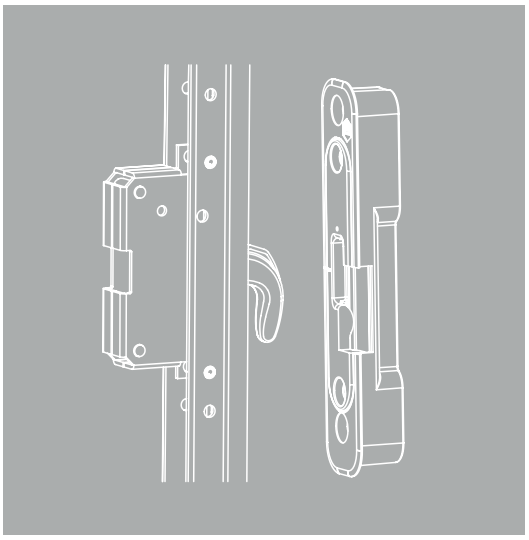
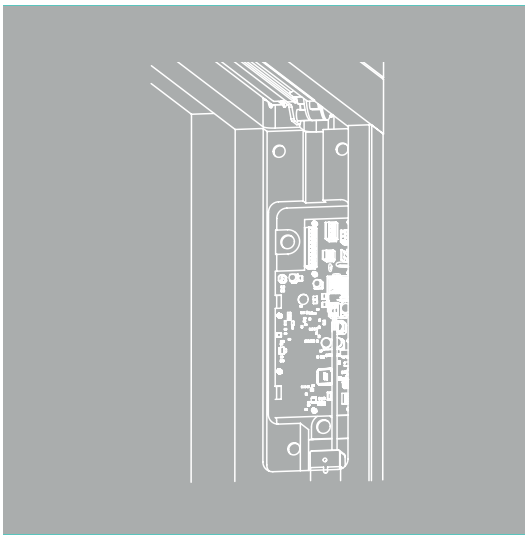
HAUTAU
A MACO Group Company

# Move HS Comfort Drive

ELECTROMOTIVE LIFT & SLIDE FITTING





WOOD

## INSTALLATION INSTRUCTIONS

Move HS Comfort Drive, 24 V DC
wood/wood-aluminium, concealed
Scheme A

**Used exclusively for specialist companies.**

## Copy of the original instructions

## Other applicable documents

The following documents apply, depending on the user and the components used:

– Installation instructions for accessories, Scheme A/C
– Installation instructions, inside operation with smartphone, wood/wood-aluminium, Scheme A/C
– Installation instructions, inside operation with operating button, wood/wood-aluminium, Scheme A/C
– Installation instructions, outside operation with key-operated switch, wood/wood-aluminium, Scheme A/C
– Installation instructions, indoor operation with code keypad/fingerprint sensor, wood/wood-aluminium, Scheme A/C
– Maintenance and set-up guide for specialist companies
– Operating and maintenance guide for specialist companies

## Contents

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# Safety instructions and warnings

It is important to observe the following instructions to ensure safety for everyone. Incorrect installation can cause **serious injury**.

**Manufacturer's declaration/technical standard**
The actuator has been tested and manufactured in line with European directives.
The applicable declaration of incorporation is available for inspection. You may only operate the devices if there is a declaration of conformity for the overall system. The actuator meets the latest technical standards and only qualified technical staff may install, service and carry out any other tasks.

**Personnel**
Only a **qualified electrician** (certified to DIN VDE 1000-10, for example) may connect the system to the mains. The actuator must be installed by personnel trained to current standards and based on the recognised code of practice.

**Intended use**

› Electrical connection: 24V DC mains (power supply unit: 230 V AC).

› The Move HS Comfort Drive belongs to the fittings product series for lift and slide windows and patio doors as per EN 13126-16. With horizontal sliding window panels, the power-operated sliding window acts as a side entrance/exit between two areas separated from one another, to interconnect outdoor areas with indoor ones.

› Use of the Move HS Comfort Drive only for sashes weighing max. 330 kg (integrated anti-trap guard).

**WARNING** **In the case of sashes weighing 330 ... 440 kg additional safety systems such as a light curtain, presence detector or key-operated switch must be fitted as required by the risk assessment.**

› The complete device must be fitted in a vertical position only.

› All components on the (lift and) slide element must be easily accessible.

› The sash is lowered into the closed position and locked with locking bolts or latches, depending in the espag design.

› The lift and slide element must not be used on a fire, smoke control or emergency door.

› In the case of a design with lift actuator: if there is a power cut, the sliding sash can be raised/lowered using the emergency unlocking device and moved slowly by hand. This allows the sash to be locked/unlocked in the closed position.

Ensure that the required fastening fixture are suitable for the building structure and the stress load. Use

# Safety instructions and warnings (continued)

additional materials if necessary. Any fastening fixtures supplied may only meet requirements to a certain extent.
Any use cases or modifications to the actuator that are not in accordance with the intended use are explicitly prohibited. We assume no liability for any injuries or damage to property where there is failure to comply with this requirement.
Please also observe the Specifications and instructions on the product and on liability (VHBH) issued by Gütegemeinschaft Schlösser und Beschläge e.V. (German Association for Quality of Locks and Fittings).

**Safe-keeping of documents/orientation**
Safeguard these installation instructions for maintenance and use at a later date. Give the operating instructions to the end user and show them how to use the system.

**Installation and operation**
Before installing: a cut-off device must be provided to ensure all poles can be disconnected from the mains in the final fixed installation.
Inspect lift and slide panels or sliding sashes and safety systems for any damage and replace damaged components. Ensure the sliding panel is intact and moves freely.
All work (installation, setting, etc.) must be performed with the system in a denergized state.
Before fitting the actuator, check whether the specified temperature range is compatible with the surrounding conditions.
Use sufficiently long screws to fasten the fitting parts. They must reach as far as the steel reinforcement in PVC profiles.
When a key-operated switch with a power-off default setting (dead man switch) is activated, no other person may be in the area surrounding the actuator.

# Safety instructions and warnings (continued)

**WARNING: Never** connect the actuator/the control keypad to 230 V.
The actuator may only be operated using a safety extra-low voltage. Failure to do so could result in **loss of life**.

**Risk of crushing and pinching**
A risk assessment as per Directive 2006/42/EC on Machinery must be carried out at the installation location to prevent incorrect use. Safety measures must be implemented as specified in EN 60335-2-103/2016-05.

**⚠ WARNING**

**In the case of sashes weighing 330 ... 440 kg additional safety systems such as a light curtain, presence detector or key-operated switch must be fitted as required by the risk assessment.**

**Limitations to the WLAN function**

| In dead man mode | In normal mode | |
|---|---|---|
| | Sashes weighing ≤ 330 kg | Sashes weighing > 330 ... 440 kg |
| Remote operation not possible via WLAN | Wireless LAN permitted with visual contact with sliding panel | Wireless LAN only permitted with additional safety systems (e.g. light curtain, presence detector or key-operated switch) |

The actuator opens and closes sliding sashes automatically. A power cut-off brings it to a stop. However, the compressive force is still strong enough to squash fingers if users and fitters do not take care.
Do **not** reach into the walk-through space or the actuator when it is in operation.
Ensure that no-one and no objects are in the way of the sliding sash.
If the sliding sash panel does not have an additional safety system (light curtain, presence detector), only operate the actuators if you can see the sliding sash. Watch the movements of the sliding sash until it reaches its end position.
Do not pass through the walk-through space until the sliding sash has come to a halt.
Make sure that children do not get hold of remote controls. Ensure only people who have been instructed on how the remote-controlled sliding sash works use it.
The user must maintain visual contact with the sliding sash when using the remote control.
Note that a button on the hand-held transmitter can be pressed accidentally if it is carried in a pocket or handbag, causing the sliding sash to move unintentionally.
Ensure that no-one or no objects are in the way of the sliding sash during its calibration.

# Safety instructions and warnings (continued)

**There is a risk of injury, especially for children and people with disabilities.**
Children aged 8 or over and people with reduced physical, sensory or mental capabilities or lacking in experience and knowledge may only use this device under supervision or if they undergo a suitable briefing on safe usage and they are aware of the associated risks and hazards.
Children must not play with the device.
Children must not carry out cleaning and user maintenance without supervision.

**IMPORTANT INFORMATION**
If you do not follow the work steps, this will damage the actuator permanently.
Incorrect handling puts the material at risk from damage. Do **not** allow any liquid to penetrate the device interior.
Do not leave any dirt or objects on the sliding track.

**Safety**


If a remote control is used, the factory access code for the Wifi Box must be changed to a more secure, customised password, using upper and lower case letters with numbers and special characters, for example. A WiFi network should be protected by a password only in accordance with the WPA2 standard. Liability is generally not assumed for damages and manipulation due to integration in open networks and/or use without passwords, or use of weak passwords.

**Testing**
Check all functions to ensure they operate correctly after installation and after every change to the system.

**Note:**
Only use original replacement parts if you need replacement parts or wish to expand the system. Using third-party products voids liability, warranty, and service provisions.
You must install/configure the system as specified in this manual to ensure reliable operation and prevent damage and hazards.

## Maintenance

Check all devices and cable connections for external damage and dirt. Structural alterations and stored goods must not prevent the control keypad from working properly.
Use a slightly dampened soft cloth to clean the housing parts and the control keypad. Do not use any corrosive chemicals, aggressive cleaning solutions or solvent-based agents for cleaning to prevent any damage to surfaces. Permanently protect the actuator from water and dirt.

## Maintenance/servicing

The power supply to the actuator must be disconnected at all poles when cleaning or performing other maintenance work. The system is secured against being switched on again accidentally. The (lift and) slide panel and its actuator(s) must be inspected and serviced once a year to ensure integrity. The actuator must no longer be used if repairs or settings are needed due to an imbalance or signs of wear or damage to parts such as cables, split pins or the entire hardware fitting. Remove any dirt from the actuators. Checksecuring andterminal screws to ensure they are firmly in position. The toothed belt tension must be checked every year and the toothed belt tightened if necessary (see section on **Adjusting the toothed belt tension**).
You will find the parts which require checking and the points which require servicing on the maintenance check list (www.hautau.de/en/).
Check the actuator with a test run. Defective actuators may only be repaired in our factory. Use only original replacement parts. You must check operational readiness on a regular basis.

## Certificates and declarations

HAUTAU declares that the actuator is a partly completed machine as specified in the European Directive 2006/42/EC on Machinery.
Use the QR code to view the declaration of incorporation.

The following statutory regulations have been applied:
- Directive 2006/42/EC on Machinery
- EMC Directive 2014/30/EU
- RoHS Directive 2011/65/EU

The safety objectives of other statutory regulations have been met:
- Low Voltage Directive 2014/35/EU

## Warranty

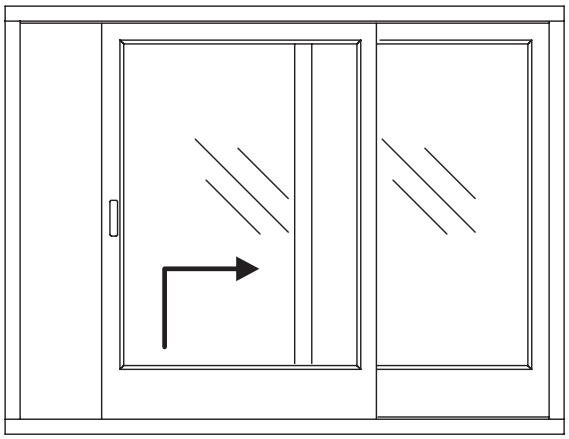
HAUTAU's General Terms and Conditions of Business apply to the actuator (online: www.hautau.de/en/).

## Disposal

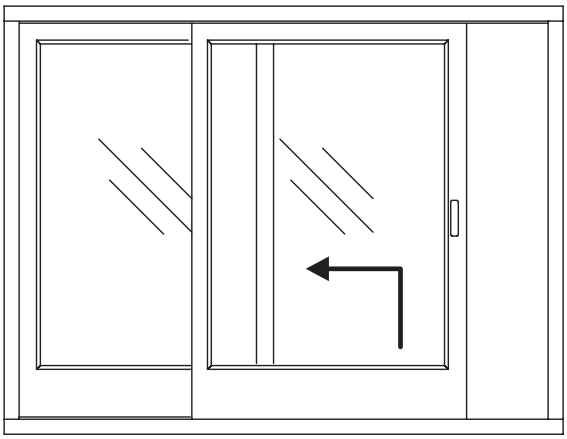
The crossed-out wheeled bin symbol indicates that you must not dispose of this electrical appliance or electronic device in the household waste at the end of its service life.
You can return it to free collection points for old electrical appliances in your area or to other centres where they accept old appliances for recycling.
Contact your local council for addresses of collection points and centres. If the electrical appliance or electronic device contains personal data, you yourself are responsible for erasing data before you return it.
You will find more information online at www.weeelogic.com or other websites on the WEEE Directive.

# Explanation of terms

Left-hand version:
Sliding sash opening from left to right



Right-hand version:
Sliding sash opening from right to left



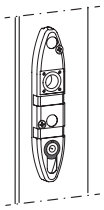
This manual describes a left-hand version (a sash opening to the right) as an example.
Dimensions and work steps for a right-hand configuration (a sash opening to the left) and for Schema C must be adapted accordingly.

Measurements in mm. Diagrams without a scale are **not** necessarily to scale.

# Abbreviations

BS Backset
SW Sash weight
SH Sash height
LS/S Lift and slide/slide ...
LL Lift actuator length
BO Bogie
FEW Frame exterior width
FH Frame height

# Differing diagrams

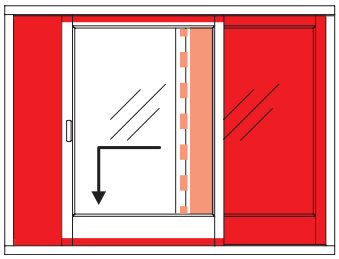


The following diagrams show the installation procedure for the design with handle escutcheons. This is only needed for manual locking/unlocking with a standard cover.

Other product variants may not be explicitly shown, but the steps indicated also apply to them. If there is a distinction between the variants in a given step, it will be highlighted accordingly.

# Operation

**WARNING**



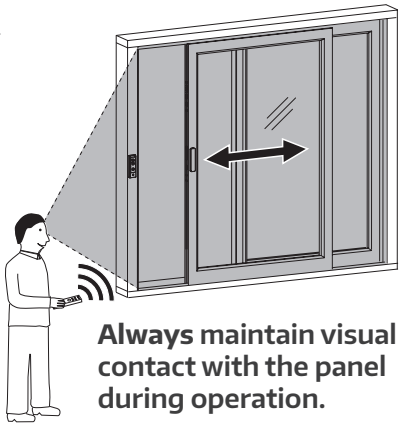
**Do not enter the walk-through space while in operation under any circumstances.**

**Exit the walk-through space as soon as the sliding sash starts moving.**

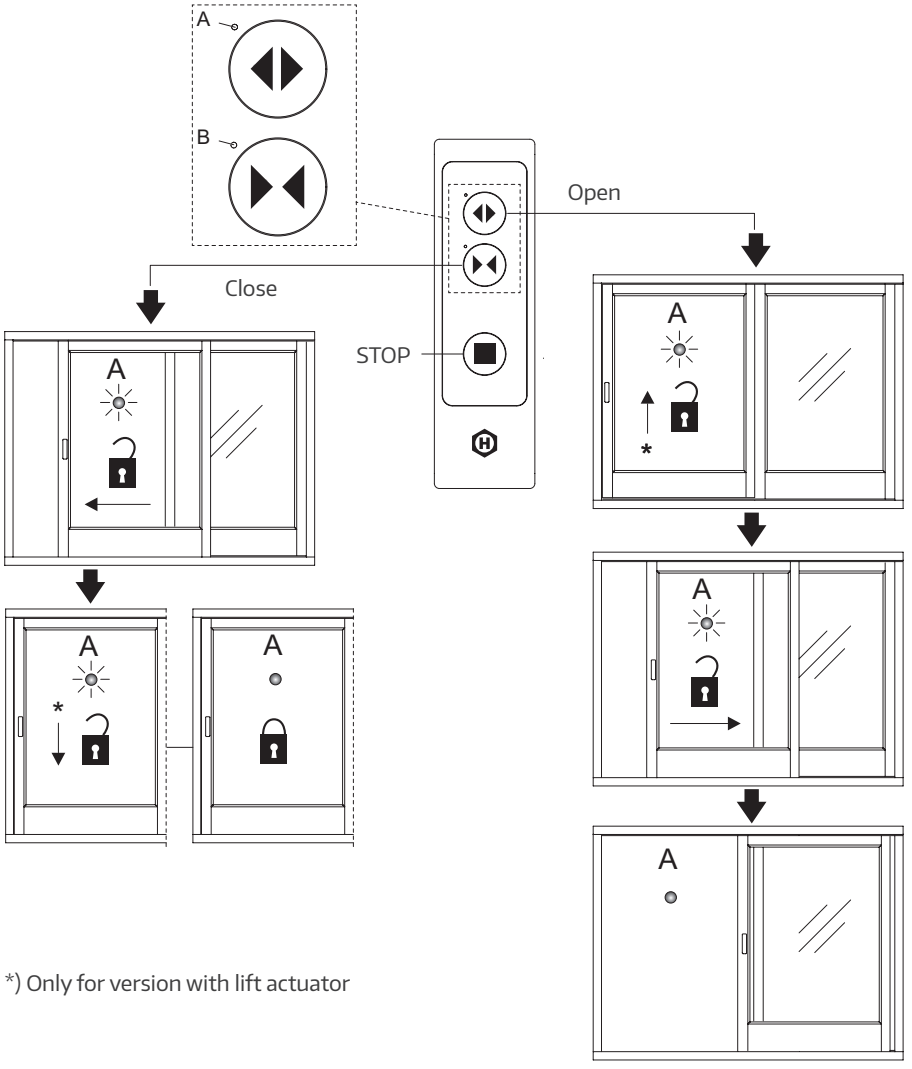
**Do not reach into areas where fingers or other objects can be drawn in.**

**Make sure that no other people, especially children, and no objects are within the walk-through space or at any other critical points (▬).**

**Failure to do so may result in physical injuries and property damage.**



**Always maintain visual contact with the panel during operation.**




A
Green lights up while the lift/slide actuator is moving.

B
Yellow lights up if there is an error.

B
During initialisation mode, yellow flashes: once initiation is complete, the LEDs go out.

*) Only for version with lift actuator

See separate document for other variants of operating controls.

# Manual locking/unlocking/emergency unlocking with a defective lift actuator

If the lift actuator fails, you can lift and open the sash using the emergency unlocking device (item code 485040) with the help of the emergency unlocking device.

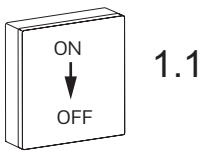
**Important: However, you should try using the service switch (item code 305882) to lift the sash. Consult the Sections on Service procedure for lift actuator and Bring sash into lifted position in the installation instructions.**

Note: regardless of whether the lift actuator has contact with the power transfer on the frame or not, the service/initial operation switch will function, no matter whether the sash is in the closed or open position.

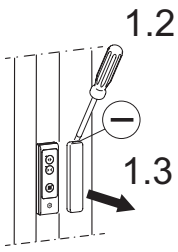
If lifting the sash using the service/initial operation switch does not work, the sash is emergency-unlocked as follows:

**1. Remove cover**

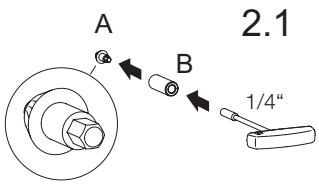
Disconnect power supply on the primary side before the power supply unit



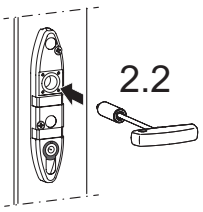

Fuse enclosure




**2. Fit the sprocket emergency unlocking device with the guide on the espag**




Attach the sprocket emergency unlocking device A with the guide (sleeve) B onto the 1/4" socket wrench.

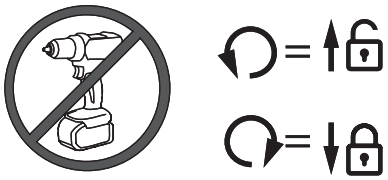



Insert 1/4" socket wrench, sprocket and guide (sleeve) into the handle hole.

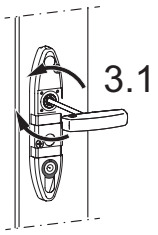
# Manual locking/unlocking/emergency unlocking with a defective lift actuator (contd.)

**IMPORTANT:**
The direction of rotation is always the same as shown here, i.e. **this instruction applies to both the left-hand and right-hand versions.**

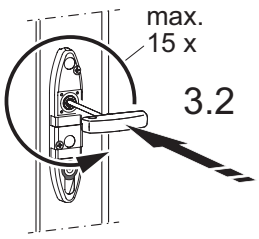
### 3. Emergency unlocking device



Do **not** use a battery-operated screwdriver.




Important note:
The socket must be fully inserted.
To ensure this is the case, gently turn it back and forth (right/left). The emergency unlocking device has engaged as soon as you feel resistance and hear a whirring sound.

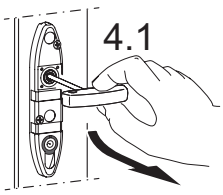


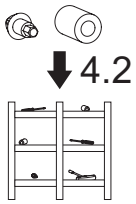

Recommendation for easier handling: separate from the cam so that you don't need to push against the slide motor. While applying slight pressure towards the sash, turn the emergency unlocking device anti-clockwise up to 15 full turns (applies to sashes opening both to the left and right) until the sash can be moved (try to move it after every few turns). If the emergency unlocking device slips, increase the pressure towards the sash.

### 4. Detach guide (sleeve) and emergency unlocking device socket

**IMPORTANT**
**After emergency unlocking, you must remove the guide (sleeve) and the socket from the sash with the 1/4" socket wrench.**
**If you do not, you may damage the lift actuator.**

Guide (sleeve) and socket must be stored away in case the end user needs to use it at a later stage.



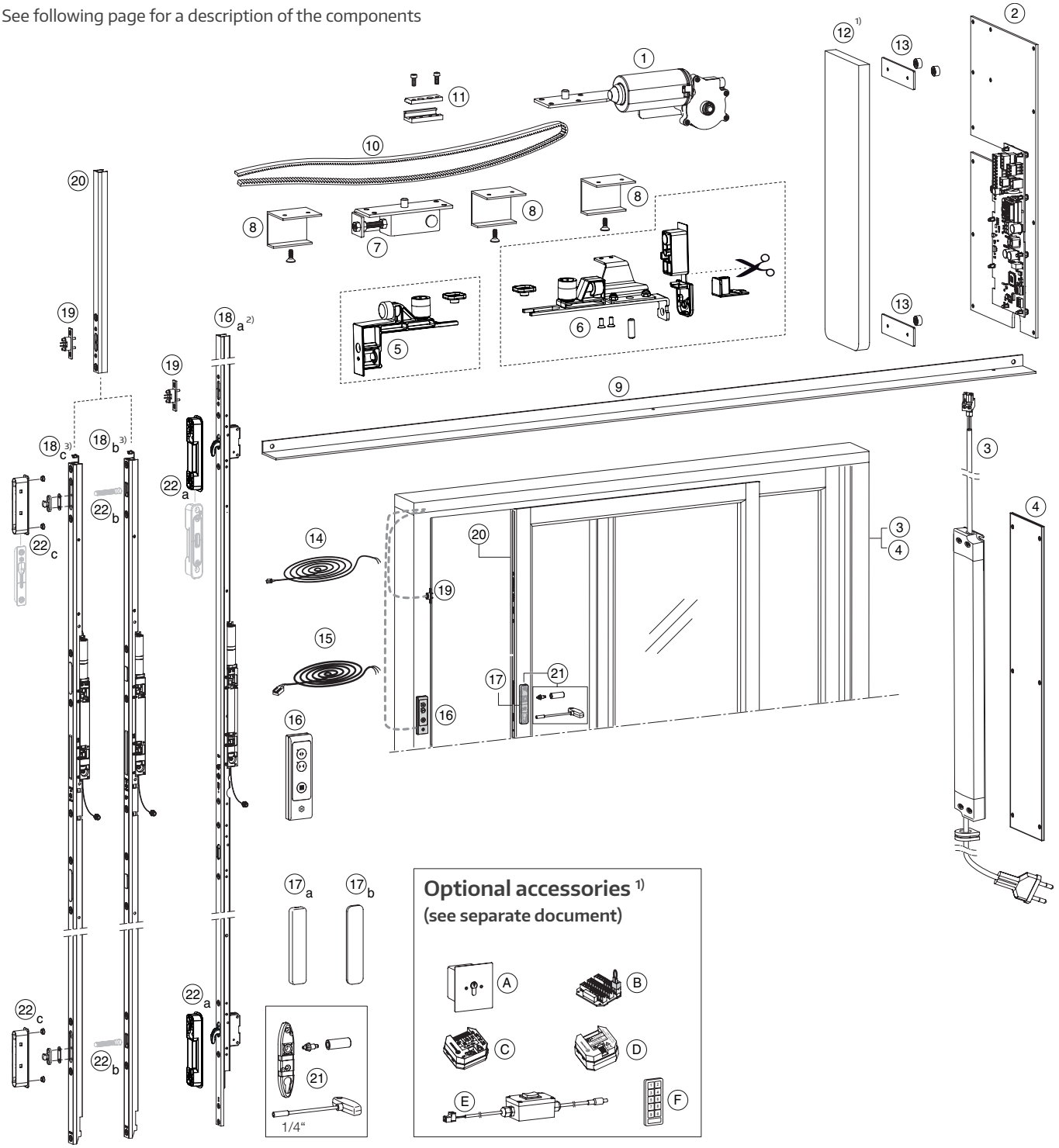




End user

# Parts overview

**Example:** Sliding sash opening from left to right – view from inside

See following page for a description of the components




1) Not included in the scope of supply.
2) Installation only possible with bogie variant M1 or M2 (see following page).
3) Installation only possible with bogie variants H1, H2 or H3 (see following page).

