



Roto Safe A

A700

Mechanical-automatic multipoint lockings for doors

Contact

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1 General information

1.1 Version history

Ver- sion	Date	Changes
v0	07/02/2023	Publication
v1	13/04/2023	Classification key in accordance with prEN 15685:2019 → <i>from page 130</i> Torque specified for turning the latch around on the additional lock → <i>from page 54</i>
v2	10/08/2023	Lever-operated espagnolette Standard added → <i>from page 69</i> Installation of round cylinder changed → <i>from page 62</i>
v3	14/03/2024	Turning the trigger unit around adapted → <i>from page 54</i> Adjusting the trigger unit added → <i>from page 108</i> Retrofitting the drive unit added Installation of round cylinder changed → <i>from page 62</i>
v4	07/01/2026	Stipulated use expanded → <i>from page 13</i> Force-fit connections changed → <i>from page 27</i> Single-leaf doors → <i>from page 36</i> and double-leaf doors restructured → <i>from page 69</i> Operation of the A700 changed → <i>from page 110</i> Operation of the day-time unlocking device changed → <i>from page 111</i> Operation of the lever-operated espagnolette Standard changed → <i>from page 114</i>

1.2 Instructions

This manual contains important information, instructions and assembly guidelines for the installation, maintenance and operation of hardware.

The information and instructions contained in this document refer to products belonging to the Roto hardware system named on the front page.

All steps must be completed in sequence.

The following documents apply in addition to these instructions:

Catalogue

- Roto Safe catalogue: CTL_86

Installation instructions

- Roto Eifel installation instructions: IMO_423
- Installation instructions for Roto Safe E | Eneo A: IMO_506

Quick guide

- Quick guide for Roto Safe A | A700 – Retrofitting the drive unit: SUG_52
- Quick guide for Roto Safe A | A700 – Replacing the main lock: SUG_58
- Quick guide for Roto Safe A | A700 – Installation instructions for fitters: SUG_66

Additional guidelines and directives

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

Storing the instructions

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

Explanation of the markings

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

Marking	Meaning
	Optional / alternative components seated in the sash
	Sash / components seated in the sash
	Optional / alternative components seated in the frame
	Frame / components seated in the frame
	Drill holes, routing, screw positions
	Unaffected components / indirectly affected components
	Components, arrows or movements that have just been described
	Item number
[1]	Legend
[A]	Steps



INFO

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



INFO

Figures are provided in the right-hand version (DIN 107).

1.3 Symbols

Symbol	Meaning
■	First-level list
□	Second-level list
→	(Cross) reference
▷	Result
▶	Unnumbered step
1.	Numbered step
a.	Numbered second-level step
⇒	Requirement

1.4 Pictographs

Symbol	Meaning
	Timber
	PVC
	Aluminium
	Door

1.5 Faceplates

Symbol	Meaning
 16	Flat faceplate 16 mm
 20	Flat faceplate 20 mm
 24	Flat faceplate 24 mm
 6x24	U-shaped faceplate 6 x 24 mm

1.6 Abbreviations

Abbreviation	Meaning
AH	Automatic power wedge
CTL	Catalogue
DIN L / R	DIN left / right
SRH	Sash rebate height
IMO	Installation instructions
kg	Kilograms
KO	Couplable at the top
Max.	Maximum
Min.	Minimum
mm	Millimetres
Nm	Torque in newton metres
TF	ID latch
ZS	Additional locking device

1.7 Explanation of terms

Lock

The term “lock” refers to the deadbolt in the main lock and the additional locks, used to lock the door securely.

Door locked

The term “door locked” means that the door is secured by an unsprung rigid deadbolt that has been pushed out of the main lock, and/or additionally by other additional locks. All locking elements engage in corresponding recesses in the door frame, or striker plates, the lock casing, etc.

1.8 Target groups

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

Hardware dealers

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

Door manufacturers

The "door manufacturers" target group includes all companies and individuals that purchase hardware from hardware manufacturers or hardware dealers and further process the hardware by integrating it in doors.

Building element dealers or installation companies

The "building element dealers or installation companies" target group includes all companies and individuals that purchase doors from door manufacturers for resale and installation in a construction project, without modifying the doors.

Builders

The "builders" target group includes all companies and individuals who place orders for the manufacture of doors for installation in their construction projects.

End users

The "end users" target group includes all individuals who use the installed doors.

1.9 Target groups' obligation to give instructions

**INFO**

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

Unless specified otherwise in the text below, documents and information can be passed on as a printed document, on a data storage device or via the Internet.

Responsibility of hardware dealers

Hardware dealers must pass the following documents on to the door manufacturer:

- Catalogue
- Installation, maintenance and operation instructions

Responsibility of the door manufacturer

The door manufacturer must pass the following document on to building element dealers or the builder, even if a subcontractor (installation company) is involved:

- Installation, maintenance and operation instructions

They must ensure that the end users are provided with the documents and information intended for them in printed format.

Responsibility of building element dealers / the installation company

Building element dealers must pass the following document on to the builder, even if a subcontractor (installation company) is involved:

- Maintenance and operation instructions

Responsibility of the builder

The builder must hand over the following document to the end user:

- Maintenance and operation instructions

1.10 Copyright protection

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

1.11 Limitation of liability

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

The hardware manufacturer assumes no liability for damage caused by:

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

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

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

The warranty only covers original Roto components.

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

1.12 Preserving the surface finish



ATTENTION

Surface treatments may cause property damage.

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

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



ATTENTION

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

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

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



ATTENTION

Contamination may cause property damage.

Contamination prevents components working properly.

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



ATTENTION

(Permanently) damp room air may cause property damage.

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

- ▶ Provide adequate ventilation for components, particularly during the construction phase.
- ▶ Intensively air out the room several times per day by opening all elements for approximately 15 minutes. If intensive airing is not an option, place the elements in the tilt position and provide airtight masking inside the room, e.g. if there is fresh screed that cannot be walked on or must not be exposed to draughts. Discharge any humidity present in the room air to the outside using condensation dryers.
- ▶ Establish a ventilation plan for more complex construction projects if necessary.
- ▶ Provide adequate ventilation during holiday periods as well.



2 Security

This manual contains instructions relating to safety. The principal safety information in this chapter includes information and instructions relevant to the safe use or maintaining the safe condition of the product. Warning instructions that relate to handling warn of residual risks and are located before steps that are relevant to safety.

- ▶ Follow all of the instructions in order to prevent personal injury and property and environmental damage.

2.1 Presentation and structure of warning instructions

The warning instructions relate to individual actions and are structured as follows with a warning symbol:



DANGER

Nature and source of the danger.

Explanation and description of the danger and the implications.

- ▶ Measures to take to avert the danger.

2.2 Security levels of warning instructions

The warning instructions that relate to handling are identified differently according to the severity of the associated danger. The signal words and the associated warning symbols used are clarified below.



DANGER

Immediate risk of death or serious injuries.

- ▶ Observe these warning instructions to avoid personal injuries.



WARNING

Potential risk of death or serious injuries.

- ▶ Observe these warning instructions to avoid personal injuries.



CAUTION

Risk of injuries

- ▶ Observe these warning instructions to avoid personal injuries.



ATTENTION

Reference to property or environmental damage.

- ▶ Observe these warning instructions to avoid property or environmental damage.

2.3 Stipulated use

The multipoint lock described in these instructions is designed for installation in doors. The multipoint lock is only intended for further processing on doors for vertical installation made from the materials described in these instructions. The multipoint lock opens, closes and locks doors.

Stipulated use also includes compliance with all safety information and specifications contained in these instructions, the other applicable documents and the applicable regulations, directives and national laws.

The A700 automatic multipoint lock is designed for installation in doors equipped with a handle bar or doorknob on the outside and a lever handle on the inside.

2.3.1 Misuse

Any use and processing of the products that goes beyond or differs from the stipulated use is considered misuse and can lead to hazardous situations.



WARNING

Misuse may pose a risk of death!

Misuse and incorrect installation of hardware can lead to serious injuries.

- ▶ Only use hardware combinations that have been approved by the hardware manufacturer.
- ▶ Only use original accessories or those that have been approved by the hardware manufacturer.
- ▶ Note the product-related documentation → *from page 7*.

2.3.2 Usage restriction

Open and unlocked doors do not meet the requirements for:

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

2.4 Basic safety information

The following hazards may arise when handling the product.

2.4.1 Installation

Incorrect installation poses an immediate risk of death or serious injuries.

Incorrect installation or assembly of hardware can lead to hazardous situations or property damage. Depending on the height of the fall, this can result in serious to life-threatening injuries, as well as glass breakage.

- ▶ Only use multipoint locks that have been approved by the hardware manufacturer.
- ▶ Only use original accessories or those that have been approved by the hardware manufacturer.
- ▶ Always have installation performed by a specialist company.

Heavy loads pose a risk of injury.

Lifting and carrying heavy loads may lead to injuries in the event of a fall or physical overexertion.

- ▶ Note the applicable accident prevention regulations.
- ▶ Transport heavy loads with two people and use suitable transportation means (such as an industrial truck).

Physical overexertion may be harmful to health.

Moving heavy loads for extended periods leads to physical injury in the long term.

- ▶ When carrying and lifting by hand, comply with a maximum weight of 25 kg for men and 10 kg for women.
- ▶ Carry and lift even small loads with an ergonomically correct posture.



2.4.2 Use

Trapping body parts in the opening between leaf and frame may lead to serious injuries.

Gripping between the leaf and frame when closing doors poses the risk of crushing injuries.

- ▶ When closing doors, never grip between the leaf and frame and always exercise caution.
- ▶ Keep children and anyone unable to understand the risks away from the hazardous area.
- ▶ Refrain from slamming the door shut deliberately or uncontrollably.

Opening and closing leaves improperly poses the risk of injury and property damage.

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

Opening and closing leaves improperly poses the risk of injury and property damage.

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

- ▶ When moving the leaf, ensure that it will not slam against the frame or other leaves once fully opened or closed.
- ▶ Ensure that the leaf is slowly guided by hand throughout its entire movement range, until it has been brought into a fully closed or opening position.
- ▶ When closing a leaf and locking the multipoint lock, the gasket counter force must be overcome.
- ▶ Do not use the extended deadbolt to keep the door open.
- ▶ Do not use any tools or aids which act as a lever to actuate the multipoint lock.
- ▶ Only use the designated locking mechanisms.
- ▶ Do not actuate the door lever handle and locking mechanism at the same time.
- ▶ Do not open double-leaf doors using the second opening leaf.

Misuse poses the potential risk of injury and property damage.

Misuse can lead to hazardous situations and may destroy the hardware, profiles or other parts within the doors.

- Refrain from introducing obstacles into the opening area between the frame and leaf.
- Refrain from exerting loads which exceed normal manual force on the lever handle connection.
- Refrain from exerting loads which exceed normal manual force on the multipoint lock via the cylinder key.
- Refrain from placing additional loads which act upon the leaf.

Improper maintenance poses the potential risk of injury and property damage.

The doors, including the multipoint lock, require expert maintenance (care, cleaning, servicing and inspection) in order to guarantee their proper condition and safe use.

- ▶ Keep the multipoint lock free of deposits and contaminants.
- ▶ Refrain from performing after-treatment on the locking elements that would prevent them from working properly, e.g. by painting over them.
- ▶ Carry out care and cleaning tasks in accordance with these instructions.
- ▶ Always have regular maintenance, adjustment and repair work carried out by a specialist company.
- ▶ Refrain from performing work on the multipoint lock or striker plate that could impact the structure, mode of operation or correct functioning.

- ▶ Refrain from introducing foreign and unsuitable objects into the multi-point lock or striker plate.

2.4.3 Ambient conditions

Physical and chemical influences may result in property damage.

Multipoint locks can be permanently damaged to the point that they can no longer function in a saline, aggressive or corrosive environment.

- ▶ Do not use multipoint locks in a saline, aggressive or corrosive environment.
- ▶ Carry out care and cleaning tasks in accordance with these instructions.
- ▶ Corrosion protection must be inspected by an authorised specialist company as part of regular maintenance work.

Moisture may cause property damage.

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

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

2.5 Operation

The safety symbols and markings and the associated warnings explained below apply to the safe operation of leaves.

Safety symbols and markings



Symbol	Meaning
	<p>Trapping body parts in the opening between leaf and frame may lead to serious injuries.</p> <p>When closing leaves, never grip between the leaf and frame and always exercise caution.</p> <p>Keep children and anyone unable to understand the risks away from the hazardous area.</p>
	<p>Placing additional loads on the leaf may lead to minor injuries and property damage.</p> <p>Avoid placing additional loads on the leaf.</p>
	<p>The impact of wind may lead to minor injuries and property damage.</p> <p>Ensure that the leaf is guided slowly by hand throughout its entire movement range, until it has been brought into a fully closed or opening position.</p> <p>Avoid exposing the open leaf to wind.</p> <p>Move the leaf to the closed position in windy and draughty conditions.</p>
	<p>Introducing obstacles into the opening between leaf and frame may result in minor injuries and property damage.</p> <p>Avoid introducing obstacles into the opening between leaf and frame.</p>
	<p>Pressing the leaf against the edge of an opening (reveal) may pose a risk of minor injuries and cause property damage.</p> <p>Avoid pressing the leaf against the edge of an opening (reveal).</p>

3 Information on the product

3.1 Product characteristics

Security

- three automatically extending security locking points for increased burglary inhibition
- deadbolt in the main lock extends automatically
- VdS-certified burglary inhibition
- automatic power wedge and deadbolt are push-back safeguarded without using the key

Comfort

- automatic closing without using the key
- latches ensure consistent gasket compression and prevent door warping
- sound-absorbing silent latch for closing the door gently
- retrofittable day-time unlocking for simple access without a key

Efficiency

- standardised locking patterns for reduced logistics and installation effort
- profile-related frame components for efficient installation
- latch can be turned around when installed for simple conversion on the construction site

Design

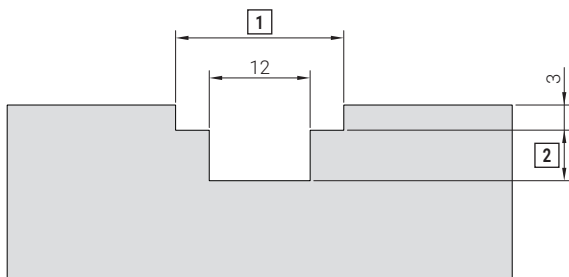
- door designs up to 3000 mm for freedom of design
- durable and scratch-resistant surfaces for a high-quality appearance in the long term
- backsets from 35 to 80 mm for a high level of flexibility

Quality

- certified continuous operation characteristics for permanent functional safety
- corrosion-resistant surfaces for a safe investment

3.2 Faceplates

Flat faceplates

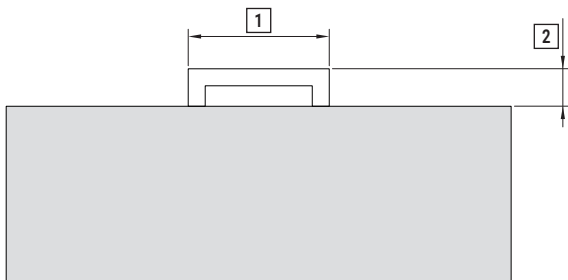


[1] Faceplate width (16, 20, 24)

[2] Connecting-rod depth (6 or 9)

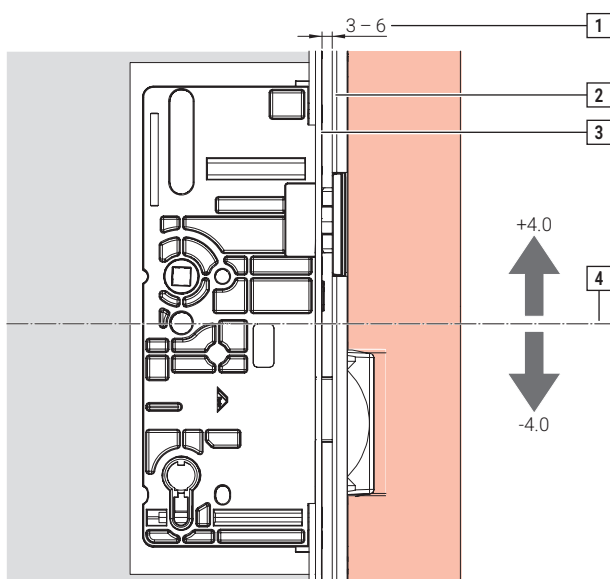


U-shaped faceplates



- [1] Faceplate width (24)
- [2] Faceplate depth (6)

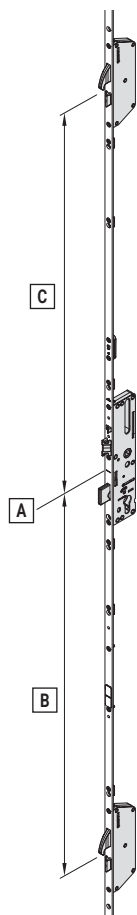
3.3 Tolerance – height offset



- [1] Functional clearance (distance between striker / front edge of striker strip and front edge of faceplate)
- [2] Striker / striker strip
- [3] Faceplate
- [4] Height offset between centre of lock and centre of striker (markings present)

3.4 Locking pattern

The locking pattern designates the dimensional position of the additional locking points on the faceplate. In this pattern, the first two numbers represent the distance(s) from the centre of the main lock down to the centre of the additional lock(s), while the last two numbers stand for the distance(s) from the centre of the main lock upwards.



Assignment	Meaning
[A]	Centre of main lock
[B]	Centre of main lock downwards, to centre of additional lock
[C]	Centre of main lock upwards, to centre of additional lock

Since the position of the additional lock also impacts the position of the frame components, the locking pattern also applies to these, especially for striker strips and lever-operated espagnolettes.

To ensure you choose the multipoint lock with the ideal level of security for your needs, the highest locking point should be lockable at the top where possible and the lowest locking point must be positioned as far down as possible according to the specific sash rebate height (SRH).

Locking pattern	Sash rebate height (SRH)
V02/01	1800 – 2200 mm
V02/03	1900 – 2200 mm
V02/05	1500 – 1900 mm
V02/07	2200 – 2400 mm
V02/17	1900 – 2200 mm



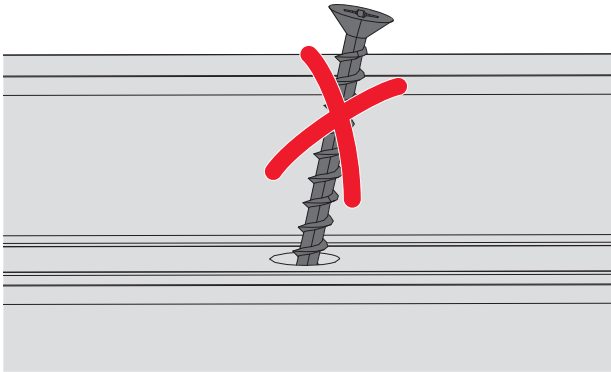
4 Brief instructions

4.1 Installation sequence

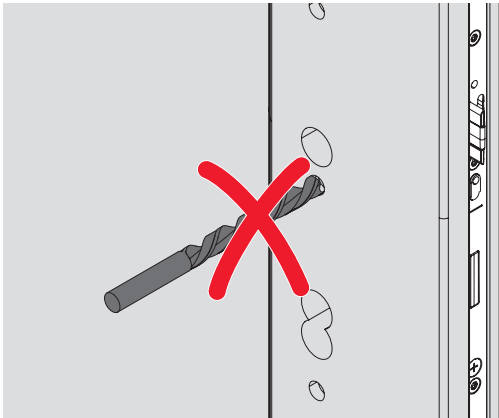
	Step	Note	Page reference
Leaf	Route the profile.		→ from page 38
	Predrill the door lever handle set.		→ from page 51
	Turn the latch around if required.		→ from page 54
	Install the multipoint lock or extendable multipoint lock.		→ from page 60
	Install the lever-operated espagnolette (Standard, Plus) on the second opening leaf.	Only for double-leaf doors	→ from page 69 → from page 74
	Install the door lever handle set.		→ from page 62
	Carry out a performance test.		→ from page 64
Frame	Route the profile.		→ from page 66
	Install the striker strip or strikers and any electrical openers required.		→ from page 66
	Install the top shootbolt protrusion striker.	Only for double-leaf doors	→ from page 68
	Install the bottom shootbolt protrusion striker.	Only for double-leaf doors	
Final acceptance	Make the necessary adjustments.		→ from page 100
	Lubricate the hardware.		→ from page 117
	Carry out a performance test.		→ from page 64

5 Installation

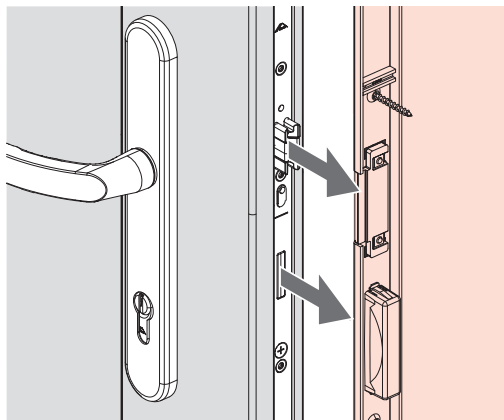
5.1 General information for fabricators



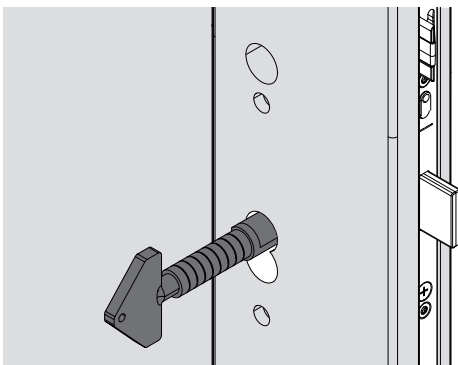
Turn the screws in straight so that they are not tensioned. Do not use stainless-steel screws on the Roto Sil surface. Use stainless-steel screws on stainless-steel components.



Do not drill through the lock area of the door leaf when the lock is installed (e.g. for protective hardware).

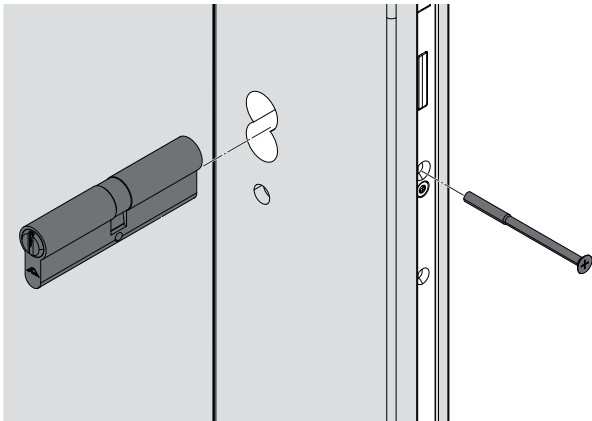


Manufacture door designs so that it is ensured that the locks always operate properly. Observe the axis dimension.



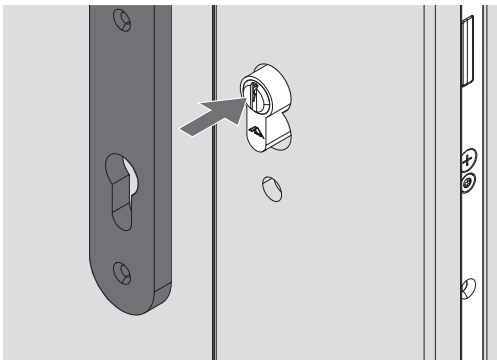
INFO

When an original cylinder is not installed, only unlock the door using the Roto universal access key. Alternatively, use an extractor handle.



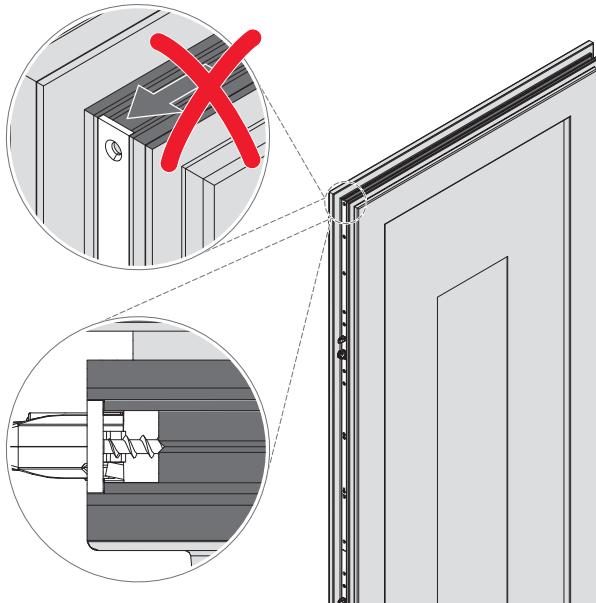
INFO

Install the profile cylinder or round cylinder without subjecting it to stress (align it 90° to the leaf).



INFO

Install the long plates and escutcheons without subjecting them to stress (align them 90° to the leaf).

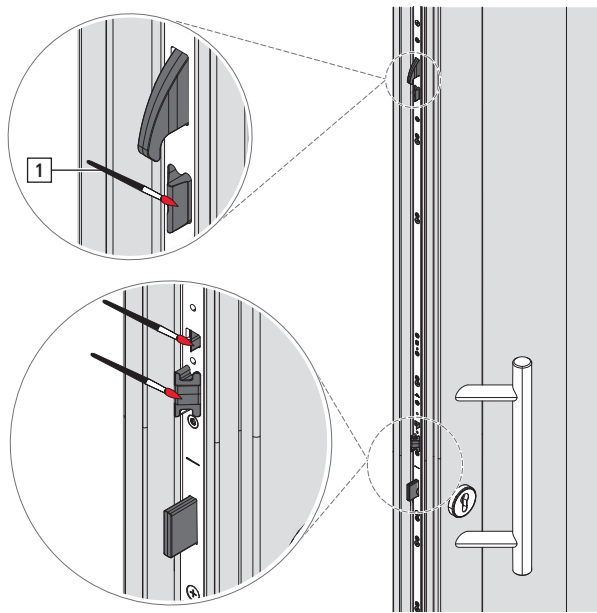


ATTENTION

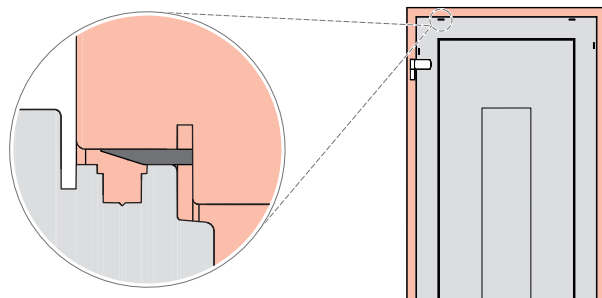
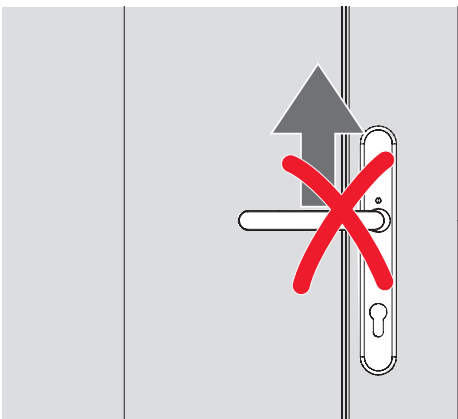
Contamination may cause property damage.

Contamination may get behind the floating mullion and block the multipoint locking system.

- ▶ Do not wipe contamination in the upper area of the sash (e.g. plaster, gypsum) towards the floating mullion.



[1] Grease



Lubricate the latches and trigger unit at least once a year.



ATTENTION

Using incorrect lubricants may cause property damage.

Substandard lubricants can prevent the hardware from working properly.

- ▶ Use high-quality lubricants.
- ▶ Only use resin-free and acid-free lubricants.
- ▶ Use appropriate lubricant in more challenging climatic conditions. Note the manufacturer specifications.



ATTENTION

Incorrect lubrication may cause property damage!

Lubricants in the main lock and additional locks may prevent them from working properly.

- ▶ Only lubricate the latches and trigger unit.

During transport, secure the leaf against the frame using suitable supports (run-up blocks, wedges, etc.).

Do not remove the cylinder fixing, which is a transport safety mechanism, until you are about to install the profile cylinder.

Do not carry the leaf by the door lever handle.



5.2 Screw connections



ATTENTION

Improper screw fixings may cause property damage.

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

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



ATTENTION

Using incorrect screw material may cause property damage.

Using the wrong screws may damage the components.

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

General information

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

5.2.1 Timber

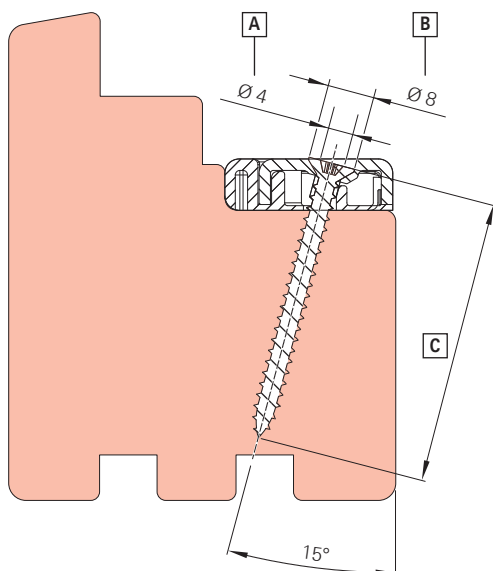
Fasten hardware components using electrogalvanised and passivated steel fixing screws. Use fixing screws with additional sealing in more challenging climatic conditions.

Fixing screws for timber strikers



INFO

It can be seen from each individual timber striker whether the fixing screws have to be turned in straight or at a 15° angle.



Choose screws for timber strikers with a 15° angle:

[A] Screw diameter

[B] Maximum possible head diameter

[C] Maximum possible screw length

5.2.2 PVC



ATTENTION

Incorrect screw connections may cause property damage.

- Short screws will not reach the steel reinforcement and will therefore not hold.
The multipoint lock can be pulled out of the leaf if it is not screwed into the steel reinforcement.
- ▶ Select the length of the screws so that they will hold in the steel reinforcement.

Fasten hardware components using electrogalvanised and passivated steel fixing screws. Use fixing screws with additional sealing in more challenging climatic conditions.

5.2.3 Aluminium



ATTENTION

Improper screw connections may cause property damage.

- The multipoint locking can be pulled out of the profile if it is not screwed down correctly.
- ▶ Select the length of the screws so that they will hold in the aluminium profile.
- If necessary, insert additional aluminium profiles or use rivet nuts.

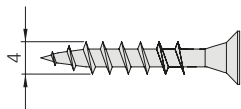


INFO

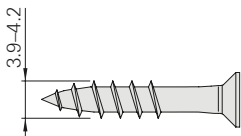
If rivet nuts are used instead of screws, use countersunk nuts.

5.2.4 Screwdriving recommendations

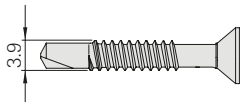
Timber



PVC



Aluminium





5.3 Force-fit connection



INFO

Force-fit connections are formed by screwing down components A and B so that forces and movements are transferred without loss.

Couplable hardware components always require a force-fit connection.

