



Sliding shutters
Aluminium shutters



Installation instructions

INSTALLATION BY
SPECIALIST PERSONNEL
Valid from 09.2011

E 915.6

Notes

The present Installation & operating instructions describe the installation and commissioning of EHRET sliding shutters.

Carefully read through these installation instructions prior to commissioning. Observe the specified process steps and take into account the notes and recommendations given. Knowledge of and technically impeccable implementation of the given safety notes and warnings are prerequisites for safe and proper operation of EHRET sliding shutters. Insufficient knowledge at the time of commissioning and utilisation lead to the loss of any liability claims against EHRET GmbH. Any installation or operation in deviation from our installation and operating instructions – either in full or in part – will result in the warranty becoming void.

These installation instructions are a component part of the product and are therefore always to be retained until the product is disposed of. These installation instructions are to be passed along in the event of the sale of this product.

These installation instructions are addressed to qualified specialist personnel. Qualified specialist personnel are persons who are familiar with the transport, set-up, installation, commissioning and operation of the product and who have appropriate qualifications for their work. Specialist personnel must know and observe the relevant standards and/or guidelines.

This product complies with the general rules of technology. Safety-conscious behaviour is necessary for commissioning the product safely. For this reason, observe the following notes.

Should any of the information in these installation instructions not be absolutely clear, it is essential that you contact the specialist personnel at EHRET GmbH, 77972 Mahlberg (Germany).

Bore hole sizes and fastening material are recommendations; these could vary because of the substrate!

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Explanation of signs and symbols


Warning notes

 **DANGER**

- ▶ Designates an imminent danger that could lead to death or severe injuries if the respective precautionary measures are not implemented.

 **WARNING**

- ▶ Means that death, severe bodily injury or major property damage could occur if the respective precautionary measures are not implemented.

 **CAUTION**

- ▶ Means a possible danger that could lead to minor injuries or property damage if it is not avoided.

- ▶ Directives for action

Safety notes

- ▶ Only qualified specialist personnel may carry out installation and commissioning!

 **WARNING**

Incorrect installation could lead to severe injuries and/or damage to property.

- ▶ Follow all installation instructions.

 **WARNING**

- ▶ Take into account the following notes and warnings in order to avoid dangers and to protect the product.

- ▶ Observe the accident prevention regulations of the Accident Prevention & Insurance Association.
- ▶ Observe the rules of the road during transport.
- ▶ Make sure that the load is well-secured on the means of transport.
- ▶ Take care to ensure that the drives are stored under dry conditions prior to final installation and commissioning.
- ▶ Cordon off a generously large area around the installation site.
- ▶ Observe without limitation the regulations of the manufacturers of dowel and attachment materials.
- ▶ The mounting bases of the installation site are to be checked for load-bearing capacity prior to installation.
- ▶ In the event of uncertainties about the mounting bases, contact your responsible building experts.
- ▶ Electrical work may be carried out only by authorised electricians.

- ▶ The specified connection diagrams are to be observed, as otherwise damage to the motor could occur. EHRET GmbH assumes no liability for damage resulting from incorrect installation.
- ▶ Check the product for damage prior to installation. Products requiring repair may not be used.
- ▶ Do not touch any internal parts of the product that become exposed as the result of damage (e.g. electrical cables/lines).
- ▶ Discontinue operation of your electrical drive at once in the event of smoke or fumes.
- ▶ Do not allow children to play with the operating apparatus of the drives.
- ▶ Electrical/electronic devices are not secure against failure. Make sure that no hazardous situations for personnel or product could arise in the event of a power failure.
- ▶ Devices with electrical controls could go into motion at any time and without warning. Prevent situations hazardous to personnel and product that arise from this fact.
- ▶ No personnel or obstacles are permitted to be within the range of pivoting and/or travelling shutters while they are moving. Keep personnel and objects away until the shutters have reached their final position.
- ▶ Do not reach into moving parts or closing areas while shutters are opening or closing.
- ▶ Make sure that no articles of clothing or body parts are able to be caught by moving parts in the system.
- ▶ Disconnect the drives from the power supply during maintenance work.
- ▶ Ice could form on the product in the event of snowfall, sleet or icy rain. Do not operate equipment until the ice formation is no longer present, and switch automatic controls to manual.
- ▶ Make sure that the shutters are locked before any wind load occurs.
- ▶ The shutters may not be operated at wind speeds from 62 km/h (stormy wind).
- ▶ No additional loads such as persons or objects are permitted to have an effect on the shutters.
- ▶ Shutters are not intended to protect individuals from falls.

 **WARNING**

Danger of injury from the weight of the product!

- ▶ Due to the weight of the products, perform transport and installation by at least two individuals.

- ▶ Transport the product carefully in order to avoid damage.
- ▶ Take care to ensure that the product is not damaged when the packaging material is removed.

 **WARNING**


Danger of suffocation from packaging foil.

- ▶ The packaging foil must be kept out of reach of children.
- ▶ Store the foil carefully until you turn it in for recycling.

- ▶ Turn the packaging materials in for recycling.

Installation FAQs

Which parts have been delivered?

- Carrier profiles with pre-mounted guide rails. Version in accordance with the required projection: System A75, A105, A148 with continuous carrier profiles, System A195 with wall basic profile and hooked-up rail carrier
- Trolleys and stoppers are pushed into the guide rails
- Sliding sash with pre-mounted suspension bars and pre-mounted shutter guide profiles
- Guide bracket, unattached, fits guide Type A (punctiform guide) or Type B (continuous guide), quantity and version, see  chapter "Guide bracket matrix", page 23.
- Guide T-profile, unattached, enclosed with continuous guides
- Cover trim with lateral closing cover, unattached, with fastening screws Version with Systems A75, A105 and A148 as continuous cover profile, single-part. As continuous cover with System A195, although 2-part version

Which means of attachment are being used?

- The means of attachment are not included in the scope of delivery!
- The selection of the attachment materials is oriented towards the mounting bases on hand, the load-bearing capacities of which are to be checked before the installation. Observe without limitation the regulations of the manufacturers of dowel and attachment materials.

WARNING

Unsuitable means of attachment could lead to severe injuries and/or damage to property.




- ▶ Select the means of attachment in accordance with the load-bearing capacity of the mounting bases.

Which sash-wall clearances and sash-wall overhangs are to be observed?

If no object-specific special clearances are agreed to, the following applies:

- Wall and intermediate clearances
 - with sash depth 32 and 48 mm = 12 mm
 - with sash depth 70 mm = 15 mm
- Sash overhang in lintel area 30 mm
- Lateral sash overhang 40 mm to the reveal

Which parts are to be positioned where on the structure?

- Position and fasten carrier profiles in accordance with the system drawing (System A75/A105/A148/A195) and stop diagram above the lintel, see  chapter "Carrier and cover system", page 12  chapter "Installing carrier profiles", page 26.
- Position and fasten side guidance brackets in accordance with the system drawing and stop diagram, see  chapter "Installing lower sliding shutter guides", page 31.

How are the sliding sashes hooked up in the trolleys and how can the sashes be re-adjusted?

WARNING

Danger of injury/property damage caused by folding sliding sashes falling

If the lock nuts are not tightened firmly, the sliding sash can become detached and fall.

- ▶ The solid seating of the lock nuts is to be checked.

 **CAUTION****Danger of injury/property damage caused by protruding screws**


- ▶ Take care to ensure the hexagon screw is securely threaded sufficiently far into the carriage.

- The sliding shutters with the hooking bars are pushed into the hexagon screws (WS13) screwed in the trolleys from below and fastened with lock nuts (WS17) after the height adjustment.
- The prescribed clearance from the upper edge of a sash to the lower edge of the guide rail is 33 mm for all systems.
- The height can be adjusted by a maximum of ± 5 mm by screwing the hexagon screw (SW13) in or out. The wall clearance can be readjusted by a maximum of ± 2 mm by shifting the suspension bars horizontally in the suspension screws.
- As an additional disconnection lock, the lock nut can be protected against inadvertent loosening with the optional safety spring.

What is to be taken into account with the function check?


- Can the sliding shutters be moved easily?
- Is the holding force of the trolley stoppers set properly (not too strong or too weak)?
- Are all of the lock nuts on the suspension bars firmly tightened?
- Are the distances to the reveal and clearances of the lateral guides aligned to the sliding shutters?
- Are the sliding shutters aligned parallel to one another?
- Are the sliding shutters aligned to the facade?

Disposal

 IMPORTANT
<p>Disposal</p> <ul style="list-style-type: none"> • The following information must be strictly adhered to in order to prevent any environmental damage. Even if the machine is disposed of by certified experts, the operator must ensure proper execution!

Some materials of the machine are reusable. By recycling some parts or raw materials from used products, you make an important contribution to protecting the environment.

- ▶ Please contact your local authorities if you require information about collection points near you.

 IMPORTANT
<p>Disposal</p> <ul style="list-style-type: none"> ▶ Dispose of any machine parts in such a way that damage to human health and the environment can be excluded.

Hazardous waste

Reusable material	Components
Electronic waste	<ul style="list-style-type: none"> • Electrical supplies • Control units • Circuit boards with electronic components

Recyclable materials of the machine

Reusable material	Components
Aluminium	<ul style="list-style-type: none"> • Sliding shutters • Suspensions • Guide brackets • Window sill cover • Fittings
Copper	<ul style="list-style-type: none"> • Cables • Motor
Plastic, rubber, PVC	<ul style="list-style-type: none"> • Guides • Accessories • Seals • Cables
Steel	<ul style="list-style-type: none"> • Motor and components • Fittings • Accessories

CE EC Declaration of Conformity

(Original EC Declaration of Conformity)

In accordance with Machinery Directive 2006/42/EC, Annex II, 1. A.

In accordance with EMC Directive 2004/108/EC

In accordance with Low Voltage Directive 73/23/EEC

In accordance with the Construction Products Directive 89/106/EEC

The manufacturer: EHRET GmbH
Aluminium shutters
Bahnhofstrasse 14–18
77972 Mahlberg, Germany

declares that the product: **EHRET window/sliding shutter
with manual or electrical operation**

Description of function: **Sun/glare protection and screen**

to which this guideline refers meets all the applicable requirements of the EC Directives specified above. The protection objectives of the EC Directive 2006/95/EC are adhered to.

