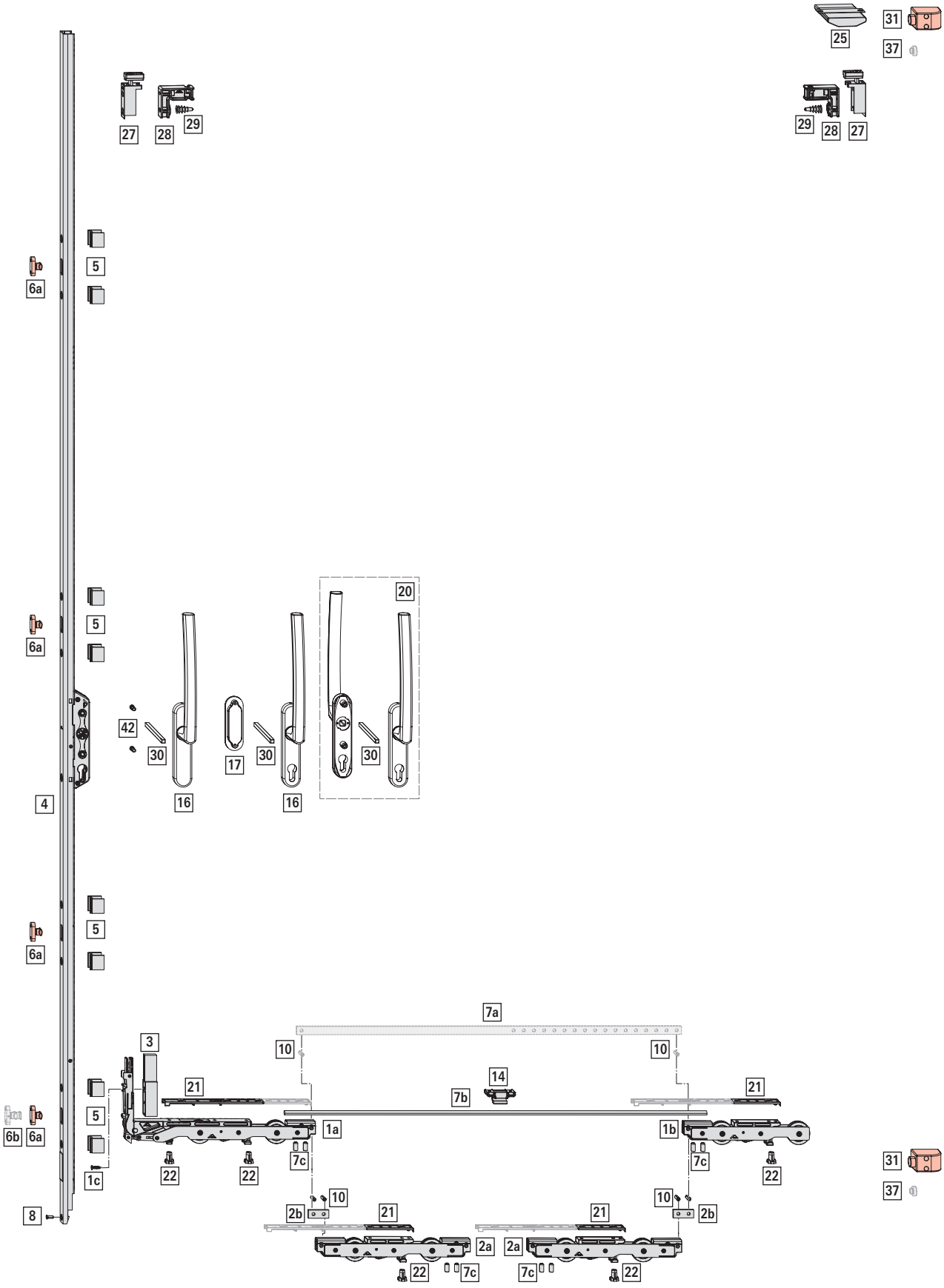


Fig. 4.4: Shown: left version; SW 1400 mm; SH 2400 mm; S.kg 300 / 400 kg

Application range

SW: 720 - 3000 mm
SH: 1000 - 3100 mm [3]
S.kg: max. 400 kg

[*] Roller unit set — 1

		№
22	–	899520
	Stainless steel Plus	899522

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 1

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[21] Packer for roller unit set without / with upgrade set; profile-related

	№
3.2	899529
8.2	899545

Weight-dependent choice:

≤ 300	1
> 300	3

[22] Support block

	№
Max. 400 kg	762901

≤ 300	3
> 300	5

[*] Roller unit upgrade set; S.kg > 300 kg — 1

			№
22	Max. 400 kg	–	899521
		Stainless steel Plus	899523

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4] Espagnolette – fixed handle height — 1

							№
37.5	–	max. 300 kg	1000 – 1800	349	1700	N	840816
			1801 – 2200	953	2185	Y	840378
			2201 – 2600	953	2375	Y	2001803
			2601 – 3100	953	3000	Y	840382
	Min. 300 kg	Max. 400 kg	1801 – 2200	953	2185	Y	840391
			2201 – 2600	953	2375	Y	2001814
			2601 – 3100	953	3000	Y	840393

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 1800	6	1
1801 – 2600	8	1
> 2600	10	2

[42] Threaded insert, for espagnolette — 2

	№
37.5	635152

[6a] Locking pin without night ventilation

	№
11	595652
13.5	639864
14.5	639863
15	595650
16	635126
17	635128
22	600508
24.5	639875
24	639896

≤ 1800	3
1801 – 2600	4
> 2600	5

[3] > 300 kg: $SH_{min.}$ = 1801 mm

[7b] Round connecting rod Ø 8; for profiles with a closed groove — 1

	№
970	2000125
1575	2000126
2380	2000127

Weight-dependent choice:

≤ 300 kg

≤ 1590	970
1591 – 2190	1575
> 2190	2380

> 300 kg with roller unit upgrade set

≤ 2190	970
2191 – 2800	1575
> 2800	2380

[7c] Threaded pin M8 x 15; for mounting the round connecting rod Ø 8

#		№
4	M8x15	899526

≤ 300	1
> 300	2

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 — 1

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 — 1

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 — 1

[31] End stop — 2

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[25] Gasket bridge — 1

		#		№
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related — 1

	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

[*] **Screw set (not sh.)**; profile-related; for mounting the espagnolette, roller unit and locking pin → *8.4 "Screw sets" from page 74*

Optional

[6b] Locking pin with night ventilation (alternatively at the lowest position) — 1

	№
13.5	862390
15	595651
16	2005652
17	639862

[7a] Flat connecting rod — 1

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:

≤ 300 kg

≤ 1500	895
1501 – 1800	1200
1801 – 2100	1500
2101 – 2400	1800
> 2400	2300

> 300 kg

≤ 2100	895
2101 – 2400	1200
2401 – 2700	1500
> 2700	1800

[14] Support block, depending on S.kg and SW — 1

	#		№
For round connecting rod Ø 8	2	ST4,2x16	2000139

Weight-dependent choice:

≤ 300 (without roller unit upgrade set)	≥ 1800
> 300 (with roller unit upgrade set)	≥ 2400

4.5 Diagram A | Standard | DesignLocking | 300 / 400 kg

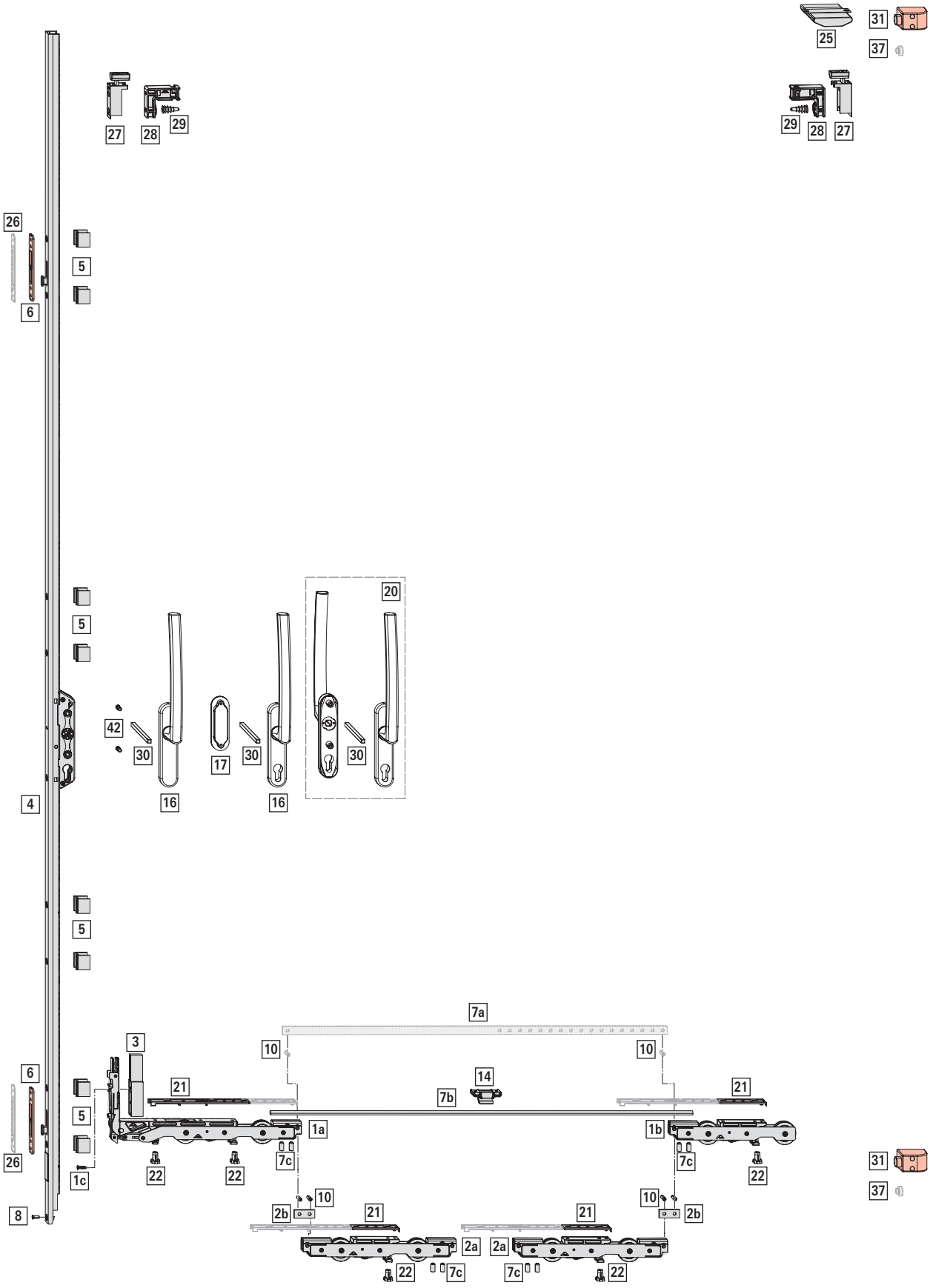


Fig. 4.5: Shown: left version; SW 1400 mm; SH 2400 mm; S.kg 300 / 400 kg

Application range

SW: 720 - 3000 mm
SH: 1000 - 3100 mm [4]
S.kg: max. 400 kg

[*] Roller unit set — 1

		№
22	–	899520
	Stainless steel Plus	899522

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 1

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[22] Support block

	№
Max. 400 kg	762901

≤ 300	3
> 300	5

[*] Roller unit upgrade set; S.kg > 300 kg — 1

			№
22	Max. 400 kg	–	899521
		Stainless steel Plus	899523

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4] Espagnolette – fixed handle height — 1

							№
37.5	–	max. 300 kg	1801 – 2200	953	2185	Y	771969
			2201 – 2600	953	2375	Y	771970
			2601 – 3100	953	3000	Y	771971

[4] > 300 kg: $SH_{min.}$ = 1801 mm

							№
	Min. 300 kg	Max. 400 kg	1801 – 2200	953	2185	Y	840784
			2201 – 2600	953	2375	Y	840799
			2601 – 3100	953	3000	Y	840815

[42] Threaded insert, for espagnolette — 2

	№
37.5	635152

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 1800	6	1
1801 – 2600	8	1
> 2600	10	2

[6] Striker

		№
20	12.8	890955
	14	2005651
	16.5	2005650
	18	2000134
23	3	2000136

≤ 1800	–
1801 – 2600	2
> 2600	3

[7b] Round connecting rod Ø 8; for profiles with a closed groove — 1

	№
970	2000125
1575	2000126
2380	2000127

Weight-dependent choice:

≤ 300 kg

≤ 1590	970
1591 – 2190	1575
> 2190	2380

> 300 kg with roller unit upgrade set

≤ 2190	970

2191 – 2800	1575
> 2800	2380

[7c] Threaded pin M8 x 15; for mounting the round connecting rod Ø 8

#		№
4	M8x15	899526

≤ 300	1
> 300	2

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 — 1

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 — 1

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 — 1

[31] End stop — 2

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[25] Gasket bridge — 1

		#		№
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related — 1

	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

Optional

[26] Packer for striker

			№
20	5	Can only be used with 2000134, 2005650 and 2005651	2000135
23	1	Can only be used with 2000136	2003691
23	5	Can only be used with 2000136	2000137

≤ 1800	–
1801 – 2600	2
> 2600	3

[7a] Flat connecting rod — 1

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:

≤ 300 kg

≤ 1500	895
1501 – 1800	1200
1801 – 2100	1500
2101 – 2400	1800
> 2400	2300

> 300 kg with roller unit upgrade set

≤ 2100	895
2101 – 2400	1200
2401 – 2700	1500
> 2700	1800

[14] Support block, depending on S.kg and SW — 1

	#		№
For round connecting rod Ø 8	2	ST4,2x16	2000139

Weight-dependent choice:

≤ 300 (without roller unit upgrade set)	≥ 1800
> 300 (with roller unit upgrade set)	≥ 2400

[21] Packer for roller unit set without / with upgrade set; profile-related

	№
3.2	899529
8.2	899545

Weight-dependent choice:

≤ 300	1
> 300	3

4.6 Diagram C | Slim | BasicLocking | 150 kg

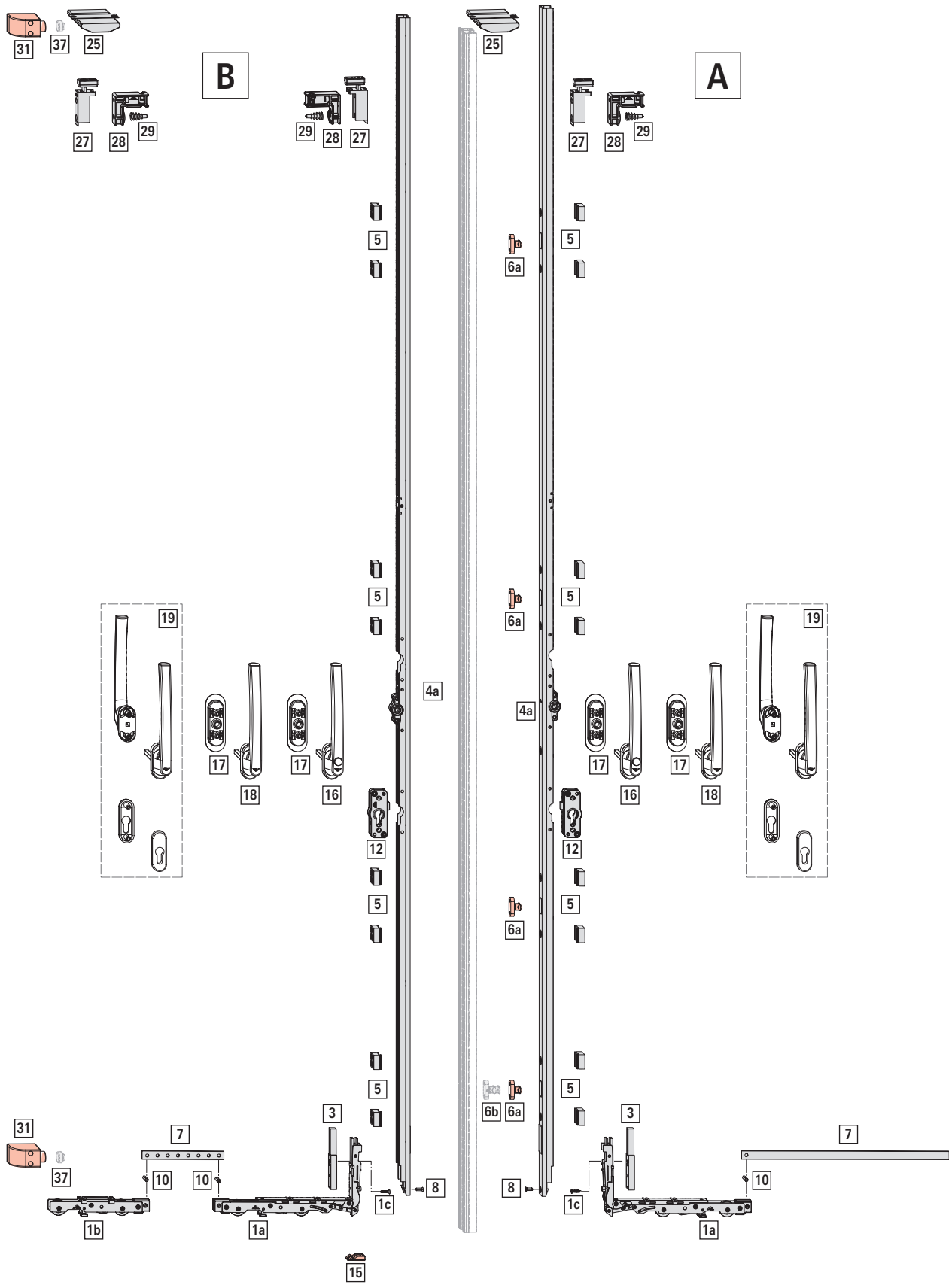


Fig. 4.6: Shown: S.kg 150 kg; [A] First opening sash: section of right version; SW 1400 mm; SH 2400 mm; [B] Second opening sash: left version; SW 1400 mm; SH 2400 mm;

Application range

SW: 720 - 2800 mm

SH: 1801 - 2600 mm

S.kg: max. 150 kg

INFO

First opening sash: for a complete hardware overview, see diagram A.

[*] Roller unit set 2

		№
16	–	840191
18	–	840771
	Stainless steel Plus	734289
22	–	840193
	Stainless steel Plus	734290

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit 2

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[4a] Espagnolette – fixed handle height 2

					№
25	max. 150 kg	1801 – 2200	965	2185	633426
		2201 – 2600	965	2375	633427

[*] Lock casing set 2

	№
max. 150 kg	631368

[*]		#
[12]	Lock casing	1
	Spring pin 5 x 22	2

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 2600	16	2
> 2600	20	3

[6a] Locking pin without night ventilation

	№
11	595652
13.5	639864
14.5	639863
15	595650
16	635126
17	635128
22	600508
24.5	639875
24	639896

≤ 2600	4
> 2600	5

[7] Flat connecting rod 2

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

≤ 1400	895
1401 – 1700	1200
1701 – 2000	1500
2001 – 2300	1800
> 2300	2300

[15] Floor striker 1

	№
Screw-on	840783

[16] Sliding door handles – interior handles; 200 mm – push-to-open → CTL_1 2

[17] Recessed grip; oval 16 mm (43 mm screw spacing) → CTL_1 2

Alternatively:

[18] Sliding door handles – interior handles; 200 mm → CTL_1

[19] Handle set with escutcheon version; 200 mm → CTL_1

[31] End stop 4

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[25] Gasket bridge 3

		#		№
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related 2

	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

[*] **Screw set (not sh.)**; profile-related; for mounting the espagnolette, roller unit and locking pin → *8.4 "Screw sets" from page 74*

Optional

[6b] Locking pin with night ventilation (alternatively at the lowest position) 1

	№
13.5	862390
15	595651
16	2005652
17	639862

4.7 Diagram C | Slim | BasicLocking | 200 / 400 kg

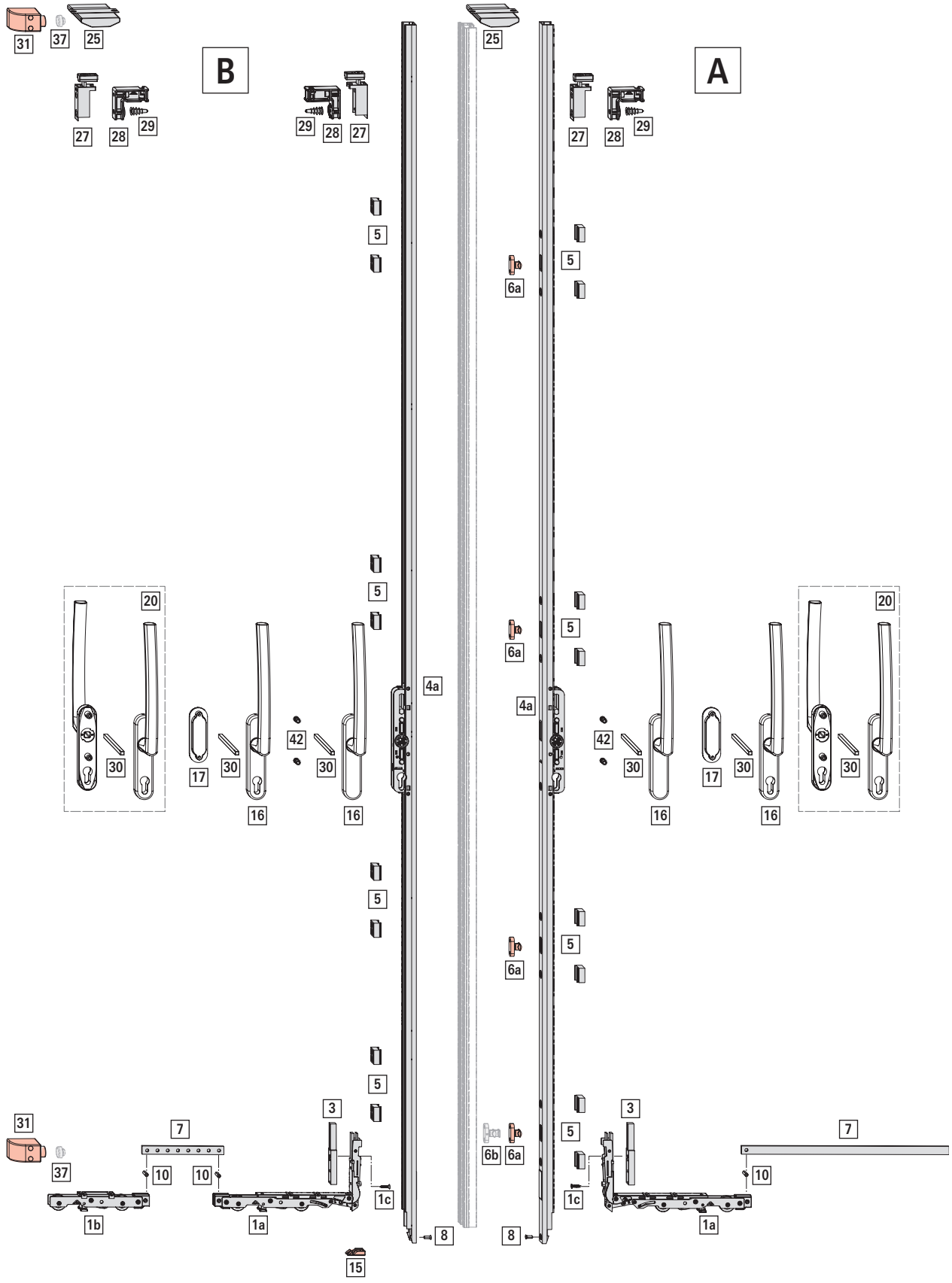


Fig. 4.7: Shown: S.kg 200 kg; [A] First opening sash: section of right version; SW 1400 mm; SH 2400 mm; [B] Second opening sash: left version; SW 1400 mm; SH 2400 mm; dashed in grey: profile-related floating-mullion profile

Application range

SW: 720 - 3000 mm [5]
SH: 1801 - 3100 mm
S.kg: max. 400 kg

INFO
First opening sash: for a complete hardware overview, see diagram A.

