Digital SmartHandle AX

Manual

20.03.2024

SimonsVoss technologies

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1. Intended use

Products in the SmartHandle AX range consist of electronic door fittings. Users can engage SmartHandle AX and open the door onto which it is fitted with an authorised ID medium, such as a transponder.

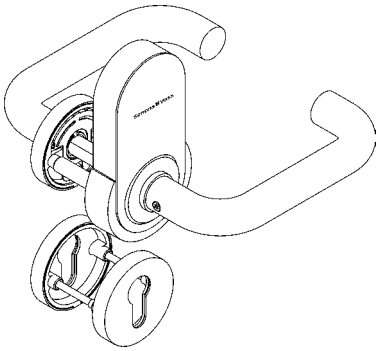
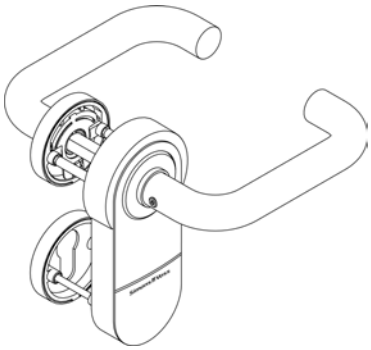
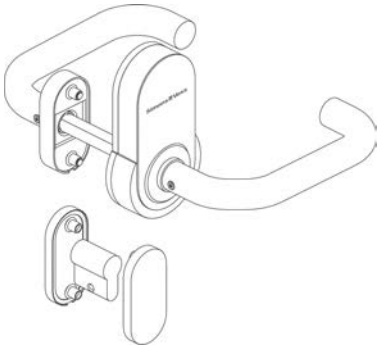
The corresponding authorisations need to be issued using an electronic locking plan.

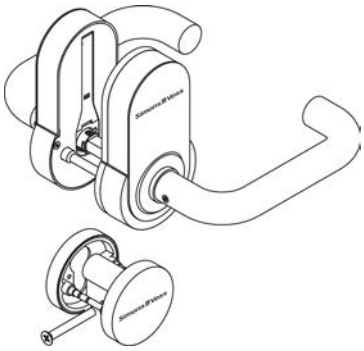
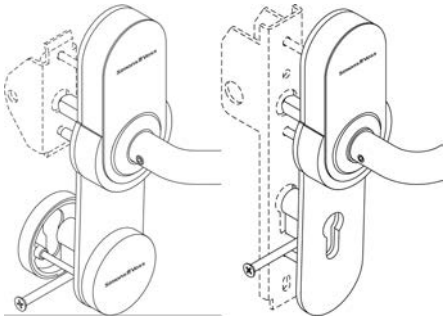
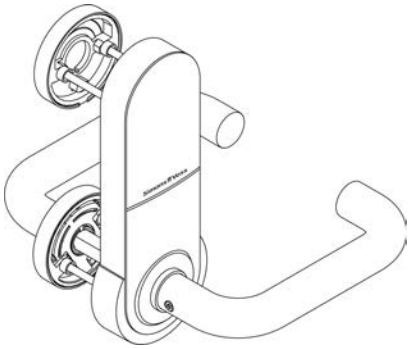
Products in the SmartHandle AX range may only be used for locking and unlocking doors. No other use is permitted.

2. General

The SmartHandle AX is an electronic fitting that can be used to open and close a door.

Electronic fittings in the this range are available in the following models (also see *Versions [▸ 14]*):

Digital SmartHandle AX	Description
Variant A0/B0 	▪ Electronic door handle for mounting on prepared escutcheon holes for stationary installation ▪ Suitable for handle locks with Euro profile (A) or SwissRound (B) ▪ Outer side operated with identification medium only ▪ Inner side permanently engaged to open ▪ Optional: Mechanical Override (MO) ▪ Optional: FH approval
Variants A1/ A1, B1/ A2 	▪ Electronic door handle for mounting on prepared escutcheon holes for suspended installation ▪ Suitable for handle locks with Euro profile (A) or SwissRound (B) ▪ Outer side operated with identification medium only ▪ Inner side permanently engaged to open ▪ Optional: FH approval ▪ Optional: PAS24 certification
Variant A3 	▪ Electronic door handle for mounting on prepared metal frame doors ▪ Suitable for handle locks with a Euro Profile ▪ Outer side operated with identification medium only ▪ Inner side permanently engaged to open ▪ Optional: Mechanical Override (MO) ▪ Optional: FH approval

Digital SmartHandle AX	Description
DS version 	■ Electronic door handle for mounting on prepared escutcheon holes for stationary installation ■ Suitable for handle locks with Euro profile (A) or SwissRound (B) ■ Outside and inside can only be operated with identification medium ■ Optional: Mechanical Override (MO)
Variant A4 	■ Electronic door handle for stationary installation with panic bar adaptation ■ Suitable for handle locks with a Euro Profile ■ Outer side operated with identification medium only ■ Inner side permanently engaged to open ■ Optional: Mechanical Override (MO) ■ Optional: FH approval
Variants E0, E1 	■ Electronic door handle for mounting on predrilled holes for Scandinavian Oval ■ Outer side operated with identification medium only ■ Inner side permanently engaged to open ■ Optional: Mechanical Override (MO) ■ Optional: FH approval

3. General safety instructions

Signal word: Possible immediate effects of non-compliance
WARNING: Death or serious injury (possible, but unlikely)
CAUTION: Minor injury
IMPORTANT: Property damage or malfunction
NOTE: Low or none

WARNING

Blocked access

Access through a door may stay blocked due to incorrectly fitted and/or incorrectly programmed components. SimonsVoss Technologies GmbH is not liable for the consequences of blocked access such as access to injured or endangered persons, material damage or other damage!

Blocked access through manipulation of the product

If you change the product on your own, malfunctions can occur and access through a door can be blocked.

- Modify the product only when needed and only in the manner described in the documentation.

Do not swallow battery. Danger of burns from hazardous substances

This product contains lithium button cell batteries. Swallowing the button cell battery, in can result in severe internal burns leading to death in as little as two hours.

1. Keep new and used batteries away from children.
2. If the battery compartment does not close securely, cease using the product and keep it away from children.
3. If you think batteries have been swallowed or are in any part of the body, seek medical attention immediately.

Risk of explosion due to incorrect battery type

Inserting the wrong type of battery can cause an explosion.

- Only use the batteries specified in the technical data.

CAUTION

Fire hazard posed by batteries

The batteries used may pose a fire or burn hazard if handled incorrectly.

1. Do not try to charge, open, heat or burn the batteries.
2. Do not short-circuit the batteries.

IMPORTANT

Damage resulting from electrostatic discharge (ESD) when enclosure is open

This product contains electronic components that may be damaged by electrostatic discharges.

1. Use ESD-compliant working materials (e.g. Grounding strap).
2. Ground yourself before carrying out any work that could bring you into contact with the electronics. For this purpose, touch earthed metallic surfaces (e.g. door frames, water pipes or heating valves).

Damage resulting from liquids

This product contains electronic and/or mechanic components that may be damaged by liquids of any kind.

- Keep liquids away from the electronics.

Damage resulting from aggressive cleaning agents

The surface of this product may be damaged as a result of the use of unsuitable cleaning agents.

- Only use cleaning agents that are suitable for plastic or metal surfaces.

Damage as a result of mechanical impact

This product contains electronic components that may be damaged by mechanical impacts of any kind.

1. Avoid touching the electronics.
2. Avoid other mechanical influences on the electronics.

Damage due to polarity reversal

This product contains electronic components that may be damaged by reverse polarity of the power source.

- Do not reverse the polarity of the voltage source (batteries or mains adapters).

Operational malfunction due to radio interference

This product may be affected by electromagnetic or magnetic interference.

- Do not mount or place the product directly next to devices that could cause electromagnetic or magnetic interference (switching power supplies!).

Communication interference due to metallic surfaces

This product communicates wirelessly. Metallic surfaces can greatly reduce the range of the product.

- Do not mount or place the product on or near metallic surfaces.

NOTE

Intended use

SimonsVoss-products are designed exclusively for opening and closing doors and similar objects.

- Do not use SimonsVoss products for any other purposes.

Malfunctions due to poor contact or different discharge

Contact surfaces that are too small/contaminated or different discharged batteries can lead to malfunctions.

1. Only use batteries that are approved by SimonsVoss.
2. Do not touch the contacts of the new batteries with your hands.
3. Use clean and grease-free gloves.
4. Always replace all batteries at the same time.

