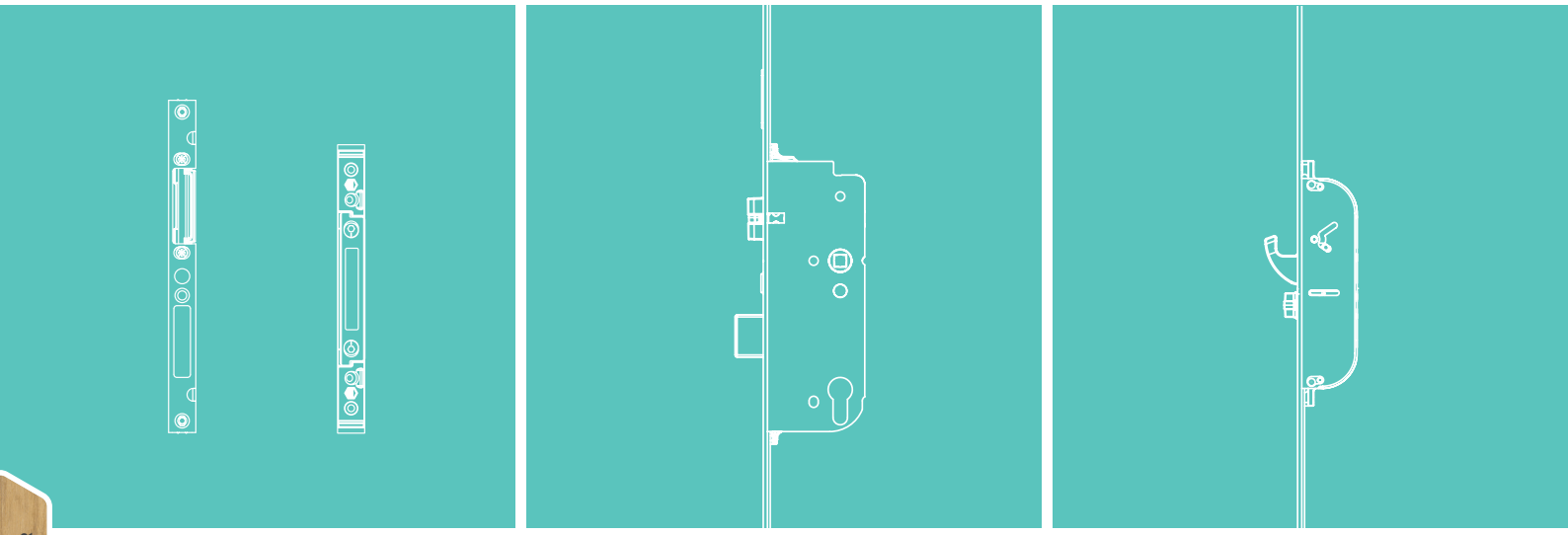
TECHNOLOGY IN MOTION

The work described in these installation instructions may only be carried out by specialist companies.

Read thoroughly before use/installation!
Keep for future reference!

MACO PROTECT

DOOR LOCKS



TIMBER

ASSEMBLY INSTRUCTIONS

A-TS
Automatic door lock

VdS

M119317

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

maco.eu

Legends and abbreviations

	DM	Backset
	E	Distance
	GM	Handle height
		Cut-to-length range
		Profile front edge
	HO	Hook upwards
	A-TS	3-latch automatic lock
	MF	Multifunction latch
	EV	End piece
	FFH	Sash rebate height (SRH)
	K+	Case dimension top
	K-	Case dimension bottom

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1. Notes for using these installation instructions

Target group

› These installation instructions are intended exclusively for specialised companies and trained specialist personnel (e.g. carpenters, metalworkers for construction technology, window and glass façade installers).

› The work described in these installation instructions may only be carried out by specialist personnel! This also applies in particular to electrical work, which may only be carried out by qualified electricians.

Before starting installation ...

› Read these installation instructions carefully before starting installation. Install all components professionally and only as described in these installation instructions and observe all safety and hazard information.

› The use of system accessories not expressly approved by MACO, modifications or repair work not expressly authorised by MACO and improper servicing can lead to malfunctions and must be avoided.

› Failure to comply with the installation, safety and hazard information described in these installation instructions does not guarantee the proper functioning of the fitting; this leads to the immediate loss of warranty, guarantee, compensation, product liability claims and other liability claims against MACO. MACO accepts no liability for any damage to persons or material resulting from improper installation or installation contrary to the instructions given in these installation instructions.

› Failure to comply with the installation instructions will also result in the immediate loss of any outstanding claims arising from any existing warranty agreement.

› Coordinate the required fastening material with the structure and the corresponding load and supplement it if necessary. Any fastening material supplied only fulfils part of the requirements.

› Test doors and safety elements. The intactness and ease of movement of the doors must be ensured.

› All work (installation, adjustment, etc.) must be carried out in a de-energised state.

› Before installing the drive, check that the applicable temperature range is suitable for the environment.

Usage instructions

› These installation instructions are revised on an ongoing basis and the latest version is available for download at https://www.maco.eu/assets/757784 verfügbar. The QR code, which takes you directly to the latest version, and the creation date can be found at the end of these installation instructions.

› All illustrations are only symbolic and serve only for better visualisation.

› Unless otherwise stated, dimensions are given in **millimeters**.

› Further information on our currently available products can be found on our website www.maco.eu.

› If in doubt, please consult your MACO contact person!

› Please send any suggestions or ideas for improving our installation instructions by email to feedback@maco.eu

Protective note to restrict the use of documents in accordance with ISO 16016:
© Mayer & Co Beschläge GmbH.

Applicable documents

The following documents must be observed in addition to these instructions and/or provide additional information:

› Online catalogue eCat at https://ecat.maco.eu/

› Operating and maintenance instructions for end users - Doc. No. 757585

› Installation instructions A-TS Comfort motor, access solutions and interfaces - Doc. No. 760322

› Installation instructions French Casement Drive Gear - Doc. No. 760309

› Installation instructions Electrical And Mechanical Door Openers - Doc. No. 760320

You can find the current version of all documents on our website at https://www.maco.eu/Downloads.

The specialist company's obligation to provide information and instruction

Please ensure that you fulfil your obligation to inform and instruct the end user! As the distributor, you are obliged to deliver the window or door elements exclusively including the applicable operating and maintenance instructions and, if applicable, a sticker for deviating operating methods. We make these available to our customers in the download area of our website (https://www.maco.eu/Downloads).
End users must be trained accordingly.

Retention of documents



Keep these installation instructions for future reference.

2. Safety and warning notices

These installation instructions contain safety instructions before a sequence of actions that could result in personal injury or material damage. The hazard prevention measures described must be strictly adhered to. For the safety of personnel, there are safety instructions in the following 3 stages:



Imminent danger!
Failure to comply with such instructions will result in death or serious injury!



Possible imminent danger!
Failure to comply with such instructions can result in death or serious injury!



Possible imminent danger!
Failure to comply with such instructions may result in minor or slight injuries!

In addition, installation steps that require special attention are labelled with the following note:



Note to avoid material damage or errors when installing the fitting parts on the element.

3. Storage and transport of the fitting / door or window element

Check the following immediately upon delivery:

› damage to packaging or containers
› damage to the material
› other obvious irregularities

3.1 Notes on storing and transporting the fitting

Improper storage and transport of the fitting can impair the surface quality. This can result in the safety and function of the fitting no longer being guaranteed. To prevent this, the following points must be observed:

› It must be ensured that the room air is permanently dry (max. 60% relative humidity).
› Avoid large temperature fluctuations that lead to the formation of condensation. Condensate on the fitting leads to the galvanised surfaces being attacked (rust formation).
› Aggressive vapours from cleaning agents or installation aids such as silicone and the like must be avoided at all costs - even for short periods. Vapours from such substances can very quickly lead to corrosion of fittings.
› Salty air or air polluted by trade and industry also leads to corrosion on galvanised surfaces and is also unsuitable for storage facilities.

3.2 Notes on transporting and handling the door or window elements

WARNING

Possible danger to life and limb due to improper handling and transport! Follow the instructions.

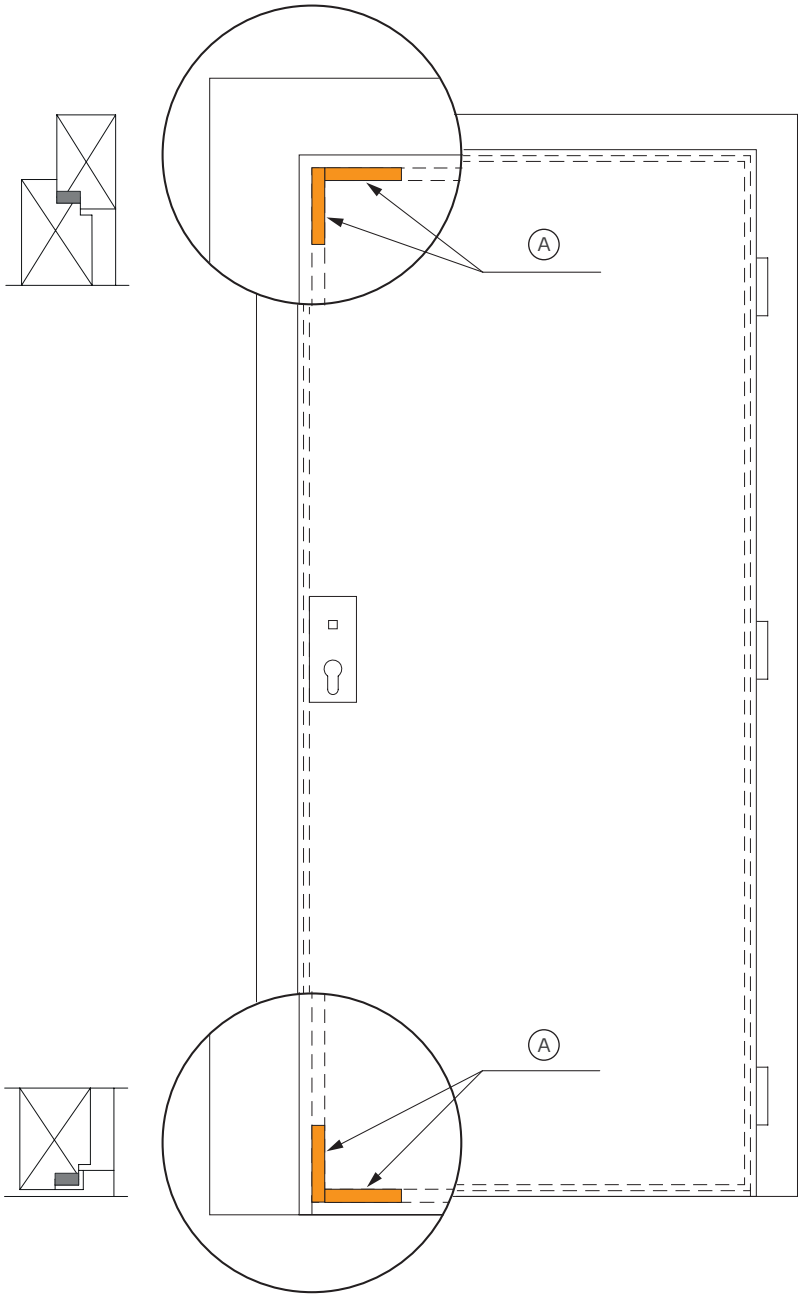
Improper handling and improper transport of the doors/windows or French door elements can lead to dangerous situations and cause serious accidents or even death. To prevent this, the following notes must be observed:

› During loading and unloading processes, force application points must be selected that only generate reactive forces in accordance with the design of the fitting for the intended installation position.
› During handling and transport, ensure that the fitting is in the locked position to prevent the sash from swinging open in an uncontrolled manner. Suitable securing devices must be used.
› Only transport securing devices that are matched to the respective rebate clearance may be used.