5.3.1 U-shaped faceplate



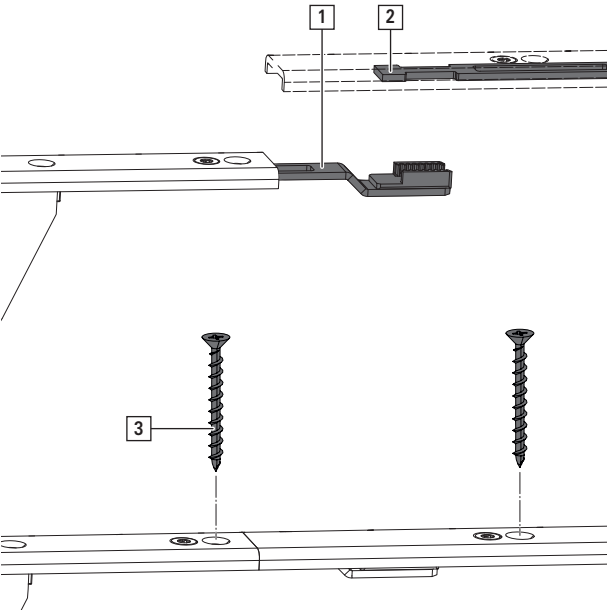
INFO

Route out the area for U-shaped faceplates. Request the routing drawing if required.



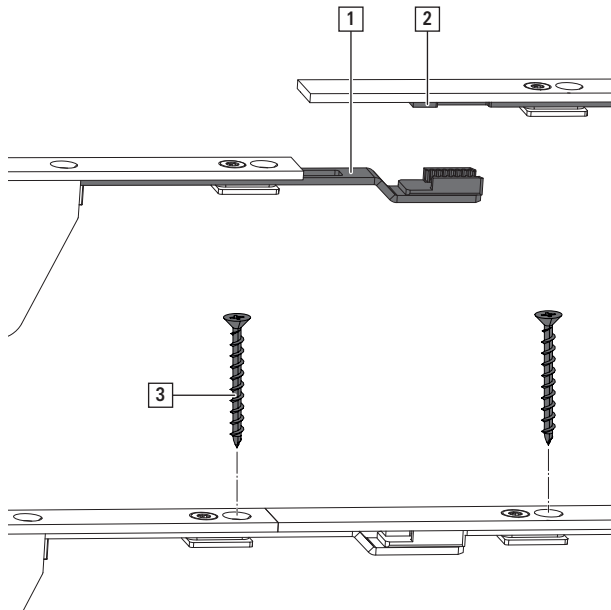
INFO

Use longer screws for aluminium profiles.



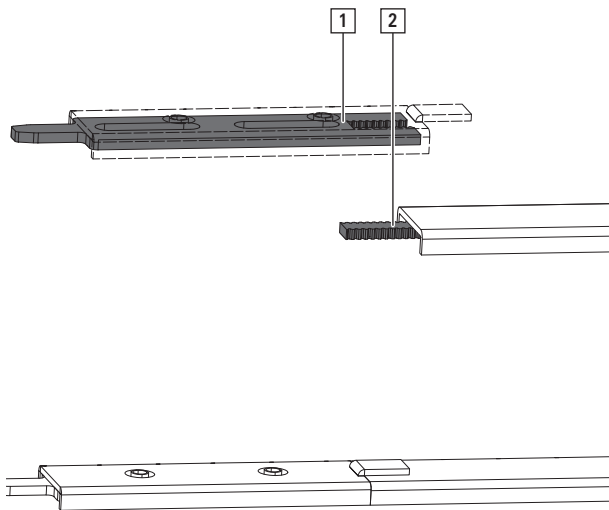
Assignment	Description
[1]	Coupling point of extension
[2]	Coupling point of multipoint lock
[3]	Screws

5.3.2 Flat faceplate



Assignment	Description
[1]	Coupling point of extension
[2]	Coupling point of multipoint lock
[3]	Screws

5.3.3 Lever-operated espagnolette Standard



Assignment	Description
[1]	Coupling point of extension
[2]	Coupling point of lever-operated espagnolette Standard



INFO

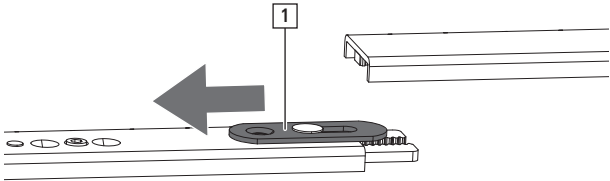
On PVC profiles with opposite hardware groove, the groove must be sealed in the area of the coupling point in order to stabilise the connection.

For this purpose, use the Roto NX connecting link (material number 350401), for example.

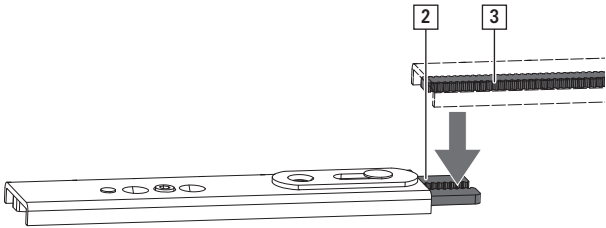


5.3.4 Lever-operated espagnolette Plus

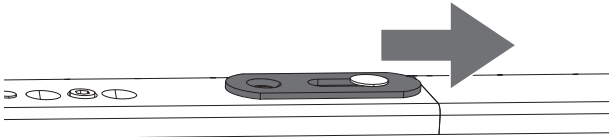
1. Move the faceplate link [1] to expose the coupling point.



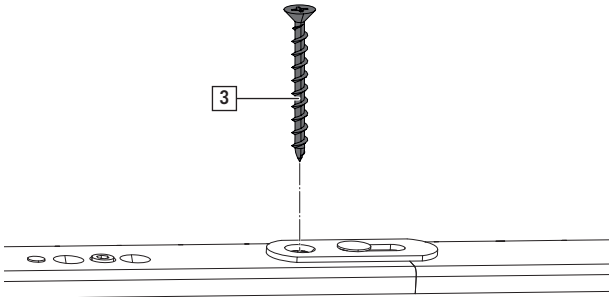
2. Connect the coupling points of the extension [2] and lever-operated espagnolette Plus [3].



3. Slide the faceplate link over the coupling point.



4. Fasten the coupling points with a screw [4].

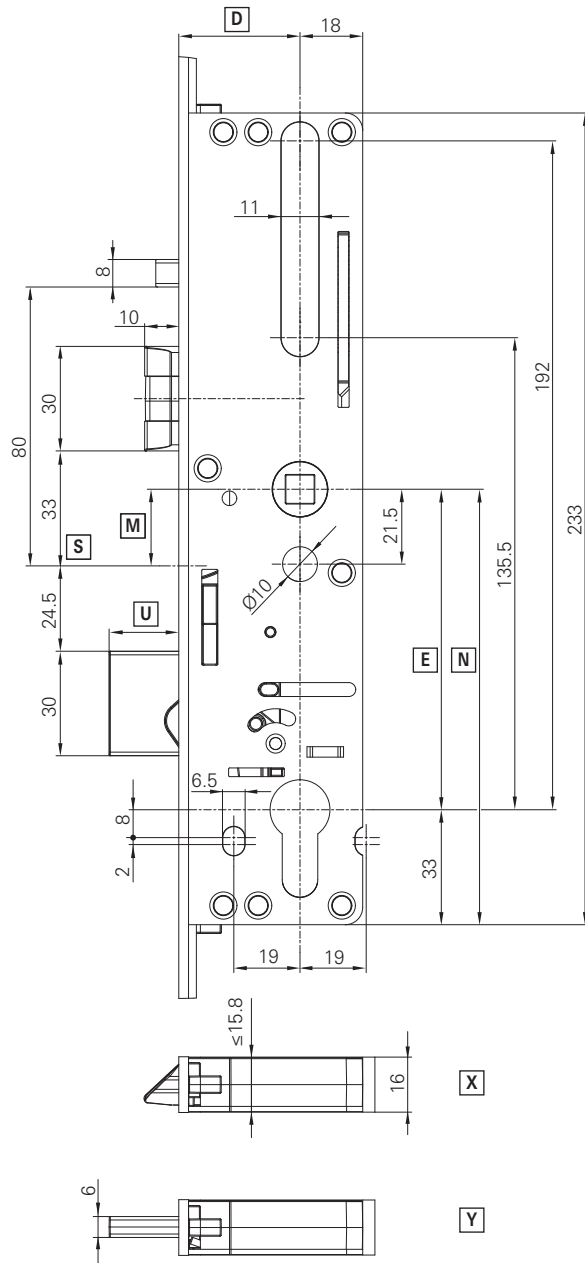


Assignment	Description
[1]	Faceplate link
[2]	Coupling point of extension
[3]	Coupling point of lever-operated espagnolette Plus
[4]	Screw

5.4 Main locks

5.4.1 A700 main lock | Backset 35, 40 mm

Profile cylinder





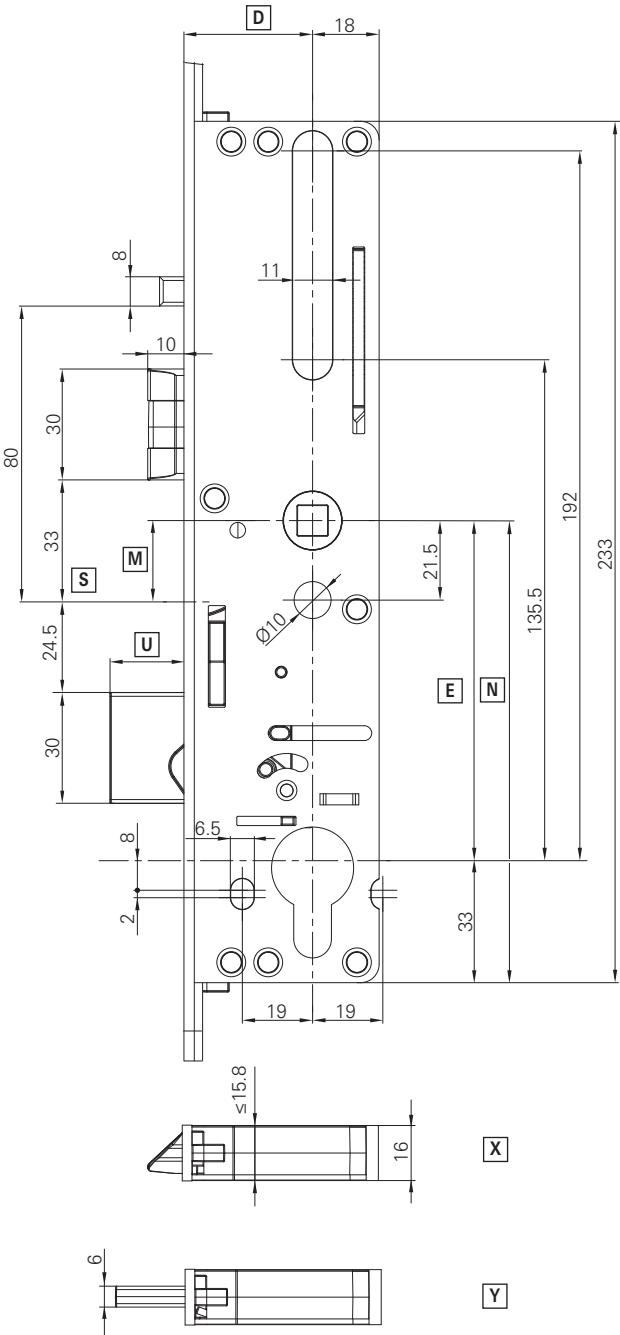
Assignment	Meaning	Value
[D]	Backset	35 and 40 mm
[E]	Distance	92 mm
[M]	Centre of spindle-receiver to centre of main lock	22 mm
[N]	Centre of spindle-receiver to lower edge of main lock	125 mm
[S]	Centre of main lock	–
[U]	Deadbolt protrusion with 35 mm backset	16 mm
	Deadbolt protrusion with 40 mm backset	20 mm
[X]	Latch (can be turned around)	–
[Y]	Deadbolt	–



INFO

The backset and dimensions for the latch and deadbolt protrusion refer to a 3 mm faceplate thickness.

Round cylinder



Installation

Main locks

A700 main lock | Backset 35, 40 mm

Assignment	Meaning	Value
[D]	Backset	35 and 40 mm
[E]	Distance	94 mm
[M]	Centre of spindle-receiver to centre of main lock	22 mm
[N]	Centre of spindle-receiver to lower edge of main lock	125 mm
[S]	Centre of main lock	–
[U]	Deadbolt protrusion with 35 mm backset	16 mm
	Deadbolt protrusion with 40 mm backset	20 mm
[X]	Latch (can be turned around)	–
[Y]	Deadbolt	–



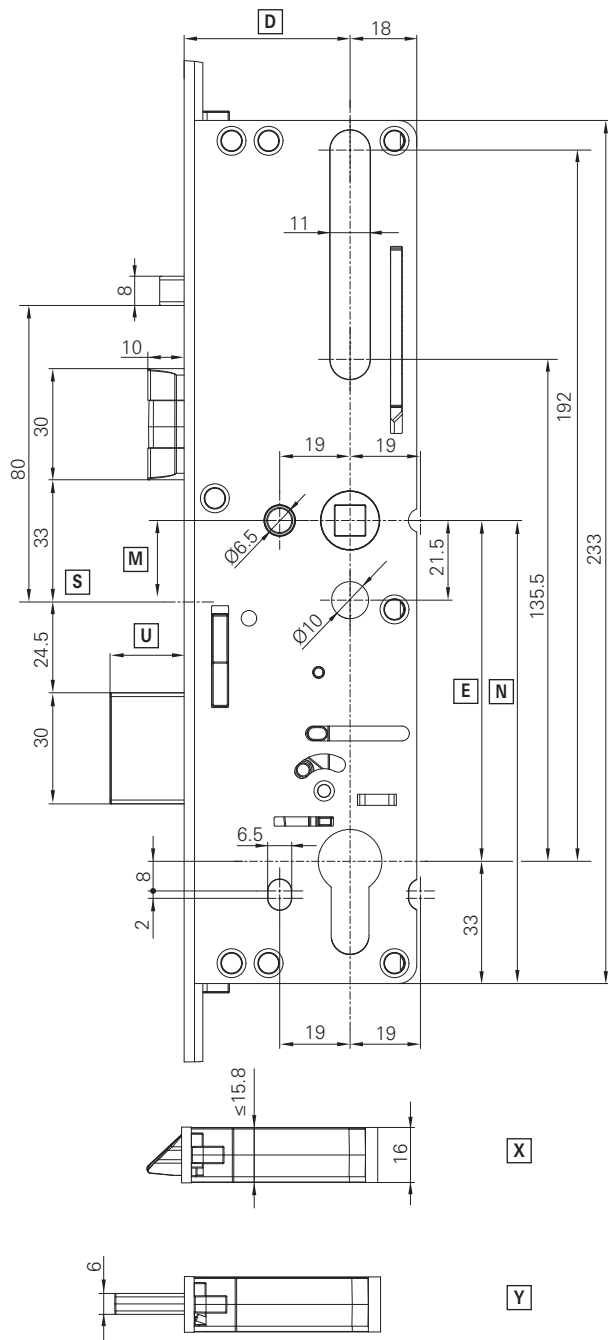
INFO

The backset and dimensions for the latch and deadbolt protrusion refer to a 3 mm faceplate thickness.



5.4.2 A700 main lock | Backset from 45 mm

Profile cylinder



Installation

Main locks

A700 main lock | Backset from 45 mm

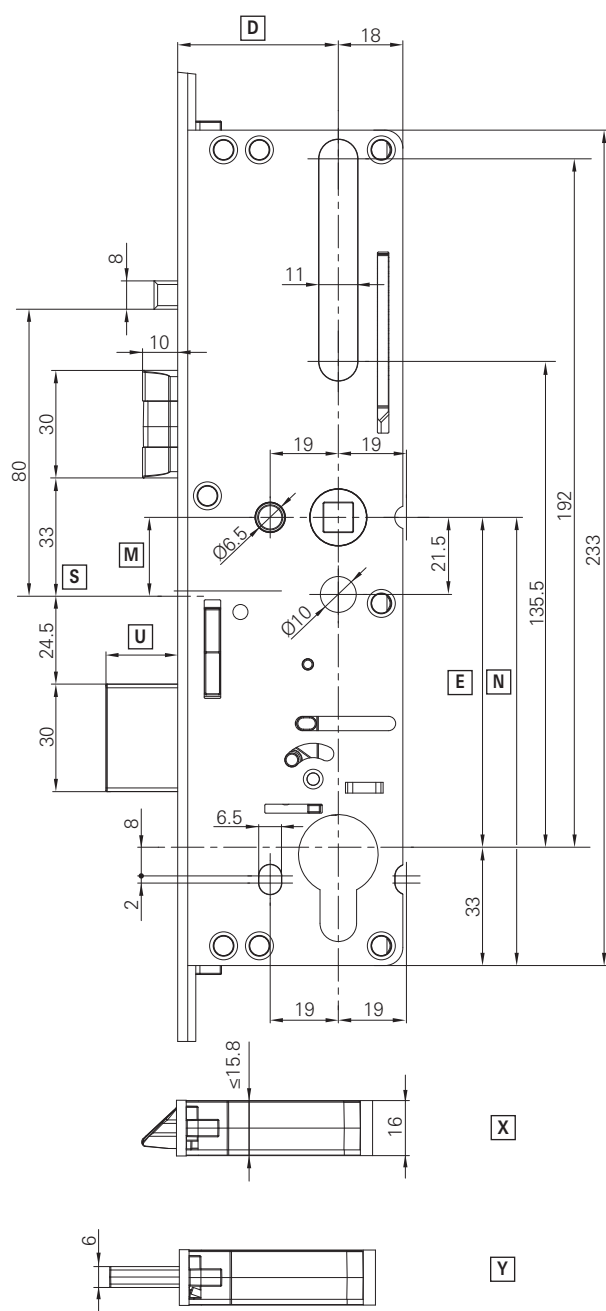
Assignment	Meaning	Value
[D]	Backset	45 to 80 mm
[E]	Distance	92 mm
[M]	Centre of spindle-receiver to centre of main lock	22 mm
[N]	Centre of spindle-receiver to lower edge of main lock	125 mm
[S]	Centre of main lock	–
[U]	Deadbolt protrusion	20 mm
[X]	Latch (can be turned around)	–
[Y]	Deadbolt	–



INFO

The backset and dimensions for the latch and deadbolt protrusion refer to a 3 mm faceplate thickness.

Round cylinder





Assignment	Meaning	Value
[D]	Backset	45 to 80 mm
[E]	Distance	94 mm
[M]	Centre of spindle-receiver to centre of main lock	22 mm
[N]	Centre of spindle-receiver to lower edge of main lock	125 mm
[S]	Centre of main lock	–
[U]	Deadbolt protrusion	20 mm
[X]	Latch (can be turned around)	–
[Y]	Deadbolt	–



INFO

The backset and dimensions for the latch and deadbolt protrusion refer to a 3 mm faceplate thickness.

5.5 Single-leaf doors

5.5.1 Overview of multipoint locks

Possible additional lock versions

Abbreviation	Meaning
2AH	2 automatic power wedges
2AHTF	2 automatic power wedges with ID latch
2AHZS	2 automatic power wedges with additional locking device
3AH	3 automatic power wedges

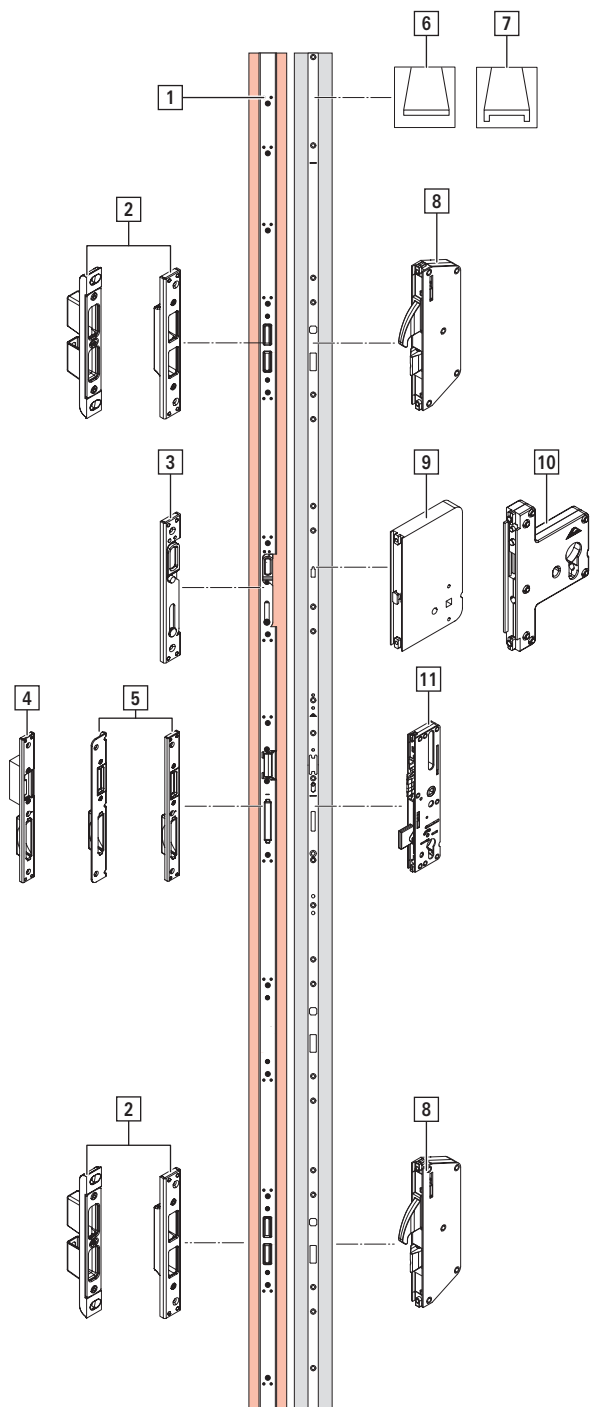
Possible striker strip versions (combination locks)

Abbreviation	Meaning
2C	2 combination locks
2CTF	2 combination locks with ID latch



INFO

Standard striker strips and strikers are used for the A700.

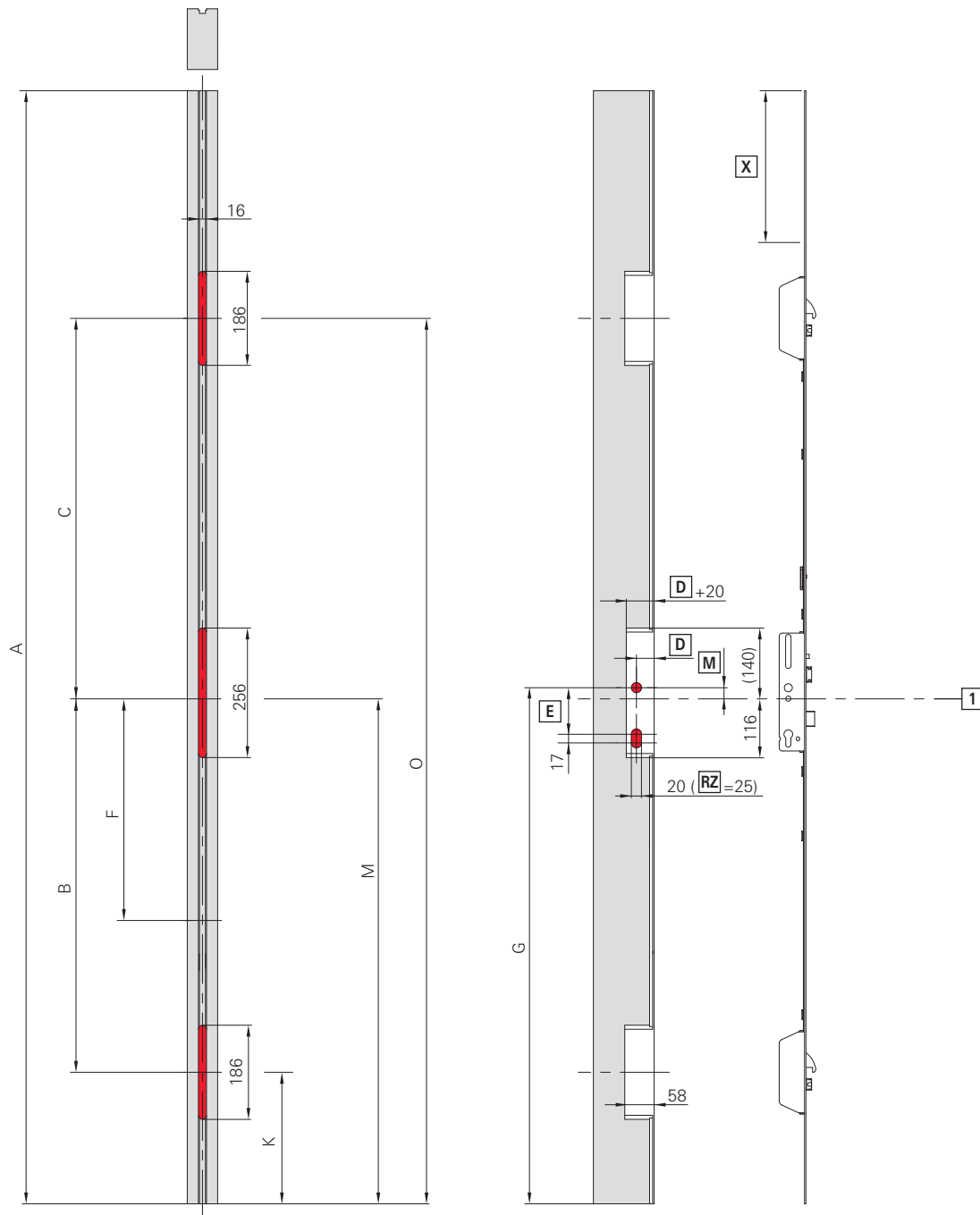


Frame		Leaf	
[1]	Striker strip	[6]	Flat faceplate
[2]	Combination striker	[7]	U-shaped faceplate
[3]	ID latch striker	[8]	Additional lock (AH)
[4]	Electrical opener / deadbolt striker	[9]	ID latch (TF)
[5]	Latch / deadbolt striker	[10]	Additional locking device (ZS)
		[11]	A700 main lock

5.5.2 Drilling and routing dimensions

5.5.2.1 Additional locks (AH)

Leaf



[1] Faceplate marking

[D] Backset

[E] Distance

[M] Centre of spindle-receiver to centre of main lock

[RZ] Round cylinder

[X] Cropping range

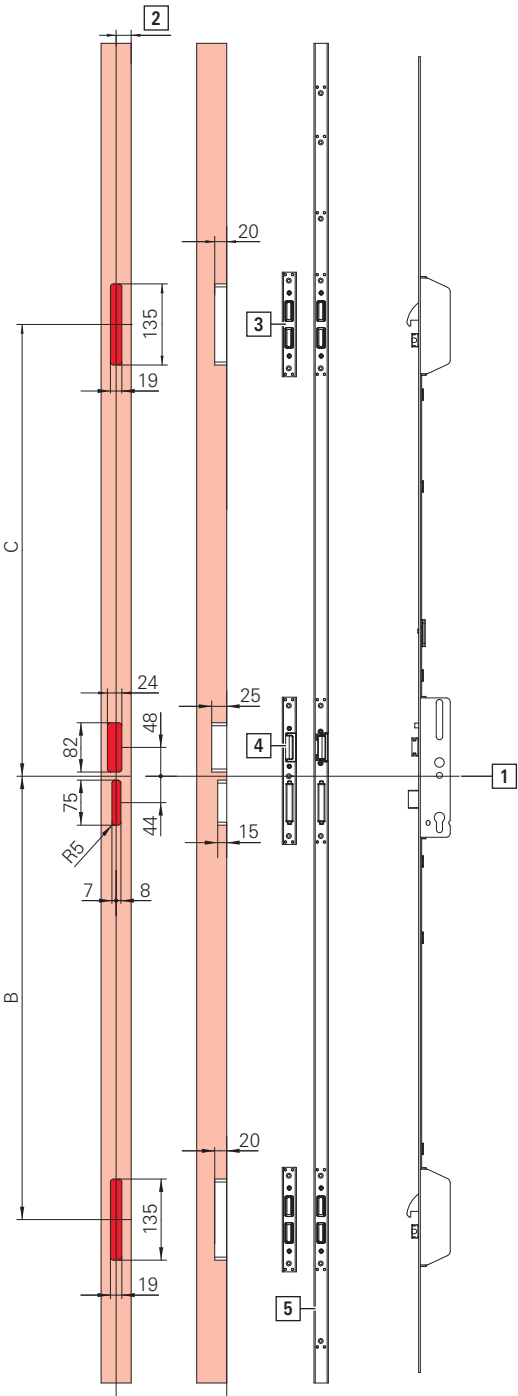


Handle height at various distances

G	1020
[E]	92 / 94
[M]	22

Pattern	A	B	C	F	K	M	O	[X]
V02/01	2200	738	632	–	260	998	1630	400
V02/03	2200	738	752	-	260	998	1750	300
V02/05	1900	738	382	-	260	998	1380	400
V02/07	2400	738	982	-	260	998	1980	200

Frame



- [1] Faceplate marking
- [2] Routing axis
- [3] Combination striker
- [4] Latch / deadbolt striker
- [5] Striker strip

► Carry out the routing work as shown in the drawing.



INFO

The routing refers to PVC and aluminium strikers.
Request the routing drawing for timber strikers.



INFO

The routing depth depends on the leg height on the striker.

Example – combination striker:

- Striker height = 24.5 mm
- Leg height = 7 mm
- Min. routing depth = 17.5 mm



INFO

The routing axis depends on the profile.