Different times for G2 locks

The internal time unit of the G2 locks has a technical tolerance of up to ± 15 minutes per year.

Qualifications required

The installation and commissioning requires specialized knowledge.

- Only trained personnel may install and commission the product.

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Modifications or further technical developments cannot be excluded and may be implemented without notice.

The German language version is the original instruction manual. Other languages (drafting in the contract language) are translations of the original instructions.

Read and follow all installation, installation, and commissioning instructions. Pass these instructions and any maintenance instructions to the user.

4. Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

NOTE

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

5. Meaning of the text formatting

This documentation uses text formatting and design elements to facilitate understanding. The table explains the meaning of possible text formatting:

Example	button
☑ Example ☐ Example	checkbox
◉ Example	Option
[Example]	Tab
"Example"	Name of a displayed window
| Example |	Upper programme bar
Example	Entry in the expanded upper programme bar
Example	Context menu entry
▼ Example	Name of a drop-down menu
"Example"	Selection option in a drop-down menu
"Example"	Area
Example	Field
Example	Name of a (Windows) service
Example	Commands (e.g. Windows CMD commands)
`Example`	Database entry
[Example]	MobileKey type selection

6. Versions

6.1 Mechanical Override (MO)

You can also install a mechanical locking cylinder (see *Profiles [▸ 14]*). This enables you to open the door without using the electronics and open the door with a mechanical key.

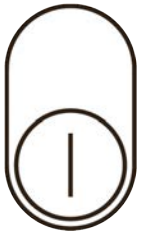
This allows you to set up a mechanical fire brigade lock for rescue services.

Order according to your aesthetic needs:

- Cut-out for the cylinder open on both sides
- Cut-out for the cylinder open on one side
- Cut-out for the cylinder concealed on both sides (completely concealed and invisible cylinder)

6.2 Profiles

Choose from the following mortise lock profiles for your SmartHandle AX:

Euro profile cylinder	Swiss Round	Scandinavian Oval
		

6.3 Fastening

You can use the following mounting variants:

Fastening		
Rosette fastening with (optional) mechanical override	■ *Variant A0 (Standing installation) [▸ 23]* ■ *Variant A1 and A2 (Downward installation) [▸ 49]* ■ *Variant DS (Reader on both sides) [▸ 174]* ■ *Variants E0 and E1 (Scandinavian Oval) [▸ 202]* ■ *Variant A1.PAS24 (Downward installation with PAS24) [▸ 78]*	You fasten the Smart-Handle AX through the drill holes and holes provided in the mortise lock.
Mounting on a tubular frame with (optional) mechanical override	*Variant A3 (Tubular frame) [▸ 104]*	You fasten the Smart-Handle AX to adapter plates. These adapter plates are screwed onto the tubular frame using rivet nuts.
Rosette fastening with panic bar adaptation	■ *Variant A4.P11 (CISA panic bar) [▸ 131]* ■ *Variant A4.P1/A4.P2 (BKS panic bar) [▸ 152]*	You fasten the using adapter SmartHandle AX plates through drill holes and the holes provided in the mortise lock. A panic bar, which must be ordered separately, can then be fitted on the inner side.
Backplate mounting	*Variant F1 (French 195 mm backplate) [▸ 219]*	You attach the Smart-Handle AX through the drill holes of adapter plates.

6.4 Distances and door thicknesses

A* = Euro Profile, B* = Swiss Round, E* = Scandinavian Oval

Versions	Centre distance	Door thickness
A0/B0 Stationary	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
A0.PAS Standing (PAS24)	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
A1/B1 Suspended, short	70 - 79 mm	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
A2/B2 Suspended, long	70 - 110 mm	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
A3 Metal frame	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 57 mm
		M: 58 - 77 mm
		L: 78 - 97 mm
		X: 97 - 196 mm
A4 Panic bar	92 mm (BKS Full-leaf door, without backplate) 72 mm (CISA Solid Door with backplate or BKS Solid Door without backplate)	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm

Versions	Centre distance	Door thickness
DS Double-sided scanning (Double-sided)	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 58 mm
		M: 59 - 78 mm
		L: 79 - 99 mm
		X: 100 - 200 mm
E0, E1 Scandinavian Oval	105 mm	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
F1 French 195 mm backplate	70 mm	S: 38 - 60 mm
		M: 58 - 80 mm
		L: 78 - 100 mm

6.5 PAS24

SmartHandle AX is also available with PAS24 certification (see *https://www.simons-voss.com/de/zertifikate.html*)

This version also meets the highest security requirements, guarantees sustainable functionality even in extreme situations and provides optimum protection against break-ins or attempted manipulation.

6.6 SmartHandle AX without electronics

SmartHandle AX is also available (for example for design purposes) without electronics. The square is then always continuous and the door can therefore be operated from both sides without an identification medium.

If you want to lock the door, you need a variant with mechanical override (MO). Here you can lock the door with an additional cylinder (see *Profiles [▸ 14]*).

6.7 Spindle

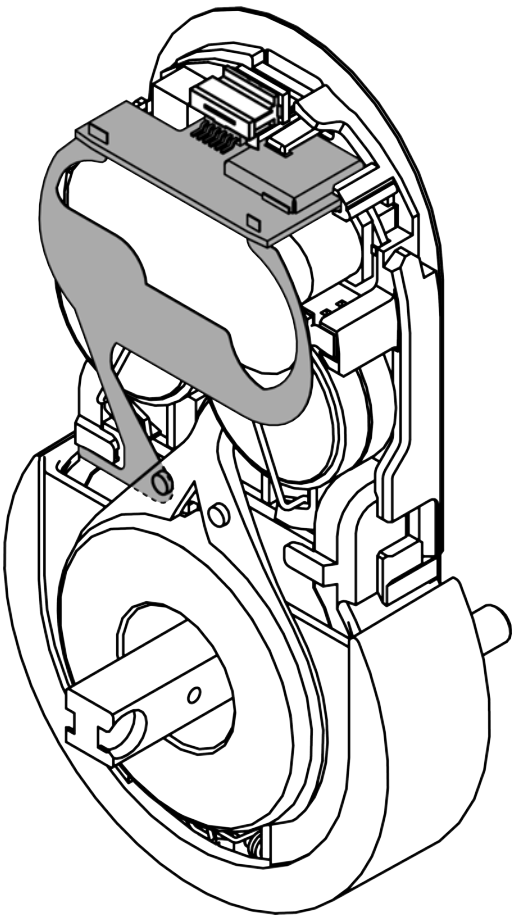
You can use the following square sizes:

Square size	
7 mm	
8 mm	

Square size	
8.5 mm	■ with sleeve attached to 8 mm (not included in delivery) ■ sold separately
9 mm	Order the fire-retardant version of the SmartHandle AX or fire doors and emergency exit locks.
10 mm	With sleeve attached to 8 mm (already included in the scope of delivery for ordered 10 mm version of the SmartHandle AX)

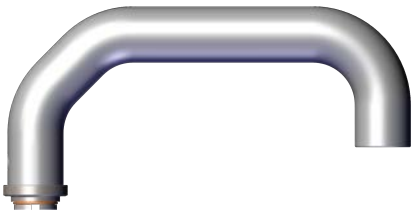
6.8 Network

You can equip the SmartHandle AX with a network node at any time (see *LockNode (LN) [▸ 231]*). You do not need to replace any components. Instead, simply insert the network node card into the slot provided.



6.9 Handle variants

You can personalise your SmartHandle AX with the following handle variants:

Letter	Description	
A	L shape R (rounded)	
B	L shape G (mitred)	
C	U shape R (rounded)	
D	U shape G (mitred)	
L	U shape (round and offset)	
0	Supplied without handle (for use with adapter sets and third-party handles, see *Accessories [▸ 274]*)	

6.10 Surface finishes

Select your surface finish SmartHandle AX from:

Silver/black-grey

Silver/white

Silver/deep black

Brass/white

6.11 Reader technology

Depending on the equipment, your SmartHandle AX supports the following scanning methods:

- Active (25 kHz) - initial programming also possible passively
- Passive (MIFARE Classic, Plus, DESFire)
- Hybrid (active and passive in one SmartHandle AX)
- BLE (Bluetooth Low Energy. SmartHandle AX is prepared and can be retrofitted after release)

The double-sided reading variant is a special version of the upright SmartHandle AX that can be combined with an additional upright SmartHandle AX to create a double-sided reading escutcheon.