The following harmonised standards have been applied in full:

EN 13659:2004+A1:2008 Shutters – Performance requirements including safety
EN 60335-2-97:2006 Household and similar electrical appliances - Safety,
+ A11:2008 + A2:2010 Part 2–97: Particular requirements for drives for rolling shutters,
awnings, blinds and similar equipment.

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Name and address of the individual who is authorised to assemble the technical documentation:

Ralf Gielen
Head of Technology

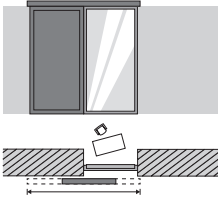
Location: 77972 Mahlberg, Germany
Date: 01/01/2015



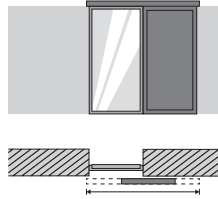
EHRET GmbH
Eberhard Schopferer
Management

Stop diagrams

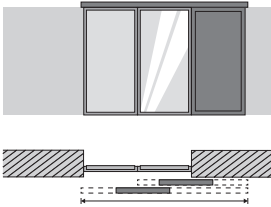
1/R



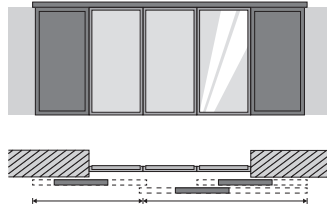
1/L



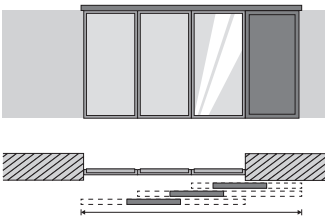
2/LL



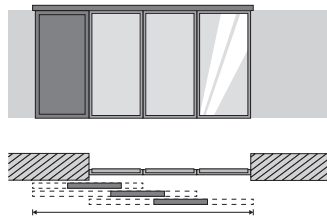
2/LL-R



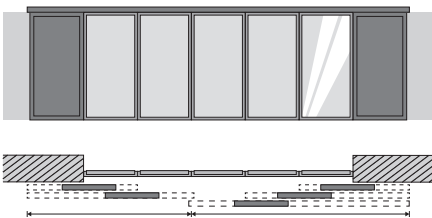
3/LLL



3/RRR



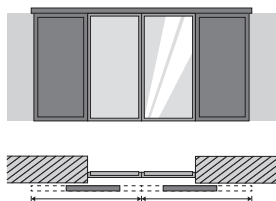
3/LLL-RR



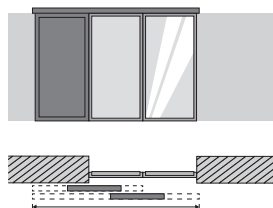
3/LL-RRR



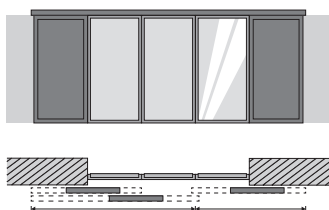
1/L-R



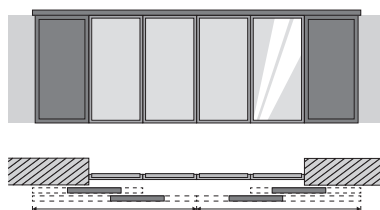
2/RR



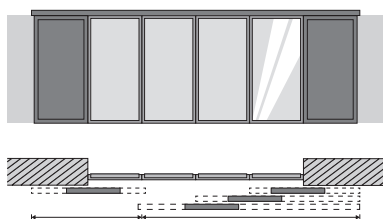
2/L-RR



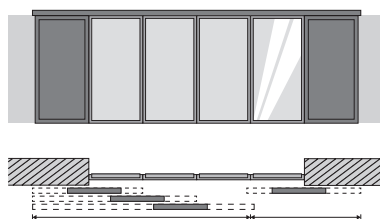
2/LL-RR



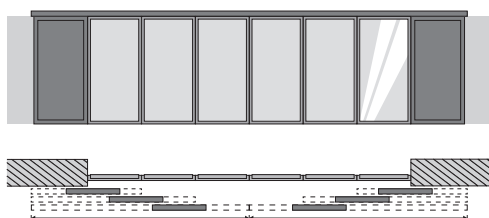
3/LLL-R



3/L-RRR



3/LLL-RRR

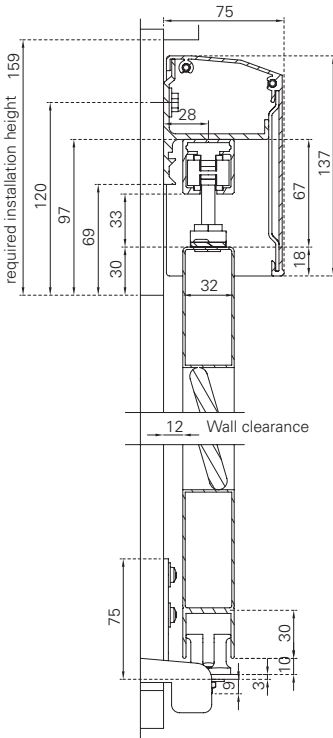


The stop diagrams are sketched as if viewed from inside.

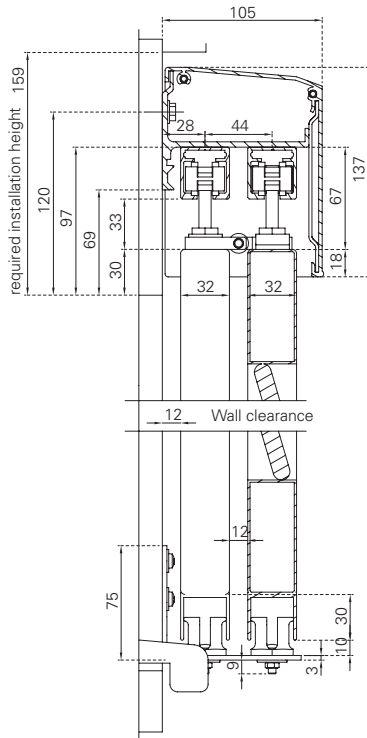
The term 2/LL-R stands for 2 rails, 2 sashes left (LL) and 1 sash right (R).

Carrier and cover system

System A75/60 BT32 | Type A



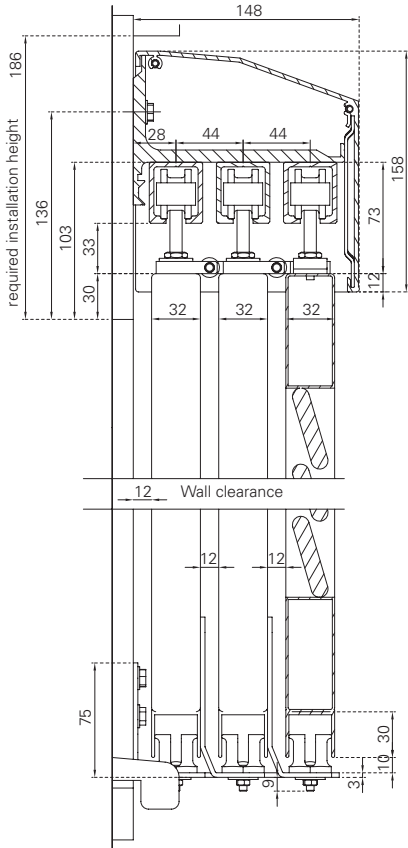
System A105/60 BT32 | Type A



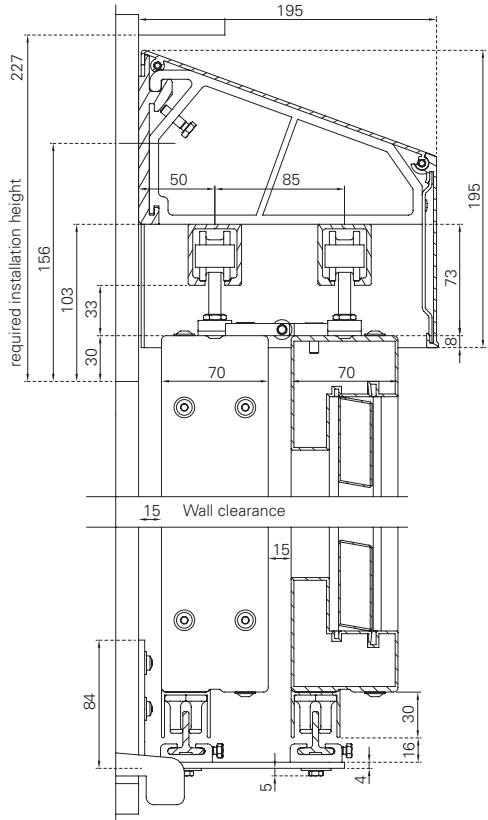
We recommend the following screw diameters and spacings for fastening the individual carrier variants to the wall:

- A75: Ø 8 mm; á = 600–800 mm
- A105: Ø 8 mm; á = 600–800 mm
- A148: Ø 8 mm; á = 600–800 mm
- A195: Ø 10 mm; á = 600–800 mm

System A148/100 BT32 | Type A

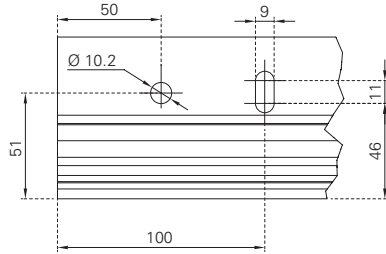
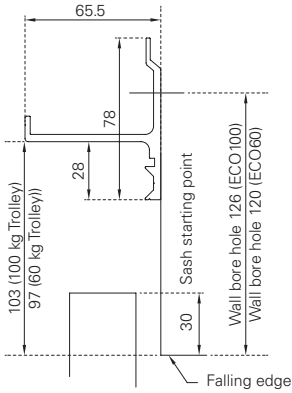