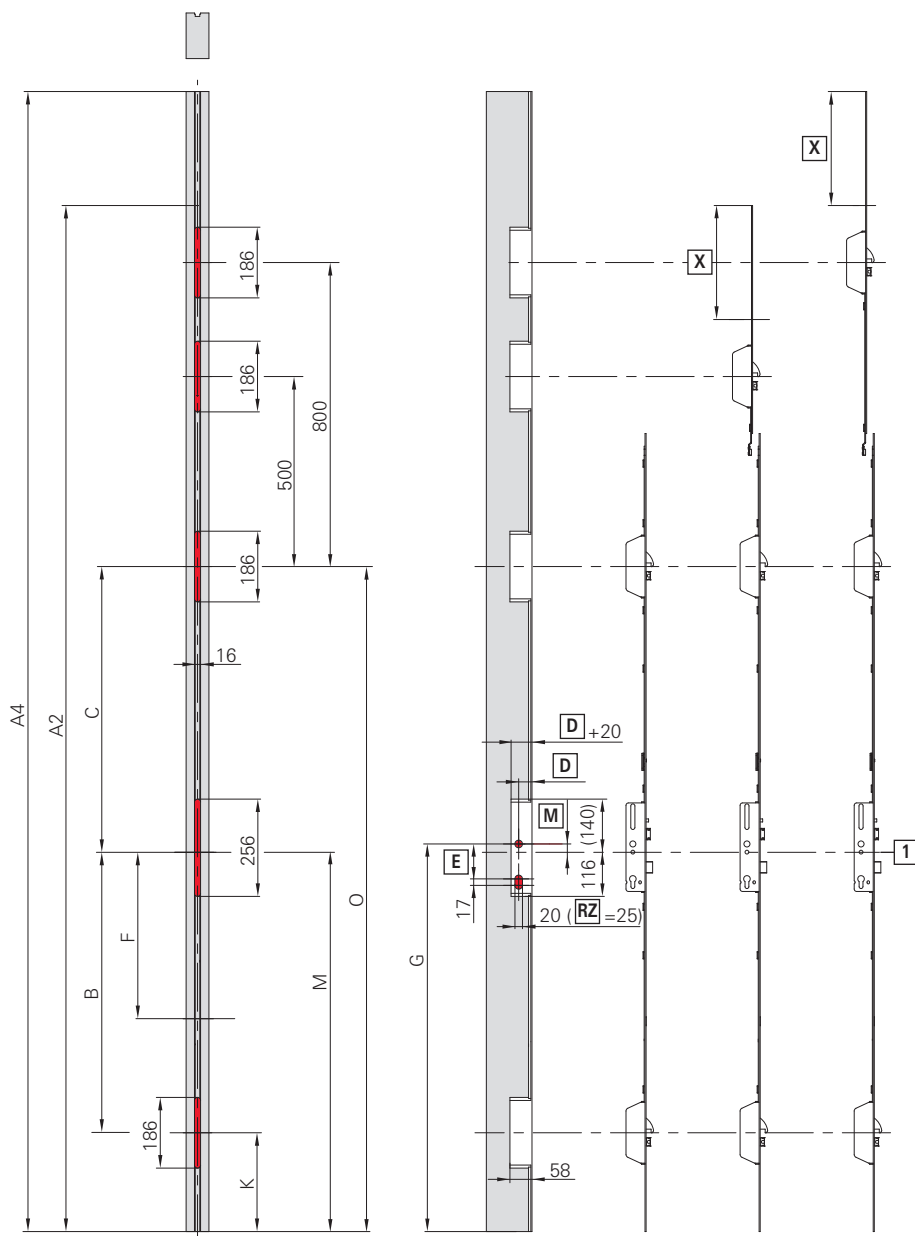
Pattern	B	C
V02/01	738	632
V02/03	738	752
V02/05	738	382
V02/07	738	982

Couplable multipoint locks (AH) – leaf



INFO

Route out the area for U-shaped faceplates. Request the routing drawing if required.

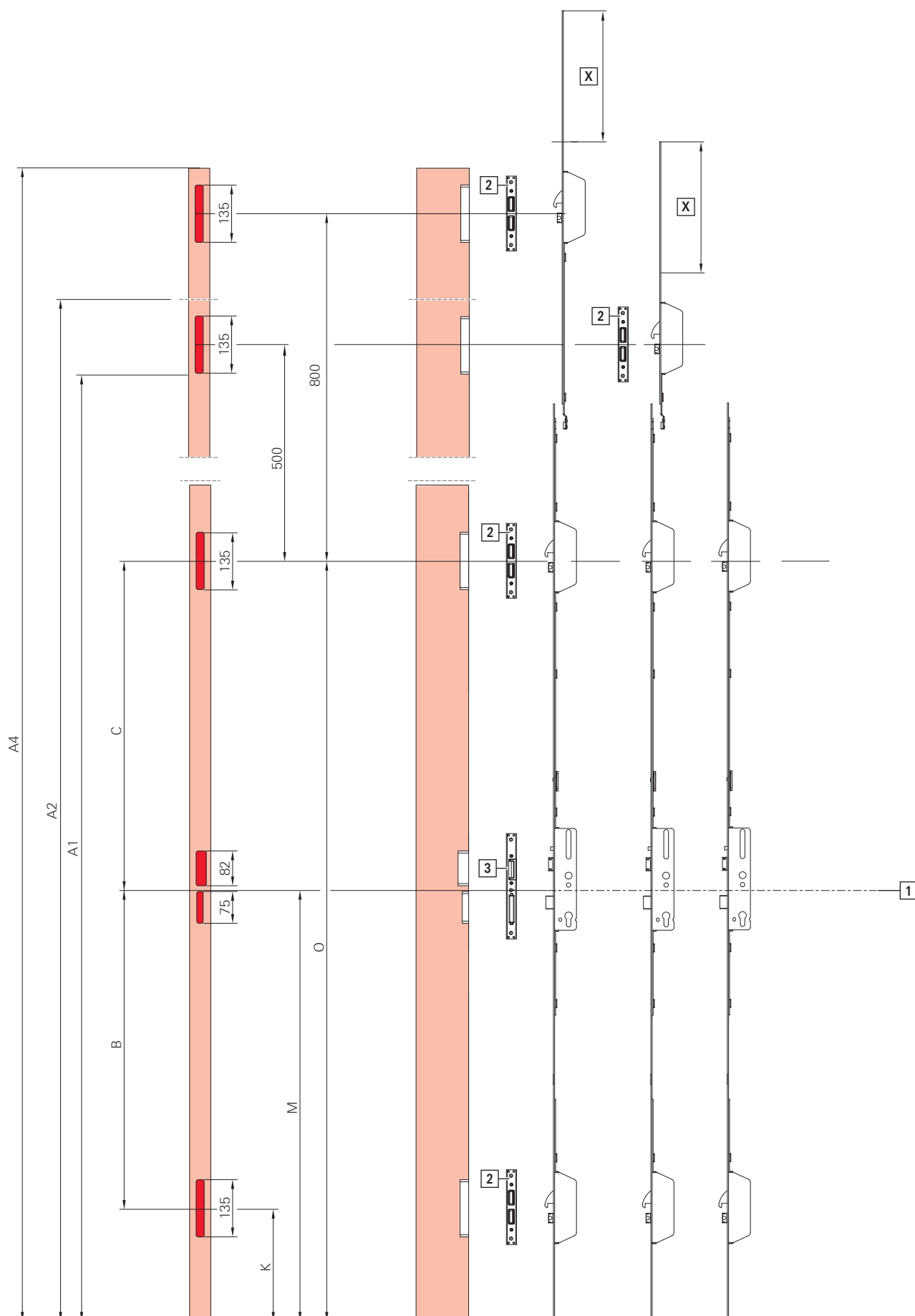


- [1] Faceplate marking
- [D] Backset
- [E] Distance
- [M] Centre of spindle-receiver to centre of main lock
- [RZ] Round cylinder
- [X] Cropping range

Pattern	A2	A4	B	C	F	K	M	O	[X]
V02/03	2400 – 2700	2700 – 3000	738	752	–	260	998	1750	300

Handle height at various distances	
G	1020
[E]	92 / 94
[M]	22

Couplable multipoint lock (AH) – frame



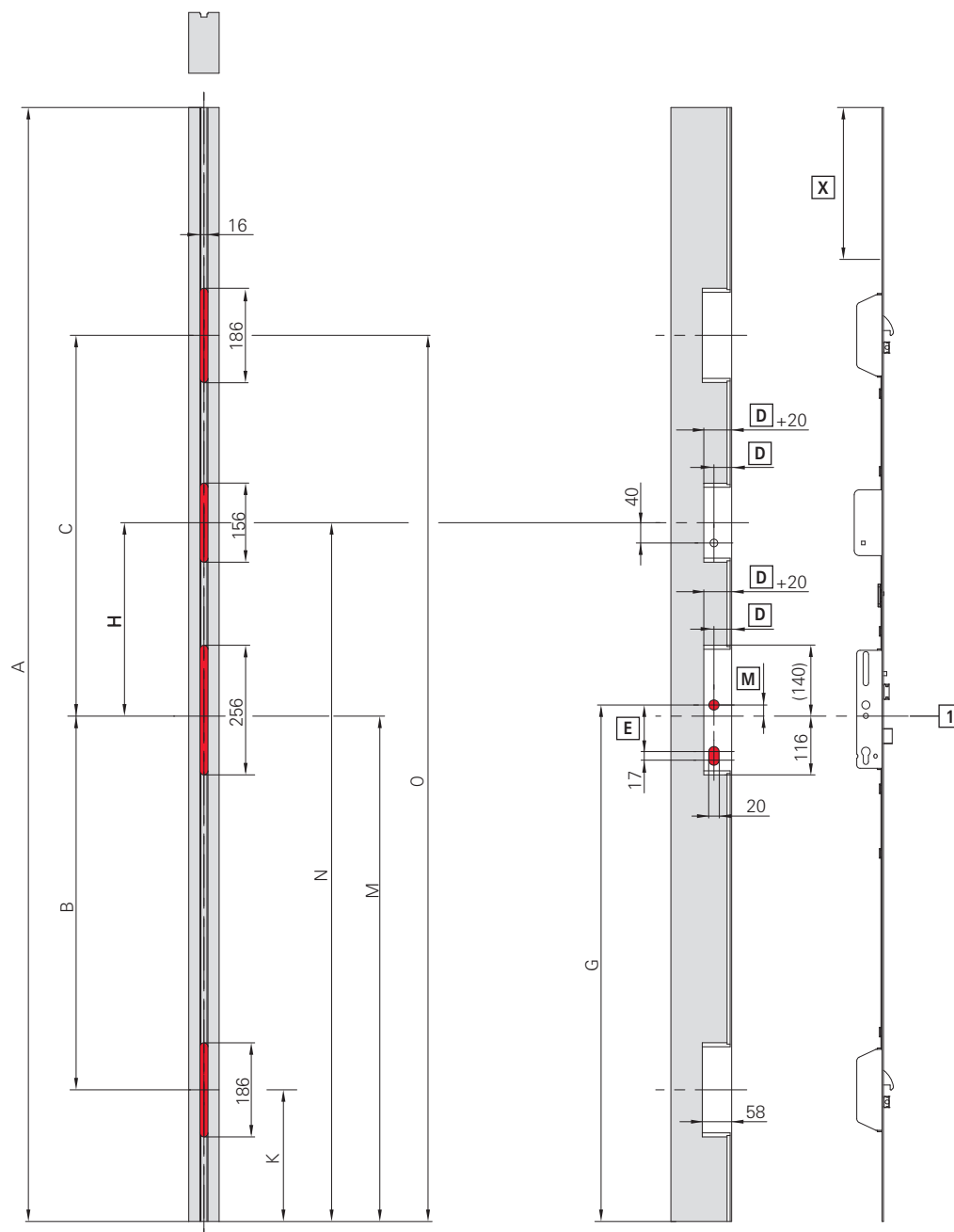


- [1] Faceplate marking
- [2] Combination striker
- [3] Latch / deadbolt striker

Pattern	A1	A2	A4	B	C	K	M	O
V02/03	Max. 200 depending on the frame height	2530 – 2700	2830 – 3000	738	752	260	998	1750

5.5.2.2 Additional locks and ID latch (AHTF)

Leaf



[1] Faceplate marking

[D] Backset

[E] Distance

[M] Centre of spindle-receiver to centre of main lock

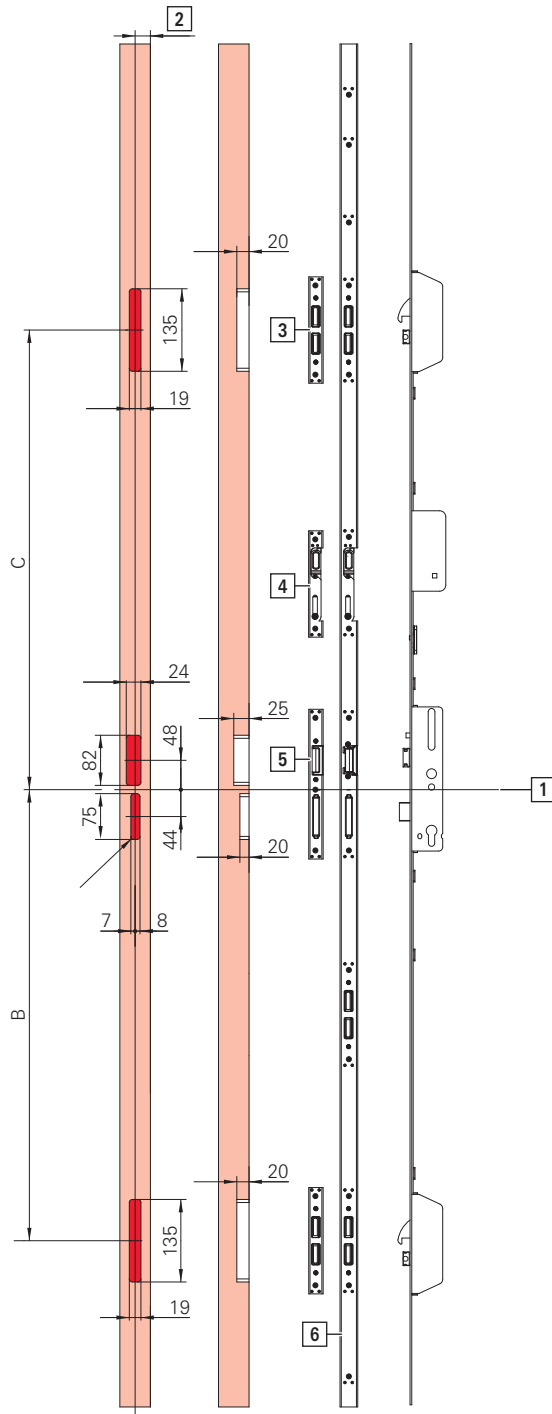
[X] Cropping range

Handle height	
[G]	1020
[E]	92
[M]	22

Pattern	A	B	C	H	K	M	N	O	[X]
V02/17	2200	738	752	382	260	998	1380	1750	300



Frame



- [1] Faceplate marking
- [2] Routing axis
- [3] Combination striker
- [4] ID latch striker
- [5] Latch / deadbolt striker
- [6] Striker strip

► Carry out the routing work as shown in the drawing.



INFO

The routing refers to PVC and aluminium strikers.

Request the routing drawing for timber strikers.



INFO

The routing depth depends on the leg height on the striker.

Example – combination striker:

- Striker height = 24.5 mm
- Leg height = 7 mm
- Min. routing depth = 17.5 mm



INFO

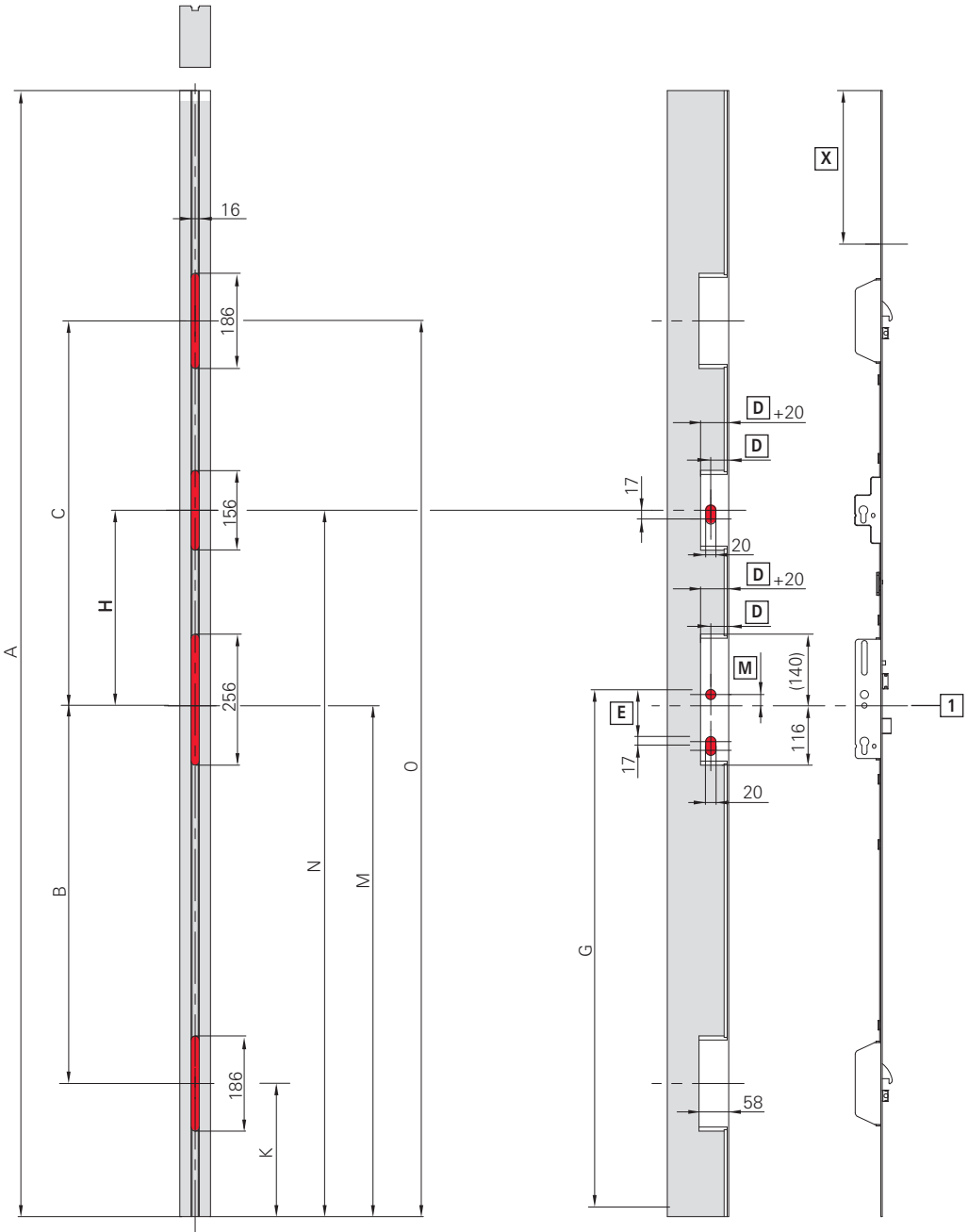
The routing axis depends on the profile.

Pattern	B	C
V02/17	738	752



5.5.2.3 Additional locks and additional locking device (AHZS)

Leaf

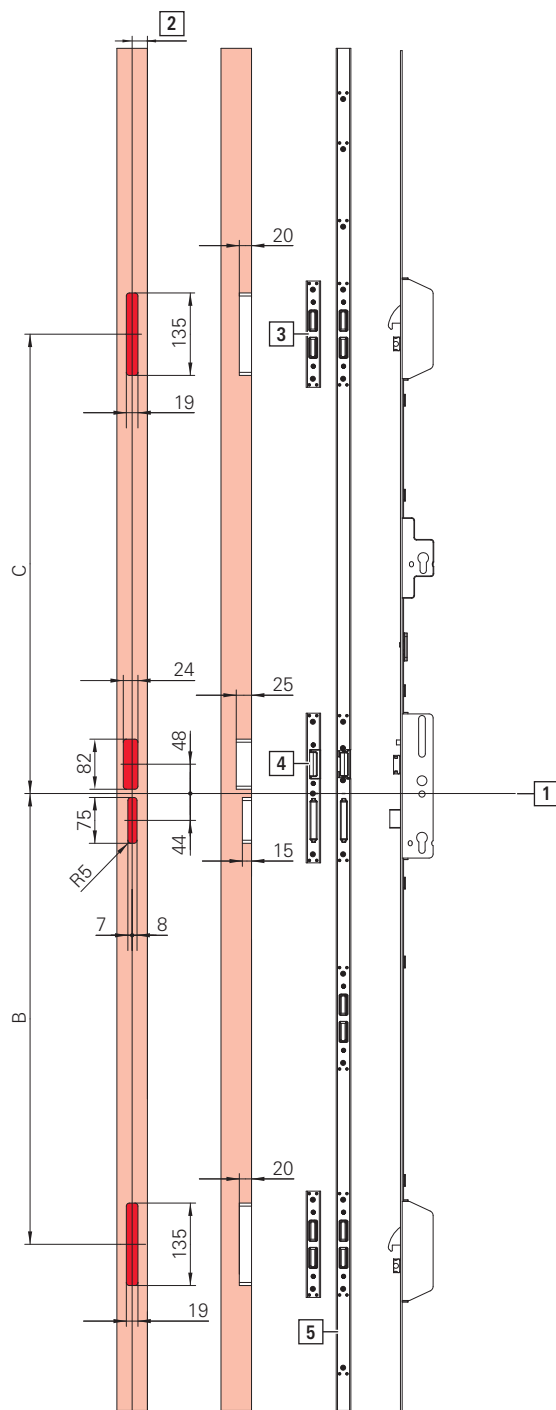


- [1] Faceplate marking
- [D] Backset
- [E] Distance
- [M] Centre of spindle-receiver to centre of main lock
- [X] Cropping range

Handle height	
[G]	1020
[E]	92
[M]	22

Pattern	A	B	C	H	K	M	N	O	[X]
V02/17	2200	738	752	382	260	998	1380	1750	300

Frame



- [1] Faceplate marking
- [2] Routing axis
- [3] Combination striker
- [4] Latch / deadbolt striker
- [5] Striker strip

► Carry out the routing work as shown in the drawing.



INFO

The routing refers to PVC and aluminium strikers.
Request the routing drawing for timber strikers.



INFO

The routing depth depends on the leg height on the striker.
Example – combination striker:

- Striker height = 24.5 mm
- Leg height = 7 mm
- Min. routing depth = 17.5 mm

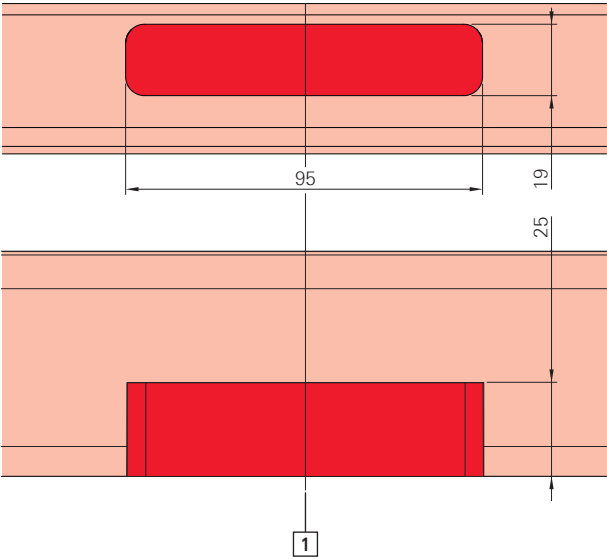


INFO

The routing axis depends on the profile.

Pattern	B	C
V02/17	738	752

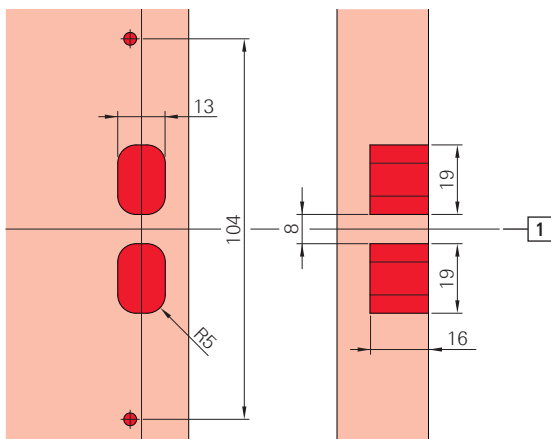
5.5.2.4 Top shootbolt protrusion



[1] Centre of shootbolt protrusion

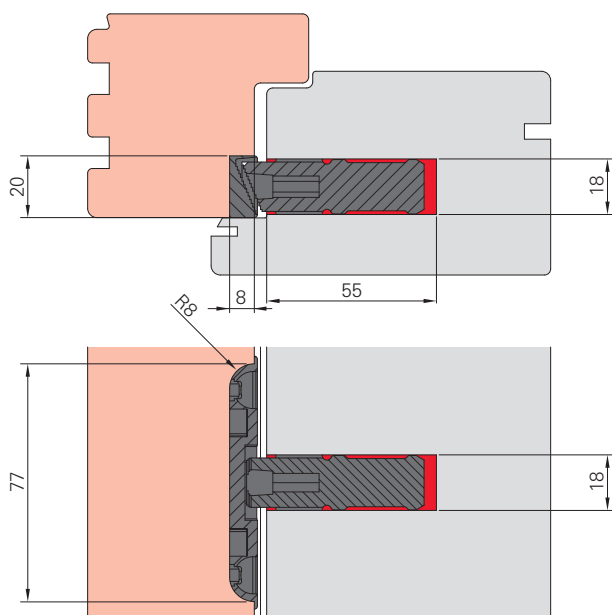
5.5.2.5 Hinge retaining mechanism

Hinge retaining mechanism cam



[1] Faceplate marking

Hinge retaining mechanism set





5.5.3 Sash

5.5.3.1 Predrilling the door lever handle set



PRECONDITION

Drilling and routing work carried out on the leaf → *from page 51.*



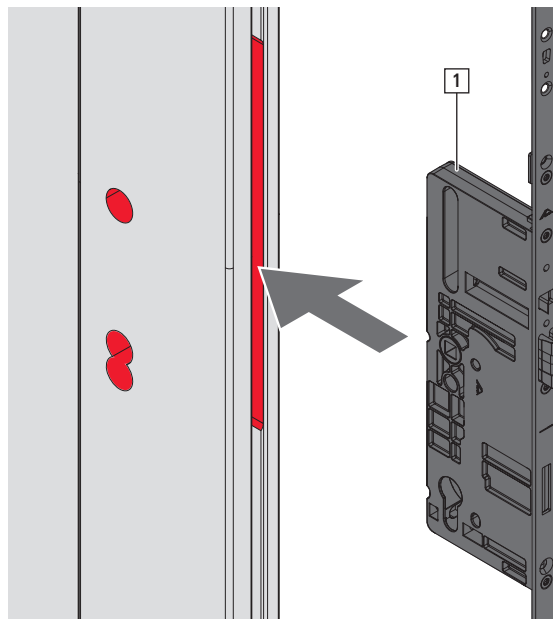
ATTENTION

Incorrect drilling methods may cause property damage!

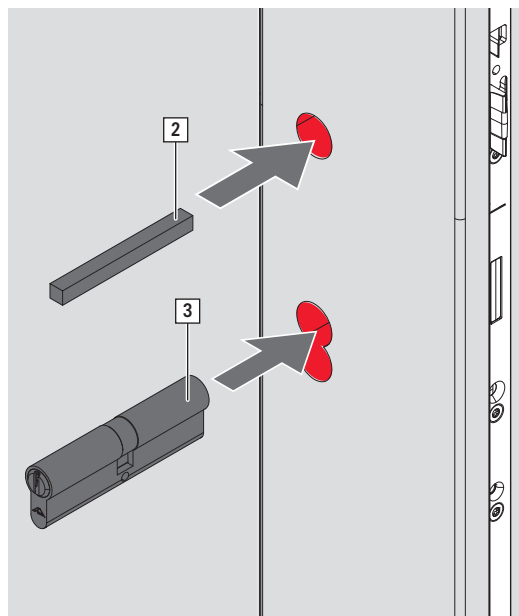
If holes are drilled in the lock area with the multipoint lock inserted, the lock may be damaged.

- Remove the multipoint lock before drilling.

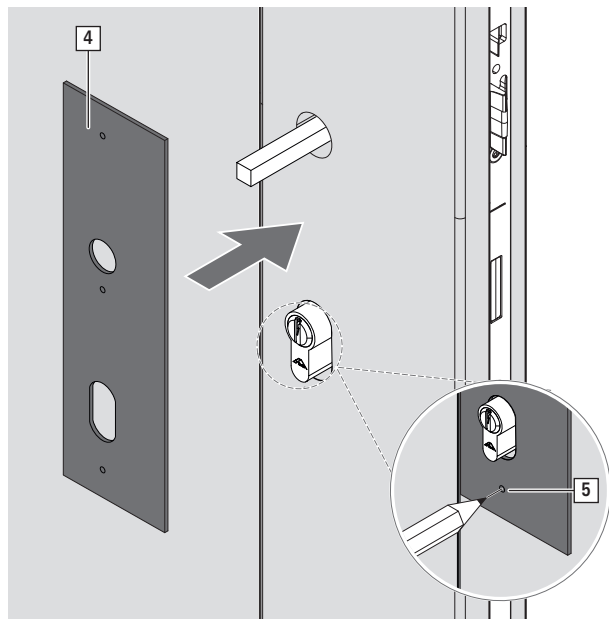
1. Insert the multipoint lock [1] into the leaf.



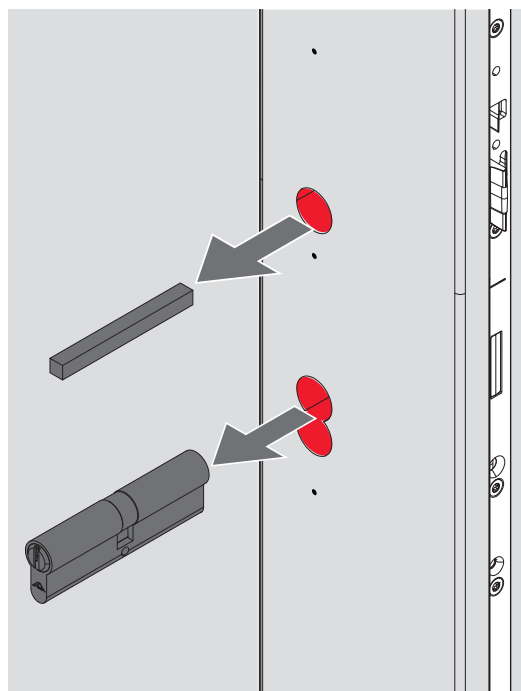
2. Insert the square spindle [2] and profile cylinder [3] into predrilled holes in the leaf.



3. Position the drilling jig [4] from the relevant manufacturer and mark the drill holes [5].

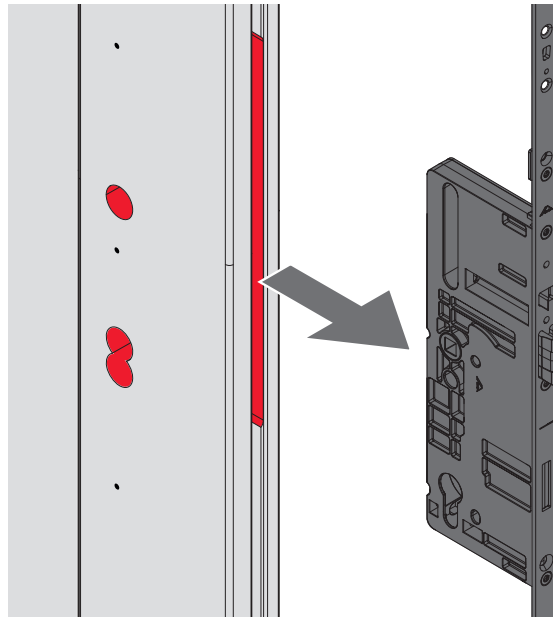


4. Remove the square spindle and profile cylinder.

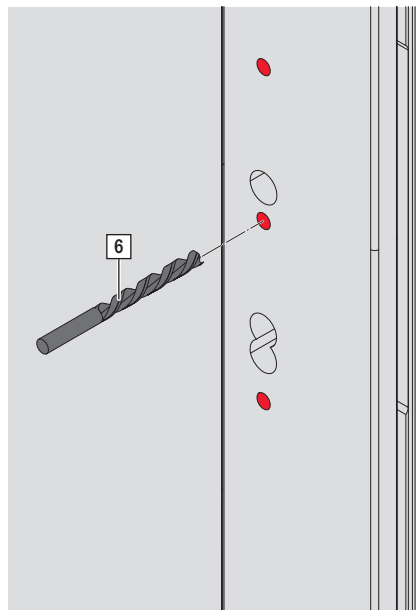




5. Remove the multipoint lock.



6. Drill the holes [6].



7. Deburr the drill holes and remove chips.



INFO

A round escutcheon can be used from a backset of 35 mm.