NOTE

Active and hybrid technology only with shortened range

The active and hybrid technologies have a significantly greater range. Under normal operating conditions, both SmartHandle AX are reached at the same time and communication errors may occur.

- Activate the checkbox for a shortened range for both sides on the SmartHandle AX in LSM/AXM.

Alternatively, it is SmartHandle AX also available without electronics or permanent coupling.

6.12 Access control (ZK) and time zone control

Access Control

With this option, your SmartHandle AX can store up to 1500 accesses.

A saved entry consists of:

- Date
- Time
- Transponder ID (TID)

You can read this data at any time with a programming device or via the network and thus trace which transponder was used when to operate the SmartHandle AX.

Time zone control

In addition, the time zone option also allows you to control the time zone. You can then program your SmartHandle AX in such a way that certain identification media are only authorised for access at certain times. You

can create up to 64000 different time zone plans in each G2 locking system or 100+1 time zone groups in each G2 lock. For detailed information on time zone control, see the LSM manual.

7. Installation

You can programme the SmartHandle AX while it is still in the packaging (except MP) and then install it.

You will also find information on installing the SmartHandle AX in the accompanying quick guide.

7.1 Installation instructions

- The batteries are already fitted.
- Do not touch electronics/components; do not allow them to come into contact with oil, paint, moisture, alkali or acids.
- Keep away from sources of interference, such as power supply units.
- You must not strike the product while installing the cylinder.
- Attach plan to the door. Do not install while bent or tensioned.
- Use the supplied drilling template.
- If required, fit the supplied dummy cylinder to comply with approval requirements for FH variants.
- Only undo the indicated screws.

7.2 Variant A0 (Standing installation)

7.2.1 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in parallel vertical lines.

NOTE

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

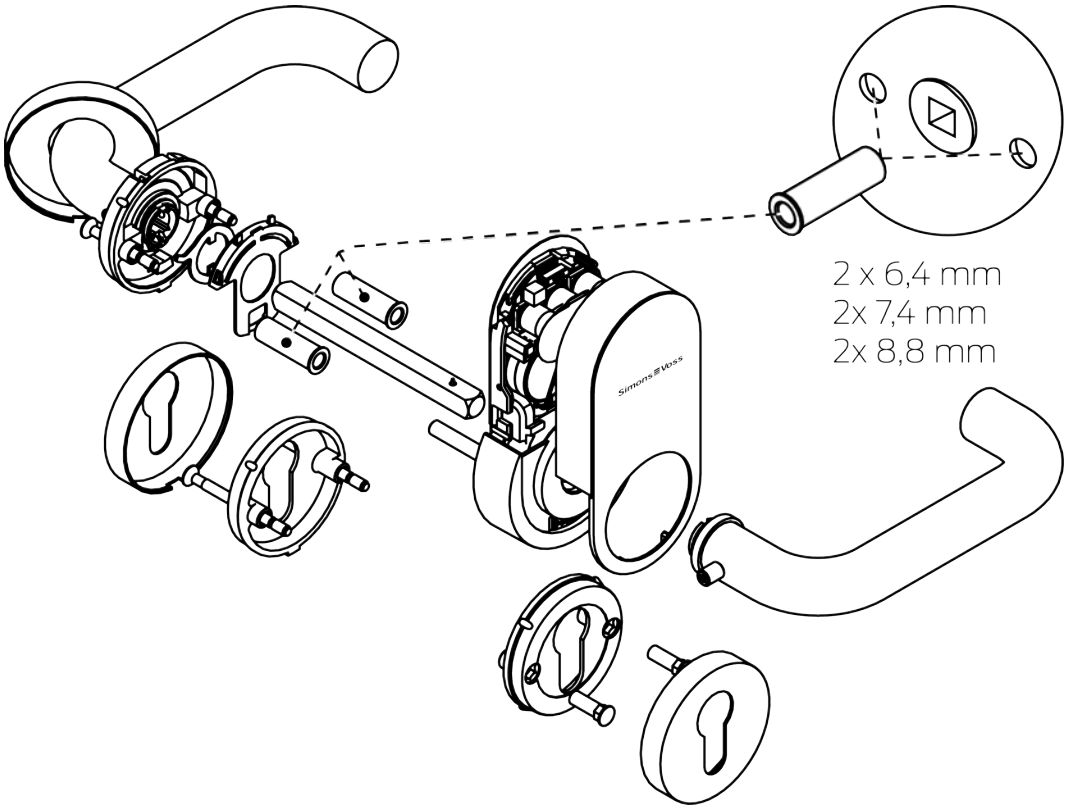
7.2.2 Scope of delivery

- SmartHandle AX (stationary installation)
- Special tool
- Quick guide

Depending on version:

- Adapter set, 7 mm spindle
- Adapter sleeve, 8.5 mm spindle
- Adapter sleeve, 10 mm spindle
- Blank cylinder

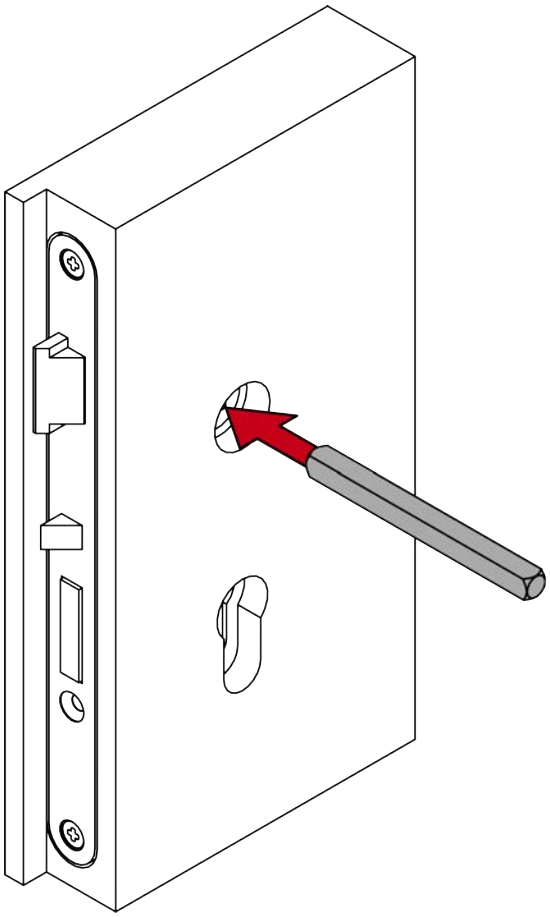
7.2.3 Design



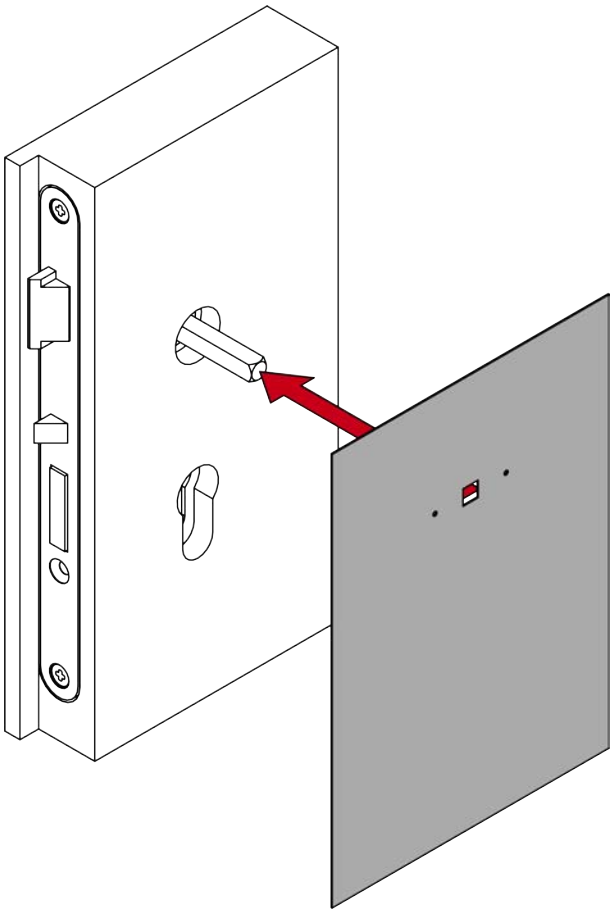
7.2.4 Prepare door (drilling template)

- ✓ Pin or scriber at hand.
- ✓ Drilling template available (see *Drilling template for variant A0 (Upright installation) [▸ 295]*).
- ✓ Drill at hand.
- ✓ Suitable drill bit at hand (depending on mortise lock hole diameter: 8.5 mm/9.5 mm/10.5 mm).
- ✓ PH2 screwdriver at hand.