System A195/100 BT70 | Type B

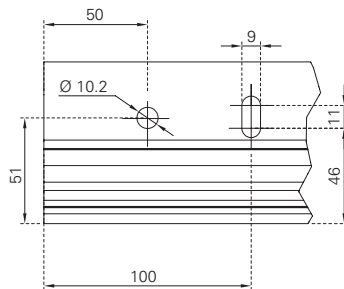
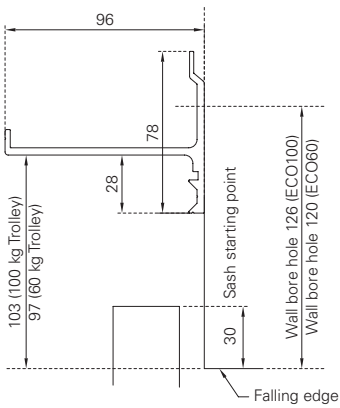


Carrier profiles

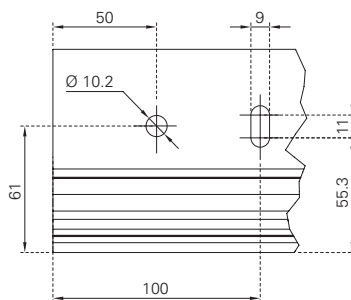
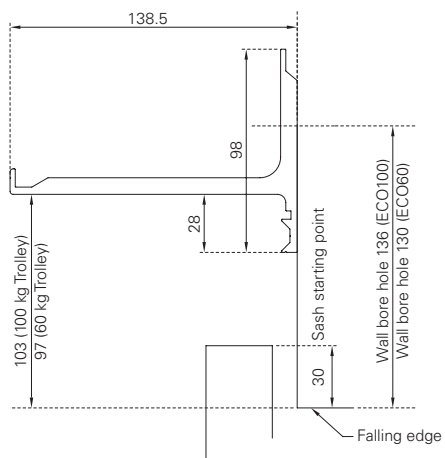
Carrier profile A75



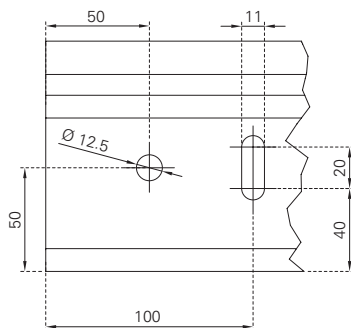
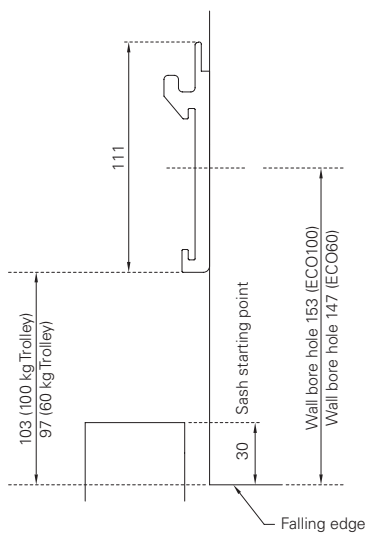
Carrier profile A105



Carrier profile A148

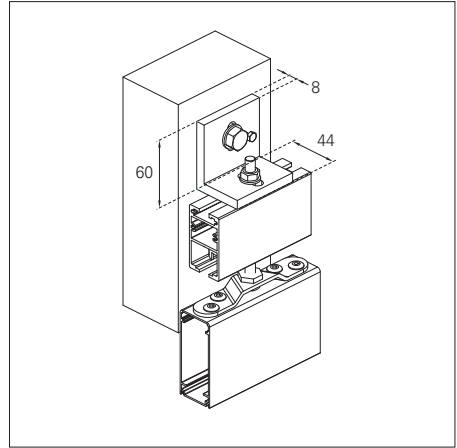
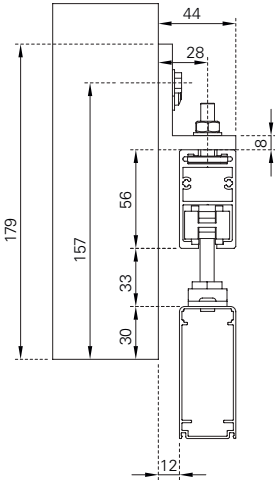


Wall basic profile A195



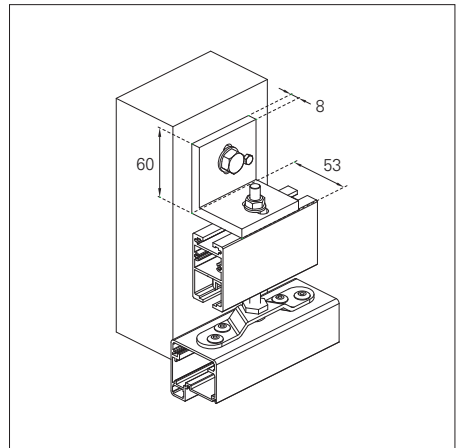
Basic angle

ECO 60 system
ECO60N



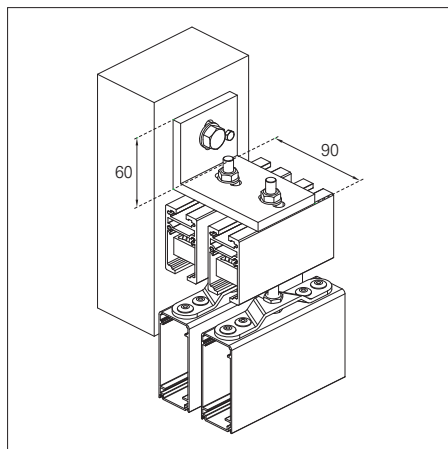
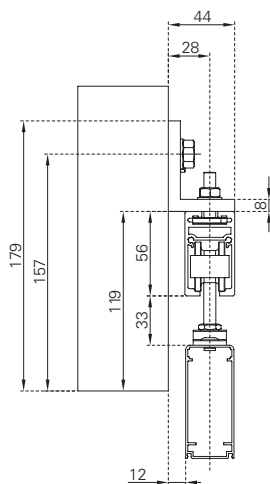
PL | PL-N | PL-LO | PL-LO-N | AR61
R75 | AR75 | TZR75 | R48 | SL | SL12

- Maximum distance between the fastening points = 800 mm
- Maximum distance from end of rail = 200 mm
- Angle calculation = Rail length / 800 mm + 1 angle
e.g.: 4 m rail = 4000 mm / 800 mm = 5 + 1 = 6 angles
- We recommend screws with Ø 8 mm diameter for fastening the basic angle brackets in place
- Rail cover set for lateral cover of the rails



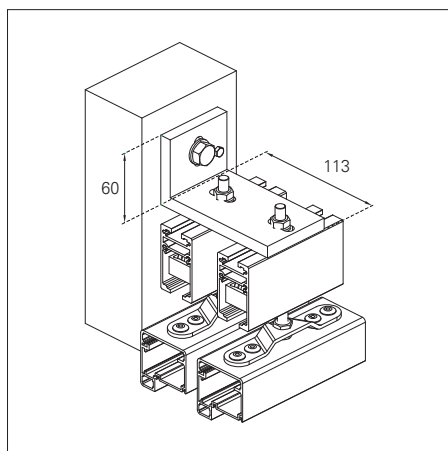
MAX15 | MAX28 | MAX37 | MAX48 | CADROTEX

ECO 100 system D33N / D55N



PL | PL-N | PL-LO | PL-LO-N | AR61
R75 | AR75 | TZR75 | R48 | SL | SL12

- Maximum distance between the fastening points = 800 mm
- Maximum distance from end of rail = 200 mm
- Angle calculation = Rail length / 800 mm + 1 angle
e.g.: 4 m rail = 4000 mm / 800 mm = 5 + 1 = 6 angles
- We recommend screws with Ø 8 mm diameter for fastening the basic angle brackets in place
- Rail cover set for lateral cover of the rails

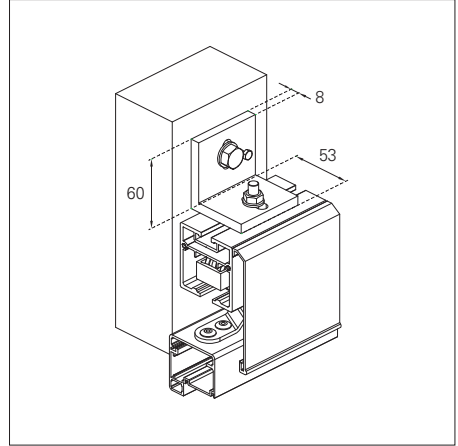
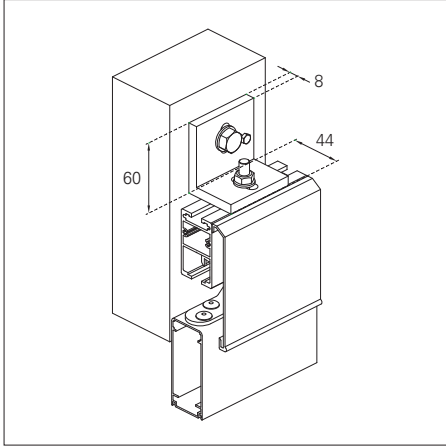


MAX15 | MAX28 | MAX37 | MAX48 | CADROTEX

Basic angle with cover

R75 frame
ECO60N / D33N

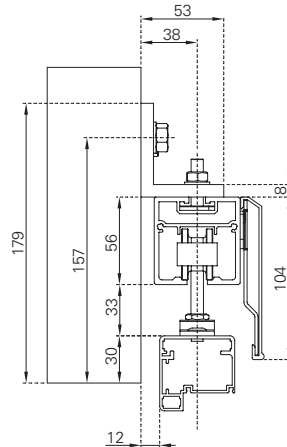
MAX frame
D33N / D55N



PL | PL-N | PL-LO | PL-LO-N | AR61
R75 | AR75 | TZR75 | R48 | SL | SL12

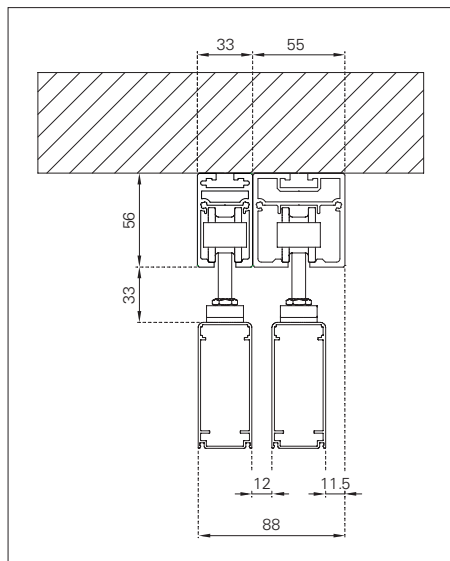
MAX15 | MAX28 | MAX37 | MAX48 | CADROTEX