3.3 Use of transportation protection devices

Simple transport protection devices, wedges or blocks ensure a safe transport of the entire door element. Remove only after installation.

Ⓐ Transport protection device position



› Transport must be carried out in the intended installation position. If transport in the intended installation position is not possible, the sash must be unhinged and transported separately from the associated frame.

Reactive forces can occur during transport and loading and unloading processes, especially when supported by aids such as suction cups, transport nets, forklift trucks or cranes, which can lead to damage or incorrect loading of the installed fitting. The following instructions must therefore be observed and taken into account for all transport, loading and unloading processes:

› The type and application points of force during transport and during loading and unloading processes have a considerable effect on the reactive forces that occur.
  → The force application points must always be selected so that the resulting reactive forces are absorbed in accordance with the design of the fitting for the intended installation position. This applies in particular to the bearing points.

› When transporting door and window elements, considerable reactive forces occur due to vibrations, which can also cause damage or incorrect loads on the installed fitting.
  → Always use transport securing devices (e.g. spacer blocks) adapted to the respective rebate clearance to hold the sash in the intended position in the frame during transport and thus transfer the reactive forces that occur directly from the sash via the frame.
  → If possible, door and window elements should always be transported in the intended installation position so that the resulting reactive forces are absorbed in accordance with the design of the fitting for the intended installation position. This applies in particular to the bearing points. If transport in the intended installation position is not possible, the respective sashes must be unhinged and transported separately from the associated frame.

In addition, it is recommended that the following guidelines be observed:

› TLE.01 from VFF (German Window and Facade Association (Verband Fenster + Fassade)) The correct handling of ready-to-install windows and external doors during transport, storage and installation

(Source: www.guetegemeinschaft-schloss-beschlag.de/Pruefen-Zertifizieren/Richtlinien/VHBH)

4. Technical data

Optional electronic components (e.g. A-TS Comfort motor, power supply, UPS), as well as access solutions and interfaces are described in the installation instructions "A-TS Comfort motor, access solutions and interfaces", Doc. No. 760322.

5. Certificates and proof of performance

You can find certificates and proof of performance at www.maco.eu.

6. Intended use

› The A-TS is intended to be installed in vertical front doors, apartment doors and side doors made of PVC, timber, aluminium or steel and combinations thereof.

› Mount all hardware parts professionally as described in this manual and observe all safety instructions.

› In order to avoid errors in the electronics due to damaged cables, all milling/drilling in the area of the cable routing must be carefully deburred!

› Installation and electrical installations must be carried out in accordance with these instructions. Incorrect wiring can lead to the destruction of the electronics.

› When screwing in, make sure that the cables are not damaged by the fastening screws!

› Before installation, ensure that all components are in perfect condition - damaged or faulty components must not be used under any circumstances. Use A-TS only in a perfect condition.

› Power to the power supply must be switched off before all work on the A-TS and the voltage-carrying components is performed.

7. Reasonably foreseeable misuse

CAUTION	Improper assembly, misuse or unusual use, the use of system accessories not expressly approved by MACO, or modifications or repair work not expressly approved by MACO may lead to malfunctions and must be avoided. Any measures not expressly permitted by MACO shall result in the loss of all liability, warranty and, if necessary, separately agreed warranty claims.

› The A-TS must NOT be used for escape or panic doors according to EN179 or EN1125.

› Material notes:

CAUTION	The following instructions regarding the material of the fitting must be observed. Otherwise, the fitting may be damaged. In addition, all warranty claims may be invalidated!

› The fitting described in these installation instructions is made of galvanised metal, passivated and sealed in accordance with EN ISO 2081:2018. It may not be used in environments with aggressive, corrosive air contents (e.g. in swimming pools, stables, buildings near the coast, polluted industrial areas, buildings for processing in the chemical industry, etc.). The fitting is also not suitable or intended for use in acidic woods (oak, larch, teak, etc.) and woods with aggressive ingredients/surface treatments. MACO offers fittings with a Tricoat-Evo surface for these areas of application.

› If the fitting is to be used in demanding environments and with demanding materials, please contact your MACO contact person before installation.

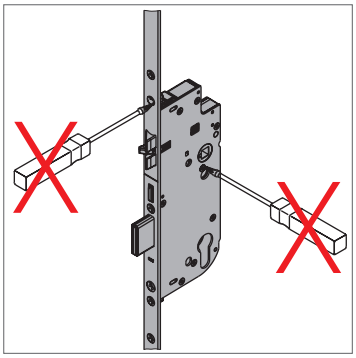
› Do not use acid-curing sealants, as these can lead to corrosion of the hardware parts.

› The door elements may only be surface-treated (painting, varnishing, glazing, oiling, etc.) before the fitting is installed. Subsequent surface treatment can impair the function of the fitting. In this case, all warranty, guarantee, compensation and product liability claims, as well as other liability claims against MACO shall lapse.

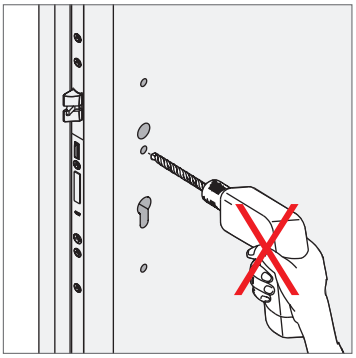
› The surface of the fitting may not be damaged during processing. Otherwise, after a while, this leads to white or red rust, which destroys the components. Damaged parts must be replaced.

CAUTION

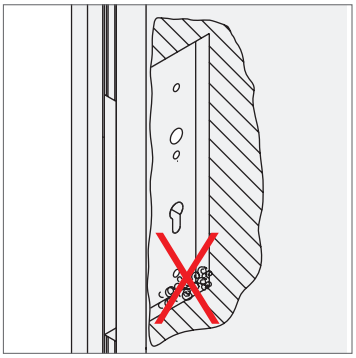
Failure to observe the following information may result in damage to the fitting!



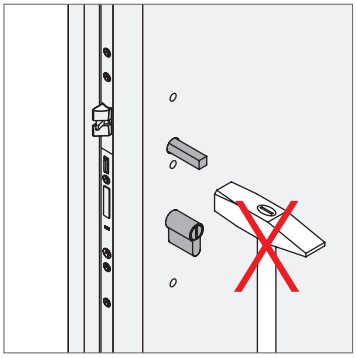
Never open the lock case!



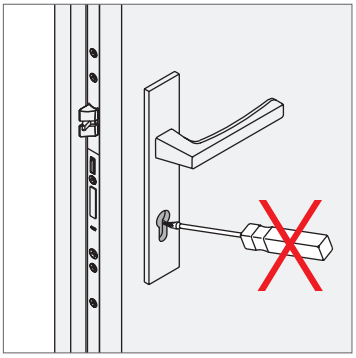
Drill all holes before installation of the lock.



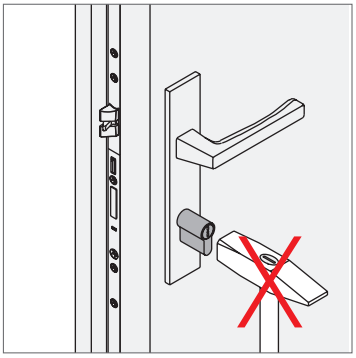
Remove swarf from the routing pockets!



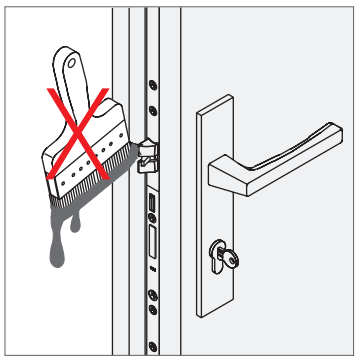
Do not force the handle pin through the lock nut!



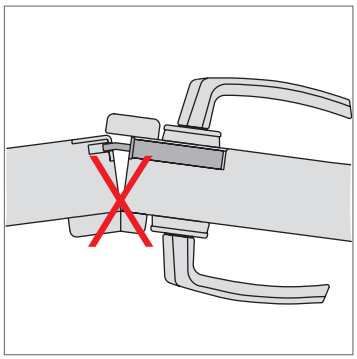
Only close the lock with the corresponding operating key!



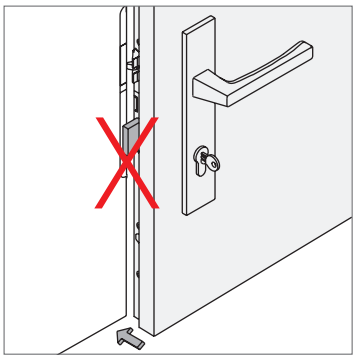
Do not use force during the cylinder assembly!



Do not paint or varnish over the padlock bolt or latch!



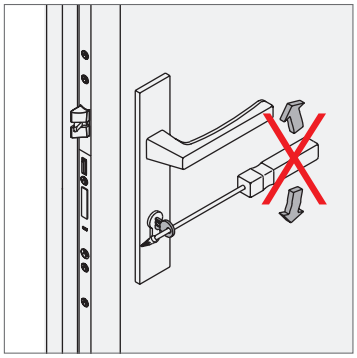
Double-sash doors must not be forced over the inactive leaf!



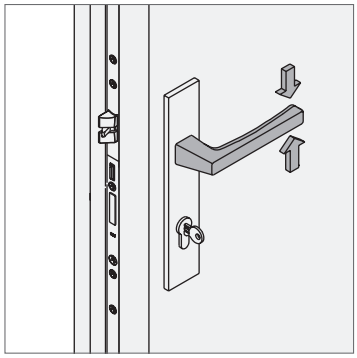
Do not lock the locking bar when the door is open!



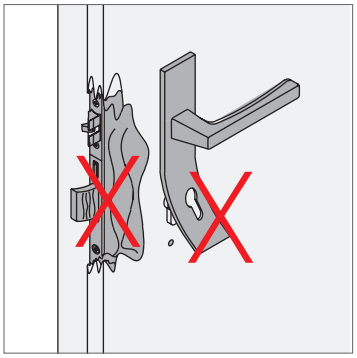
Do not simultaneously press the handle and turn the key!



Do not turn the key using force!
The latch of the main lock must not rub against the striker plate – this also applies to multi-point locks without door acceleration, and all latches of the side locks. For this, use the adjustment option on the striker plates and door hinges. Adjustment of the holes in the striker plates is not permitted.



Only apply load to the handle in the normal direction! Apply a maximum force of 15 kg in the direction of actuation (on the handle).