# Parts overview (continued)

**Description of the components**

1. Actuator unit
2. Circuit board
3. Power supply unit
4. Power supply unit cover
5. Espag-side guide
6. Cam
7. Toothed belt deflector
8. Cover mount
9. Cover strip
10. Toothed belt
11. Toothed belt clamping plate
12. Electronics cover for wood
13. Retaining plate and magnet(s)
14. Cable for lift actuator
15. Cable for control keypad
16. Control keypad
17. Cover for manual locking/unlocking device (a: standard; b: stainless steel)
18. lift actuator (a: latch espag BS 27.5; b: bolt espag BS 27.5; c: inviso espag BS 27.5)
19. Power transfer component
20. Contact transfer
21. Emergency unlocking set (socket, guide, handle escutcheon, T-handle)
22. Locking part/locking bolt (a: latch espag; b: Bolt espag; c: inviso espag)

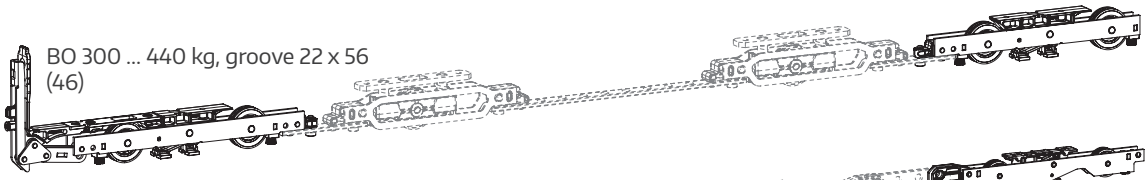
Optional accessories (see separate document):

A. Key-operated switch
B. Connection box
C. WiFi Box
D. Button box
E. Service/initial operation switch
F. Code keypad

# Parts overview (continued)

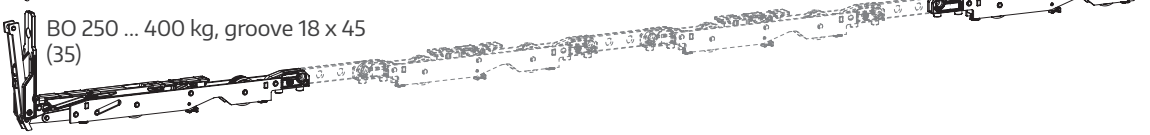
## Bogie variants (not included in the delivery package)

**M1**



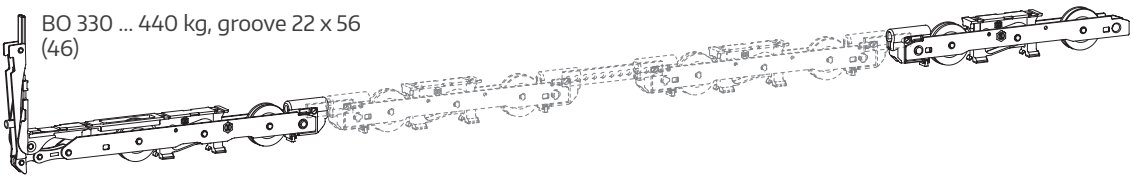
BO 300 ... 440 kg, groove 22 x 56 (46)

**M2**



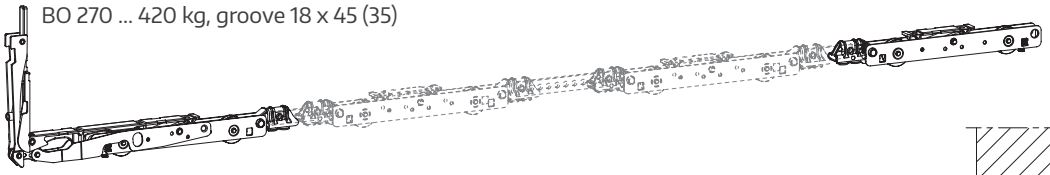
BO 250 ... 400 kg, groove 18 x 45 (35)

**H1**



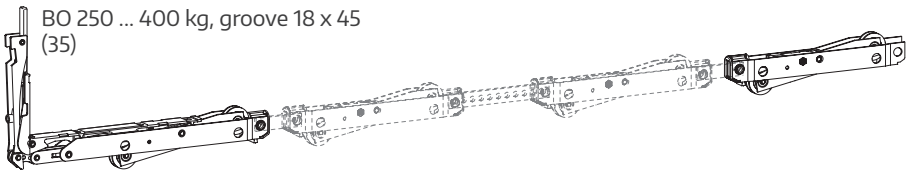
BO 330 ... 440 kg, groove 22 x 56 (46)

**H2**

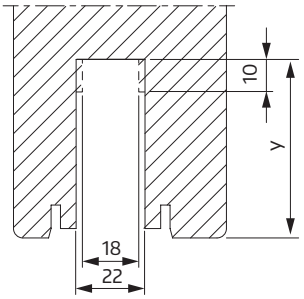


BO 270 ... 420 kg, groove 18 x 45 (35)

**H3**



BO 250 ... 400 kg, groove 18 x 45 (35)




* = can be used

\- = cannot be used

| Bogie variant | Sash weight [mm] | | | | | | | Groove Width x depth y [1] | | Only available with ... | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Single | | | | Tandem | | | | | Latch espag | Bolt/ inviso espag |
| | ≤ 250 kg | ≤ 270 kg | ≤ 300 kg | ≤ 330 kg | ≤ 400 kg | ≤ 420 kg | ≤ 440 kg | 22 x 56 (46) | 18 x 45 (35) | | |
| M1 | * | * | * | - | * | * | * | * | - | BS 27.5 | - |
| M2 | * | - | - | - | * | - | - | - | * | BS 27.5 | - |
| H1 | * | * | * | * | * | * | * | * | - | - | BS 27.5 |
| H2 | * | * | - | - | * | * | - | - | * | - | BS 27.5 |
| H3 | * | - | - | - | * | - | - | - | * | - | BS 27.5 |

[1] Standard version with 15 mm sliding track; value in brackets for version with 5 mm sliding track

# Preparatory measures

**Risk of injury and material damage.**
**Failure to comply with applicable standards and regulations may result in personal injury and material damage.**

### Ensuring correct function

To ensure the Move HS Comfort Drive functions correctly for the long term, you **must** observe the standards and guidelines for installing window and door structures in buildings (e.g. ÖN B 5320, RAL installation guide for windows, SIA 331 or 343, etc.).

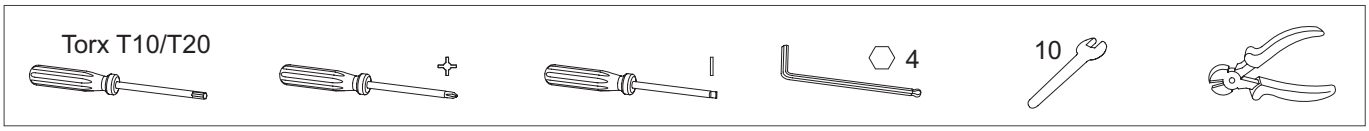
When installing glazing blocks, please refer to the German Glazing Trade Technical Guideline no. 3 **Blocking of glazing units**.

You **must** strictly adhere to the specifications for areas of use, sash weights and processing guidelines provided by profile manufacturers or system providers.

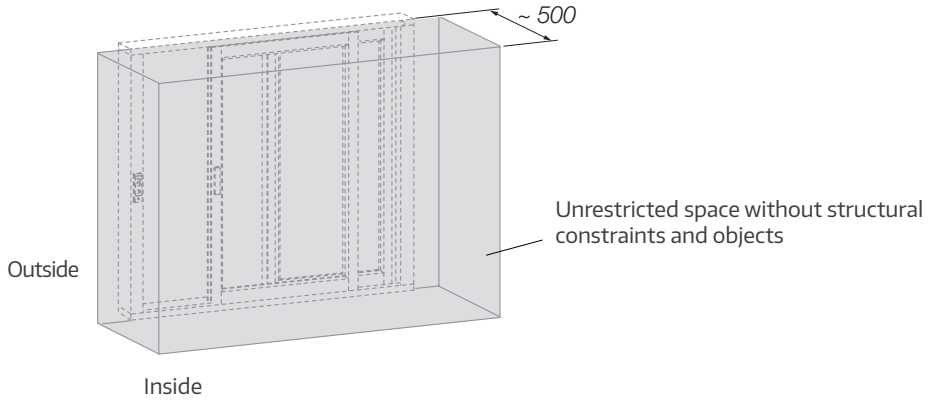
The centre of gravity or position of the glass pane may restrict the areas of use and maximum weights.
You **must** request such information where necessary.

### Verifying the prerequisites for installation

- All screw connections in the frame must engage adequately into the wood.
- Check you have all parts and they are intact.
- Any necessary milling must be completed in the workshop.
- Required tool (must be provided as indicated in the manual):

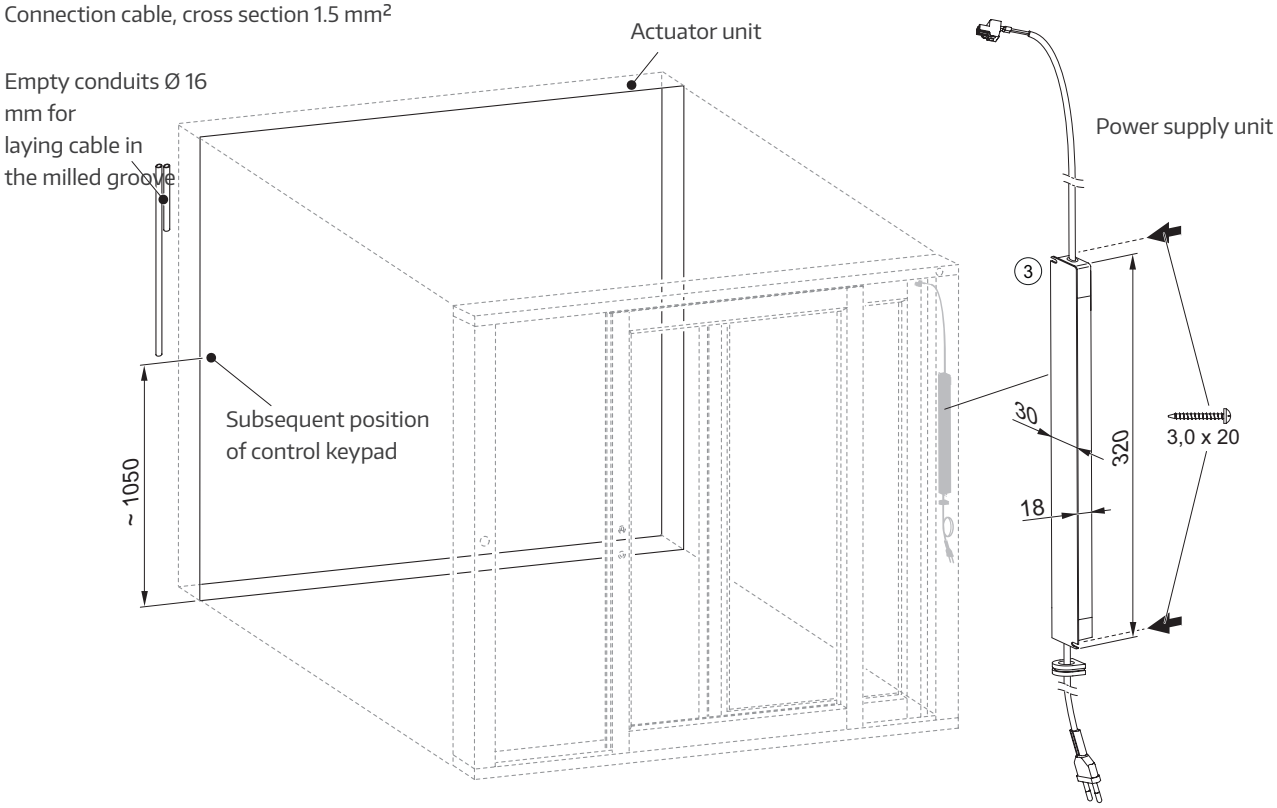



- Allow sufficient clearance for any inspection work and replacement of components.

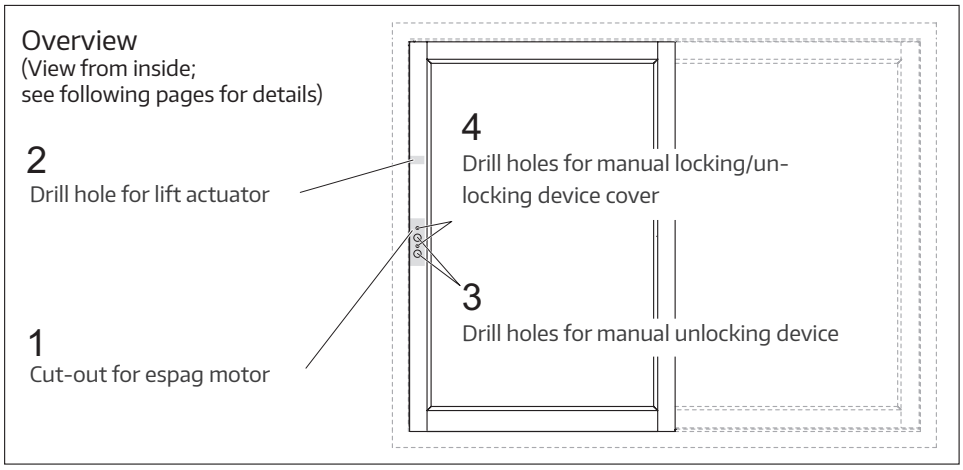


# Preparing for electrical connection

Example: Sliding sash opening from left to right – view from inside
Connection cable, cross section 1.5 mm²



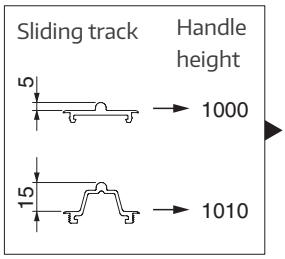
# For bolt/inviso espag:
## Sash cut-outs/drill holes for lift actuator

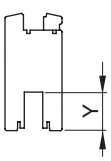


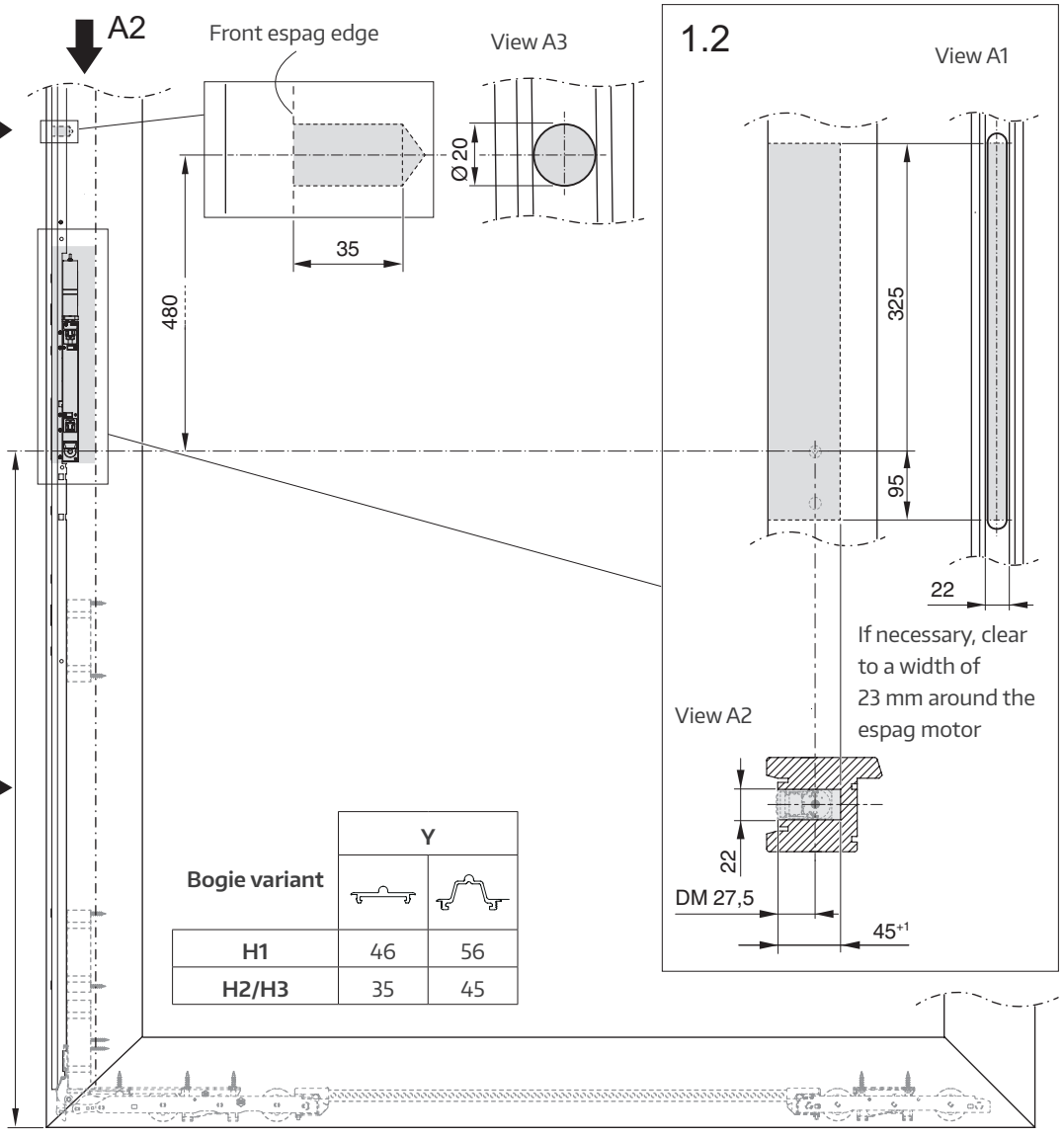

2
Drill hole for lift actuator

1
Cut-out for espag motor

1.1
Determine position for manual unlocking device (standard handle height)



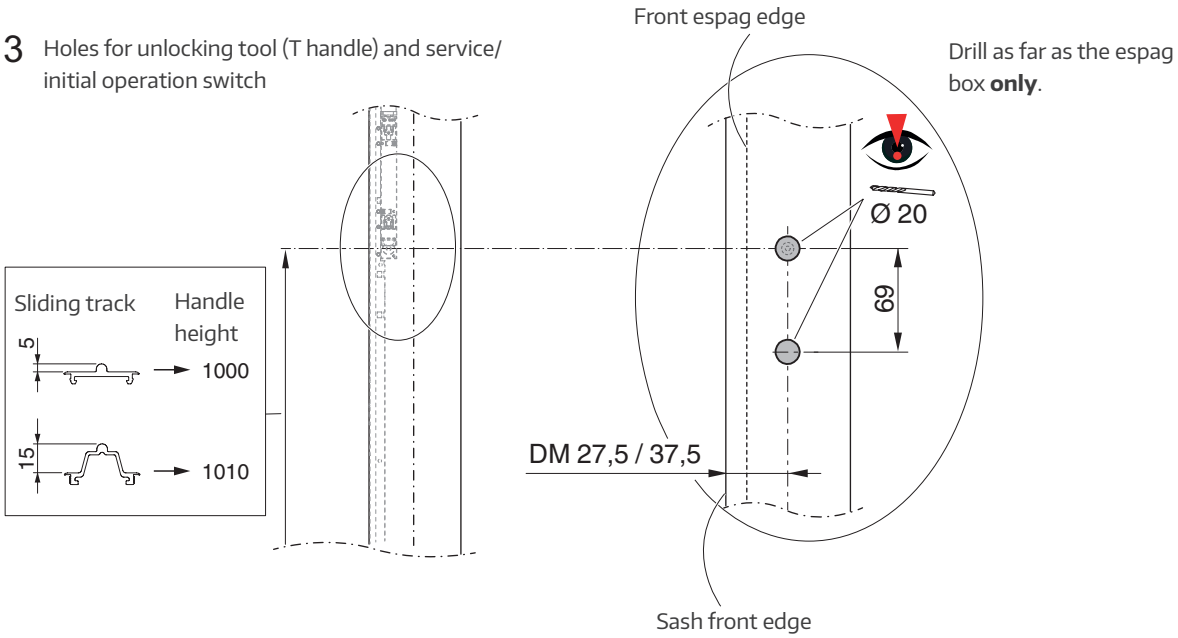



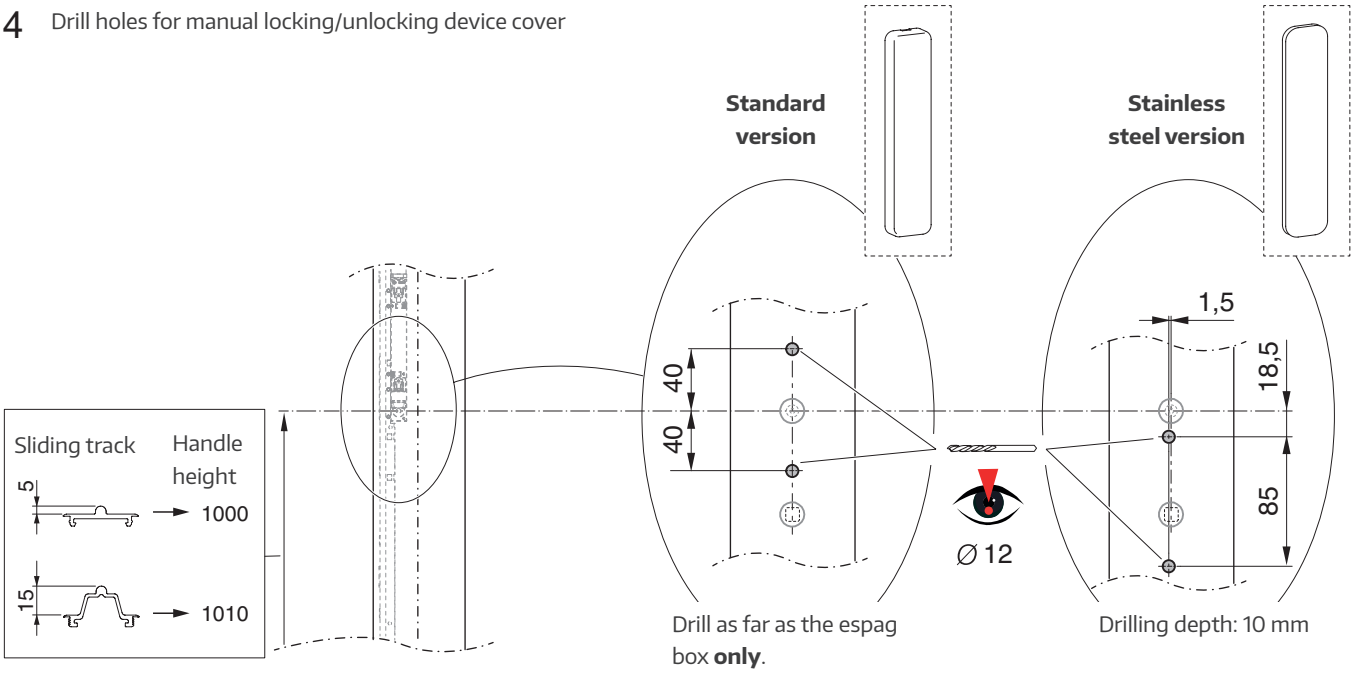

| Bogie variant | Y | |
|---|---|---|
| | | |
| H1 | 46 | 56 |
| H2/H3 | 35 | 45 |

# For bolt/inviso espag:
## Sash cut-outs/drill holes for lift actuator contd.)

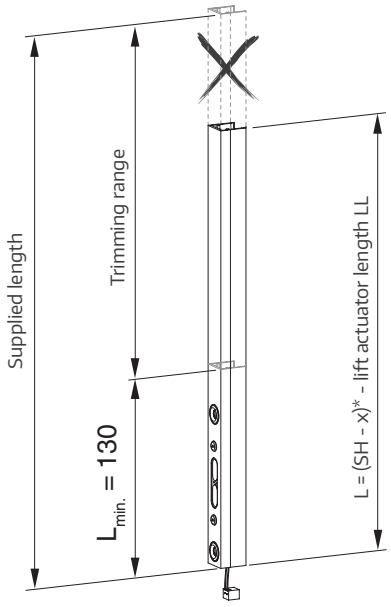
3 Holes for unlocking tool (T handle) and service/ initial operation switch



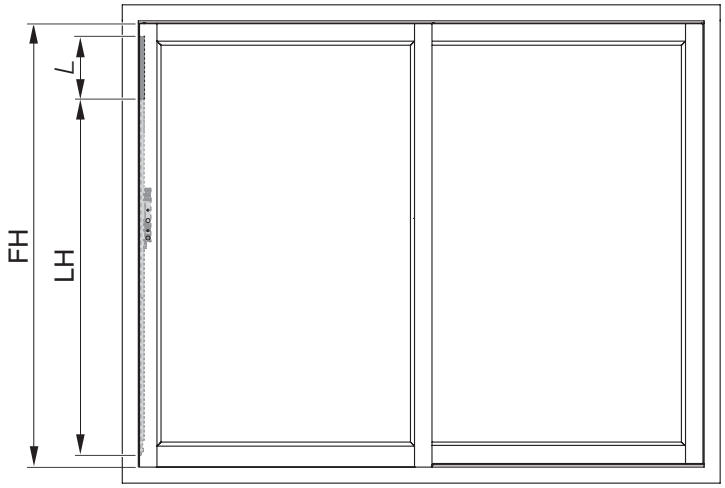

4 Drill holes for manual locking/unlocking device cover



## For bolt/inviso espag: Cut the contact transfer to size



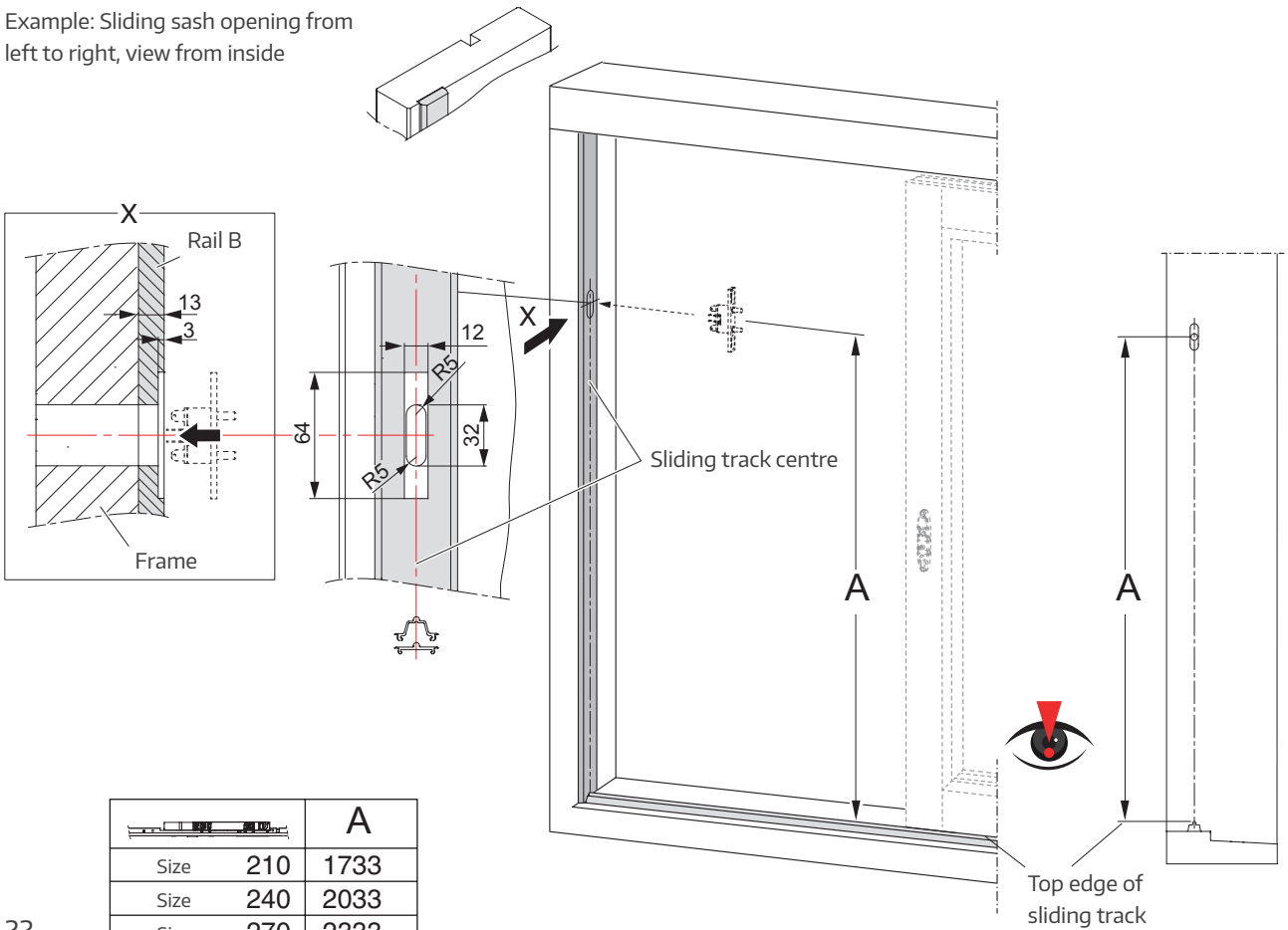

* See profile-related installation instructions




| | Lift actuator length LL |
|---|---|
| Size 210 | 1625 |
| Size 240 | 1925 |
| Size 270 | 2225 |

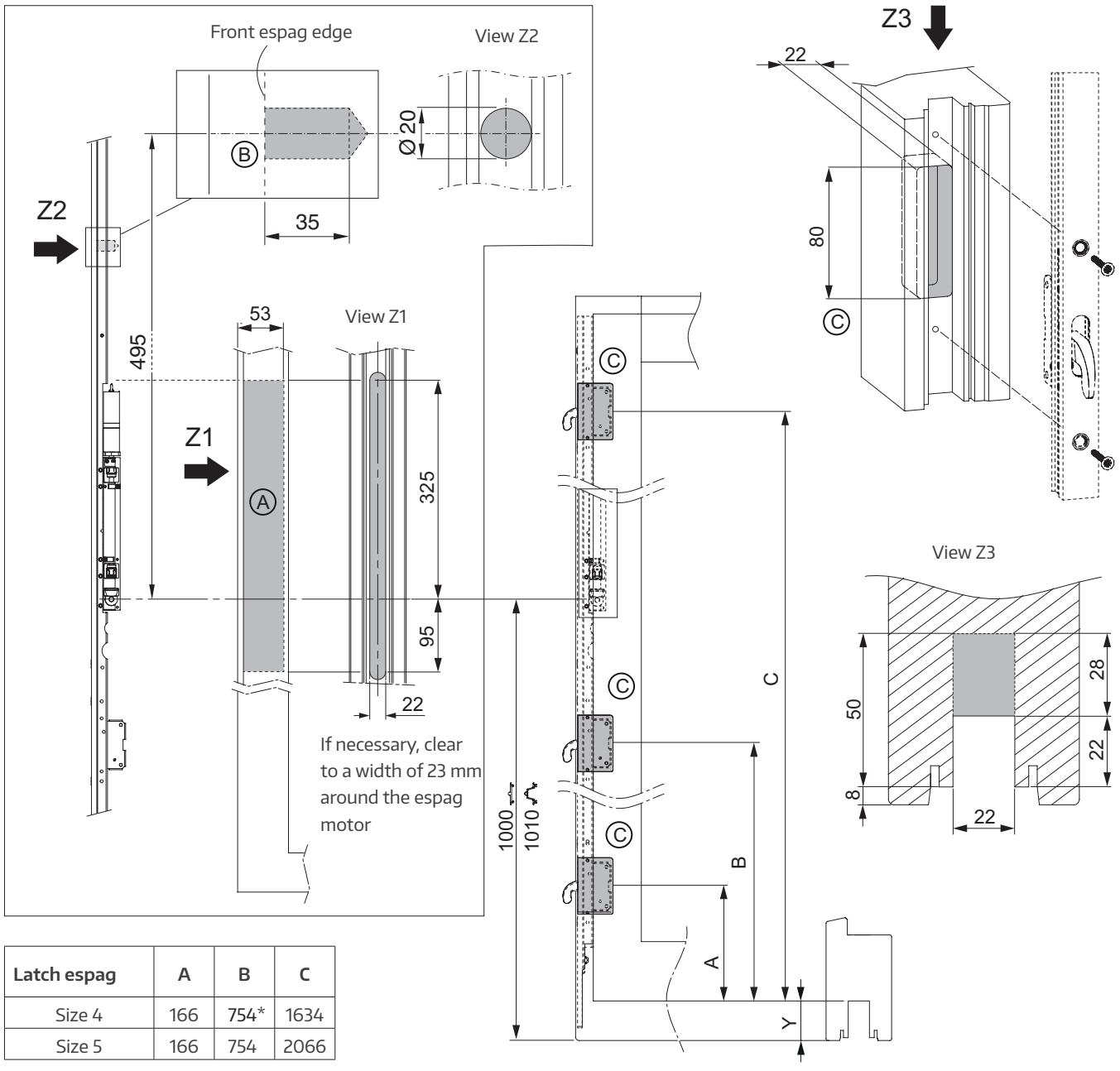
## For bolt/inviso espag: Cut-out in the frame for contact transfer