5.5.3.2 Turning the latch and trigger unit around



ATTENTION

Turning the latch around incorrectly may cause property damage!

If the latch is installed incorrectly, the lock may be damaged.

- ▶ Only turn the latch around in the vertical lock position.
- ▶ Only turn the latch around on the A700 when the lock is unlocked.
- ▶ Do not use the door lever handle or key when turning the latch around.

The latch can be turned around to use the main lock for DIN left or DIN right doors.

The latch can be turned around when installed.

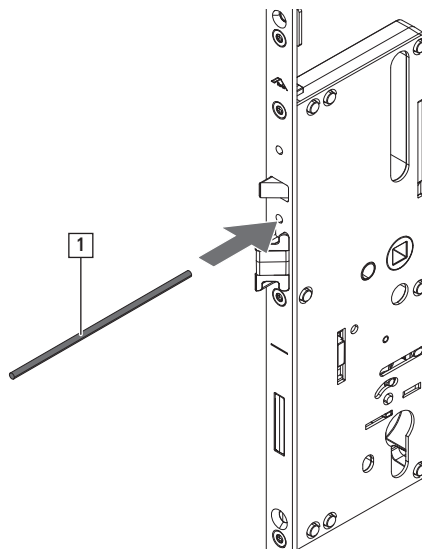
Turning the latch around on the main lock



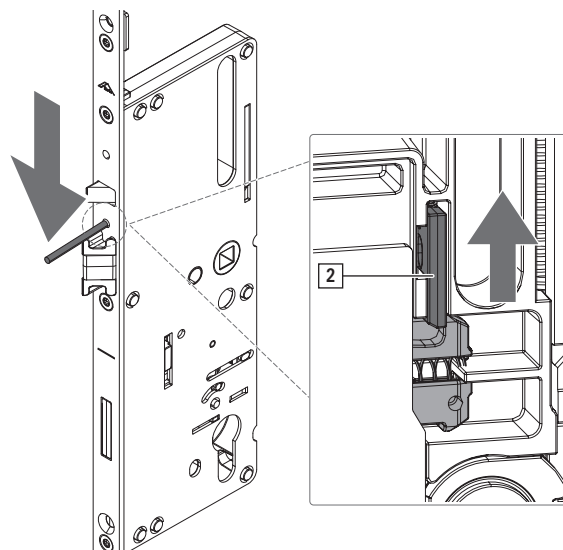
PRECONDITION

The lock is unlocked.

1. Push the pin [1] (Ø max. 3 mm) into the inspection opening.

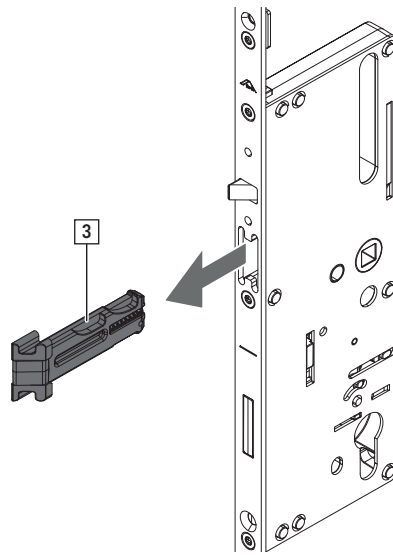


2. Push the pin down slightly so that the latch blocking device [2] disengages, then remove the pin.

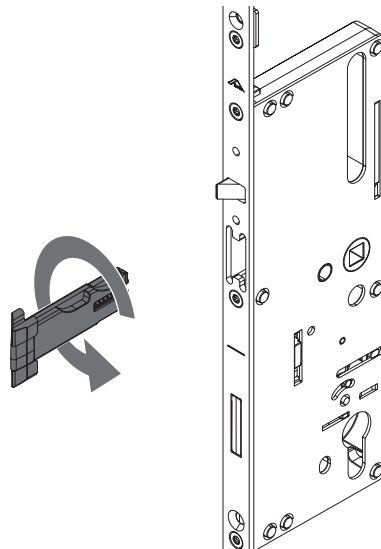




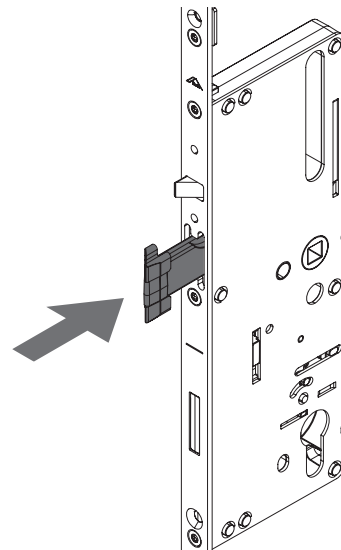
3. Remove the latch [3].



4. Turn the latch 180°.

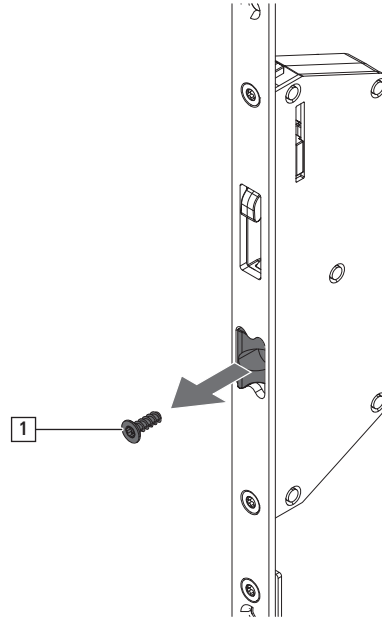


5. Insert the latch straight into the shaft and push it in until it clicks into place.

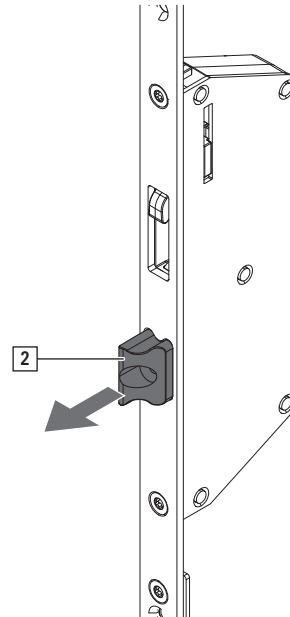


Turning the latch around on the additional lock

1. Undo the screw [1].

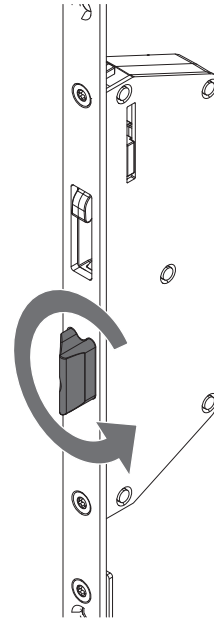


2. Remove the latch [2].

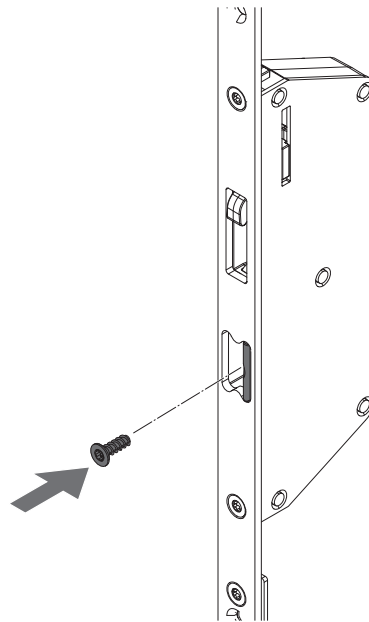




3. Turn the latch 180°.



4. Insert the latch straight into the shaft and push it in until it clicks into place.
5. Tighten the screw to 1.2 Nm.



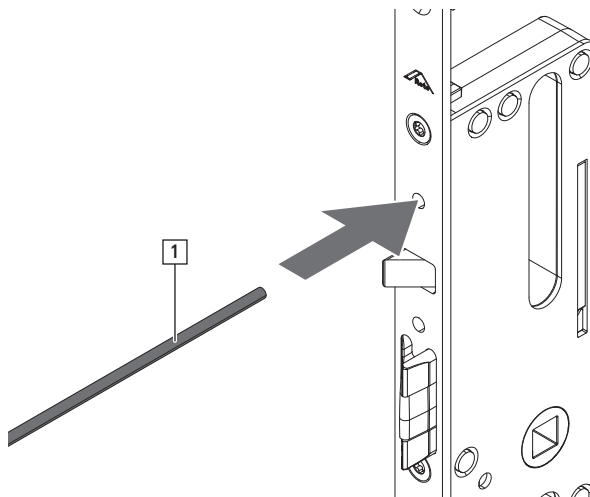
Turning the trigger unit



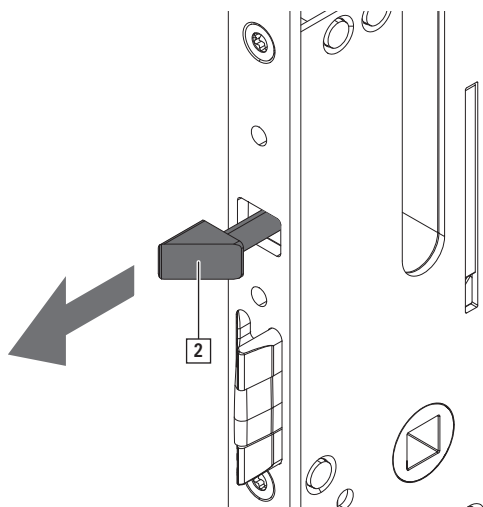
PRECONDITION

The trigger unit has previously been triggered.

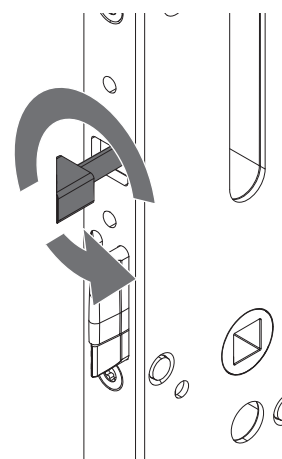
1. Push the pin [1] (Ø max. 3 mm) into the inspection opening.



2. Push the pin down slightly so that the trigger unit is triggered.
3. Pull the trigger unit [2] forwards slightly.



4. Turn the trigger unit 180°.
Tool: open-end spanner WAF8





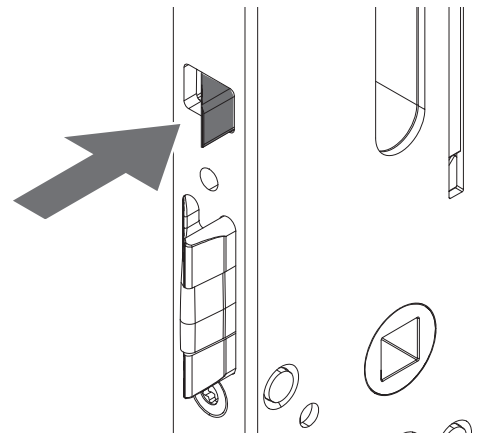
5. Push the trigger unit back into the shaft straight until it clicks into place.



ATTENTION
Incorrect installation of the trigger unit may cause property damage!

If the door lever handle is used before the trigger unit has clicked into its final position, the lock may be damaged.

- ▶ Push the trigger unit back into the shaft straight until it clicks into place.
- ▶ Only use the door lever handle once the trigger unit has clicked into place.



Adjusting the trigger unit → *from page 108*

5.5.3.3 Multipoint lock

1. Insert the multipoint lock [1] into the leaf groove.
2. Fasten the multipoint lock with screws [2].



INFO

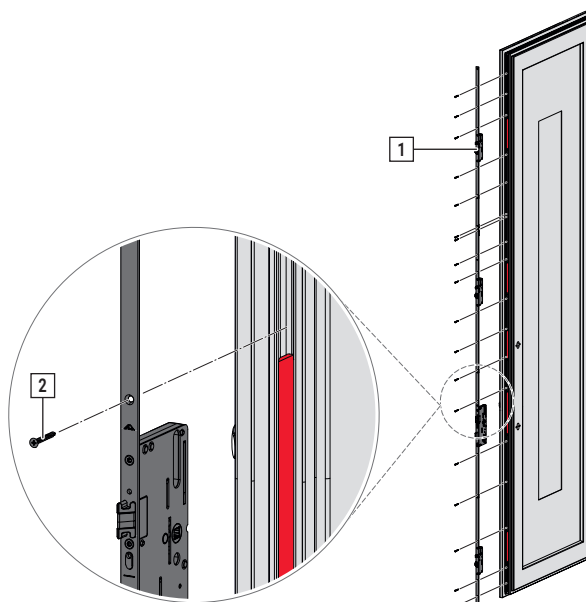
Only occupy the screw positions for the day-time unlocking device when the day-time unlocking device is installed.

Only occupy the screw positions for the drive unit when the drive unit is retrofitted.

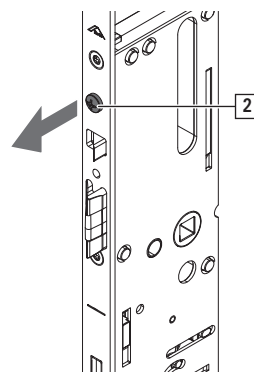


INFO

Turn in screws straight → *from page 25.*



3. Remove the transport securing screw [3] after installation.





5.5.3.4 Couplable multipoint locking



ATTENTION

Property damage is possible if no connector component is fitted.

If couplable multipoint lockings are fitted without a connector component, the connecting rod is not guided cleanly and can block.

- Only fit couplable multipoint lockings together with a connector component.

1. Connect the connector component to the coupling point on the multipoint locking. → *from page 27*
Alternatively: crop the connector component to 170 mm and connect it to the coupling point on the extendable multipoint locking.
2. Insert the multipoint locking with connector component into the leaf groove.
3. Fasten the multipoint locking and connector component with screws.



INFO

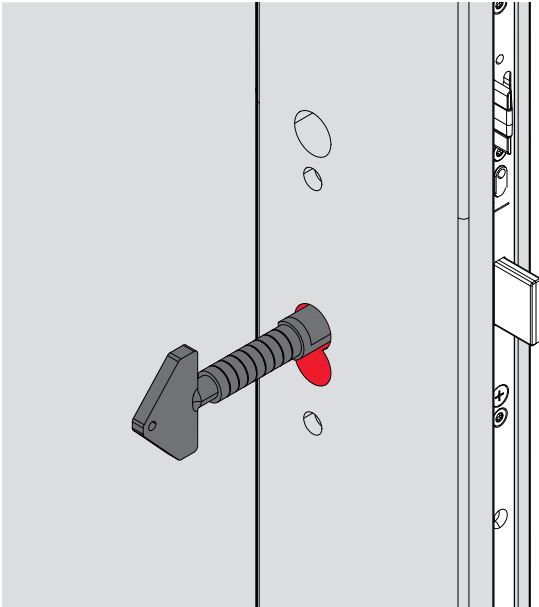
Fill every screw position. Turn in screws straight. → *from page 25*

5.5.3.5 Door lever handle set



INFO

When an original cylinder is not installed, only lock and unlock the door using the universal access key.



INFO

Install the profile cylinder or round cylinder without subjecting it to stress and align at a right angle to the leaf.

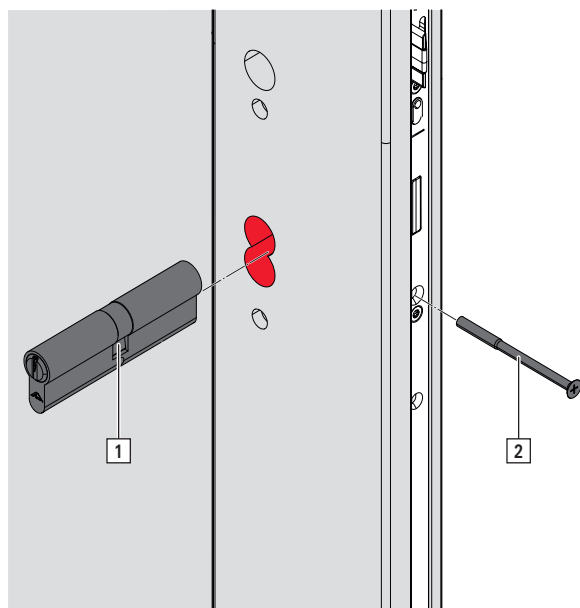


INFO

When changing the profile cylinder or round cylinder, choose a faceplate screw length based on the backset.

Profile cylinder

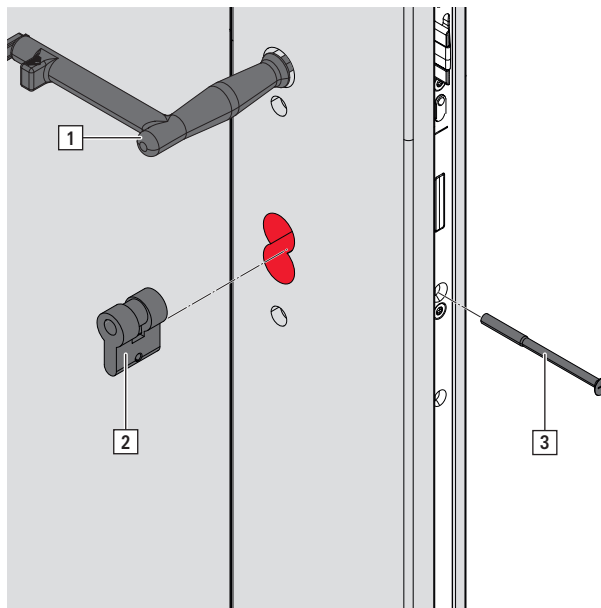
1. Insert the profile cylinder [1] and fasten with a screw [2].





Round cylinder

1. Push and hold the door lever handle [1].
2. Insert the round cylinder [2], then release the door lever handle.



3. Fasten the round cylinder with a screw [3].

Door lever handle set with long plate and escutcheon

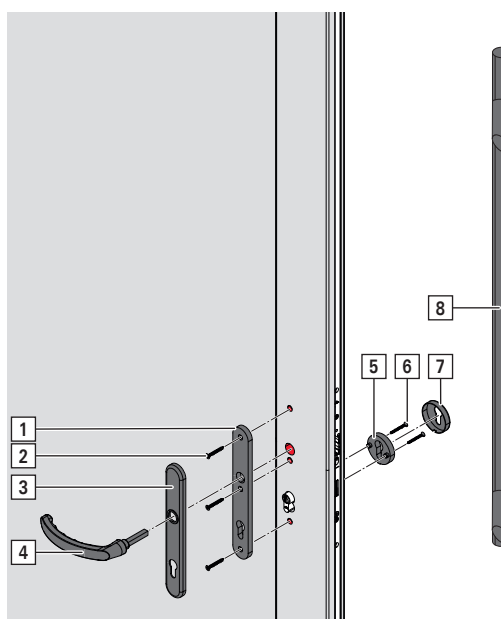


INFO

Fit long plates and escutcheons without subjecting them to stress.

1. Fit the door lever handle set with long plate and escutcheon according to the hardware manufacturer's specifications.

- [1] Long plate
- [2] Screw for long plate
- [3] Cover for long plate
- [4] Door lever handle
- [5] Escutcheon
- [6] Screw for escutcheon
- [7] Cover for escutcheon
- [8] Pull handle



5.5.3.6 Performance test



PRECONDITION

The leaf and frame must be vertical in order to carry out the performance test.

Fixing screws



ATTENTION

Over-tightened screws may cause property damage!

Over-tightened screws lose their hold and no longer provide the necessary strength.

- ▶ Do not over-tighten screws. Note the torque.

Use a screwdriver to check that all fixing screws have been tightened.

Lever handle function

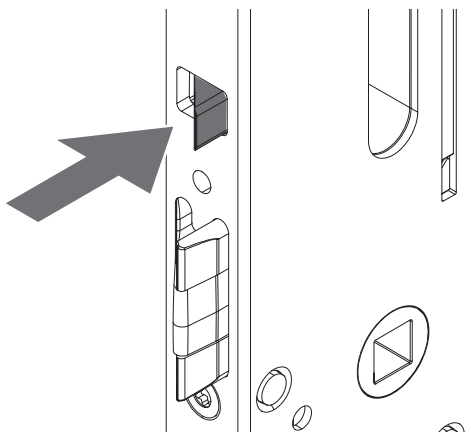
Push the lever handle all the way down and release it.

- ▶ The lever handle must automatically return to the initial position.

Automatic function

1. Press the trigger unit.

- ▶ All of the automatic power wedges and the deadbolt extend.



2. Retract the automatic power wedges and deadbolt again using the lever handle or cylinder key. To do so, push the lever handle all the way down and release it.

- ▶ All of the automatic power wedges and the deadbolt retract again.



Latch function

1. Push the lever handle all the way down.
 - ▷ The latches must retract.
 - ▷ When pushed down, the latches may protrude over the lock faceplate by a maximum of 2 mm.
2. Release the lever handle.
 - ▷ The latches must extend fully.
3. Turn the key in the profile cylinder in the unlocking direction.
 - ▷ The latches must retract fully.
4. Turn the key in the profile cylinder to the initial position.
 - ▷ The latches must extend fully.

Blocking function

Automatic power wedges and the deadbolt in the main lock are push-back safeguarded without using the key.

1. Press the trigger unit.
 - ▷ All of the automatic power wedges and the deadbolt extend.
2. Turn the key in the profile cylinder in the locking direction.
 - ▷ The lever handle is blocked.
 - ▷ It must be possible to remove the key.
3. Turn the key in the profile cylinder in the unlocking direction.
 - ▷ The lever handle can be operated.
4. Retract the automatic power wedges and deadbolt again using the lever handle or cylinder key.

For fault assistance, see → *from page 97*.



INFO

Carry out a performance test again after the door has been installed.

Performance test after installation

1. Close the leaf.
2. Insert the key and lock the leaf.
3. Remove the key.
4. Reinsert the key and unlock the leaf.
5. Remove the key.
 - ▷ Performance test passed.

5.5.4 Frame

5.5.4.1 Striker strip / striker

1. Insert the striker strip [1] or striker [2] into the frame.
2. Fasten the striker strip or striker with the recommended screws [3] (Ø4) → *from page 26*.



INFO

Fill every screw position. Turn in screws straight → *from page 25*.

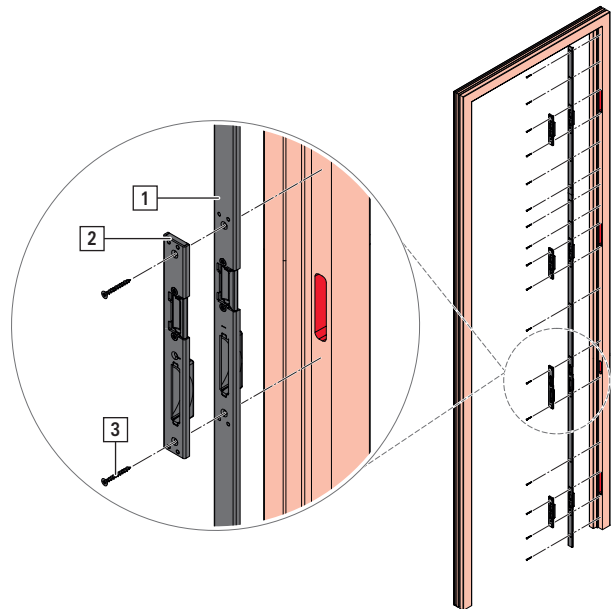
The screw length depends on the profile used.



INFO

Do not use stainless-steel screws on the Roto Sil surface.

Use stainless-steel screws (type A2) on stainless-steel components.

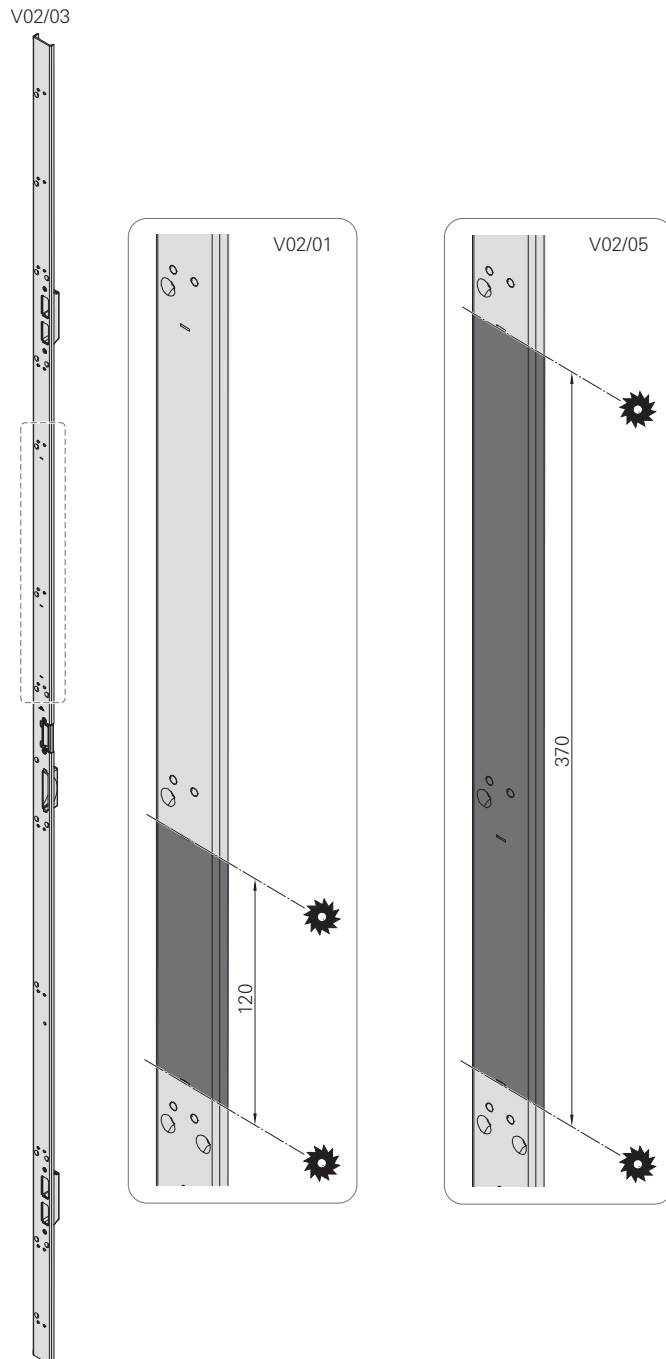




5.5.4.2 Variable striker strips

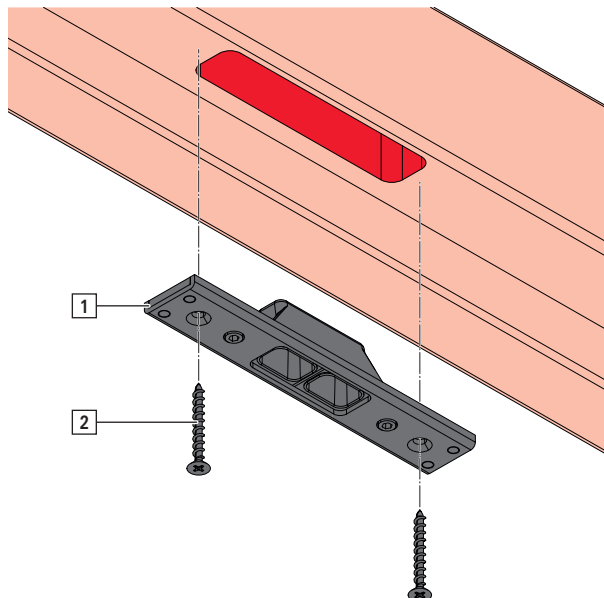
Striker strips with locking pattern V02/03 are adaptable. The variable striker strip can be machined to adapt it to locking pattern V02/01 or V02/05.

The diagram below shows the individual markings where the striker strip can be adapted.