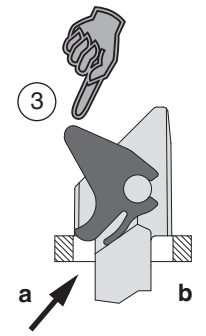


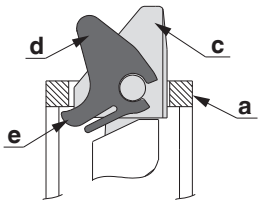
The multi-point lock must be replaced as soon as traces of use of force are visible!



Do not carry the door leaf with the handle!

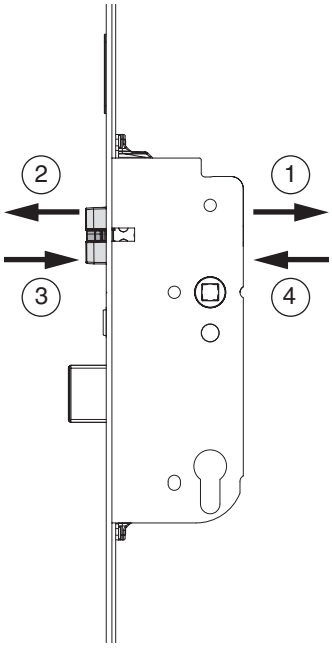
8. Latch adjustment



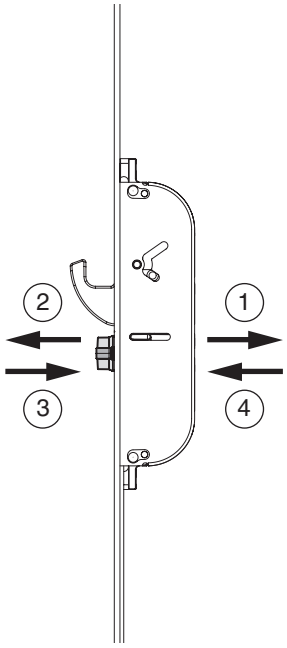


a = Faceplate
b = Faceplate recess
c = Latch
d = Latch insert
e = Insert leg

Crank latch



Multi-function latch



① Loosen the screw completely and press forward with a screwdriver!

② Remove the latch!

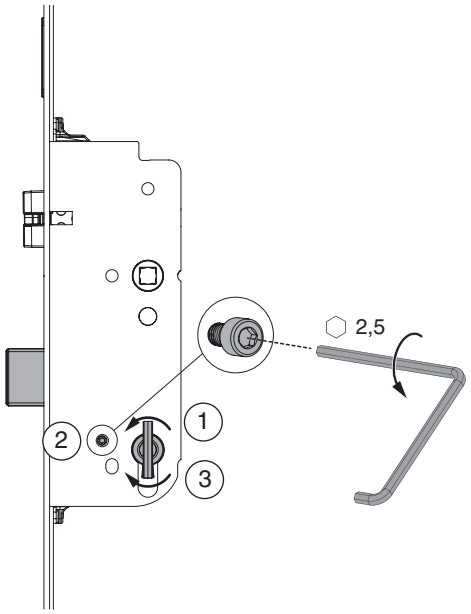
③ Turn the latch over and place it on the faceplate (**a**) so that you can press the insert leg (**e**) of the latch insert (**d**) under the faceplate recess (**b**).

④ Only then press the latch in completely! Screw in (torque min. 1.5 Nm to max. 2 Nm)!

Perform functional check!

9. Installation Instructions

9.1 Set lock for day release function (assembler)



Set day release function

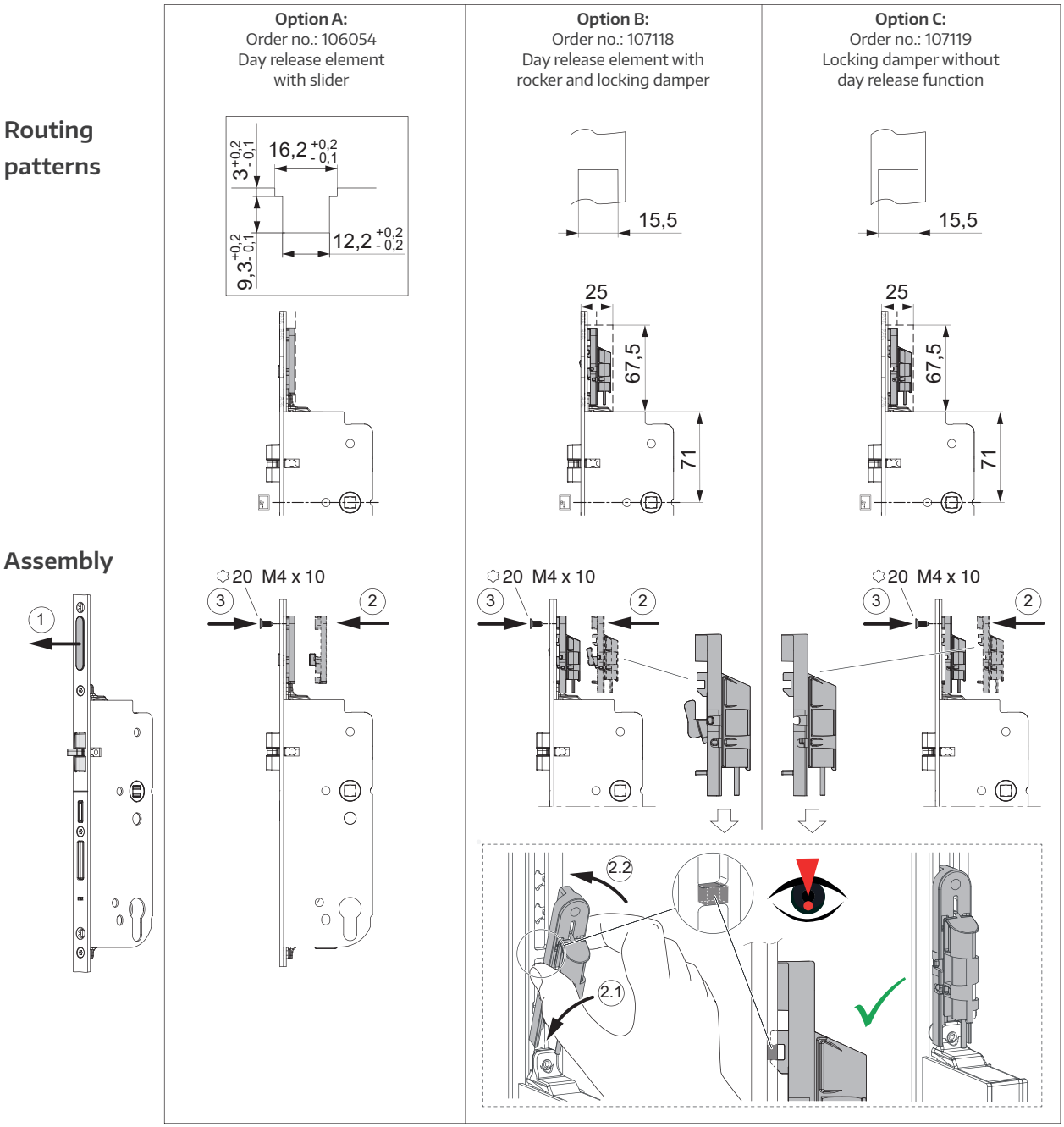
① Lock

② Remove the day release screw

③ Unlock

If the day release function is set, the main latch is not actuated during motorised operation (door does not automatically jump open, is held in place by the daily release opener, e-opener or latch insert!

9.2 Day release element / locking damper on the lock (assembler)

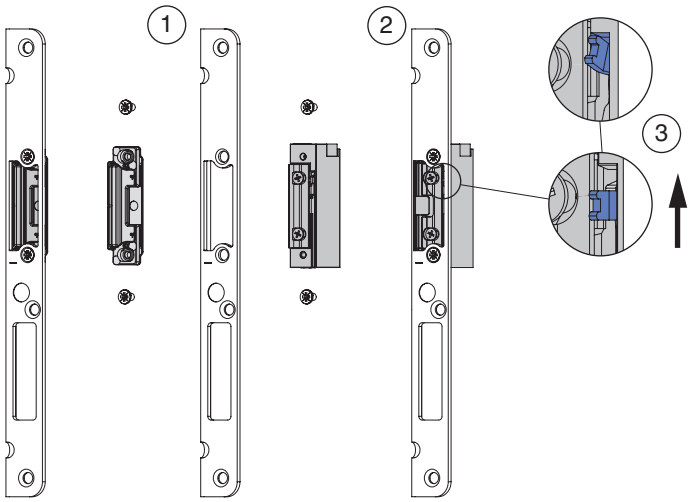


(1) Remove the faceplate cover.

(2) Position the day release element/locking damper on the back of the faceplate (directly on the latch above the lock case).

(3) Screw on the day release element/locking damper with the attached screw on the front of the faceplate!

9.3 MACO day release opener assembly on the striker plate (assembler)



① Remove the latch insert.

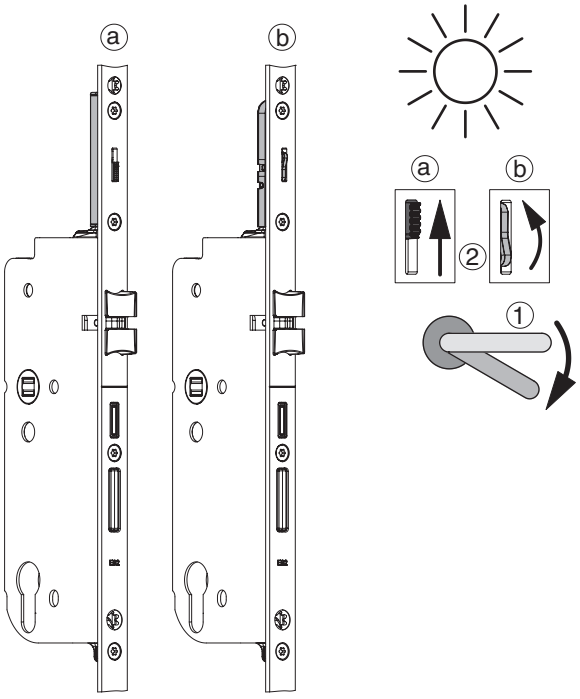
② Assemble the MACO day release opener.

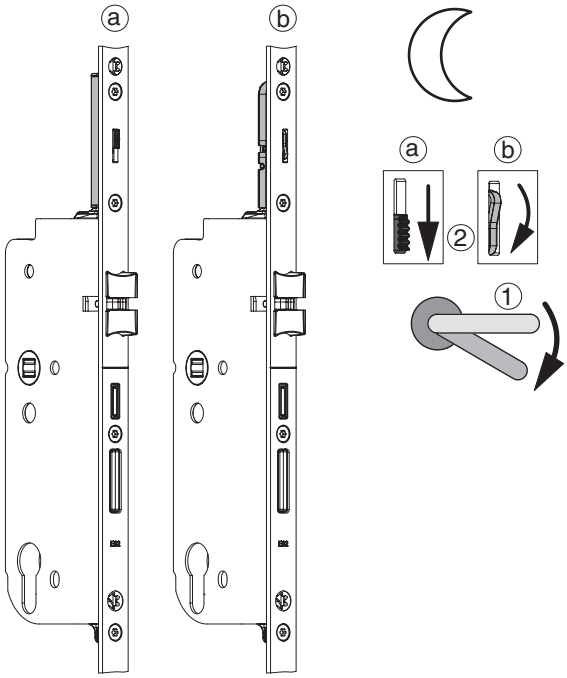
③ Activate the mechanical unlocking on the day release opener using the lever*.