Example: Sliding sash opening from left to right, view from inside




| | A |
|---|---|
| Size 210 | 1733 |
| Size 240 | 2033 |
| Size 270 | 2333 |

# For latch espag: Lift actuator cut-out/drill hole Ⓐ Ⓑ, latch case cut-out Ⓒ



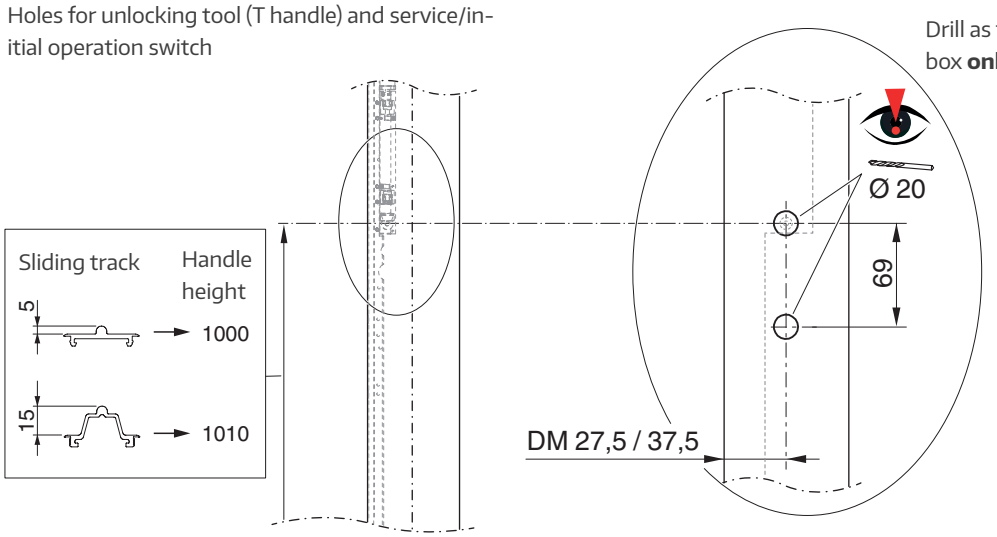

| Latch espag | A | B | C |
|---|---|---|---|
| Size 4 | 166 | 754* | 1634 |
| Size 5 | 166 | 754 | 2066 |

* optional

| Bogie variant | Y | |
|---|---|---|
| M2 | 35 | 45 |
| M1 | 46 | 56 |

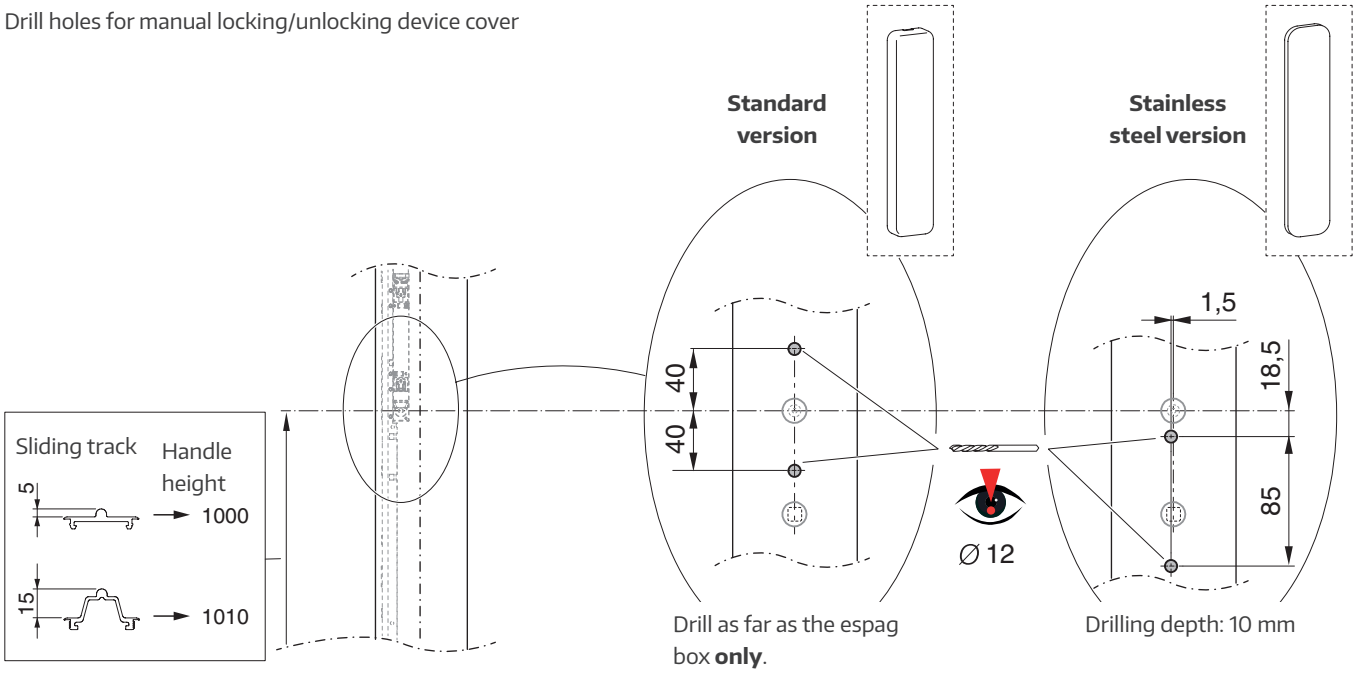
# For latch espag: drill holes for lift actuator

Holes for unlocking tool (T handle) and service/initial operation switch




Drill as far as the espag box **only**.

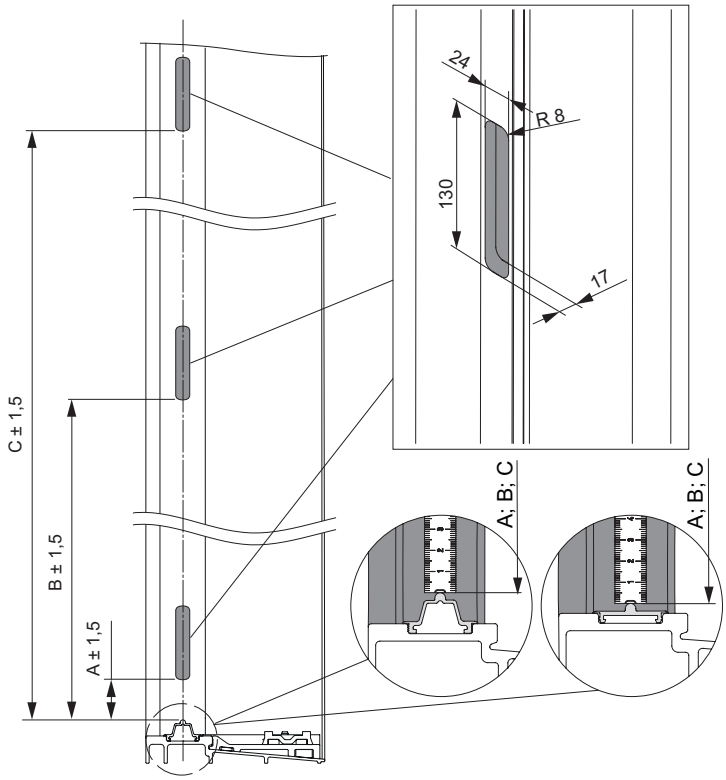
Drill holes for manual locking/unlocking device cover




Drill as far as the espag box **only**.

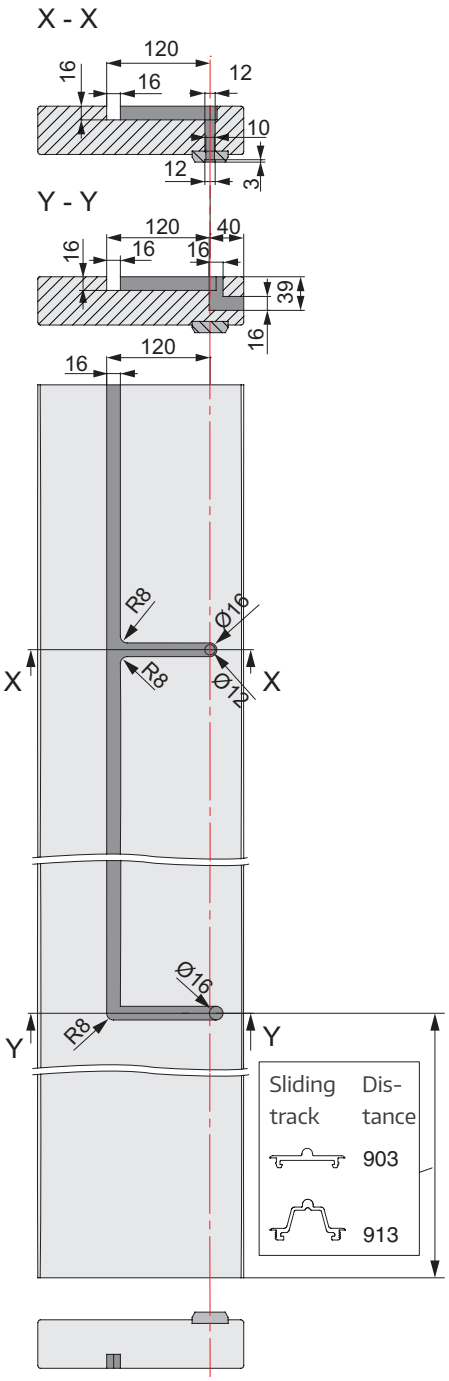
Drilling depth: 10 mm

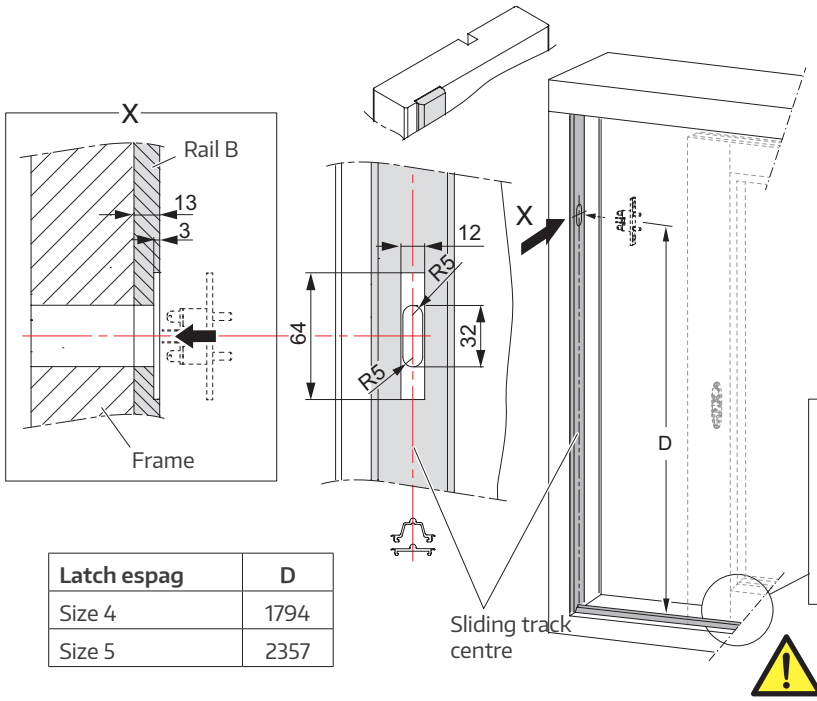
# For latch espag: Lock, operating and power transfer component



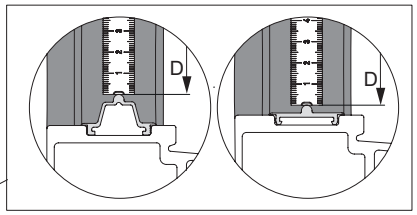

| Latch espag | A | B | C |
|---|---|---|---|
| Size 4 | 145 | 733* | 1613 |
| Size 5 | 145 | 733 | 2045 |

* optional




| Latch espag | D |
|---|---|
| Size 4 | 1794 |
| Size 5 | 2357 |

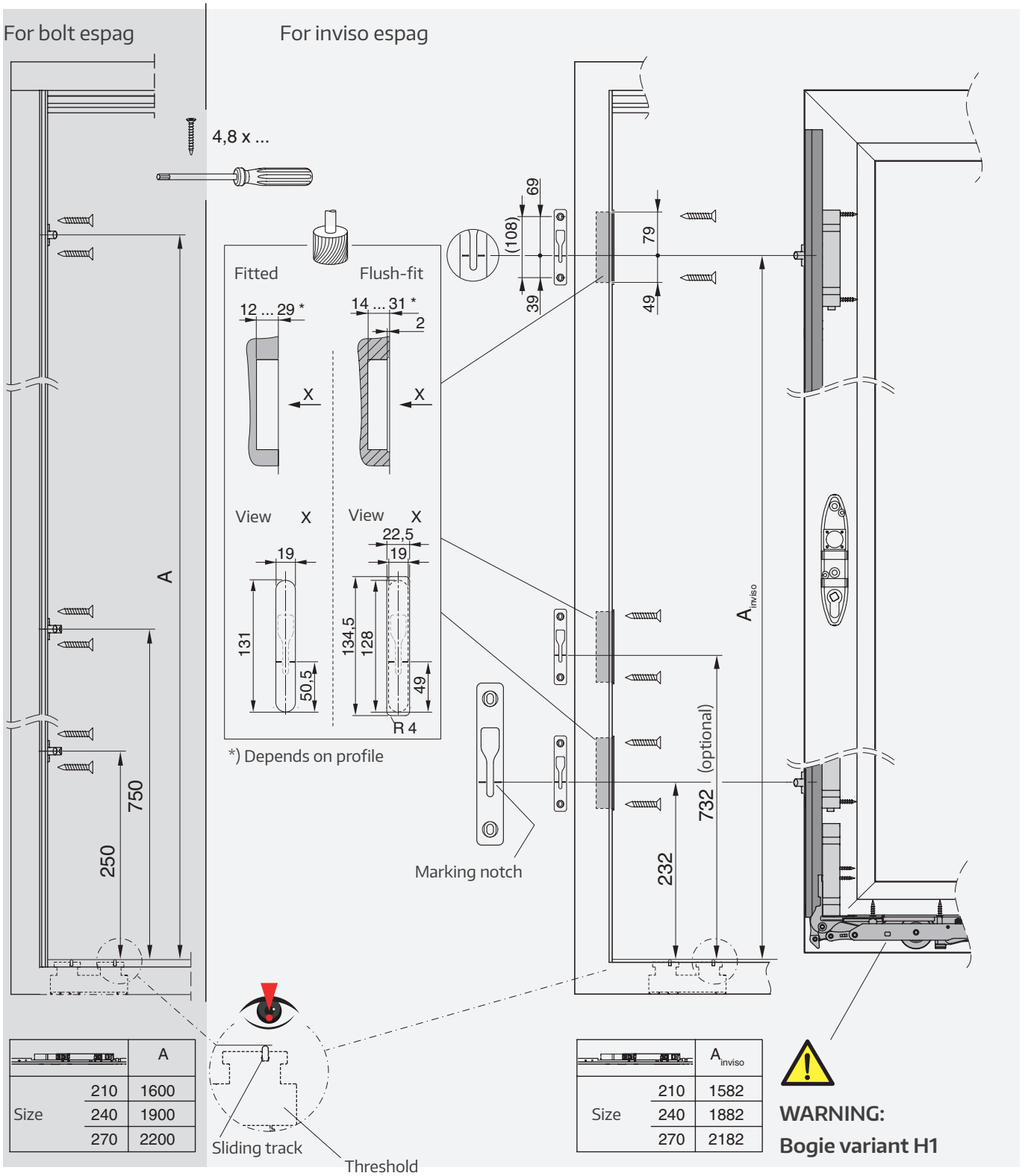



**WARNING:**
**Bogie variants M1/M2**

# For bolt/inviso espag: Positions of locking bolts/locking parts

**CAUTION: Different positions for locking bolts for a bolt espag and locking parts for an inviso espag.**

Example: Sliding sash opening from left to right, view from inside

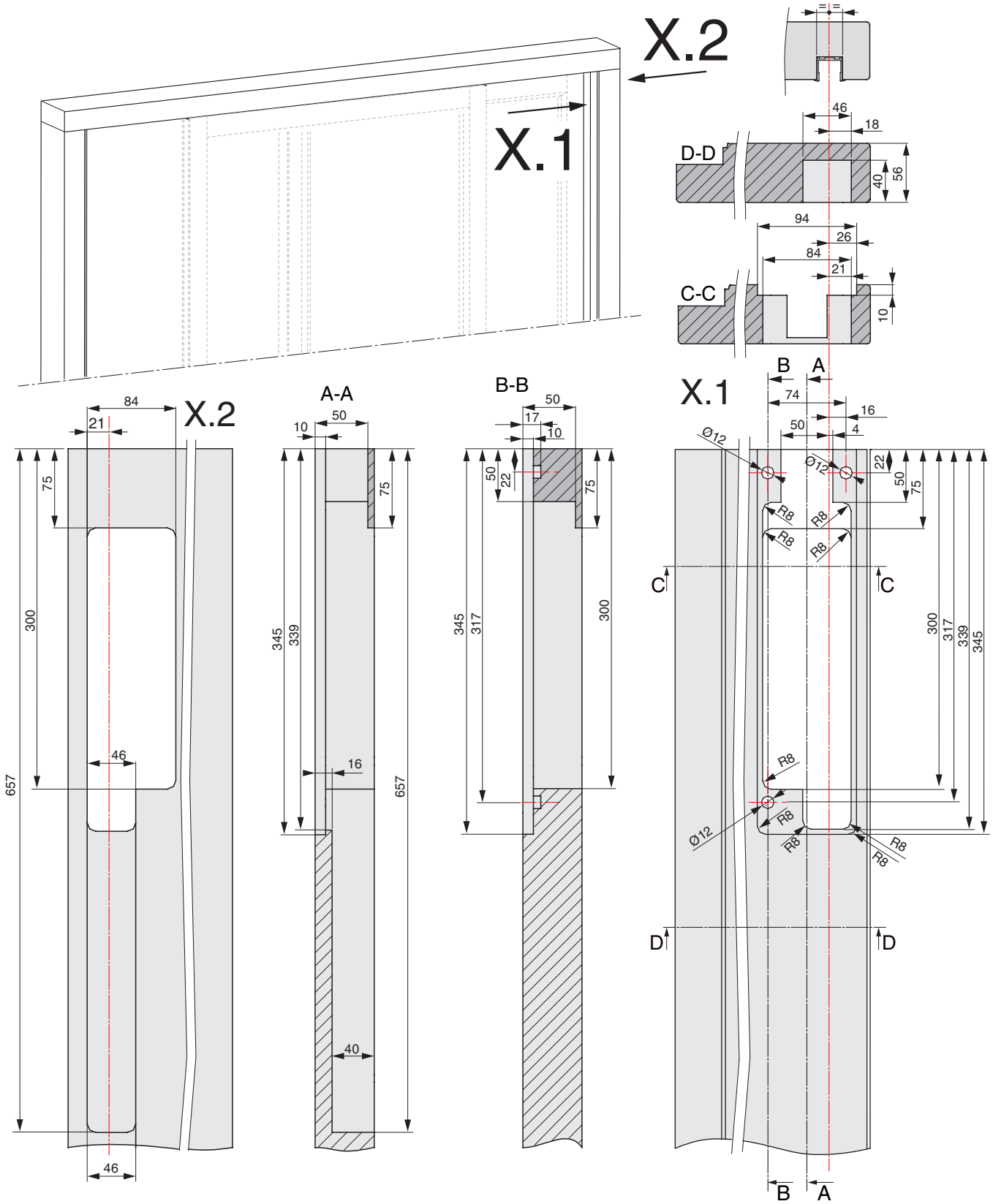



| Size | A |
|---|---|
| 210 | 1600 |
| 240 | 1900 |
| 270 | 2200 |

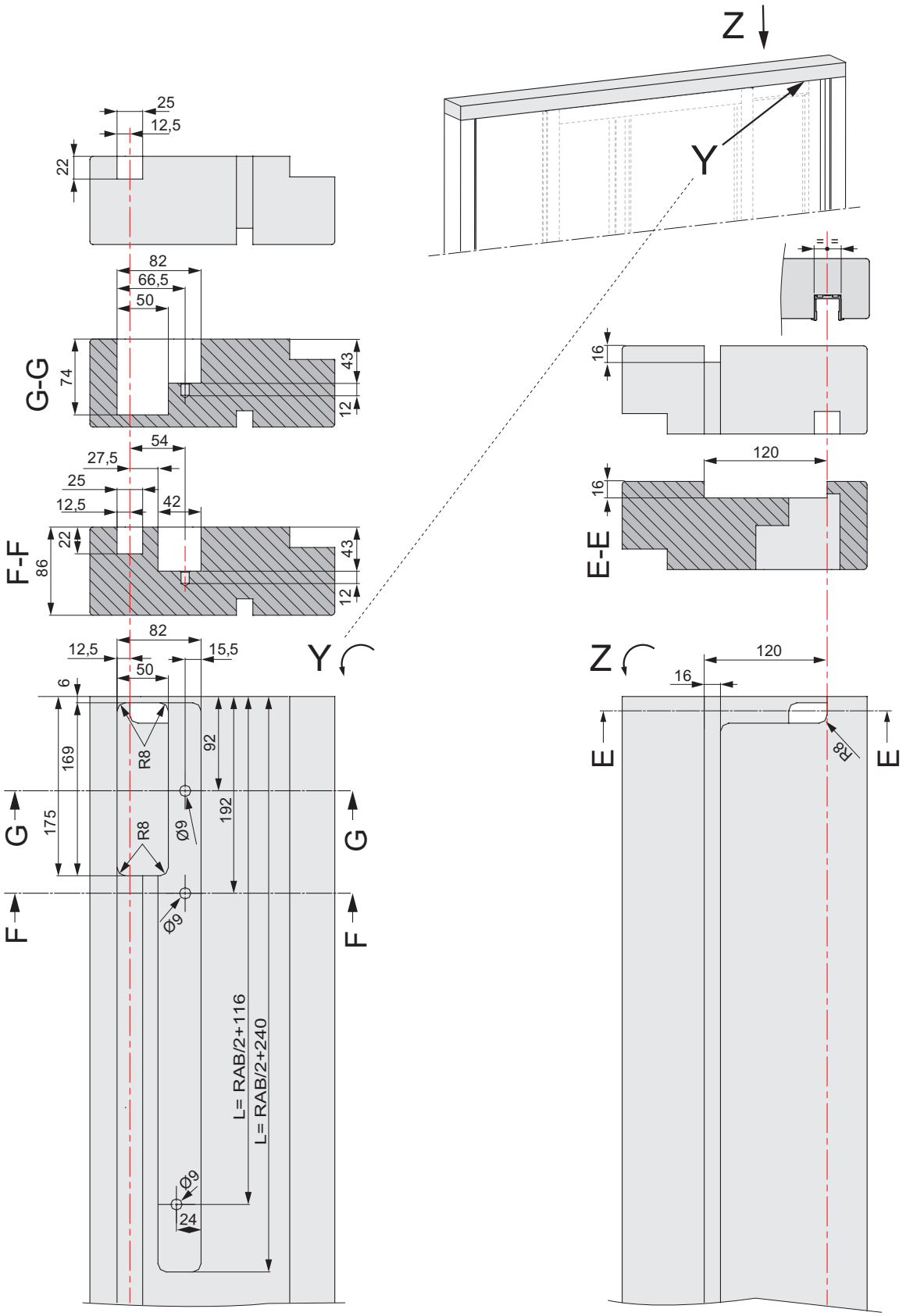
| Size | A inviso |
|---|---|
| 210 | 1582 |
| 240 | 1882 |
| 270 | 2182 |