1. Insert the spindle into the mortise lock.

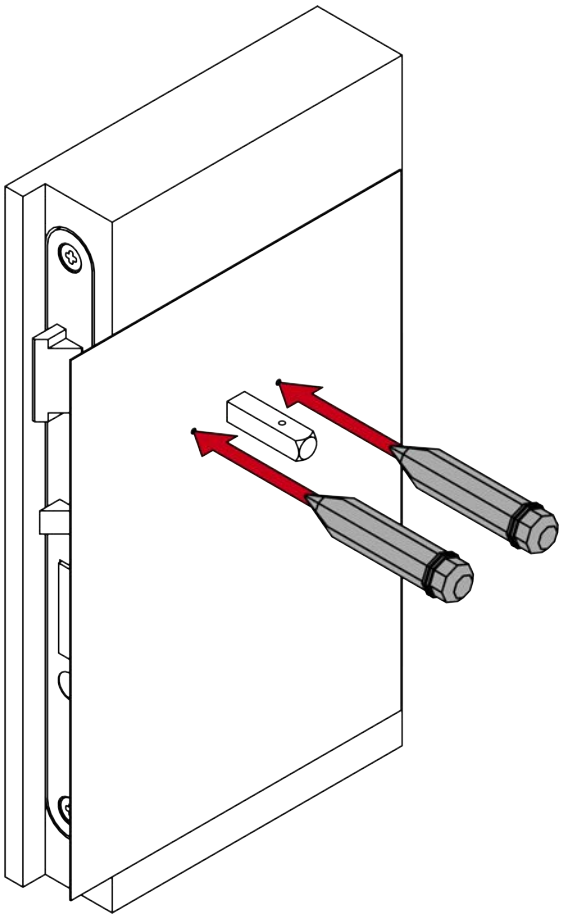


2. Place the drilling template on the spindle.

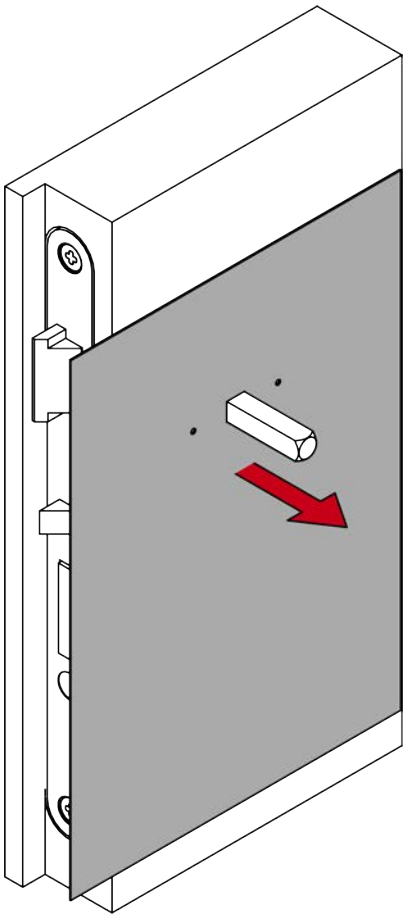


3. Align the drill template vertically using the printed scale.

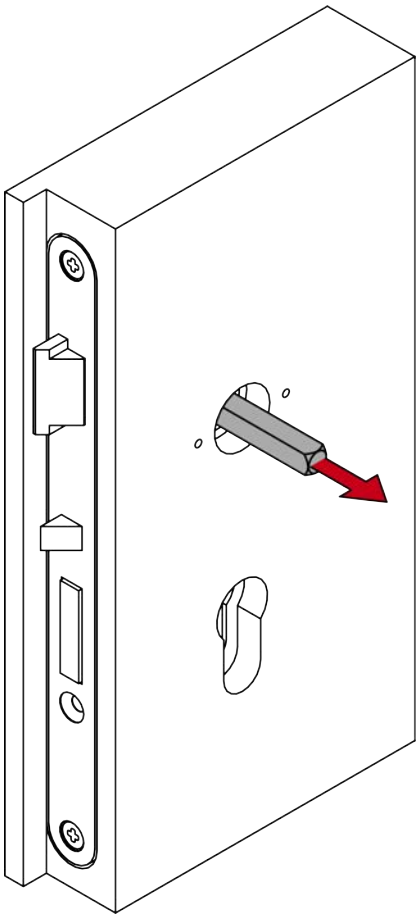
4. Mark the points to be drilled on the door.



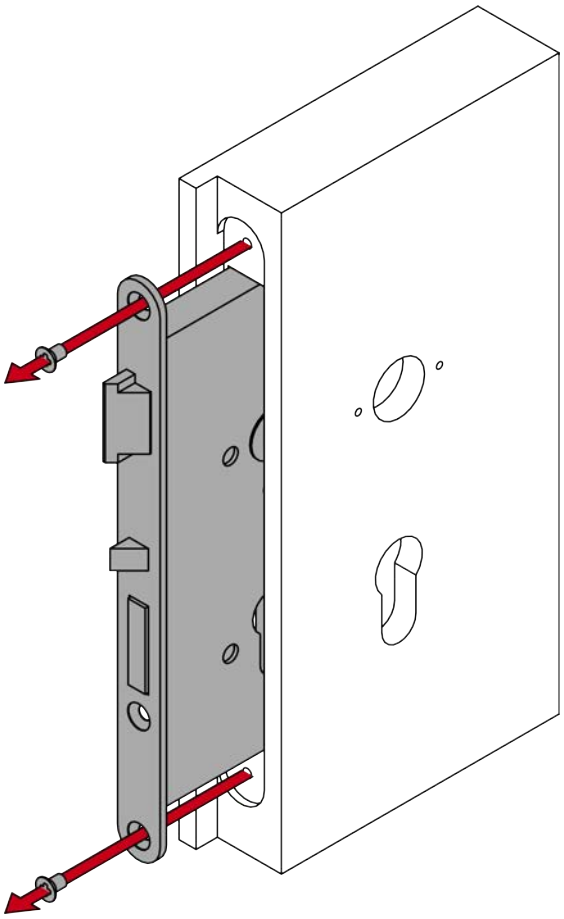
5. Remove the drilling template.



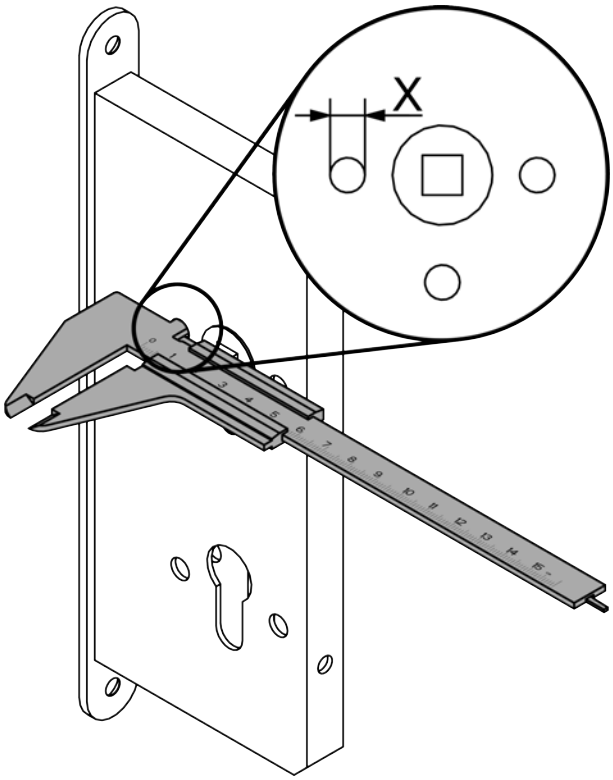
6. Remove the spindle.