* When using a mechanical day release opener it is recommended to use the version with permanent opening. This version has no lever.
When using a day release opener or an e-opener with mechanical unlocking, ensure that the lever for the mechanical release is activated in day release mode.

When using a day release opener or e-opener, it is recommended to use a latch with latch clips. When using a day release opener or an e-opener with a narrow profile it is recommended that you use a recessed latch with latch clips.

9.4 Day release function user manual (end customer)





Activate day release function

① Press the handle so that the locking element and the multifunction latch are pulled in!

②ⓐ Slide the day release slider upwards, release the handle!

ⓑ Push the day release rocker upwards, release the handle!

Day release activated – During this mode of operation, the door is not locked and can be used at any time by all persons!

Deactivate day release feature

① Press the handle so that the locking element and the multifunction latch are pulled in!

②ⓐ Slide the day release slider downwards!

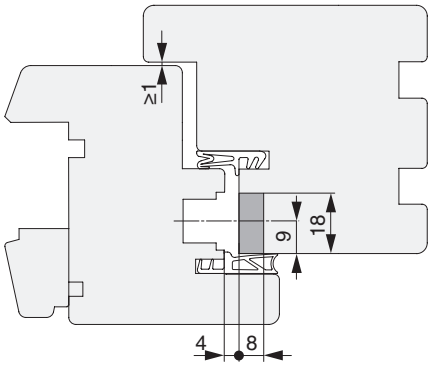
ⓑ Push the day release rocker downwards!

The A-TS basic function is restored.

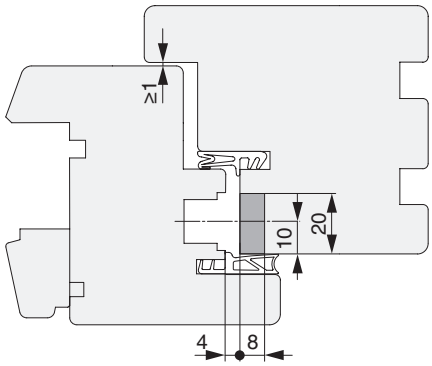
10. Door constructions

10.1 4 mm rebate gap

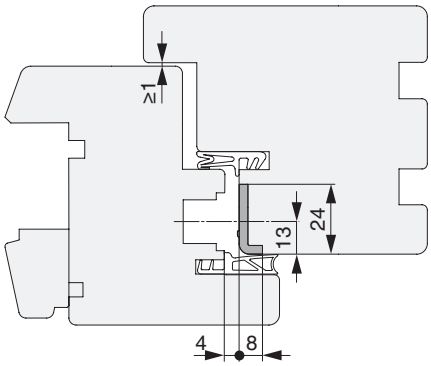
9 mm offset



10 mm offset



13 mm offset

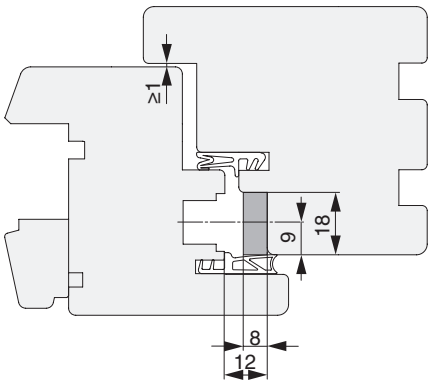


A rebate gap of 2 - 6 mm must be kept in the installed state!

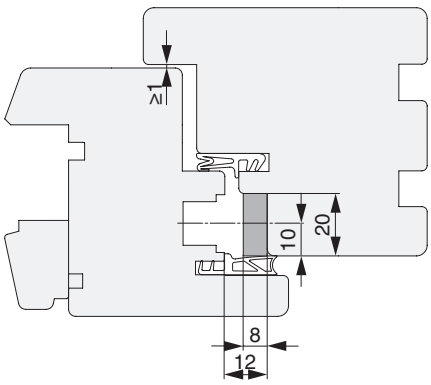
Door constructions

10.2 12 mm rebate gap

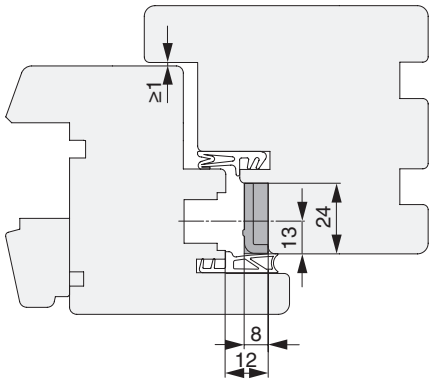
9 mm offset



10 mm offset



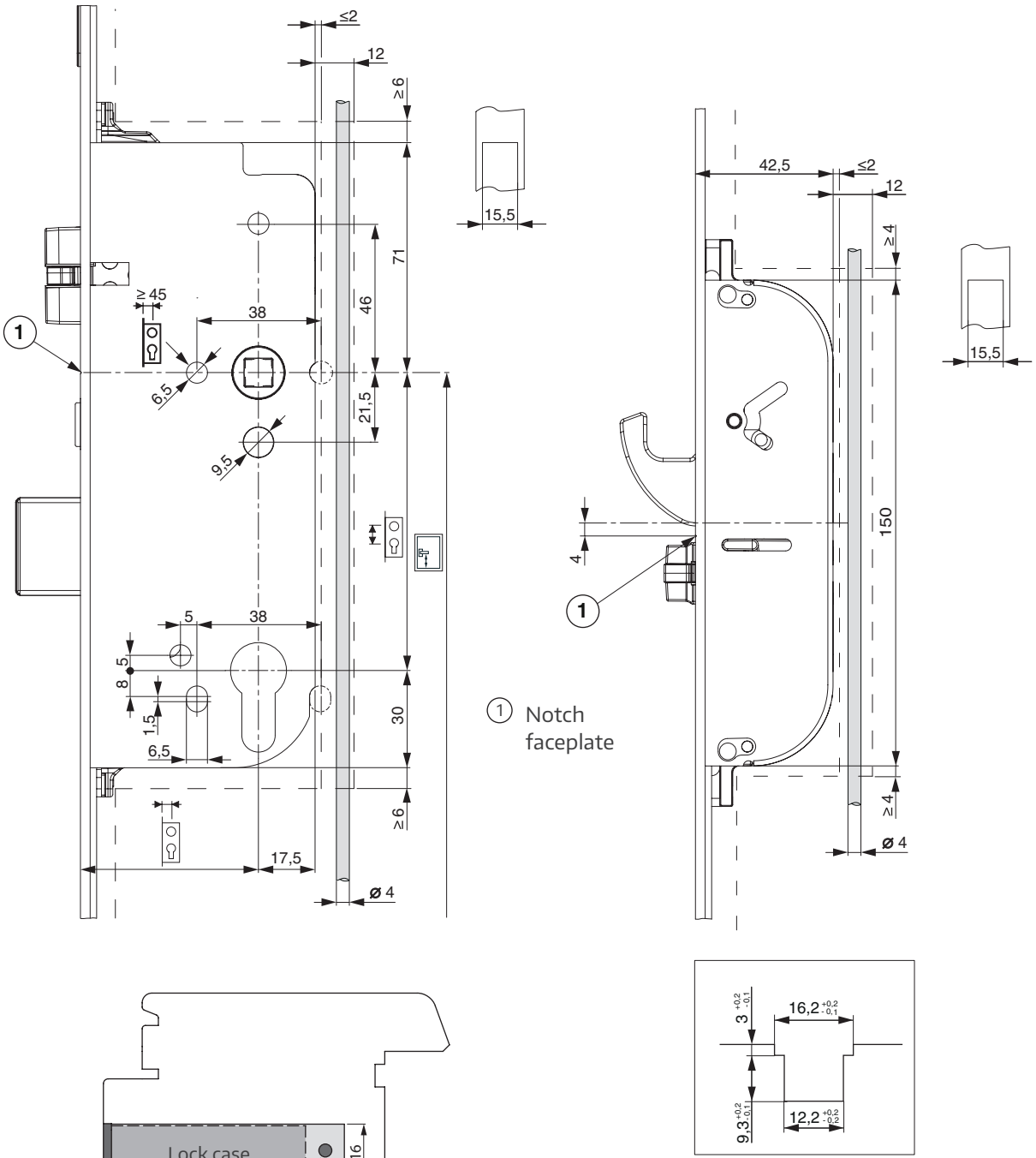
13 mm offset



A rebate gap of 10 - 14 mm must be kept in the installed state!