[*] Roller unit set — 2

			№
max. 200 kg	16	–	840191
	18	–	840771
		Stainless steel Plus	734289
	22	–	840193
		Stainless steel Plus	734290

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 2

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[*] Roller unit upgrade set; S.kg > 200 kg — 2

		№
18	–	840773
	Stainless steel Plus	840772
22	–	840243
	Stainless steel Plus	840242

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4a] Espagnolette – fixed handle height — 2

							№
27.5	–	max. 300 kg	1801 – 2200	965	2185	Y	840251
			2201 – 2600	965	2375	Y	2001815
			2601 – 3100	965	3000	Y	840253

[5] ≤ 200 kg: $SW_{max.}$ = 2800 mm

	Min. 300 kg	Max. 400 kg					№
			1801 – 2200	965	2185	Y	840248
			2201 – 2600	965	2375	Y	2001816
			2601 – 3100	965	3000	Y	840250

[11] Threaded insert, for espagnolette — 4

	№
27.5	840782

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 2600	16	2
> 2600	20	3

[6a] Locking pin without night ventilation

	№
11	595652
13.5	639864
14.5	639863
15	595650
16	635126
17	635128
22	600508
24.5	639875
24	639896

≤ 2600	4
> 2600	5

[7] Flat connecting rod — 2

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:
≤ 200 kg

≤ 1400	895
1401 – 1700	1200
1701 – 2000	1500
2001 – 2300	1800

> 2300	2300

> 200 kg with roller unit upgrade set

1080 – 1900	895
1901 – 2200	1200
2201 – 2500	1500
2501 – 2800	1800
> 2800	2300

[15] Floor striker 1

Screw-on	840783

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 2

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 2

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 2

[31] End stop 4

Alternatively:

[37] Rubber buffer → *from page 73*

	#		
27	2	ST4,2x60	2000288

[25] Gasket bridge 3

		#		
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related 2

Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

[*] **Screw set (not sh.)**; profile-related; for mounting the espagnolette, roller unit and locking pin → *8.4 "Screw sets" from page 74*

Optional

[6b] Locking pin with night ventilation (alternatively at the lowest position) 1

13.5	862390
15	595651
16	2005652
17	639862

4.8 Diagram C | Slim | DesignLocking | 200 / 400 kg

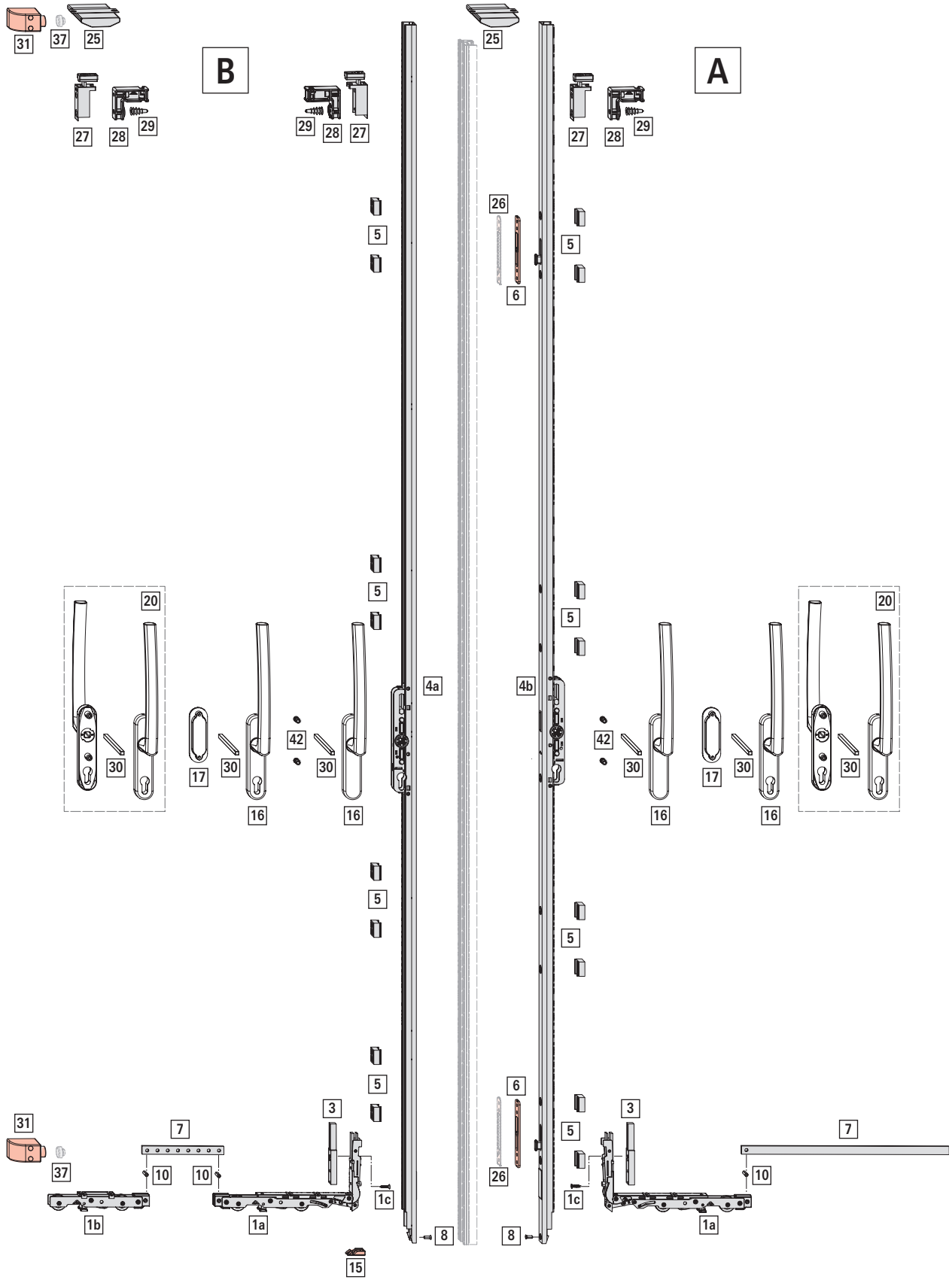


Fig. 4.8: Shown: S.kg 200 kg; [A] First opening sash: section of right version; SW 1400 mm; SH 2400 mm; [B] Second opening sash: left version; SW 1400 mm; SH 2400 mm; dashed in grey: profile-related floating-mullion profile

Application range

SW: 720 - 3000 mm [6]
SH: 1801 - 3100 mm
S.kg: max. 400 kg

INFO
First opening sash: for a complete hardware overview, see diagram A.

[*] Roller unit set — 2

			№
max. 200 kg	16	–	840191
	18	–	840771
		Stainless steel Plus	734289
	22	–	840193
		Stainless steel Plus	734290

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 2

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[*] Roller unit upgrade set; S.kg > 200 kg — 2

		№
18	–	840773
	Stainless steel Plus	840772
22	–	840243
	Stainless steel Plus	840242

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4a] Espagnolette – fixed handle height — 1

							№
27.5	–		max. 300 kg	1801 – 2200	965	2185 Y	840251
				2201 – 2600	965	2375 Y	2001815
				2601 – 3100	965	3000 Y	840253
		Min. 300 kg	Max. 400 kg	1801 – 2200	965	2185 Y	840248
				2201 – 2600	965	2375 Y	2001816
				2601 – 3100	965	3000 Y	840250

[4b] Espagnolette – fixed handle height; for first opening sash — 1

							№
27.5	–		max. 300 kg	1801 – 2200	965	2185 Y	840254
				2201 – 2600	965	2375 Y	840255
				2601 – 3100	965	3000 Y	840256
		Min. 300 kg	Max. 400 kg	1801 – 2200	965	2185 Y	840257
				2201 – 2600	965	2375 Y	840258
				2601 – 3100	965	3000 Y	840390

[11] Threaded insert, for espagnolette — 4

	№
27.5	840782

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 2600	16	2
> 2600	20	3

[6] Striker

		№
20	12.8	890955
	14	2005651
	16.5	2005650
	18	2000134
23	3	2000136

≤ 2600	2
> 2600	3

[7] Flat connecting rod — 2

	№
895	634852
1200	595649
1500	634853
1800	606712

[6] ≤ 200 kg: $SW_{max.}$ = 2800 mm

	№
2300	634854

Weight-dependent choice:
≤ 200 kg

≤ 1400	895
1401 – 1700	1200
1701 – 2000	1500
2001 – 2300	1800
> 2300	2300

> 200 kg with roller unit upgrade set

1080 – 1900	895
1901 – 2200	1200
2201 – 2500	1500
2501 – 2800	1800
> 2800	2300

[15] Floor striker 1

	№
Screw-on	840783

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 2

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 2

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 2

[31] End stop 4

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[25] Gasket bridge 3

		#		№
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related 2

	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

Optional

[26] Packer for striker

			№
20	5	Can only be used with 2000134, 2005650 and 2005651	2000135
23	1	Can only be used with 2000136	2003691
23	5	Can only be used with 2000136	2000137

≤ 2600	2
> 2600	3

4.9 Diagram C | Standard | BasicLocking | 300 / 400 kg

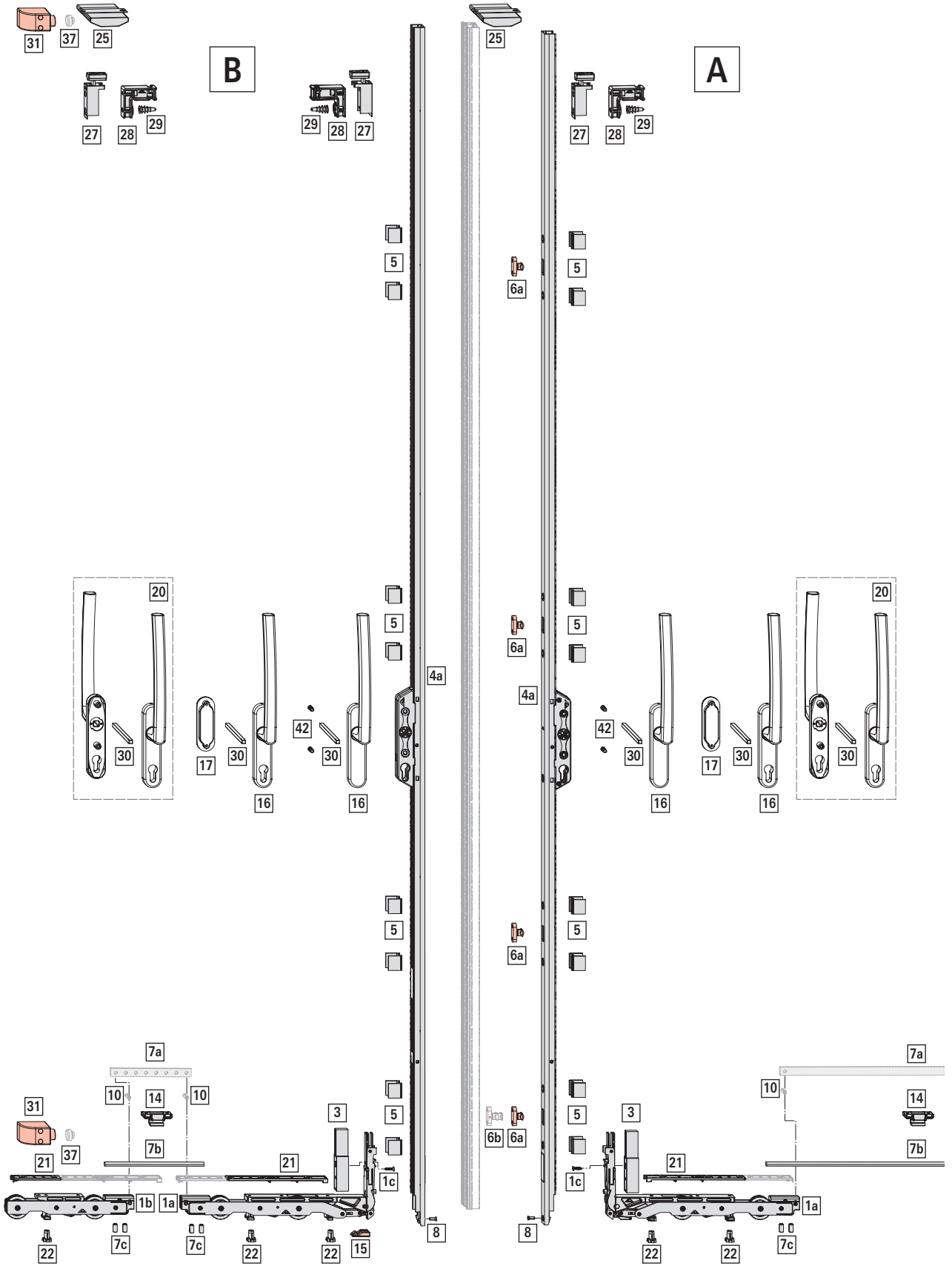


Fig. 4.9: Shown: S.kg 300 kg; [A] First opening sash: section of right version; SW 1400 mm; SH 2400 mm; [B] Second opening sash: left version; SW 1400 mm; SH 2400 mm; dashed in grey: profile-related floating-mullion profile

Application range

SW: 720 - 3000 mm
SH: 1000 - 3100 mm [7]
S.kg: max. 400 kg

INFO
First opening sash: for a complete hardware overview, see diagram A.

[*] Roller unit set — 2

		№
22	–	899520
	Stainless steel Plus	899522

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 2

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[22] Support block

	№
Max. 400 kg	762901

≤ 300	6
> 300	10

[*] Roller unit upgrade set; S.kg > 300 kg — 2

			№
22	Max. 400 kg	–	899521
		Stainless steel Plus	899523

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4a] Espagnolette – fixed handle height — 2

						№
37.5	–	max. 300 kg	1000 – 1800	349	1700 N	840816
			1801 – 2200	953	2185 Y	840378
			2201 – 2600	953	2375 Y	2001803
			2601 – 3100	953	3000 Y	840382
	Min. 300 kg	Max. 400 kg	1801 – 2200	953	2185 Y	840391
			2201 – 2600	953	2375 Y	2001814
			2601 – 3100	953	3000 Y	840393

[11] Threaded insert, for espagnolette — 4

	№
37.5	635152

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 1800	12	2
1801 – 2600	16	2
> 2600	20	3

[6a] Locking pin without night ventilation

	№
11	595652
13.5	639864
14.5	639863
15	595650
16	635126
17	635128
22	600508
24.5	639875
24	639896

≤ 1800	3
1801 – 2600	4
> 2600	5

[7b] Round connecting rod; for profiles with a closed groove — 2

	№
970	2000125
1575	2000126
2380	2000127

Weight-dependent choice:

[7] > 300 kg: $SH_{min.}$ = 1801 mm

≤ 300 kg

≤ 1590	970
1591 – 2190	1575
> 2190	2380

> 300 kg with roller unit upgrade set

≤ 2190	970
2191 – 2800	1575
> 2800	2380

[7c] Threaded pin M8 x 15; for mounting the round connecting rod Ø 8

#		Nº
4	M8x15	899526

≤ 300	2
> 300	4

[15] Floor striker 1

	Nº
Screw-on	840783

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 2

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 2

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 2

[31] End stop 4

Alternatively:

[37] Rubber buffer → *from page 73*

	#		Nº
27	2	ST4,2x60	2000288

[25] Gasket bridge 3

		#		Nº
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related 2

	Nº
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

[*] **Screw set (not sh.)**; profile-related; for mounting the espagnolette, roller unit and locking pin → *8.4 "Screw sets" from page 74*

Optional

[6b] Locking pin with night ventilation (alternatively at the lowest position) 1

	Nº
13.5	862390
15	595651
16	2005652
17	639862

[7a] Flat connecting rod 2

	Nº
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:

≤ 300 kg

≤ 1500	895
1501 – 1800	1200
1801 – 2100	1500
2101 – 2400	1800
> 2400	2300

> 300 kg with roller unit upgrade set

≤ 2100	895
2101 – 2400	1200
2401 – 2700	1500
> 2700	1800

[14] Support block, depending on S.kg and SW 2

	#		Nº
For round connecting rod Ø 8	2	ST4,2x16	2000139

Weight-dependent choice:

≤ 300 (without roller unit upgrade set)	≥ 1800
> 300 (with roller unit upgrade set)	≥ 2400

[21] **Packer** for roller unit set without / with upgrade set; profile-related	
	№
3.2	899529
8.2	899545

Weight-dependent choice:

≤ 300	2
> 300	6

4.10 Diagram C | Standard | DesignLocking | 300 / 400 kg

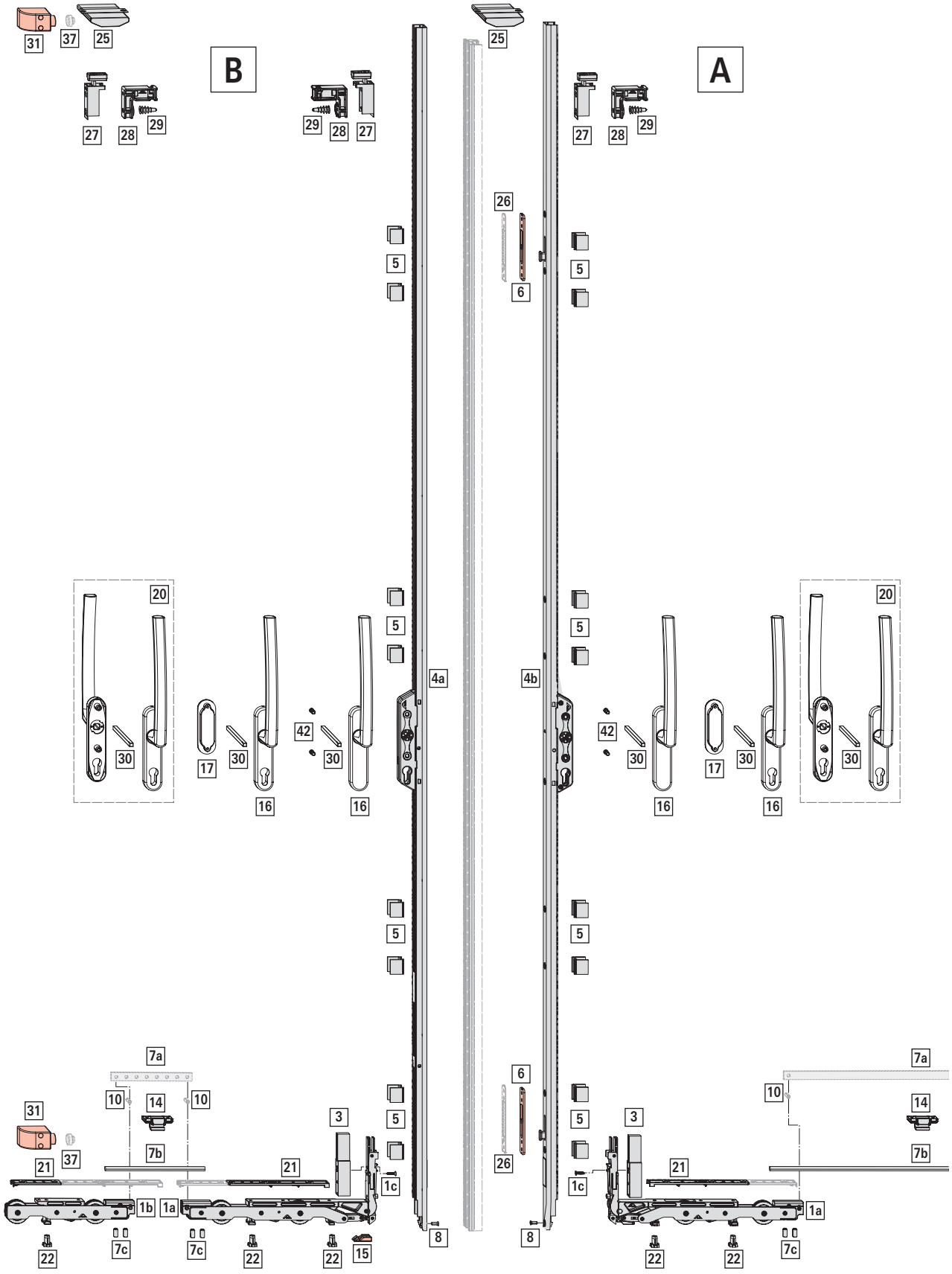


Fig. 4.10: Shown: S.kg 300 kg; [A] First opening sash: section of right version; SW 1400 mm; SH 2400 mm; [B] Second opening sash: left version; SW 1400 mm; SH 2400 mm; dashed in grey: profile-related floating-mullion profile

Application range

SW: 720 - 3000 mm
SH: 1000 - 3100 mm [8]
S.kg: max. 400 kg

INFO
First opening sash: for a complete hardware overview, see diagram A.