7. Remove the mortise lock (PH2).

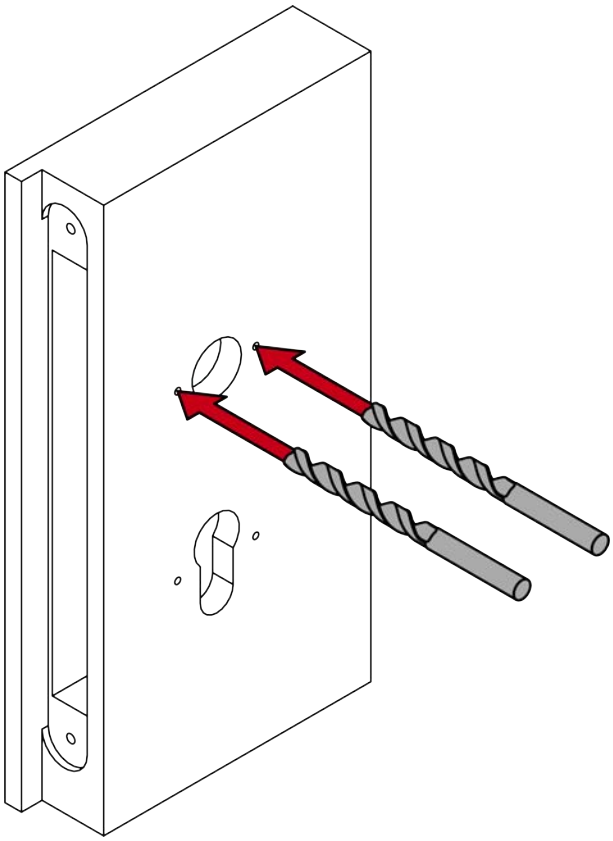


8. Measure the diameter of the fastening holes.

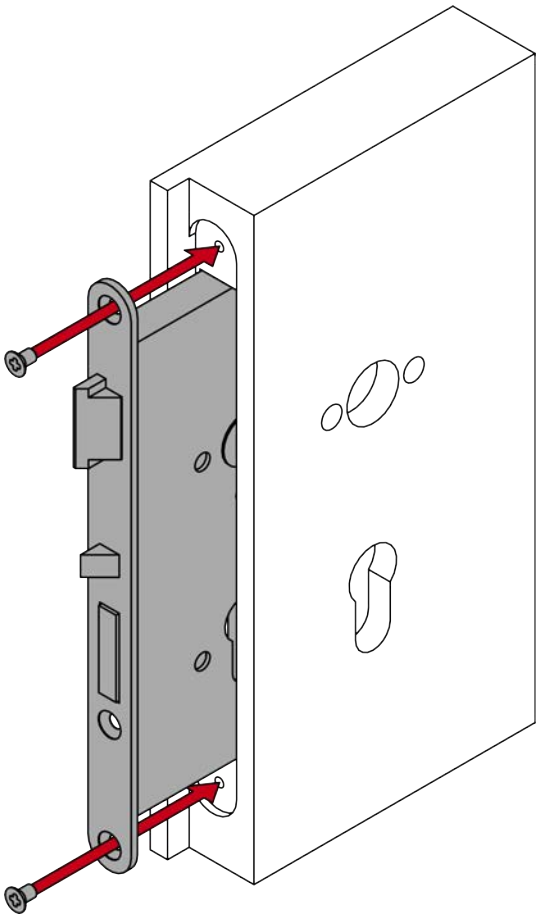


Ø fastening holes	Drill bits required
5.5 mm–6.3 mm	8.5 mm
6.4 mm–7.3 mm	8.5 mm
7.4 mm–8.7 mm	9.5 mm
≥ 8.8 mm	10.5 mm

9. Determine the required drill bit based on the measured diameter.
10. Drill the required holes.



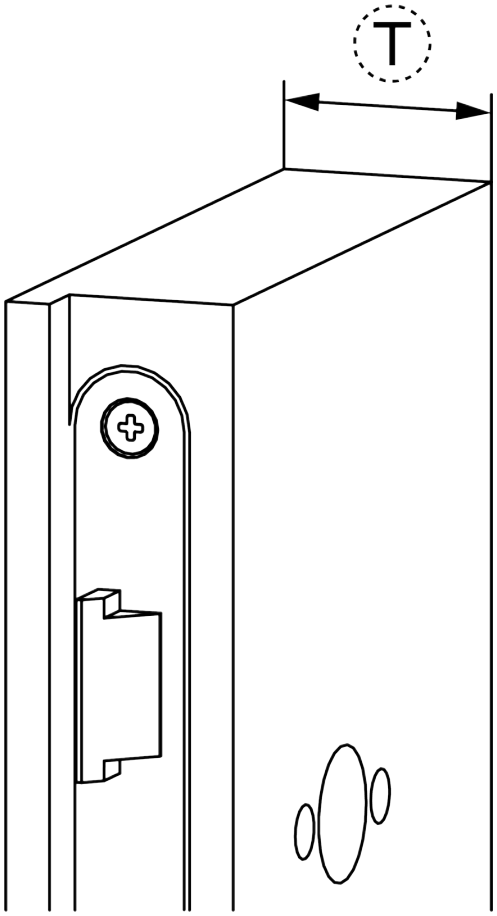
11. Fit the mortise lock (PH2).



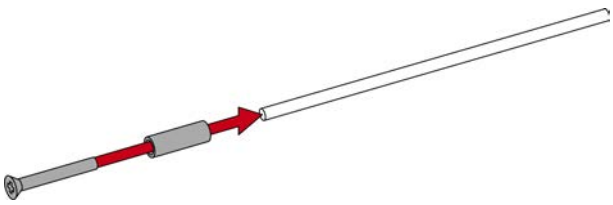
7.2.5 For door thickness X: prepare threaded rods and spindle

- ✓ Saw at hand.
- ✓ Vernier calliper at hand.
- ✓ PH2 screwdriver at hand.

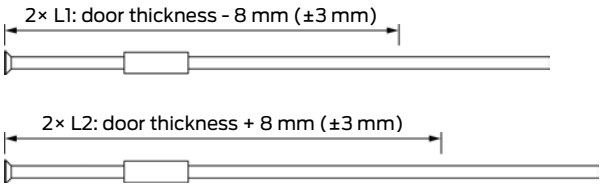
1. For X: measure the door thickness.

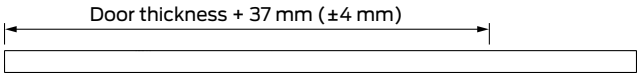


2. For X: fasten the screws, threaded sleeves and threaded rods together.

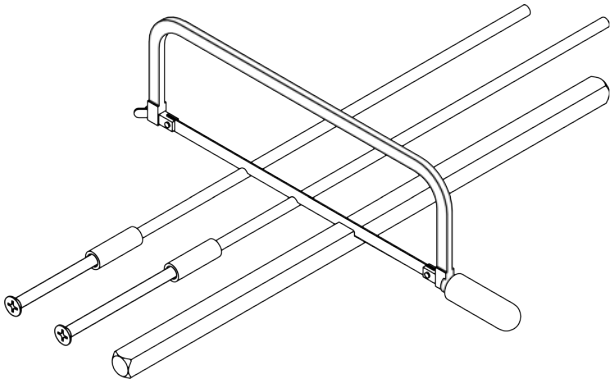


3. For X: mark the sawing points on the threaded rods and spindle.



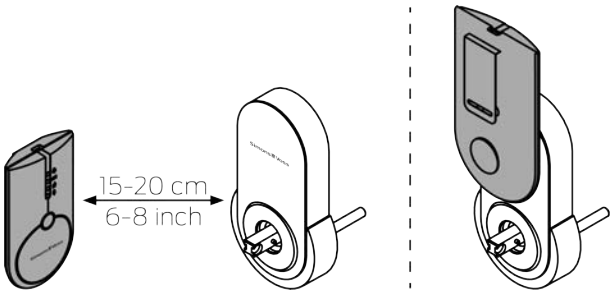


4. For X: use a suitable saw to cut the threaded rods and spindle.



7.2.6 Programming the fitting

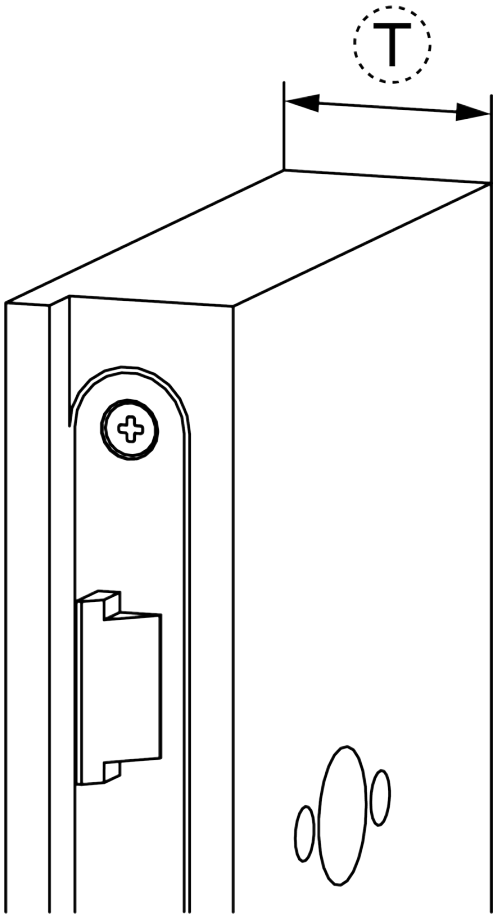
Programme the fitting before installation. You can use different programming devices, depending on the product family.