11. Drilling and routing patterns

11.1 Lock case and multifunction latch with hook lock

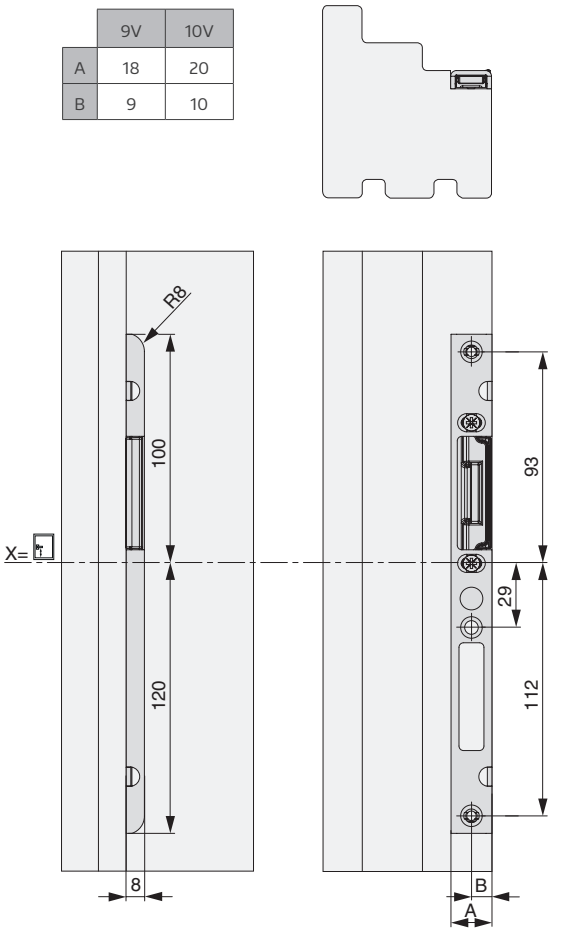


Drilling and routing patterns

11.2 Latch and dead bolt striker plate 9/10 mm offset

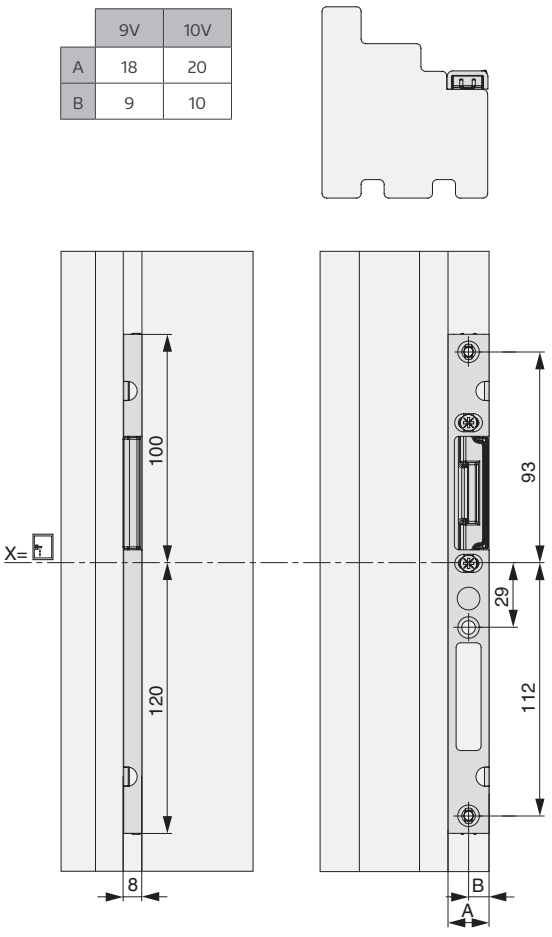
4 mm rebate gap

	9V	10V
A	18	20
B	9	10



12 mm rebate gap

	9V	10V
A	18	20
B	9	10



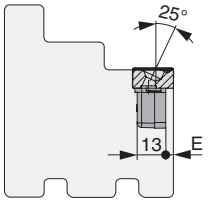
Drilling and routing patterns

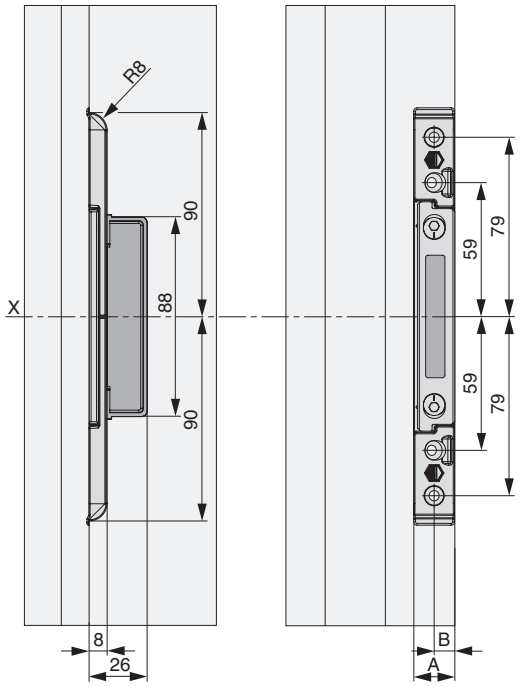
11.3 Multifunction hook striker plate 9/10 mm offset

4 mm rebate gap

X
2 MF-HO
+601 / +726 / +976
0
-764

	9V	10V
A	18	20
B	9	10
E	3	4

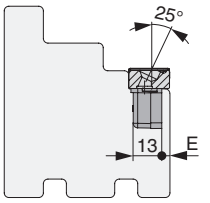


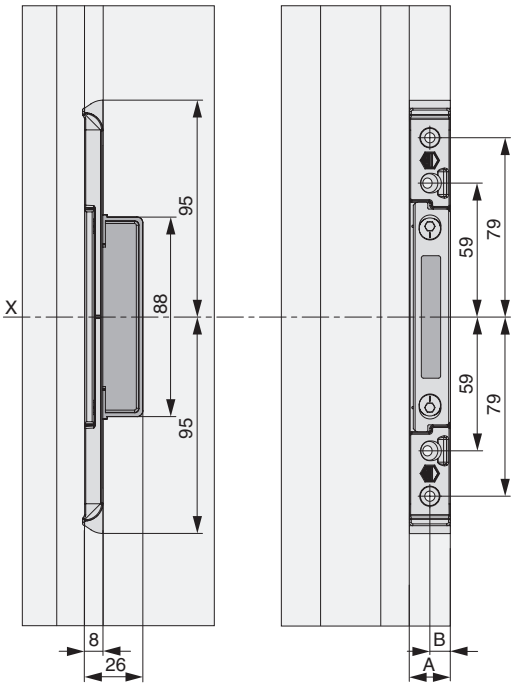


12 mm rebate gap

X
2 MF-HO
+601 / +726 / +976
0
-764

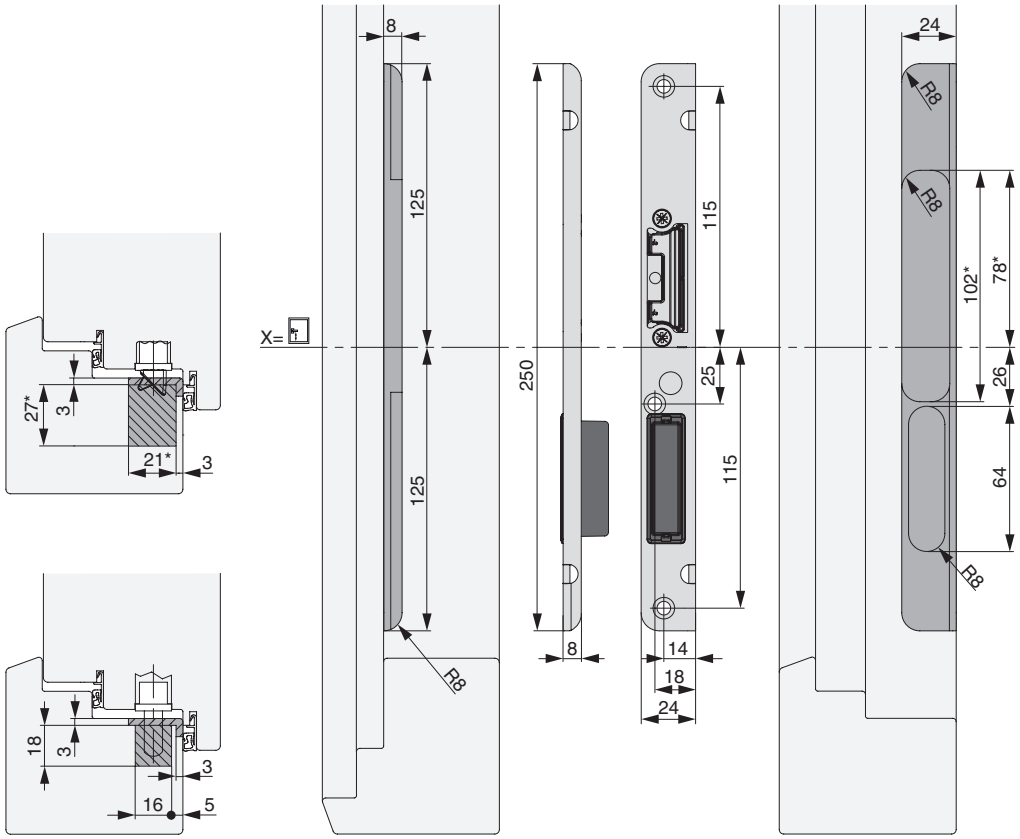
	9V	10V
A	18	20
B	9	10
E	3	4





Drilling and routing patterns

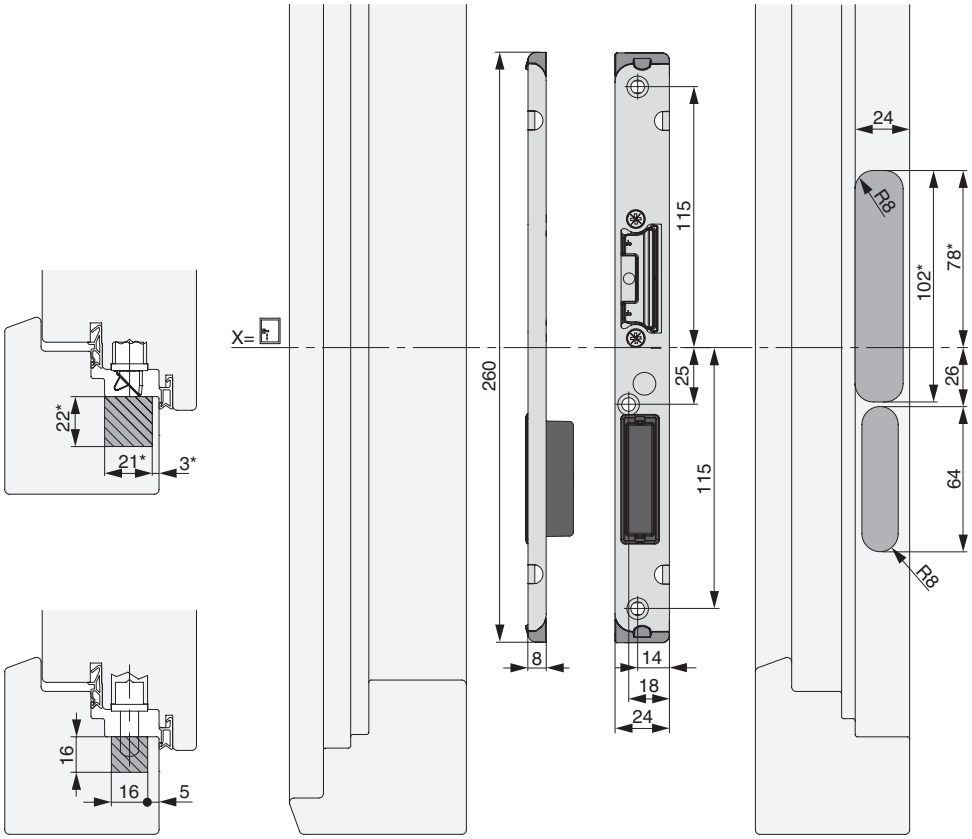
11.4 Latch and dead bolt striker plate 13 mm offset, 4 mm rebate gap