- Maximum distance between the fastening points = 800 mm
- Maximum distance from end of rail = 200 mm
- Angle calculation = Rail length / 800 mm + 1 angle
e.g.: 4 m rail = 4000 mm / 800 mm = 5 + 1 = 6 angles
- We recommend screws with Ø 8 mm diameter for fastening the basic angle brackets in place
- Trim cover set for lateral cover of the rail and cover trim



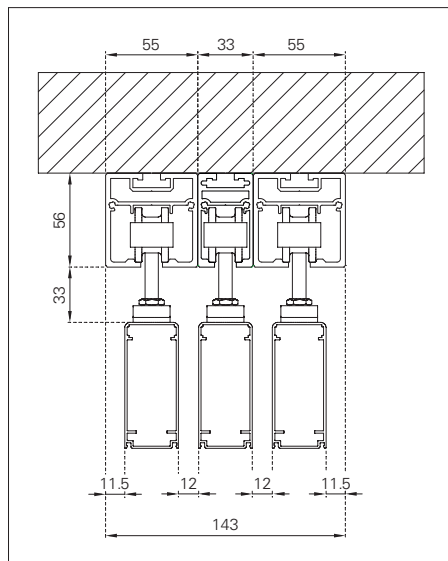
Ceiling installation

2-rail with R75 frame D33N / D55N



PL | PL-N | PL-LO | PL-LO-N | AR61
R75 | AR75 | TZR75 | R48 | SL | SL12

3-rail with R75 frame D33N / D55N



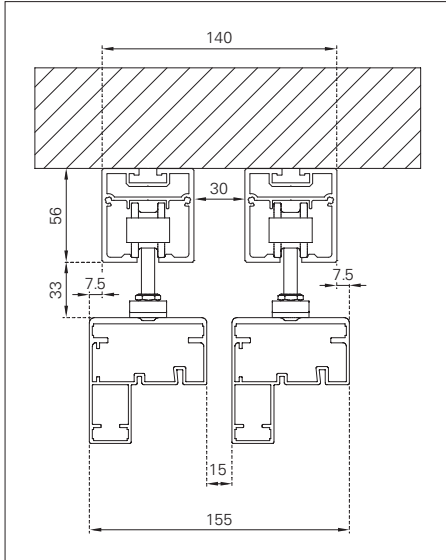
PL | PL-N | PL-LO | PL-LO-N | AR61
R75 | AR75 | TZR75 | R48 | SL | SL12

- Maximum distance between the fastening points = 800 mm
- Maximum distance from end of rail = 200 mm
- The maximum load is 100 kg / running meter
- We recommend the following screw diameters and spacings for fastening the rails in place in the case of header and ceiling installation: $\varnothing 5$ mm; $s = 400$ mm
- Rail cover set for lateral cover of the rails

Shutters can be ceiling-mounted using rail combinations. Two ceiling rails with rail widths of 33 and 55 mm are available (height: 56 mm each).

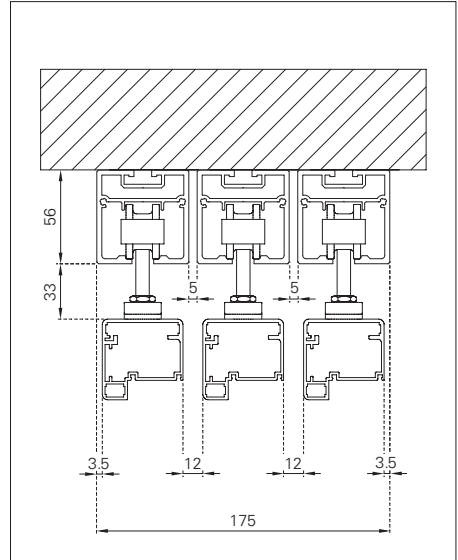
Ceiling installation

2-rail with MAX frame D55N



MAX70 | SUN-P70

3-rail with MAX frame D55N



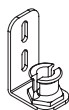
MAX48 | MAX37 | MAX28 | MAX15 | CADROTEX

- Maximum distance between the fastening points = 800 mm
- Maximum distance from end of rail = 200 mm
- The maximum load is 100 kg / running meter
- We recommend the following screw diameters and spacings for fastening the rails in place in the case of header and ceiling installation: \varnothing 5 mm; \acute{a} = 400 mm
- Rail cover set for lateral cover of the rails

Shutters can be ceiling-mounted using rail combinations. Two ceiling rails with rail widths of 33 and 55 mm are available (height: 56 mm each).

Bottom guides

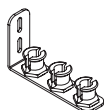
Type A | punctiform guide



813021



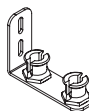
813022



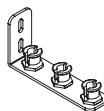
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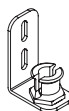
813031



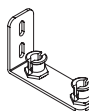
813032



813033

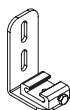


813041

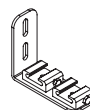


813042

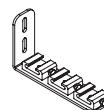
Type B | continuous guide



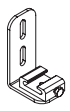
814001



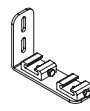
814002



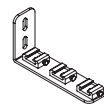
814003



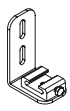
814011



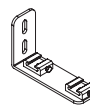
814012



814013



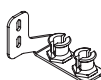
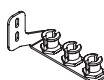
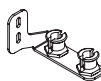
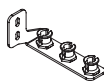
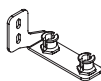
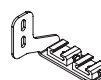
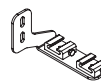
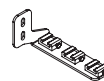
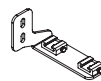
814021



814022

- For sash widths > 1000 mm, additional wall brackets are mandatory for the parking position of the opened sash!

Type A | punctiform guide, offset

813121 right
813221 left813122 right
813222 left813123 right
813223 left813131 right
813231 left813132 right
813232 left813133 right
813233 left813141 right
813241 left813142 right
813242 left814101 right
814201 left814102 right
814202 left814103 right
814203 left814111 right
814211 left814112 right
814212 left814113 right
814213 left814121 right
814221 left814122 right
814222 left

- For sash widths > 1000 mm, additional wall brackets are mandatory for the parking position of the opened sash!

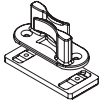
Bottom guides

Type C | "reinforced" with continuous guide

Type D | floor installation



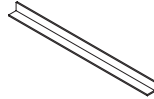
884051



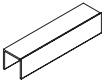
884052



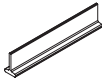
884056



818201

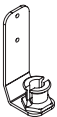


884054

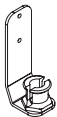


884055

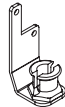
Double shutter guides



813010



813012



813011



813012

We recommend the following screw diameters for fastening the wall brackets of the bottom guides in place:

- Wall leg 34 mm wide: Ø 6 mm
- Wall leg 44 mm wide: Ø 8 mm

Guide bracket matrix

Type A | sash depths 32 mm

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR	3/RRR	3/LLL	3/LRRR	3/LLLR	3/LLRRR	3/LLRRR
813221	1	1	1		1	1	1	1		1	1	1	1	1
813121	1	1	1	1		1	1	1	1		1	1	1	1
813021	1	1	2			1	1				1	1		
813222				1										
813122					1									
813022				1	1	1	1	2				1	1	
813223									1					
813123										1				
813023									1	1	1	1	1	2

Type A | sash depths 70 mm

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR
813241	1	1	1		1	1	1	1
813141	1	1	1	1		1	1	1
813041	1	1	2			1	1	
813242				1				
813142					1			
813042				1	1	1	1	2

Type A | sash depths 48 mm

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR	3/RRR	3/LLL	3/LRRR	3/LLLR	3/LLRRR	3/LLRRR
813231	1	1	1	1	1	1	1	1		1	1	1	1	1
813131	1	1	1	1		1	1	1	1		1	1	1	1
813031	1	1	2			1	1				1	1		
813232				1										
813132					1									
813032				1	1	1	1	2				1	1	
813233									1					
813133										1				
813033									1	1	1	1	1	2

Guide bracket matrix

Type B | sash depths 32 mm

Art. no.	1/R	1/L	1/ER	2/RR	2/LL	2/ERR	2/LLR	2/LLRR	3/RRR	3/LLL	3/ERRR	3/LLLR	3/LERRR	3/LLERR	3/LLERRR
814201	1	1	1												
814101	1	1	1												
814001	1	1	2												
814202				1	1	1	1	1							
814102				1	1	1	1	1							
814002				1	1	2	2	2							
814203									1	1	1	1	1	1	1
814103									1	1	1	1	1	1	1
814003									1	1	2	2	2	2	2

Type B | sash depths 70 mm

Art. no.	1/R	1/L	1/ER	2/RR	2/LL	2/ERR	2/LLR	2/LLRR
814221	1	1	1					
814121	1	1	1					
814021	1	1	2					
814222				1	1	1	1	1
814122				1	1	1	1	1
814022				1	1	2	2	2

Type B | sash depths 48 mm

Art. no.	1/R	1/L	1/ER	2/RR	2/LL	2/ERR	2/LLR	2/LLRR	3/RRR	3/LLL	3/ERRR	3/LLLR	3/LERRR	3/LLERR	3/LLERRR
814211	1	1	1												
814111	1	1	1												
814011	1	1	2												
814212				1	1	1	1	1							
814112				1	1	1	1	1							
814012				1	1	2	2	2							
814213									1	1	1	1	1	1	1
814113									1	1	1	1	1	1	1
814013									1	1	2	2	2	2	2