[*] Roller unit set — 2

		№
22	–	899520
	Stainless steel Plus	899522

[*]		#
[1a]	Corner roller unit	1
[1b]	Roller unit on the mullion side	1
[8]	Countersunk screw M5 x 13	1
[10]	Connecting pin	2

[*] Packer set for corner roller unit — 2

	№
7.5	861564
16	840774
19	840775
20.5	840776
23	840777
25	840778
30	840779

[*]		#
[3]	Packer	1
[1c]	Self-tapping screw ST4.8 x 20	1

[22] Support block

	№
Max. 400 kg	762901

≤ 300	6
> 300	10

[*] Roller unit upgrade set; S.kg > 300 kg — 2

			№
22	Max. 400 kg	–	899521
		Stainless steel Plus	899523

[*]		#
[10]	Connecting pin	4
[2a]	Additional roller unit, central	2
[2b]	Connecting plate	2

[4a] Espagnolette – fixed handle height — 1

							№
37.5	–	max. 300 kg	1000 – 1800	349	1700	N	840816
			1801 – 2200	953	2185	Y	840378
			2201 – 2600	953	2375	Y	2001803
			2601 – 3100	953	3000	Y	840382
	Min. 300 kg	Max. 400 kg	1801 – 2200	953	2185	Y	840391
			2201 – 2600	953	2375	Y	2001814
			2601 – 3100	953	3000	Y	840393

[4b] Espagnolette – fixed handle height; for first opening sash — 1

							№
37.5	–	max. 300 kg	1801 – 2200	953	2185	Y	771969
			2201 – 2600	953	2375	Y	771970
			2601 – 3100	953	3000	Y	771971
	Min. 300 kg	Max. 400 kg	1801 – 2200	953	2185	Y	840784
			2201 – 2600	953	2375	Y	840799
			2601 – 3100	953	3000	Y	840815

[11] Threaded insert, for espagnolette — 4

	№
37.5	635152

[5] Espagnolette packer

		№
7.5	8 Piece(s)	861569
16	8 Piece(s)	595654
19	8 Piece(s)	600513
20.5	8 Piece(s)	600512
23	8 Piece(s)	601952
25	8 Piece(s)	636526
30	8 Piece(s)	606766

	#	
≤ 1800	12	2
1801 – 2600	16	2
> 2600	20	3

[6] Striker

		№
20	12.8	890955
	14	2005651
	16.5	2005650
	18	2000134
23	3	2000136

≤ 1800	–
1801 – 2600	2
> 2600	3

[8] > 300 kg: $SH_{min.}$ = 1801 mm

[7b] Round connecting rod; for profiles with a closed groove — 2

	№
970	2000125
1575	2000126
2380	2000127

Weight-dependent choice:
≤ 300 kg

≤ 1590	970
1591 – 2190	1575
> 2190	2380

> 300 kg with roller unit upgrade set

≤ 2190	970
2191 – 2800	1575
> 2800	2380

[7c] Threaded pin M8 x 15; for mounting the round connecting rod Ø 8

#		№
4	M8x15	899526

≤ 300	2
> 300	4

[15] Floor striker — 1

	№
Screw-on	840783

[16] Lift&Slide door handles – interior handle; 240 mm (without square spindle and without / with profile cylinder hole) → CTL_1 — 2

[17] Lift&Slide door handles – recessed grip on the outside; oval / square (80 mm screw spacing) → CTL_1 — 2

Alternatively:

[20] Handle set; 240 mm → CTL_1

[30] Square spindle (10 x 10 mm) → CTL_1 — 2

[31] End stop — 4

Alternatively:

[37] Rubber buffer → *from page 73*

	#		№
27	2	ST4,2x60	2000288

[25] Gasket bridge — 3

		#		№
100	17	2	ST4,2x32	2000128

[*] Topglider set, profile-related — 2

	№
Without adapter	899512
With V.16/28 adapter	899514
With V.19/24 adapter	899513
With V.19/28 adapter	2005507
With V.25/24 adapter	2005151

[*]		#
[27]	Slider	2
[28]	Slider adapter	2
[29]	Wall plug 14.5 x 33	4 / 2 / 2
	Countersunk screw ST4.8 x ... (not sh.)	4
	Special screw 6.3 x 40 (not sh.)	0 / 2 / 2

Optional

[26] Packer for striker

			№
20	5	Can only be used with 2000134, 2005650 and 2005651	2000135
23	1	Can only be used with 2000136	2003691
23	5	Can only be used with 2000136	2000137

≤ 1800	–
1801 – 2600	2
> 2600	3

[7a] Flat connecting rod — 2

	№
895	634852
1200	595649
1500	634853
1800	606712
2300	634854

Weight-dependent choice:
≤ 300 kg

≤ 1500	895
1501 – 1800	1200
1801 – 2100	1500
2101 – 2400	1800
> 2400	2300

> 300 kg with roller unit upgrade set

≤ 2100	895
2101 – 2400	1200
2401 – 2700	1500
> 2700	1800

[14] **Support block**, depending on S.kg and SW 2

	#		№
For round connecting rod Ø 8	2	ST4,2x16	2000139

Weight-dependent choice:

≤ 300 (without roller unit upgrade set)	≥ 1800
> 300 (with roller unit upgrade set)	≥ 2400

[21] **Packer** for roller unit set without / with upgrade set; profile-related

	№
3.2	899529
8.2	899545

Weight-dependent choice:

≤ 300	2
> 300	6

4.11 Diagram A | Slim and standard | BasicLocking | Components for RC 2 / RC 2 N

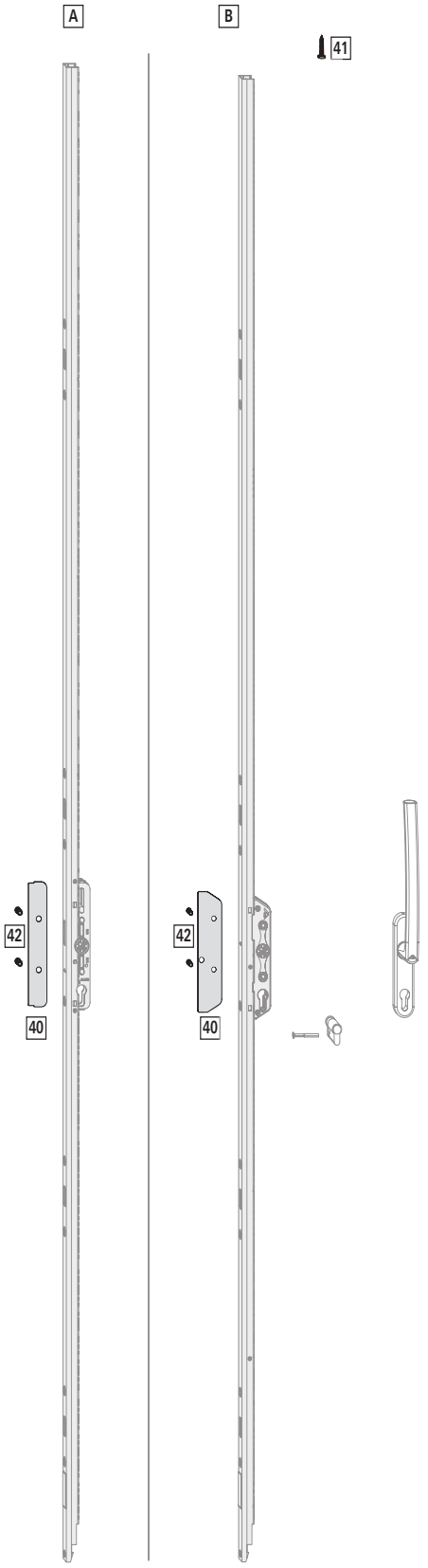


Fig. 4.11: Shown: diagram A; left version; SH 2400 mm; Slim [A] 200 kg and standard [B] S.kg 300 / 400 kg; lockable handles

INFO

Can only be used with:

- Locking pins (at all locking positions)
- Slim / standard (without DesignLocking) | BS 27.5 / 37.5
- Half-cylinder on the inside

[*]	Drilling protection set	1
		№
27.5		899528
37.5		899527

[*]		#
[40]	Drilling protection	1
[42]	Threaded insert	2

[41]	Anti-jemmy device	2
#		№
2	ST6,3x38	2000138

5 Profile systems

5.1 Overview

INFO

The profiles shown in the overview are an excerpt from the profile assessments. Other profiles are available upon request.

Abbreviation	Meaning	Abbreviation	Meaning
VAR	Version SLIM BLO= Slim BasicLocking; SLIM DLO = Slim DesignLocking STD BLO= Standard BasicLocking; STD DLO = Standard DesignLocking	**SST**	Striker width / height
LW	Roller unit width	**SST-U**	Striker packer width / height (quantity per striker)
LW-U	Packer height [A] From packer set for corner roller unit [B] For all packers on all roller units from roller unit set	**SCR-S**	Screw set number → *from page 74*
DM	Espagnolette backset	**TGL**	Topglider version (w/o ad. = without adapter)
GTR-U	Espagnolette packer height	**DBR**	Gasket bridge
VBS	Connecting rod version	■	Suitable
SB	Locking pin height	**–**	Not suitable

Profile system	VAR	LW	LW-U		DM	GTR-U	VBS	SB	SST	SST-U	SCR-S	TGL	DBR
Roto profile assessment no.			[A]	[B]									
aluplast HST85 (low roller track)	STD BLO	22	–	7.4**	37.5	–	Round	17	–	–	5	–	■
S20A2733-801_E4	STD DLO	22	–	7.4**	37.5	–	Round	–	23/3	–	5	–	■
aluplast HST85 (high roller track)	STD BLO	22	–	–	37.5	–	Round	17	–	–	4	–	■
S20A2733-101_E4	STD DLO	22	–	–	37.5	–	Round	–	23/3	–	4	–	■
Deceuninck HS76	STD BLO	22	19	–	37.5	19	Round	16	–	–	7	V.19/28	–
S20A2733-701_E3	STD DLO	22	16	–	37.5	16	Round	–	20/14	–	7	V.16/28	–
Deceuninck HST 476 **Deceuninck Monorail LS** S20A2733-301_E2	STD BLO	22	19	–	37.5*	–	Round	22	–	–	6	–	–
Decco HST 83 Panoramico	STD BLO	22	–	–	37.5	–	Round	17	–	–	–	–	■
S20A2578-001_E3	STD DLO	22	–	–	37.5	–	Round	–	23/3	–	–	–	■
Decco HST100 Standard (low roller track)	STD BLO	22	–	8.2	37.5	–	Round	17	–	–	9	–	■
S20A2578-201_E2	STD DLO	22	–	8.2	37.5	–	Round	–	23/3	–	9	–	■
Decco HST100 Standard (high roller track)	STD BLO	22	–	–	37.5	–	Round	17	–	–	8	–	■
S20A2578-101_E4	STD DLO	22	–	–	37.5	–	Round	–	23/3	–	8	–	■
Kömmerling PremiDoor 70	STD BLO	22	–	–	37.5	–	Round	16	–	–	8	W/o ad.	■
S20A2733-601_E3	STD DLO	22	–	–	37.5	–	Round	–	23/3	–	8	W/o ad.	■
Kömmerling PremiDoor 76	STD BLO	22	–	–	37.5	–	Round	16	–	–	8	W/o ad.	■
S20A2733-401_E2	STD DLO	22	–	–	37.5	–	Round	–	23/3	23/1(1)	8	W/o ad.	■
Kömmerling PremiDoor 88	STD BLO	22	–	–	37.5	–	Round	16	–	–	8	W/o ad.	–
S20A2733-501_E3	STD DLO	22	–	–	37.5	–	Round	–	23/3	23/1(1)	8	W/o ad.	–
Schüco EasySlide	STD BLO	22	25	–	37.5	25	Round	13.5	–	–	9	V.25/24	–
S21A049-001_E3	STD DLO	22	19	–	37.5	19	Round	–	23/3	23/1(3)	9	V.19/24	–
Schüco LivIngSlide	STD BLO	22	–	3.2	37.5	–	Round	17	–	–	3	***	–
S21A049-201_E2	STD DLO	22	–	3.2	37.5	–	Round	–	23/3	23/1(1)	3	***	–
VEKAMOTION 82	SLIM BLO	22	7.5	–	27.5	7.5	Flat	13.5	–	–	1	–	–
S20A2464-100_E5	SLIM DLO	22	–	–	27.5	–	Flat	–	23/3	23/5(1)	1	–	–
VEKASLIDE 70	STD BLO	22	25	–	37.5	25	Round	17	–	–	2	–	–
S20A2733-001_E2	STD DLO	22	19	–	37.5	19	Round	–	20/16.5	23/5(1)	2	–	–

Profile system	VAR	LW	LW-U		DM	GTR-U	VBS	SB	SST	SST-U	SCR-S	TGL	DBR
Roto profile assessment no.			[A]	[B]									
VEKASLIDE 82	STD BLO	22	25	–	27.5	25	Round	17	–	–	2	–	–
S20A2913-001_E2	STD DLO	22	19	–	27.5	19	Round	–	20/16.5	20/5(1)	2	–	–

* = routed espagnolette → *from page 70*

** = use the packer from the profile system manufacturer.

** = use the topglider from the profile system manufacturer.

6 Espagnolettes

6.1 Espagnolette – fixed handle height, with round cylinder

For Slim, round cylinder Ø 22 mm

–	max. 300 kg	27.5	1801 – 2200	965	2185	Y	894703
		27.5	2201 – 2600	965	2375	Y	2001817
		27.5	2601 – 3100	965	3000	Y	894745
Min. 300 kg	Max. 400 kg	27.5	1801 – 2200	965	2185	Y	894746
		27.5	2201 – 2600	965	2375	Y	2001818
		27.5	2601 – 3100	965	3000	Y	894748

Espagnolette – fixed handle height, with round cylinder can also be used with the standard design variant. The fixed handle height changes when the espagnolette is fitted with the roller unit set for the standard version → *from page 79*.

6.2 Espagnolette – fixed handle height – for espagnolette extension with additional locking point, with profile cylinder

For Slim

27.5	2201 – 2600	965	2375	Y	–	max. 300 kg	2001815
					Min. 300 kg	Max. 400 kg	2001816

For standard

37.5	2201 – 2600	953	2375	Y	–	max. 300 kg	2001803
					Min. 300 kg	Max. 400 kg	2001814

6.3 Espagnolette – fixed handle height – for espagnolette extension with additional locking point, with round cylinder

For Slim

–	max. 300 kg	28	2201 – 2600	965	2375	Y	2001817
Min. 300 kg	Max. 400 kg	28	2201 – 2600	965	2375	Y	2001818

6.4 Espagnolette – fixed handle height, routed (height 15.5 mm)

For Deceuninck HS476 and Deceuninck Monorail LS – standard

INFO
The processing steps differ. Pay attention to the profile assessment.

max. 300 kg	37.5	1000 – 1800	351	1700	Y	861145
		1801 – 2200	965	2185	Y	861142
		2201 – 2600	965	2375	Y	861143
		2601 – 3100	965	3000	Y	861144

6.5 Espagnolette extension with additional locking point

Can only be used with espagnolette – fixed handle height – for espagnolette extension with additional locking point.

Application range: SH = min. 2660[9] - 3100 mm

Espagnolette side	896110

[9] Depending on the installation dimension Z → *from page 98*

7 Jigs / tools

7.1 Positioning jigs

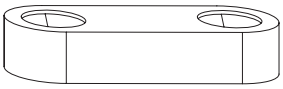
7.1.1 Locking pin

2000 – 3100	Espagnolette side	635157

8 Accessories

8.1 Locking pin

Locking pin packer



	№
7	600509

Locking pin set

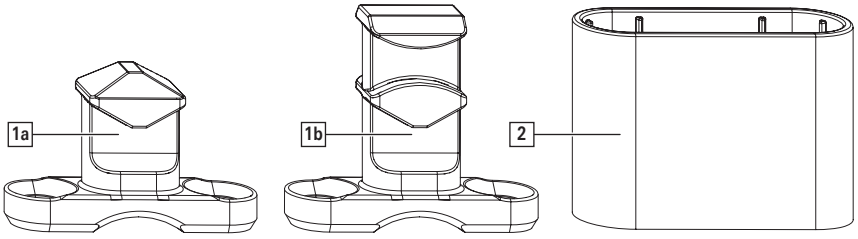


Fig. 8.1: [1a] Locking pin without night ventilation; [1b] Locking pin with night ventilation; [2] Packer

		№
35	N	642769
	Y	642770

Contents:

	#
Locking pin; height 14 mm	1
Packer; height 3 – 21 mm; can be shortened (max. 18 mm)	1

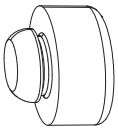
ATTENTION

Using incorrect locking pins from the set may cause property damage.

Installing the locking pin without a packer may damage the installed locking pin when closing, with the result that it may not even close at all.

1. Only use the locking pin from the set in conjunction with the packer from the set.

8.2 Rubber buffer



	№
14	729179
16.5	780647
17.5	798249

8.3 Info clip

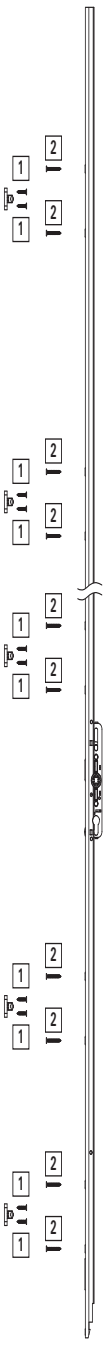
For attaching information (e.g. company logo and similar) to the espagnolette.

Signal grey	634865

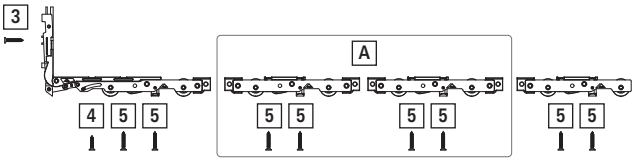
8.4 Screw sets

For espagnolette, roller unit, locking pin / striker

INFO
Note the profile assessment for selecting the screw sets or screws which can be readily procured.



	Screw length in mm (countersunk self-tapping screw ST4.8 x ...; cross-head drive)				
	[1] (10 pcs)	[2] (10 pcs)	[3] (1 pc.)	[4] (1 pc.)	[5] (4 pcs)
Screw set 1	38	50	45	19	32
Screw set 2	38	60	55	32	32
Screw set 3	38	38	32	32	32
Screw set 4	38	65	60	32	32
Screw set 5	38	65	60	38	38
Screw set 6	38	50	45	32	32
Screw set 7	45	65	60	45	45
Screw set 8	50	65	60	32	32
Screw set 9	45	65	60	38	38



INFO

With the upgrade set for the roller unit, order an additional screw set.

For diagram A, order one screw set; for diagram C, order two screw sets.

[A] Upgrade set for roller unit

9 Brief instructions

9.1 Roto Patio Lift

Summary of IMO 324

	Installation sequence	Note	Page reference	Diagram A	Diagram C
Sash	Carry out the drilling and routing work.	Deburr the drill holes and routed areas.	→ *from page 79*	■	■
	Prepare the connecting rod.	The length of the connecting rod depends on the version used Can be shortened from the left / right depending on SW.	→ *from page 89*	■	■
	Install the roller unit set.	Screw the corner roller unit onto the packer. Connect the corner roller unit and the roller unit with the connecting rod. Slim S.kg ≥ 200 kg; standard S.kg ≥ 300 kg: install the additional set	→ *from page 93*	■	■
	Install the espagnolette.	Crop the espagnolette. Break the caps from the espagnolette. Install the packers on the espagnolette. Move the espagnolette to the closed position.	→ *from page 103*	■	■
	Install the handle.		→ *from page 104*	■	■
Joining the sash and frame	Hinge the sash.			■	■
	Install the locking components.	Standard: locking pin DesignLocking: striker / striker plate	→ *from page 112* → *from page 114*	■	■
	Install the diagram C striker.		→ *from page 117*	–	■
	Install the gasket bridge.	Diagram A / D: 1 pc. Diagram C: 3 pcs	→ *from page 107*	■	■
	Install the end stop.	Alternatively: rubber buffer Diagram D: shorten the end stop bolt.	→ *from page 106* → *from page 118*	■	■
Final acceptance	Lubricate the hardware.		→ *from page 123*	■	■

10 Installation

10.1 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.

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.

10.2 Screw connections

DANGER

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

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

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

ATTENTION

Using incorrect screw material may cause property damage.

Using the wrong screws may damage the components.

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

ATTENTION

Improper screw fixings may cause property damage.

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

- Unless stated otherwise, turn screws in straight.
- Tighten screw heads until they are flush with the surface.
- Do not over-tighten screws. Note the torque. Choose a torque that will not deform the hardware and profile. Define profile-specific torques on the basis of the demo assembly.
- Use the recommended screws.
- Select the length of the screws according to the profiles used.

10.2.1 Overview

WARNING

Incorrect screw connections may pose a risk of death!

Short screws will not reach the steel reinforcement and will therefore not hold.
Hardware components can be pulled out of the sash if they are not screwed into the steel reinforcement.

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

Components	Quantity	Size	Diameter to be drilled		Type of screw	Drive
			Steel	Aluminium		
Roller unit	5	ST4.8 x ...	3.9	3.7	Countersunk self-tapping screw	Cross-head
Roller unit upgrade set	4	ST4.8 x ...	3.9	3.7	Countersunk self-tapping screw	Cross-head
Espagnolette	...	ST4.8 x ...	3.9	3.7	Countersunk self-tapping screw	Cross-head
Locking pin	2	ST4.8 x ...	3.9	3.7	Countersunk self-tapping screw	Cross-head
Striker 20/12.8	4	ST4.2 x ...	3.5	3.5	Countersunk self-tapping screw	Cross-head
Striker 20/18; 23/3	4	ST4.8 x ...	3.9	3.7	Countersunk self-tapping screw	Cross-head
End stop	2	ST4.2 x ...	3.5	3.5	Countersunk self-tapping screw	Cross-head
Support block	2	ST4.2 x ...	3.5	3.5	Countersunk self-tapping screw	Cross-head

Components	Quantity	Size	Diameter to be drilled		Type of screw	Drive
			Steel	Aluminium		
Roto Line handle without recessed grip and exterior handle	2	M5 x ...	10.0 / 12.0	10.0 / 12.0	Countersunk self-tapping screw	Cross-head

INFO

- Alternative to steel reinforcement: aluminium reinforcement
- If the thickness of the steel reinforcement is < 1.5 mm or if the thickness of the aluminium reinforcement is < 2 mm, use inlays on site.
- Place a pressure-proof underlay beneath cavities for reinforcement.

10.3 Drilling and routing dimensions

10.3.1 Determining the handle height

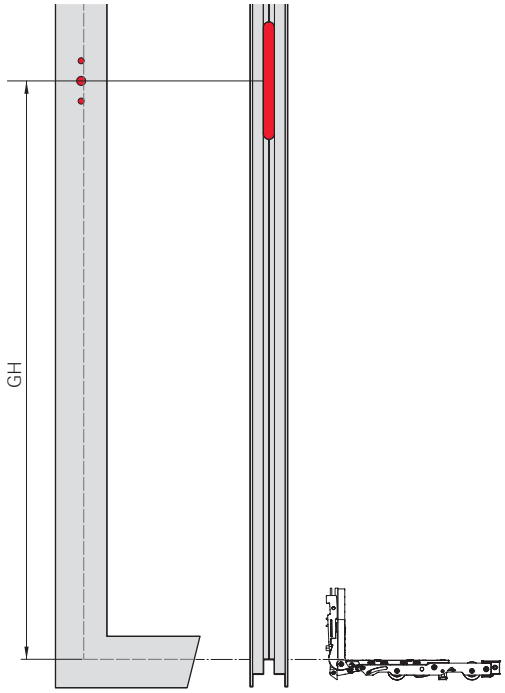
The handle height (HH) is measured from the roller unit supporting surface to the centre of the square spindle.

Espagnolettes BS 27.5 can also be used in conjunction with the standard roller unit set. Espagnolettes BS 37.5 can also be used in conjunction with the Slim roller unit set. In these cases, refer to the table below for the changed handle height for the position of the drilling and routing dimensions for the handle and gearbox.

Roller unit set	Handle height for espagnolettes with BS 27.5 and BS 37.5
Slim	361
	965
Standard	349
	953

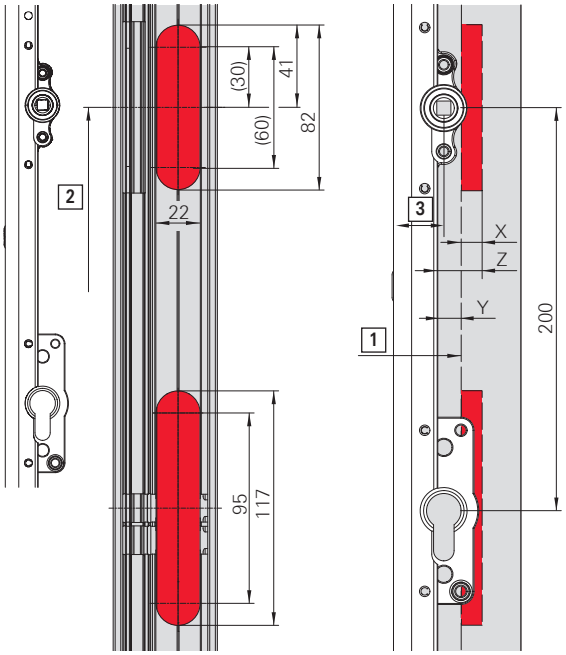
INFO

If packers are installed on the roller unit, subtract the packer height from the handle height.