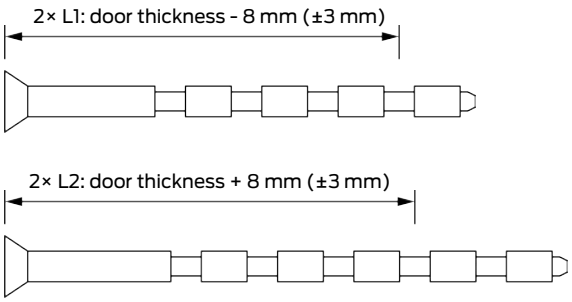
7.2.7 Installing the fitting

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Pincers at hand.

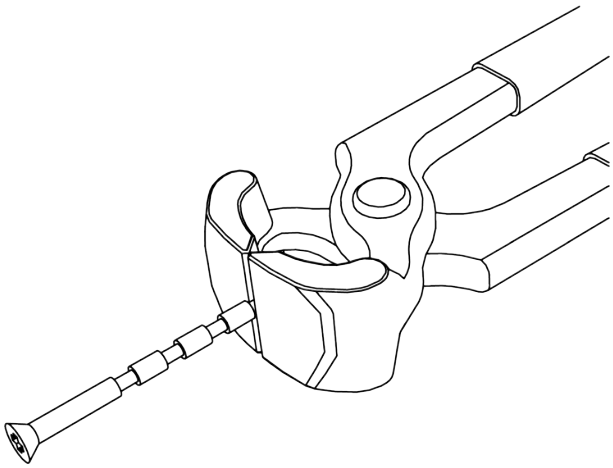
1. For S, M and L: measure the door thickness.



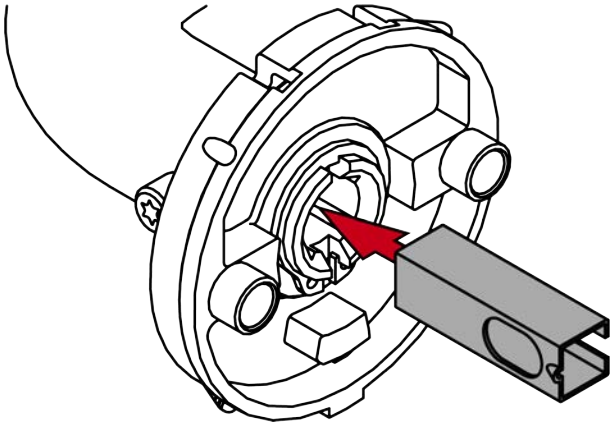
2. For S, M and L: determine the separation points on the cut-to-length screws L1 and L2.



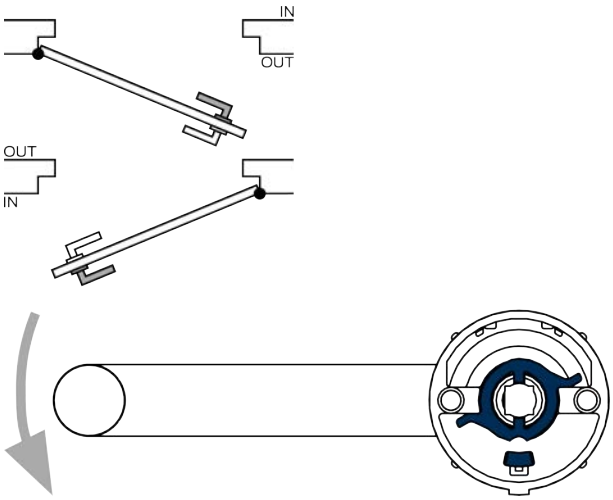
3. For S, M and L: trim the cut-to-length screws L1 and L2.

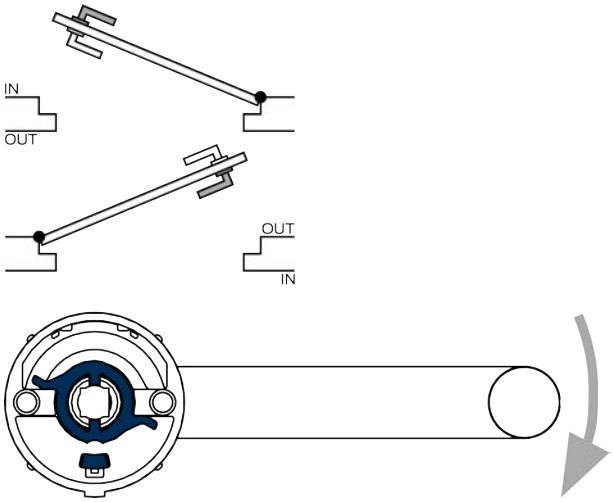


4. For 7 mm spindle: place the adapter sleeve in the inner handle in such a way that the recess faces the grub screw.

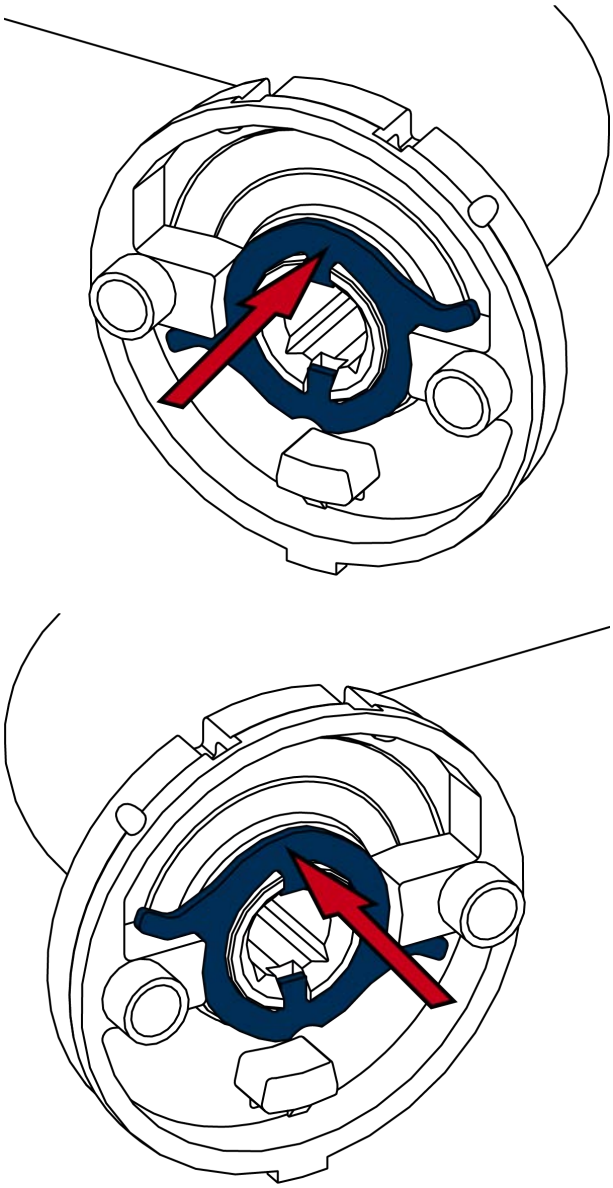


5. Determine your inner handle's direction rotation as viewed from the inside: clockwise (clockwise = CW) or anti-clockwise (counter-clockwise = CCW).