*Routing pattern E-Opener

Drilling and routing patterns

11.5 Latch and dead bolt striker plate 13 mm offset, 12 mm rebate gap

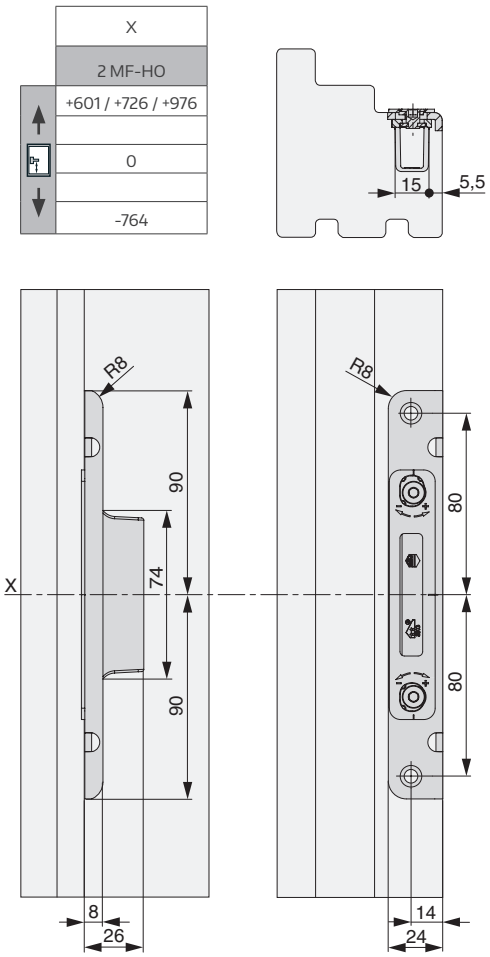


*Routing pattern E-Opener

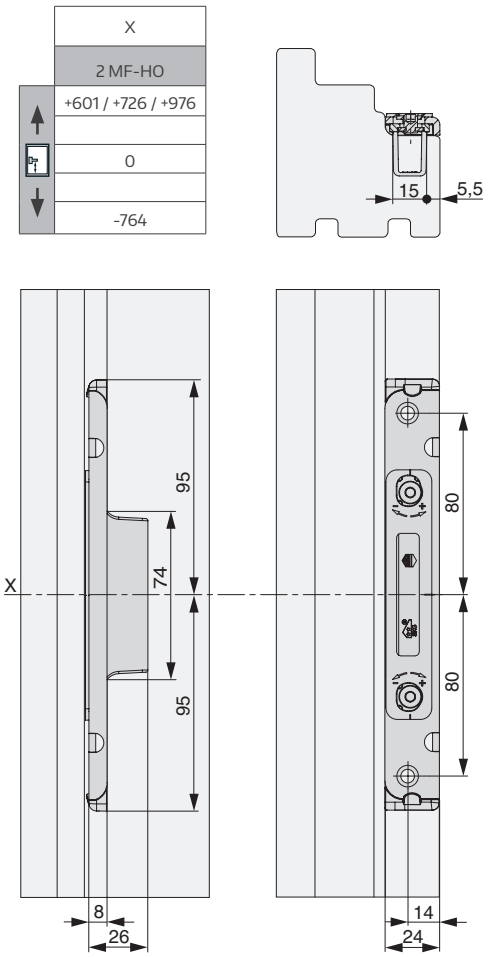
Drilling and routing patterns

11.6 Multifunction hook striker plate 13 mm offset

4 mm rebate gap



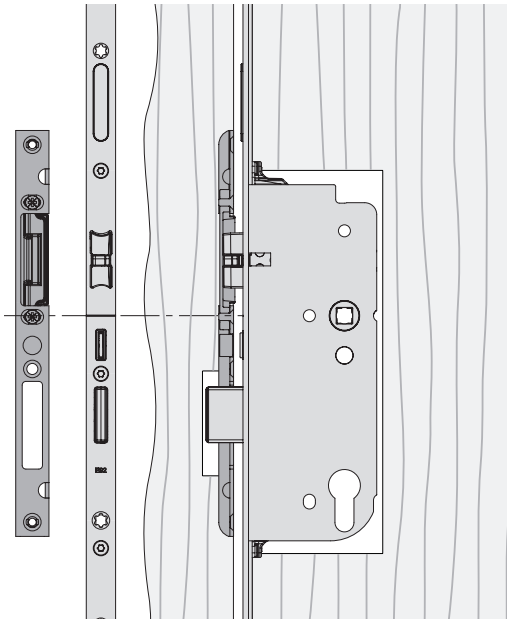
12 mm rebate gap



12. Positioning of the striker plates

12.1 Latch and dead bolt striker plate

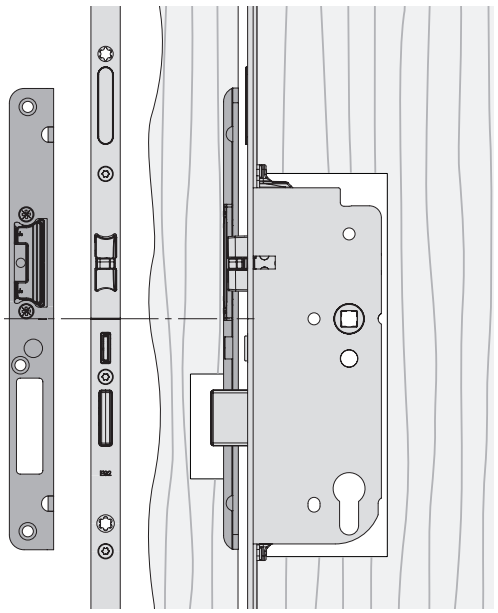
4 mm rebate gap, 9/10 mm offset



Gasket compression adjustment:
+/- 2 mm with latch and dead bolt striker plate

Positioning of notch faceplate = notch strike plate

4 mm rebate gap, 13 mm offset



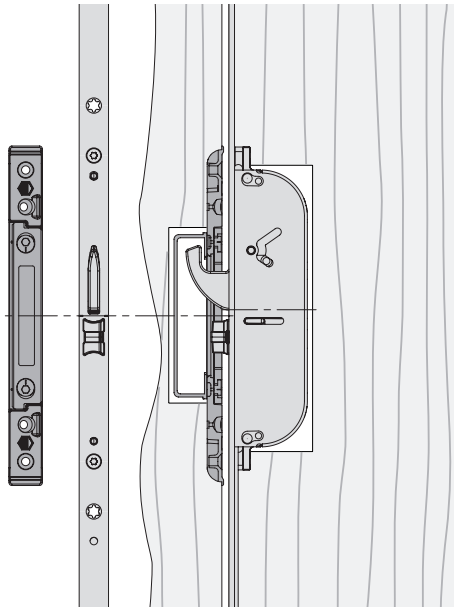
Gasket compression adjustment:
+/- 2 mm with latch and dead bolt striker plate

A rebate gap of 2 - 6 mm must be kept in the installed state!

Positioning of the striker plates

12.2 Multifunction hook striker plate

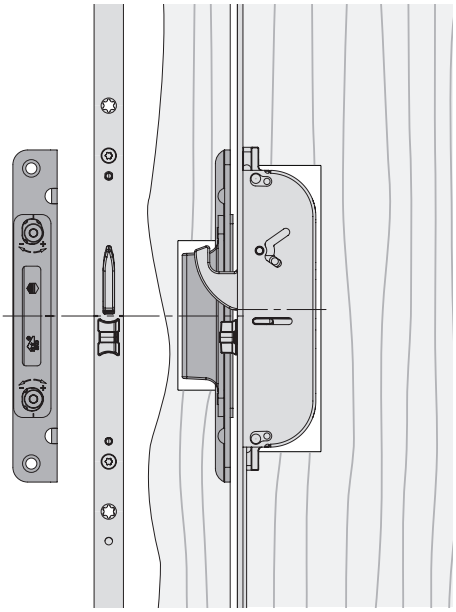
4 mm rebate gap, 9/10 mm offset



Gasket compression adjustment:
+/- 1 mm with MF-HO striker plate

Positioning of notch faceplate = notch strike plate

4 mm rebate gap, 13 mm offset



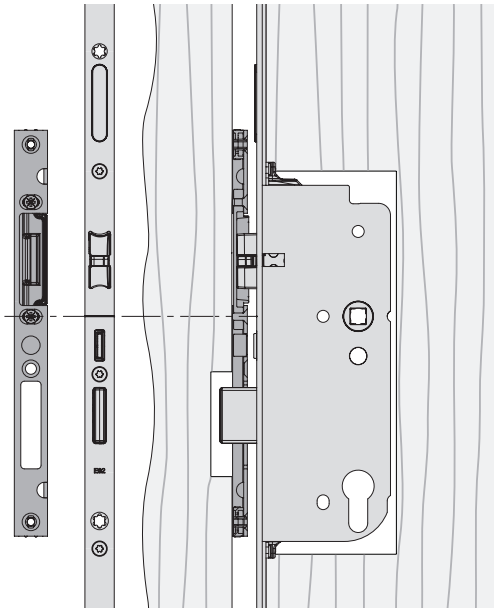
Gasket compression adjustment:
+/- 1.5 mm with MF-HO striker plate

A rebate gap of 2 - 6 mm must be kept in the installed state!

Positioning of the striker plates

12.3 Latch and dead bolt striker plate

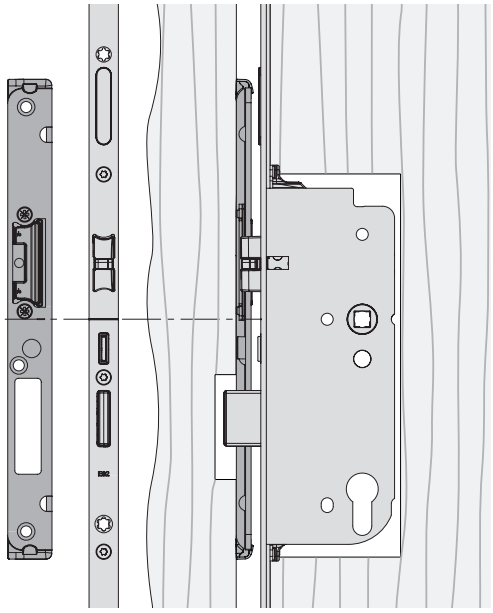
12 mm rebate gap, 9/10 mm offset



Gasket compression adjustment:
+/- 2 mm with latch and dead bolt striker plate

Positioning of notch faceplate = notch strike plate

12 mm rebate gap, 13 mm offset



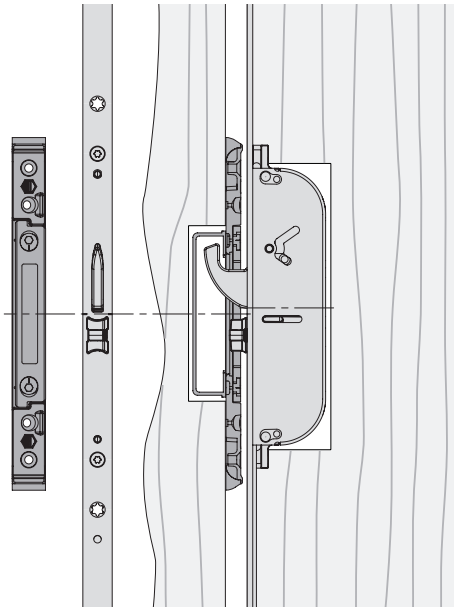
Gasket compression adjustment:
+/- 2 mm with latch and dead bolt striker plate

A rebate gap of 10 - 14 mm must be kept in the installed state!