5.5.4.3 Shootbolt protrusion striker

1. Fasten the shootbolt protrusion striker [1] with two screws [2].

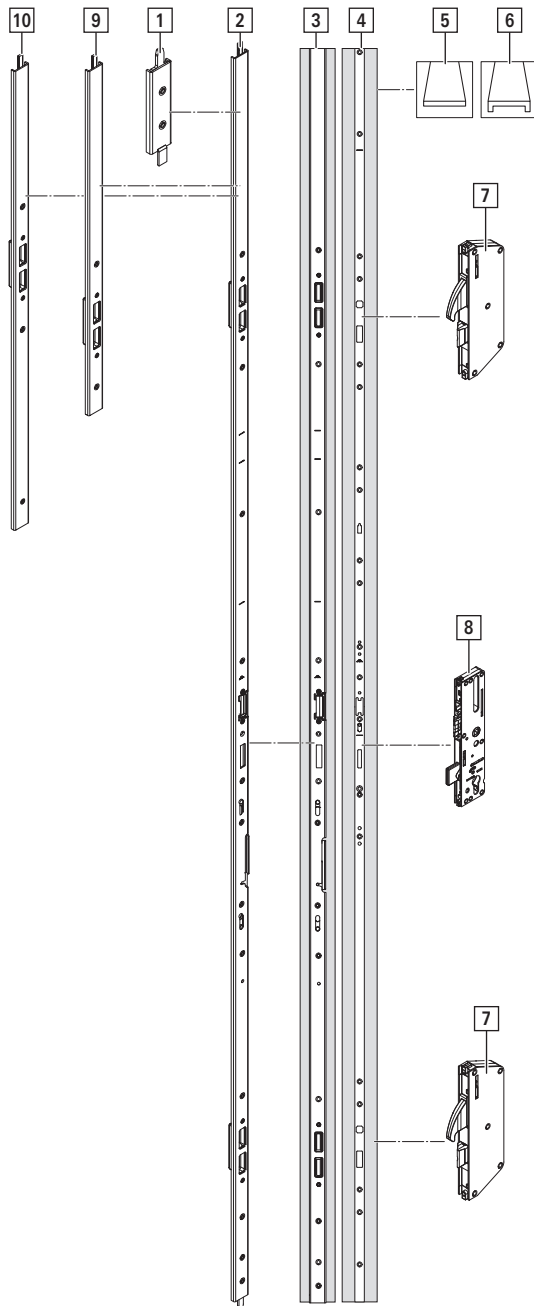




5.6 Double-leaf doors

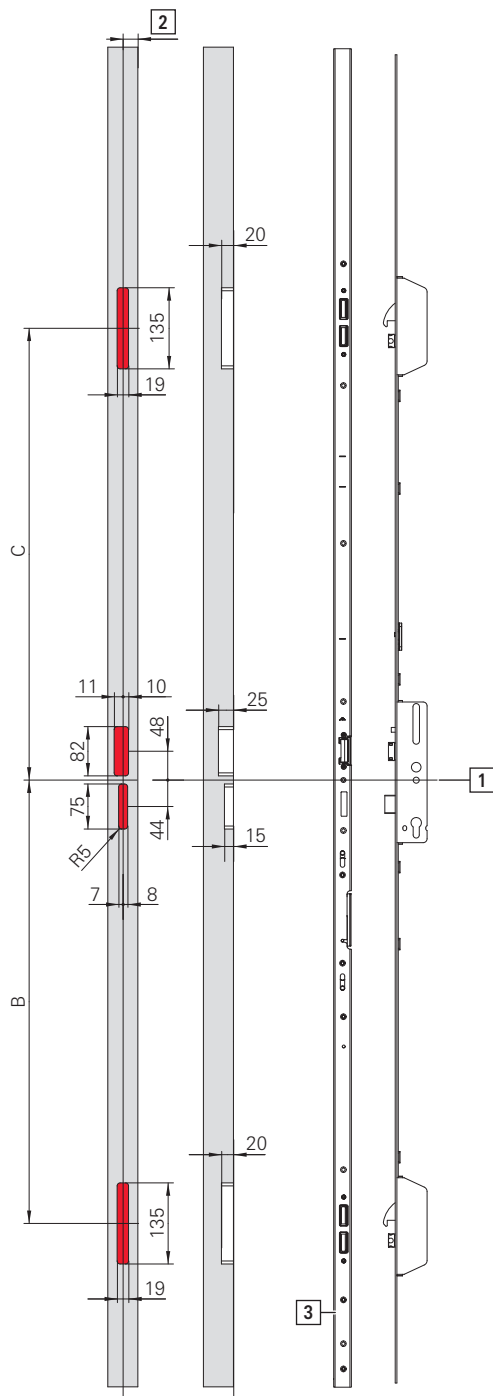
5.6.1 Lever-operated espagnolette Standard

5.6.1.1 Overview



Assignment	Meaning
[1]	Connector component for lever-operated espagnolette Standard
[2]	Lever-operated espagnolette Standard
[3]	Second opening leaf
[4]	First opening leaf
[5]	Flat faceplate
[6]	U-shaped faceplate
[7]	Additional lock (AH)
[8]	A700 main lock
[9]	Extension 600
[10]	Extension 800

5.6.1.2 Drilling and routing dimensions

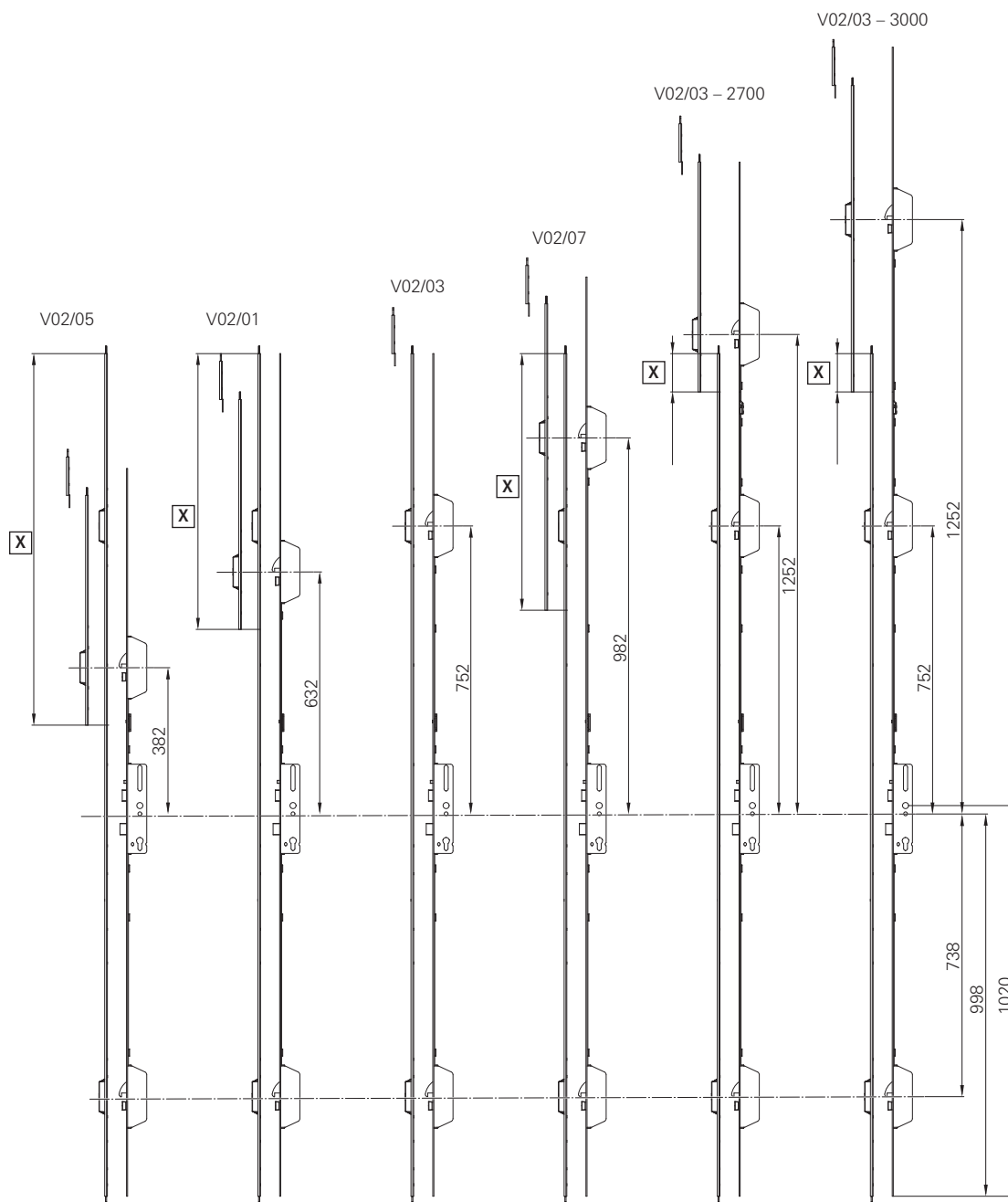


- [1] Faceplate marking
- [2] Routing axis
- [3] Lever-operated espagnolette Standard

Pattern	B	C
V02/01	738	632
V02/03	738	752
V02/05	738	382
V02/07	738	982



5.6.1.3 Locking pattern



[X] Cropping range

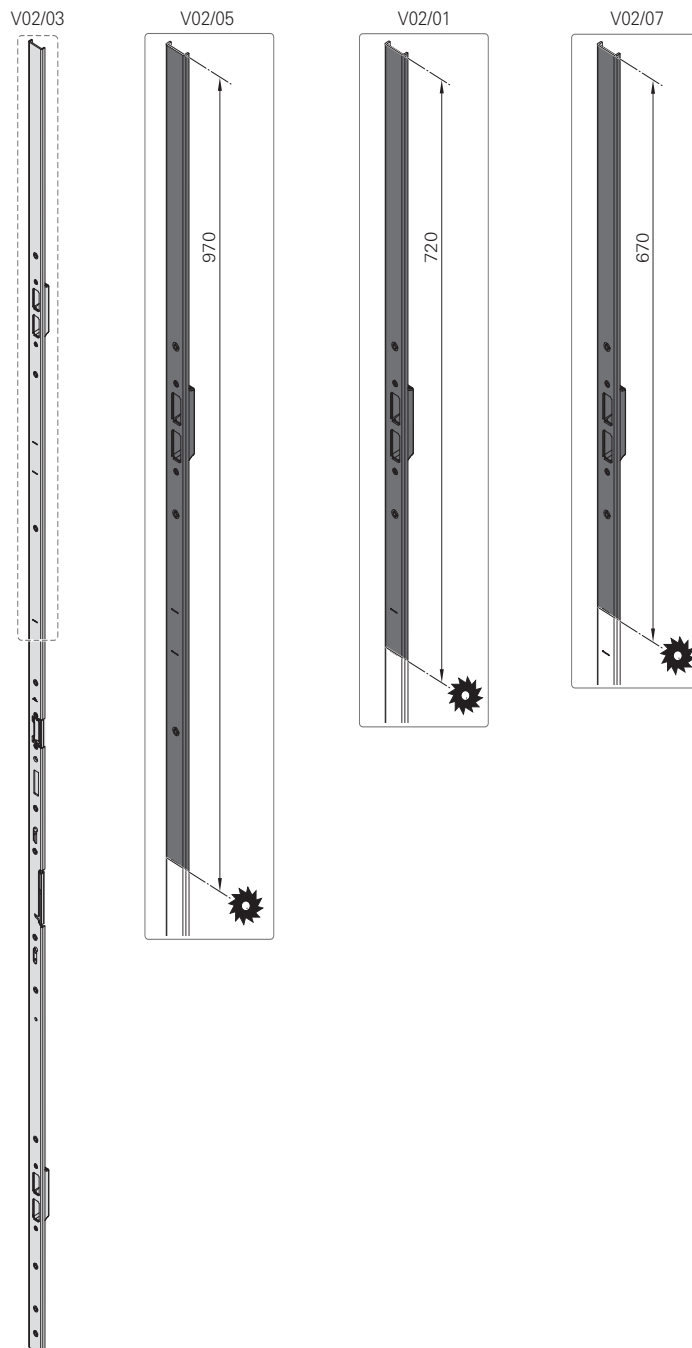
■ Combination

Pattern	Min. SRH	Max. SRH	[X]	Lever-operated espagnolette	Extension 600	Extension 800	Connector component
V02/05	1615	1930	970	■	■	—	■
V02/01	1931	1974	720	■	■	—	■
V02/03	1975	2214	—	■	—	—	■
V02/07	2215	2430	670	■	—	■	■
V02/03 to 2700	2485	2784	100	■	■	—	■
V02/03 to 3000	2785	3000	100	■	—	■	■

5.6.1.4 Variable locking pattern

The lever-operated espagnolette, standard with locking pattern V02/03 is adaptable. The lever-operated espagnolette, standard can be machined to adapt it to locking patterns V02/01, V02/05 and V02/07.

The diagram below shows the individual markings where the lever-operated espagnolette, standard can be adapted.





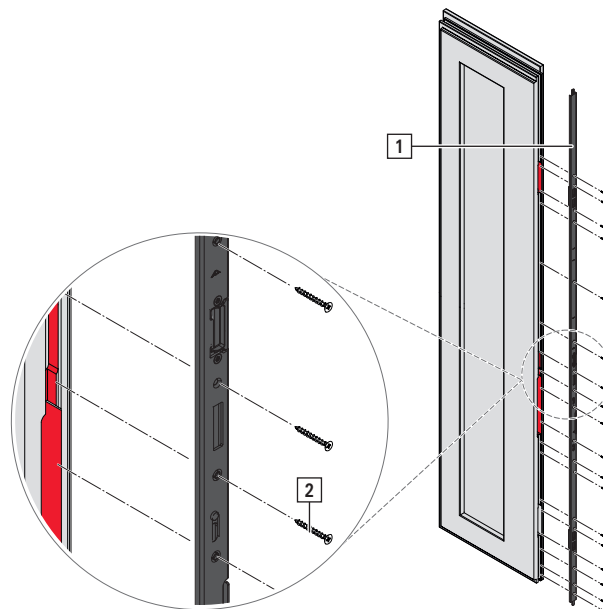
5.6.1.5 Installation

1. Insert the lever-operated espagnolette Standard [1] into the leaf groove.
2. Fasten the lever-operated espagnolette Standard with screws [2].



INFO

Fill every screw position. Turn in screws straight → *from page 25*.



3. Create a force-fit connection for coupling points → *from page 28*.



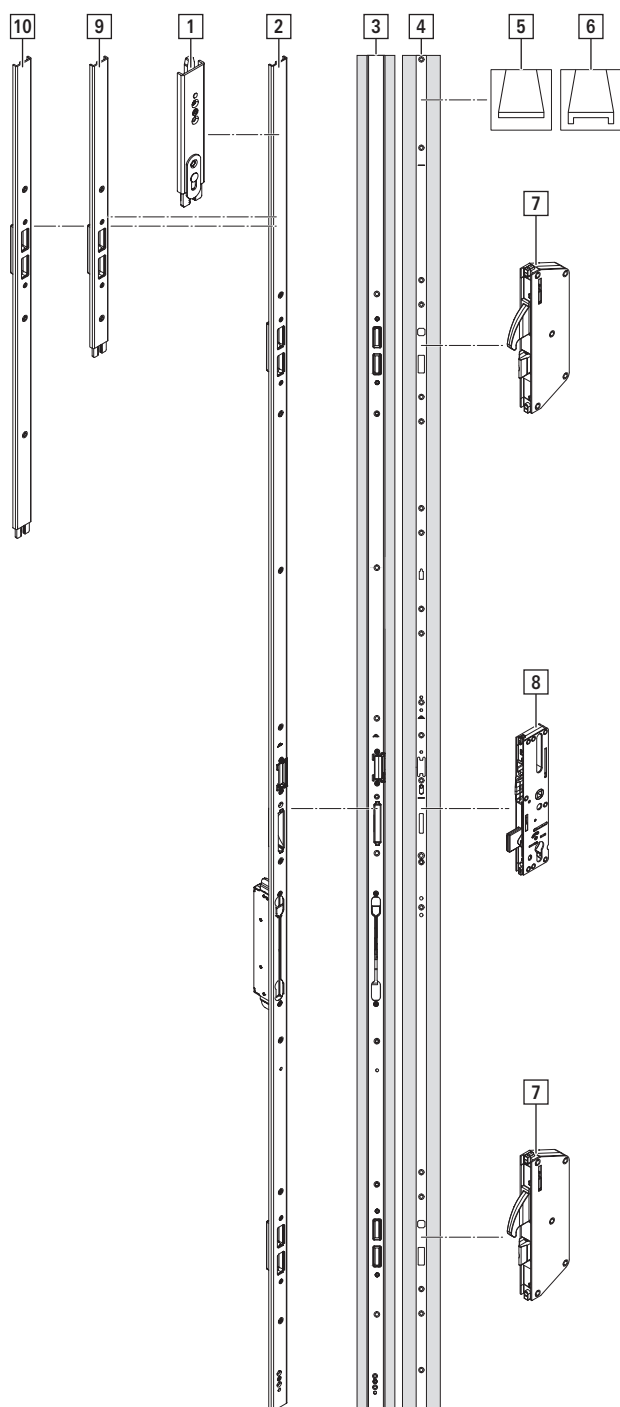
INFO

On PVC profiles with opposite hardware groove, the groove must be sealed in the area of the coupling point in order to stabilise the connection.

For this purpose, use the Roto NX connecting link (material number 350401), for example.

5.6.2 Lever-operated espagnolette Plus

5.6.2.1 Overview



Assignment	Meaning
[1]	Connector component for lever-operated espagnolette Plus
[2]	Lever-operated espagnolette Plus
[3]	Second opening leaf
[4]	First opening leaf
[5]	Flat faceplate
[6]	U-shaped faceplate
[7]	Additional lock (AH)
[8]	A700 main lock
[9]	Extension 468
[10]	Extension 768

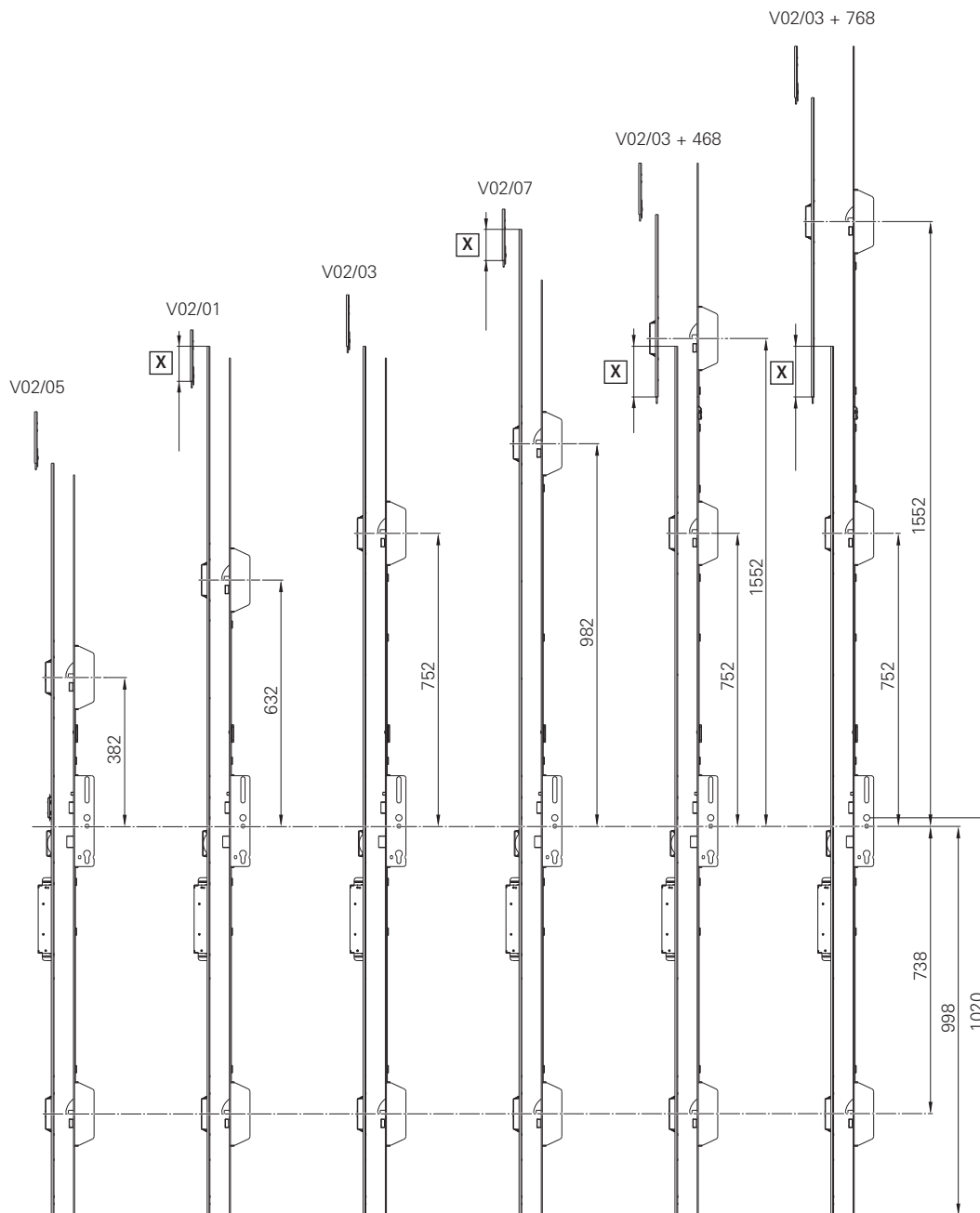
Technical drawing of a three-part aluminum profile system, showing cross-sections and dimensions.

Dimensions:

- Overall Height:** 238 mm
- Section 1 (Top):**
 - Top flange thickness: 20 mm
 - Internal channel height: 135 mm
 - Internal channel width: 19 mm
 - Internal channel radius: R5
 - Internal channel depth: 75 mm
 - Internal channel width: 82 mm
 - Internal channel depth: 48 mm
 - Internal channel width: 44 mm
 - Internal channel depth: 8 mm
 - Internal channel radius: R5
 - Internal channel depth: 190 mm
 - Internal channel width: 260 mm
- Section 2 (Middle):**
 - Top flange thickness: 20 mm
 - Internal channel height: 135 mm
 - Internal channel width: 19 mm
 - Internal channel radius: R5
 - Internal channel depth: 75 mm
 - Internal channel width: 82 mm
 - Internal channel depth: 48 mm
 - Internal channel width: 44 mm
 - Internal channel depth: 8 mm
 - Internal channel radius: R5
 - Internal channel depth: 190 mm
 - Internal channel width: 260 mm
- Section 3 (Bottom):**
 - Bottom flange thickness: 20 mm
 - Internal channel height: 135 mm
 - Internal channel width: 19 mm
 - Internal channel radius: R5
 - Internal channel depth: 75 mm
 - Internal channel width: 82 mm
 - Internal channel depth: 48 mm
 - Internal channel width: 44 mm
 - Internal channel depth: 8 mm
 - Internal channel radius: R5
 - Internal channel depth: 190 mm
 - Internal channel width: 260 mm

- | Pattern | B | C |
|---------|-----|-----|
| V02/01 | 738 | 632 |
| V02/03 | 738 | 752 |
| V02/05 | 738 | 382 |
| V02/07 | 738 | 982 |

5.6.2.3 Locking pattern



[X] Cropping range

Pattern	Min. SRH	Max. SRH	[X]
V02/05	1760	1900	–
V02/01	1901	2070	90
V02/03	2071	2270	–
V02/07	2271	2590	80
V02/03 + extension 468	2520	2700	130
V02/03 + extension 768	2820	3000	130



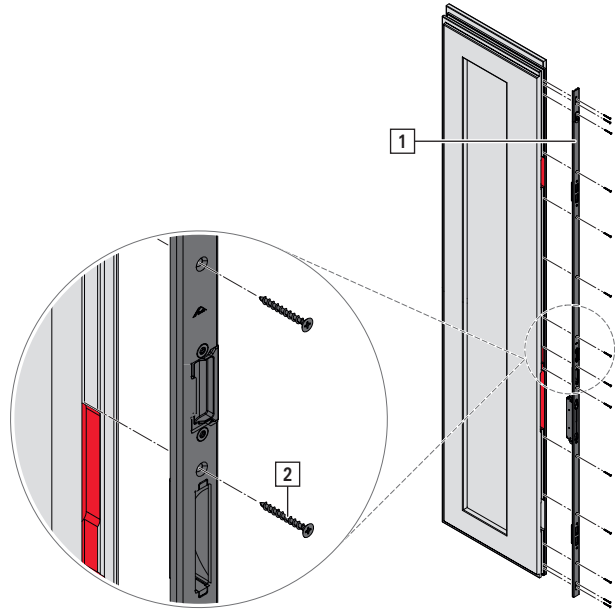
5.6.2.4 Installation

1. Insert the lever-operated espagnolette Plus [1] into the leaf groove.
2. Fasten the lever-operated espagnolette Plus with screws [2].



INFO

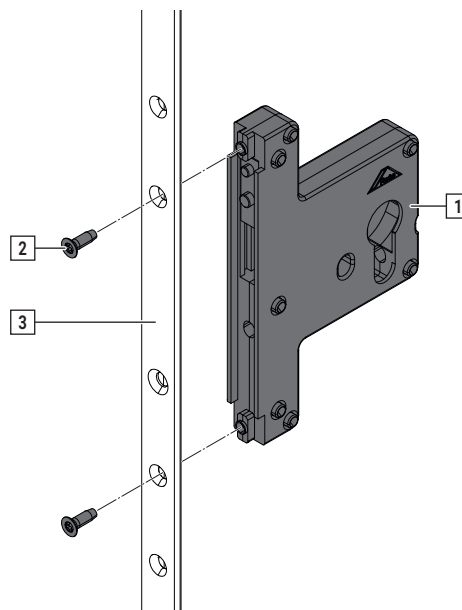
Fill every screw position. Turn in screws straight. → *from page 25*



5.7 Accessories

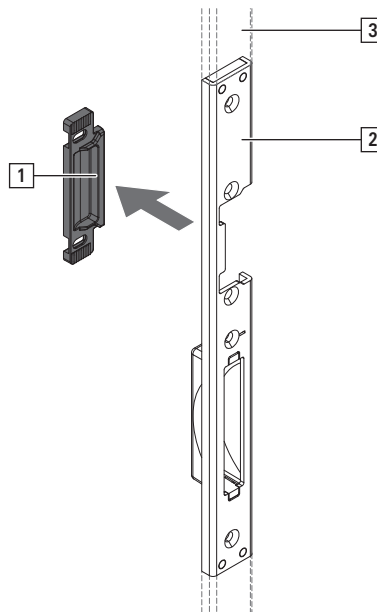
5.7.1 Additional locking device

1. Fasten the additional locking device [1] to the faceplate [3] with M4 x 12 thread-rolling screws with countersunk head [2].

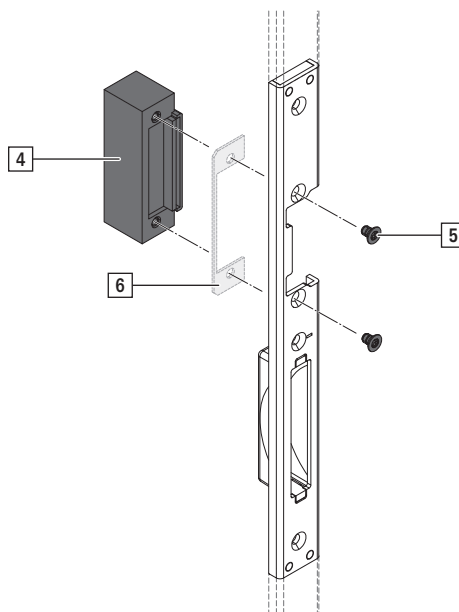


5.7.2 Electrical opener

1. Remove the replaceable part [1] from the striker [2] or from the striker strip [3].



2. Fasten the electrical opener [4] to the striker or striker strip with two screws [5].
Optional: install the packer [6].





5.7.3 Day-time unlocking device



INFO

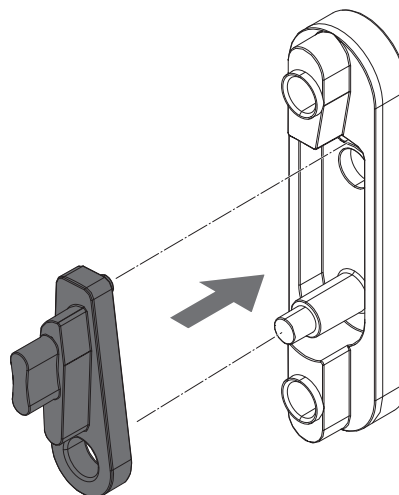
Route out the area for U-shaped faceplates. Request the routing drawing if required.



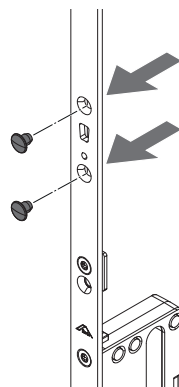
PRECONDITION

The electrical opener is installed.

1. Join the day-time unlocking device together.



2. Remove the cover caps from the screw positions for the day-time unlocking device.

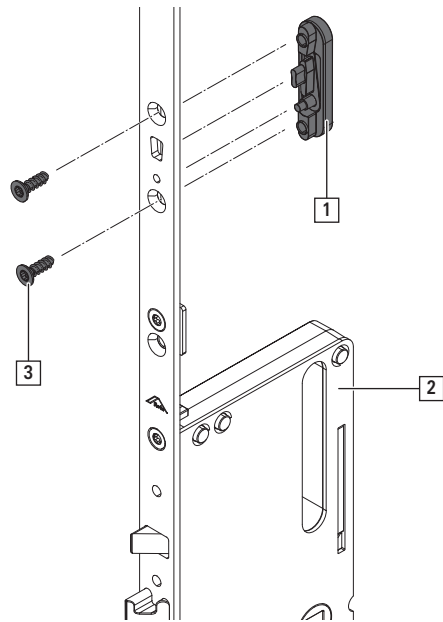


Installation

Accessories

Day-time unlocking device

3. Clip the day-time unlocking [1] device into the recess above the main lock [2].



4. Fasten with two screws [3].



5.7.4 Replacement main lock

5.7.4.1 A700

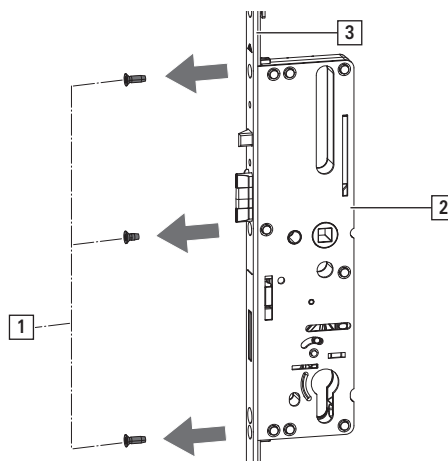


INFO

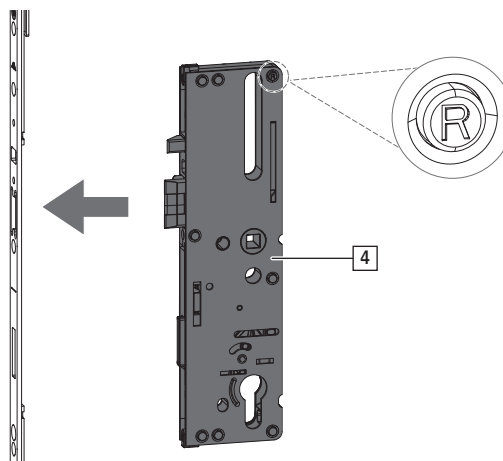
The system certificate and warranty become void when the replacement main lock is installed.

Replacement when removed

1. Undo three screws [1].
Tool: T20 hexalobular socket



2. Remove the main lock [2] from the faceplate [3].
3. Insert the replacement main lock [4] marked with "R" into the faceplate.

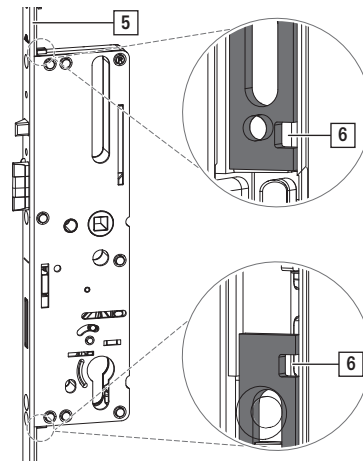


4. Mount the connecting rod [5] in the connector [6] of the replacement main lock.

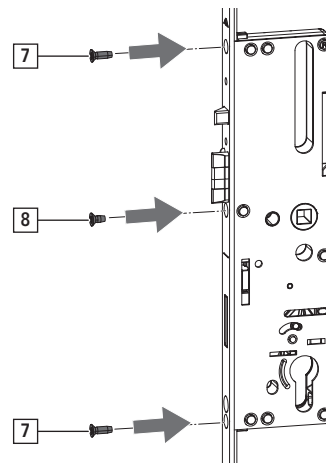


INFO

Position the replacement main lock so that it is flush with the connecting rod and faceplate.

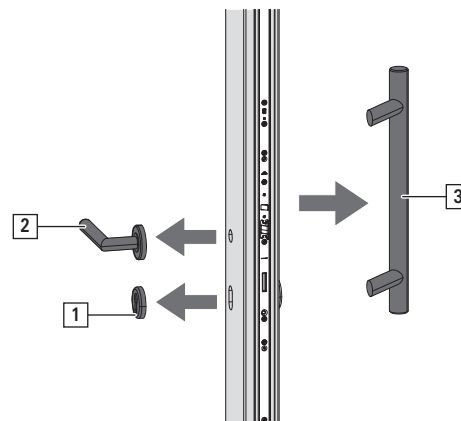


5. Fit it with three screws.
[7] M4 x 12
[8] M4 x 8
Torque: max. 4 Nm



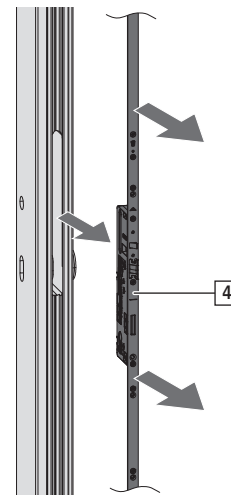
Replacement when installed

1. Remove the profile cylinder [1], doorknob [2] and pull handle [3].

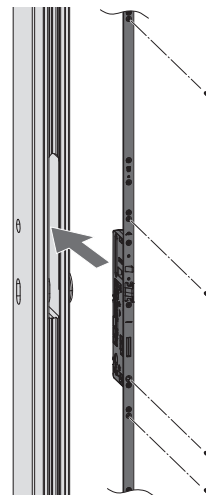




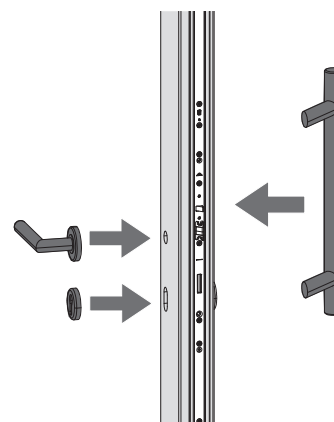
2. Undo all screws on the multipoint lock [3] and remove the entire faceplate from the door profile.