**WARNING:**
**Bogie variant H1**

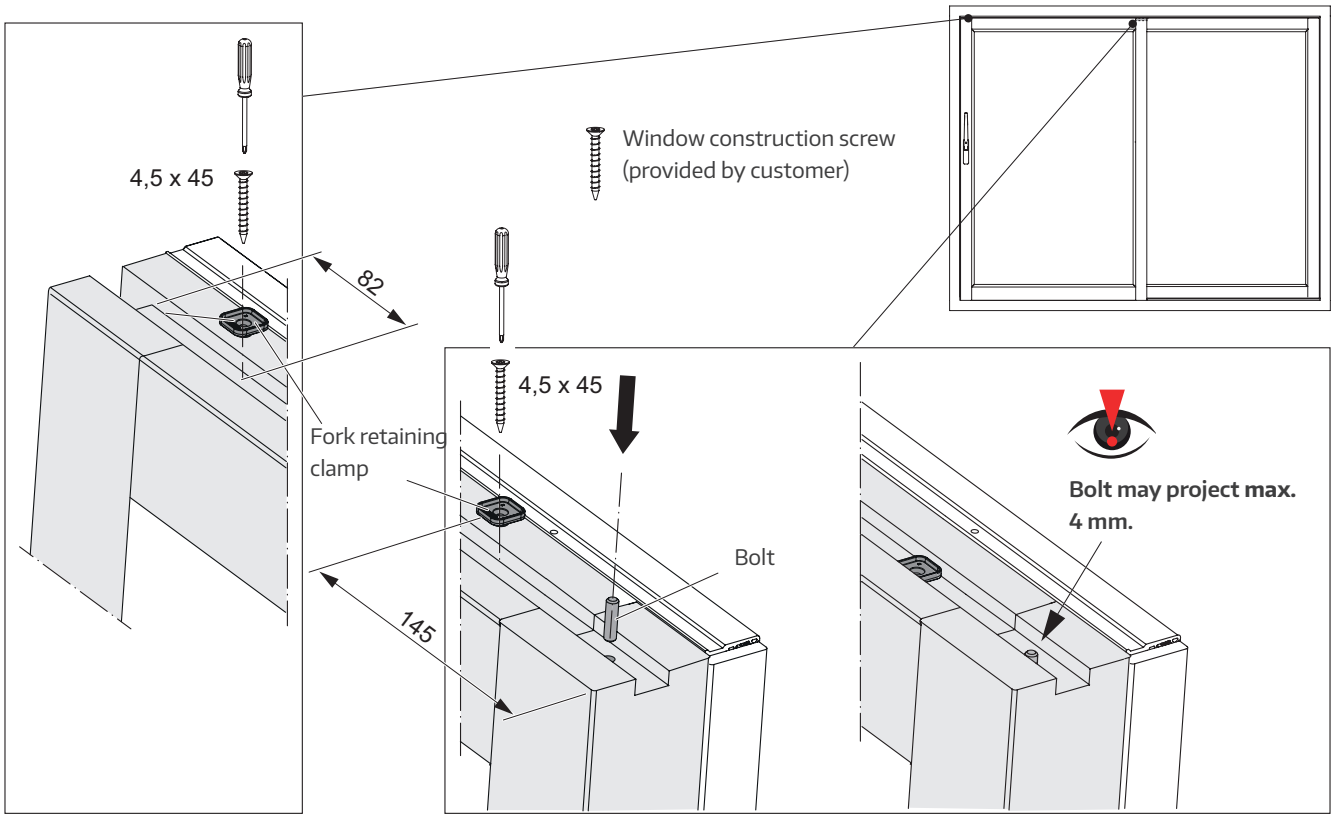
# Circuit board cut-out

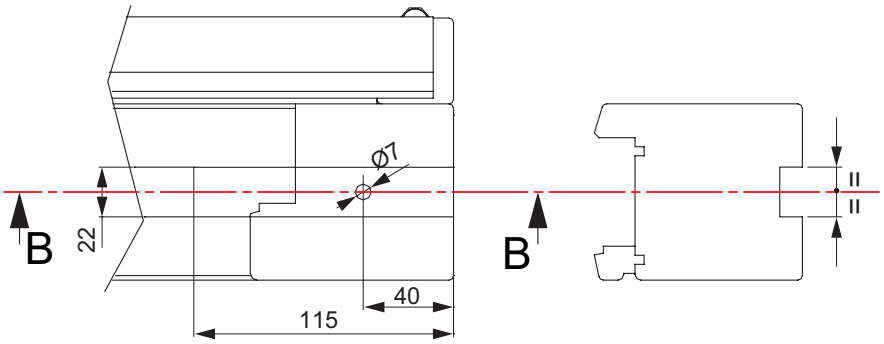


# Actuator unit cut-out

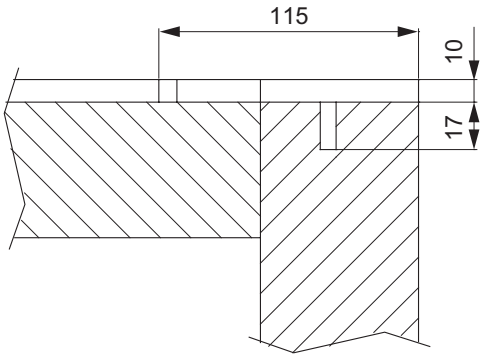


# Preparing to install the top guide pieces



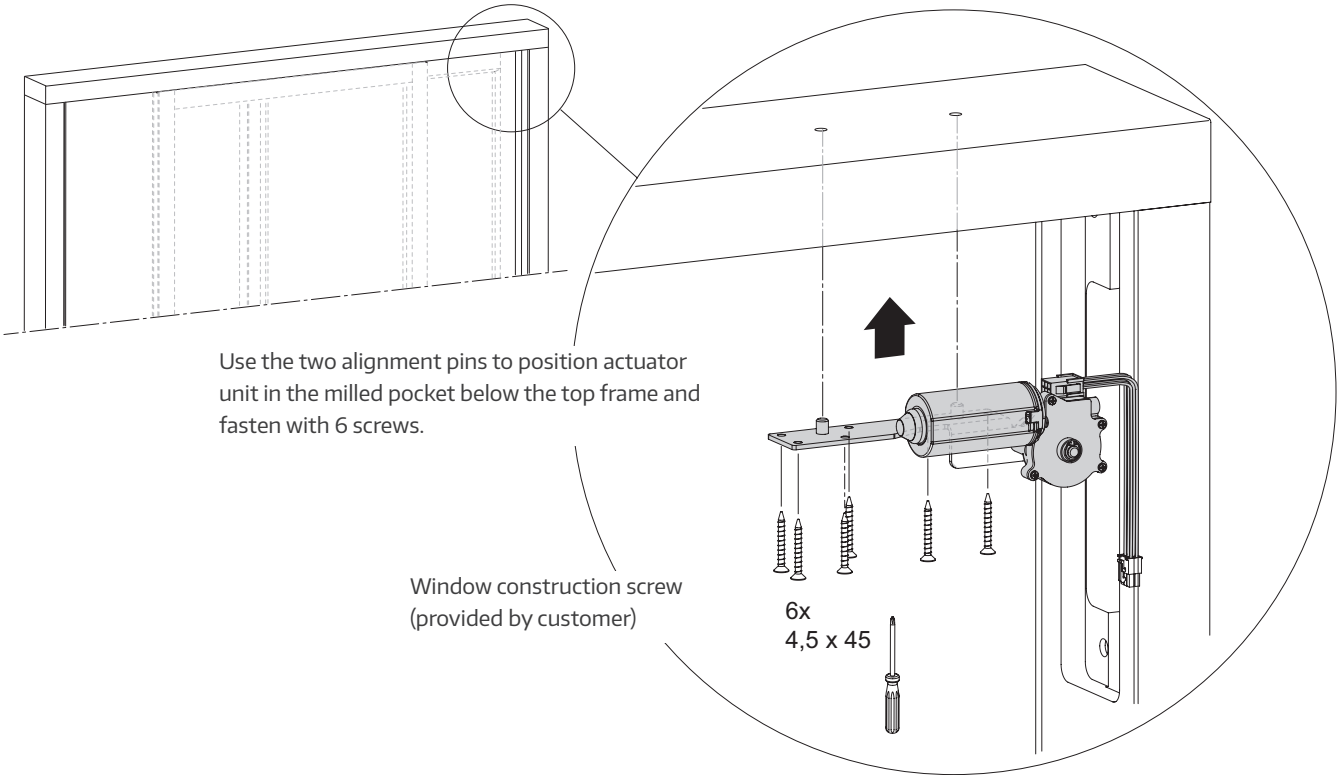




B - B



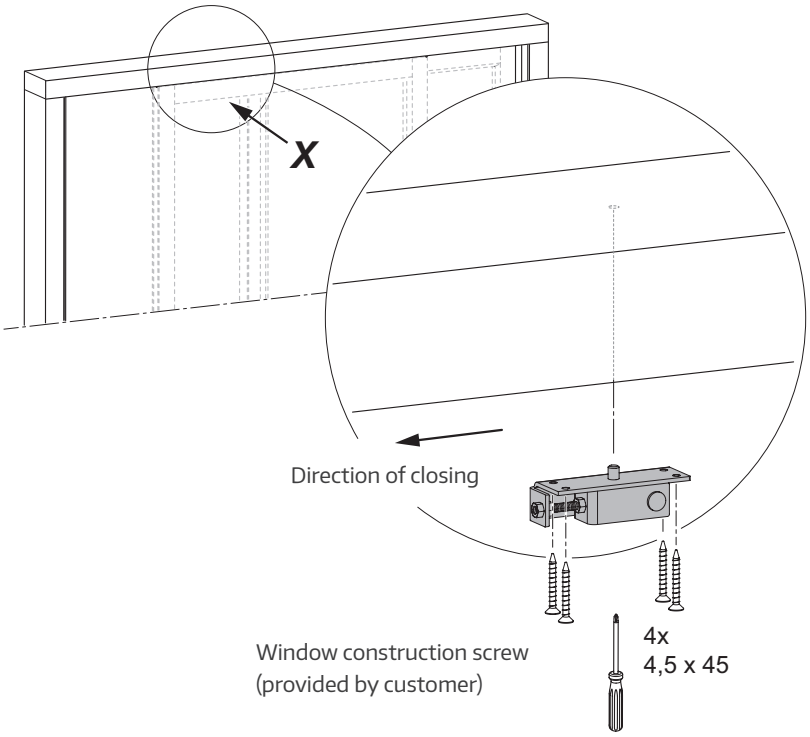
# Installing the actuator unit

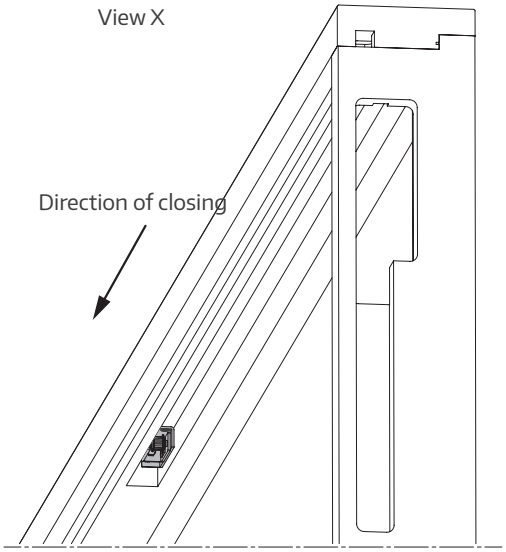
**It is recommended to fit it on the loose rod.**



# Fitting the toothed belt deflector

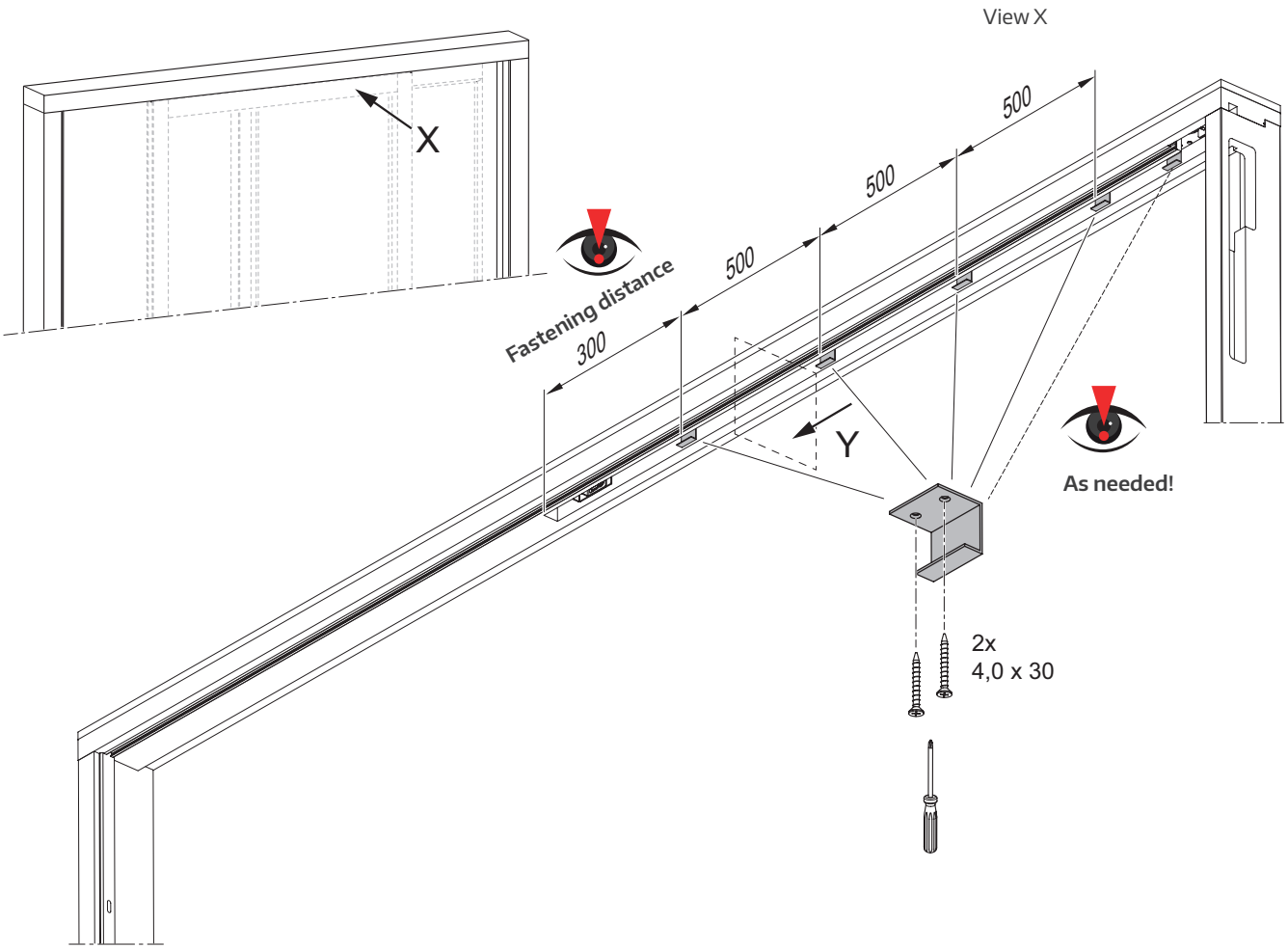
**It is recommended to fit it on the loose rod.**



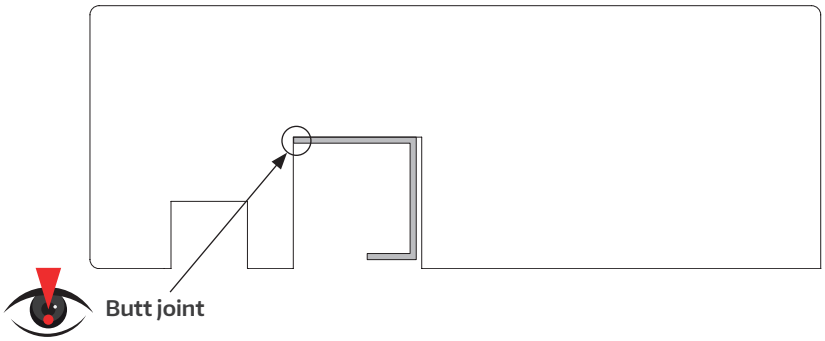



# Fitting the cover strip mount

**It is recommended to fit it on the loose rod.**

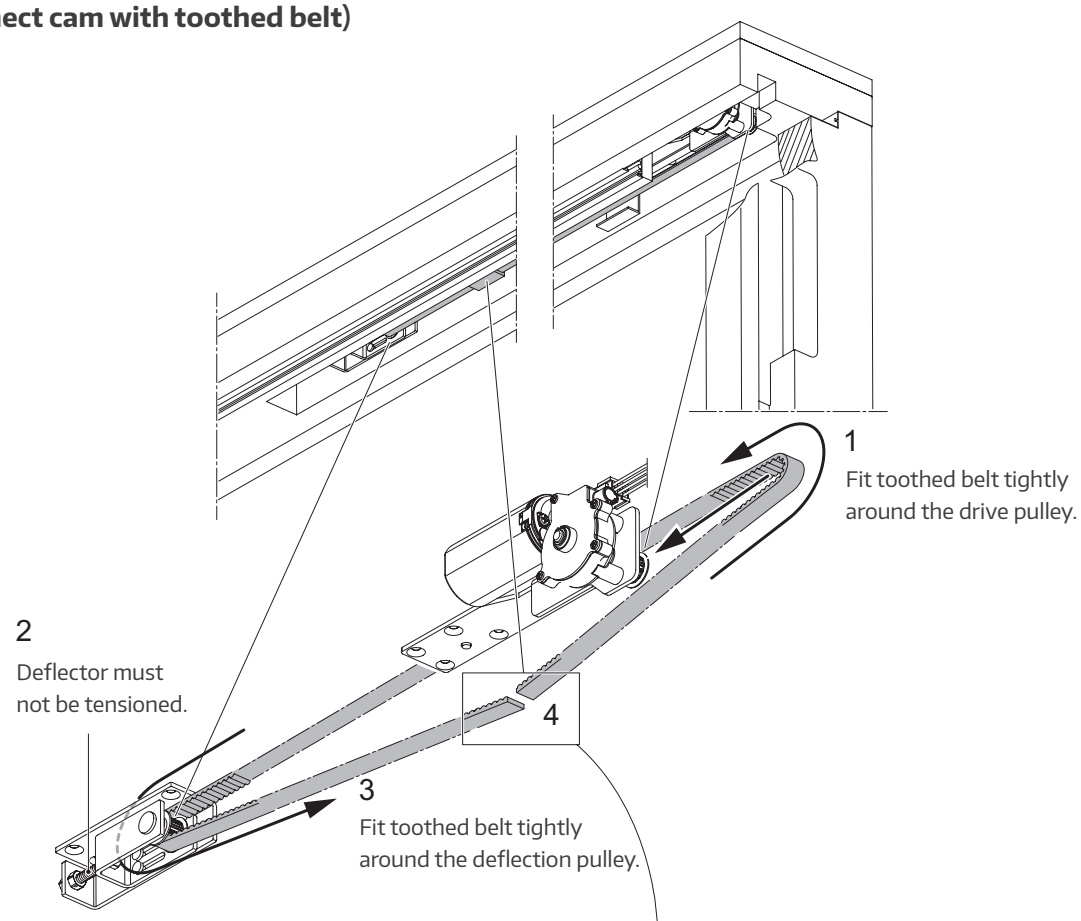



Cross-section Y (frame with cover strip mount only)

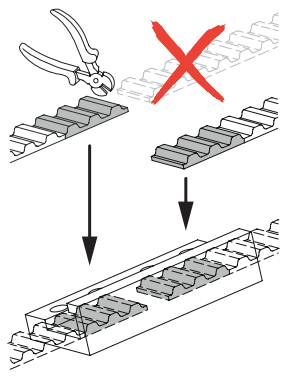


# Fitting the toothed belt

**The toothed belt should be fitted roughly halfway along the fixed section.**
**(See Connect cam with toothed belt)**

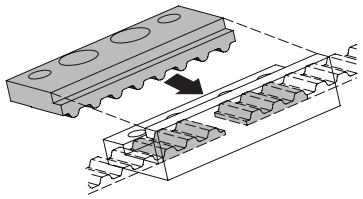



4.1
Trim toothed belt so that it can be fastened at both ends with **3 teeth** in the clamp on each side when tightened by hand.



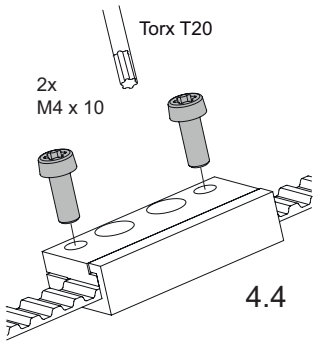
4.2
Position the top clamping plate on the lower clamping plate and the two ends of the toothed belt as shown.

**Remove deflector to make it easier to connect the toothed belt.**

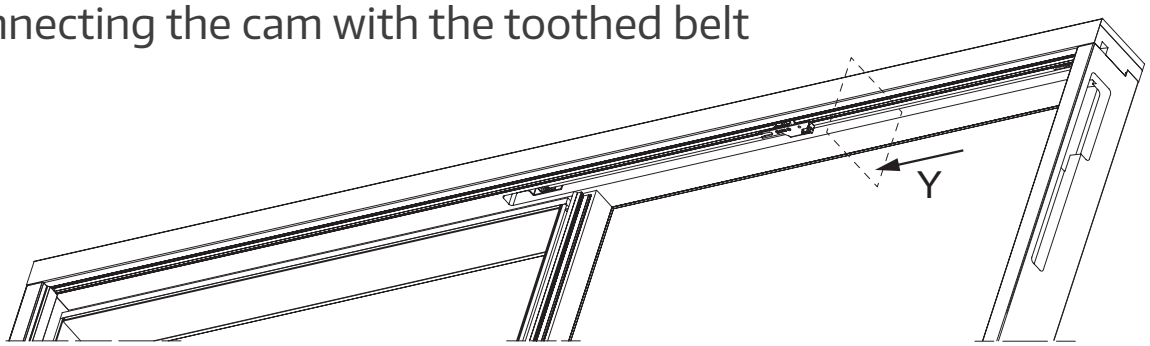


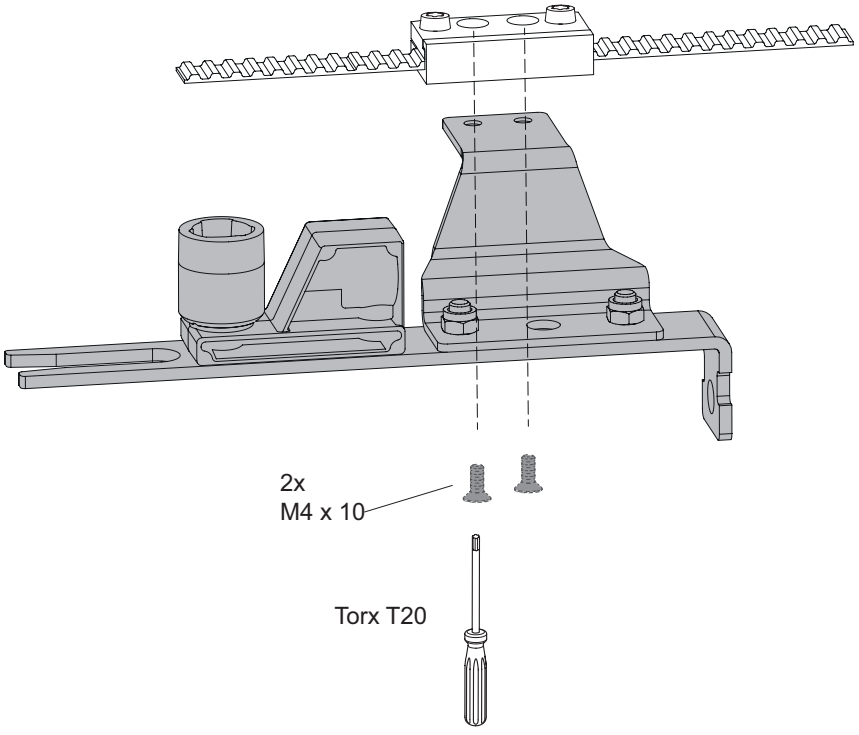
4.3
Fasten both clamping plates together with 2 M4 x 10 screws.

4.4
Mount the deflector again.

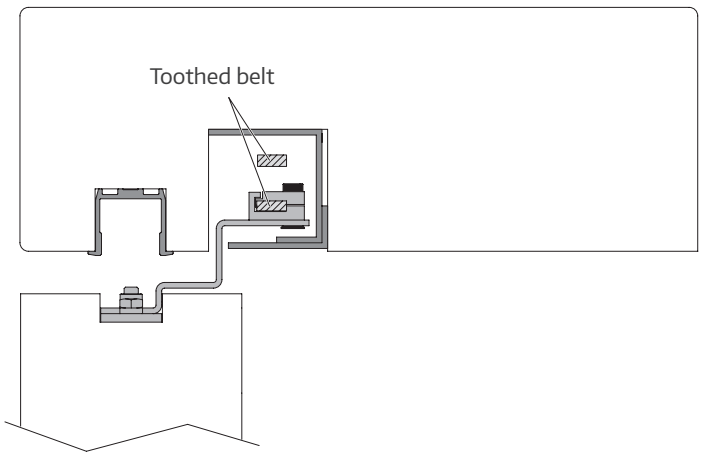


# Connecting the cam with the toothed belt

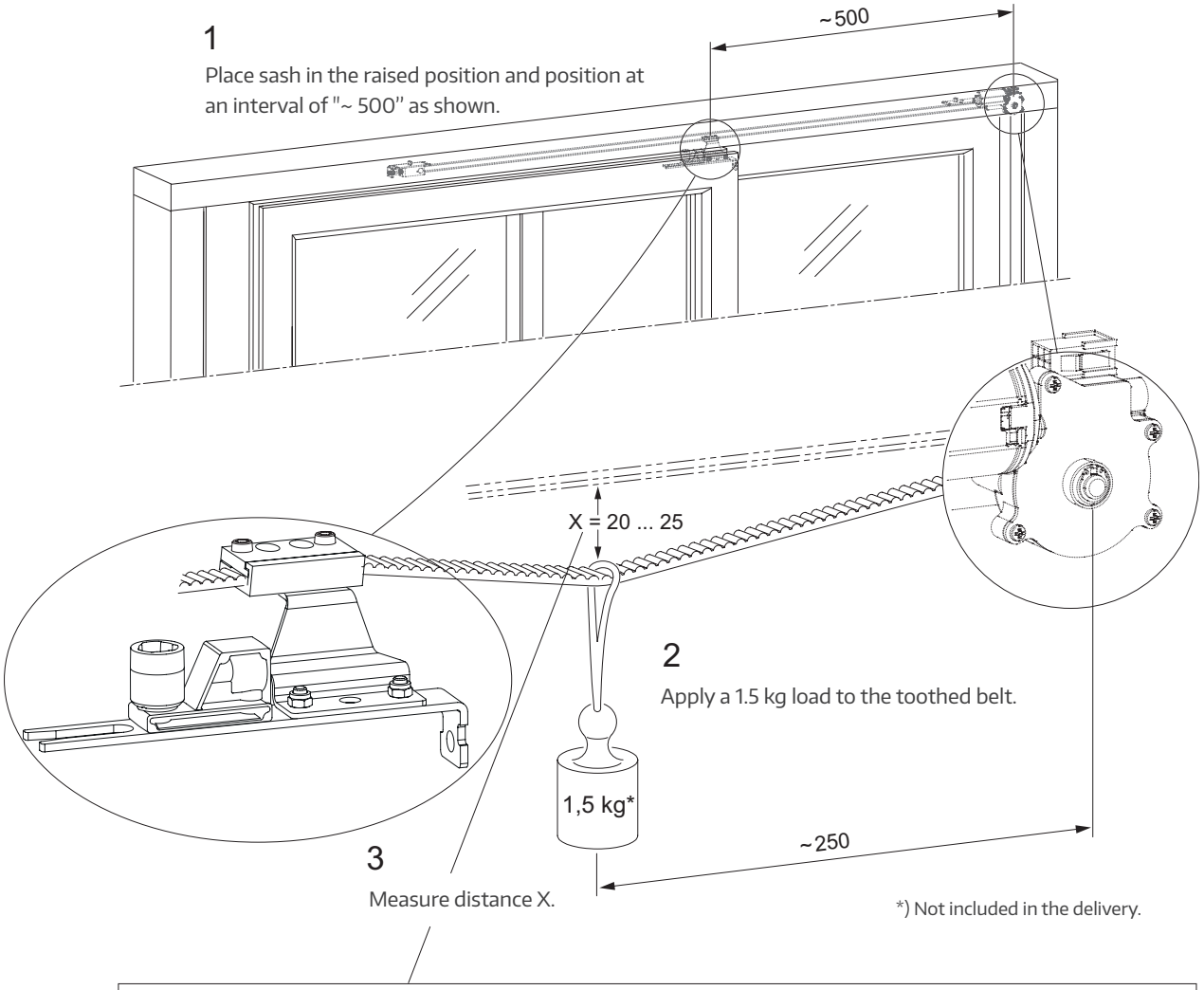


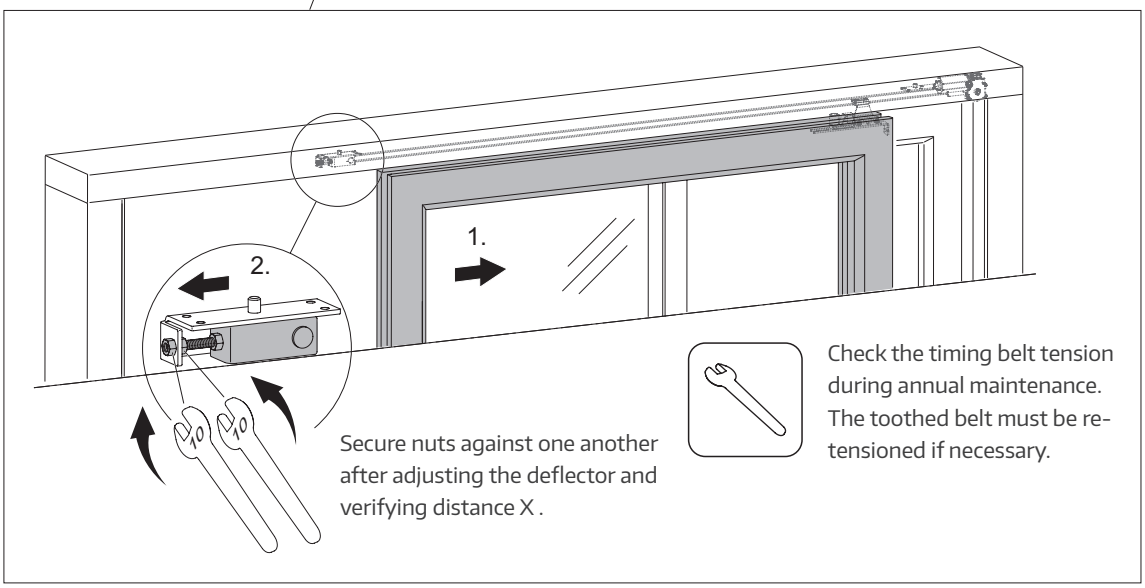




Cross-section Y

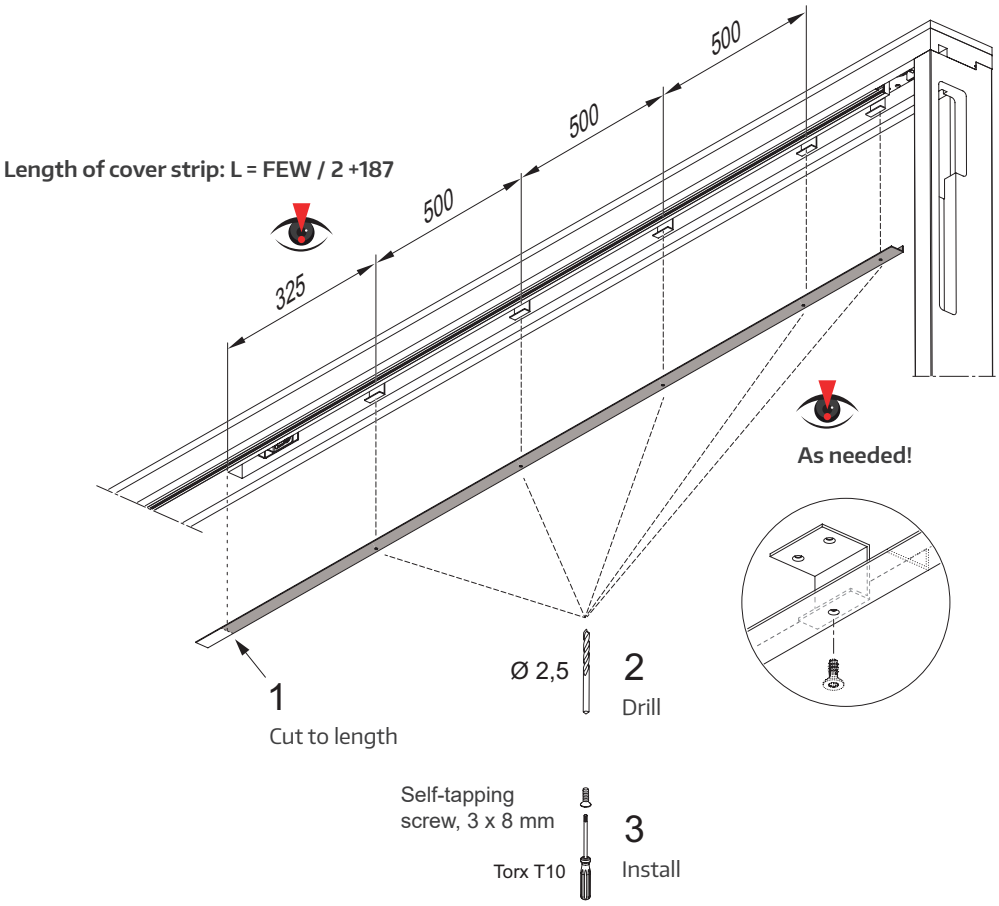


# Adjusting the toothed belt tension



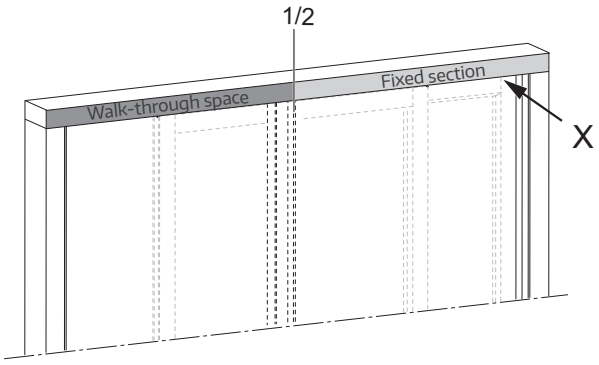



# Fitting the cover strip

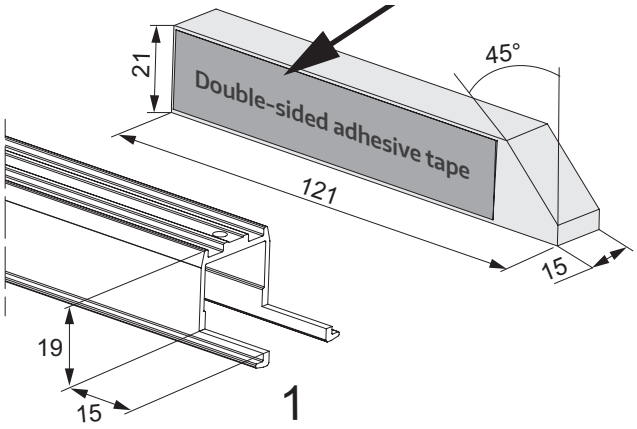


# Fitting the guide track

**2-piece guide track**
**(walk-through and fixed sections)**




View X

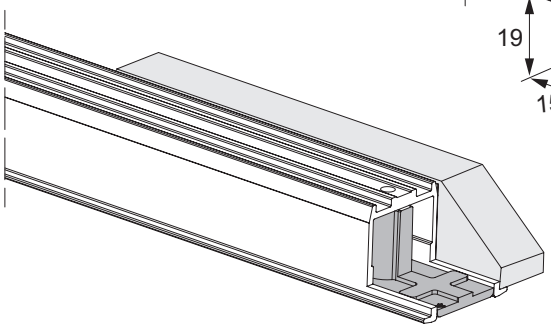



**2**

Attach double-sided adhesive tape on the wooden block.