Positioning of the striker plates

12.4 Multifunction hook striker plate

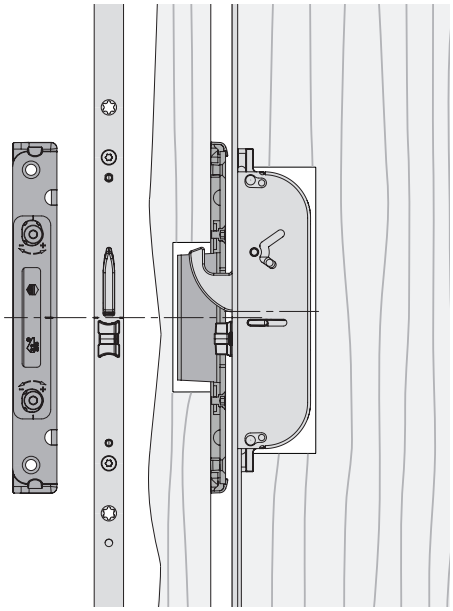
12 mm rebate gap, 9/10 mm offset



Gasket compression adjustment:
+/- 1 mm with MF-HO striker plate

Positioning of notch faceplate = notch strike plate

12 mm rebate gap, 13 mm offset



Gasket compression adjustment:
+/- 1.5 mm with MF-HO striker plate

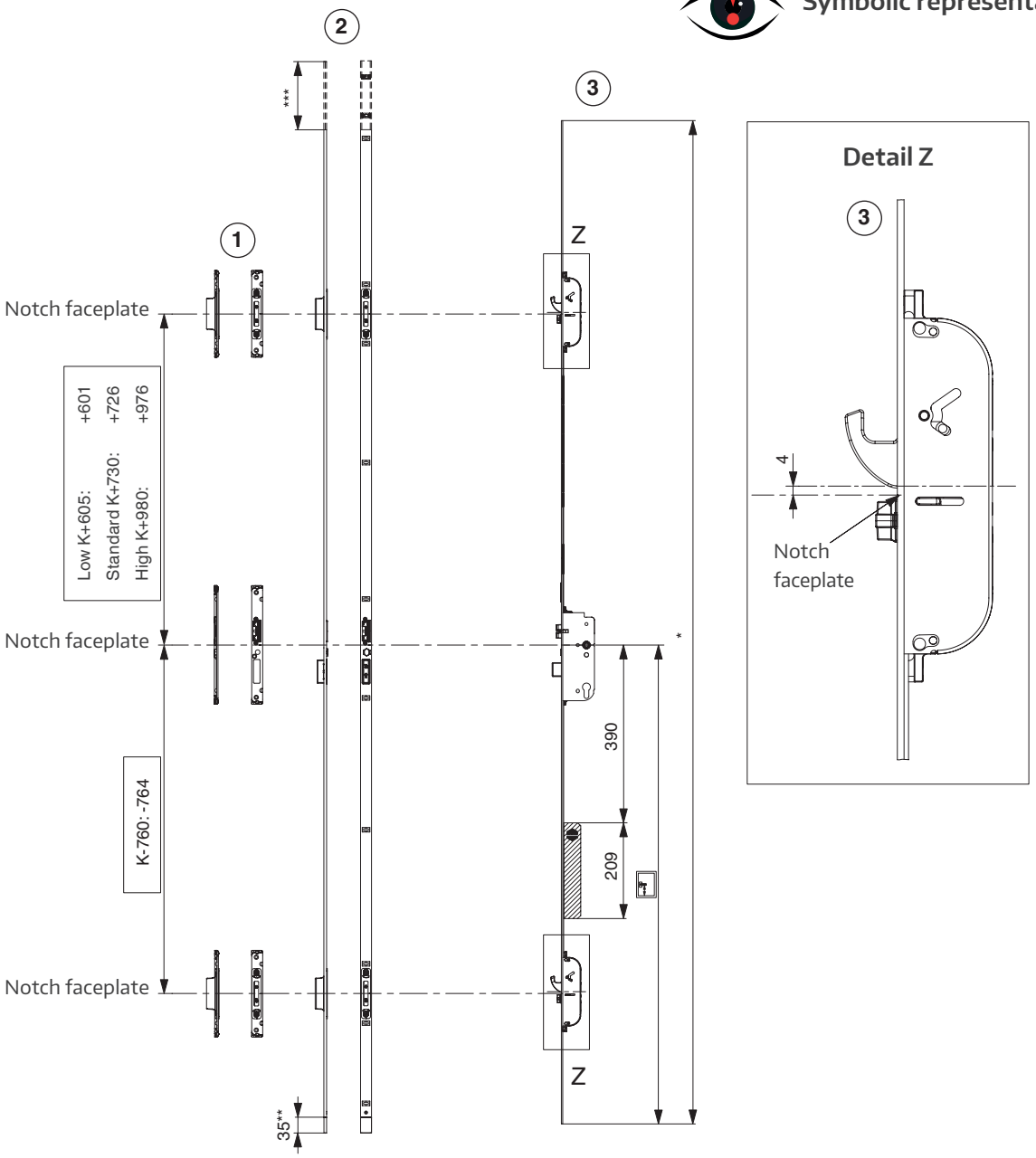
A rebate gap of 10 - 14 mm must be kept in the installed state!

Positioning of the striker plates

12.5 2 multifunction latch with hooks, single sash

① **Single striker plate**
② **Single piece door striker**
③ **Lock**

Symbolic representation only!



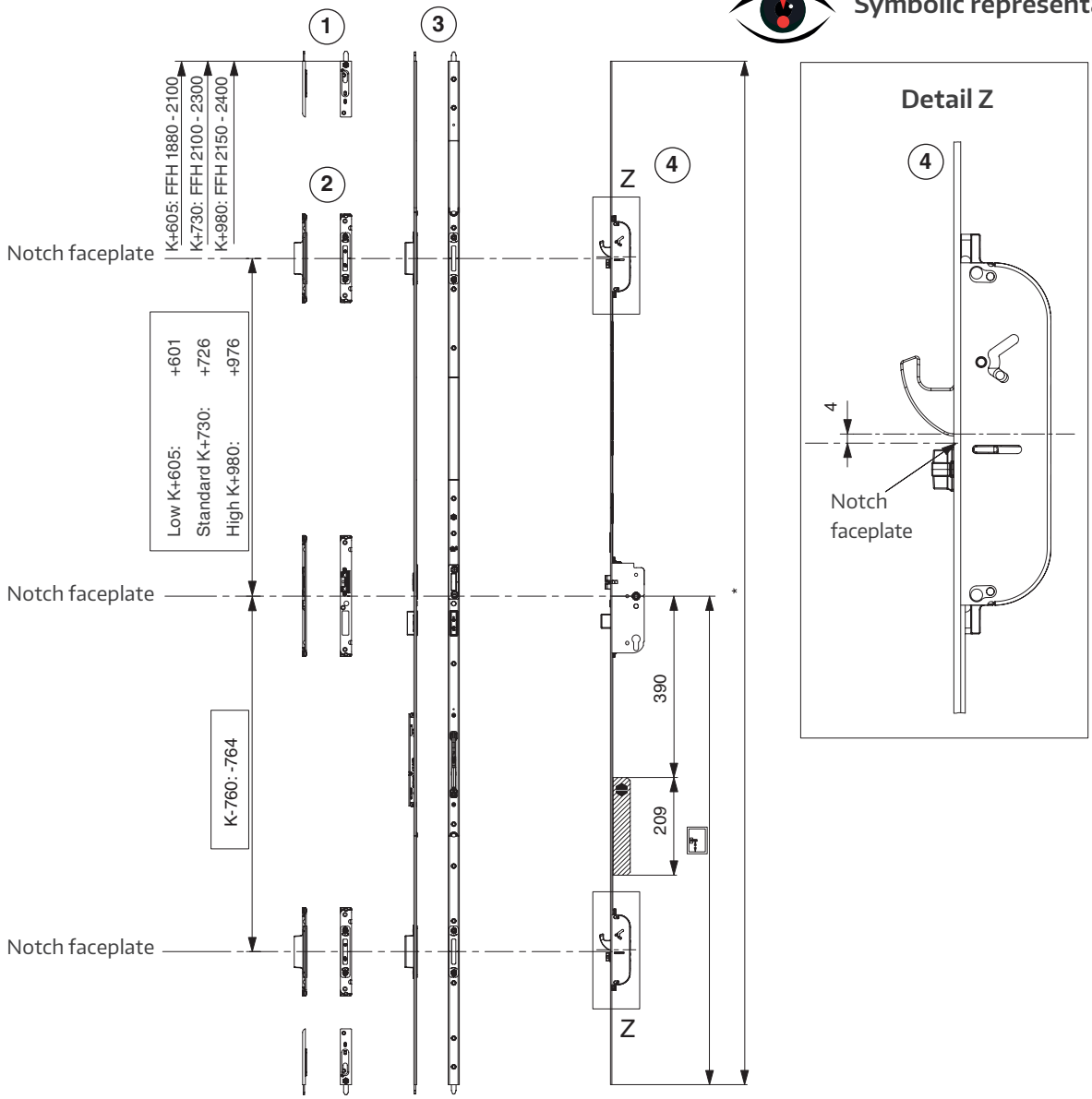
Drive for motorised opening
* Use faceplate strip cover for higher FFH!
** Attachment end for adaptation to threshold (only with timber profile 12 mm rebate clearance, 13 mm offset)
*** For higher FFH item 102852 use single piece door striker extension (only for timber profile 12 mm rebate clearance, 13 mm offset)

Positioning of the striker plates

12.6 2 multifunction latch with hooks, double sash

① **Finger operated door shootbolt**
② **Single striker plate**
③ **French casement drive gear (see installation instructions 760309)**
④ **Lock**

Symbolic representation only!



Drive for motorised opening

* Use faceplate strip cover for higher FFH!

13. Lengthening/shortening of the A-TS K+730: Module without additional locking point

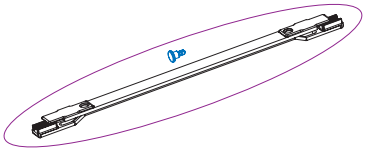
⇨ Only possible with A-TS K+730 module!

⇨ When using the lengthening or shortening faceplate, the standard eurogroove must be used (Exception: U-face plate variant)!



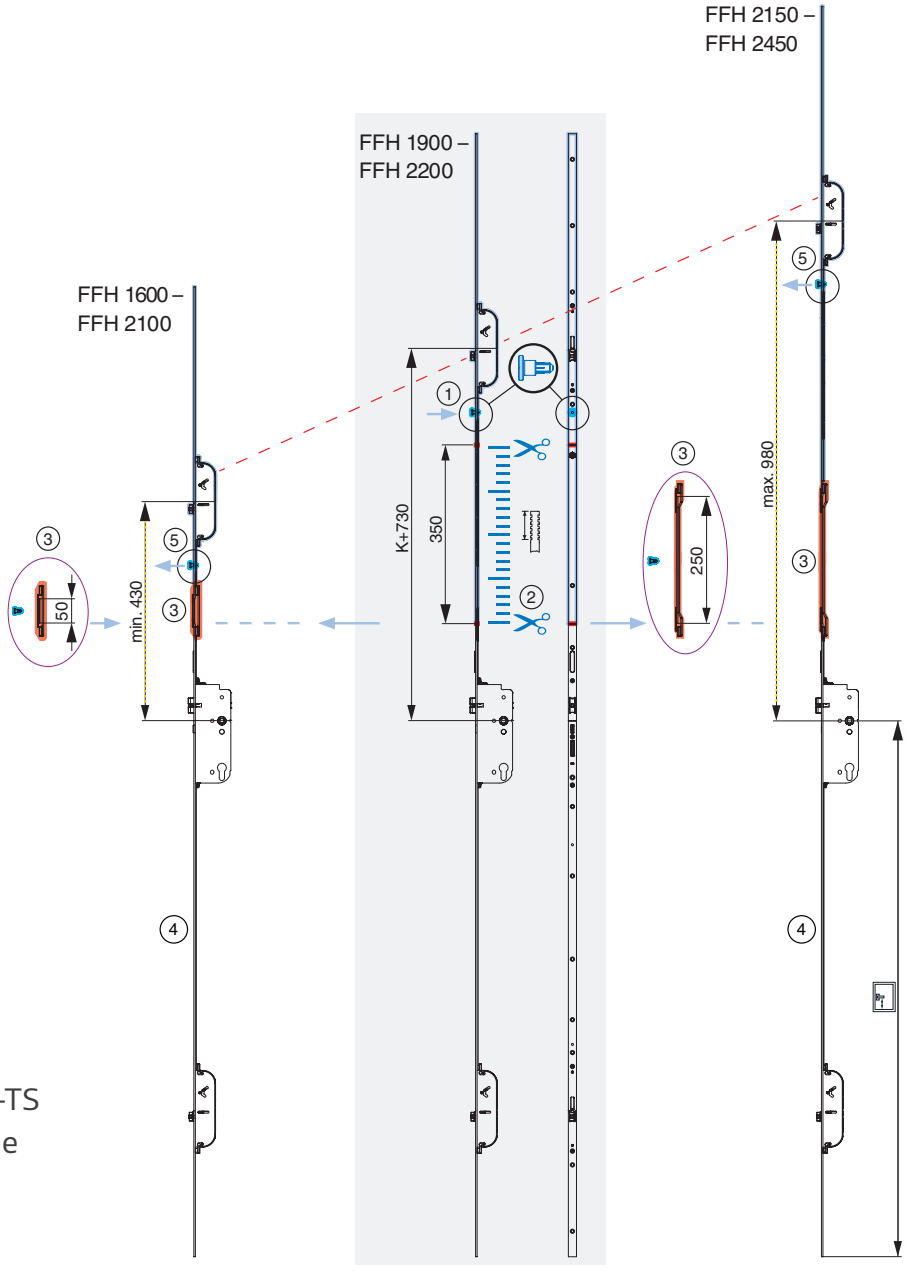
Shortening faceplate pack

Contents: 1 pc. fixing bolt with shortening faceplate and deadbolt



Lengthening faceplate pack

Contents: 1 pc. fixing bolt with lengthening faceplate and deadbolt



① Pre-insert fixing bolts on Standard A-TS K+730 module.