3. Perform steps 1 to 5 from "when removed".
4. Insert the faceplate into the door profile. Ensure that it is flush.
5. Fasten all screws on the multipoint lock.



6. Install the profile cylinder, door lever handle and pull handle.



6 Retrofitting the drive unit

The drive unit can be retrofitted.



INFO

It is not permitted to retrofit the drive unit to escape doors in accordance with EN 179.

6.1 Installing the drive unit



INFO

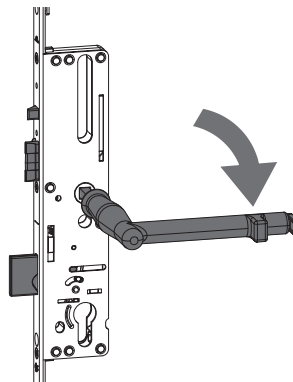
Day-time unlocking device not recommended when retrofitting the drive unit. Remove this if necessary.



INFO

Ensure that the transport retaining bolt has been removed.

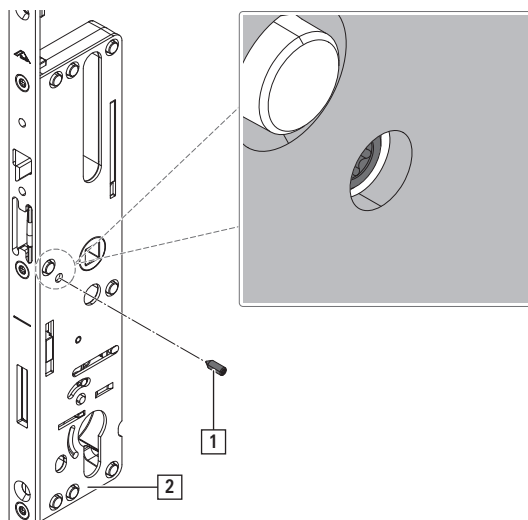
1. Push the lever handle down and hold it there.
▷ The deadbolt and latches must be retracted.



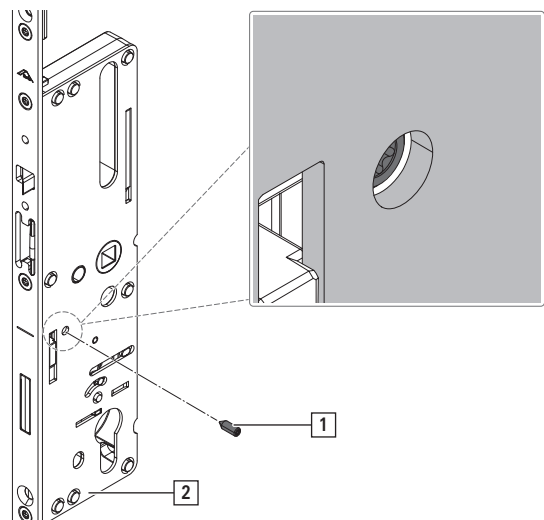
2. Screw the threaded pin [1] into the plate [2] as far as it will go.
▷ The threaded pin must go out of sight behind the plate.
The thread is cut into when it is screwed in for the first time. For technical reasons, resistance will be felt during this process.

Tool: 2 mm hex key

Backset 35, 40

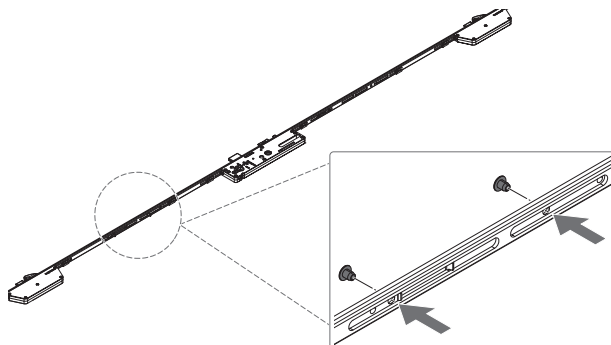


Backset > 40

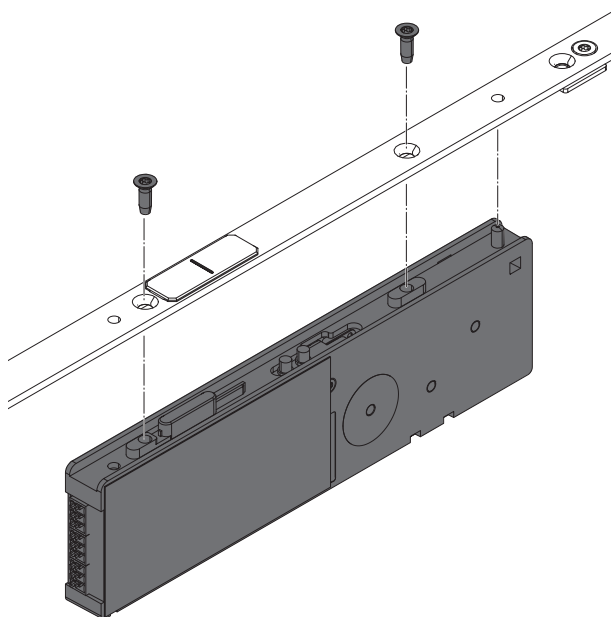




3. Release the lever handle.
▷ The lever handle must automatically return to the initial position and the latches must extend fully.
If the latches do not extend fully, screw the threaded pin in further.
4. Remove the cover caps from the screw positions for the drive unit.



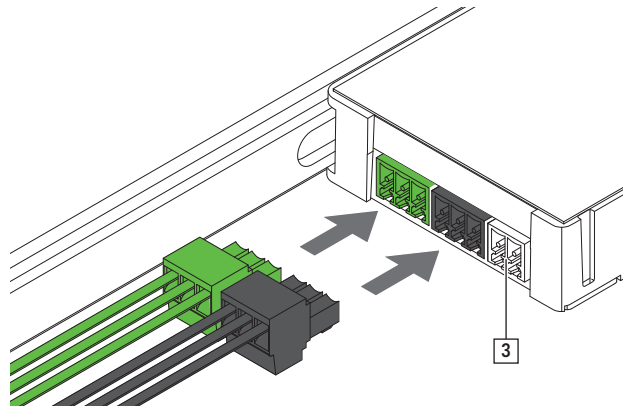
5. Insert the drive unit into the faceplate.
6. Fasten the drive unit with M4 x 12 Taptite thread-rolling screws.
Tool: T20 hexalobular socket
Torque 1.5 –2 Nm



7. Optionally adjust the travel and carry out a performance test on the drive unit before installing the multipoint lock → *from page 87*.

6.2 Installing the multipoint lock

1. Connect the drive unit to the power supply.
Leave the slot on the right [3] free.



2. Insert the multipoint lock [4] into the leaf groove and fasten with screws.



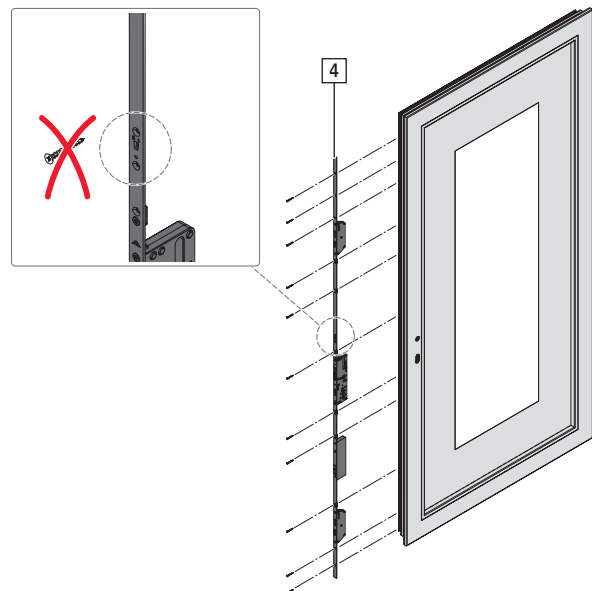
INFO

Do not occupy the screw positions for the day-time unlocking device.



INFO

Turn in screws straight → *from page 25.*



3. Only adjust the travel and carry out the performance test when the element is installed.
→ *from page 89* (with Control Unit)
→ *from page 92* (with cable junction)

6.3 Initial operation of the door



DANGER

Risk of death caused by electric shock!

Current can lead to fatal injuries.

- ▶ Installation and maintenance work may only be carried out by qualified electricians.
- ▶ Observe and comply with the respective national regulations (in Germany VDE 0100 and others).
- ▶ When laying the network connection cable on-site, all-pole safety isolation must be established.
- ▶ Only carry out work when the power supply is disconnected.

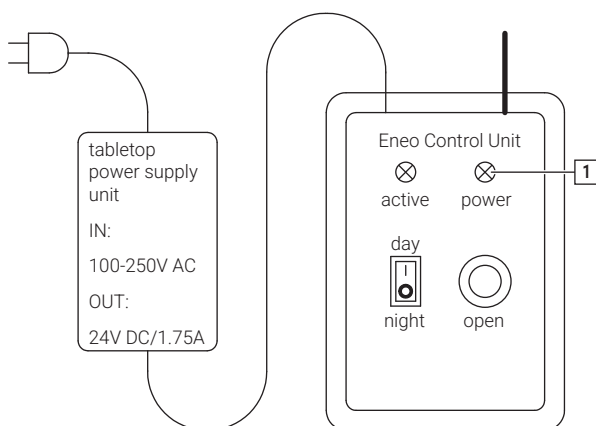
Before connecting the drive unit to the supply voltage, check that it is working properly, as for a mechanical multipoint lock. The force required to actuate the lever handle and the cylinder key must not exceed normal manual force.



6.3.1 Multipoint lock not installed (Control Unit)

6.3.1.1 Connecting the Control Unit to the drive unit

1. Connect the Control Unit to the drive unit using the cable (mat no. 524935) via Plug&Play connections.
2. Connect the Control Unit to the power supply.
 ▷ The power LED [1] lights up green.



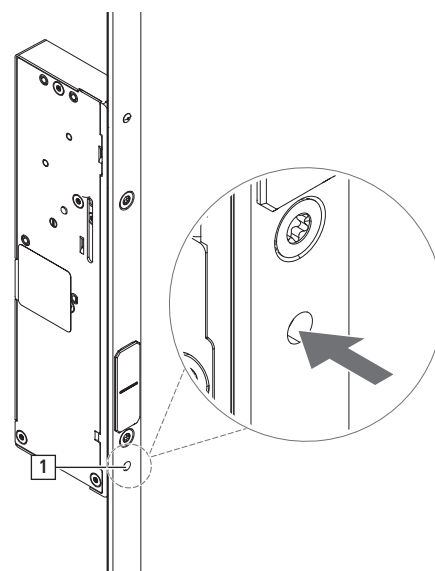
6.3.1.2 Adjusting the travel



INFO

Only perform the adjustment when the element is vertical.

1. Push the lever handle down and hold it there.
2. Insert the pin or tool ($\varnothing$ 3 to 3.5 mm) into the inspection opening.
 Press and hold the radio-controlled teach button [1] for five seconds.
 ▷ The drive unit provides confirmation with a sequence of sounds and is adjusted.



3. Keep the lever handle pushed down.
 ▷ The drive moves down, up and then down again, with each movement being confirmed by 1x beep.

- ▷ The drive unit exits the mode automatically.
- 4. Release the lever handle.
- 5. Disconnect the drive unit from the power supply and reconnect it for a restart.
- 6. Carry out a performance test.

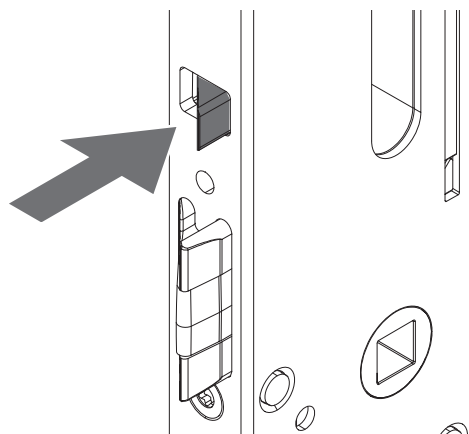


INFO

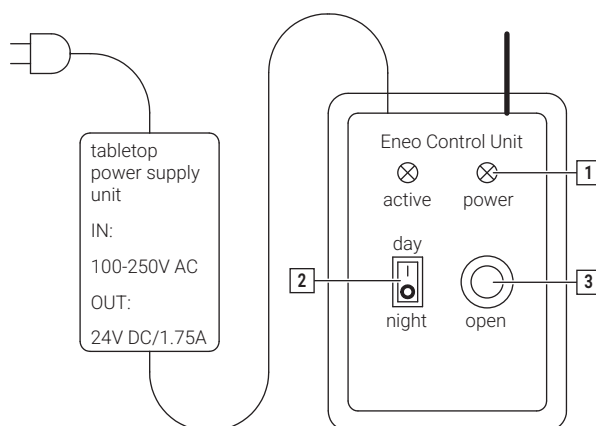
If there is an error, 7x two-tone beeps are heard .
Repeat the adjustment from step 2 onwards.

6.3.1.3 Drive unit performance test

1. Activate the trigger unit.



2. Ensure that the day / night changeover switch [2] on the Control Unit is set to 0 (night).



3. Press the open button [3].
 - ▷ The additional locks, main deadbolt and latches are retracted. Only the latches extend again.
 - ▷ Performance test passed.If the performance is not as expected, see fault assistance → *from page 113* → *from page 97*.
4. Install the multipoint lock → *from page 86*.



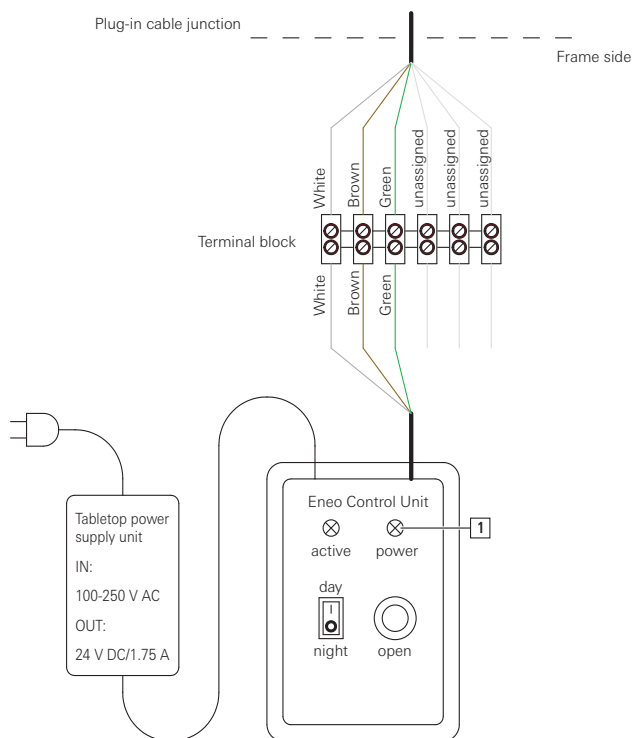
6.3.2 Multipoint lock installed (Control Unit)

6.3.2.1 Connecting the Control Unit to the drive unit

1. Open the leaf.
2. Connect the Control Unit to the cable junction cable.

Connector / cable assignment

White: IN1 / input 1 (OPEN)
 Brown: +24 V
 Green: GND
 Yellow: unassigned
 Grey: unassigned
 Pink: unassigned



3. Connect the Control Unit to the power supply.
 - ▷ The power LED [1] lights up green.

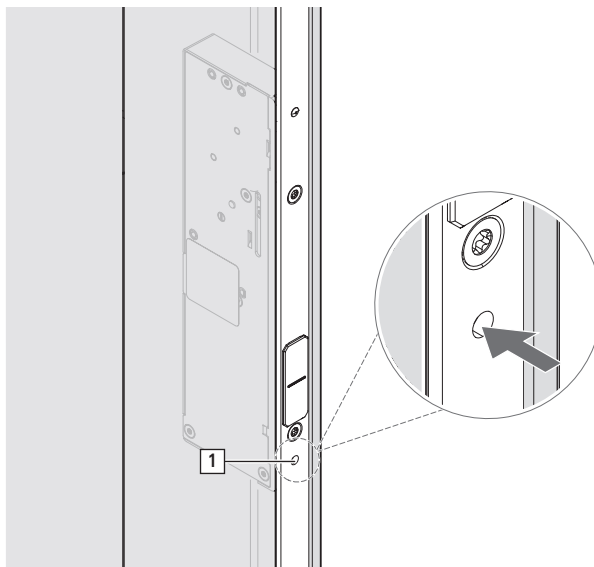
6.3.2.2 Adjusting the travel



INFO

Only perform the adjustment when the element is vertical.

1. Open the leaf.
2. Push the lever handle down and hold it there.
3. Insert the pin or tool ($\varnothing$ 3 to 3.5 mm) into the inspection opening.
Press and hold the radio-controlled teach button [1] for five seconds.
▷ The drive unit provides confirmation with a sequence of sounds and is adjusted.



4. Keep the lever handle pushed down.
▷ The drive moves down, up and then down again, with each movement being confirmed by 1x beep.
▷ The drive unit exits the mode automatically.
5. Release the lever handle.
6. Disconnect the drive unit from the power supply and reconnect it for a restart.
7. Carry out a performance test.



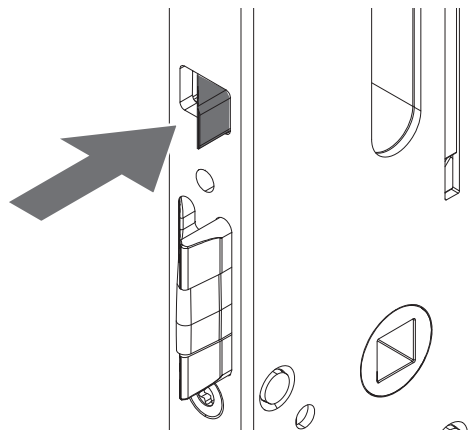
INFO

If there is an error, 7x two-tone beeps are heard .
Repeat the adjustment from step 2 onwards.

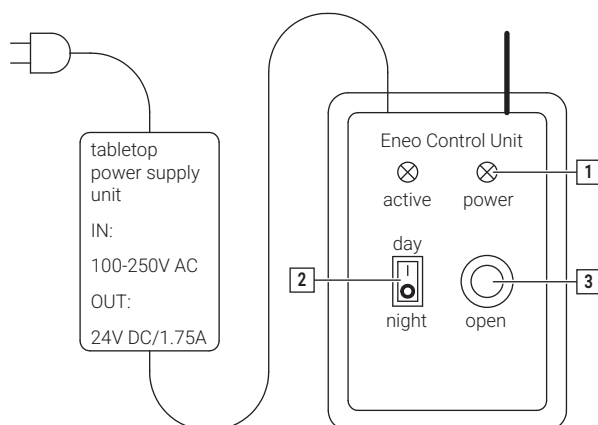


6.3.2.3 Performance test with Control Unit

1. Open the leaf.
2. Activate the trigger unit.



3. Ensure that the day / night changeover switch [2] on the Control Unit is set to 0 (night).



4. Press the open button [3].
 - ▷ The door is unlocked. The additional locks, main deadbolt and latches are retracted. Only the latches extend again.
 - ▷ Performance test passed.If the performance is not as expected, see fault assistance → *from page 113* → *from page 97*.
5. If the performance test is passed, close the leaf and repeat point 4.

6.3.3 Multipoint lock installed (cable junction)

6.3.3.1 Connecting the cable junction with built-in power supply unit to the drive unit

1. Open the leaf.
2. Connect the mains cable to the 230 V power supply.



INFO

Only an electrician is permitted to establish the connection to the 230 V power supply.

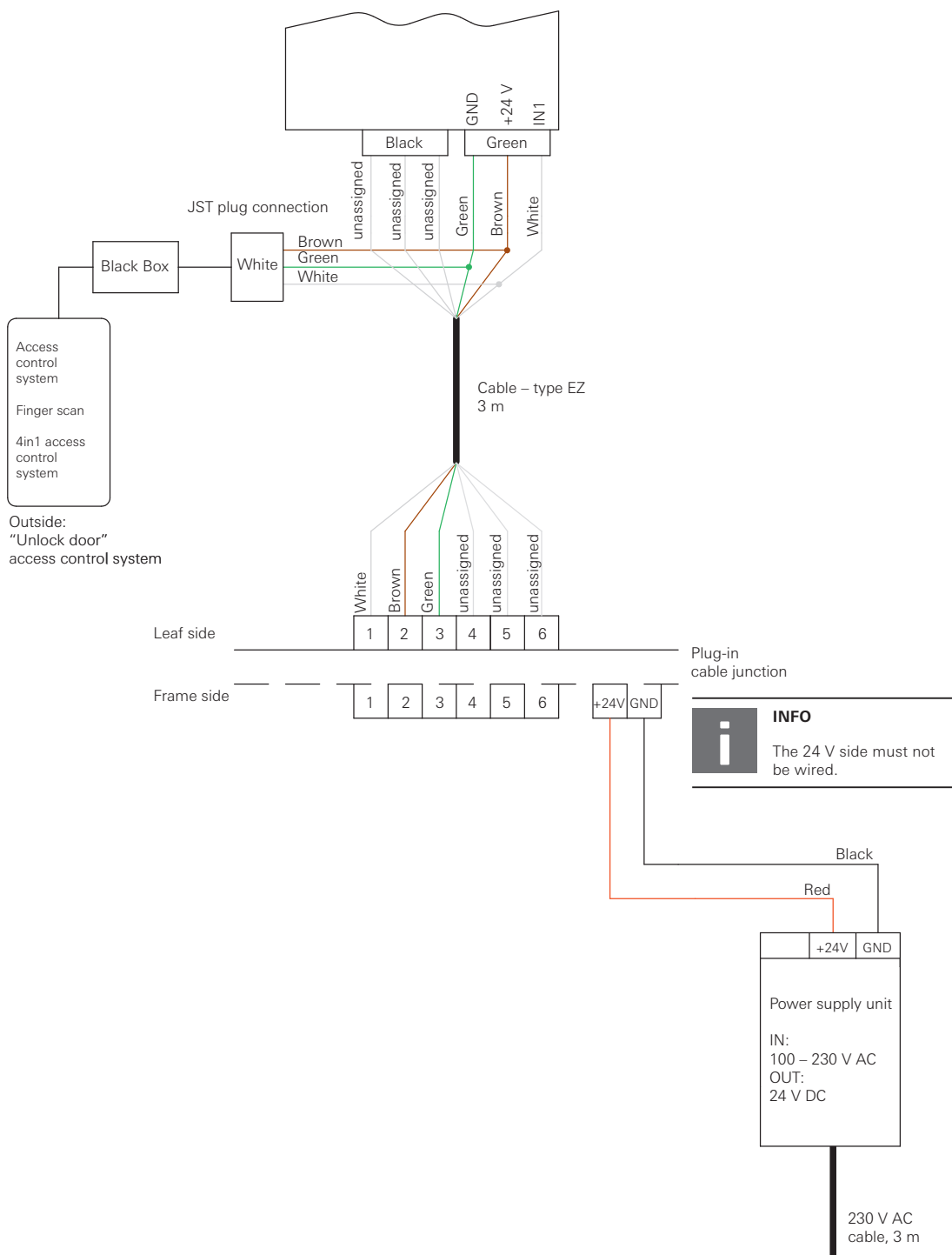


ATTENTION

Property damage due to short-circuit.

If the power supply unit is connected to the 230 V power supply before the cable junction is connected, this may cause a short-circuit.

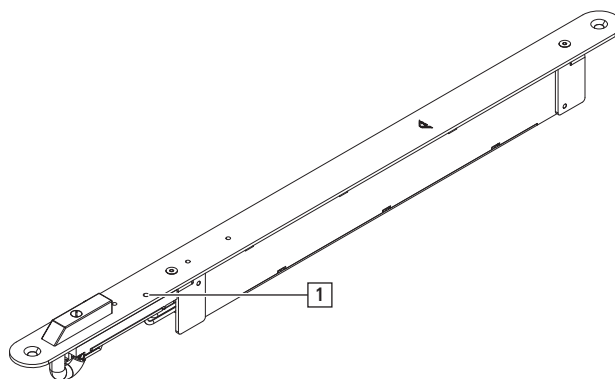
- ▶ On the leaf side, connect the EZ cable to the cable junction. For the cabling, see the connection diagram.
 - ▶ On the frame side, connect the cable for the cable junction, e.g. to the push-button, intercom, etc.
-



Connector / cable assignment

White: IN1 / input 1 (OPEN)
 Brown: +24 V
 Green: GND
 Yellow: unassigned
 Grey: unassigned
 Pink: unassigned

3. Check the power supply at the power supply unit.
 - ▷ The LED [1] is lit up green when there is voltage.



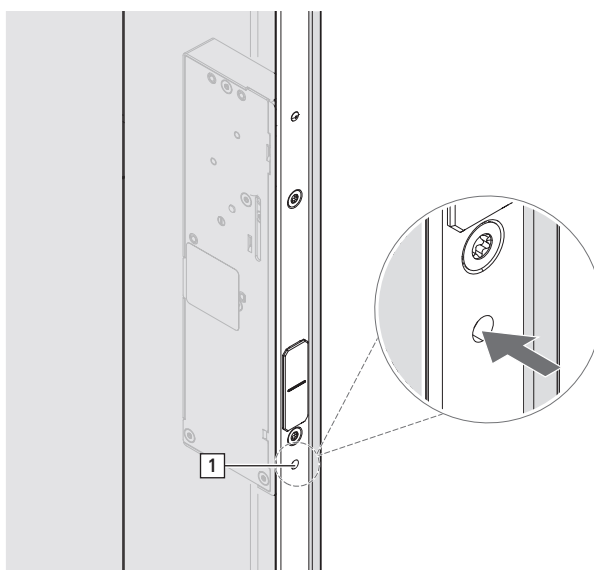
6.3.3.2 Adjusting the travel



INFO

Only perform the adjustment when the element is vertical.

1. Open the leaf.
2. Push the lever handle down and hold it there.
3. Insert the pin or tool (Ø 3 to 3.5 mm) into the inspection opening.
Press and hold the radio-controlled teach button [1] for five seconds.
 - ▷ The drive unit provides confirmation with a sequence of sounds and is adjusted.



4. Keep the lever handle pushed down.
 - ▷ The drive moves down, up and then down again, with each movement being confirmed by 1x beep.



- ▷ The drive unit exits the mode automatically.
- 5. Release the lever handle.
- 6. Disconnect the drive unit from the power supply and reconnect it for a restart.
- 7. Carry out a performance test.

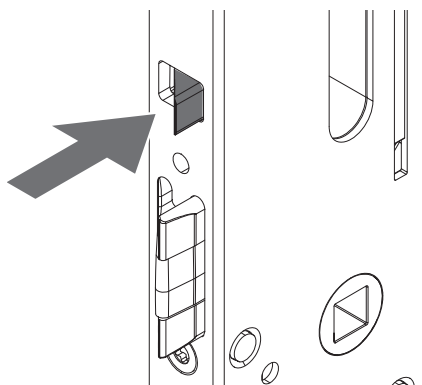


INFO

If there is an error, 7x two-tone beeps are heard  .
Repeat the adjustment from step 2 onwards.

6.3.3.3 Performance test for cable junction with built-in power supply unit

1. Open the leaf.
2. Activate the trigger unit.



3. Open via access control system (e.g. "4in1" access control system, finger scan).
 - Open via "4in1" access control system .
 Automatic testing mechanism for testing the cabling and connections with the motor lock.
 Commissioning using the app is not necessary.
 There is no limit on the number of tests.
 ⇒ Only possible in the delivery state.
 - i. Enter code 123456 on the display.
 - ii. Confirm by checking the box.
 ⇒ The door opens.



INFO

Once you set up a personal PIN, this will overwrite the initial PIN.

- Open via finger scan .
 Automatic testing mechanism for testing the cabling and connections with the motor lock. It is not necessary to calibrate the master or user fingerprints.
 ⇒ Only possible in the delivery state.

Autotest function	LED
Finger scan is ready for operation.	● ●
Remote control: press the 0 button.	○ ●
Confirm with OK .	● ○
Autotest is started automatically	
The cabling, pairing, encryption and connections are tested	
Autotest successful (after approx. 10 seconds).	● ○



INFO

The autotest is limited to a total of ten cycles, with one cycle already having been performed in the production plant.

- ▷ The door is unlocked. The additional locks, main deadbolt and latches are retracted. Only the latches extend again.
- ▷ Performance test passed.

If the performance is not as expected, see fault assistance → *from page 113* → *from page 97*.