10.3.2 Gearbox / lock casing

BS 25 with profile cylinder



[1] Hardware supporting surface

[2] Handle height

[3] Backset BS

Gearbox routing depth:

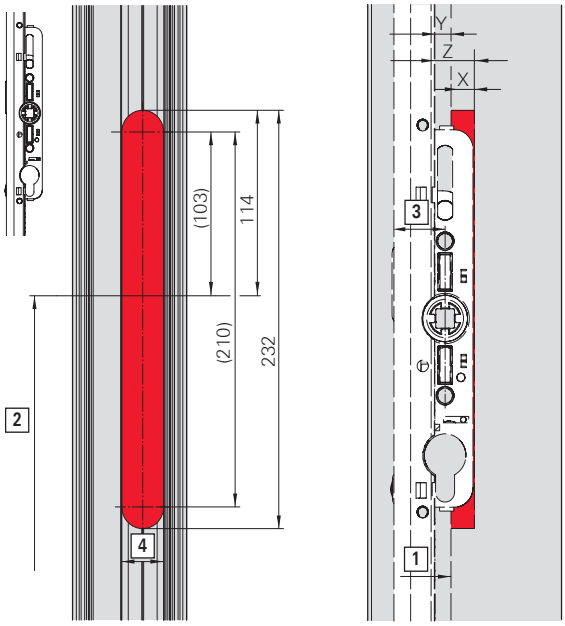
Without lock casing: X = 16 - Y

With lock casing: X = 22 - Y

Y = packer height

Z = 16 (without lock casing) / 22 (with lock casing)

BS 27.5 with profile / round cylinder



[1] Hardware supporting surface

[2] Handle height

[3] Backset BS

[4] Groove width without drilling protection = 22, with drilling protection = 24

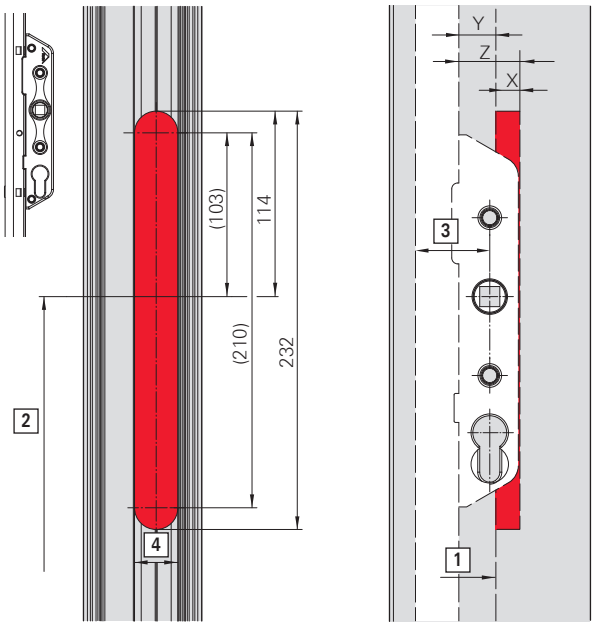
Gearbox routing depth:

X = 22 - Y

Y = packer height

Z = 22

BS 37.5 with profile cylinder



[1] Hardware supporting surface

[2] Handle height

[3] Backset BS

[4] Groove width without drilling protection = 22, with drilling protection = 24

Gearbox routing depth:

X = 32 - Y

Y = packer height

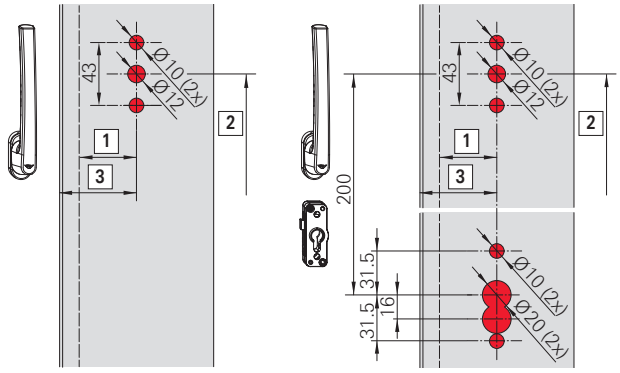
Z = 32

10.3.3 Handle

Drill holes for the handle's square spindle and lugs.

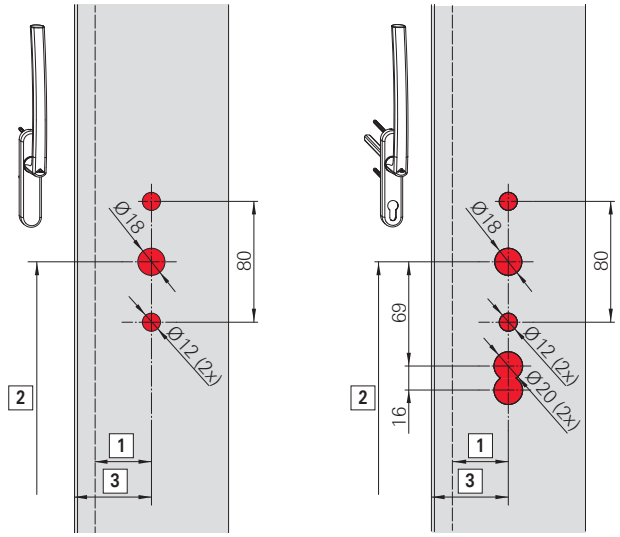
INFO
Pay attention to the profile assessment.

BS 25 without / with profile cylinder



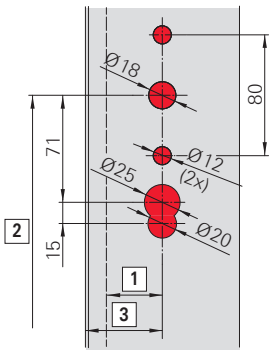
[1] Backset
[2] Handle height
[3] Drilling dimension (profile-related)

BS 27.5 / 37.5 without / with profile cylinder



[1] Backset
[2] Handle height
[3] Drilling dimension (profile-related)

BS 27.5 with round cylinder

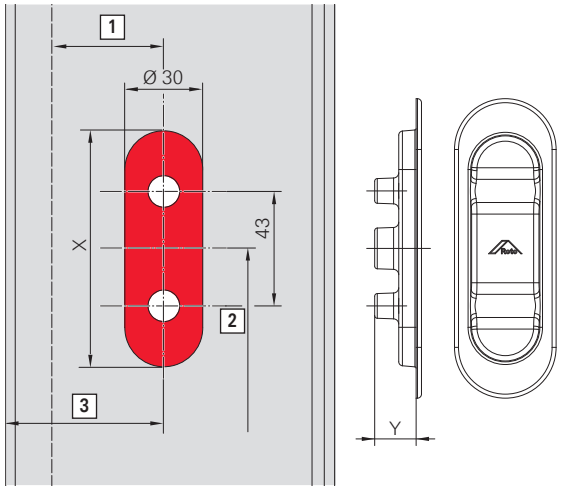


[1] Backset
[2] Handle height
[3] Drilling dimension (profile-related)

10.3.4 Recessed grip

INFO
Pay attention to the profile assessment.

BS 25



Screw spacing = 43 mm

Routing depth Y

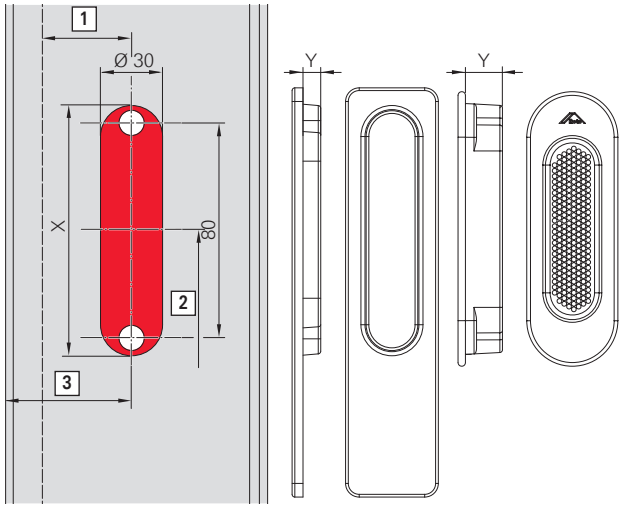
For recessed grip; oval: X = 90 mm; Y = 16 mm

[1] Backset

[2] Handle height

[3] Drilling dimension

BS 27.5 / 37.5



Screw spacing = 80 mm

Routing depth Y

For recessed grip; square: X = 93 mm; Y = 11 mm

For recessed grip; oval: X = 93 mm; Y = 7 mm

For recessed grip; oval: X = 96 mm; Y = 14 mm

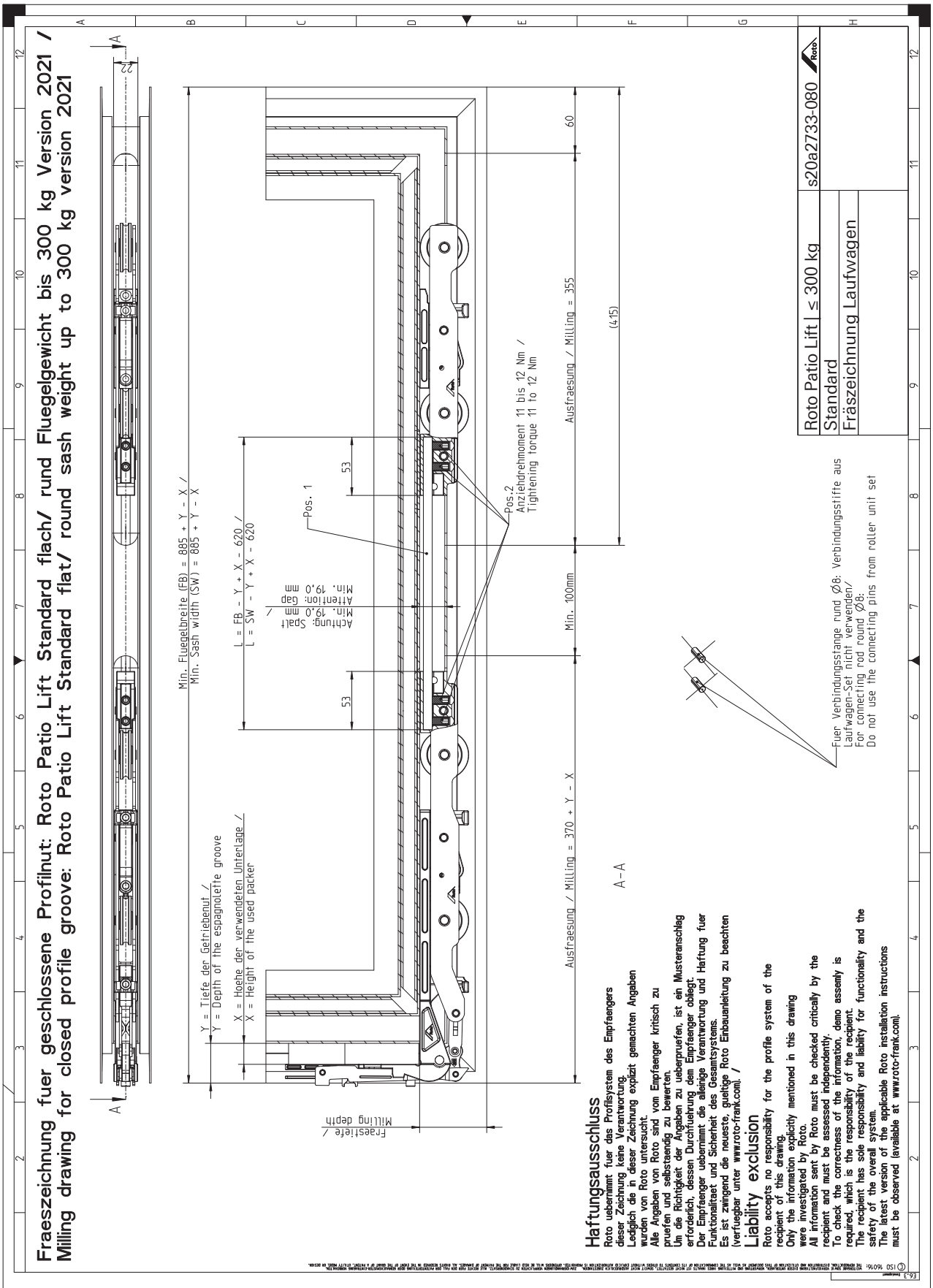
[1] Backset

[2] Handle height

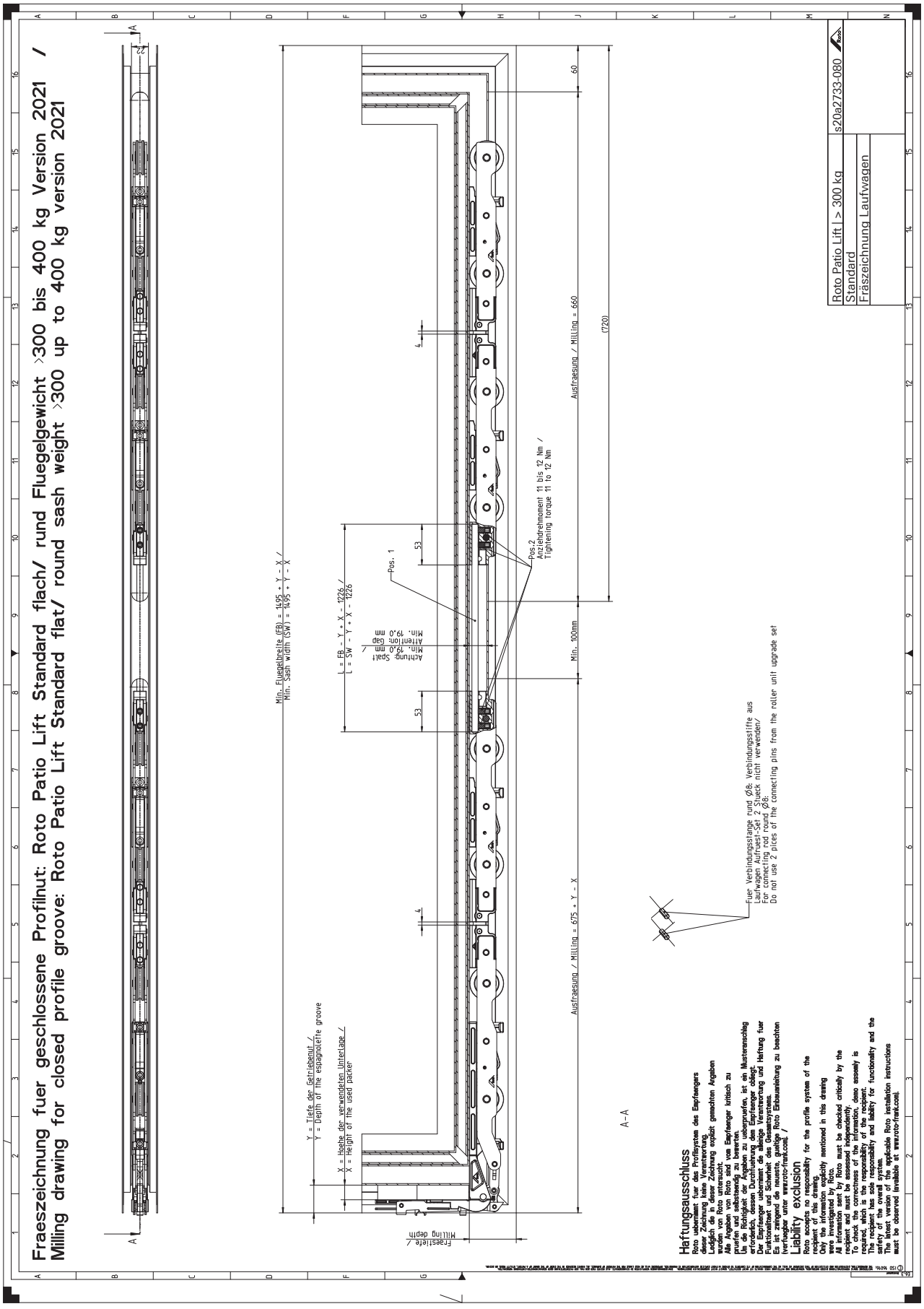
[3] Drilling dimension

10.3.5 Routing drawing for roller unit in closed groove

Standard | ≤ 300 kg



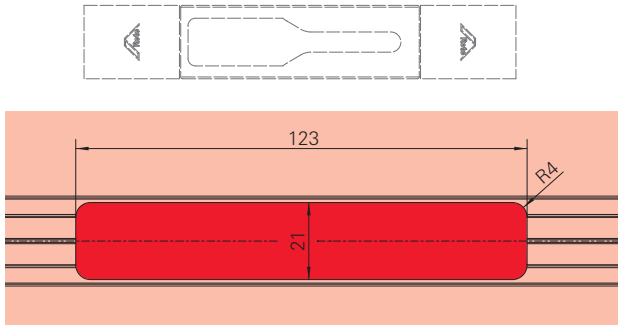
Standard | > 300 kg



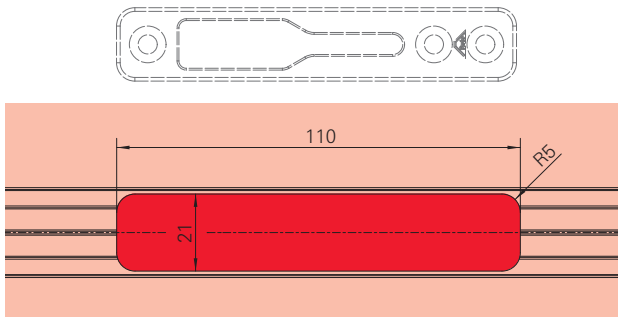
10.3.6 Locking components

INFO
The routing depth is profile-related, see profile assessment.

Striker width 20; height 12.8



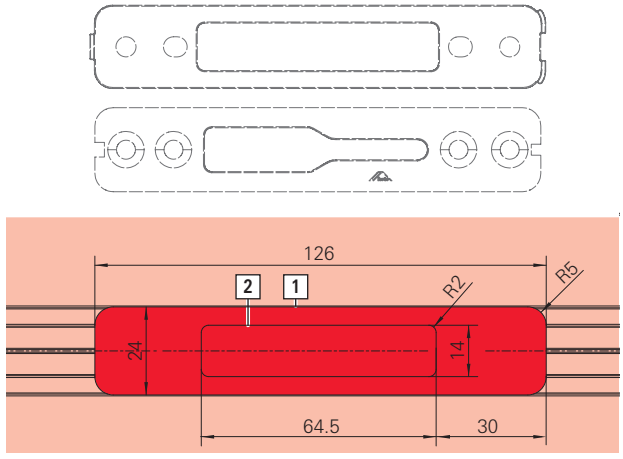
Striker width 20; height 14 / 16.5 / 18



Striker width 23; height 3; with packer

[1] Routing for striker with packer

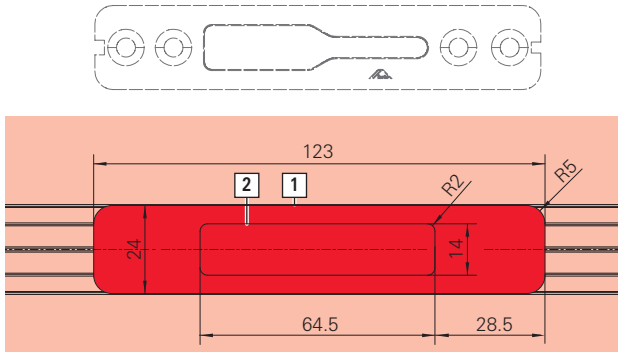
[2] Routing for espagnolette locking cam



Striker width 23; height 3; without packer

[1] Routing for striker without packer

[2] Routing for espagnolette locking cam



10.3.7 Topglider

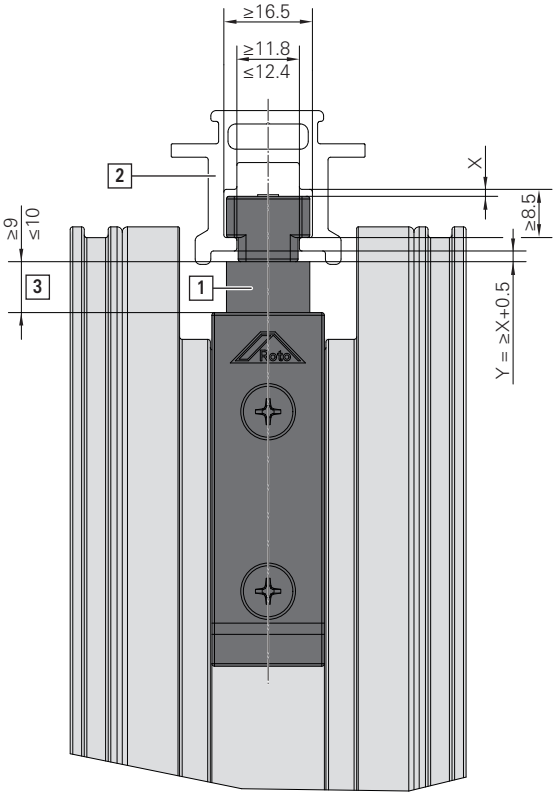
INFO
No reinforcement in the area of the wall plugs.

Space requirement

[1] Topglider

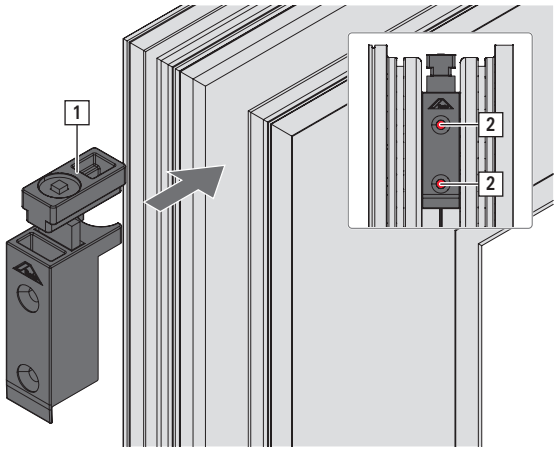
[2] Guide track

[3] In closed position

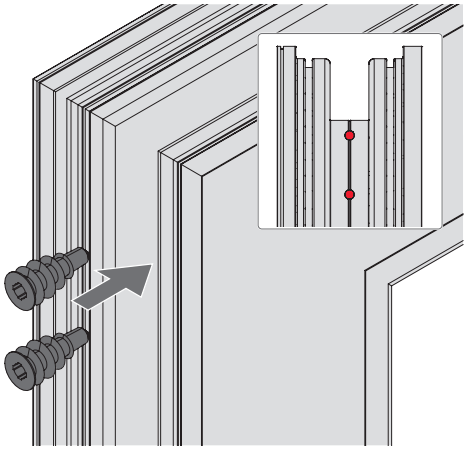


Without adapter

1. Insert the slider [1] on the espagnolette side and mark the position of the wall plugs [2] at the side.
   Remove the slider.
   Drill holes.
   Drill:
   2x Ø 7 mm



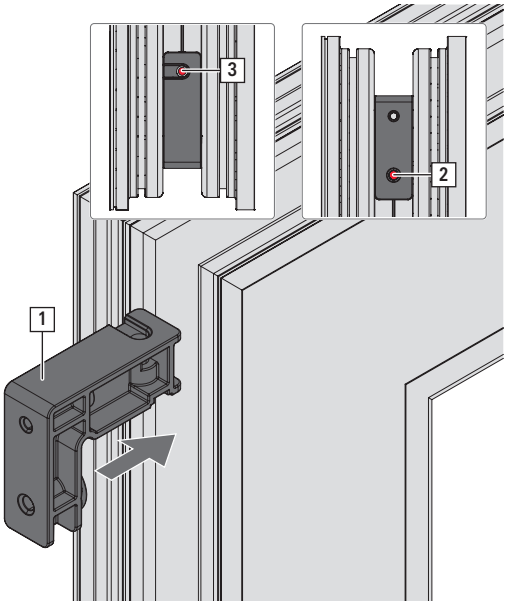
2. Insert the wall plugs and tighten them.
   Tool:
   Cross-head



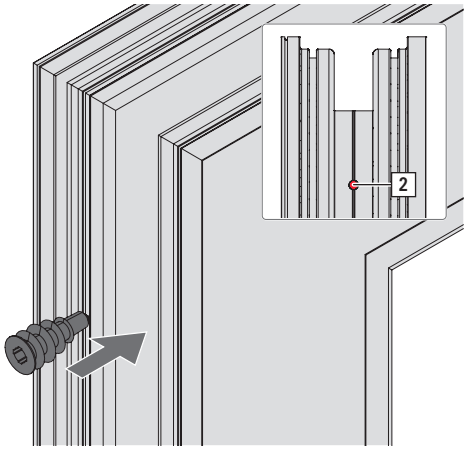
3. Repeat the process the other way around on the mullion side.