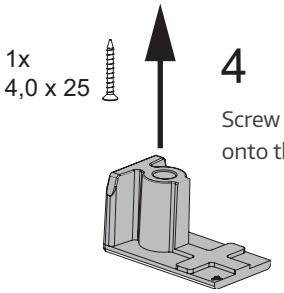
**1**

Cut a notch in the guide track.



**3**

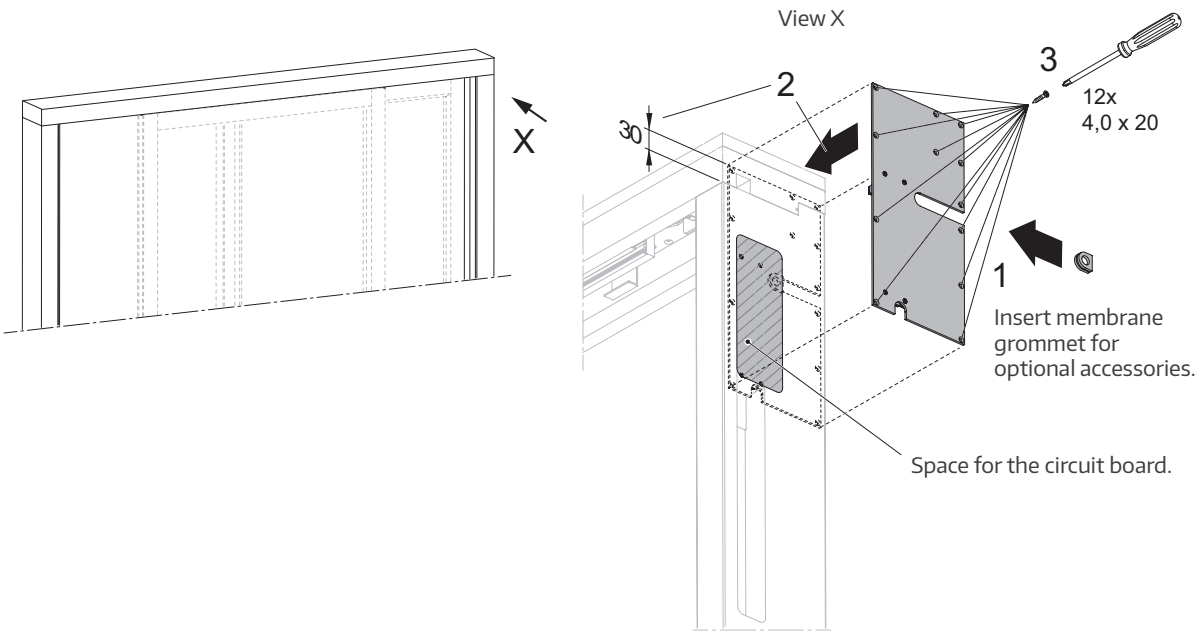
Adhere to guide track.

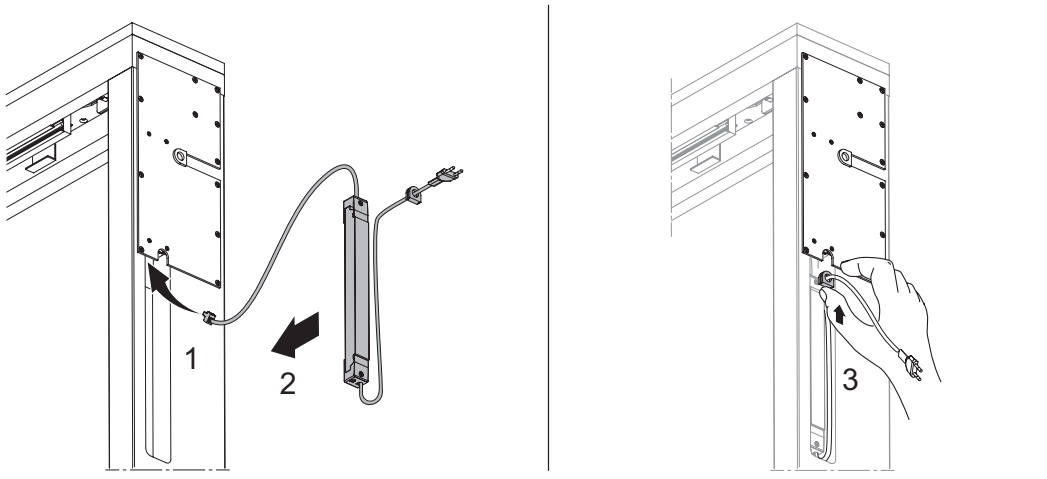


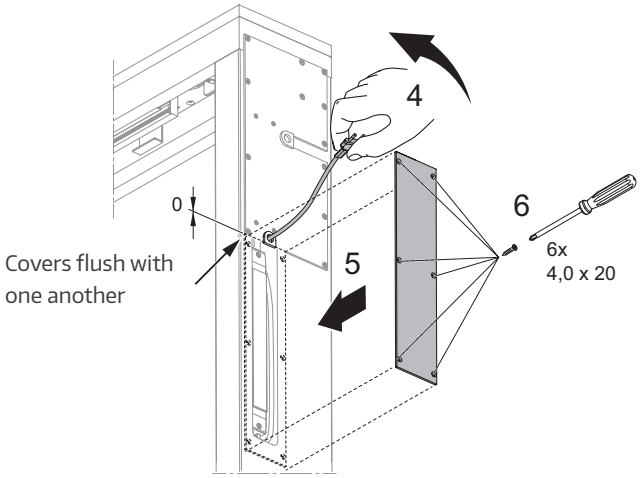

**4**

Screw stop bracket onto the guide track.

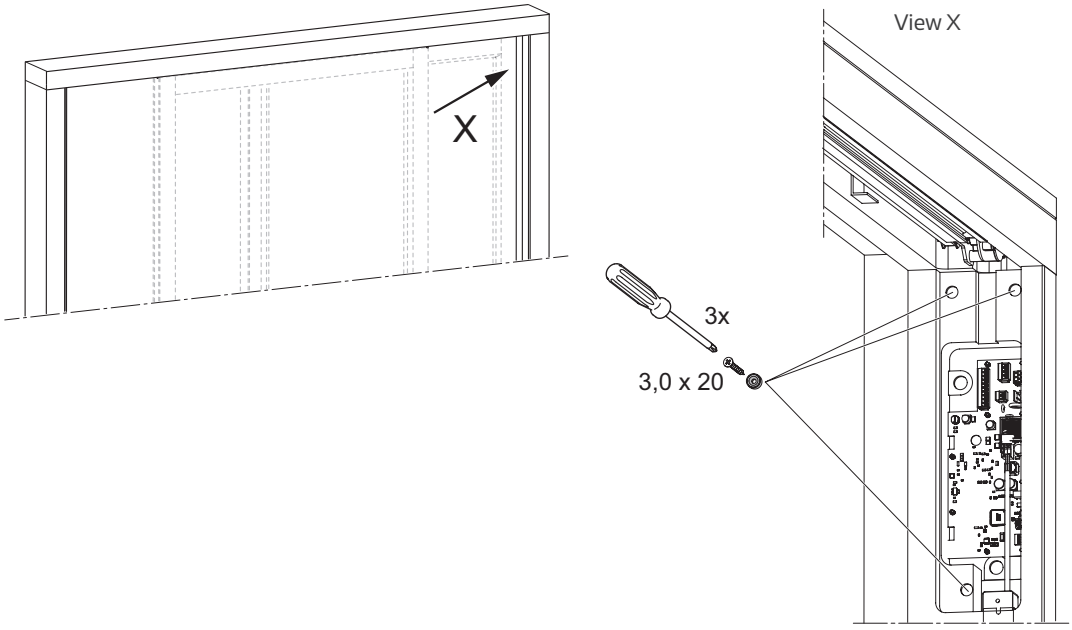
# Fitting the circuit board



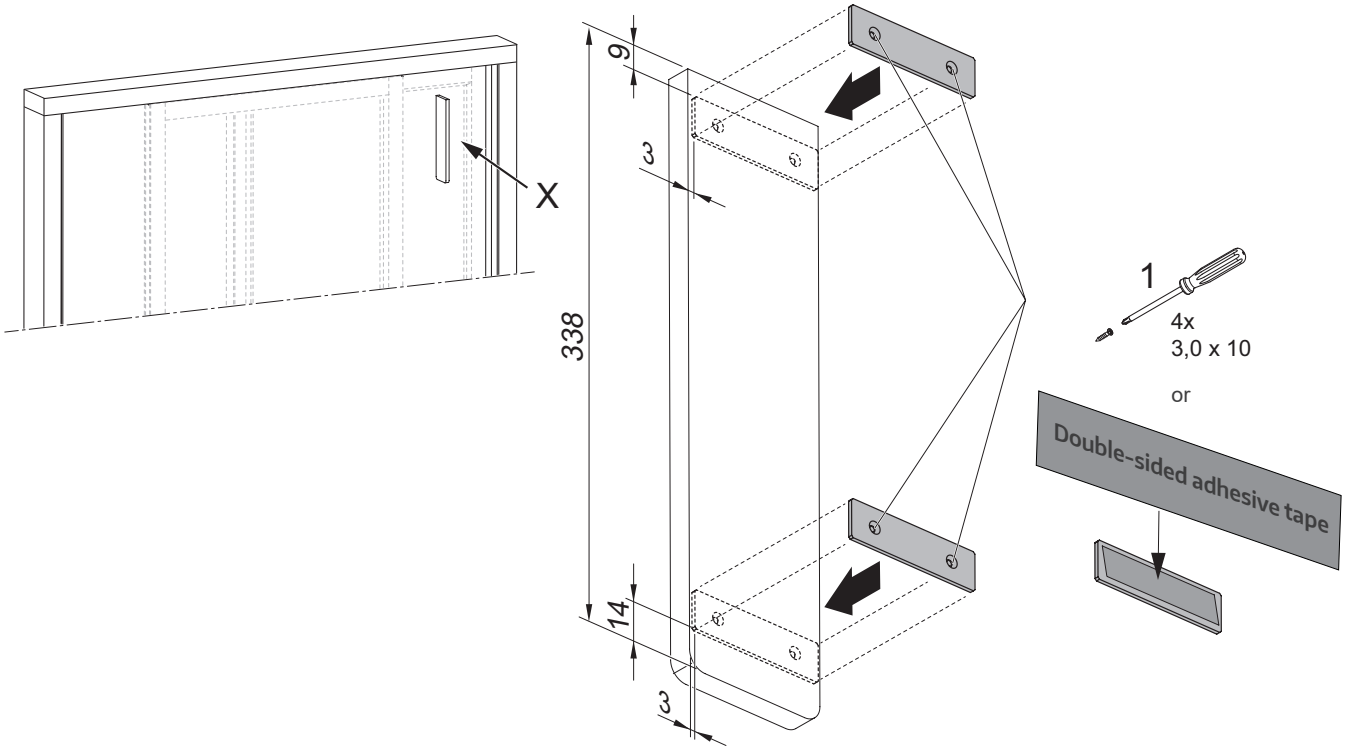



## Fitting the magnets

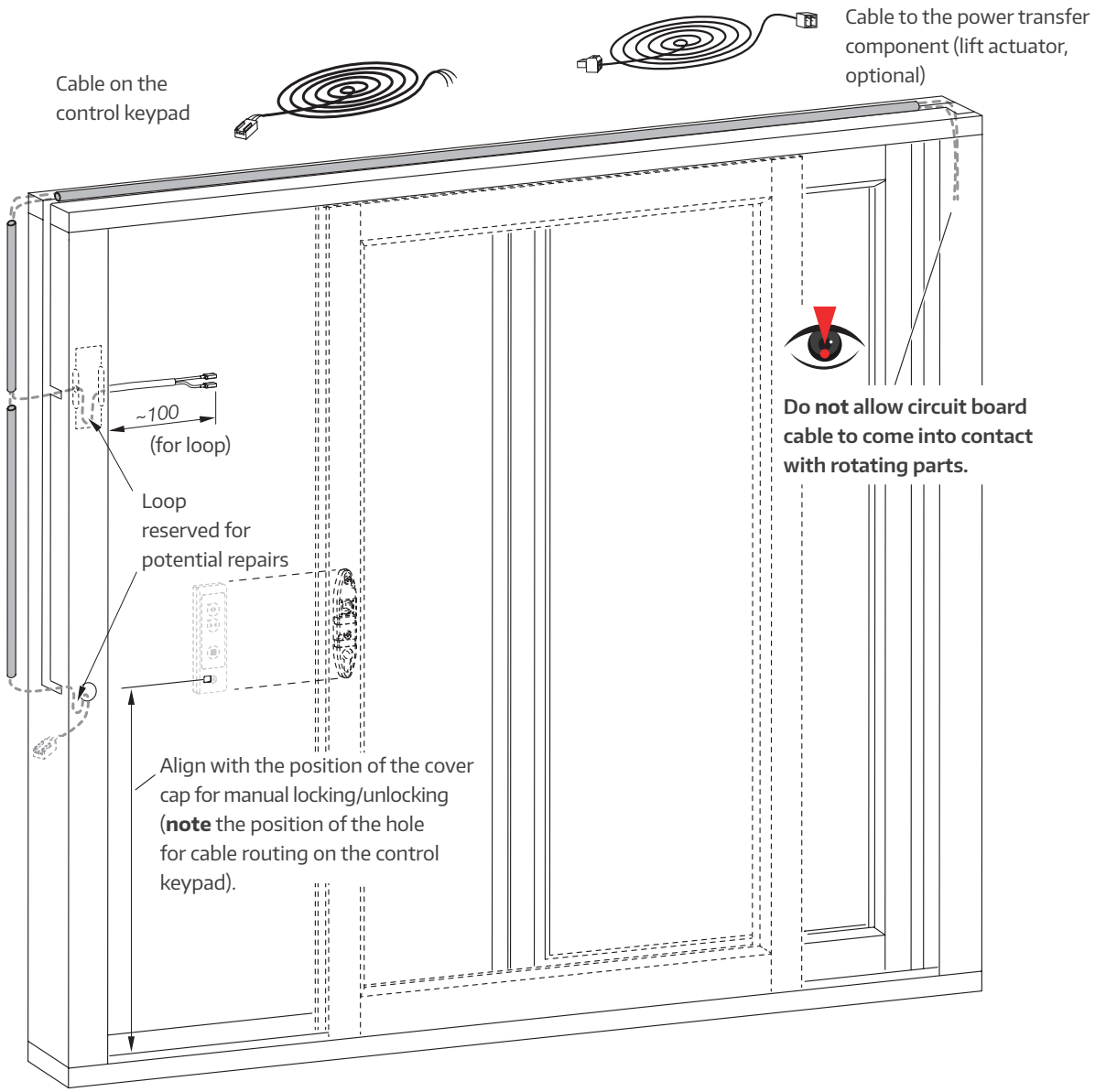



## Fitting retaining plates on the cover



# Cable routing options

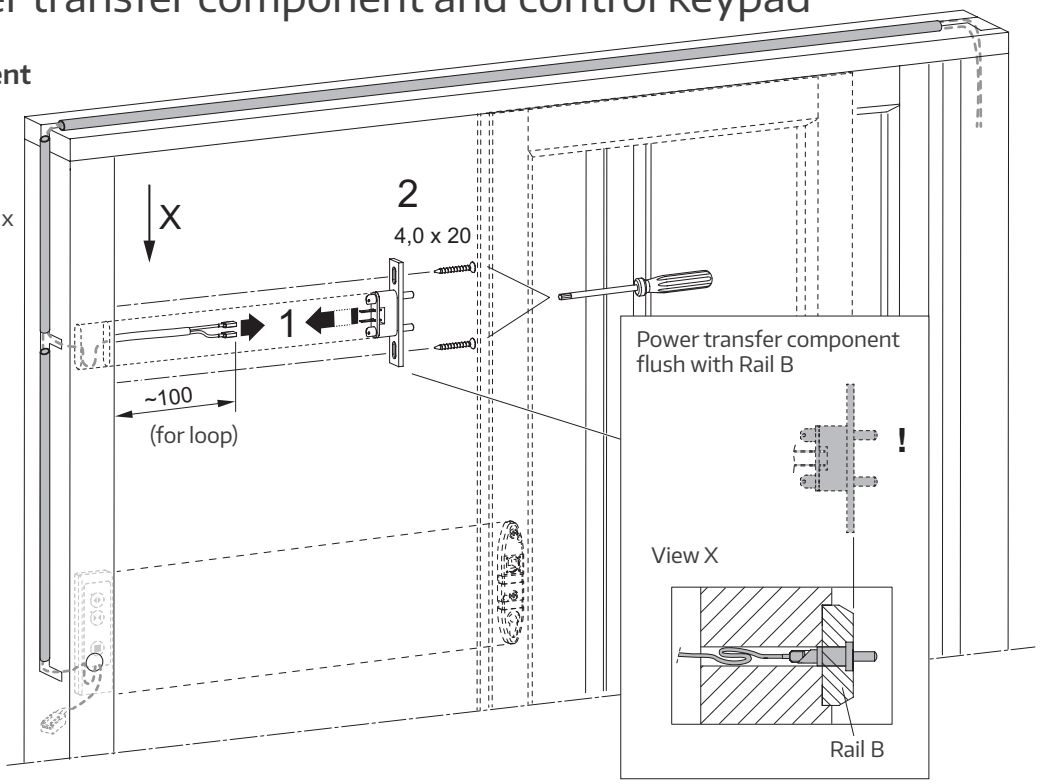
**The cables must be attached in such a way that they do not come into contact with moving parts. The holes drilled for cable routing must be carefully deburred.**
**Risk of material damage.**



# Fitting the power transfer component and control keypad

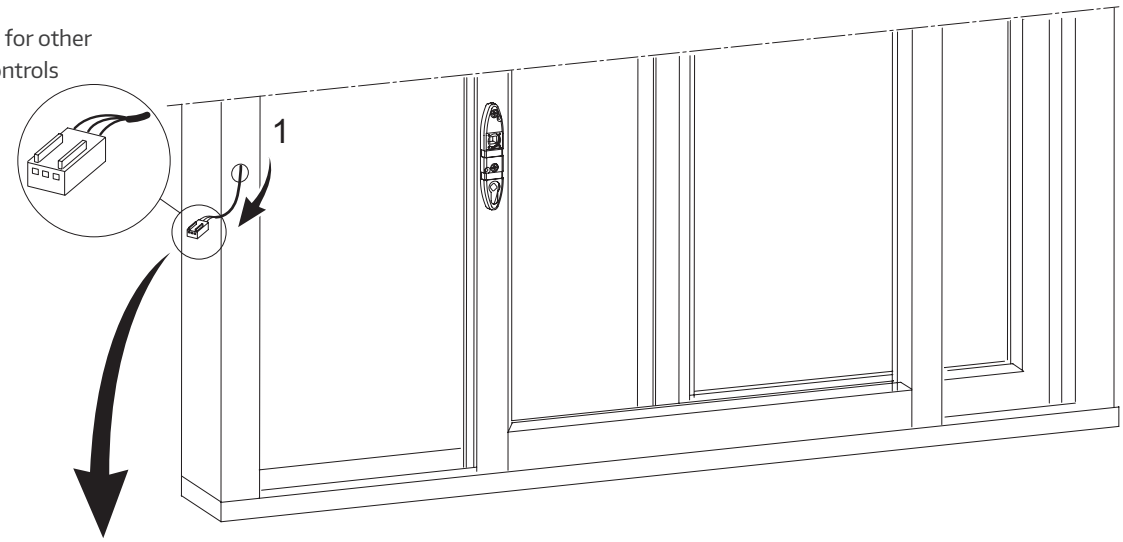
## Power transfer component

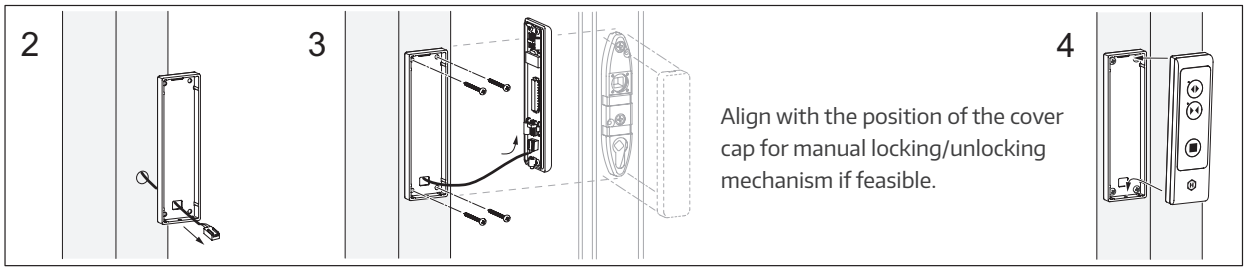
1. Attach flat connector to the power transfer component.
2. Firmly fasten power transfer component with 2 screws 4.0 x 20 to Rail B.




## Control keypad

See separate document for other variants of operating controls

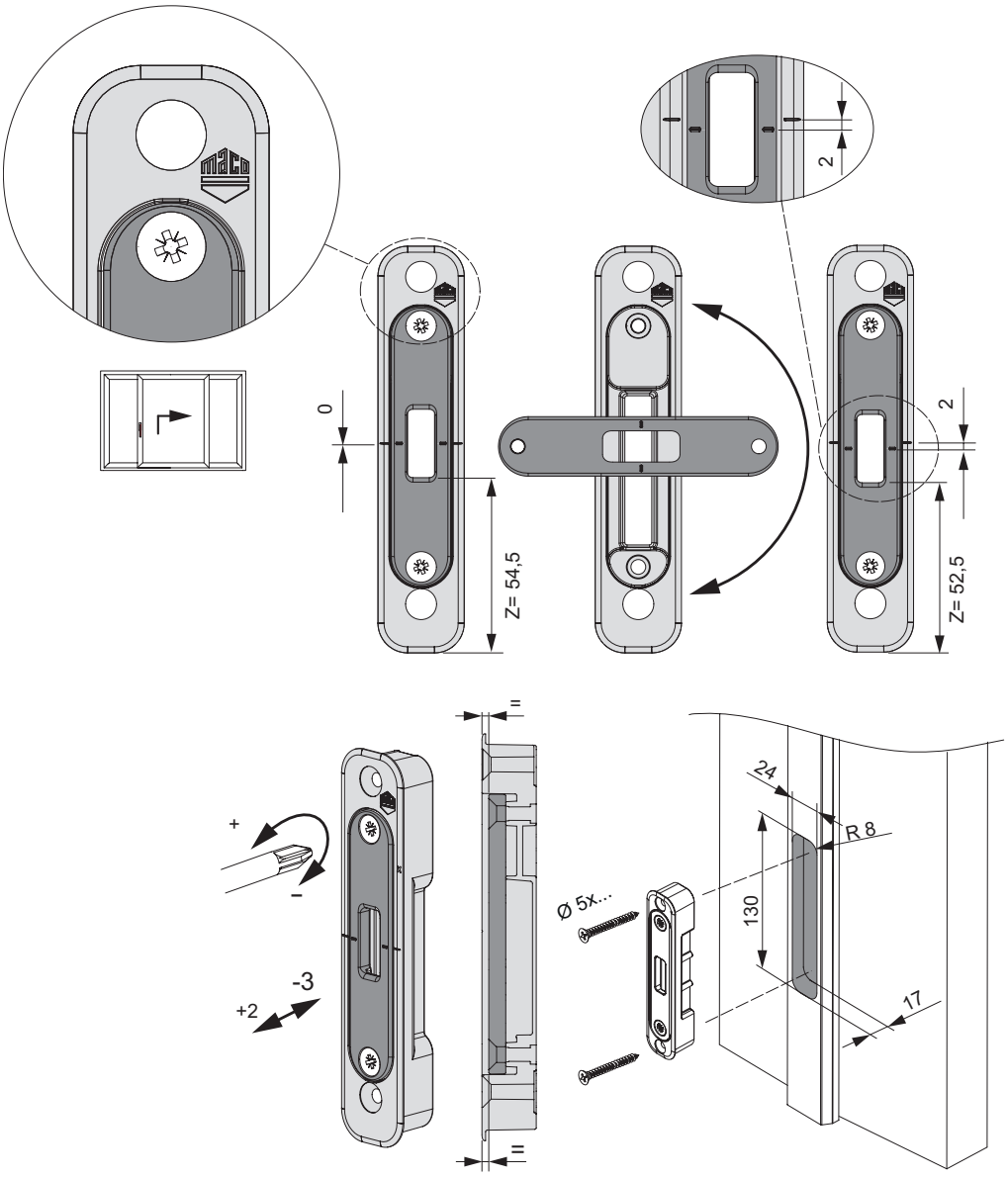


# Fitting the locking parts

## For latch espag: Installing the latch locking mechanism

**Always** choose the installation position so that the MACO logo is placed **at the top**.
Turning the striker around **can compensate** for manufacturing tolerances.