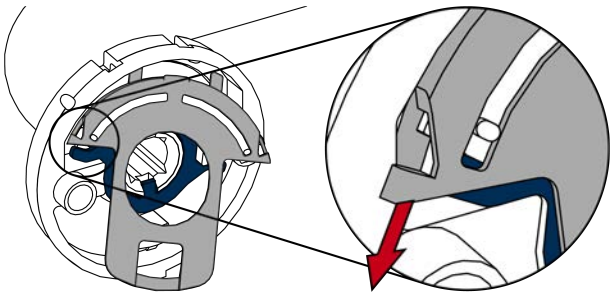




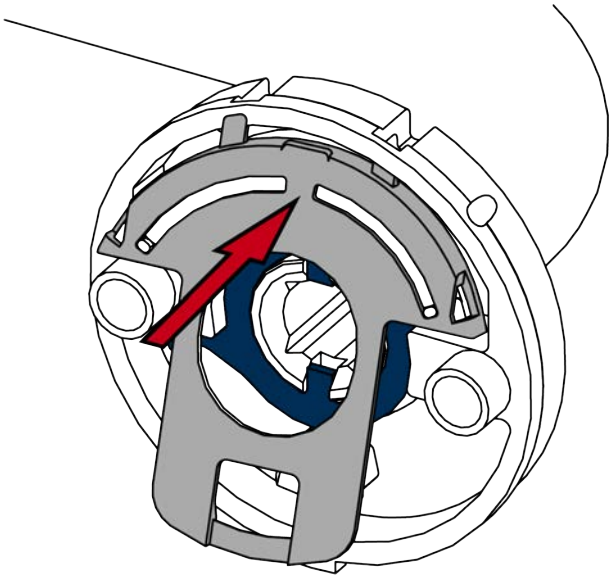
6. Insert the interchangeable plate into the inner handle as required.



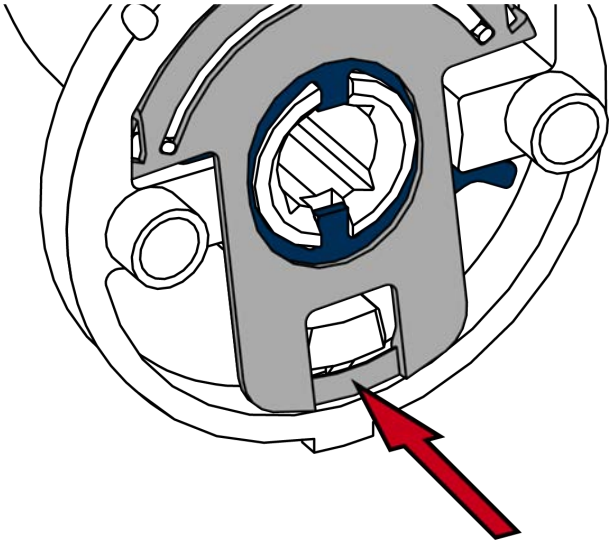
7. Press the spring plate on one side against the interchangeable plate so that the spring is compressed.



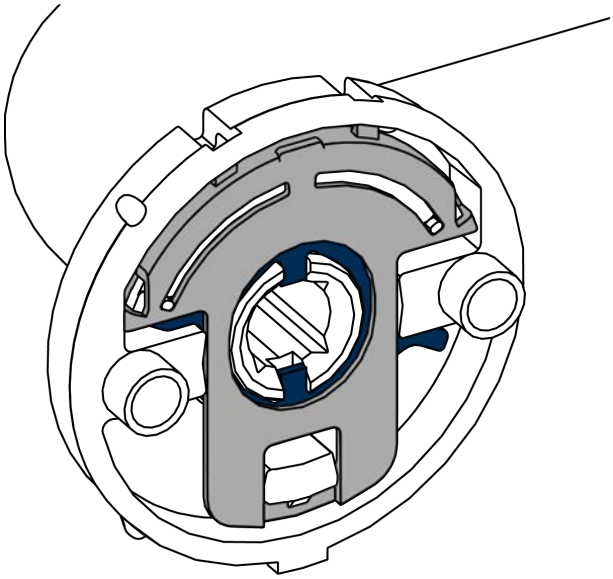
8. At the same time, hook the spring plate tabs into the slot in the inner handle.



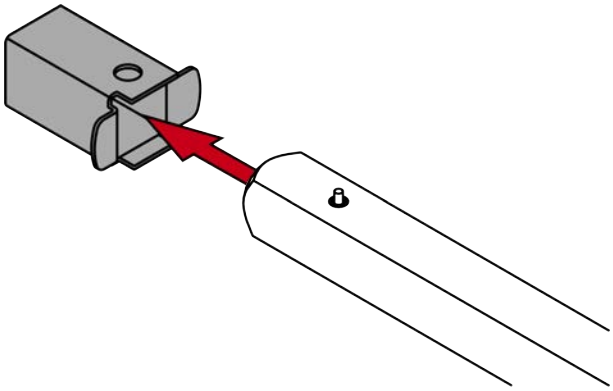
9. Press down the spring plate bracket.



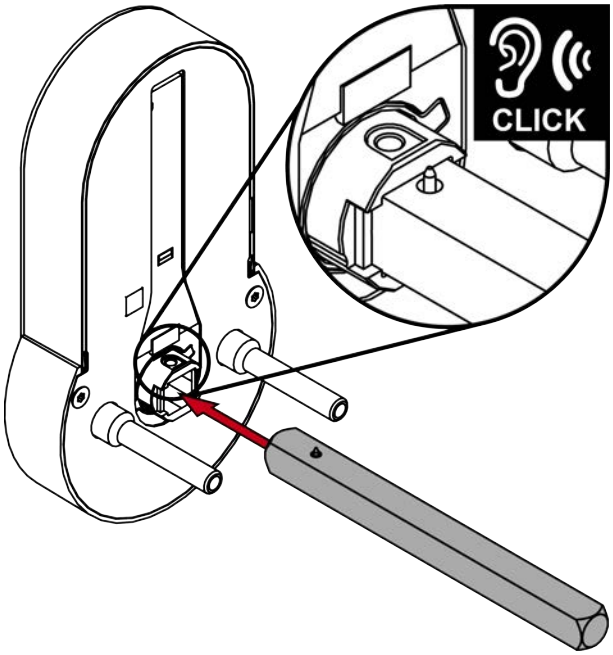
↳ The inner handle is now ready.