Double shutter guides | sash depths 32 mm

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR	3/RRR	3/LLL	3/LRRR	3/LLLR	3/LRRR	3/LLLR	3/LLRRR
813010				1	1	1	1	2	2	2	2	3	3	3	4
813013				1		1		1	2		2		2	1	2
813011					1		1	1		2		2	1	2	2
816011				1	1	1	1	2					1	1	
816012									1	1	1	1	1	1	2
800070				1	1						1	1			
800073									1	1					

Accessory parts: Double shutter guides, carriage, cover guard bracket

Double shutter guides | sash depths 70 mm

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR
813012								
816022				1	1	1	1	2
800072				1	1			

Accessory parts: Double shutter guides, carriage, cover guard bracket

Double shutter guides | sash depths 48 mm

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR	3/RRR	3/LLL	3/LRRR	3/LLLR	3/LRRR	3/LLLR	3/LLRRR
813010				1	1	1	1	2	2	2	2	3	3	3	4
813013				1		1		1	2		2		2	1	2
813011					1		1	1		2		2	1	2	2
816011				1	1	1	1	2					1	1	
816021									1	1	1	1	1	1	2
800071				1	1						1	1			
800074									1	1					

Accessory parts: Double shutter guides, carriage, cover guard bracket

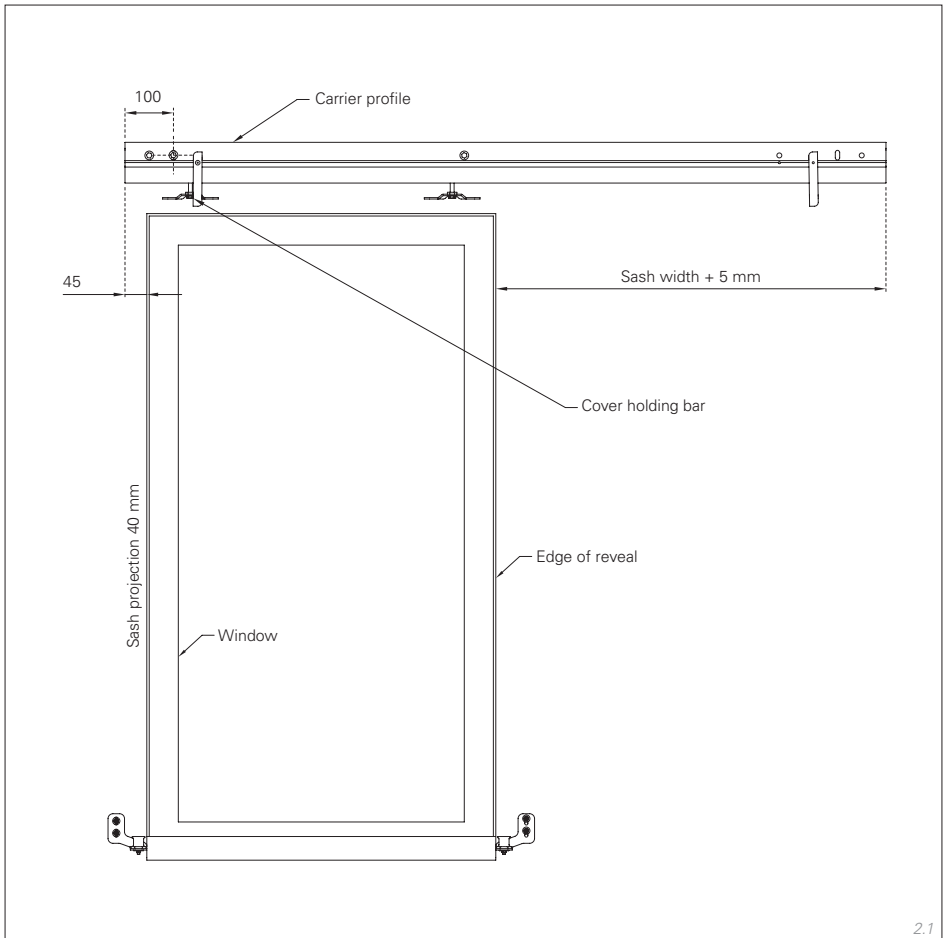
Additional guide parts for Type B guides

Art. no.	1/R	1/L	1/LR	2/RR	2/LL	2/LRR	2/LLR	2/LLRR	3/RRR	3/LLL	3/LRRR	3/LLLR	3/LRRR	3/LLLR	3/LLRRR
008054	2	2	4	4	4	6	6	8	6	6	8	8	10	10	12

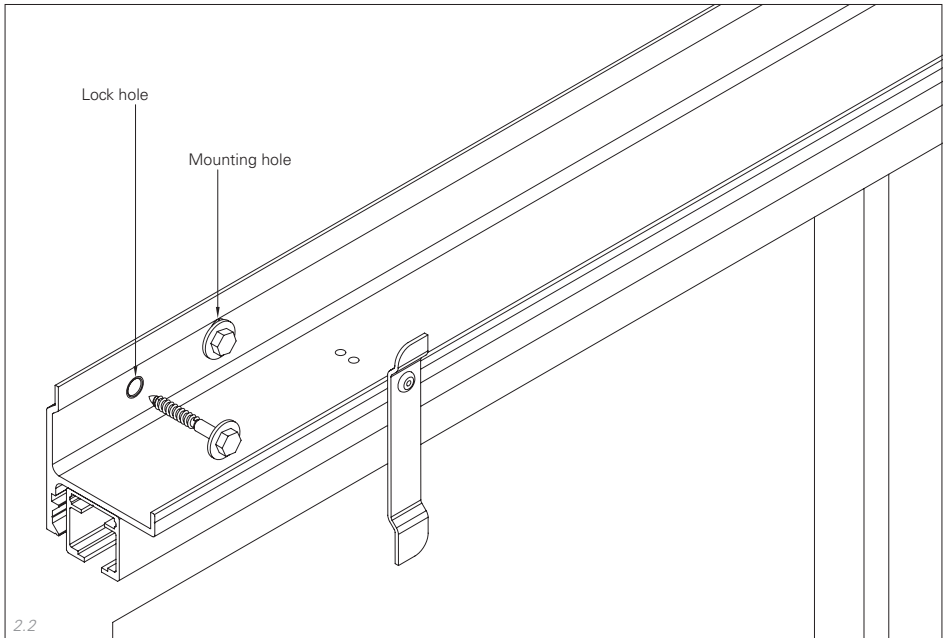
2 Installation instructions

Installing carrier profiles

- ▶ Check the scope of delivery for completeness.
- ▶ Determine the position of the carrier profiles with respect to the window opening in accordance with the stop diagram and sash width
- ▶ Position the carrier profile in accordance with the system drawing and mark the oblong holes for fastening

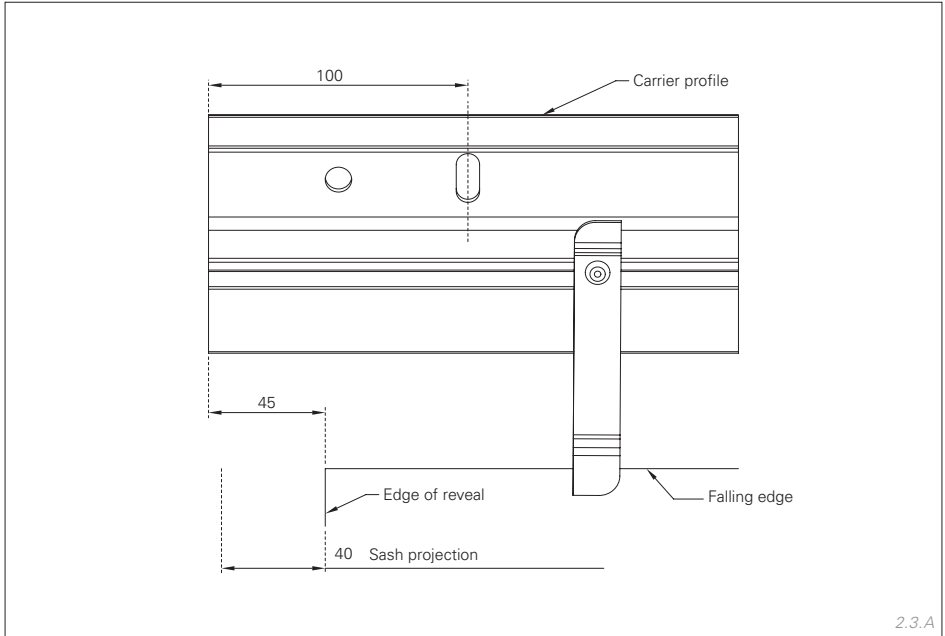


- ▶ Mark & centre-drill the mounting holes (oblong)
- ▶ Screw or dowel carriers to wall surface (all bore holes including security bore hole)
- ▶ Align carrier profile
- ▶ Fasten carrier profile in place with additional screws or dowels in the security bore holes.