With adapter

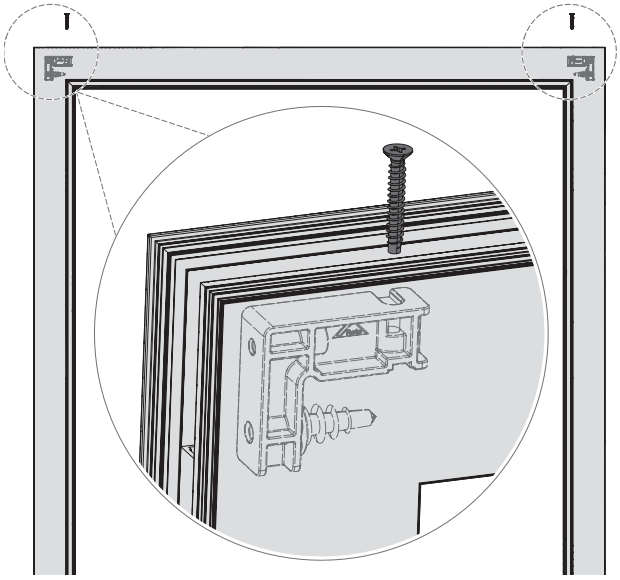
1. Insert the slider adapter [1] on the espagnolette side and mark the position of the wall plug [2] at the side and of the screw [3] at the top.
   Removing the slider adapter
   Drill holes.
   Drill:
   Wall plug 1x Ø 7 mm
   Screw 1x Ø 4.5 mm



2. Insert the wall plug into the Ø 7 hole at the side and tighten it.
   Tool:
   Cross-head



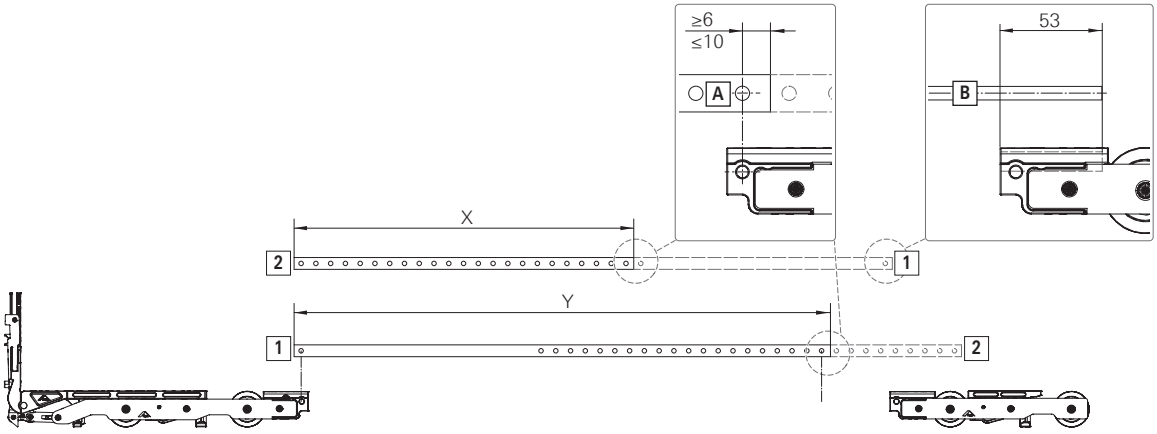
3. Place the slider adapter on the sash groove on the espagnolette and mullion side and fasten it at the top with one supplied special screw 6.3 x 40.



4. Repeat the process the other way around on the mullion side.

10.4 Preparing for installation

10.4.1 Cropping the connecting rod



Roller unit with flat connecting rod [A]

For profiles with an open groove which do not require routing.

INFO
The flat connecting rod may be shortened by the dimension of the hole spacing (20 mm).

1. Crop the flat connecting rod from side [1] or side [2] depending on the sash width and design variant.

Slim		Standard	
150 / 200 kg	400 kg	300 kg	400 kg
SW ≤ 1030: X= SW - 570	SW ≤ 1500: X= SW - 1040	SW ≤ 1140: X= SW - 680	SW ≤ 1746: X= SW - 1286
SW > 1030: Y= SW - 570	SW > 1500: Y= SW - 1040	SW > 1140: Y= SW - 680	SW > 1746: Y= SW - 1286

After cropping, projection from drill hole centre for pinning: min. 6 mm to max. 10 mm.

Roller unit with round connecting rod [A]

For profiles with a closed groove or an open groove which do not require routing.

1. When used with a round connecting rod, it does not matter from which side the connecting rod is cropped.

Standard X = espagnolette packer height Y = espagnolette groove depth	
300 kg	SW ≥ (885 + Y - X): length = SW - Y + X - 620
400 kg	SW ≥ 1(495 + Y - X): length = SW - Y + X - 1226

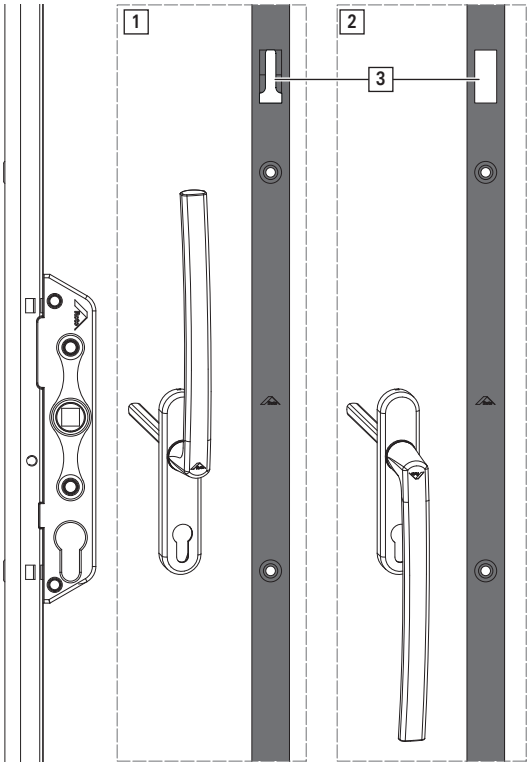
INFO
For further information, see "Routing drawing for roller unit in closed groove" → *from page 84*.

10.4.2 Preparing the espagnolette

INFO

⇨ Move the espagnolette to the closed position [1] (sliding position [2]).

Check via the inspection window [3] in the espagnolette faceplate.



1. Mount the espagnolette in the corner roller unit in the closed position.

INFO

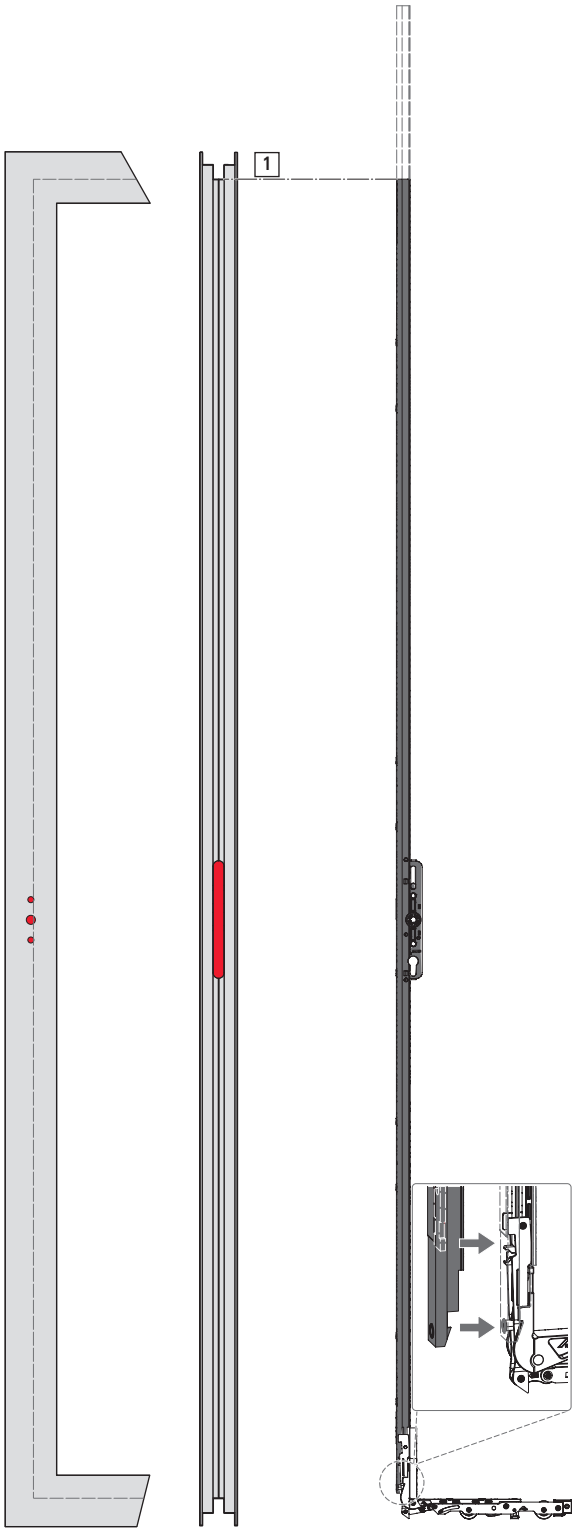
Espagnolette connecting rod engages in the groove of the corner roller unit mechanics.

2. Mark the length on top of the groove base [1].
3. Remove the espagnolette and crop it in the sliding position.

INFO

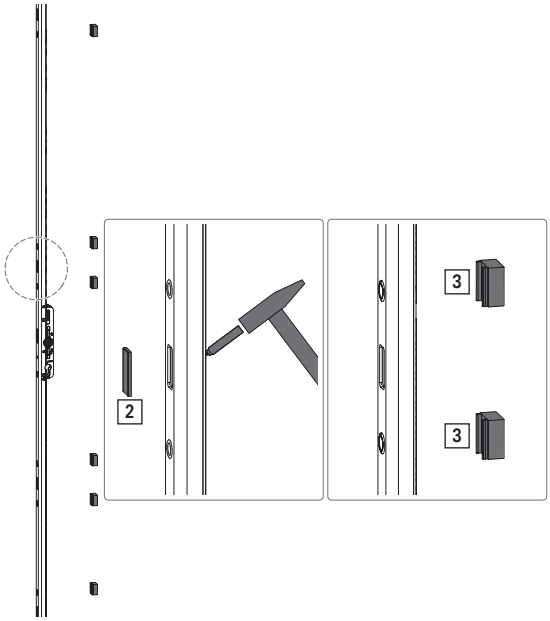
Additional cropping with topglider → *from page 98*:

- Without adapter: 52 mm
- With V.16/28 and V.19/28 adapter: 24 mm
- With V.19/24 and V.25/24 adapter: 28 mm



1. Break the caps [2] from the espagnolette according to the required locking points; if necessary, break them from the espagnolette extension too.

   Underlay the area of the locking pin mount depending on the profile. To do so, clip one packer [3] into the espagnolette under each screw hole; if necessary, also in the espagnolette extension.



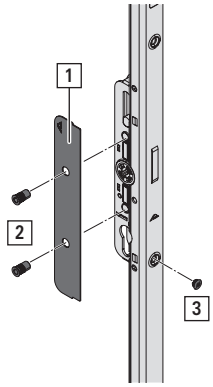
RC 2

1. Attach the drilling protection [1] with a form-fitting connection.

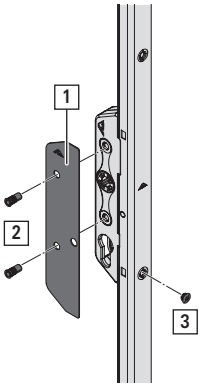
   Press two threaded inserts [2] through the drilling protection and into the espagnolette.

   Remove the cover [3] from the espagnolette to fasten a half-cylinder.

BS 27.5



BS 37.5



10.5 Sash

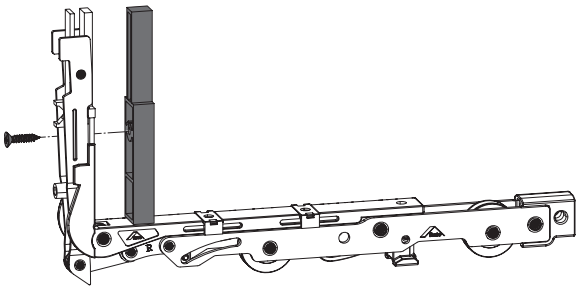
10.5.1 Roller unit set

Slim S.kg ≤ 200 kg; standard S.kg ≤ 300 kg

Installing the packer on the corner roller unit

⇨ A profile-related packer is required.

1. Secure the packer to the corner roller unit with one self-tapping screw ST4.8 x 20.

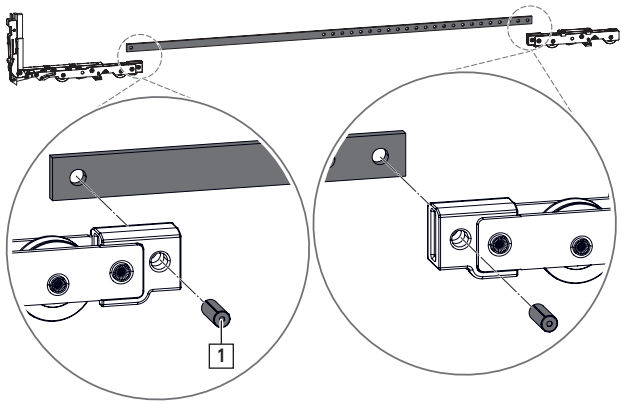


Installing the roller unit set with flat connecting rod

1. With S.kg > 300 kg: install the roller unit additional set → *from page 95*.

   Insert the flat connecting rod into the mount for the corner roller unit and roller unit.

   Tap two connecting pins with visible marking [1] all the way into the corner roller unit and roller unit.

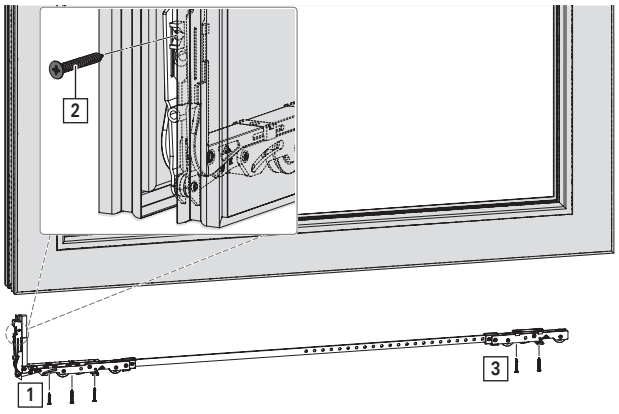


2. Insert the roller unit set with flat connecting rod into the sash on the espagnolette side.

   Ensure that it is centred relative to the sash groove.

   Fasten the corner roller unit on the espagnolette side with three screws [1] at the bottom and one screw [2] at the side.

   Fasten the roller unit on the mullion side with two screws [3].



INFO

The screw at the side may need to have a different length from the other screws.

Installing the roller unit set with round connecting rod

⇨ Profiles with a closed groove or an open groove which do not require routing.

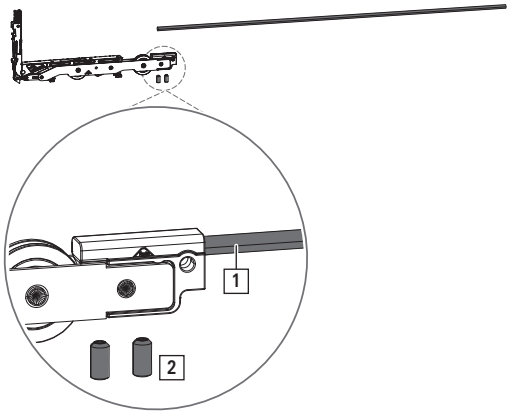
⇨ Routed profile → *from page 89*.

1. With S.kg > 300 kg: install the roller unit additional set → *from page 95*.

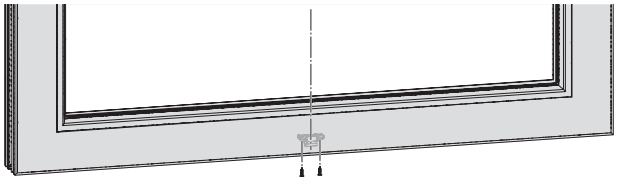
   Insert the round connecting rod [1] into the corner roller unit as far as it will go.

   Fasten with two threaded pins [2] M8 x 15.

   Torque: 11.0 – 12.0 Nm



2. **SW ≥ 1800 mm: install the support block**, for profiles with an open groove which do not require routing.



> **INFO**
> If packers are used on the roller unit, place pressure-proof supports under the support block at the installation height of the packers.

   Centre the support block – relative to the sash and in the groove – and fasten it with two supplied screws.

3. Insert the corner roller unit with round connecting rod into the sash on the espagnolette side.

   When using a support block, ensure that the connecting rod is correctly fitted in the support block.

   Insert the roller unit into the sash on the mullion side and push the round connecting rod in as far as it will go placed against the groove base.

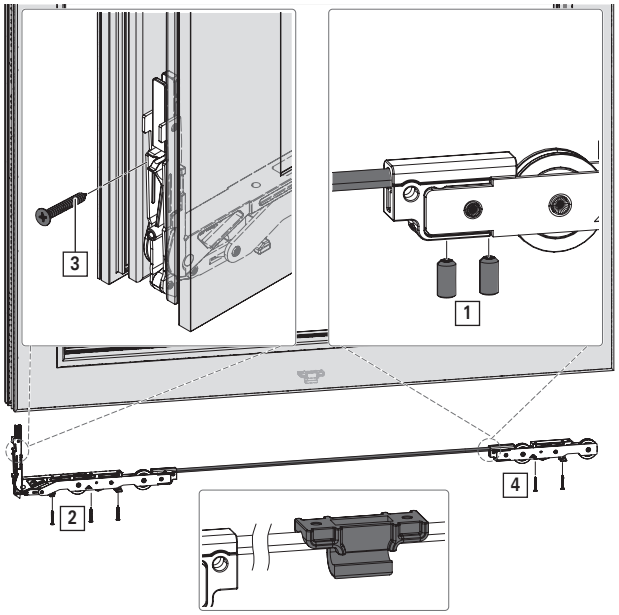
   Fasten with two threaded pins [1] M8 x 15.

   Torque: 11.0 – 12.0 Nm

   Ensure that it is centred relative to the sash groove.

   Fasten the corner roller unit on the espagnolette side with three screws [2] at the bottom and one screw [3] at the side.

   Fasten the roller unit on the mullion side with two screws [4].



> **INFO**
> The screw at the side may need to have a different length from the other screws.

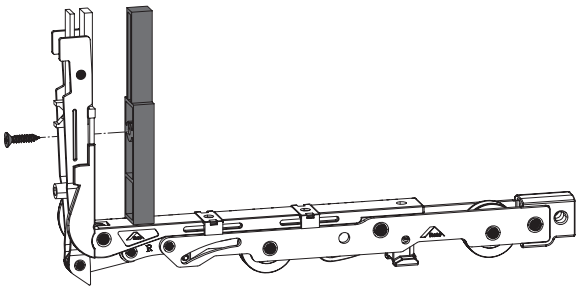
10.5.2 Roller unit set with additional set

Slim S.kg > 200 kg; standard S.kg > 300 kg

Installing the packer on the corner roller unit

⇨ A profile-related packer is required.

1. Secure the packer to the corner roller unit with one self-tapping screw ST4.8 x 20.

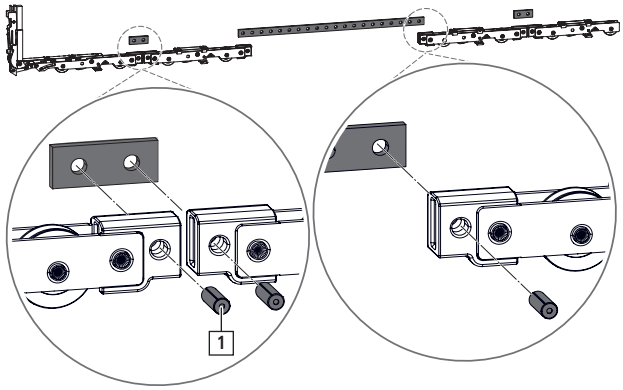


Flat connecting rod

Joining the roller unit set and additional set – flat connecting rod

1. Insert the flat connecting rods into the mount for the corner roller unit, additional roller unit and roller unit.

   Tap six connecting pins with visible marking [1] all the way into the corner roller unit, additional roller unit and roller unit.



Installing the roller unit set with additional set

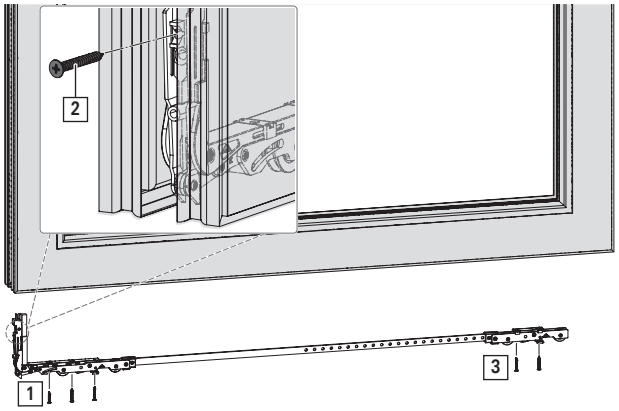
1. Push in the roller unit set with additional set and connecting rod.

   Fasten the corner roller unit on the espagnolette side with three screws [1] at the bottom and one screw [2] at the side.

   Fasten the roller unit on the mullion side and in the centre with two screws in each case [3].

INFO

The screw at the side may need to have a different length from the other screws.

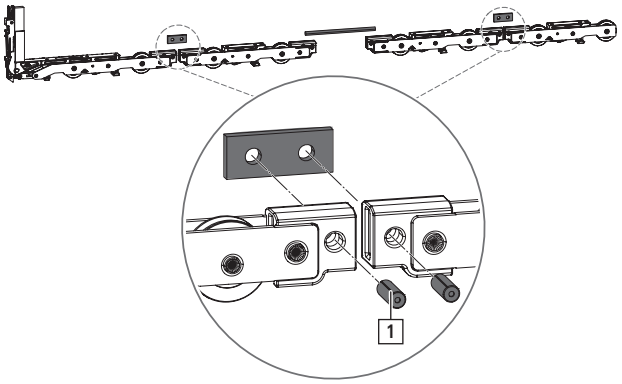


Round connecting rod

Joining the roller unit set and additional set – round connecting rod

1. Insert the flat connecting rods into the mount for the corner roller unit, central roller unit and roller unit.

   Tap four connecting pins with visible marking [1] all the way into the corner roller unit, central roller unit and roller unit.