② Separate the faceplate and deadbolt.

③ Insert the shortening or lengthening faceplate.

④ Screw in the entire faceplate.

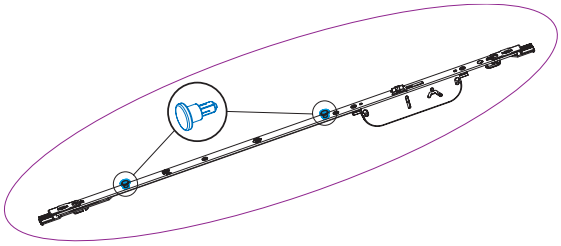
⑤ Remove the fixing bolts on A-TS intermediate faceplate and the A-TS K+730 module.

⇨ Perform functional testing!

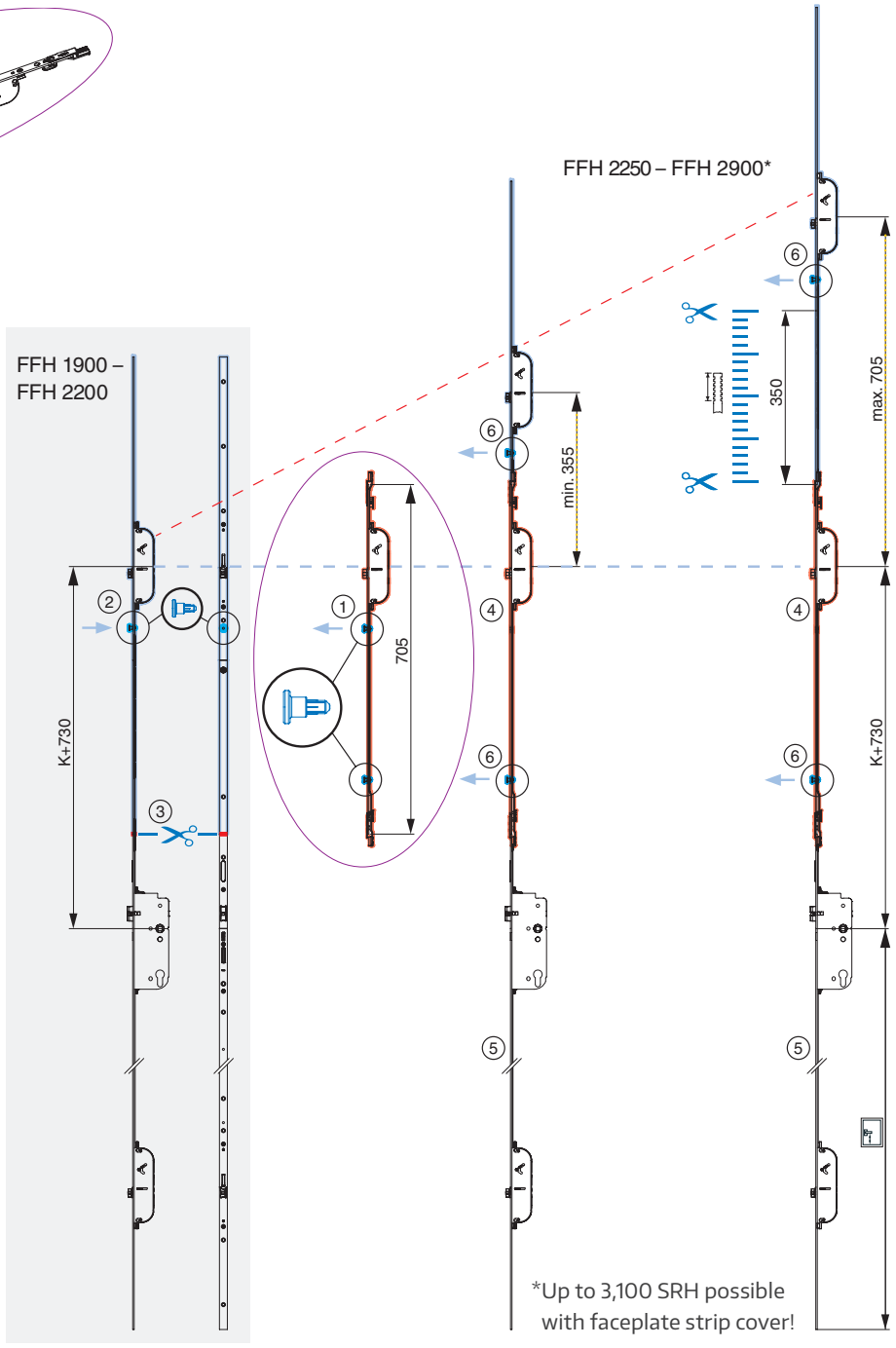
14. Extension of the A-TS K+730: Module with additional locking point

⇨ Only possible with A-TS K+730 module!

⇨ When using the A-TS intermediate faceplate module, the standard eurogroove must be used (Exception: U-face plate variant)!



The A-TS intermediate faceplate module is delivered with two pre-inserted fixing pins!



① Remove 1 of the fixing pins from the intermediate faceplate.

② Pre-insert fixing bolts on Standard A-TS K+730 module.

③ Separate the faceplate and deadbolt.

④ Insert the A-TS intermediate faceplate with the pre-fitted fixing pins.

⑤ Screw in the entire faceplate.

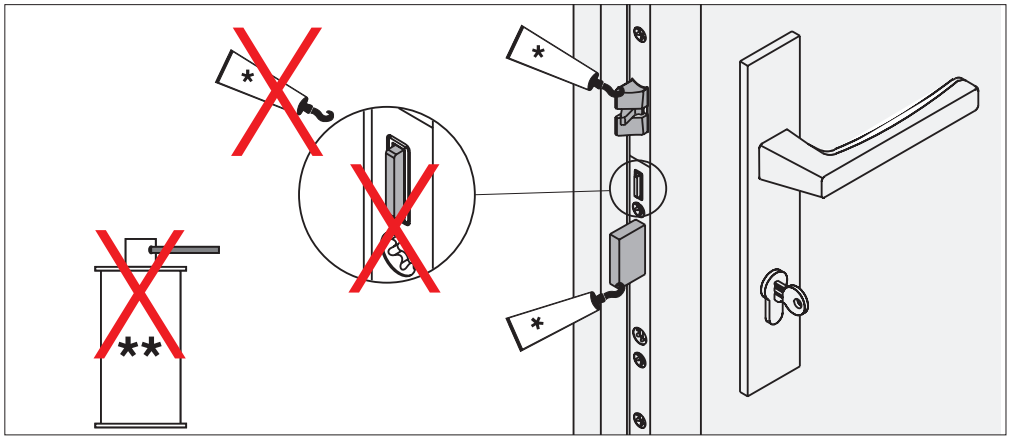
⑥ Remove the fixing bolts on the A-TS intermediate faceplate and on the A-TS K+730 module.

⇨ Perform functional testing!

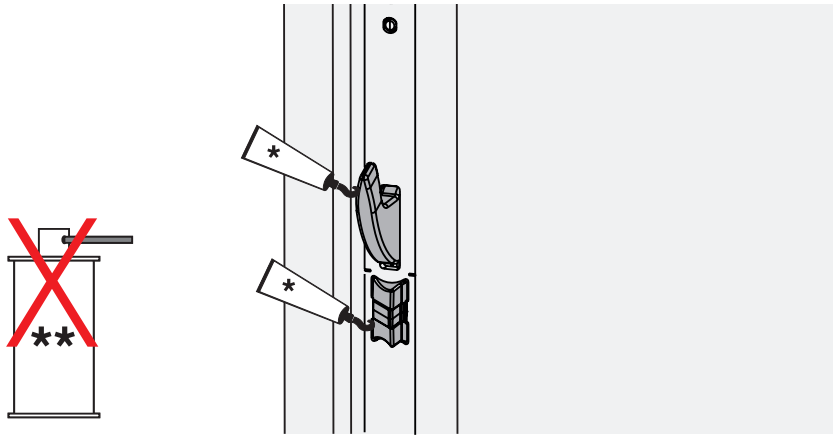
15. Maintenance

CAUTION	Do not use any lubricating oils, rust remover, silicone sprays etc! Lubricate only with grease or technical petroleum jelly!

* Spray grease (455341), ** Rust remover



The door lock (lock case) is delivered with an intensive lubrication of high performance greases and must **NOT be re-lubricated! Lubricate the latch and locking bolt 1x annually!**



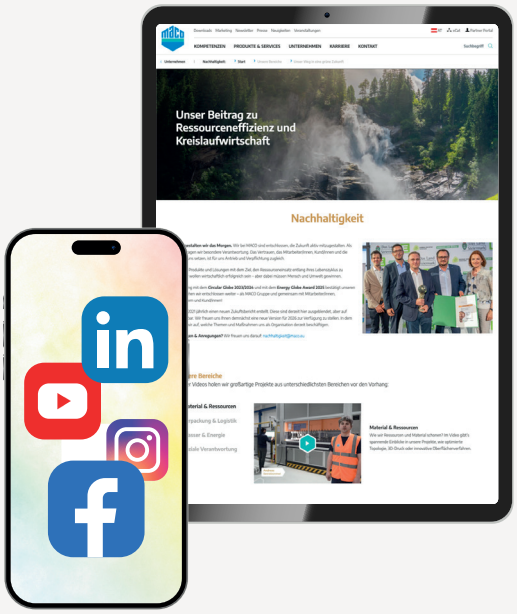
Lubricate the MF-HO locking element 1x annually!

16. Disposal of the fitting

The fitting must be disposed of in accordance with local regulations and laws.
Disposal of the fitting may **NOT BE IN DOMESTIC WASTE**!

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TECHNOLOGY IN MOTION

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