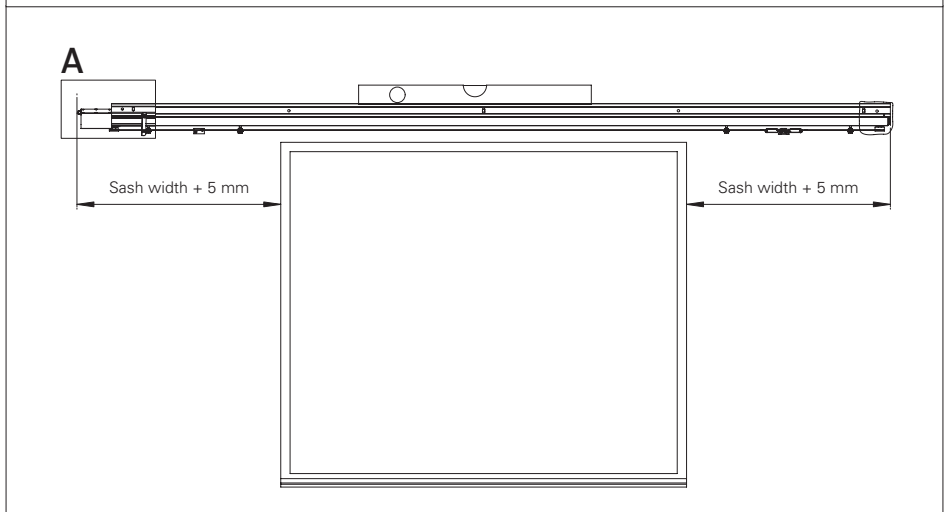
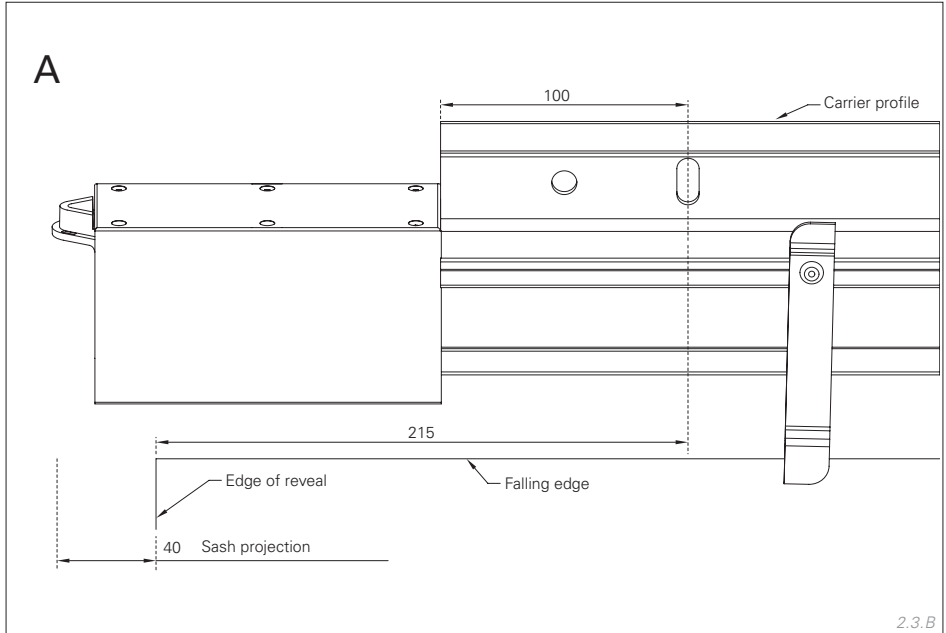


Positioning of the carrier profile in relation to the edge of the reveal

Standard installation for manual operation



Standard installation with motor positioning in the area of the edge of the reveal



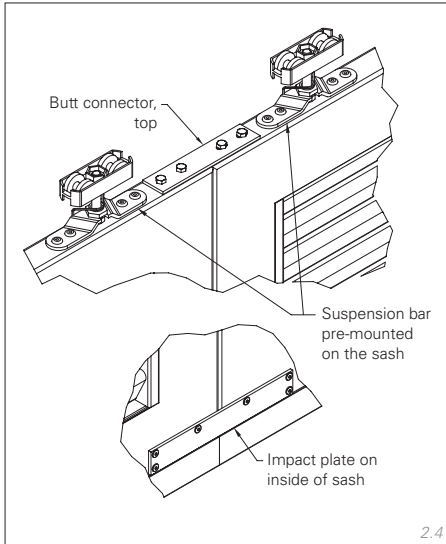
Coupling sliding sashes

NOTES

To ensure a more secure transport, coupled sashes are delivered as single sashes and must be assembled on site.

The mounting holes of the connectors are pre-drilled. The butt connectors and plates with fastening material are enclosed unattached.

- ▶ Unpack the sashes to be coupled and position them in relation to one another
- ▶ Hook up the sliding sashes in the sliding system
- ▶ Slide the sashes together and screw the butt connectors in place at the top
- ▶ Position and rivet the impact plate on inside of the sash



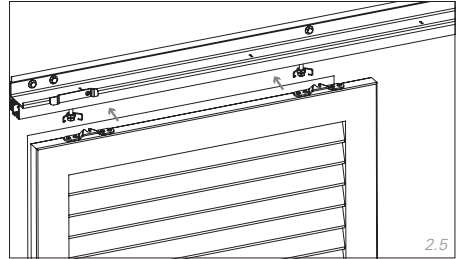
Hook up the sliding sashes in the trolley

- ▶ Adjust sashes

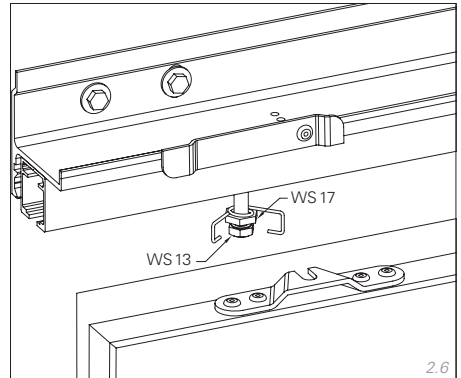
Adjustment range for sash calibration

vertical (↑↓): - 5 mm

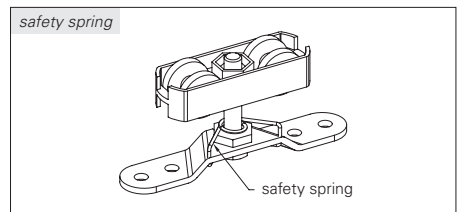
horizontal (↔): ± 2 mm



- ▶ Tighten the nuts firmly (key width WS13 + WS17)



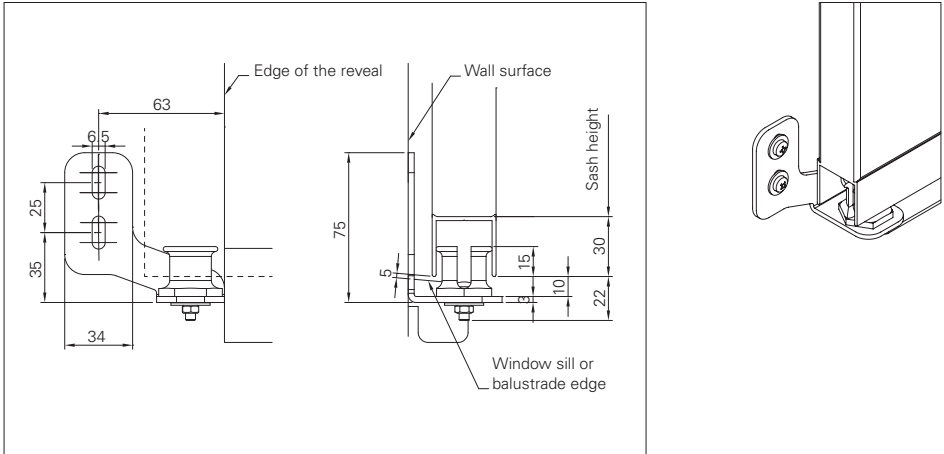
- ▶ Hang the safety spring into the suspension bar



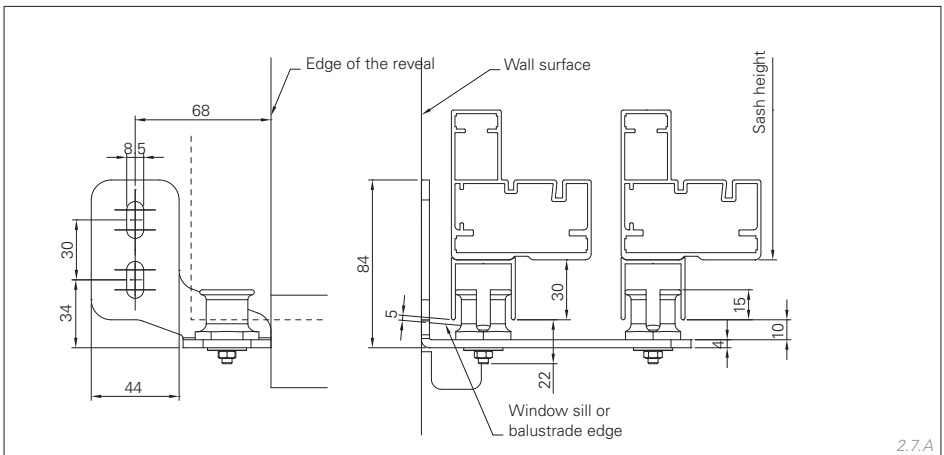
Installing lower sliding shutter guides

- Position and fasten lateral guides in accordance with system drawing

Type A | punctiform guide, offset



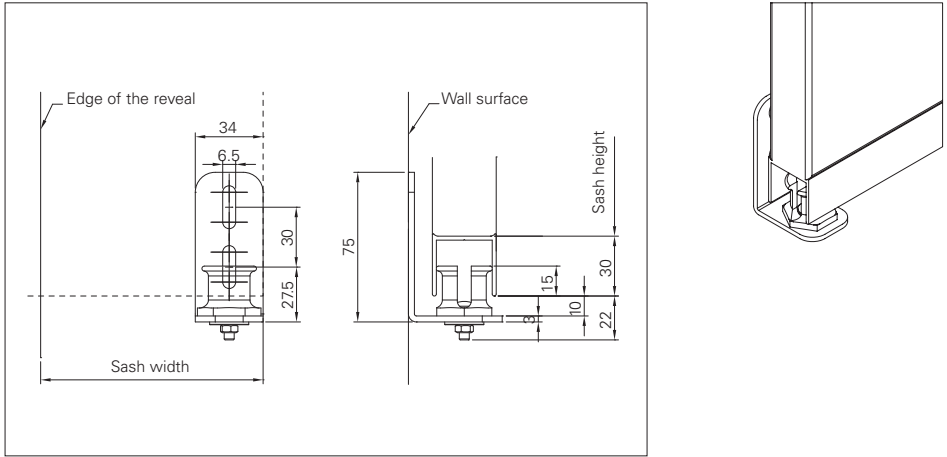
Mounting holes for side guidance bracket Type A, punctiform guide, offset, visible width 34 mm