Installing the roller unit set with additional set

1. **SW ≥ 2400 mm: install the support block**, for profiles with an open groove which do not require routing → *from page 93*.

   Insert the round connecting rod as far as it will go into the central roller unit that is joined to the corner roller unit.

   Fasten with two threaded pins M8 x 15.

   Torque: 11.0 – 12.0 Nm

   Insert the corner roller unit that is joined to the central roller unit and round connecting rod into the sash on the espagnolette side.

   When using a support block, ensure that the connecting rod is correctly fitted in the support block.

   Insert the central roller unit that is joined to the roller unit into the sash on the mullion side and push the round connecting rod in as far as it will go placed against the groove base.

   Fasten with two threaded pins [1] M8 x 15.

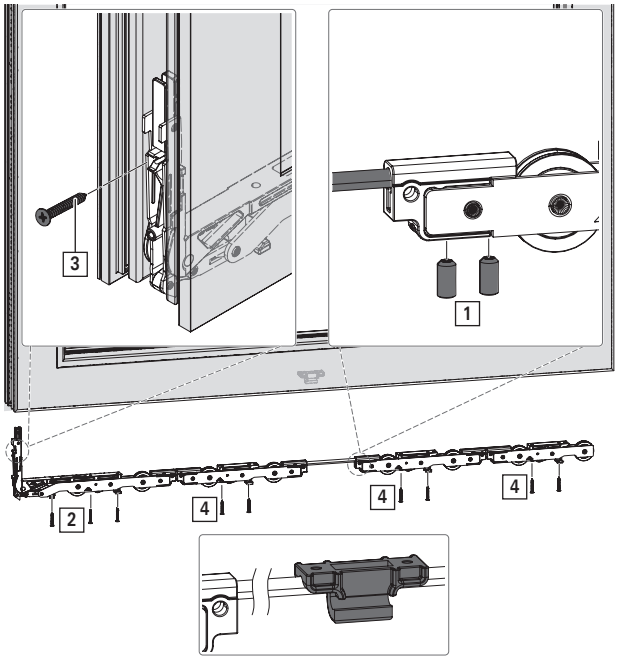
   Torque: 11.0 – 12.0 Nm

   Ensure that it is centred relative to the sash groove.

   Insert the roller unit set with additional set and connecting rod.

   Fasten the corner roller unit on the espagnolette side with three screws [2] at the bottom and one screw [3] at the side.

   Fasten the roller unit on the mullion side and in the centre with two screws in each case [4].



INFO

The screw at the side may need to have a different length from the other screws.

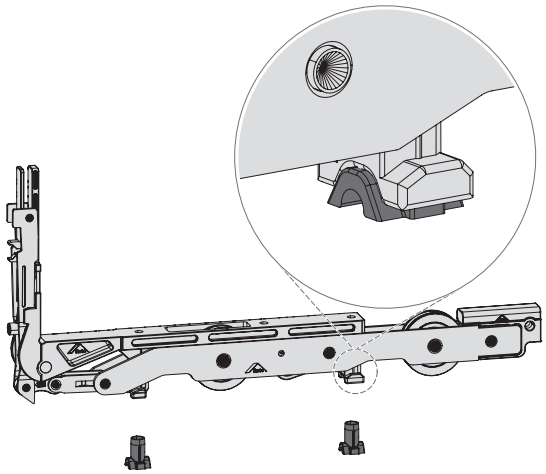
10.5.3 Roller unit support block

Standard | 300 / 400 kg

In the closed position, the sash is approx. 1.6 mm higher. This means that the rollers are contactless.

1. Install two support blocks in the corner roller unit on the espagnolette side and one support block in the roller unit on the mullion side. Install one support block per additional roller unit, ensuring a form-fitting connection and correct alignment.

DANGER
Incorrect installation of support blocks poses a risk of death.
Incorrect installation of the support blocks may cause the sash to fall out (mainly when the sash is slid open with the handle in the closed position).
1. Install the support block so that it is form-fitting and correctly aligned.



10.5.4 Espagnolette extension with additional locking point

⇨ Reinforcement for PVC profiles also in the area of the top screw.

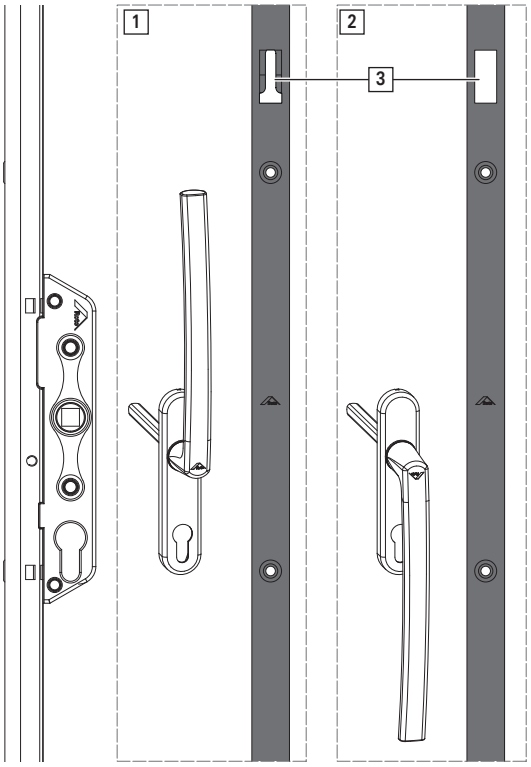
Identifying the position of the espagnolette and espagnolette extension

The espagnolette is shown here.

[1] Closed position

[2] Sliding position

Check via the inspection window [3] in the floating mullion.



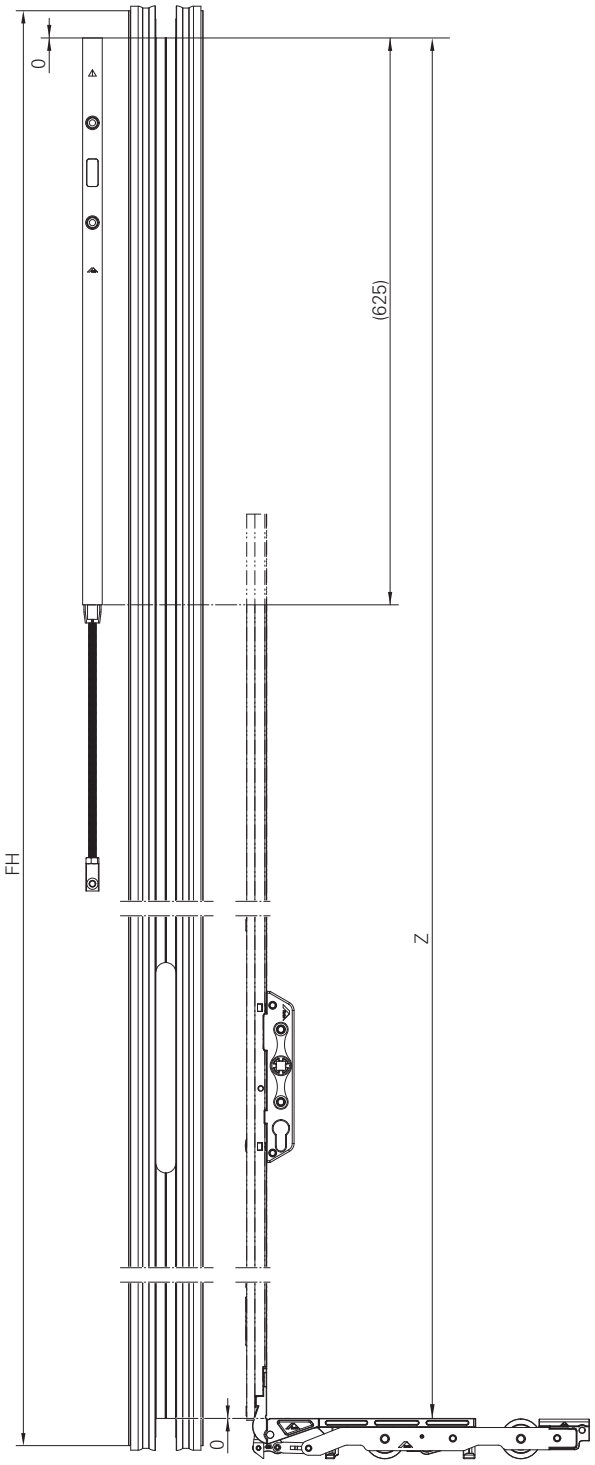
Determining the installation dimension Z

1. The installation dimension for the espagnolette extension depends on the profile and hardware.

   Z = top of sash groove base to roller unit supporting surface or top roller unit packer.

Min. installation dimensions

Without taking the packer on the roller unit into account	Slim	Standard
Without topglider set	2660	2670
With topglider set, without adapter	2712	2722
With topglider set and V.16/28 or V.19/28 adapter	2684	2694
With topglider set and V.19/24 or V.25/24 adapter	2688	2698



Determining the cropping dimension X

1. Place the espagnolette extension [1] on top of the groove base [2] and mark the lower edge [3a] of the case on the sash.

   With topglider set [5]: either take new cropping dimensions from the info box or place the topglider set without / with adapter and espagnolette extension on top of the groove base and mark the lower edge [3b] of the case on the sash.

   Remove the espagnolette extension again.

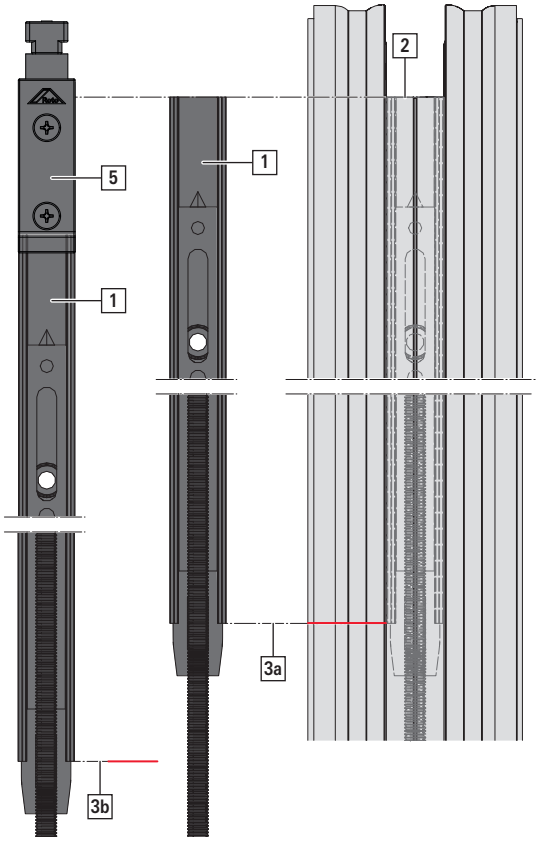


Fig. 10.1: The espagnolette extension version without topglider set in the sash is shown dashed.

2. Preassemble the espagnolette with corner roller unit in the closed position without screw fixing → *from page 103*.

   Transfer the marking from the sash to the espagnolette [4].

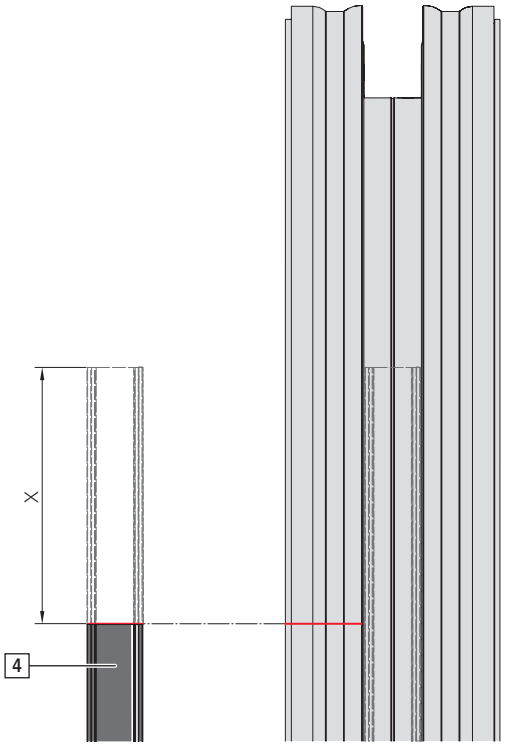
INFO

With the topglider set, note the new cropping dimensions (if you did not also position the topglider set when marking).

Topglider set without adapter: $X_{new} = X + 52$

Topglider set with V.16/28 and V.19/28 adapter: $X_{new} = X + 24$

Topglider set with V.19/24 and V.25/24 adapter: $X_{new} = X + 28$



Cropping the espagnolette in the sliding position

⇨ Espagnolette for espagnolette extension → *from page 70*.

ATTENTION

Cropping the espagnolette incorrectly may cause property damage.

If the maximum cropping dimensions for the espagnolette are not adhered to, the espagnolette is no longer couplable.

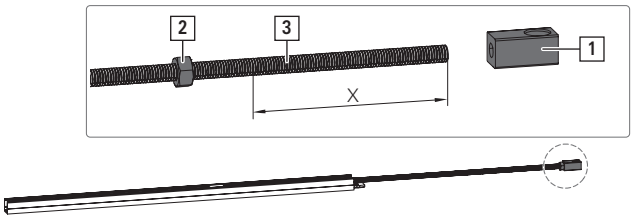
1. Adhere to a maximum cropping dimension of ≤ 340 mm for the espagnolette.
2. Crop the espagnolette in the sliding position.

1. Crop the espagnolette by the cropping dimension.

Cropping the espagnolette extension

1. Unscrew the connecting piece [1] and turn the locknut [2] on the threaded rod anticlockwise so that it is not also cropped.

   Crop the threaded rod [3] by the cropping dimension X.



Installing the espagnolette extension

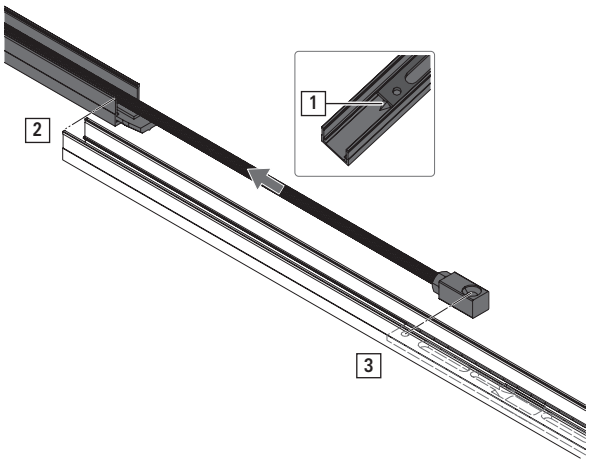
⇨ Espagnolette in sliding position

1. Screw the locknut onto the threaded rod up to approx. 10 mm from the end. Screw the connecting piece against it.

   Tighten the locknut to 15 Nm.

2. Push the threaded rod into the espagnolette extension as far as it will go [1].

   Place the espagnolette extension next to the espagnolette [2] and screw in the threaded rod until the coupling point on the connecting piece is flush with the coupling point on the espagnolette [3].



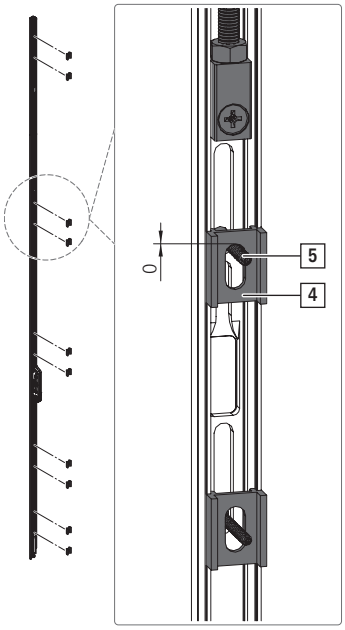
3. Insert the espagnolette extension into the espagnolette and fasten with one supplied screw M6 x 18.

   Tool: cross-head

   Torque: 5 Nm

4. Break the caps according to the required locking points and clip one packer in under each screw hole → *from page 91*.

   Push the top packer [4] on the espagnolette down for installation until it is positioned on the screw [5] to prevent it colliding with the espagnolette extension connecting piece in the closed position.



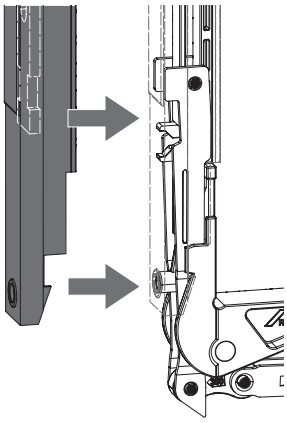
5. Mount the espagnolette with espagnolette extension in the corner roller unit and fasten it with screws.

   Insert it into the sash and fasten with one screw in each screw hole → *from page 103*.

10.5.5 Espagnolette

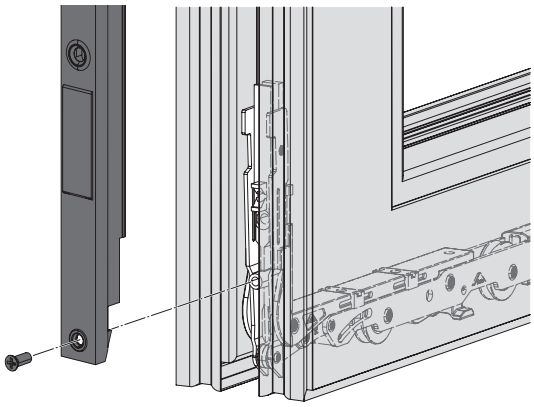
⇨ Espagnolette in closed position.

1. Mount the espagnolette in the corner roller unit.

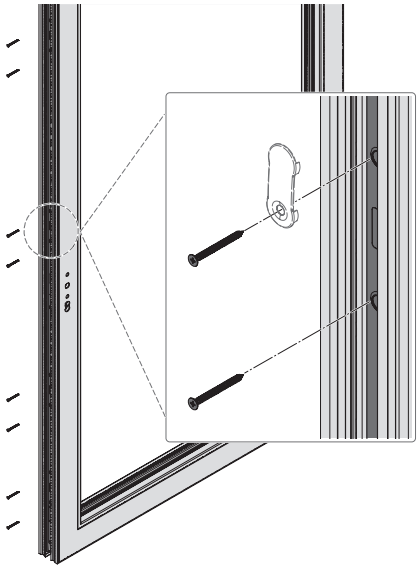


INFO
Espagnolette connecting rod engages in the groove of the corner roller unit mechanics.

2. Fasten on the corner roller unit with one countersunk screw M5 x 13.



3. Fasten the espagnolette with one screw in each screw hole.
   Also attach the optional info clip. Ensure that the area of the locking pin mount is left free.

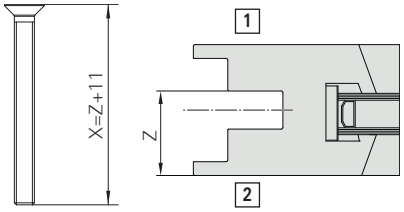


10.5.6 Handle and recessed grip

INFO
If the appropriate thread engagement length is not reached with the screws that can be shortened, choose electrogalvanised screws (countersunk screw according to DIN ISO 7046-1 – M5 x ... - 4.8 - H) with a suitable length.

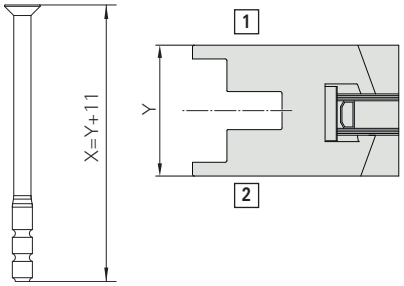
Selecting the screw length

1. **Installation without recessed grip / without exterior handle:**
   Shorten the screw to X = Z + 11
   Exception: Slim | 150 kg:
   - X = Z + 8



[1] Outside
[2] Inside

2. **Installation with recessed grip / with exterior handle:**
   Shorten the screw to X = Y + 11
   Exception: Slim | 150 kg:
   - With recessed grip X = Y + 3
   - With handle set screws for exterior handle X = Y + 8
   - With handle set screws for escutcheon X = Y + 5



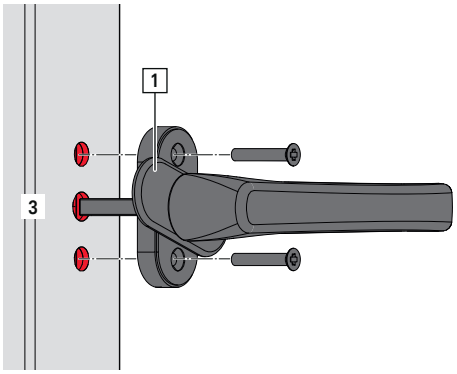
[1] Outside
[2] Inside

INFO
Drill out the threads provided in the espagnolette with Ø 5.2.

Installing the handle (length 200 mm) without recessed grip / without exterior handle

⇨ Espagnolette BS 25 installed.

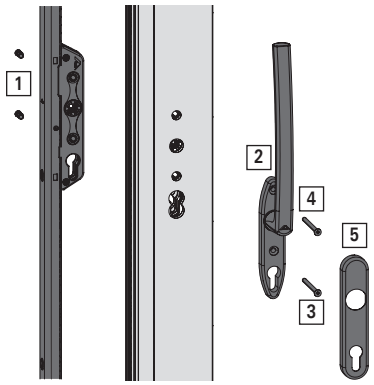
1. Insert the handle into the sash (in the closed position → *from page 121*).
2. Turn the handle 180°, thereby undoing the fixing.
3. Turn the handle so that it is horizontally aligned with the escutcheon.
4. Rotate the cover [1] on the handle 90°.
5. Fasten the handle with screws.
6. Rotate the cover on the handle anticlockwise.
7. With drilling protection, choose a handle pin length that is offset inwards by 2 mm relative to the outer edge of the espagnolette. The handle pin must not protrude.



Installing the handle (length 240 mm) without recessed grip / without exterior handle

⇨ Espagnolette BS 27.5 and 37.5 installed.

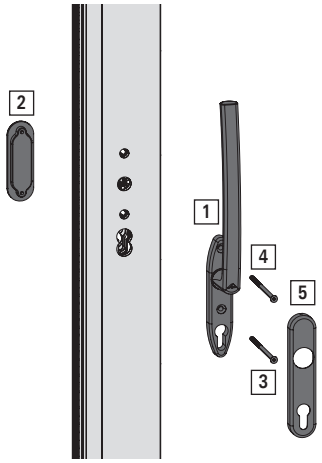
1. Press two threaded inserts [1] into the espagnolette from the outer side.
2. Move the handle [2] to the closed position → *from page 121*.
3. Insert the handle into the sash.
4. Fasten the handle in the lower screw hole with one screw [3].
5. Move the handle to the sliding position.
6. Fasten the handle in the upper screw hole with one screw [4].
7. Attach the cover [5].



Installing the handle (length 240 mm) and recessed grip

⇨ Espagnolette BS 27.5 and 37.5 installed.

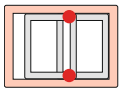
1. Move the handle [1] to the closed position → *from page 121*.
2. Insert the handle into the sash.
3. Insert the recessed grip [2] into the sash on the opposite side.
4. Fasten the recessed grip in the lower screw hole with one screw [3].
5. Move the handle to the sliding position.
6. Fasten the recessed grip in the upper screw hole with one screw [4].
7. Attach the cover [5].