In the case of bolt/inviso espag: see section **Locking parts positions**

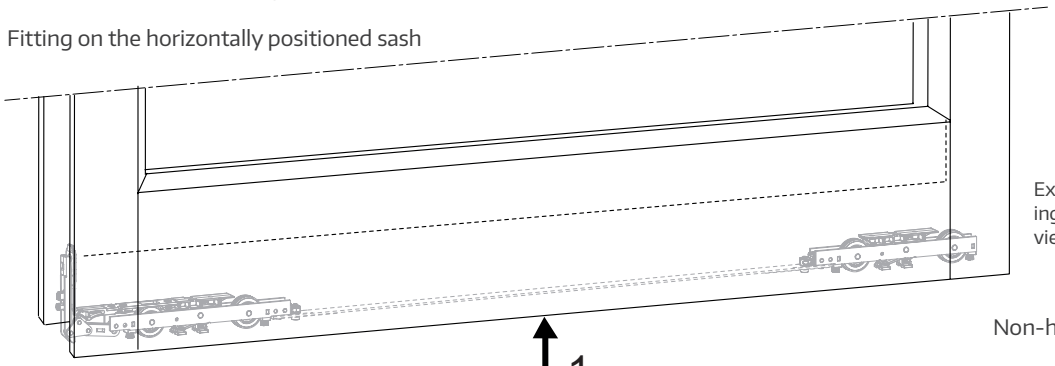
# Bogie installation

**2 additional bogies for 400 kg or 440 kg must be used with a sash weighing 200 kg (latch espag) or 330 kg (bolt/inviso espag) or more;**

siehe auch profilbezogene Montageanleitung
Refer to profile-based installation instructions

also see **Parts overview → Bogie variants**

Fitting on the horizontally positioned sash

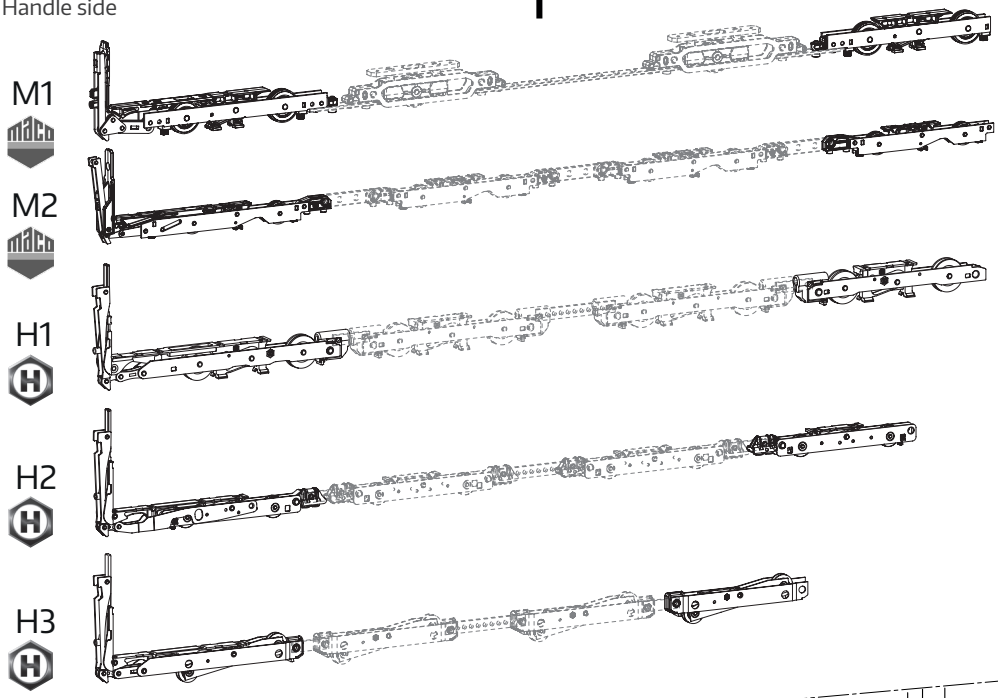


Example: Sliding sash opening from right to left, view from inside

Non-handle side

Handle side

1




2

Remove retainers from both bogies with a hammer and a suitable wooden striking block. The bogies must then be able to move very easily.

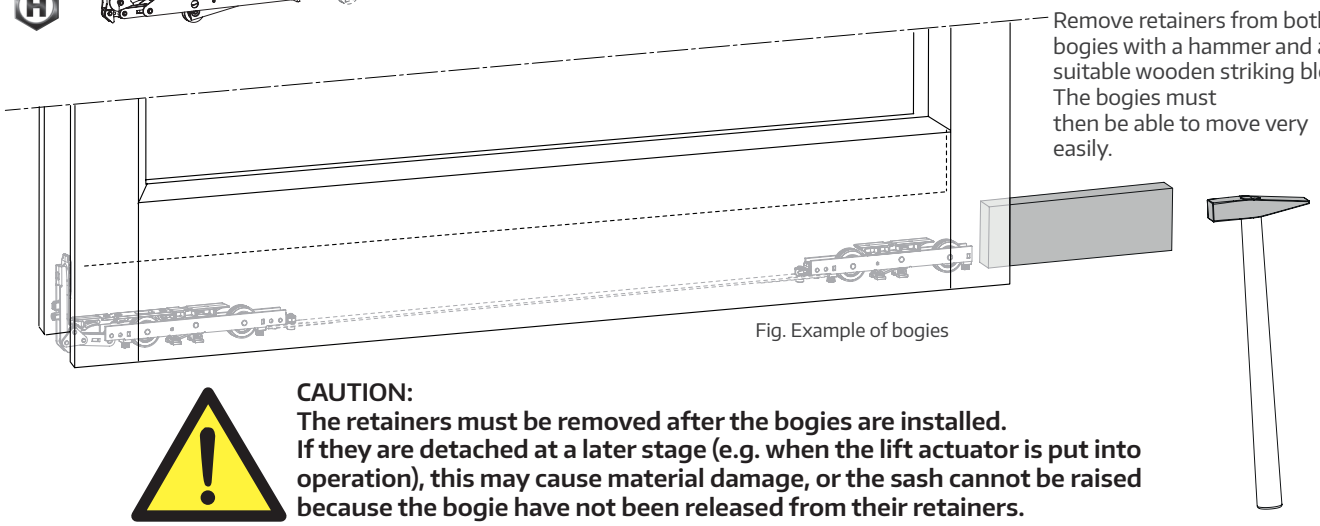
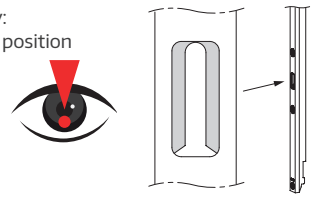


Fig. Example of bogies

**CAUTION:**
**The retainers must be removed after the bogies are installed. If they are detached at a later stage (e.g. when the lift actuator is put into operation), this may cause material damage, or the sash cannot be raised because the bogie have not been released from their retainers.**

# For bolt/inviso espag:
# Installing the lift actuator and contact transfer component

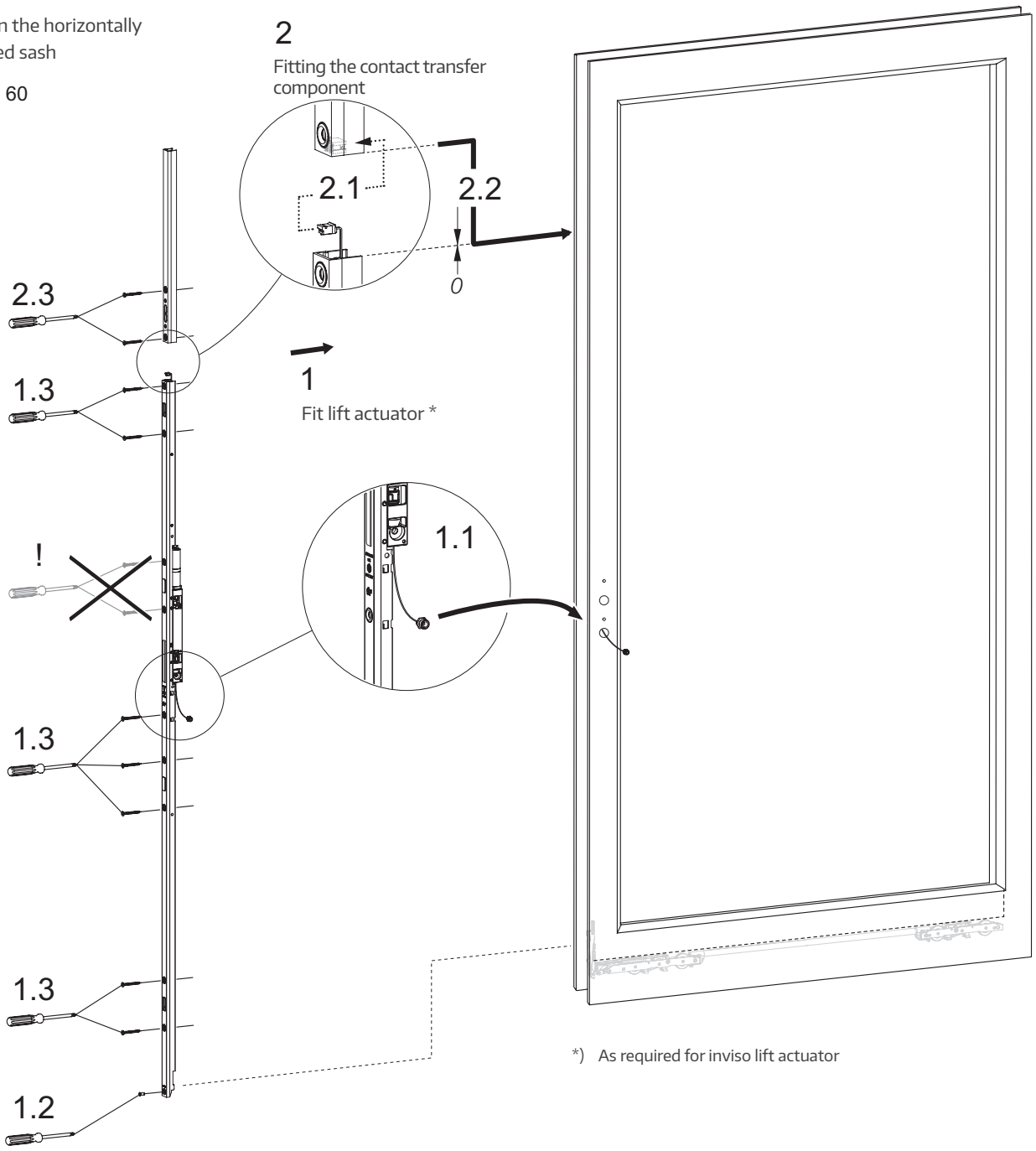
Condition on delivery:
**Sash lowered** motor position



Example: Sliding sash opening from left to right, view from inside

Fitting on the horizontally positioned sash

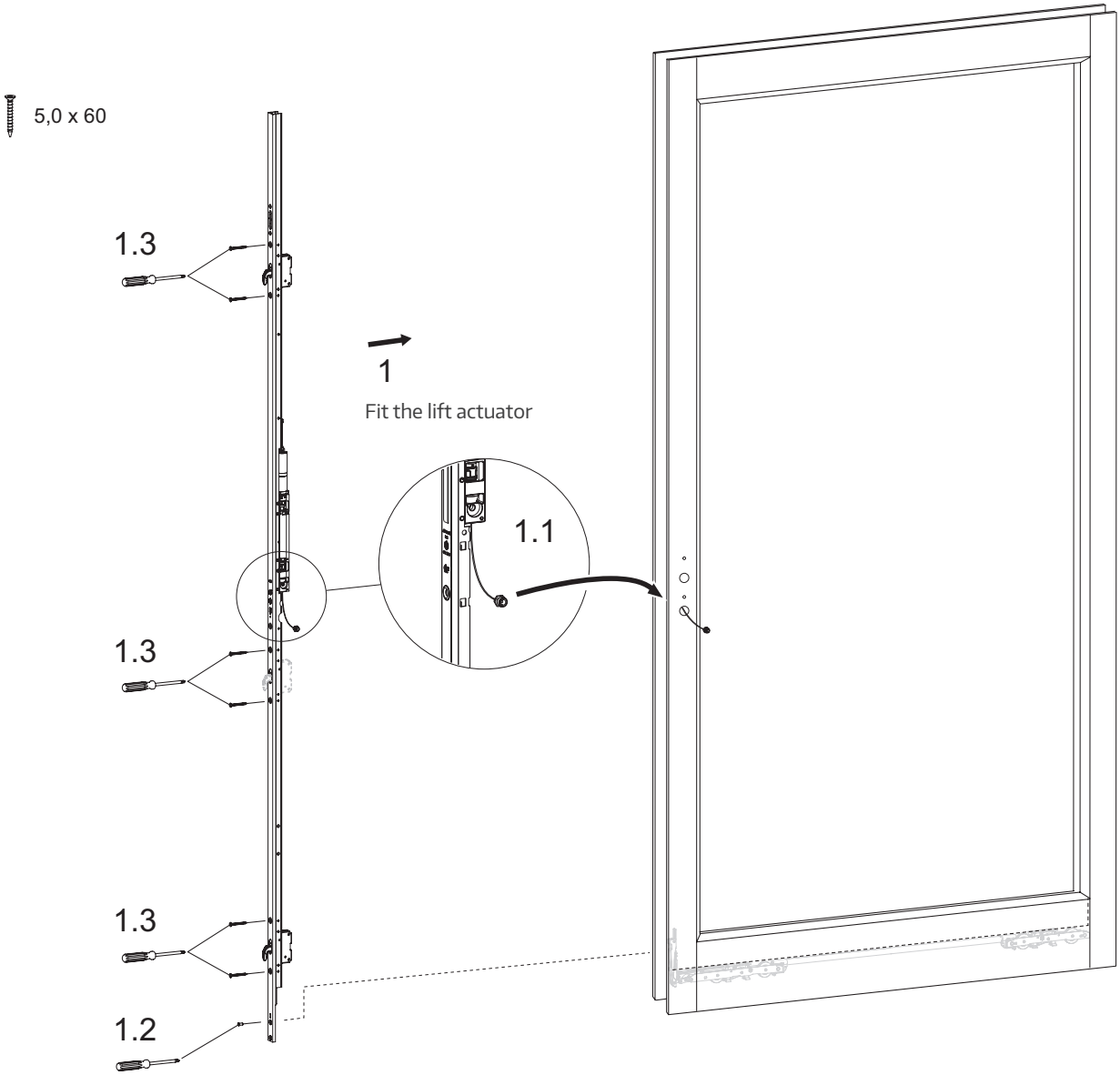
5,0 x 60




*) As required for inviso lift actuator

# For latch espag:
# Fitting the lift actuator

Condition on delivery:
**Sash lowered** motor position

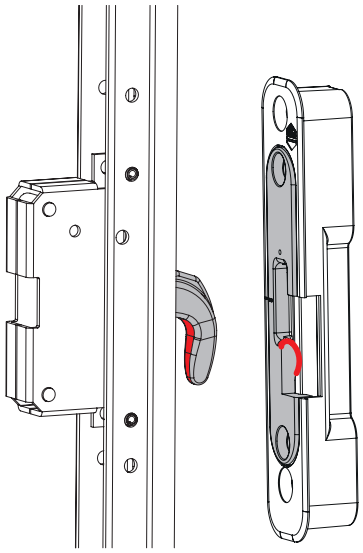


# Greasing locking parts

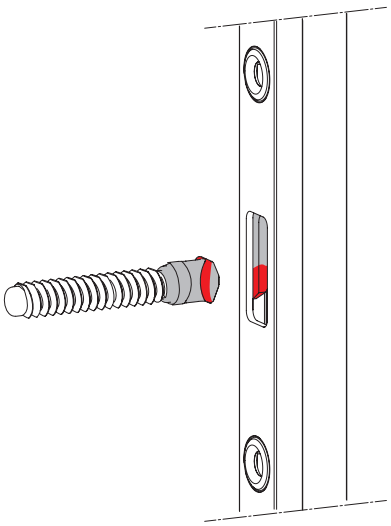
**IMPORTANT:**
You **must grease** the latches and latch locking mechanisms (inner side) before initial operation.

Lubricating grease for fittings:
Adhesive lubricant spray with PTFE,
e.g. OKS 3751 or equivalent.

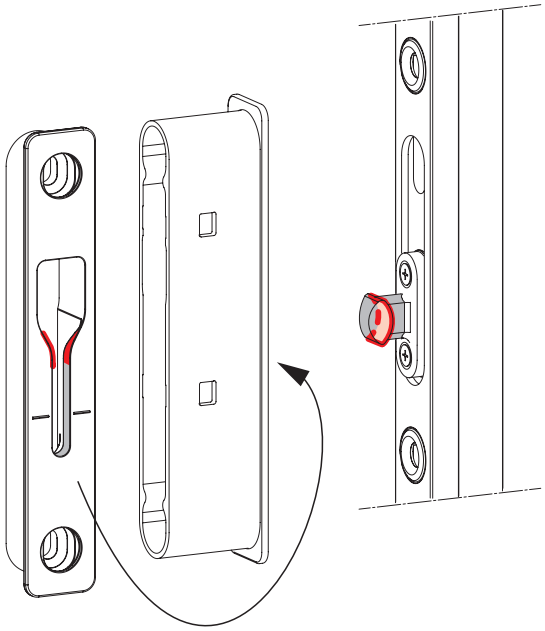
## For latch espag



## For bolt espag



## For inviso espag



# Installing the sash

## Overview

**WARNING**

You **must** follow this order. You may otherwise cause material damage.

Insert sash

↓

Place sash in raised position

↓

Prepare for test run:

Test displacement force of max. 150 N on glazed sash

**Cam must not be fitted.**

↓

If OK:

Fasten the sliding sash (Connect cam to sash)

**DANGER**

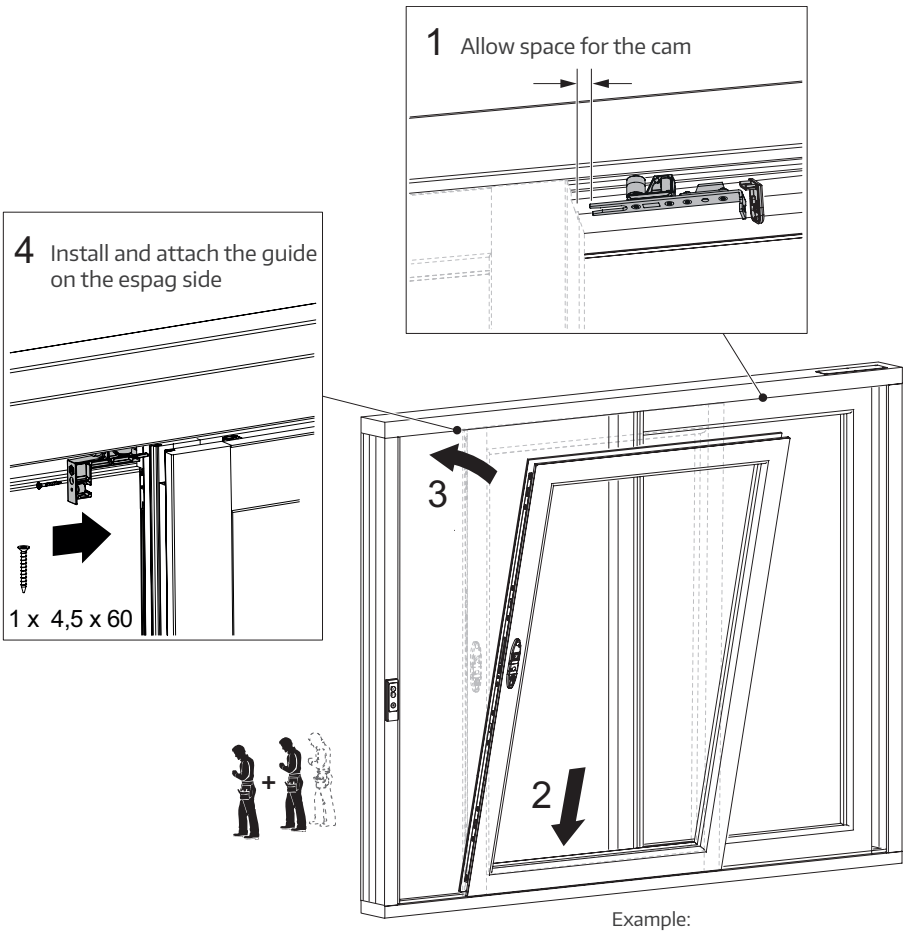
**Heavy sash weights up to max. 440 kg.**

**Risk of injury if used improperly.**

**Place the sash in the frame with the possible assistance from other people, depending on the weight, and hold in position until it is fitted into the sliding track and guide.**

See following page for details.

# Insert sash



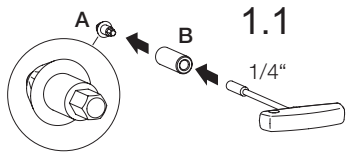

Example:
With bolt/inviso espag;
as required for latch espag

# Placing sash in raised position

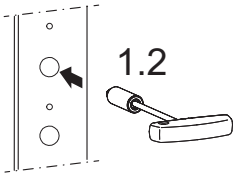
MECHANICAL lifting of the sash/lift actuator (**without** service/initial operation switch)

**IMPORTANT:**
The direction of rotation is always the same as shown here, i.e. **this instruction applies to both the left-hand and right-hand versions.**

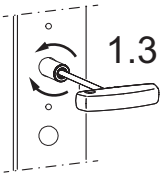
1. Fit the sprocket emergency unlocking device with the guide on the espag




Attach the sprocket emergency unlocking device A with the guide (sleeve) B onto the 1/4" socket wrench.

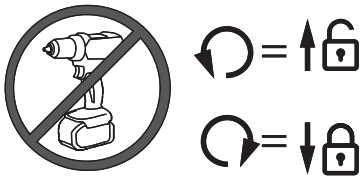



Insert 1/4" socket wrench, sprocket and guide (sleeve) into the handle hole.

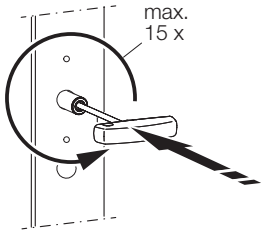



**IMPORTANT:**
**The socket must be fully inserted.**
To ensure this is the case, gently turn it back and forth (right/left). The emergency unlocking device has engaged as soon as you feel resistance and hear a whirring sound.

2. Lift sash



**Do not use a battery-operated screwdriver.**



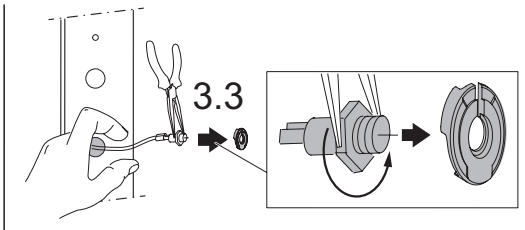

**RECOMMENDED: Lift sash without weight of glass. If you do not, it may take greater effort.**
While applying slight pressure towards the sash, turn the emergency unlocking device anti-clockwise up to 15 full turns (applies to sashes opening both to the left and right) until the sash can be moved (try to move it after every few turns). If the emergency unlocking device slips, increase the pressure towards the sash.

3. Detach guide (sleeve) and emergency unlocking device socket

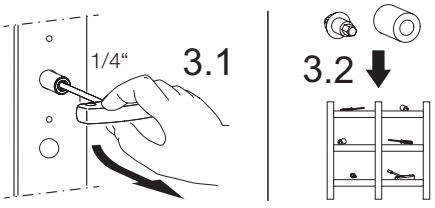
**IMPORTANT**
**After lifting the sash, you must remove the guide (sleeve) and the socket from the sash. If you do not, you may damage the lift actuator or the emergency unlocking mechanism.**

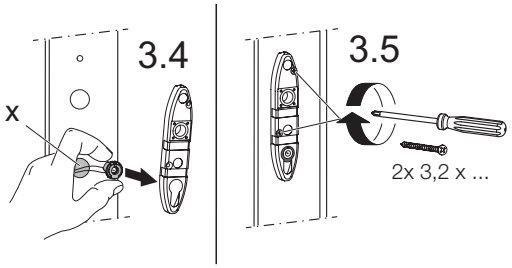
Remove the guide (sleeve) and the socket from the sash with the 1/4" socket wrench and store away somewhere safe in case you need them again. Insert the plug socket for the initial operation switch into the plastic holder* and fasten it tight using needle-nose pliers (or similar tool). Fit the plastic holder with the plug socket into the handle escutcheon, stow the cables in hole (X) and screw on the handle escutcheon.

*) Diagrams with handle escutcheon; without the handle escutcheon, the plug socket is stowed in the hole (X)




**CAUTION!**
**Cables must not get caught or snagged.**
**Risk of electric shock.**




4. Perform initialization: see **Initial operation** (**Full Init**)
Wiring of the panel needs to be complete to do this.

# Placing sash in raised position (contd.)

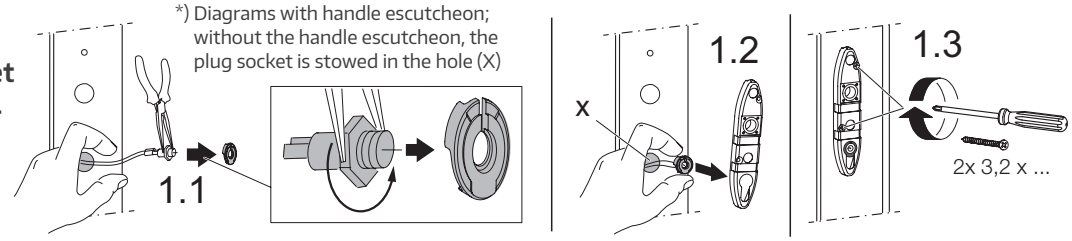
ELECTRIC lifting of the sash/lift actuator with service/initial operation switch

1. Fit plug socket for initial operation switch

Insert the plug socket for the initial operation switch into the plastic holder* and fasten it tight using needle-nose pliers (or similar tool). Fit the plastic holder with the plug socket into the handle escutcheon, stow the cables in hole (X) and screw on the handle escutcheon.

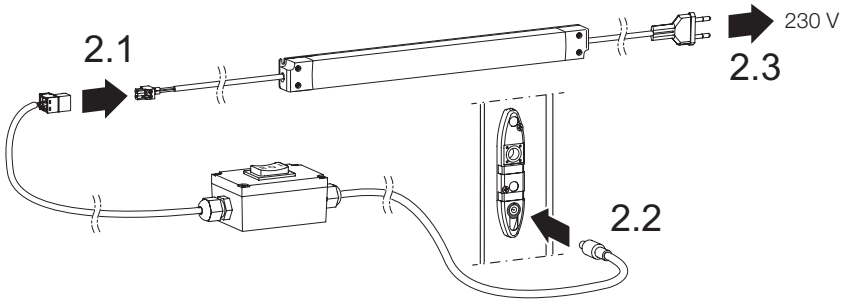
**CAUTION!**
**Cables must not get caught or snagged. Risk of electric shock.**

*) Diagrams with handle escutcheon; without the handle escutcheon, the plug socket is stowed in the hole (X)




2. Connect initial operation switch

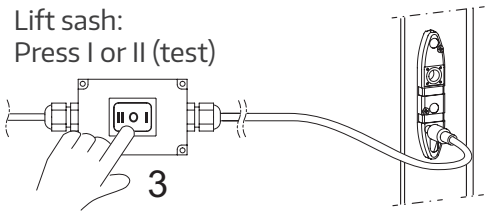
Connect initial operation switch with the power supply unit. Insert plug into the plug socket in the handle escutcheon and connect the 230 V power supply unit.




3. Lift sash

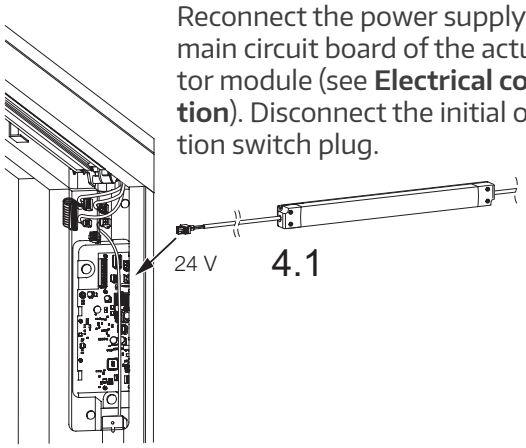
Sash must be built into the panel and everything must be screwed/fastened into place.
**If the toothed belt is already fitted, you must ensure that it is not fastened to the cam.**
Use the initial operation switch to lift the sash.

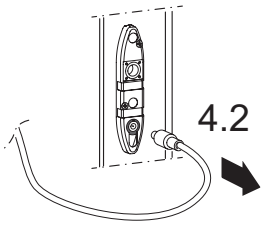
Lift sash:
Press I or II (test)




4. Complete lifting the sash

Reconnect the power supply to the main circuit board of the actuator module (see **Electrical connection**). Disconnect the initial operation switch plug.