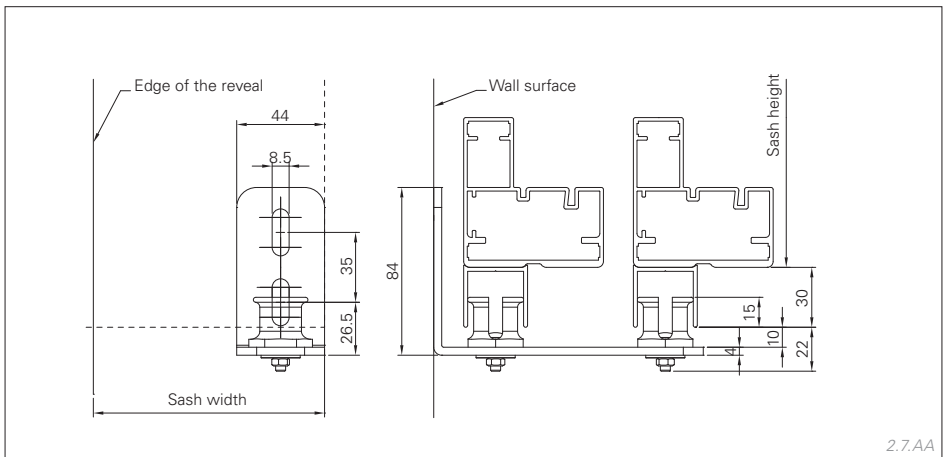
Mounting holes for side guidance bracket Type A, punctiform guide, offset, visible width 44 mm

2.7.A

Type A | punctiform guide, straight version



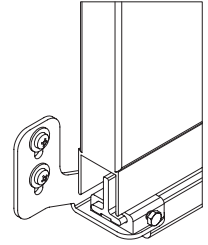
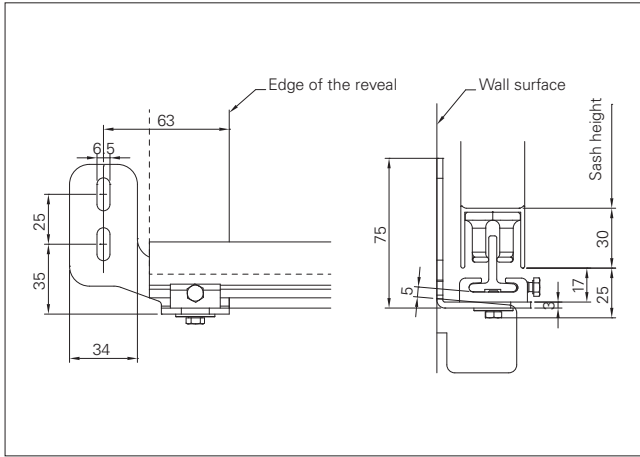
Mounting holes for side guidance bracket Type A, punctiform guide, straight version, visible width 34 mm



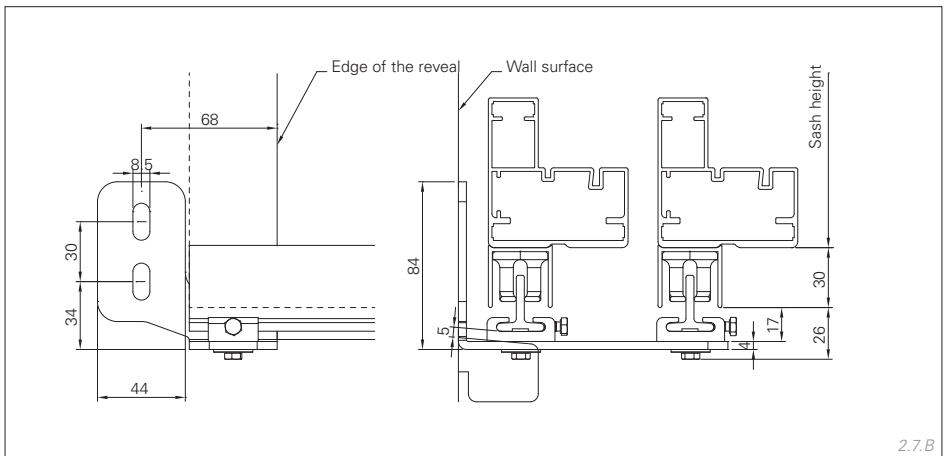
Mounting holes for side guidance bracket Type A, punctiform guide, straight version, visible width 44 mm

2.7.AA

Type B | continuous guide, offset



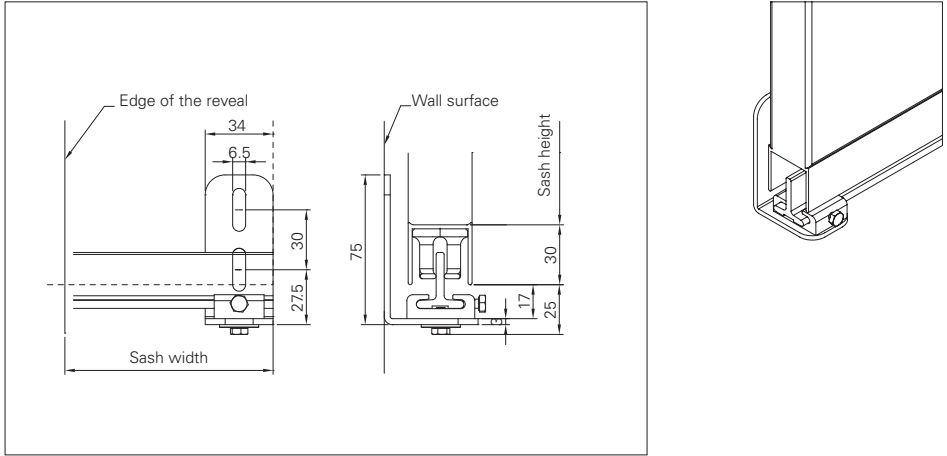
Mounting holes, side guidance bracket Type B, continuous guide, offset, visible width 34 mm



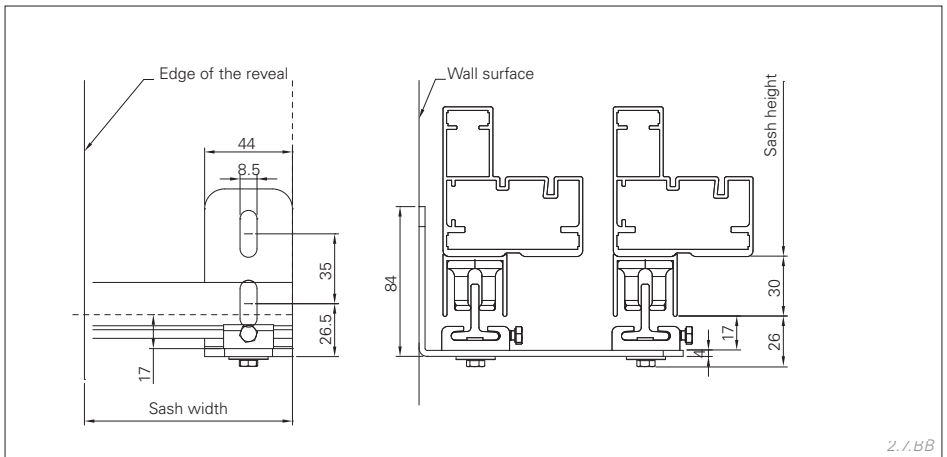
2.7.B

Mounting holes, side guidance bracket Type B, continuous guide, offset, visible width 44 mm

Type B | continuous guide, straight version



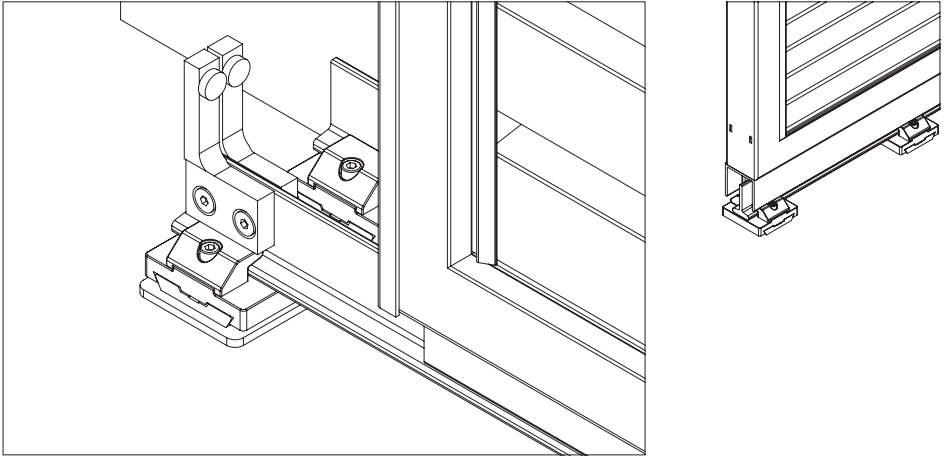
Mounting holes, side guidance bracket Type B, continuous guide, straight version, visible width 34 mm



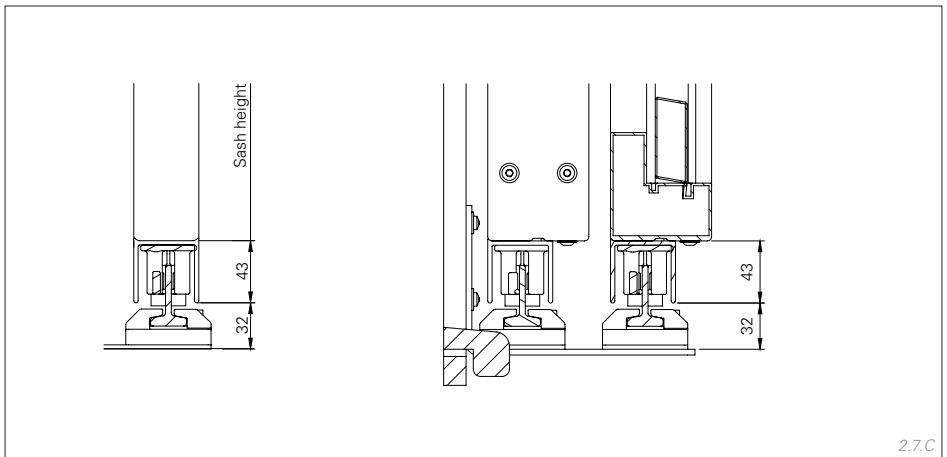
Mounting holes, side guidance bracket Type B, continuous guide, straight version, visible width 44 mm

2.1.BB

Typ C | continuous guide "reinforced"