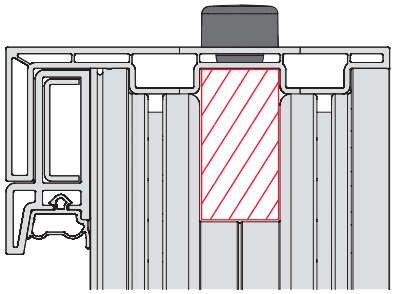


10.5.7 Rubber buffers

Installing rubber buffers

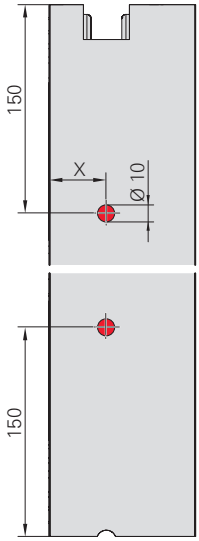
1. Install the profile-related cover on the mullion side. Ensure that the guide track and roller track are running smoothly.





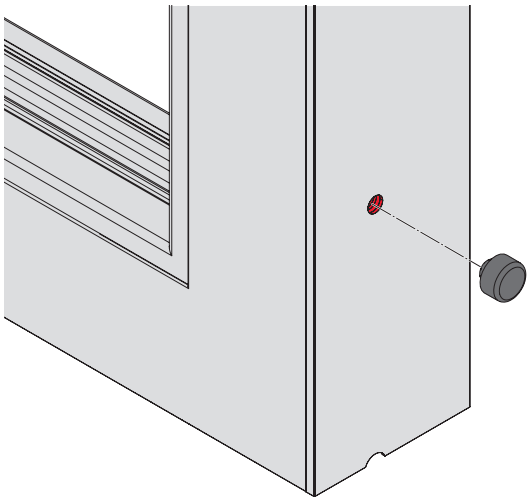
INFO
Place pressure-proof packers underneath the cover at the top and bottom in the hatched area for installing the rubber buffers.

2. Drill two holes Ø 10 mm for rubber buffers at the top and bottom of the cover.



INFO
The dimension X for the drill hole position is profile-related.

3. Insert the rubber buffer.



CAUTION
Risk of crushing due to sliding the sash open as far as it will go!
Opening the sash fully without using end stops at the top and bottom may lead to physical injury.
1. The use of end stops is mandatory in conjunction with a sliding handle on the outside for inward running sashes or on the inside for outward running sashes.
2. Ensure that there is enough space between the sliding handle / recessed grip and the floating mullion when the sash is open.

For further information, see installation of end stop → *from page 118*.

10.6 Joining the sash and frame

CAUTION

Heavy loads pose a risk of injury.

Lifting and carrying heavy loads in an uncontrolled manner may lead to physical injury.

- Transport and installation must be carried out by at least two people.
- Use transportation means. → *14 "Transport" from page 128*
- Note the applicable accident prevention regulations.

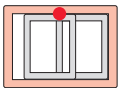
ATTENTION

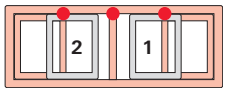
Heavy loads may cause property damage.

Lifting and carrying heavy loads in an uncontrolled manner may lead to property damage.

- Transport and installation must be carried out by at least two people.
- Use transportation means. → *14 "Transport" from page 128*
- Do not rest sashes on the rollers.

10.6.1 Gasket bridge

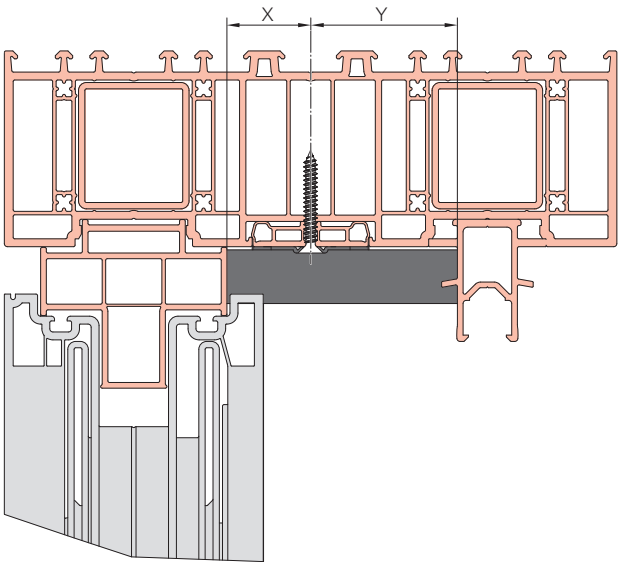




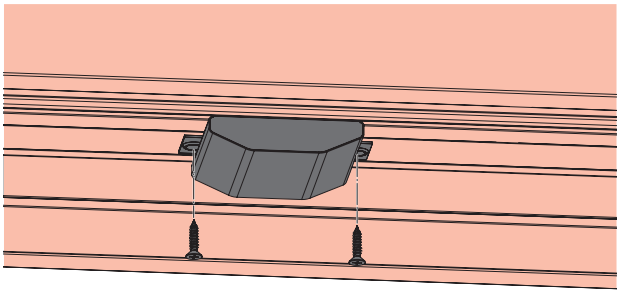
Profile system	Diagram A / C		Diagram D	
	X	Y	X	Y
aluplast HST85 With high roller track	17	45	45	45
Decco	17	47	47	47
Kömmerling PremiDoor 70	22	39	39	39
Kömmerling PremiDoor 76	24	40	40	40

Profile system	Diagram A / C		Diagram D	
	X	Y	X	Y
VEKASLIDE 70	34	48	48	48

1. Cut the gasket bridge according to the specifications from the profile assessment (or see table above).



2. Fasten the gasket bridge in the frame with two supplied screws ST4.2 x 32.
   Diagram A / D: one gasket bridge
   Diagram C: three gasket bridges



10.6.2 Inserting the sash

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.

Without topglider

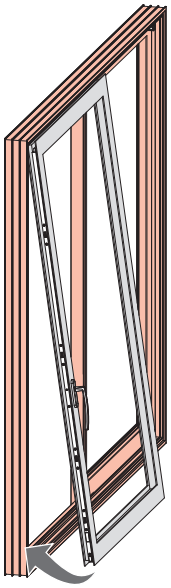
⇨ Guide track installed.

⇨ Specifications of the profile manufacturer complied with.

1. Move the handle to the sliding position.

2. In front of the access area, insert the sash at the top of the frame until the sash engages in the guide track.

   Tilt the sash inwards in a controlled manner at the bottom until the roller units are positioned vertically on the roller track.



INFO

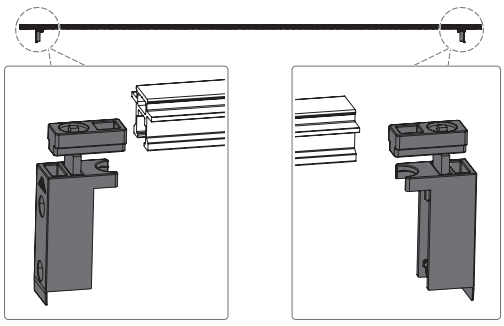
If it is not possible to tilt the sash inwards, then install the sash as described in the section entitled “With topglider, without adapter”, but without the topglider.

With topglider, without adapter

⇨ Sash predrilled and wall plugs installed → *from page 87*.

⇨Espagnolette also cropped → *from page 91* and installed.

1. Mount two sliders per moving sash in the guide track.

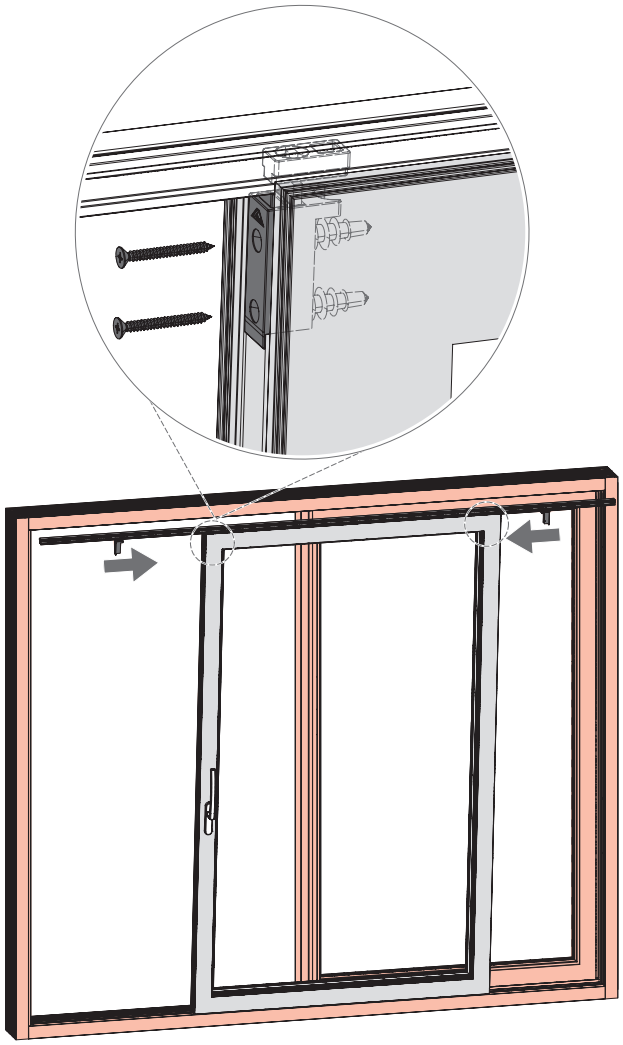


2. Move the handle to the closed position.

3. Place the guide track on the sash and fasten each slider with two supplied screws.

   Guide the sash into the frame at bottom centre until the roller units are positioned vertically on the roller track.

   Tilt the sash with guide track fitted inwards in a controlled manner at the top until the guide track can be installed in the frame groove provided.



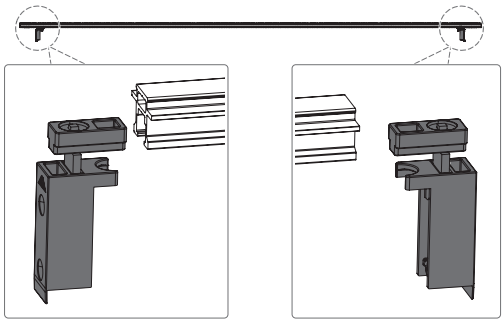
With topglider and adapter

⇨ Sash predrilled and wall plugs installed → *from page 87*.

⇨Espagnolette also cropped → *from page 91* and installed.

1. Move the handle to the closed position.

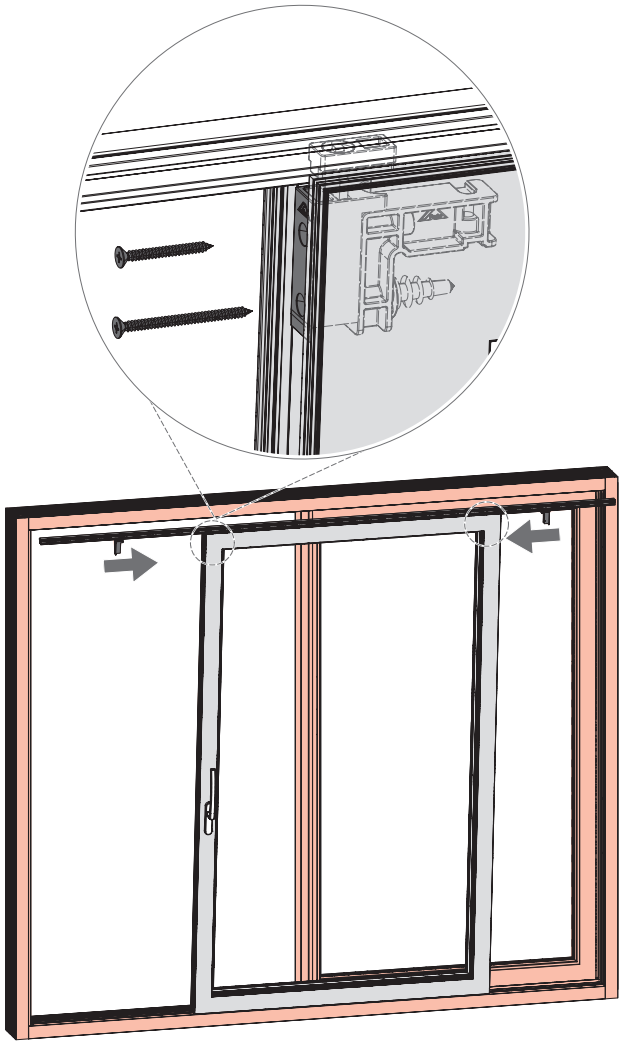
2. Mount two sliders per moving sash in the guide track.



3. Place the guide track on the sash and fasten each slider with two supplied screws (short screw at the top, long screw at the bottom).

   Guide the sash into the frame at bottom centre until the roller units are positioned vertically on the roller track.

   Tilt the sash with guide track fitted inwards in a controlled manner at the top until the guide track can be installed in the frame groove provided.



4. Fasten the guide track on the frame profile according to the specifications of the profile manufacturer.

INFO
The topglider must be seated securely in the guide track and on the sash.

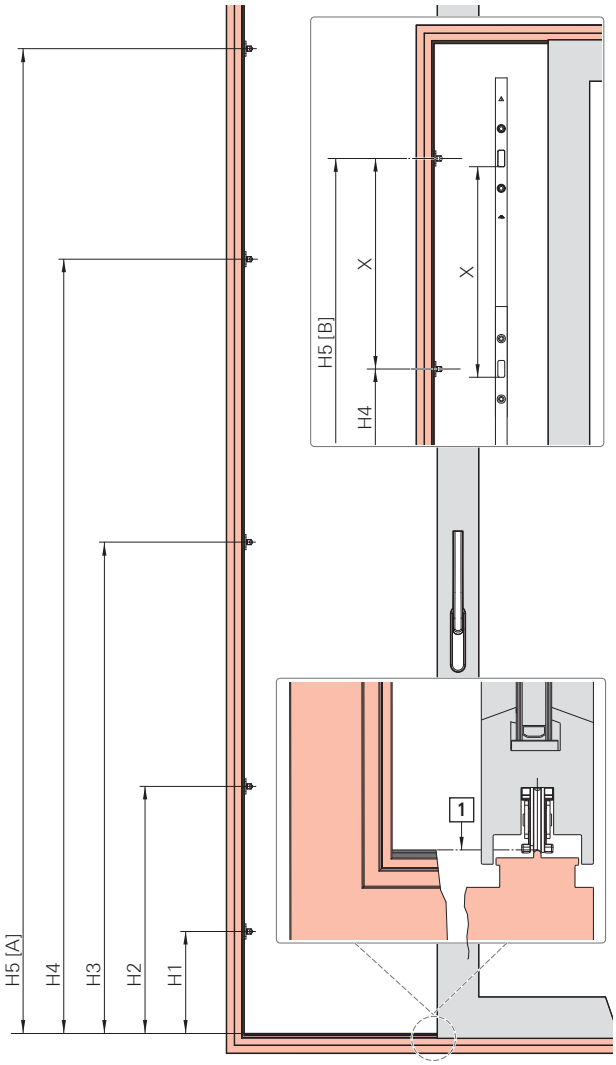
10.6.3 Locking pin without positioning jig

⇨ Espagnolette installed without locking cam.

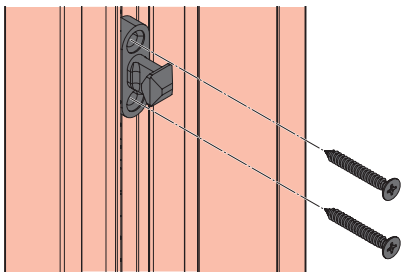
1. Position the locking pin (the dimensions relate to the roller track level [1]).
   Alternatively: use a locking pin positioning jig → *from page 113*.

SH / mm	H1	H2	H3	H4	H5 [A]	H5 [B]
≤ 1800	251	608	1209	–	–	–
1801 - 2200	251	608	1209	1601	–	–
2201 - 2600	251	608	1209	1906	–	–
> 2600 [10]	251	608	1209	1906	2425	1906 + X

H5 [A] Without espagnolette extension
H5 [B] With espagnolette extension
[X] Additional locking point dimension



2. Fasten the locking pin with two screws.



[10] With espagnolette extension, see installation dimension → *from page 98*

10.6.4 Locking pin with positioning jig

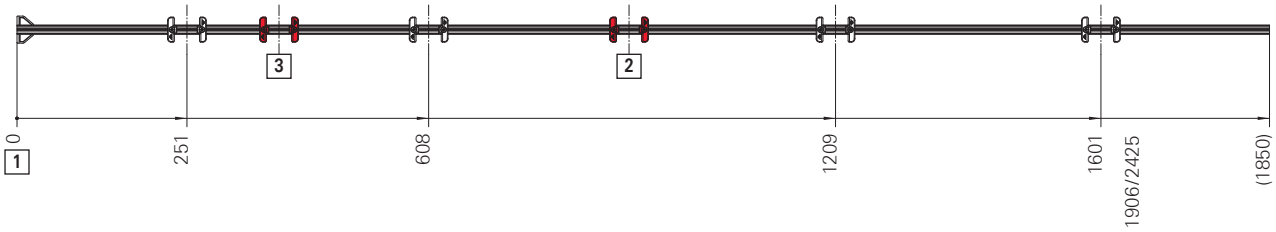


Fig. 10.4: **[1]** Roller track stop; **[2]** Adapter position for locking pin 1906; **[3]** Adapter position for locking pin 2425

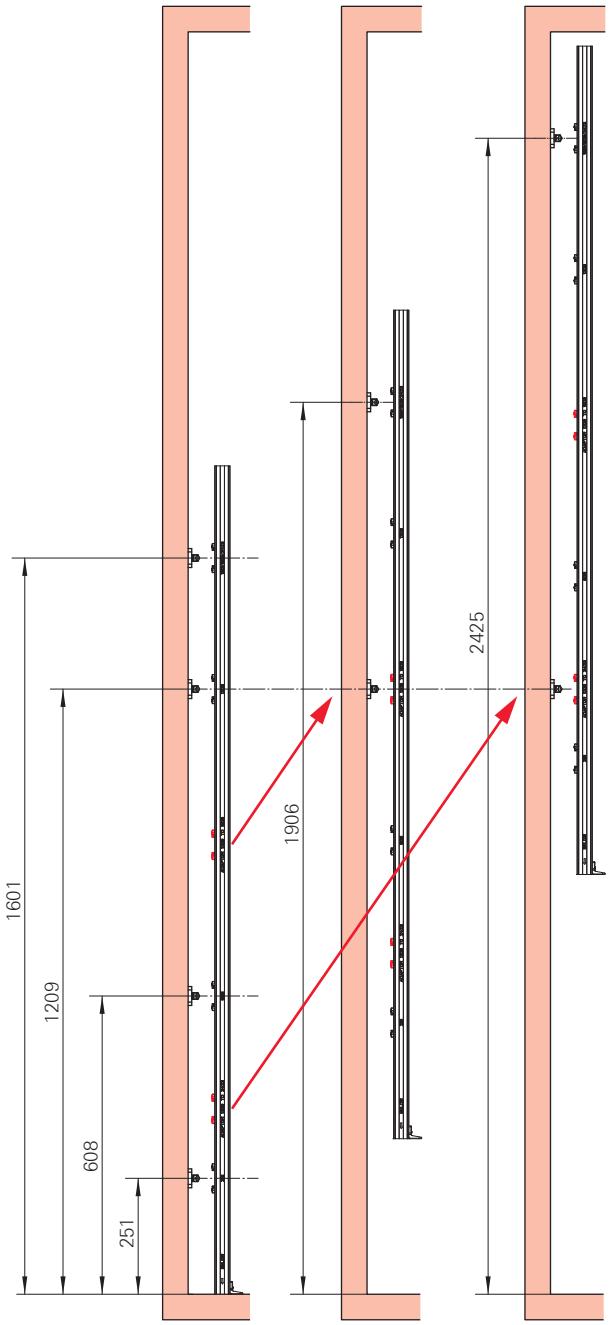
Positioning the positioning jig

⇨ Espagnolette installed without locking cam.

1. Place the jig on the roller track and attach locking pins 251, 608, 1209 and 1601. Fasten with two screws → *from page 112* each.

   Locking pin 1906: position the jig on the locking pin 1209 at the adapter position [3] and place the locking pin at the last position. Fasten with two screws → *from page 112*.

   Locking pin 2425: position the jig on the locking pin 1209 at the adapter position [2] and place the locking pin at the last position. Fasten with two screws → *from page 112*.



10.6.5 Striker width 20; height 12.8 | DesignLocking

Positioning the striker

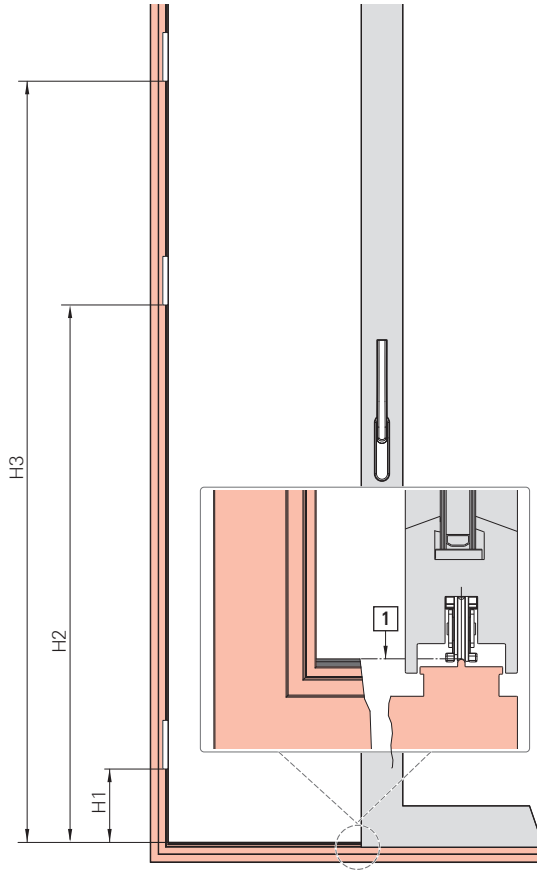
⇨ Espagnolette installed with locking cam (version for DesignLocking).

⇨ Refer to the profile assessment for the quantity of packers required.

⇨ Striker version taken from profile assessment and frame routed → *from page 86*.

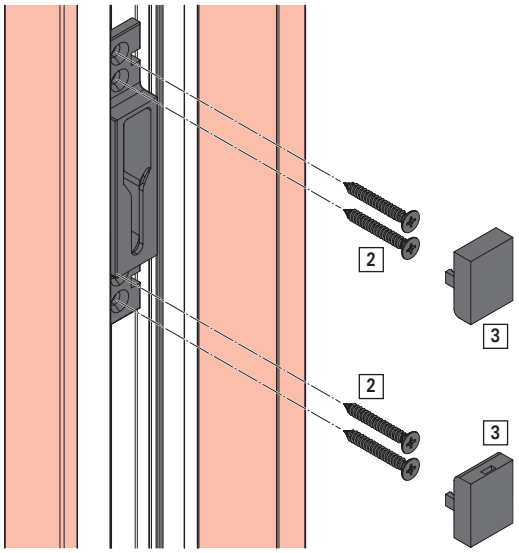
1. Position the striker (the dimensions relate to the roller track level [1]).