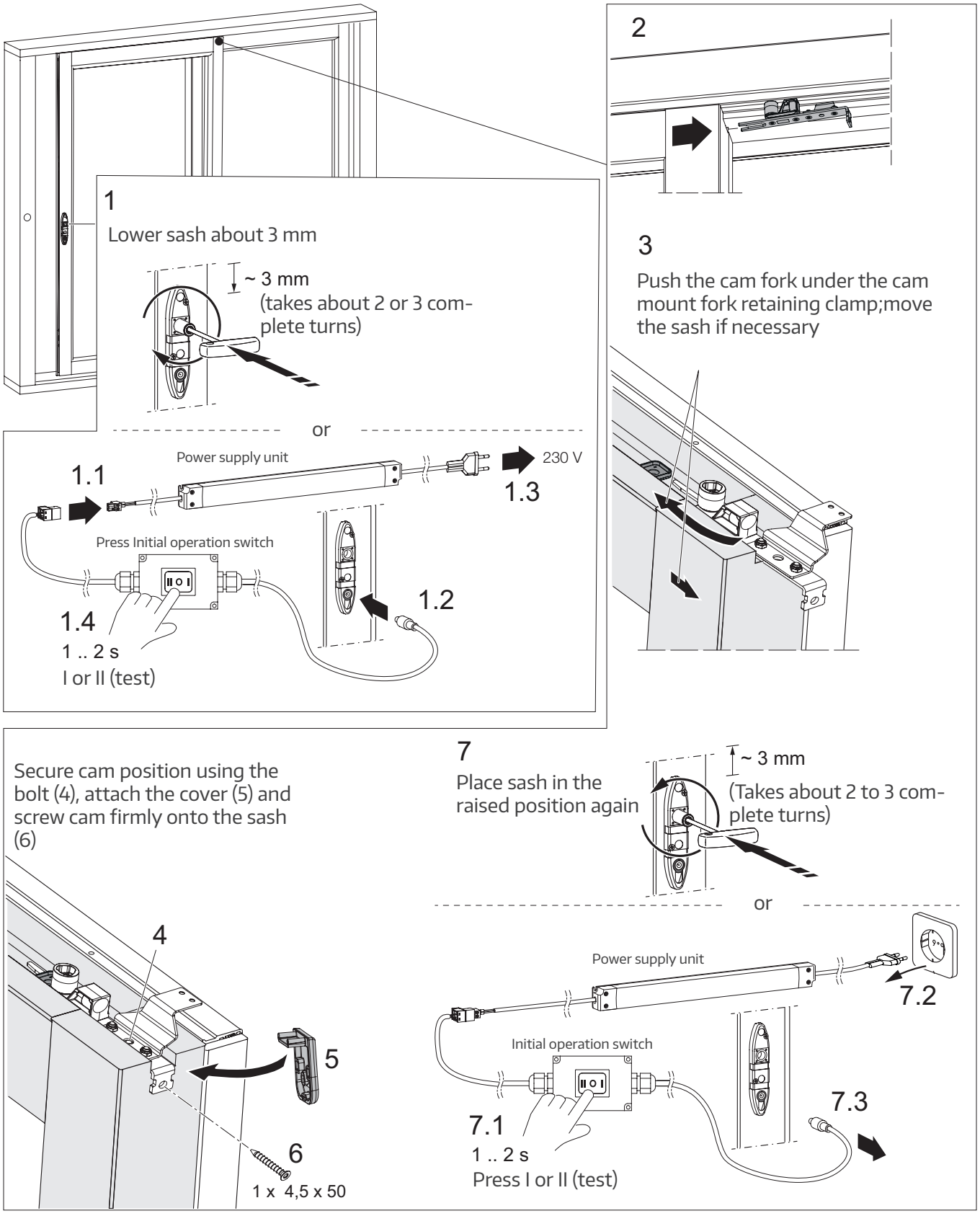
# Preparing for test run

**IMPORTANT INSTRUCTIONS**

**The sliding sash must be in the lifted position and glazed.**


Sliding sash Check the sash moves freely (mechanical operating force: max. 150 N)

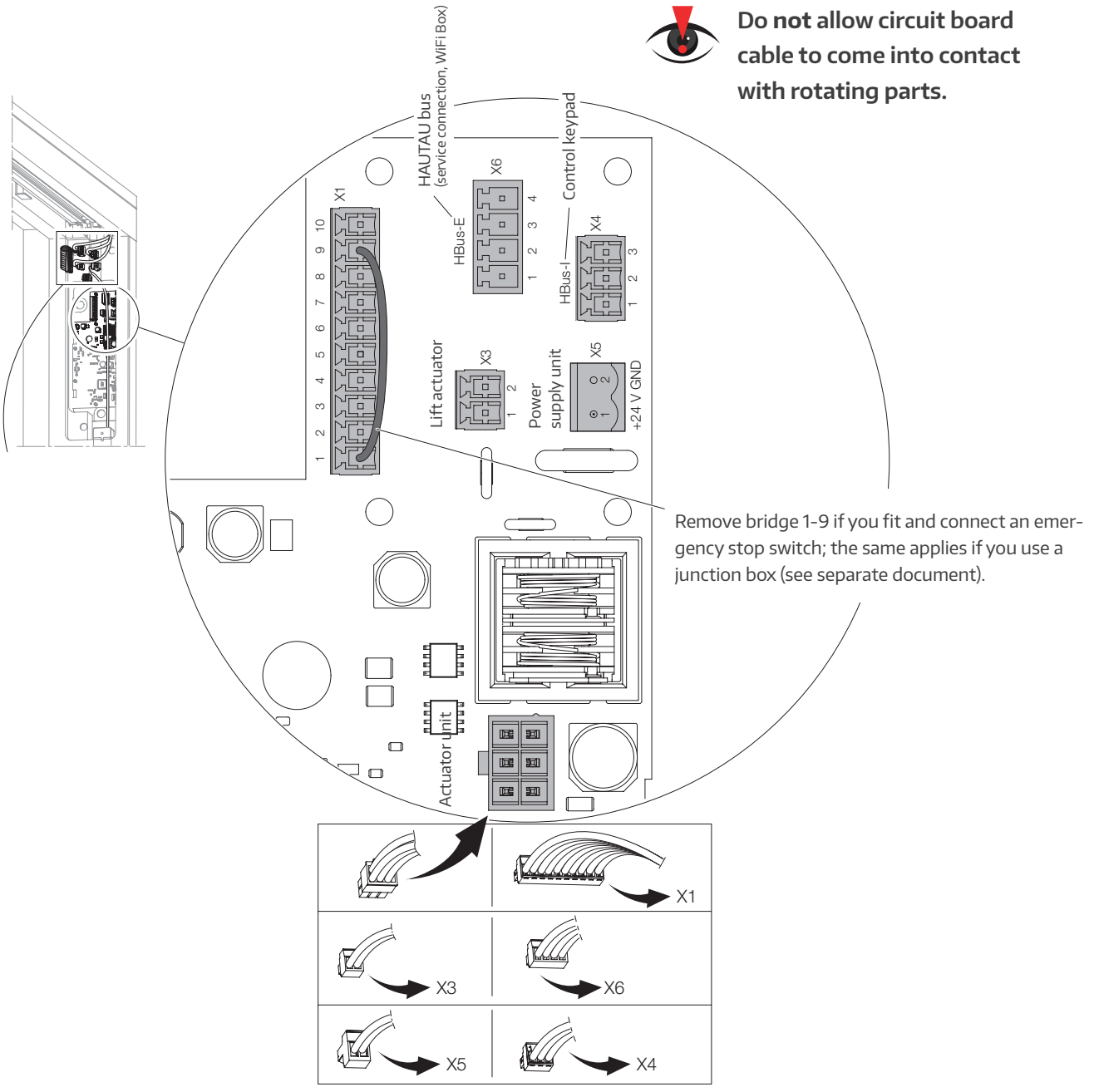
# Fastening the sliding sash (connecting the cam to the sash)



# Electrical connection

**WARNING**
**Disconnect the power supply to the actuator while carrying out connection work.**
**If you do not, this poses a life-threatening hazard due to electric shock.**

**Example:** Sliding sash opening from left to right – view from inside



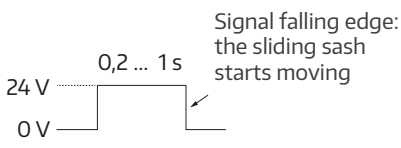
# Electrical connection (continued)

## Terminal assignment

**X1: Connection/extended connection for connection box**

X1-1 +24 V for ext. devices (light curtain, fingerprint sensor, etc.)
X1-2 Test signal for light curtain
X1-3 Sensor signal from light curtain 2
X1-4 Sensor signal from light curtain 1
X1-5 Control output for locking control
X1-6 Ext. OPEN control input (dead man) or external actuation switching impulse →
X1-7 Ext. CLOSE control input (dead man)
X1-8 Ext. HAUTAU bus
X1-9 Emergency off input
X1-10 GND

**IMPORTANT INFORMATION**
**for selecting accessories**
e.g. smart home, fingerprint sensor, etc.
(also see installation instructions for accessories)




**X3: Connection for lift actuator**

X3-1 +24V or GND
X3-2 GND or +24V

**X4: Connection for control keypad**

X4-1 +24V (red)
X4-2 HAUTAU bus (brown)
X4-3 GND (black)

**X5: Power supply connection (power supply unit)**

X5-1 +24V
X5-2 GND

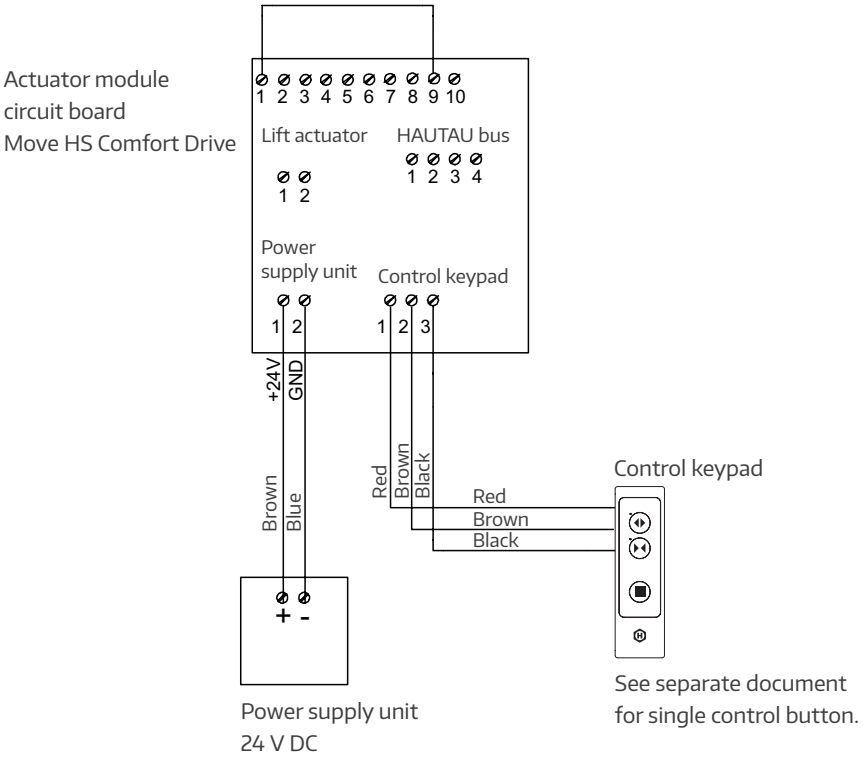
**X6: HAUTAU bus service connection, connection for WiFi Box**

X6-1 +24V
X6-2 unassigned
X6-3 HAUTAU bus
X6-4 GND

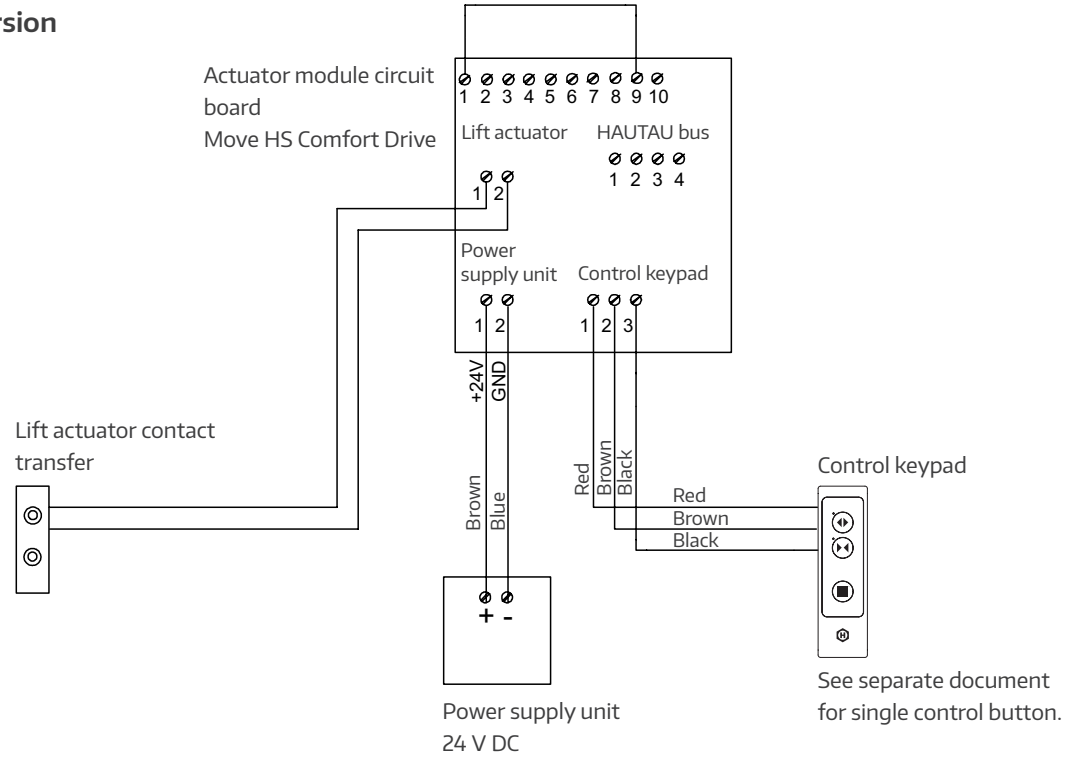
# Electrical connection (continued)

## Circuit diagram (examples)

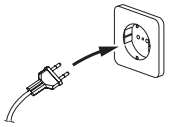
**Slide version**




**Lift and slide version**



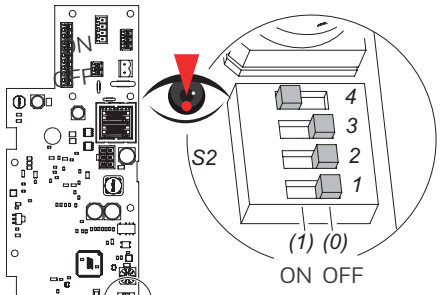
# Checking/configuring DIP switches



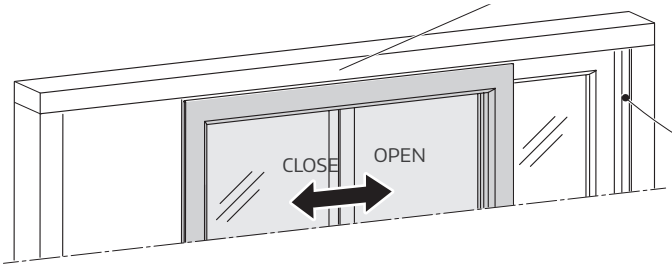
**The sliding direction for must be checked before initialisation.**

**Example:** Sliding sash opening from left to right, - actuator on right, view from inside

(pre-set on delivery)

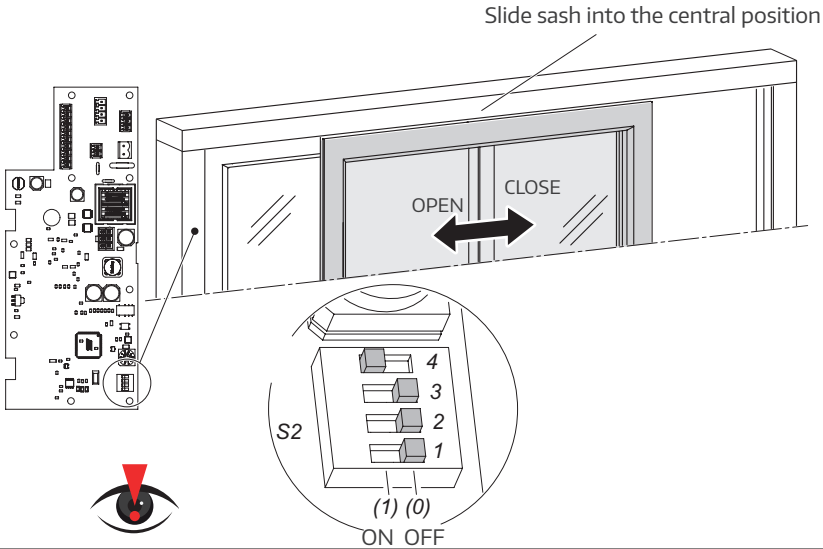


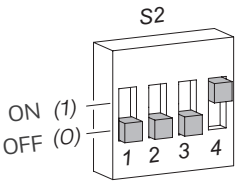

Slide sash into the central position




**Example:** Sliding sash opening from right to left, - actuator on left, view from inside

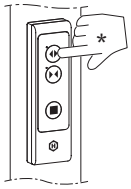
Slide sash into the central position




| System settings (■ = applicable) | | ON (1) | OFF (0) |
|---|---|---|---|
| 1 | Sash opening from left to right | | ■ |
| | Sash opening from right to left | | ■ |
| 2 | Fixed sash (Scheme C) | | ■ |
| 3 | Active sash (Scheme C) | | ■ |
| 4 | Automatic system/optionally with smart home, fingerprint sensor (ekey) or similar | ■ | |
| | Dead man **/with key-operated switch | | ■ |

**) During initial operation (Full Init) or the calibration run (Home Init), the sliding sash moves in automatic mode and then in dead man mode.



Press OPEN button: the sliding sash must move in the OPEN direction. The sash moves about 100 mm, then automatically stops. When a sash moves in the CLOSE direction, the position of DIP switch 1 must be checked on S2.

*) The button is pressed in the case of the single control button.

**After changes to the S2 switch, the power supply unit must be disconnected from the power supply for at least 20 seconds.**

# Activating **Full Init** and **Home Init** (overview)

**Full Init** = factory reset
**Home Init** = software reset

**IMPORTANT NOTE:**

**A factory reset and software reset of the Move HS Comfort Drive are only possible with the control keypad and the control button/button box. Also see the following pages regarding details on prerequisites and procedure.**

| Mode | Operating controller | Type of initialisation | Action | Feedback signal |
|---|---|---|---|---|
| Automatic mode (DIP switch 4 set to ON) | Control keypad | Software reset (Home Init) | Press STOP button for about 20 sec. | Yellow + green LED |
| | | Factory reset (Full Init) | Press STOP button for about 30 sec. | Yellow + green LED |
| | Control button with button box | Software reset (Home Init) | Press button for about 20 sec. | Audible signal from button box |
| | | Factory reset (Full Init) | Press button for about 30 sec. | Audible signal from button box |
| Dead man mode (DIP switch 4 set to OFF) | Control keypad | Software reset (Home Init) | Press STOP button for about 20 sec. | Yellow + green LED |
| | | Factory reset (Full Init) | Press STOP button for about 30 sec. | Yellow + green LED |
| | Control button with button box | Software reset (Home Init) | Double-click + press button for about 20 sec. | Audible signal from button box |
| | | Factory reset (Full Init) | Double-click + press button for about 30 sec. | Audible signal from button box |
| | | End initialisation | Wait about 1 min. or double-click again | - |

# Initial operation ('Full Init')

## Overview

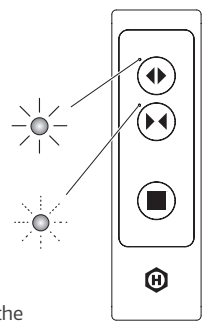
(see following page for procedure)
During initial operation, the sash completes a full automatic initialisation, moving to CLOSE and OPEN to determine and save the required parameters. If DIP switch 4 is set to DEAD MAN on the S2 switch, the sliding sash first moves in automatic mode and then in dead man mode.

Sliding sash closes and opens automatically during initialisation.

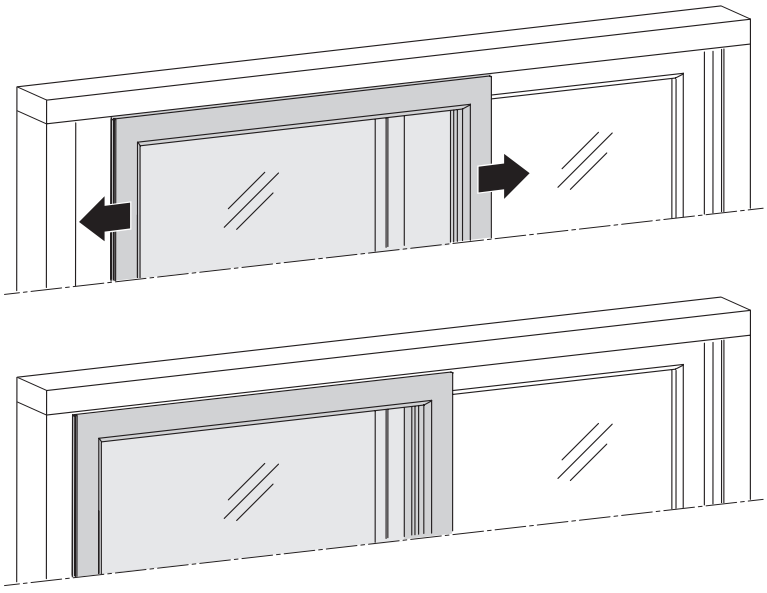
Let sash move until yellow LED no longer flashes*.

Green LED on the control keypad lights up permanently when the sash moves.

Green LED on the control keypad flashes during initialisation.



*) The button is pressed in the case of the single control button.



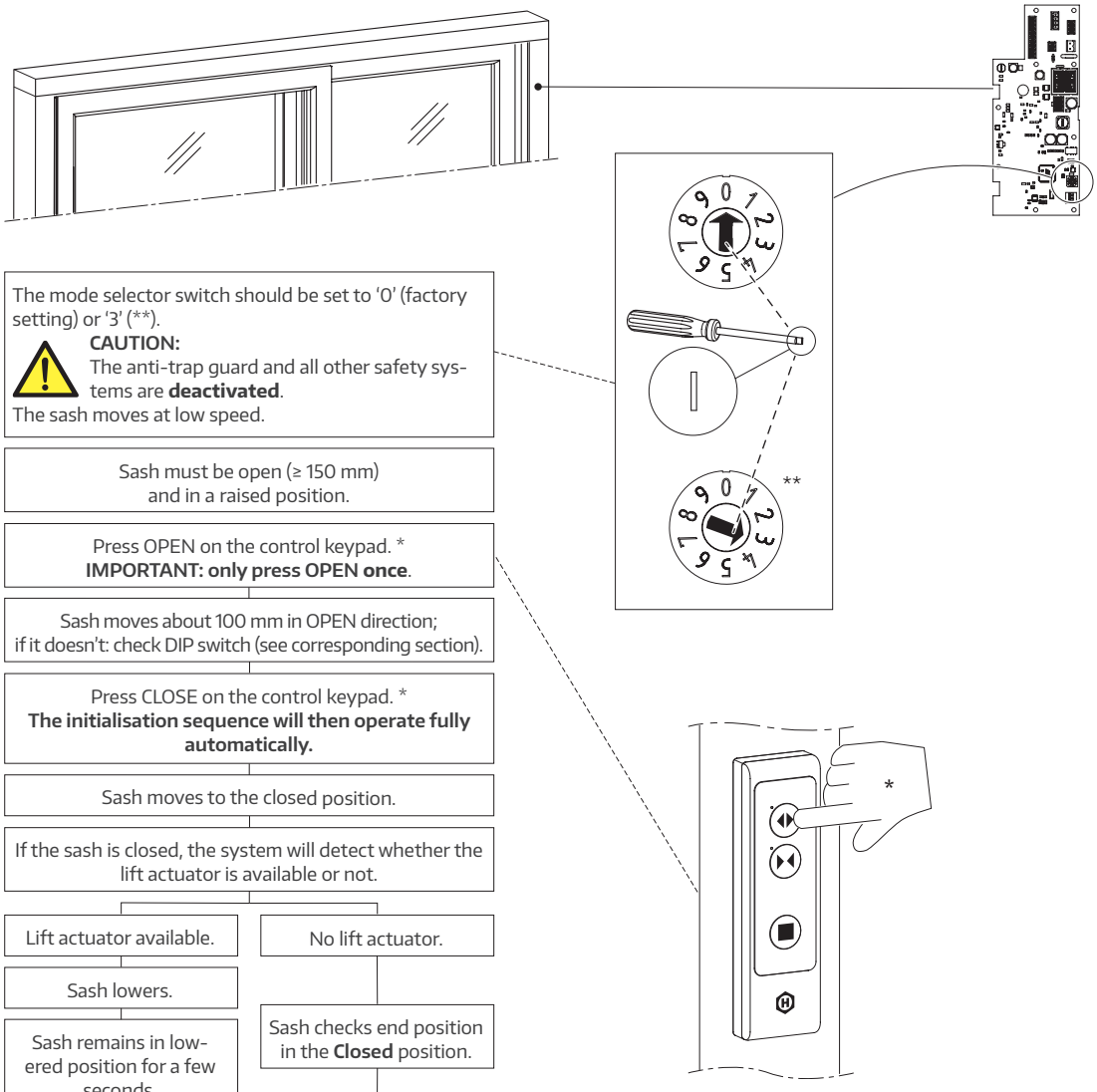
The sash remains in the closed position after initialisation.

# Initial operation (‘Full Init’, continued)

## Procedure

### Full, automatic initialisation

(You can use STOP to interrupt the process at any time.)




The mode selector switch should be set to ‘0’ (factory setting) or ‘3’ (**).

**CAUTION:**
The anti-trap guard and all other safety systems are **deactivated**.

The sash moves at low speed.

Sash must be open (≥ 150 mm) and in a raised position.

Press OPEN on the control keypad. *
**IMPORTANT: only press OPEN once.**

Sash moves about 100 mm in OPEN direction; if it doesn’t: check DIP switch (see corresponding section).

Press CLOSE on the control keypad. *
**The initialisation sequence will then operate fully automatically.**

Sash moves to the closed position.

If the sash is closed, the system will detect whether the lift actuator is available or not.

| Lift actuator available. | No lift actuator. |
|---|---|
| Sash lowers. | |
| Sash remains in lowered position for a few seconds. | Sash checks end position in the **Closed** position. |
| Sash lifts on its own. | Sash moves in **Open** direction. |

Sash slowly opens fully as far as the end of the panel.

Sash moves in **Close** direction until it reaches closed position.

The anti-trap guard and all other safety systems are enabled.

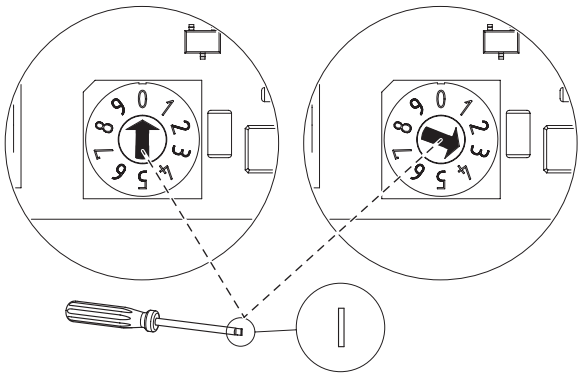
Initialisation complete.

*) The button is pressed in the case of the single control button.
**) Reduced stop range of 10 mm instead of 130 mm before mech. end position.

# Normal mode

**In automatic mode, the sash will stop about 120 mm* before the mechanical end position when opening.**

*) Default operating mode switch setting on delivery ('0').