4. If the performance test is passed, close the leaf and repeat point 3.



6.4 Fault assistance

6.4.1 A700

Check the tolerances and height offset on the element. → *from page 19*

Fault	Cause	Corrective action	To be carried out by
The lock does not lock automatically.	Screws are too tight.	Loosen the screws.	■
	Screws are too long.	Use the recommended screw length.	■
	Screws scrape against the connecting rod.	Turn in screws straight or use screws with a partial thread (without a thread behind the screw head).	■
	Projection of the trigger unit not large enough.	Adjust the trigger unit → <i>from page 108</i> .	■
	Connecting-rod guides at an angle.	Straighten the connecting-rod guides.	■
	Screw positions for the day-time unlocking device occupied.	Do not occupy the screw positions for the day-time unlocking device → <i>from page 60</i> .	■
The lever handle is not in the zero position (hanging).	Escutcheon fitted incorrectly (escutcheon not at the correct angle).	Remove the escutcheon and attach with drilling jig.	■
	Spindle-receiver holding spring worn / broken.	Replace the lock casing.	■
	Friction between lever handle and long plate too high.	Lubricate.	□
The lever handle is not in the zero position (too high).	Square spindle bent.	Replace the entire square spindle or the entire lever handle set.	■
The locking lug of the profile cylinder scrapes in the main lock casing.	Long plate / escutcheon and lever handle / lever handle not positioned correctly in relation to one another (axes and interaction on the inside and outside).	Remove the escutcheons and long plate and secure with drilling jig (drill new holes if required).	■
Lock rattles in the door.	Screws are too loose.	Tighten the screws according to the specifications.	■
The lock casing deadbolt scrapes in the striker plate.	Frame and frame components twisted in the vertical axis.	Free up space for the deadbolt by mechanically machining the striker plate.	■
The door does not stay closed.	The latches do not run in.	Adapt the frame component position.	■
	The door has dropped / warped.	Adjust the door hinges and frame components, provide new spacer blocking for the door element if required (see Glazing Guide FLY_11). Adjust the electrical openers.	■
The door cannot be closed.	The latch is not running into the lock casing.	Lubricate the latch with Roto adhesive grease.	□
	Contamination in the threshold area.	Clean the threshold area.	□
	Profile cylinder has twisted, e.g. due to excessive weight on the bunch of keys.	Position the profile cylinder vertical again.	□

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

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

6.4.2 A700 with retrofitted drive unit

Fault	Cause	Corrective action	To be carried out by
System not functioning. Drive unit not responding, no beeps.	There is no 230 V voltage on the primary side of the power supply unit.	Check the power supply. Supply a 230 V voltage on the primary side of the power supply unit.	■
	There is no 24 V voltage at the drive unit.	Check the 24 V terminal contacts on the power supply unit. Check the supply line between the power supply unit and the drive unit, and replace if necessary.	■
	There is 24 V voltage at the drive unit but the polarity is the wrong way round.	Swap round the power supply on the secondary side of the power supply unit.	■
	No signal at the signal transmitter output or no signal at the drive unit input. or The drive is in a final position and does not receive a signal to implement a movement.	Check whether voltage is being supplied. Check the cabling . Check whether the hand-held transmitter is calibrated . Check whether the access control system is connected and set correctly .	■
	Still not working?	Disconnect the voltage, wait for 10 seconds and restart it. Test using the Control Unit . Contact qualified personnel.	■
Door cannot be opened although the motor can be heard.	Threaded pin not inserted.	Insert the threaded pin → <i>from page 84</i> .	■
The latch and locks remain retracted.	Day function activated (there is a 24 V voltage at the yellow conductor).	Set the day / night changeover switch on the Control Unit to night (0) or check and adapt the cabling.	■
The locks are not retained after unlocking and fall out.	Drive unit travel too short.	Start adjusting the travel → <i>from page 90</i> .	■
 3x two-tone beeps Drive unit does not unlock fully. It has detected excess current and stopped the movement.	Drive unit travel too long.	Start adjusting the travel → <i>from page 90</i> .	■
	Connecting rod or drive unit is blocked, e.g. by being previously locked using the key.	Unlock the door using the key.	□
	Door gasket compression is too high.	Adjust the door → <i>from page 100</i> .	■
	Additional lock or main lock blocks the drive. Foreign object blocks the connecting rod.	Remove the foreign object.	■
	Load placed on the door during the unlocking process.	Open the door again and wait until the drive unit has fully unlocked the door.	□
 4x two-tone beeps Drive unit does not unlock fully.	Drive unit does not reach its final position in one of the two travel directions.	Replace the drive unit	■

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

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



6.5 Acoustic signals

Sound	Type of message	Meaning
1x beep 	Confirmation	Command understood, process completed correctly.
3x beeps 	Note	Command understood, Eneo A cannot carry out command. Maximum number of cycles (approx. 6 – 8 locking and unlocking procedures per minute) in time unit exceeded. Eneo A is ready for operation again after 30 – 40 seconds.
4x beeps 	Note	Calibration push-button was pressed but calibration / deletion is not possible.
5x two-tone beeps 	Note	Command from hand-held transmitter is executed but the hand-held transmitter battery will soon be flat.

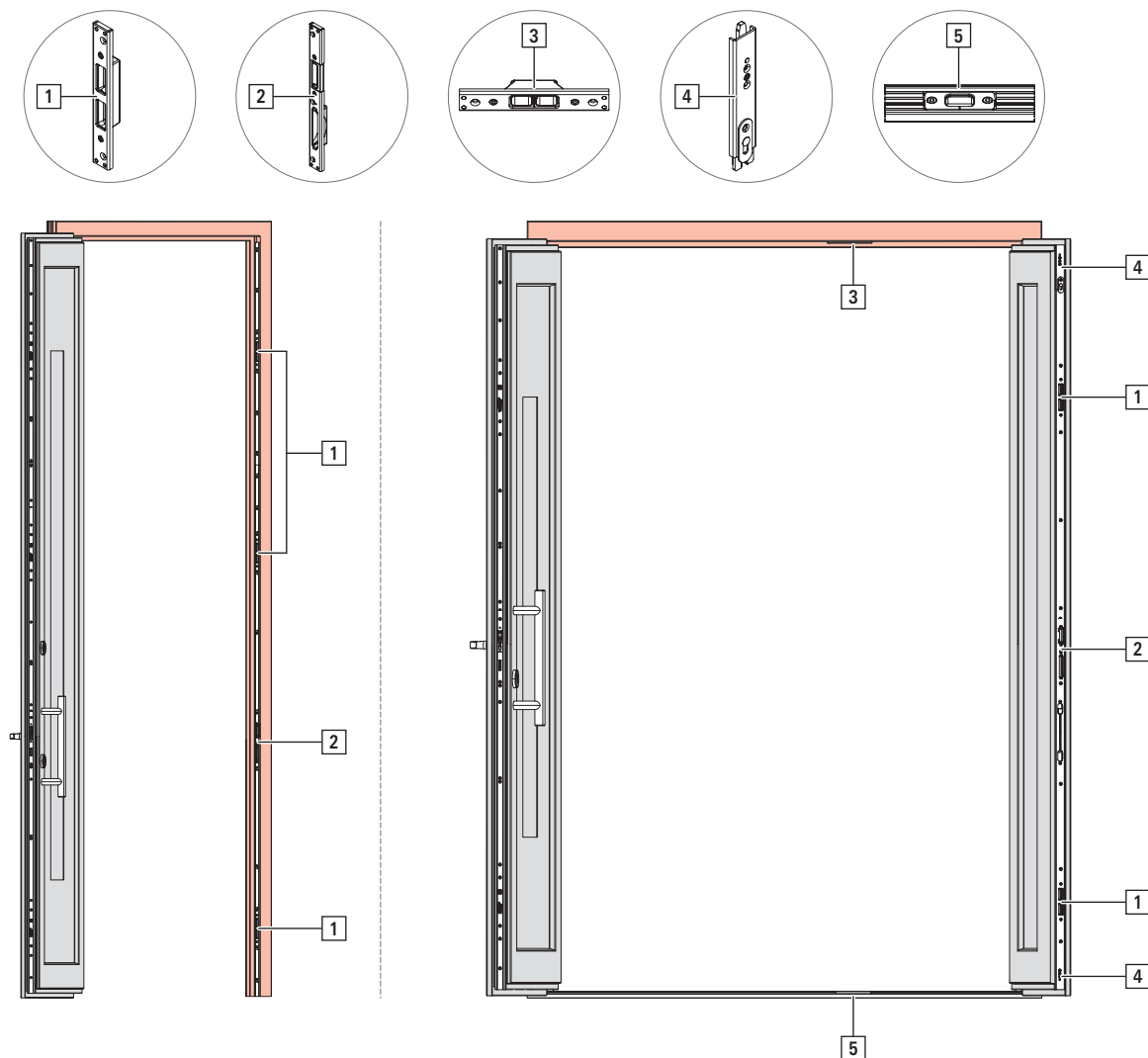
7 Adjustment



INFO

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

7.1 Overview



Assignment	Description	
[1]	Combination striker	→ from page 100
[2]	Latch / deadbolt striker	→ from page 100
[3]	Shootbolt protrusion striker	→ from page 100
[4]	Connector component for lever-operated espagnolette Plus	→ from page 106
[5]	Cover bridge	→ from page 106

7.2 Strikers



INFO

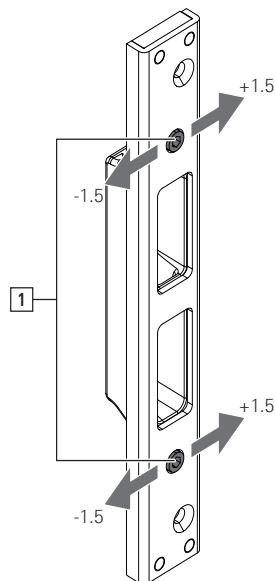
The adjustment principles are shown here by way of example. The component shown may differ from the figure depending on the type (latch / deadbolt, combination, automatic, etc.) and profile system (timber / PVC / aluminium). The adjustment principles remain the same.



7.2.1 Lateral adjustment

Eccentric adjustment

1. Perform lateral adjustment ± 1.5 mm via the adjustment eccentric [1] at the top and bottom.
Tool: size 3 hex key



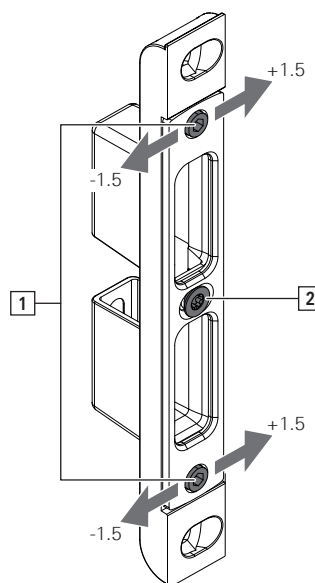
INFO

The adjustment distance of 1.5 mm is reached after a 90° turn:

- 90° turn = 1.5 mm
- 180° turn = initial position
- 270° turn = -1.5 mm
- 360° turn = initial position

Eccentric adjustment (with a retaining screw in the centre)

1. Undo the retaining screw [2].
Tool: T20 hexalobular socket screwdriver
2. Perform lateral adjustment ± 1.5 mm via the adjustment eccentric [1] at the top and bottom.
Tool: size 3 hex key





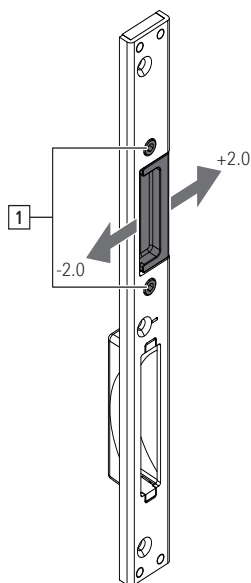
INFO

The adjustment distance of 1.5 mm is reached after a 90° turn:

- 90° turn = 1.5 mm
- 180° turn = initial position
- 270° turn = -1.5 mm
- 360° turn = initial position

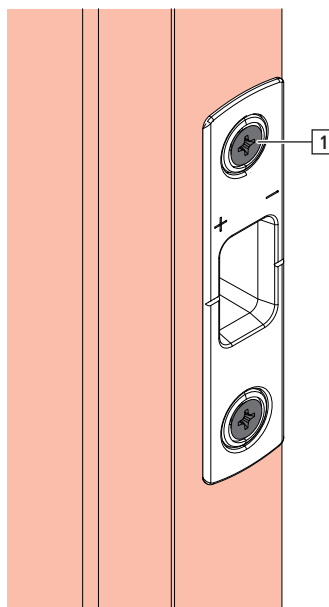
Adjustment of lock-in position (manually using two retaining screws)

1. Undo the retaining screws [1].
Tool: T20 hexalobular socket screwdriver
2. Perform lateral adjustment ± 2 mm by hand.
Lock-in position integrated in component.



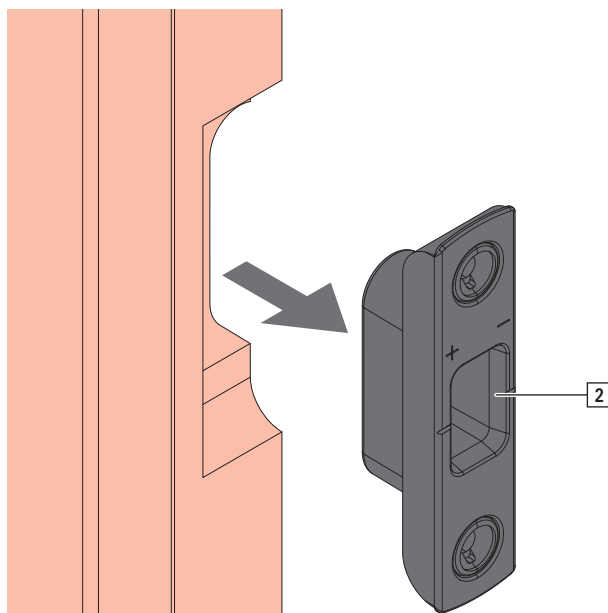
Turning the component

1. Undo the screws [1].

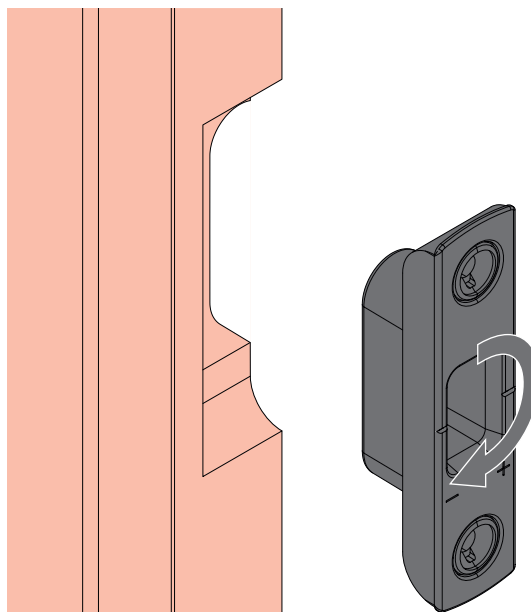




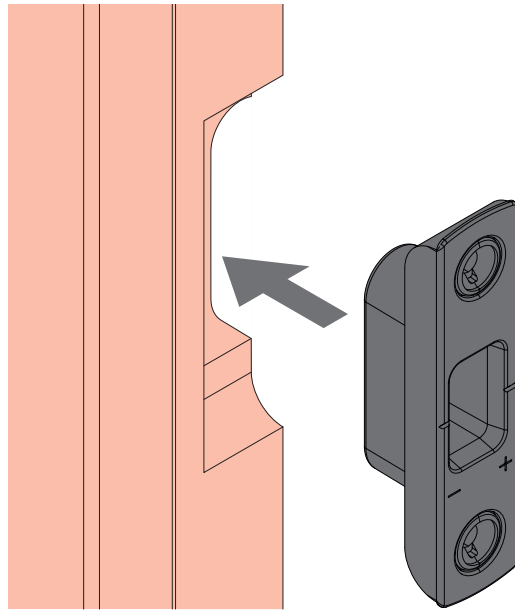
2. Remove the striker [2] from the frame.



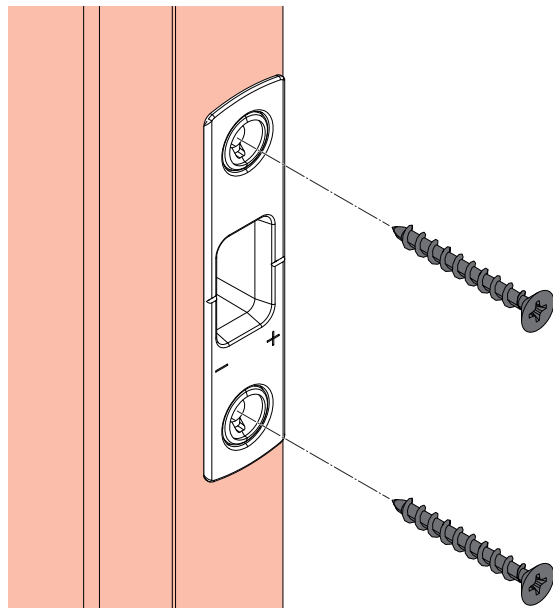
3. Turn the striker 180°.



4. Insert the striker.

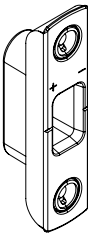


5. Fasten the striker with two screws.

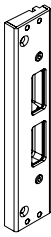
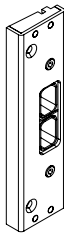
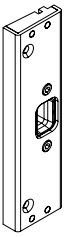




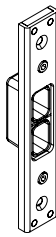
7.2.2 Timber

	Latch / deadbolt	Combination	Shootbolt protrusion	Bolt
Adjustment of lock-in position ± 2 mm		-	-	-
Eccentric adjustment ± 1.5 mm				
Eccentric adjustment (with a retaining screw in the centre) ± 1.5 mm	-		-	-
Turning the component	-	-	-	

7.2.3 PVC

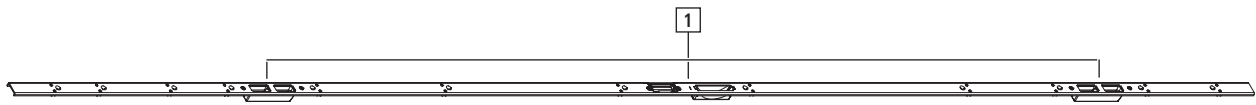
	Latch / deadbolt	Combination	Shootbolt protrusion	Bolt
Eccentric adjustment ± 1.5 mm				

7.2.4 Aluminium

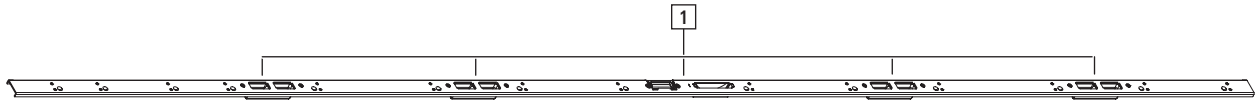
	Latch / deadbolt	Combination	Shootbolt protrusion	Bolt
Eccentric adjustment ± 1.5 mm				

7.3 Striker strips

2 combination lockings (2C)

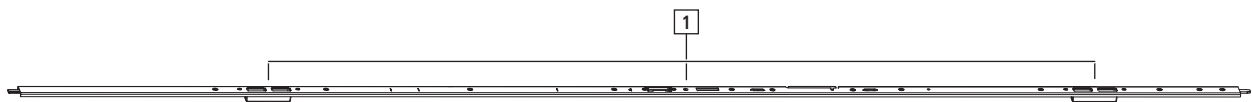


4 combination lockings (4C)



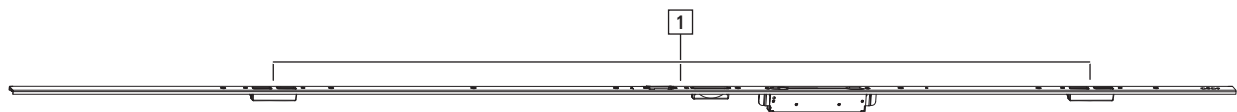
[1] Eccentric adjustment
 $\pm 1.5 \text{ mm}$

7.4 Lever-operated espagnolette, standard



[1] Eccentric adjustment
 $\pm 1.5 \text{ mm}$

7.5 Lever-operated espagnolette Plus

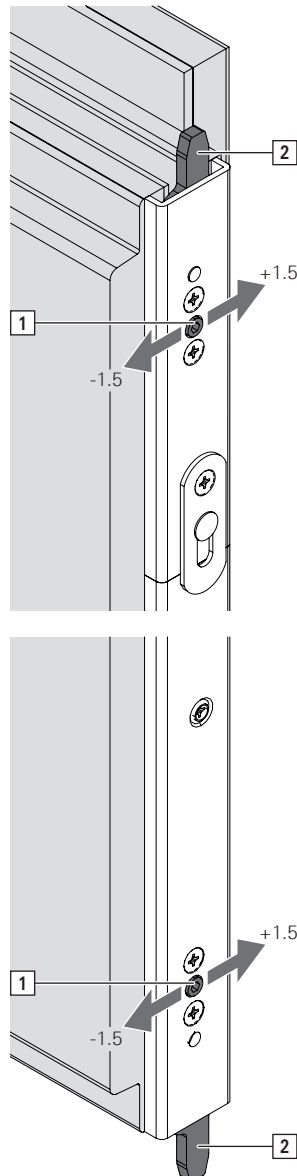


[1] Eccentric adjustment
 $\pm 1.5 \text{ mm}$



Shootbolt protrusion

1. Adjust the adjusting screw [1] for shootbolt protrusion [2] at the top and bottom.
Adjustment distance ± 1.5 mm
Tool: size 3 hex key



INFO

For information about integrating a threshold, refer to [IMO_423](#) (Roto Eifel).

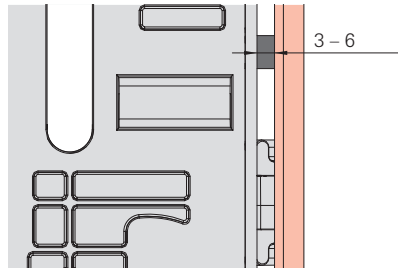
7.6 Adjusting the trigger unit



PRECONDITION

The trigger unit has previously been triggered.

1. Measure the functional clearance.



2. Measure the projection [Y] of the trigger unit.

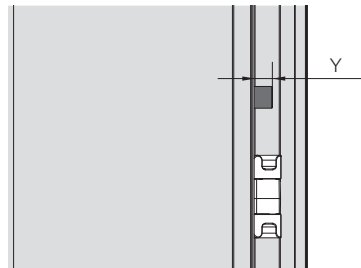


INFO

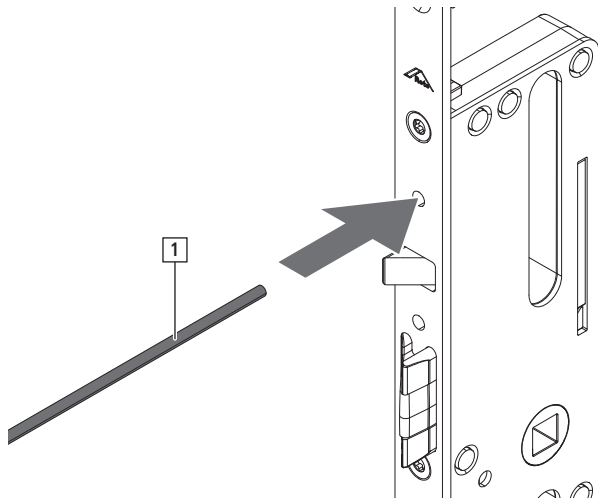
The optimum projection [Y] is calculated as follows:

Functional clearance + min. 2.5 mm

Roto delivery state: projection approx. 8.5 mm



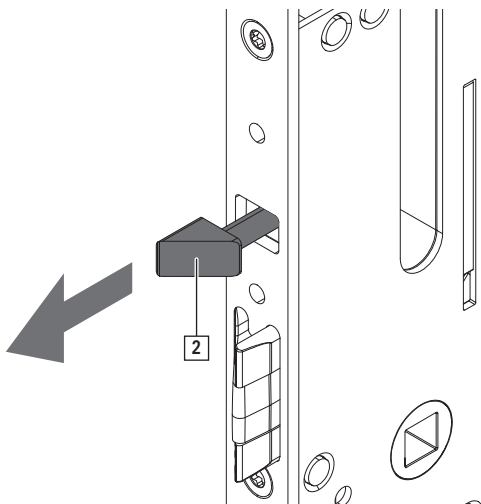
3. Push the pin [1] (Ø max. 3 mm) into the inspection opening.



4. Push the pin down slightly so that the trigger unit is triggered.



5. Pull the trigger unit [2] forwards slightly.

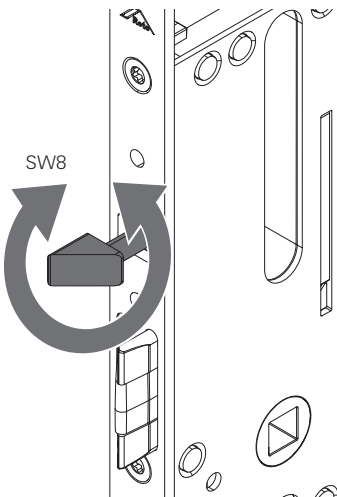


6. Adjust the trigger unit projection.
Tool: 8 mm open-end spanner



INFO

1 turn (360°) = 0.5 mm
Projection max. 9 mm



7. Push the trigger unit back into the shaft straight until it clicks into place.



ATTENTION

Incorrect installation of the trigger unit may cause property damage!

If the door lever handle is used before the trigger unit has clicked into its final position, the lock may be damaged.

- ▶ Push the trigger unit back into the shaft straight until it clicks into place.
- ▶ Only use the door lever handle once the trigger unit has clicked into place.

8. Carry out a performance test:
- ▶ Close the door leaf.
 - ▶ It must be possible to turn the key in the locking direction.

8 Operation

8.1 Unlocking / locking the A700

Locking the door

1. Close the leaf.
 - ▷ The door is locked, the multipoint lock automatically locks.

Unlocking the door from the inside

1. Push the lever handle down.
2. Open the leaf.

Unlocking the door from the outside

1. Turn the key one turn in the unlocking direction.
2. Open the leaf.

8.2 A700 lever handle blocking device

Locking the door and blocking the lever handle

1. Close the leaf.
 - ▷ The door is locked, the multipoint lock automatically locks.
2. Turn the key one turn in the locking direction.
 - ▷ The door lever handle is blocked.

Unblocking the lever handle

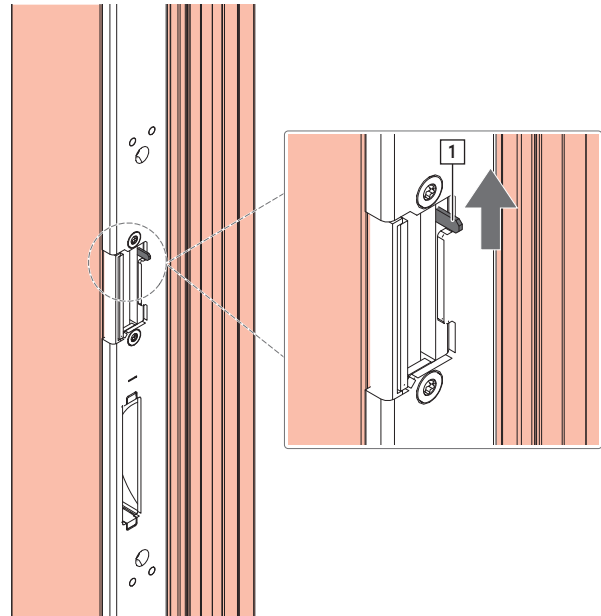
1. Turn the key one turn in the unlocking direction.



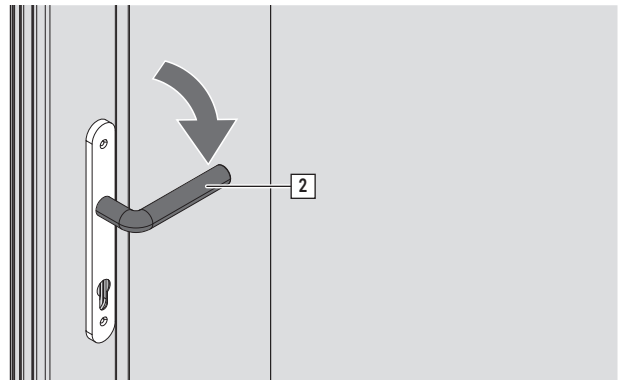
8.3 Day-time unlocking device

Activating day operation mode

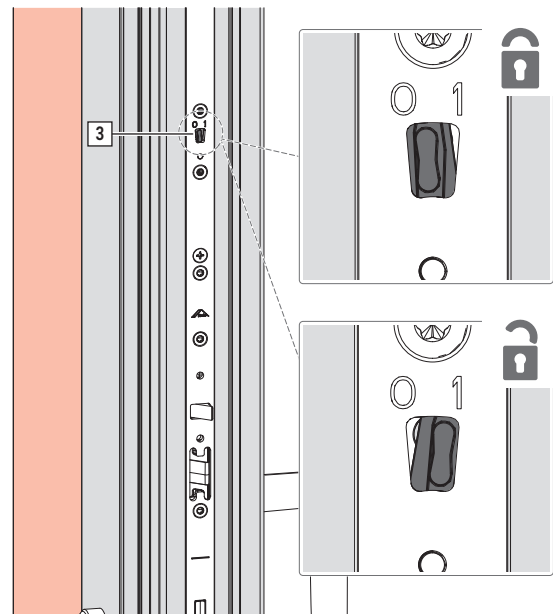
1. Set the switch [1] on the electrical opener to day operation mode.



2. Push the lever handle [2] down and hold it there.
▷ The latches retract.



3. Move the switch [3] on the day-time unlocking device to position 1.
▷ The day-time unlocking device is activated.



4. Release the lever handle.
 - ▷ The latches remain retracted, except for the latch in the main lock. The door can be opened from the outside without a key.

Deactivating day operation mode

1. Set the switch on the electrical opener to night operation mode.
2. Push the door lever handle down and hold it there.
 - ▷ The latches retract.
3. Move the switch on the day-time unlocking device to position 0.
 - ▷ The day-time unlocking device is deactivated.
4. Release the lever handle.
 - ▷ All of the latches extend.



8.4 Fault assistance

8.4.1 A700

Check the tolerances and height offset on the element. → *from page 19*

Fault	Cause	Corrective action	To be carried out by
The lock does not lock automatically.	Screws are too tight.	Loosen the screws.	■
	Screws are too long.	Use the recommended screw length.	■
	Screws scrape against the connecting rod.	Turn in screws straight or use screws with a partial thread (without a thread behind the screw head).	■
	Projection of the trigger unit not large enough.	Adjust the trigger unit → <i>from page 108</i> .	■
	Connecting-rod guides at an angle.	Straighten the connecting-rod guides.	■
	Screw positions for the day-time unlocking device occupied.	Do not occupy the screw positions for the day-time unlocking device → <i>from page 60</i> .	■
The lever handle is not in the zero position (hanging).	Escutcheon fitted incorrectly (escutcheon not at the correct angle).	Remove the escutcheon and attach with drilling jig.	■
	Spindle-receiver holding spring worn / broken.	Replace the lock casing.	■
	Friction between lever handle and long plate too high.	Lubricate.	□
The lever handle is not in the zero position (too high).	Square spindle bent.	Replace the entire square spindle or the entire lever handle set.	■
The locking lug of the profile cylinder scrapes in the main lock casing.	Long plate / escutcheon and lever handle / lever handle not positioned correctly in relation to one another (axes and interaction on the inside and outside).	Remove the escutcheons and long plate and secure with drilling jig (drill new holes if required).	■
Lock rattles in the door.	Screws are too loose.	Tighten the screws according to the specifications.	■
The lock casing deadbolt scrapes in the striker plate.	Frame and frame components twisted in the vertical axis.	Free up space for the deadbolt by mechanically machining the striker plate.	■
The door does not stay closed.	The latches do not run in.	Adapt the frame component position.	■
	The door has dropped / warped.	Adjust the door hinges and frame components, provide new spacer blocking for the door element if required (see Glazing Guide FLY_11). Adjust the electrical openers.	■
The door cannot be closed.	The latch is not running into the lock casing.	Lubricate the latch with Roto adhesive grease.	□
	Contamination in the threshold area.	Clean the threshold area.	□
	Profile cylinder has twisted, e.g. due to excessive weight on the bunch of keys.	Position the profile cylinder vertical again.	□

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

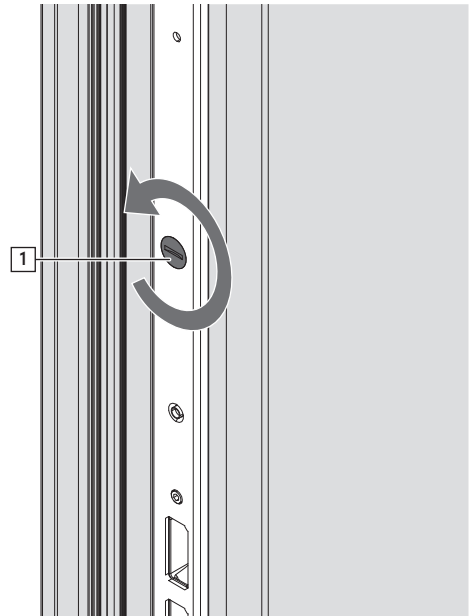
■ = **Must** be carried out by a specialist company

8.5 Lever-operated espagnolette

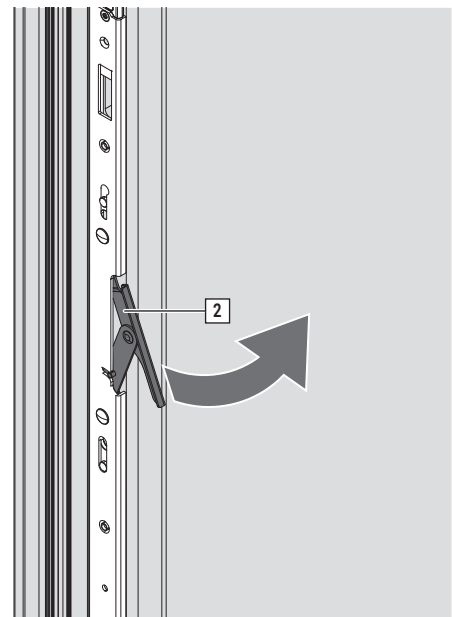
8.5.1 Lever-operated espagnolette Standard

Unlocking the second opening leaf

1. Using a flat object (e.g. a coin), turn the blocking element [1] away from the lever and move it to a vertical position.
 - ▷ The connecting rod is released.