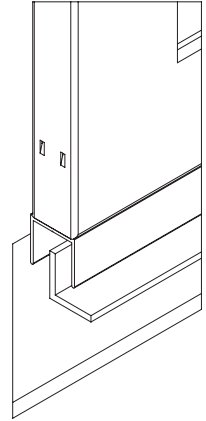
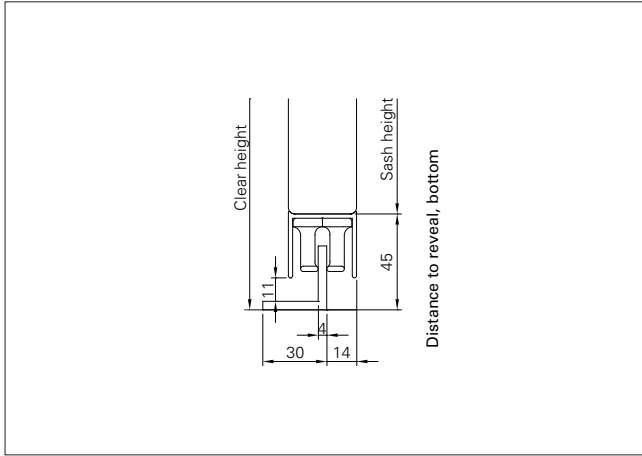
Continuous guides Type C "reinforced", with rail stoppers



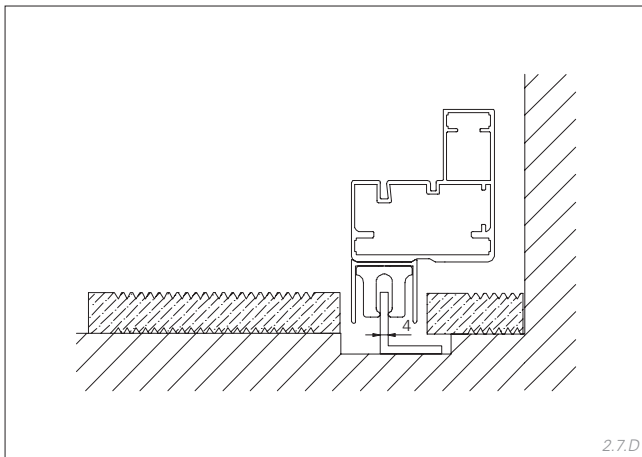
Individual mounting, side guidance bracket Type C „reinforced“

2.7.C

Typ D | floor installation



Continuous Guide Type D (floor installation) with guide brackets 30x30x4 mm



Floor guide Type D for installation on a firm base by building contractor.
There is no adjustment option at mounting Type D!

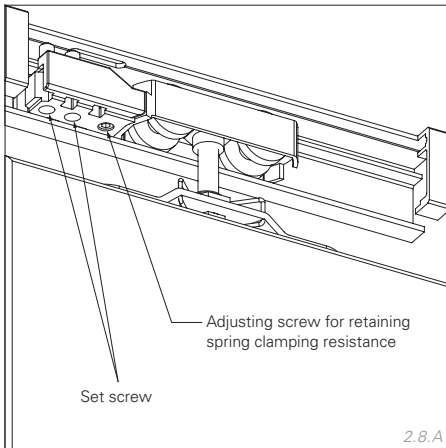
Setting trolley stoppers

- ▶ Push sliding shutter into end position
- ▶ Move stopper against trolley
- ▶ Tighten set screw

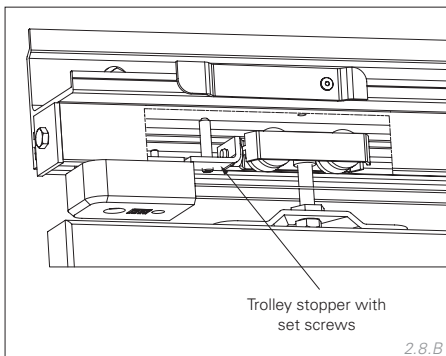
in case of manual operation

- ▶ Adjust clamping resistance of retaining spring at adjusting screw.

The pre-tension of the retaining spring increases by turning it counter-clockwise!



in case of electrical wire drive



Coupling sliding shutters to electrical wire drive

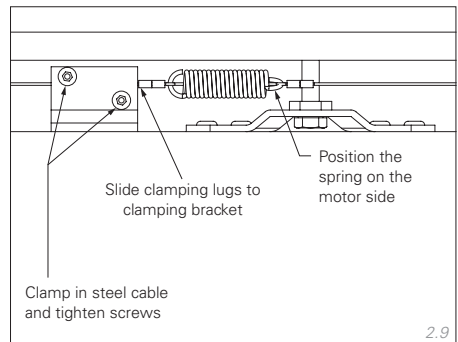
NOTE

An additional sash is clamped in synchronised fashion to the steel cable in setups 1/L-R, 2/L-RR, 2/L-L-R and 2/L-L-RR. To accomplish this, move the sashes to the Open position and clamp the steel cable firmly in the clamping bead on the sliding sashes.

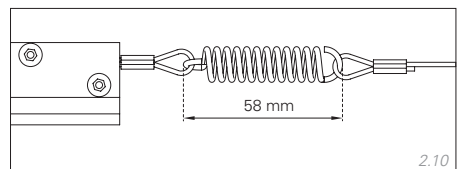
If the position of the extension spring is arranged in such a way that it cannot be connected with the sash to be driven, then a commissioning must take place first, see separate document □ operating instructions "E 623 | Motorisation for sliding shutters | VOLETRONIC", chapter "Commissioning".

Manual shifting of the steel cable is not possible!

- ▶ Position steel cable with extension spring to actuated sash.
- ▶ Clamp steel cable in clamps on the sliding shutters

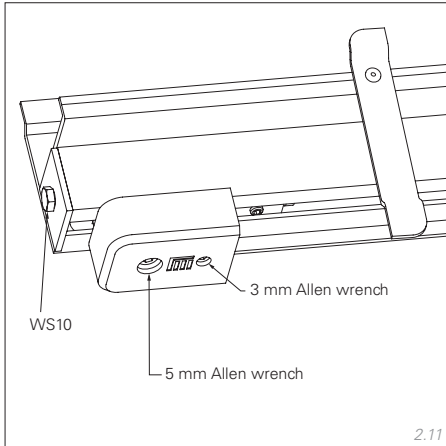


- ▶ Remeasure cable and spring tension and retighten if necessary



Retightening steel cable

- ▶ Undo set screws at return pulley
- ▶ Rotate front-side hexagon screw until the extension spring is tensioned at 58 mm
- ▶ Tighten set screws

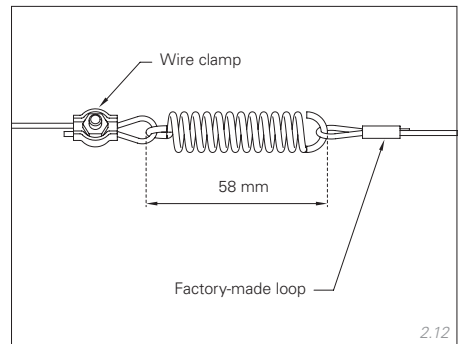


Electrical sliding systems with excess length (optional)

NOTE

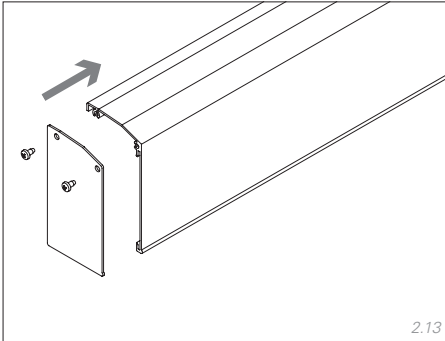
Steel cable is delivered loose with a factory-fitted loop

- ▶ Installation of the rails and carrier rails
- ▶ Tighten steel cable on pulley wheels
- ▶ Hook up extension spring in the loop on hand (motor side)
- ▶ Slide the loose wire end into the wire clamp and hook up the loop in the extension spring
- ▶ Tighten wire clamp and cut off overlapping wire end
- ▶ Pre-tension the extension spring to 58 mm
- ▶ Clamp steel cable in sash clamping part
- ▶ Put system in operation

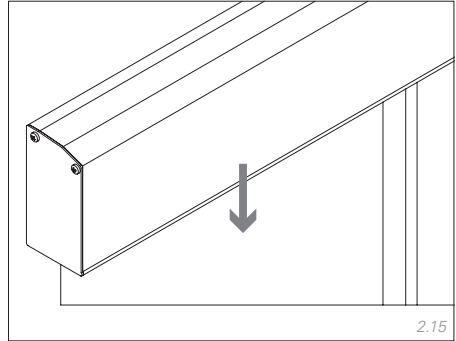


Installing covers

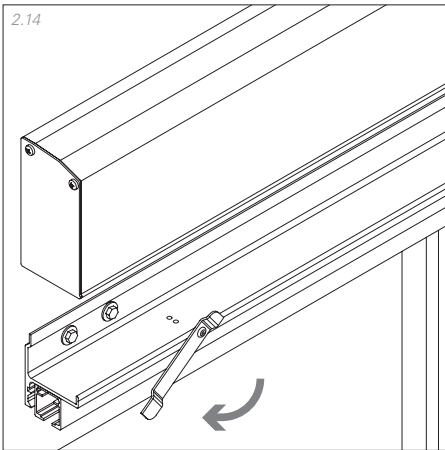
- ▶ Screw lateral cover to the cover profiles



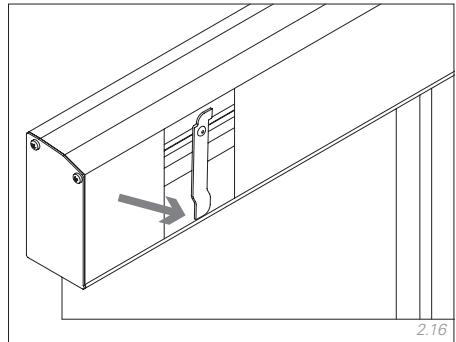
- ▶ Hook up the cover



- ▶ Set the cover bars at an angle (approx. 45°)



- ▶ Screw in the bars and lock them



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