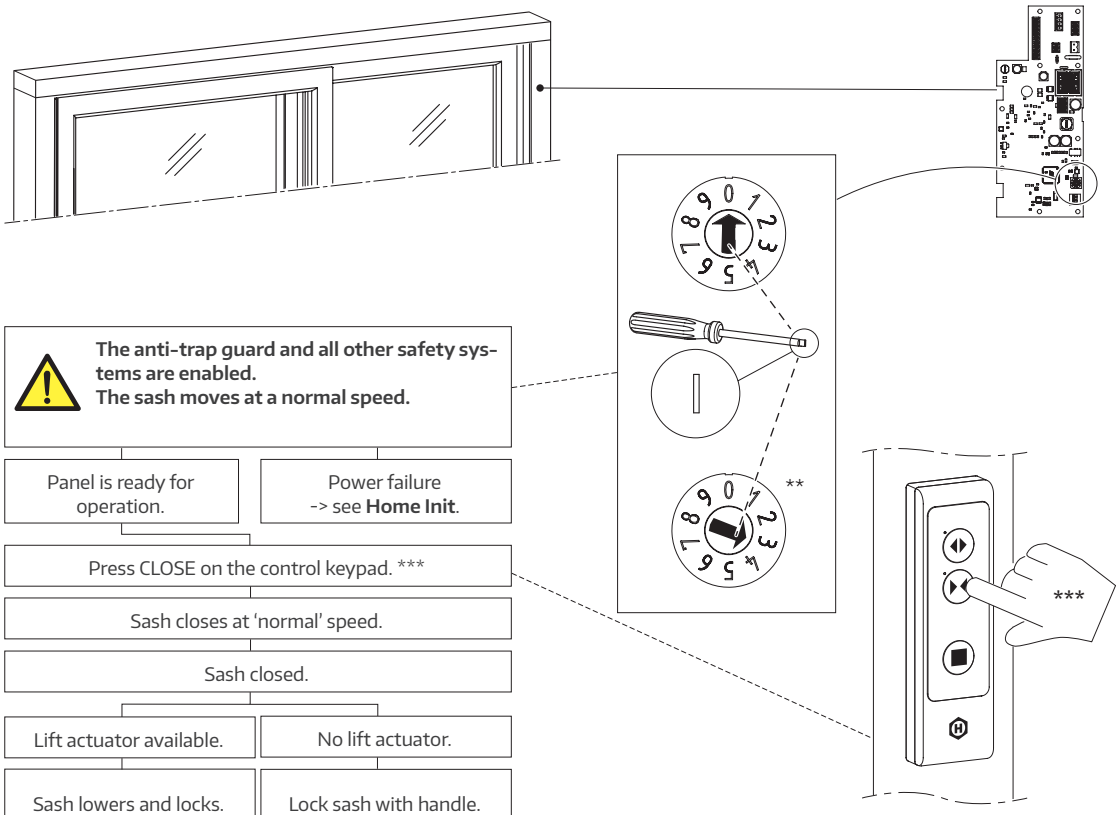


If the operating mode switch is set to '3', the sash stops about 10 mm before the mechanical end position.

**WARNING:**
**This setting poses a risk of fingers being crushed in the central stile section.**
**The operator must implement measures to prevent this.**

A factory reset (**Full Init**) with complete initialisation must be performed after adjusting the operating mode switch. (see section Activating **Full Init** and **Home Init).**

Partial initialisation, e.g. after a power failure

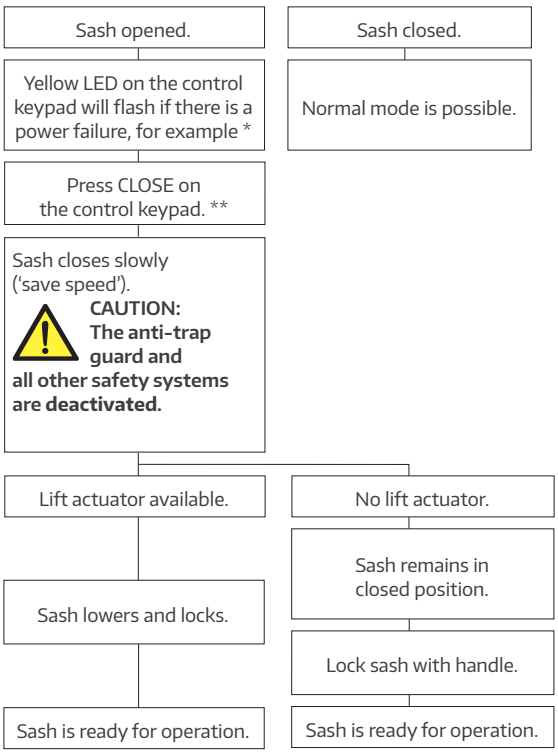



**) Reduced stop range of 10 mm instead of 130 mm before mech. end position.
***) The button is pressed in the case of the single control button.

# Calibration run (Home Init)

Home Init = software reset

If the DIP switch 4 is set to DEAD MAN on the S2 switch, the sliding sash first moves in automatic mode and then in dead man mode.

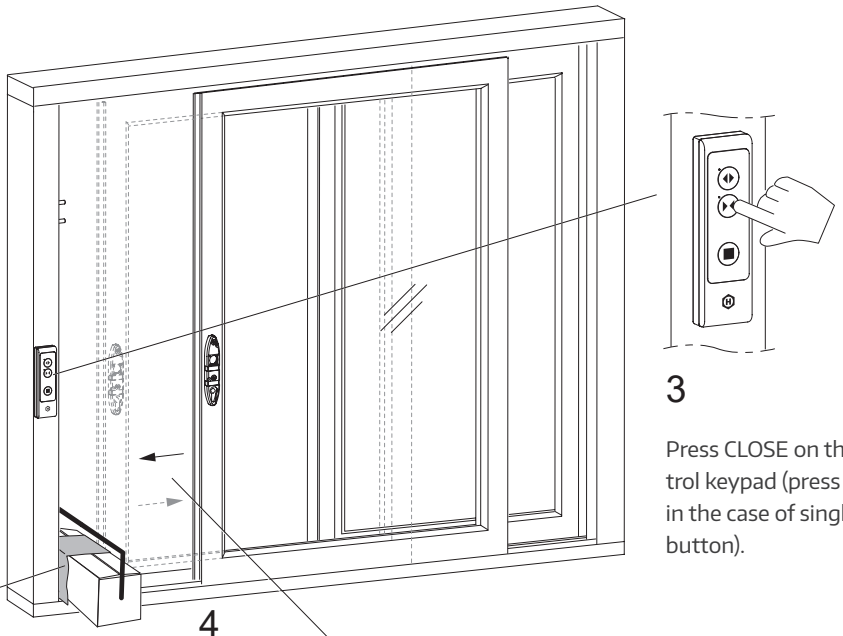



*) or audible signal from the button box in the case of single button control pad.
**) The button is pressed in the case of the single control button.

# **Reversal** safety function test

1 ✓

Calibration run (**Home Init**) has been carried out. Sash is opened.



2

Place a solid object such as a toolbox between the sash and frame and against the frame.

**You should cover the object with a suitable cloth to prevent scratches on the sash or frame.**

3

Press CLOSE on the control keypad (press the button in the case of single control button).

4

Sash moves against the solid object, comes to a halt and then moves in the OPEN direction to a certain extent.

**Yes**

Test was successful:
The (lift and) slide system must be marked according to the EC Machinery Directive.

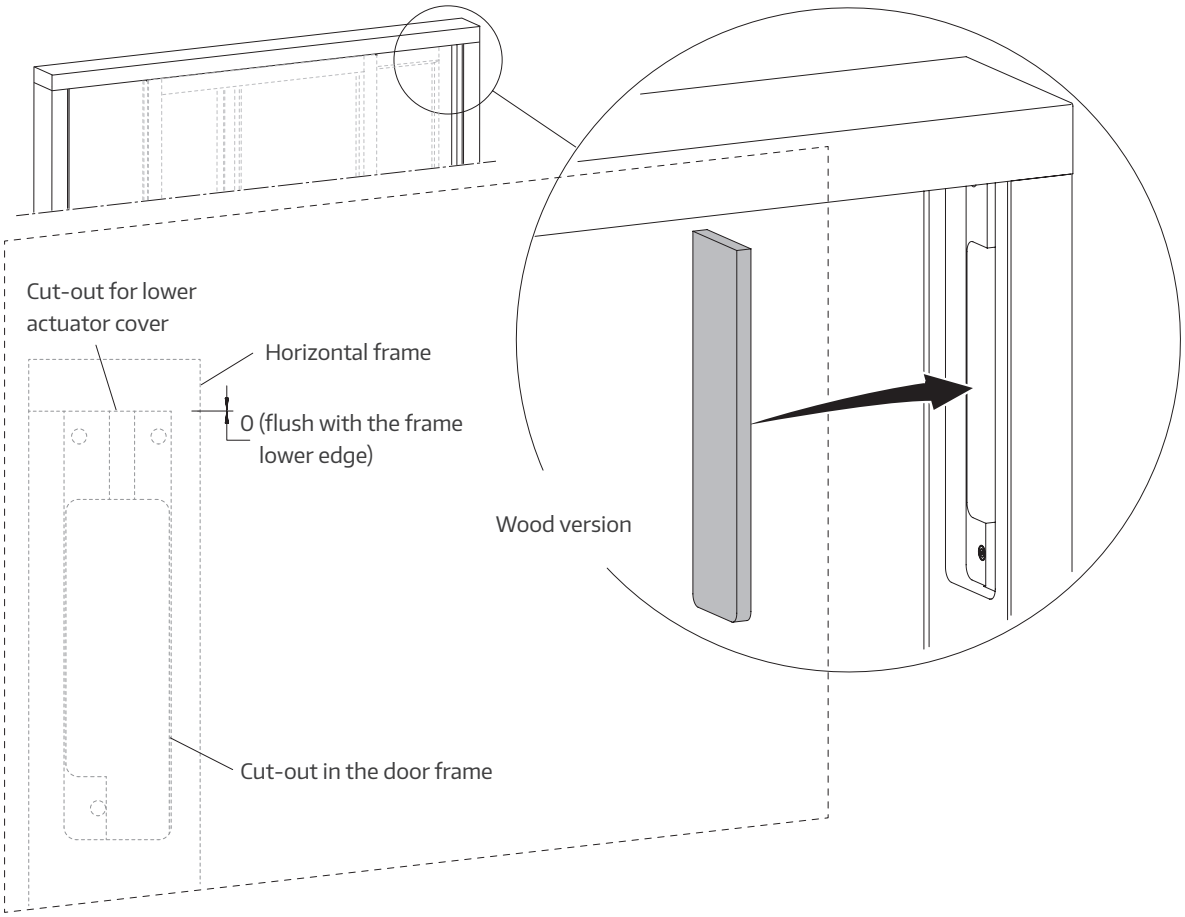
(Lift and) slide system may be put into operation.

**No**

Test was not successful:
The calibration run (Home Init) and reversal safety function test must be repeated.

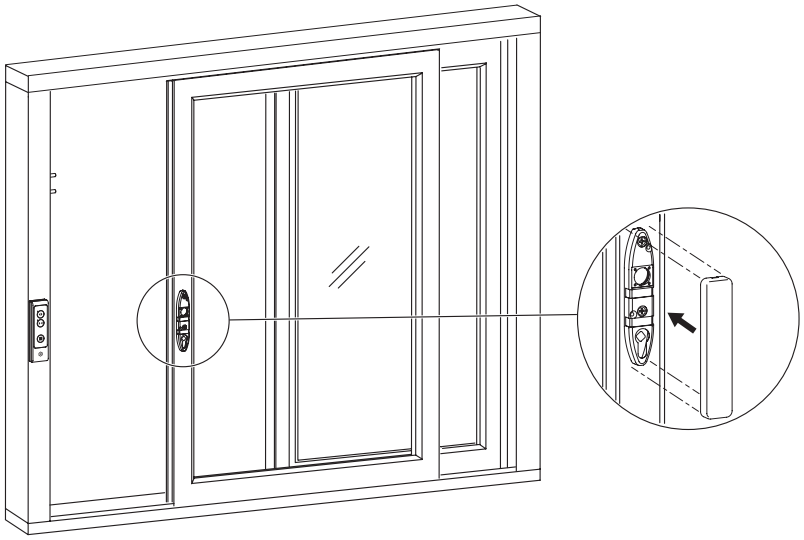
If the test fails repeatedly, the (lift and) slide system must be taken out of service, disconnected from the power supply and a service company must be consulted to rectify the fault. It can otherwise lead to serious physical injury.

# Fitting the electronics cover

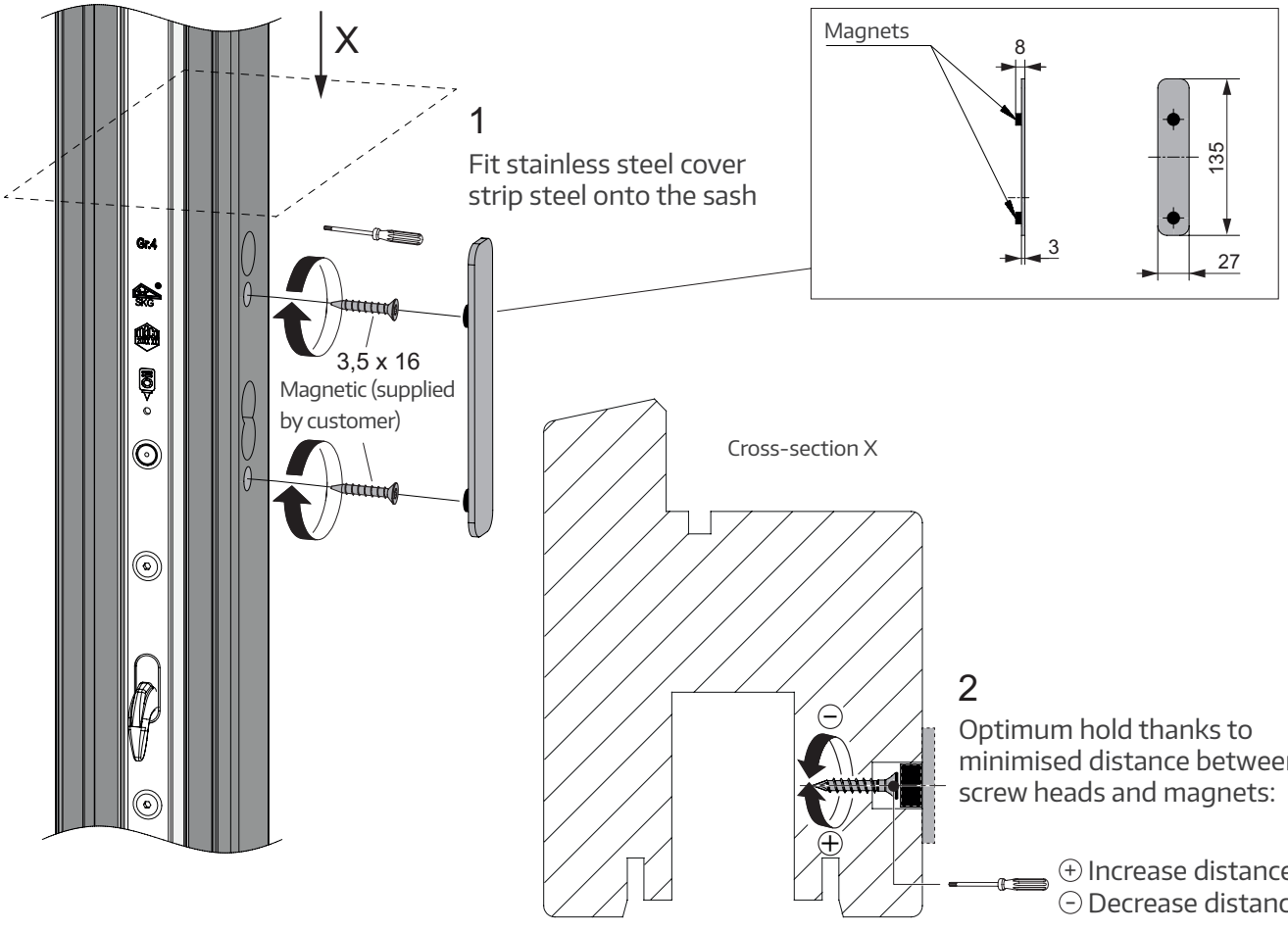


# Fitting the covers for the manual locking/unlocking device

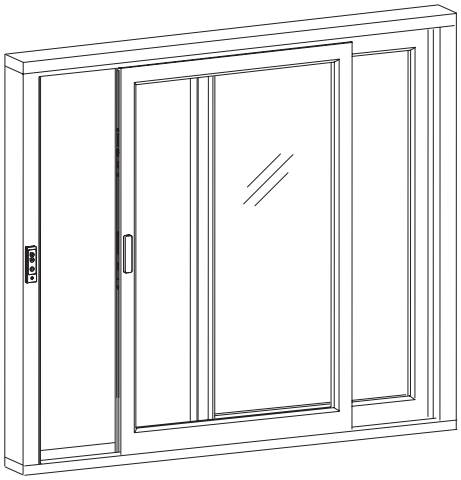
## Standard version (optional)



## Stainless steel cover strip (optional)



# Completing the entire structure



**Congratulations!**

You have successfully completed installation of the Move HS Comfort Drive and connected it to the power supply.

It is now crucial to maintain the original state of the structure as far as possible and ensure consistently flawless operation of this high-quality electric sliding sash.

When handing the system over to the customer, you must inform them about the measures required for maintenance, servicing and care and provide them with the relevant information for these tasks.

# Fault repair after completing the entire structure

If one of the following malfunctions occurs immediately after completion, you can take the appropriate measures as indicated in the table. If any additional malfunctions occur during later operation, you can be consult a continuously updated list on our website to see what remedial action is required.

| Event | Meaning | Action |
|---|---|---|
| General malfunctions (e.g. one or both sashes make unexpected or incomplete movements) | One/both lift actuator(s) is/are not connected | - Connect both lifting actuators to the relevant circuit board or check connection/ cabling |
| Yellow LED on the control keypad flashes * | Fault | › Press the STOP button on the control keypad (**Error reset**; light goes out *)<br>› Press (OPEN) button:<br>if slide movement is normal: everything OK; if the yellow remains lit *:<br>- Initiate software reset by pressing the (STOP) button for about 20 s (**Home Init** - both LEDs light up for about 3 s * - see section Calibration run (Home Init);<br>- If the (STOP) button is pressed for about 30 s, a factory reset is initiated (**Full Init** - both LEDs light up for about 3 s * - see section Initial operation (Full Init). |
| Power failure (operating mode switch set to '0' or '3') | Fault | › If sash opened: **Home Init** is required (yellow LED flashes*); press the (CLOSE) button on the control keypad (sash moves to CLOSE and sets position to '0')<br>› If the sash is closed, no action is required, because the sash has detected the position<br>⚠ **WARNING: All safety systems are deactivated during the Home Init.** |
| No response after pressing the (STOP) button for at least 30 s | Fault | › Set operating mode switch to '5' and disconnect power supply unit from mains for at least 20 s<br>› Re-connect power supply unit<br>› After about 3 s: Set operating mode switch to '0' – for further action see initial operation (Full Init) |
| Actuator reverses (sash moves back about 100 mm) | Sash moved against obstacle | Error reset by pressing on the (STOP) button (yellow LED goes out *) |

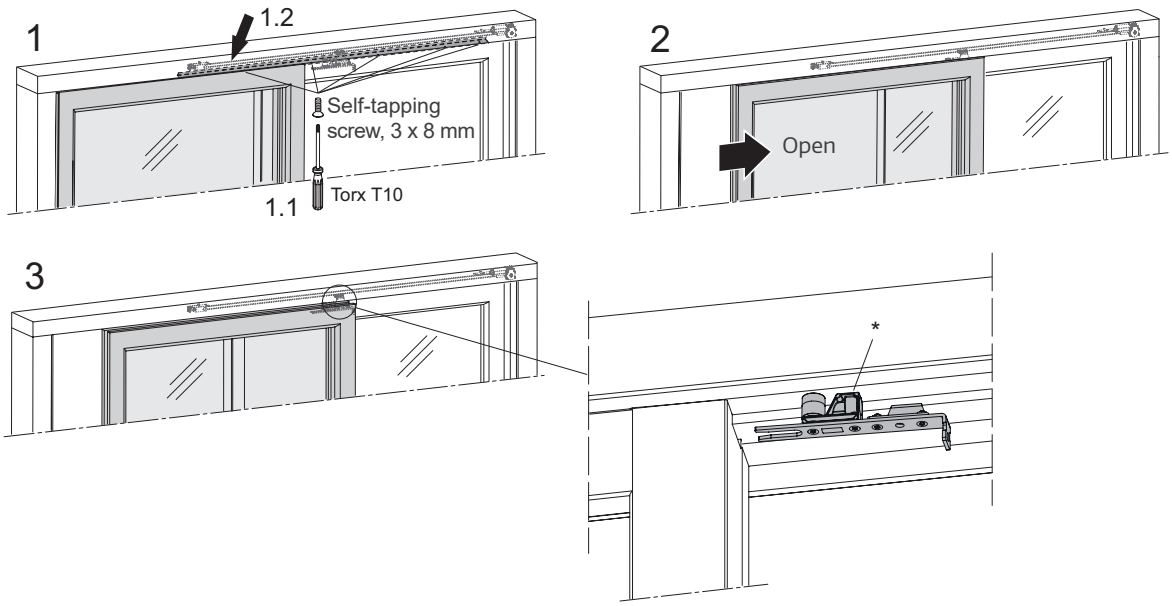
*) or 2x audible signal sequence on control button (on the button box)

## Removing the cover plate (in preparation for tensioning the toothed belt)

- Undo screws in cover strip (1.1).
- Place cover strip on sash (1.2).
- Disengage the lift actuator and open the sliding sash halfway across the fixed section (2).
- Disconnect cam from the sash (3*).
- Remove cover strip from the sash.
- Close sash and lower.

* See **See Fastening the sliding sash (connecting the cam to the sash)** for details (Disconnection same sequence but in reverse order)

Refit the cover panel using the same process in reverse order after adjusting the toothed belt tension (see **Adjusting the toothed belt tension**).

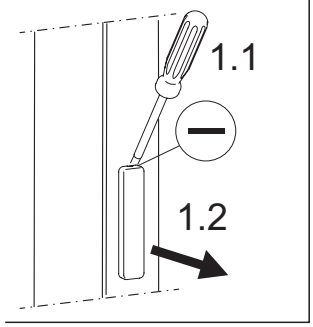


# Service procedure for lift actuator

In the case of a service/error status, the lift actuator may not function correctly due to causes such as a defective contact transfer or main circuit board, improper installation of the contact transfer, or wrong size of shims for the power transfer component. In such cases, the service technician can use the service/initial operation switch to raise the lift actuator and open the sash.

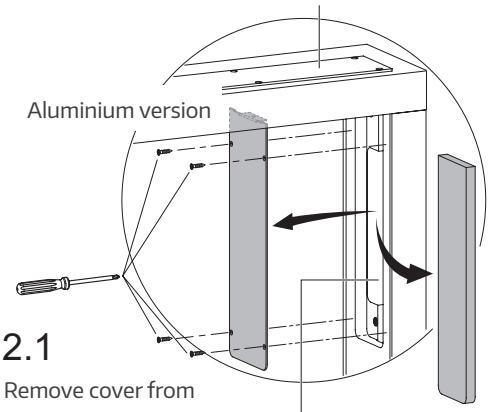
Example: Standard cover with handle escutcheon; similar in the case of stainless steel cover without handle escutcheon

Remove the handle escutcheon from the cover

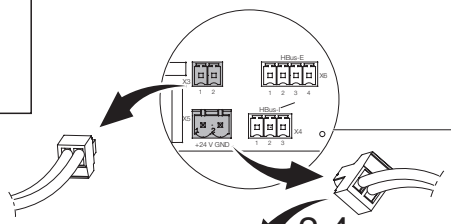



WARNING: It is mandatory to disconnect the lift actuator plug from the main circuit board before using the service switch.
This is necessary to ensure no current is supplied to the main circuit board via the lift actuator. There is a **risk of material damage** otherwise.

Example: actuator module on right; similar for actuator module on left

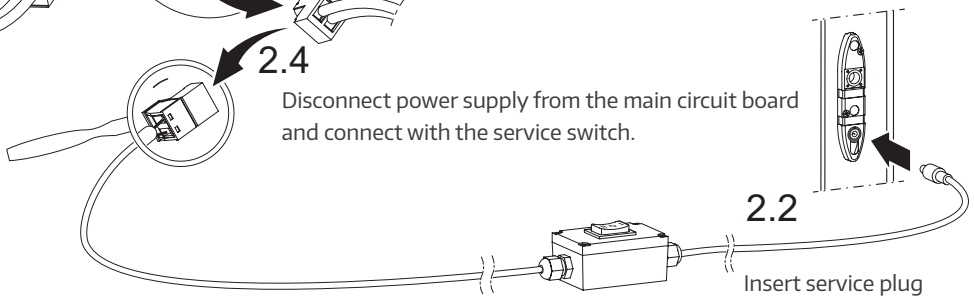



2.1
Remove cover from the actuator module

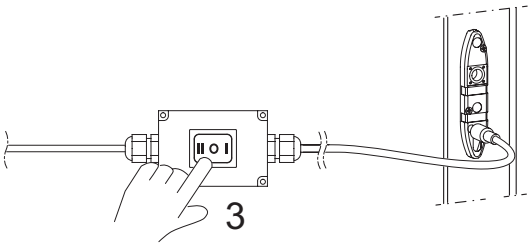


2.3
Disconnect lift actuator from main circuit board

2.4
Disconnect power supply from the main circuit board and connect with the service switch.

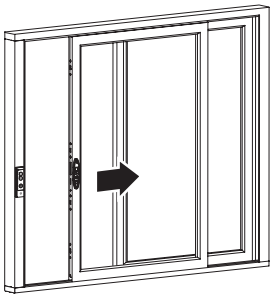


2.2
Insert service plug into the socket

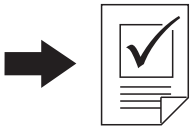


3
Lift sash:
Press I or II (test)

4
Slide sash open



5
Carry out service tasks or work through the error checklist as per the installation instructions



6
Reconnect the plug as it was originally connected and fit covers into place

# Technical specifications

## Overall system

(Lift and slide actuator)

"Move HS Comfort Drive"

| | |
|---|---|
| Sash width (SW) | 720 to 3235 mm |
| Sash height (SH) | |
| Bolt/inviso espag | 1900 to 2800 mm |
| Latch espag | 1870 to 2850 mm |
| Ratio SH : SB | max. 2: 1 |
| Frame exterior width | max. 6500 mm |
| Max. sash weight | |
| Bolt/inviso espag | BS 27.5: 440 kg |
| Latch espag | BS 27.5: 440 kg |
| Total sound pressure level LpA | ≤ 70 dB(A) |
| Max. actuator displacement force | 200 N |

**Electrical characteristics**

| | |
|---|---|
| Nominal voltage | 24 V DC (–10%, +30%) |
| Permitted voltage range | 21.6 to 31.2 V DC |
| Max. permitted ripple | ≤ 20% in relation to the nominal voltage |
| Current draw | 4 A at 24 V |
| Max. wattage 100 W | |
| Switch-off in any position (blockage) | Yes, safety switch-off in the OPEN and CLOSE directions up to 330 kg. |
| Protection class III safety extra-low voltage | (SELV) |

**Connection and operation**

| | |
|---|---|
| Duty cycle | 20 cycles or D 30 |
| Life cycle | 20,000 cycles (Class H3 EN 13126-16) |
| Reading of operating statuses | Yes |
| Servicing | Yearly in line with general maintenance guidelines |
| Connection to WiFi Box | |
| Address (factory setting) | 103 |

**Installation and environmental conditions**

| | |
|---|---|
| Nominal temperature | 20 °C |
| Ambient temperature | -5 to +60 °C (Environment class 1 as per VdS 2580) |
| Protection rating | IP40 as per EN 60529 |
| Ambient conditions | For dry environments only; no dew formation, no aggressive steams/vapours, no dusty environments |

**Instructions on power supply and actuation**

| | |
|---|---|
| Switch-mode power supply and transformer power supply | |
| | C-load suitable with energy reserves for the starting and stopping torque of actuators |
| Low voltage (24 V) | Rated impulse withstand voltage category I must be guaranteed |

**Approvals and certificates**

See section **Certificates and declarations**.

# Technical data (continued)

## Slide actuator

**Electrical characteristics**

| | |
|---|---|
| Nominal voltage | 24 V DC (–10%, +30%) |
| Permitted voltage range | 21.6 to 31.2 V DC |
| Max. permitted ripple | ≤ 20% in relation to the nominal voltage |
| Current draw | 4 A at 24 V |
| Switch-off in any position (blockage) | Yes, safety switch-off in the OPEN and CLOSE directions up to 330 kg |

**Material and mechanical properties**

| | |
|---|---|
| Sound pressure level LpA | ≤ 70 dB(A |
| Displacement force | 200 N |
| Max. sash weight | 440 kg |
| Operating speed | 75 mm/s (factory setting) |
| Halogen-free | No |
| Silicone-free | No |
| RoHS-compliant | Yes |
| Temperature range | –5 to 60 °C |
| Protection rating | IP 40 as per EN 60529, when installed |
| Max. number of cycles: | 20 |

## Lift actuator (for "Move HS Comfort Drive")

**Electrical characteristics**

| | |
|---|---|
| Nominal voltage | 24 V DC (–15%, +30%) |
| Permitted voltage range | 20.4 to 31.2 V DC |
| Max. permitted ripple | ≤ 20% in relation to the nominal voltage |
| Current draw | 2.5 A |
| Switch-off OPEN/CLOSE | Integrated limit switches |
| Protection class | III safety extra-low voltage (SELV) |

**Material and mechanical properties**

| | |
|---|---|
| Sound pressure level LpA | ≤ 70 dB(A |
| Mech. emergency unlocking | Yes |
| Halogen-free | No |
| Silicone-free | No |
| RoHS-compliant | Yes |
| Lift time | about 6 s |
| Max. sash weight | |
| Bolt/inviso/latch espag | BS 37.5: 330 kg |
| Bolt/inviso espag | BS 27.5: 440 kg |
| Latch espag | BS 27.5: 440 kg |
| Temperature range | –5 to 60 °C |
| Protection rating | IP40 as per EN 60529, when installed |
| Max. number of cycles: | 20 |

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