2. Pull the lever [2] forwards and upwards as far as the latching point.



3. Open the second opening leaf.

Locking the second opening leaf

1. Close the second opening leaf.
2. Push the lever down and slide it towards the lever-operated espagnolette to fold it in.

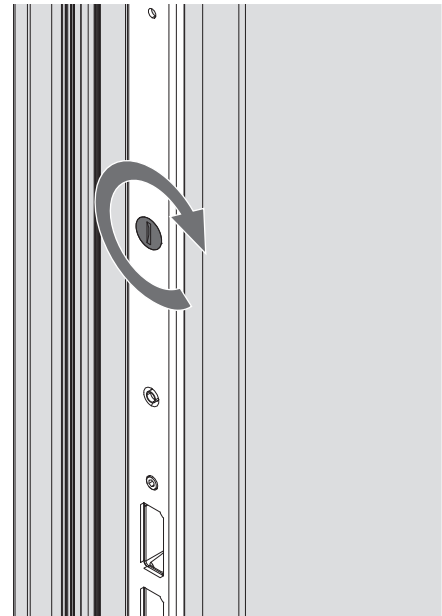
Operation

Lever-operated espagnolette

Lever-operated espagnolette Plus



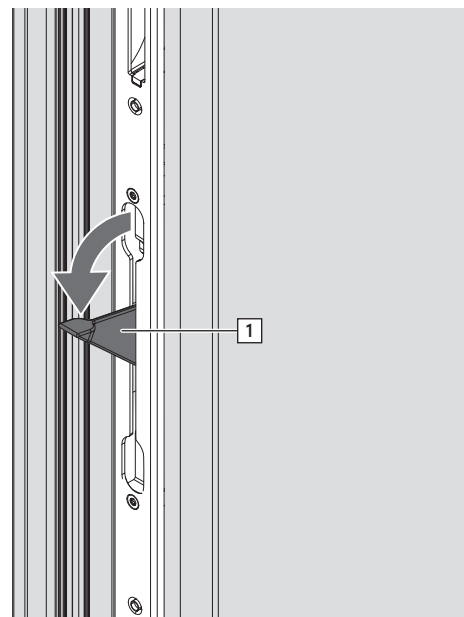
3. Using a flat object, turn the blocking element towards the lever and move it to a horizontal position.



8.5.2 Lever-operated espagnolette Plus

Unlocking the second opening leaf

1. Fold out the lever [1].
2. Open the second opening leaf.



Locking the second opening leaf

1. Close the second opening leaf.
2. Fold in the lever.

9 Maintenance



CAUTION

Performing maintenance work incorrectly can lead to injuries.

Performing maintenance incorrectly can lead to injuries.

- ▶ Ensure that there is sufficient space for installation before starting work.
- ▶ Ensure that the installation site is clean and tidy.
- ▶ Always have hardware adjustment and replacement work performed by a specialist company.
- ▶ Secure the sash against unintentionally opening or closing.
- ▶ Do not unhinge the sash for maintenance.



ATTENTION

Incorrect or improper testing may cause property damage.

Incorrect or improper testing of the hardware may cause the element to malfunction.

- ▶ Have the hardware checked by a specialist company when installed.
- ▶ If defects need to be remedied, have the element unhinged and remounted by a specialist company.



INFO

The manufacturer must draw the attention of builders and end consumers to these maintenance instructions.

Roto Frank Fenster- und Türtechnologie GmbH recommends the manufacturer conclude a maintenance agreement with their end users.

No legal claims can be derived from the following recommendations; their application is to be based on the specific individual case.

	Responsibility	
Maintenance interval	☐	→ from page 116
Cleaning		→ from page 117
Clean hardware	☐	
Care		→ from page 117
Lubricate movable parts	☐	
Lubricate locking points	☐	
Performance test		→ from page 64
Check that hardware components are fitted securely	☐	
Inspect hardware components for wear	☐	
Check that movable parts work properly	☐	
Check that locking points work properly	☐	
Check ease of movement	■	
Repair		→ from page 120
Retighten screws	■	
Replace damaged components	■	

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

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

9.1 Maintenance intervals



ATTENTION

Failure to adhere to maintenance intervals may cause property damage.

The maintenance interval for all tasks relating to the hardware components is **annually** at the least. In hospitals, schools and hotels, the maintenance interval is **six-monthly**.

Regular maintenance is necessary in order to maintain the proper and smooth-running operation of the hardware and to prevent premature wear or even defects.

- ▶ Determine and adhere to the appropriate maintenance interval in accordance with the ambient conditions.



9.2 Cleaning



ATTENTION

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

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

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

Cleaning the hardware

- ▶ Remove deposits and contaminants from the hardware using a soft cloth.
- ▶ Lubricate the latches and trigger unit after cleaning → 9.3 "Care" from page 117.
- ▶ Apply a thin protective film to the hardware, for example using a cloth soaked in oil.

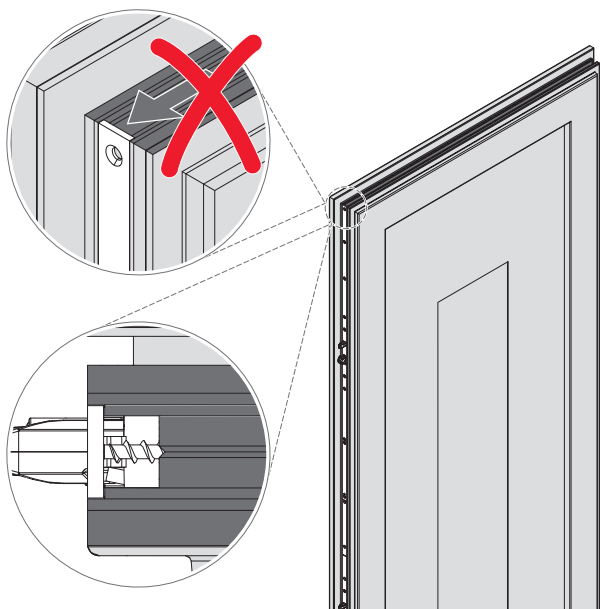


ATTENTION

Contamination may cause property damage.

Contamination may get behind the floating mullion and block the multipoint locking system.

- ▶ Do not wipe contamination in the upper area of the sash (e.g. plaster, gypsum) towards the floating mullion.



9.3 Care



ATTENTION

Using incorrect lubricants may cause property damage.

Substandard lubricants can prevent the hardware from working properly.

- ▶ Use high-quality lubricants.
- ▶ Only use resin-free and acid-free lubricants.
- ▶ Use appropriate lubricant in more challenging climatic conditions. Note the manufacturer specifications.



ATTENTION

Cleaning agents and lubricants may pollute the environment.

Leaking or excess cleaning agents and lubricants may pollute the environment.

- ▶ Remove any leaking or excess cleaning agents and lubricants.
- ▶ Dispose of cleaning agents and lubricants separately and properly.
- ▶ Observe the applicable directives and national laws.

Ease of movement can be improved by lubricating or adjusting the hardware. Lubricate the latches and trigger unit at least once a year.

Recommended lubricants

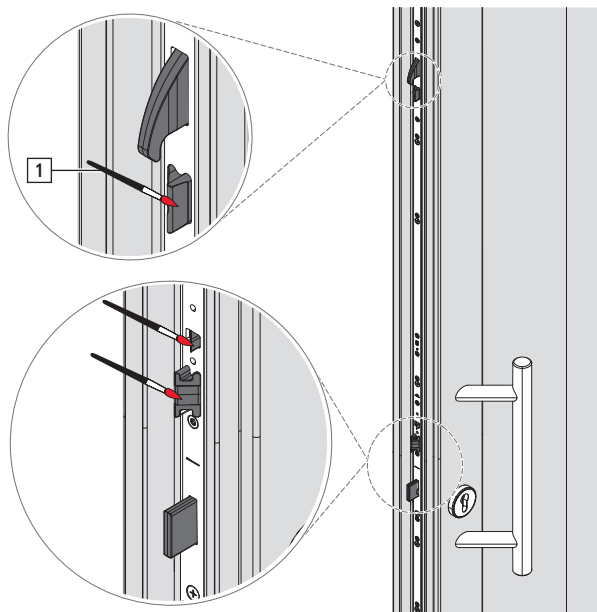
- Roto NX / NT grease



INFO

The figure displays the positioning of potential lubrication points. The figure does not necessarily match the installed hardware. The quantity of lubrication points varies depending on the size and design of the element.

9.3.1 Lubrication points



[1] Grease

Lubricate the latches and trigger unit at least once a year.



ATTENTION

Using incorrect lubricants may cause property damage.

Substandard lubricants can prevent the hardware from working properly.

- ▶ Use high-quality lubricants.
- ▶ Only use resin-free and acid-free lubricants.
- ▶ Use appropriate lubricant in more challenging climatic conditions. Note the manufacturer specifications.



ATTENTION

Incorrect lubrication may cause property damage!

Lubricants in the main lock and additional locks may prevent them from working properly.

- ▶ Only lubricate the latches and trigger unit.



9.4 Performance test



PRECONDITION

The leaf and frame must be vertical in order to carry out the performance test.

Fixing screws



ATTENTION

Over-tightened screws may cause property damage!

Over-tightened screws lose their hold and no longer provide the necessary strength.

- Do not over-tighten screws. Note the torque.

Use a screwdriver to check that all fixing screws have been tightened.

Lever handle function

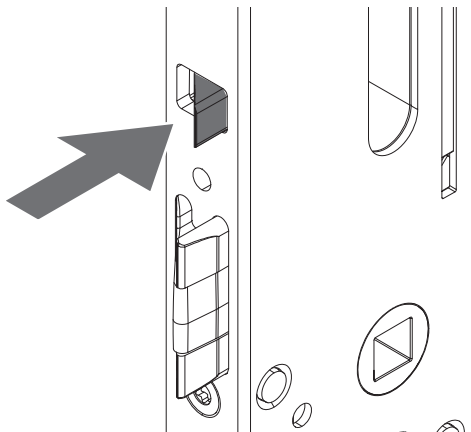
Push the lever handle all the way down and release it.

- The lever handle must automatically return to the initial position.

Automatic function

1. Press the trigger unit.

- All of the automatic power wedges and the deadbolt extend.



2. Retract the automatic power wedges and deadbolt again using the lever handle or cylinder key. To do so, push the lever handle all the way down and release it.

- All of the automatic power wedges and the deadbolt retract again.

Latch function

1. Push the lever handle all the way down.
 - ▷ The latches must retract.
 - ▷ When pushed down, the latches may protrude over the lock faceplate by a maximum of 2 mm.
2. Release the lever handle.
 - ▷ The latches must extend fully.
3. Turn the key in the profile cylinder in the unlocking direction.
 - ▷ The latches must retract fully.
4. Turn the key in the profile cylinder to the initial position.
 - ▷ The latches must extend fully.

Blocking function

Automatic power wedges and the deadbolt in the main lock are push-back safeguarded without using the key.

1. Press the trigger unit.
 - ▷ All of the automatic power wedges and the deadbolt extend.
2. Turn the key in the profile cylinder in the locking direction.
 - ▷ The lever handle is blocked.
 - ▷ It must be possible to remove the key.
3. Turn the key in the profile cylinder in the unlocking direction.
 - ▷ The lever handle can be operated.
4. Retract the automatic power wedges and deadbolt again using the lever handle or cylinder key.

For fault assistance, see → *from page 97*.



INFO

Carry out a performance test again after the door has been installed.

Performance test after installation

1. Close the leaf.
2. Insert the key and lock the leaf.
3. Remove the key.
4. Reinsert the key and unlock the leaf.
5. Remove the key.
 - ▷ Performance test passed.

9.5 Repair



WARNING

Improper repair work may pose a risk of death!

Improper maintenance may prevent the element from working properly and make it less safe to use.

- ▶ Always have repairs performed by a specialist company.
-



ATTENTION

Improper screw fixings may cause property damage.

Loose or faulty screws can prevent the hardware from working properly.

- ▶ Check that the individual screws are secure and seated correctly.
- ▶ Tighten or replace loose or faulty screws.
- ▶ Use only the suggested screws.

Repair work includes replacing components and is only necessary if components have become damaged after wear or as a result of external circumstances. The hardware must be secured reliably in order to ensure that the element works properly and is safe to use.

The following tasks must only be performed by a specialist company:

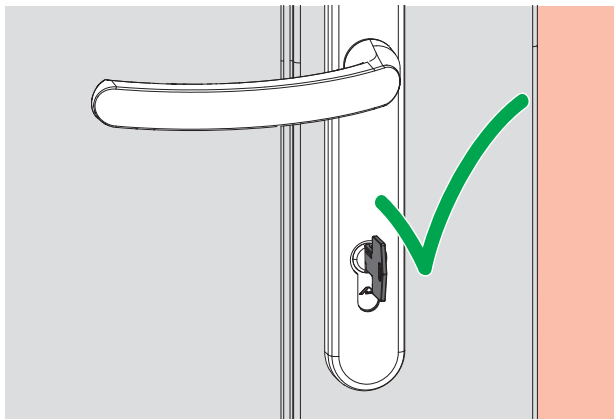
- Adjusting the hardware.
- Replacing the hardware or hardware components.
- Removing and reinstalling the elements.

The specialist company must observe the following:

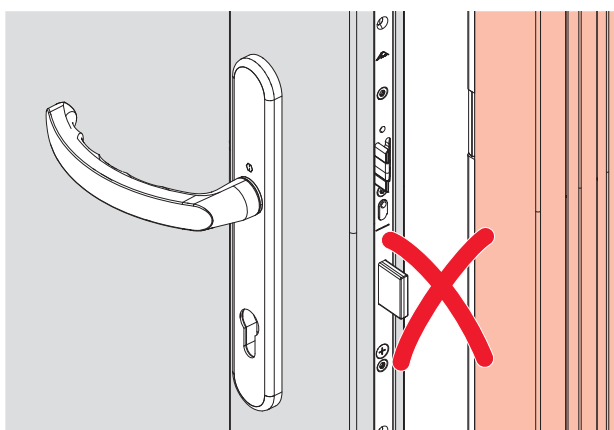
- Perform the necessary repair work properly, according to generally recognised engineering practice and in accordance with the applicable regulations.
- Do not perform makeshift repairs on worn or damaged components.
- Only use original or approved spare parts for replacements.

9.6 General information

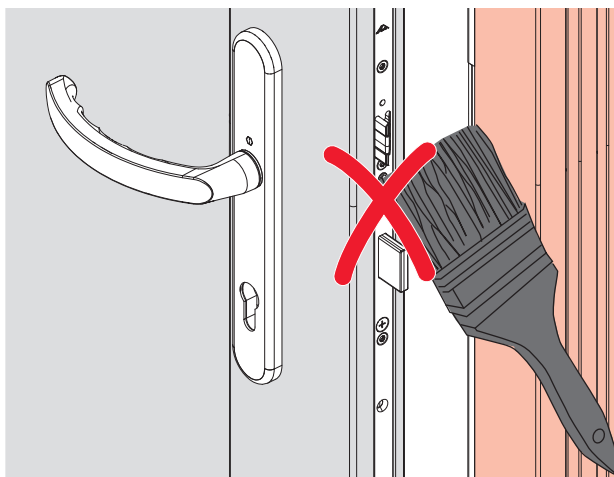
9.6.1 For the end customer



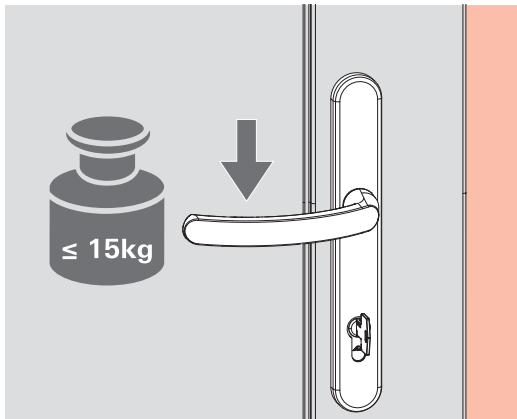
Always move the key in the profile cylinder to a vertical position; do not leave it in the turned position.



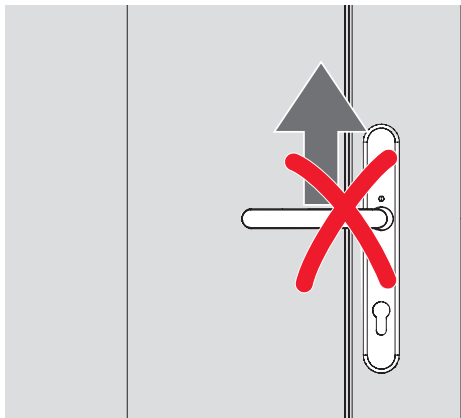
When the lock is extended, do not close the door or push it against the frame.



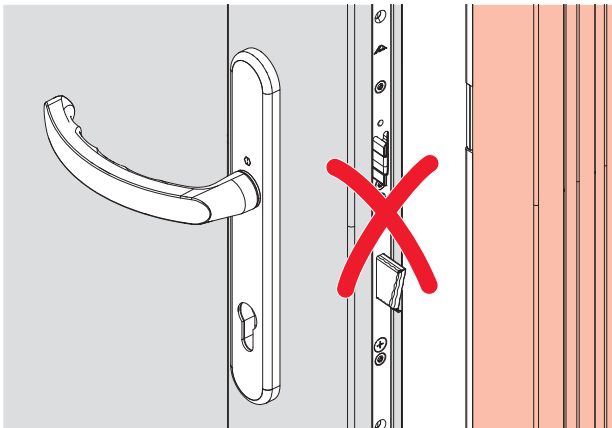
Do not paint over the lock or locking components (latch, deadbolt, additional lock, etc.).



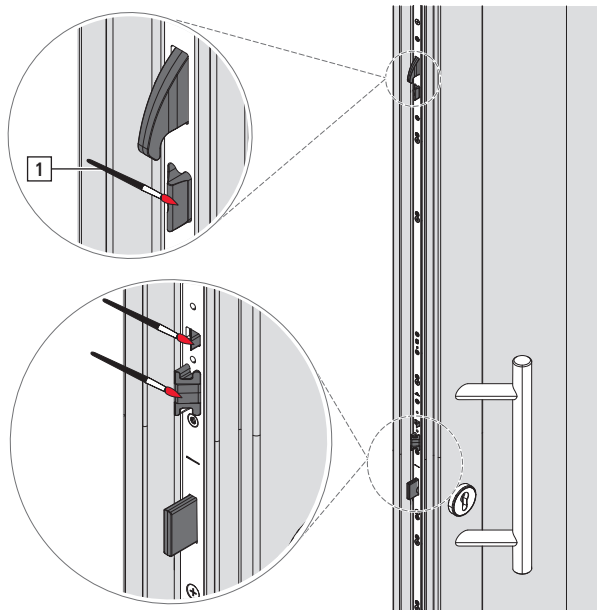
Do not place heavy loads on the handle; the maximum load is 15 kg.



Do not carry the leaf by the door lever handle.



Where there are visible signs that force has been used, replace the lock and/or handle.



[1] Grease

Lubricate the latches and trigger unit at least once a year.



ATTENTION

Using incorrect lubricants may cause property damage.

Substandard lubricants can prevent the hardware from working properly.

- ▶ Use high-quality lubricants.
- ▶ Only use resin-free and acid-free lubricants.
- ▶ Use appropriate lubricant in more challenging climatic conditions. Note the manufacturer specifications.



ATTENTION

Incorrect lubrication may cause property damage!

Lubricants in the main lock and additional locks may prevent them from working properly.

- ▶ Only lubricate the latches and trigger unit.



10 Dismantling



WARNING

Improper dismantling may pose a risk of death!

The leaf may fall during dismantling.

- ▶ Secure the leaf to prevent it from falling, e.g. by using two people.
 - ▶ Always have dismantling work performed by a specialist company.
-



CAUTION

Physical strain may cause injury and damage to health.

Carrying and lifting heavy loads for extended periods leads to physical injury in the long term.

- ▶ When carrying or lifting loads, maintain an ergonomically correct posture. The maximum permissible load is 25 kg for men and 10 kg for women.
-



INFO

Unless otherwise stated, dismantling is performed in reverse order to installation.

10.1 Hardware components

Removing hardware components

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

11 Transport

11.1 Transporting elements and hardware



DANGER

Improper transport poses a risk of death!

Improper procedures for transporting, loading or unloading elements may cause serious injuries and glass breakage as a result of the elements swinging open, falling or becoming overloaded.

- ▶ Note the applicable accident prevention regulations.
- ▶ Note force application points and reaction forces.
- ▶ Prevent the sash from opening uncontrollably.
- ▶ Avoid jerky movements.
- ▶ Use suitable transportation means and protective devices.
- ▶ Watch out for protruding components.
- ▶ Transport heavy loads with two people and use suitable transportation means (such as an industrial truck).



CAUTION

Trapped limbs may result in injuries.

The transported goods can skid, open, close or fall during transport. This can result in limbs being trapped and seriously injured.

- ▶ Never reach near the scissor stays.
- ▶ Close the sash after installation and secure it in place for transport.
- ▶ Wear safety gloves and protective footwear.



CAUTION

Physical strain may cause injury and damage to health.

Carrying and lifting heavy loads for extended periods leads to physical injury in the long term.

- ▶ When carrying or lifting loads, maintain an ergonomically correct posture. The maximum permissible load is 25 kg for men and 10 kg for women.

Hardware is supplied to the specialist company as complete sets. The components are packaged accordingly for each scope of delivery. The instructions for safely transporting the hardware are described below.

Observe the following basic instructions when transporting hardware:

- ▶ Transport larger scopes of delivery using appropriate transportation means (such as industrial trucks).
- ▶ Note the transport weight in order to select appropriate transportation means.
- ▶ Ensure that the transport process is careful and appropriate for the material and that components are protected against dirt during transport.
- ▶ Immediately check the delivery for completeness and transport damage on receipt.



INFO

Submit a complaint about any defects as soon as they are identified. Claims for damages may only be made within the reclamation period.

Use the following transportation means for support when transporting, loading and unloading larger scopes of delivery:

- Industrial trucks, e.g. forklifts, telescopic handlers, pallet trucks



- Lifting equipment, e.g. transport nets, carry straps, round slings
- Protective devices, e.g. edge protection, spacer blocks



INFO

Industrial trucks and lifting devices may only be operated by qualified persons.



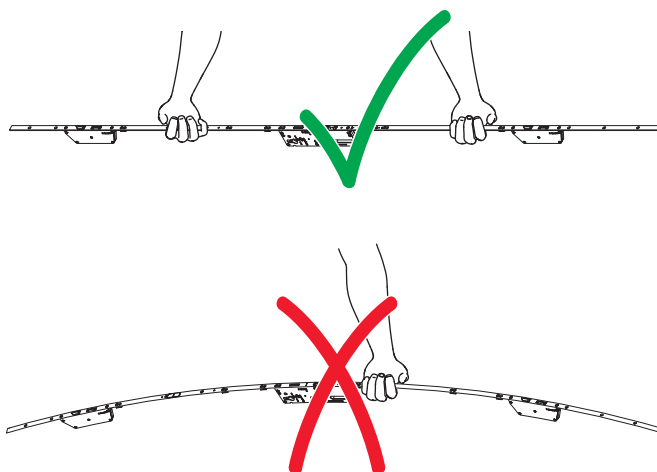
INFO

Lifting equipment and protective devices may only be used if they are in full working order.

11.2 Information on transport

Multipoint lock

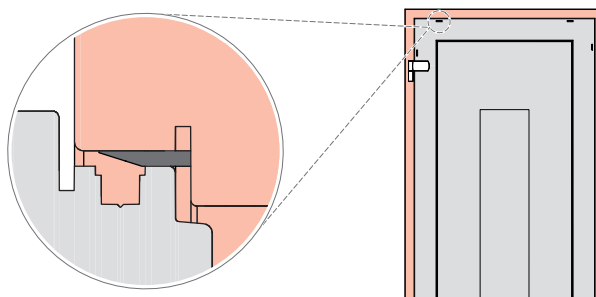
Transport the multipoint lock vertically. If transporting it horizontally, always support it at two points. Do not bend the connecting rod.



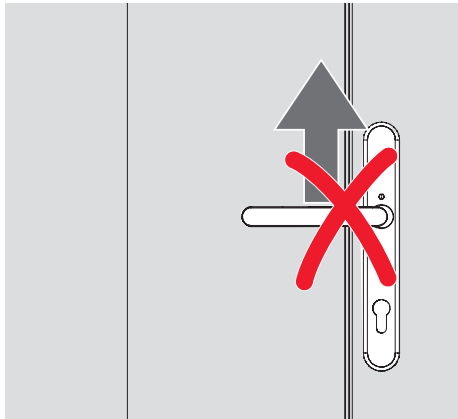
Element

During transport, secure the leaf against the frame using suitable supports (run-up blocks, wedges, etc.).

Do not remove the cylinder fixing, which is a transport safety mechanism, until you are about to install the profile cylinder.

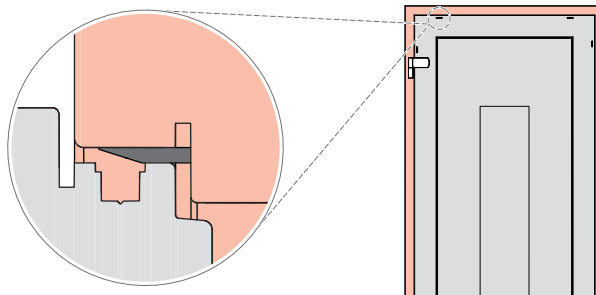


Do not carry the leaf by the door lever handle.



Transport to the construction site

If no transport securing screw is used, the lock is actuated and locked, and rebate limiting inserts absolutely must be used.



11.3 Storing the hardware

Store all hardware components as follows until they are installed:

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



12 Disposal



ATTENTION

Incorrect disposal may pollute the environment.

Pieces of hardware are raw materials.

- ▶ Dispose of hardware for environmentally friendly material re-utilisation as mixed scrap.

12.1 Disposing of packaging

The hardware is supplied as complete sets together with the packaging. Once unpacked, the installation company or builder is responsible for disposing of the packaging properly. The packaging materials are produced in accordance with current environmental protection standards. The materials can be recycled separately.

Follow the basic instructions below for the proper disposal of packaging:

- ▶ Do not dispose of packaging in household waste.
- ▶ Hand over packaging at local waste collection points or recycling centres.
- ▶ Observe the national regulations on the disposal of recyclable materials.
- ▶ Contact the local authorities if necessary.

12.2 Disposing of hardware

Once the hardware is finished with, the end user or builder is responsible for properly disposing of the windows, doors or balcony doors and the hardware, including any accessories. Hardware is produced in accordance with current environmental protection standards. The materials can be recycled separately.

Follow the basic instructions below for the proper disposal of hardware:

- ▶ Observe the information and specifications for disposal contained in the other applicable documents.
- ▶ Separate hardware components from windows, doors or balcony doors.
- ▶ Do not dispose of hardware in household waste.
- ▶ Hand over hardware at local waste collection points or recycling centres.
- ▶ Observe the national regulations on the disposal of recyclable materials.
- ▶ Contact the local authorities if necessary.

13 Additional information

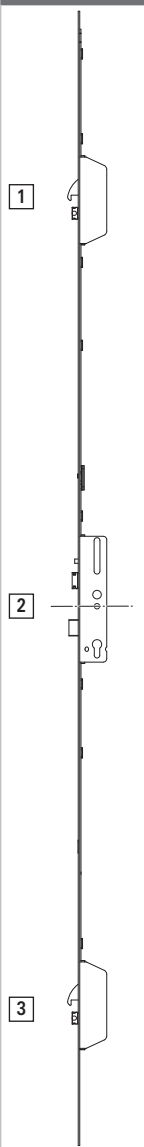
13.1 Product information about A700 – 2AH

Classification key

prEN 15685:2019	3	S	7	0	0	C	3	0	3	0
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Purpose of use	Yes / No	Comments (additional information for the purpose of classification)	Reference
On Turn-Only leaf doors	Yes	Multipoint locks are tested for their lateral forces and counter force.	
Lock with spring-loaded feature	Yes	Tested in accordance with 5.5.1 and 5.11.3 using tensioning devices 23 and 32 and/or in accordance with 5.11.5 or 5.11.6 using tensioning device 35 with spring-loaded feature.	
Lock without spring-loaded feature	Yes	Tested in accordance with 5.5.1 and 5.11.3 using tensioning devices 22 and 31 and/or in accordance with 5.11.5 or 5.11.6 using tensioning device 34 without spring-loaded feature.	
Suitable for use on smoke protection doors	No	See manufacturer declaration regarding a test in accordance with EN 1634-3 or the details of the melting point of the relevant latch components and the duration of proven smoke resistance, if applicable.	
Suitable for use on smoke protection and fire protection doors	No	See manufacturer declaration regarding a test in accordance with EN 1634-1 or the details of the melting point of the relevant latch components and the duration of proven smoke / fire resistance, if applicable.	
Multipoint lock for use with door lever handle without spring-loaded feature	Yes	Lock must comply with 4.1.7, minimum self-aligning torque of the lock nut 0.8 Nm.	
Multipoint lock for use with door lever handle with spring-loaded feature	No	Manufacturer declaration regarding self-aligning torque.	
Use of locks which are locked from the inside (when the key needs to be operated from the inside in order to get out)	Yes	It must not be possible to remove burglar inhibiting components from the inside of the multipoint lock without special tools.	



	No.	Locking point Item 7	Anti-jemmy protection point Item 9	Door closing point Item 10	With spring-loaded feature / Without spring-loaded feature
	[1]	3	3	0	With spring-loaded feature
	[2]	3	0	0	With spring-loaded feature
	[3]	3	3	0	With spring-loaded feature



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Hardware systems for windows and balcony doors

Sliding

Hardware systems for large sliding windows and doors

Door

Matching hardware technology everything about doors

Equipment

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Contact