SH / mm	H1	H2	H3
≤ 2200	180.5	1530	–
2201 - 2600	180.5	1835	–
> 2600	180.5	1138	2354



Installing the striker

1. Fasten the striker with four screws [2].
   Clip the cover caps [3] onto the striker.



10.6.6 Striker width 20; height 18 | DesignLocking

Positioning the striker

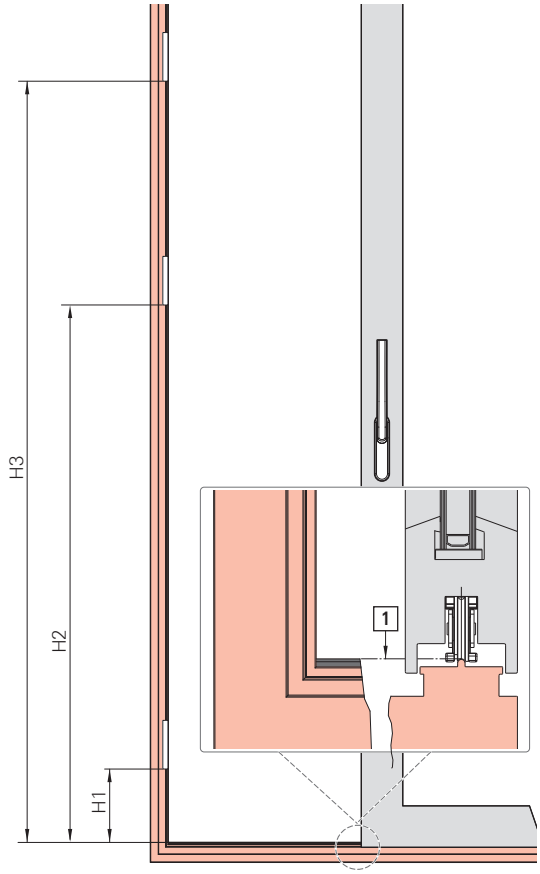
⇨ Espagnolette installed with locking cam (version for DesignLocking).

⇨ Refer to the profile assessment for the quantity of packers required.

⇨ Striker version taken from profile assessment and frame routed → *from page 86*.

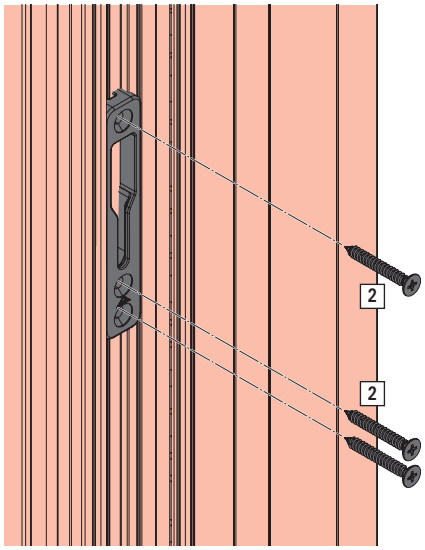
1. Position the striker (the dimensions relate to the roller track level [1]).

SH / mm	H1	H2	H3
≤ 2200	180.5	1530	–
2201 - 2600	180.5	1835	–
> 2600	180.5	1138	2354



Installing the striker

1. Fasten the striker with three screws [2].



10.6.7 Striker width 23; height 3 | DesignLocking

Positioning the striker

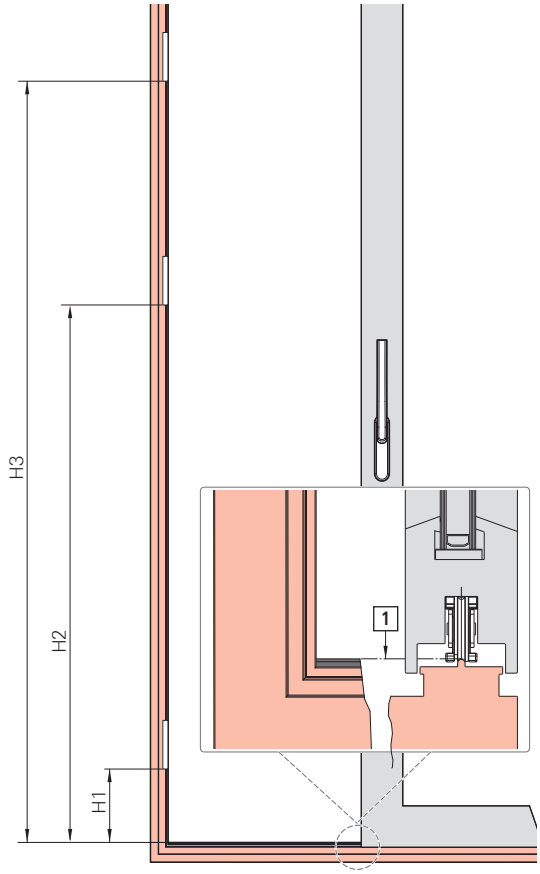
⇨ Espagnolette installed with locking cam (version for DesignLocking).

⇨ Refer to the profile assessment for the quantity of packers required.

⇨ Striker version taken from profile assessment and frame routed → *from page 86*.

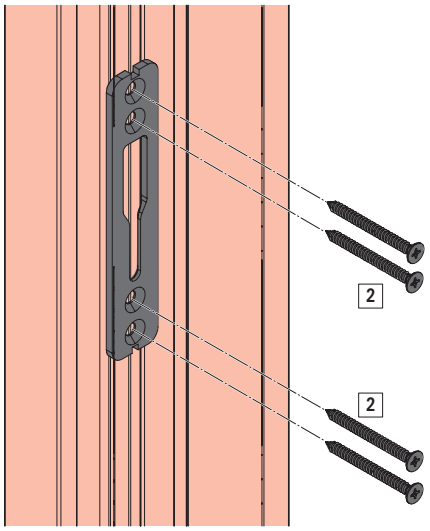
1. Position the striker (the dimensions relate to the roller track level [1]).

SH / mm	H1	H2	H3
≤ 2200	180.5	1530	–
2201 - 2600	180.5	1835	–
> 2600	180.5	1138	2354



Installing the striker

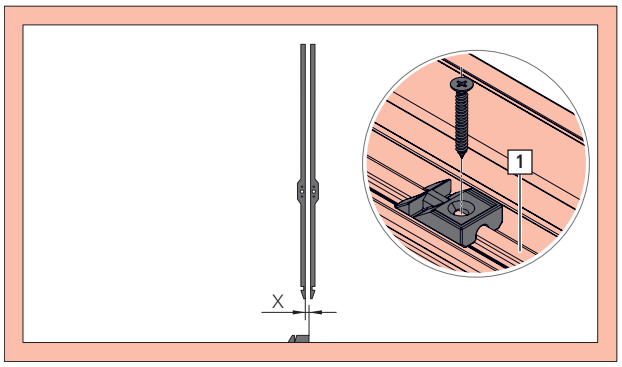
1. Fasten the striker with four screws [2].



10.6.8 Floor striker

Diagram C

1. Position the floor striker on the roller track [1].
   X = 4 mm (distance from the outer edge of the floor striker to the outer edge of the espagnolette of the second opening sash in the closed position)
   Predrill the drill hole for mounting the floor striker.
   Fasten with one screw.



10.6.9 End stop with packer

CAUTION

Risk of crushing due to sliding the sash open as far as it will go!

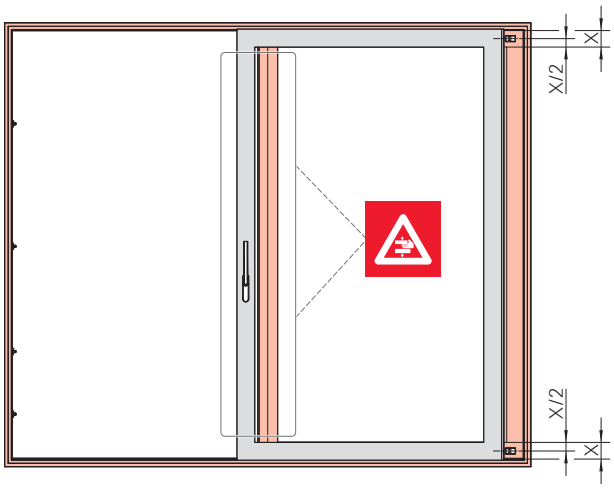
Opening the sash fully without using end stops at the top and bottom may lead to physical injury.

1. The use of end stops is mandatory in conjunction with a sliding handle on the outside for inward running sashes or on the inside for outward running sashes.
2. Ensure that there is enough space between the sliding handle / recessed grip and the floating mullion when the sash is open.

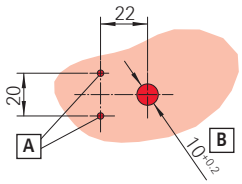
1. Define the end stop position.

INFO

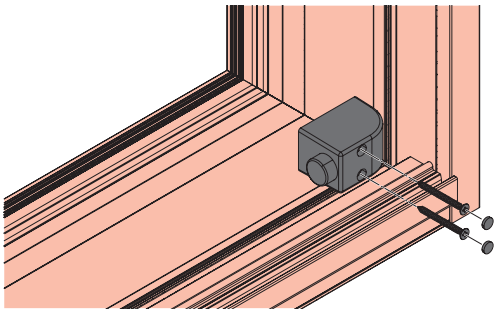
Diagram D: the length of the end stop bolt and screws must be selected so that they do not collide with the hardware. Crop the end stop bolt if necessary.



2. Drill the holes for the end stop.
   [A]: 1x Ø $10.0^{+0.2}$
   [B]: 2x Ø 3.5



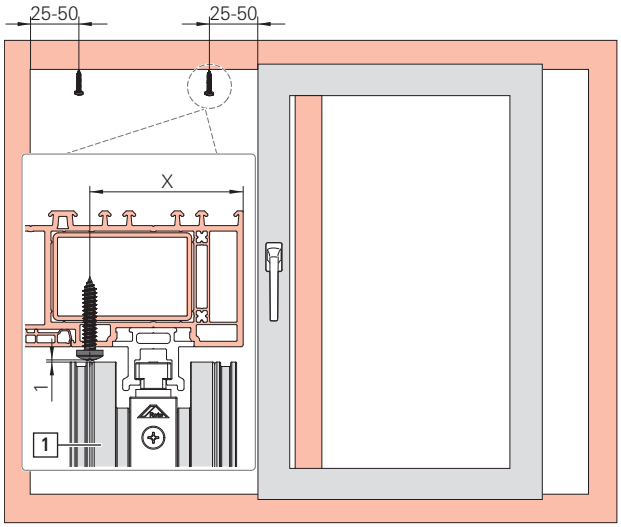
3. Fasten the end stop with two screws.
   Fit the screw cover caps.



10.6.10 Anti-jemmy device

⇨ For the profile-related screw position for the anti-jemmy device, refer to the profile assessment.

1. Open the sash fully.
   Mark the position of the screws.
   Predrill with Ø 5.0.
   When tightening the screws, ensure that the distance between the screw head and the top edge of the sliding sash [1] is 1 mm in the sliding position. Ensure that it is possible to slide the sliding sash open and closed fully without any issues.



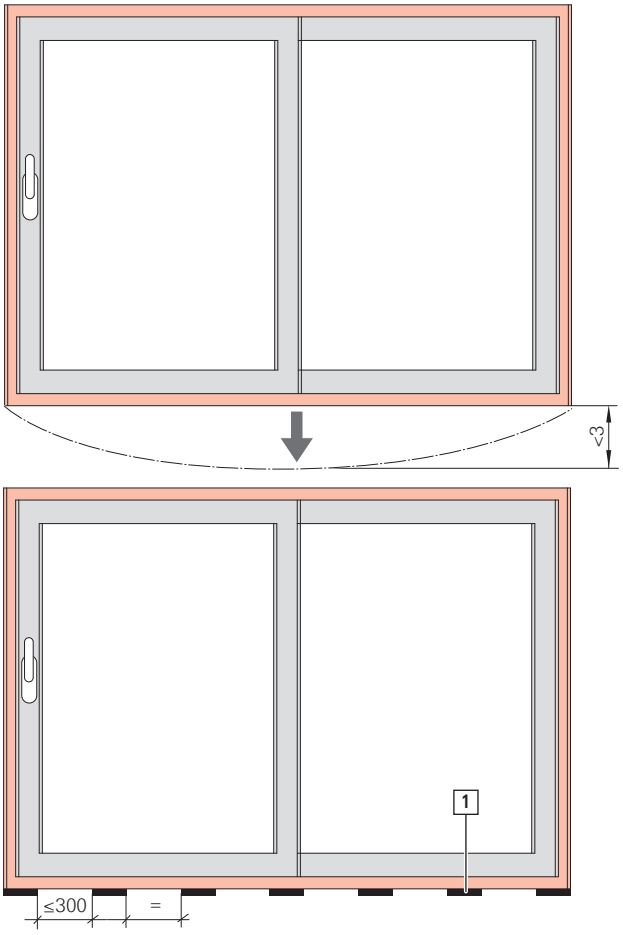
10.6.11 Notes on final assembly

DANGER
Risk of death caused by excessive bending of the running profile.
Incorrect installation of the sash in an element that bends by ≥ 3 mm may cause the sash to fall out.
1. Underlay the element so that it bends by < 3 mm.

INFO
In order to ensure the proper functioning and security of the element, the bending of the frame must not exceed 3 mm.

INFO
Place supports under the threshold every 300 mm across its entire area.

[1] Packer

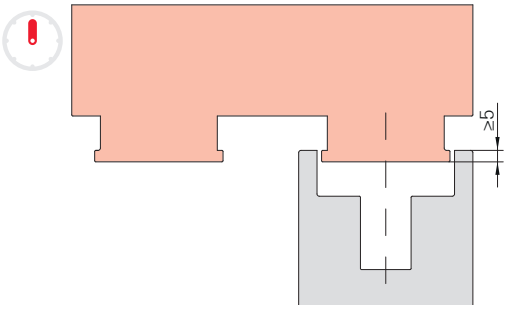


DANGER

Risk of death caused by insufficient pressure-proof coverage from sash to frame in the closed position.

Incorrect installation of the sash in an element that has < 5 mm pressure-proof coverage from sash to frame may cause the sash to fall out (mainly when the sash is slid open with the handle in the closed position).

1. Construct the element so that pressure-proof coverage of ≥ 5 mm from sash to frame is ensured in all positions.



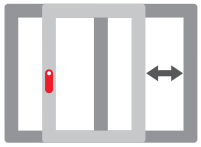
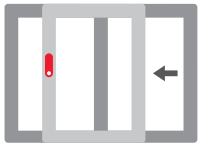
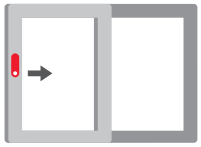
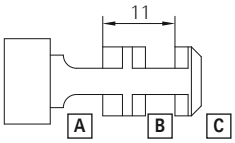
11 Operation

11.1 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.

11.1.1 Roto Patio Lift

Handle position	Sash position	Meaning
		Sash in closed position.
		Sash in sliding position.
		Sash in fixed sliding position.
		Standard: night ventilation position with sash opened by 11 mm and handle in closed position  [A] Closed position [B] Night ventilation position [C] Sliding position

11.2 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.	■
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).	■
Locking cams brush against the striker.	Sash components hinged or installed incorrectly.	Check the setting in the turn position (potentially rehang – start from the T&T espagnolette).	■
	Incorrect striker positions.	Adapt the striker positions.	■

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

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

12 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 122*
Cleaning		→ *from page 123*
Clean hardware	☐	
Care		→ *from page 123*
Lubricate movable parts	☐	
Lubricate locking points	☐	
Performance test		→ *from page 125*
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 125*
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

12.1 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.

12.2 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. → *12.3 "Care" from page 123*
- Apply a thin protective film to the hardware, for example using a cloth soaked in oil.

12.3 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.

12.3.1 Lubrication points

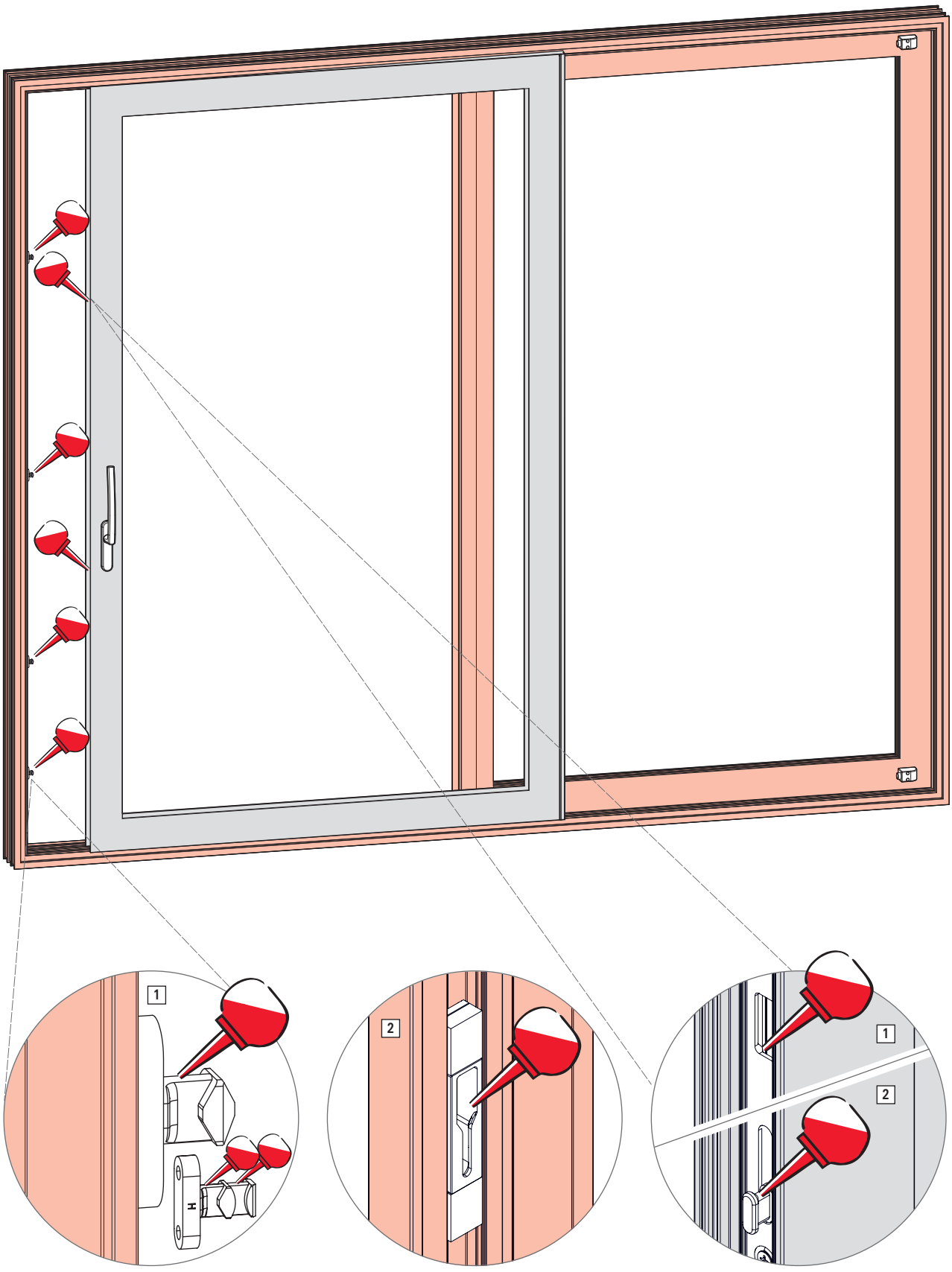


Fig. 12.1: [1] Standard; [2] DesignLocking

12.4 Performance test

WARNING

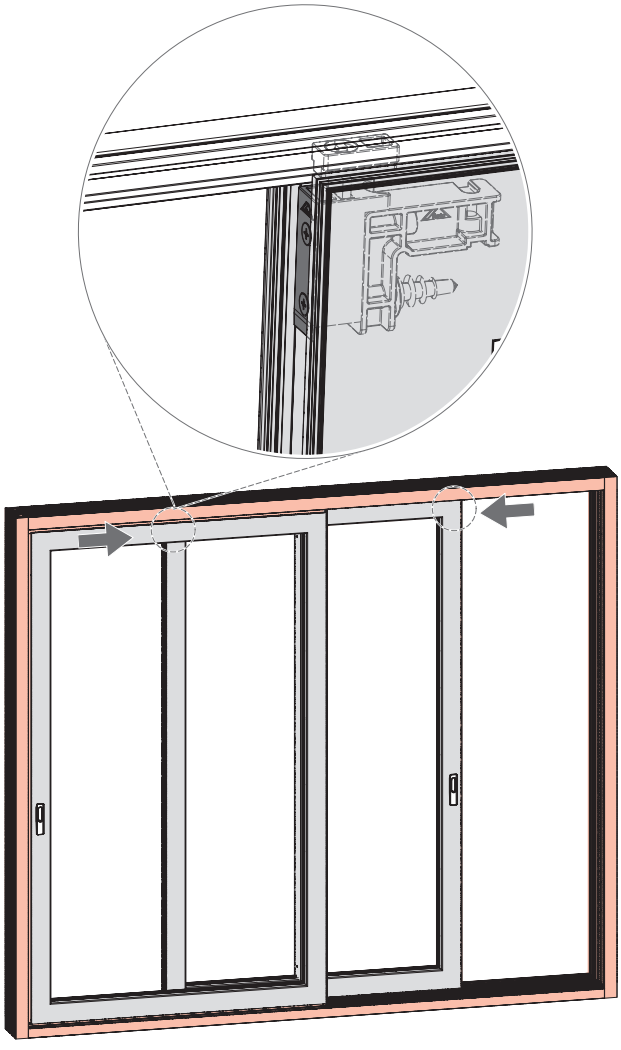
Improper repair work may pose a risk of death!

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 secure fit.
- Check that the element runs smoothly by opening and closing it.
- Check the element gaskets for elasticity and fit.
- Check the closed element to ensure that it is leakproof.
- Check that the topglider is fitted securely in the guide track and on the sash.



Have malfunctions remedied by a specialist company.

12.5 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.

13 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.

13.1 Unhinging the sash

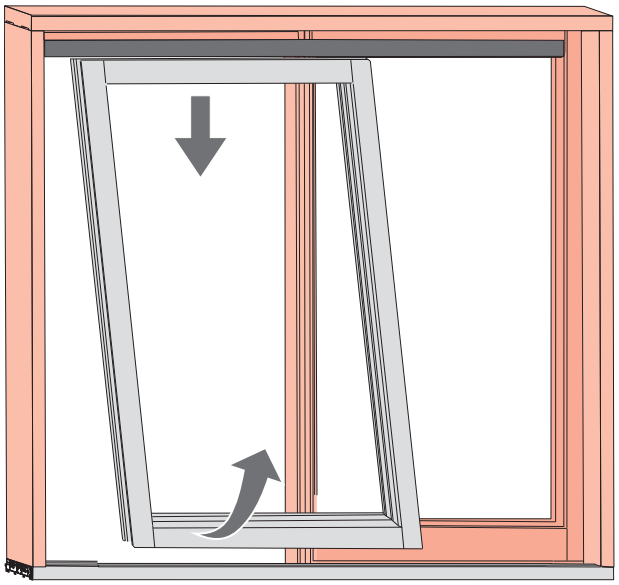
⇨ Specifications of the profile manufacturer complied with.

1.

Move the handle to the sliding position .

Lift the sash and tilt it outwards at the bottom.

Lower the sash in a controlled manner until the frame no longer overlaps the sash.



2. Remove the sash parallel to the frame.

13.2 Hardware components

Removing hardware components

1. Undo all screw connections.
2. Remove the hardware components.
3. Dispose of the hardware components properly.

14 Transport

14.1 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.

14.2 Storing the hardware

Store all hardware components as follows until they are installed:

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

15 Disposal

ATTENTION

Incorrect disposal may pollute the environment.

Pieces of hardware are raw materials.

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

15.1 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.

15.2 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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