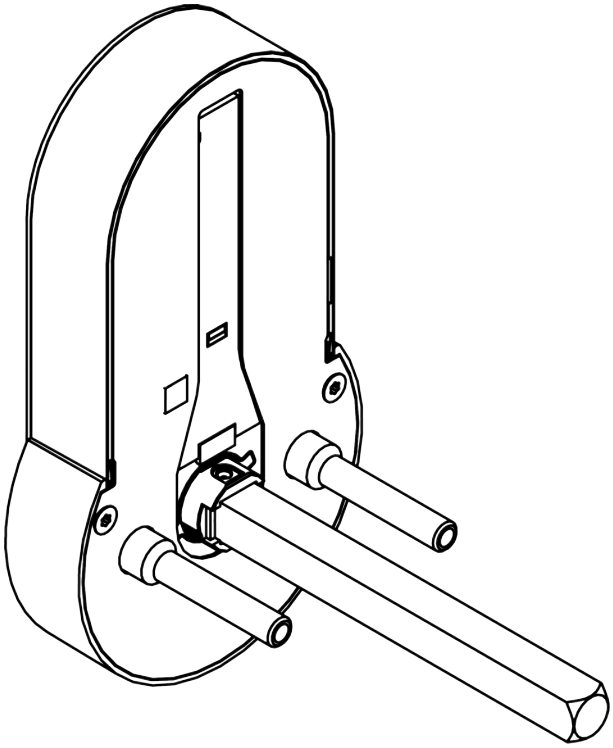


10. For 7 mm spindle: insert the adapter sleeve onto the side of the spindle with the pin.

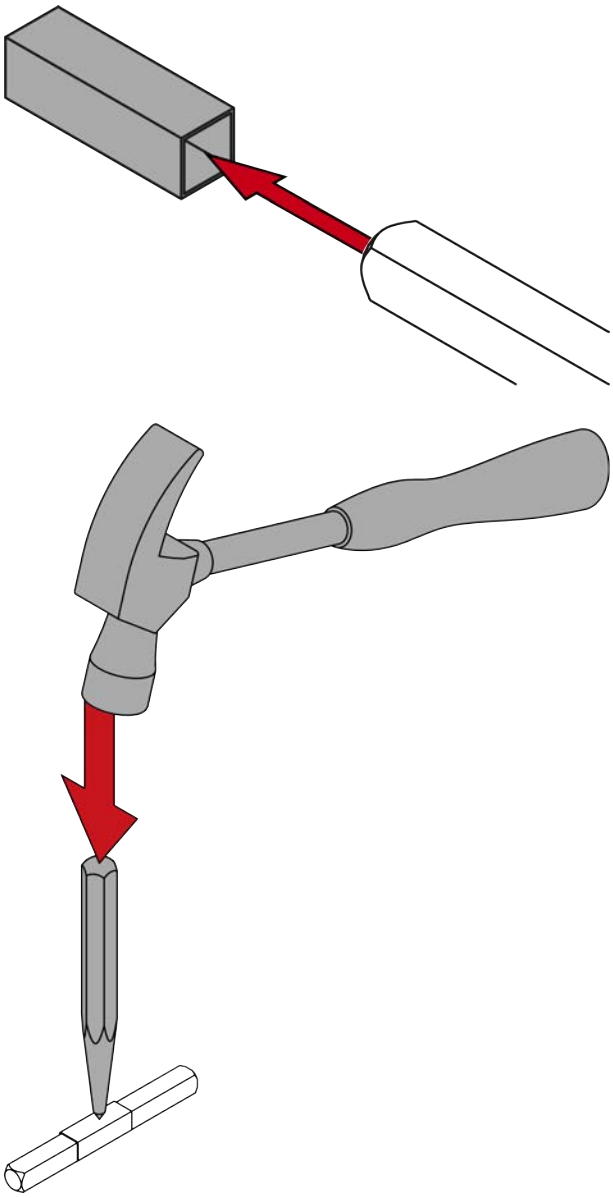


11. Insert the spindle with the pin side into the fitting.
    ↳ Pin will snap into position in the mount.

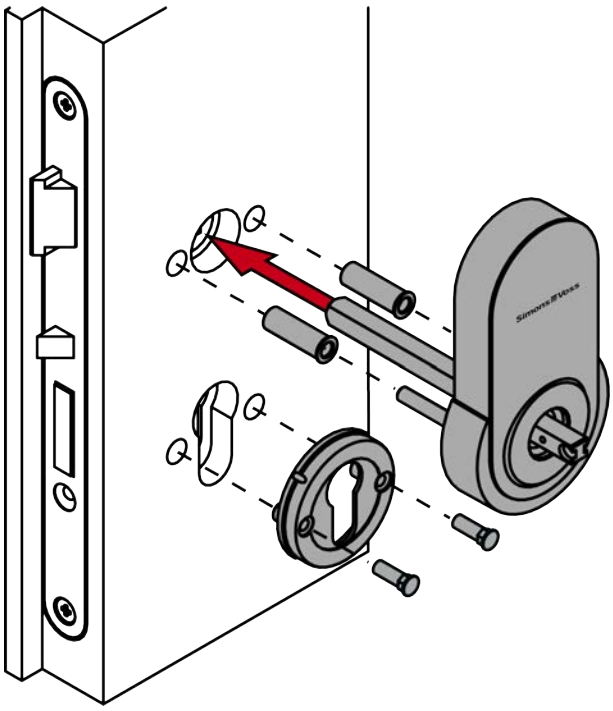

CLICK



12. For 8.5 mm and 10 mm spindle: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.



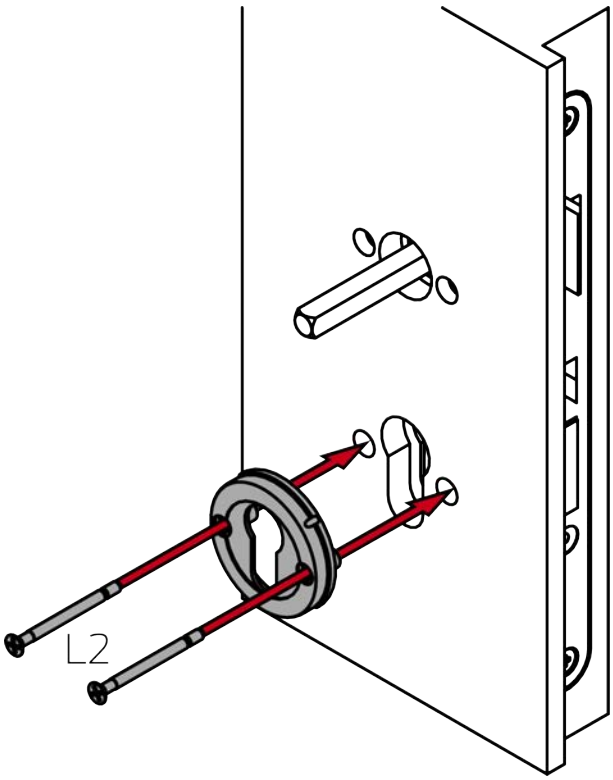
13. Insert the fitting with the spindle into the door. Use adapter sleeves if necessary.



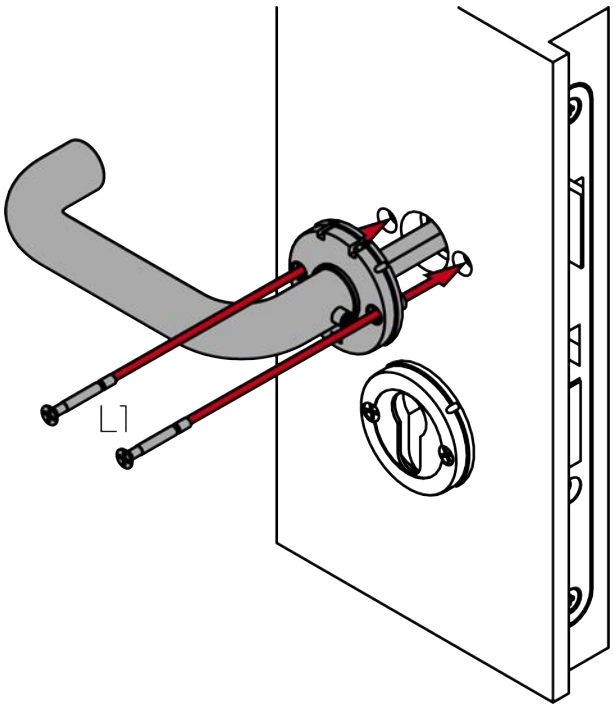
Ø mortise lock fastening hole	Adapter sleeves
5.5 mm–6.3 mm	No adapter sleeves
6.4 mm–7.3 mm	6.4 mm
7.4 mm–8.7 mm	7.4 mm
≥ 8.8 mm	8.8 mm

14. Insert the escutcheon base into the door with the sleeve nuts.

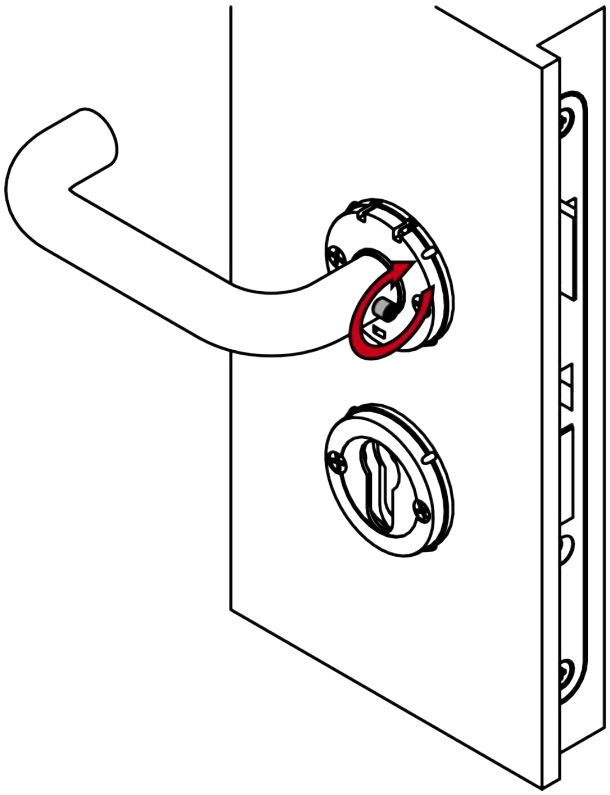
15. Fasten both escutcheon bases together with the L2 screws (PH2, torque 1.1 Nm).



16. Fasten the inner handle firmly with the L1 screws (PH2, torque 1.1 Nm).



17. Fasten the set screw on the inner handle firmly (TX15, torque 5.0 Nm).



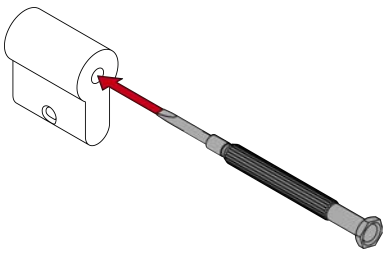
18. For FH: insert the dummy cylinder.

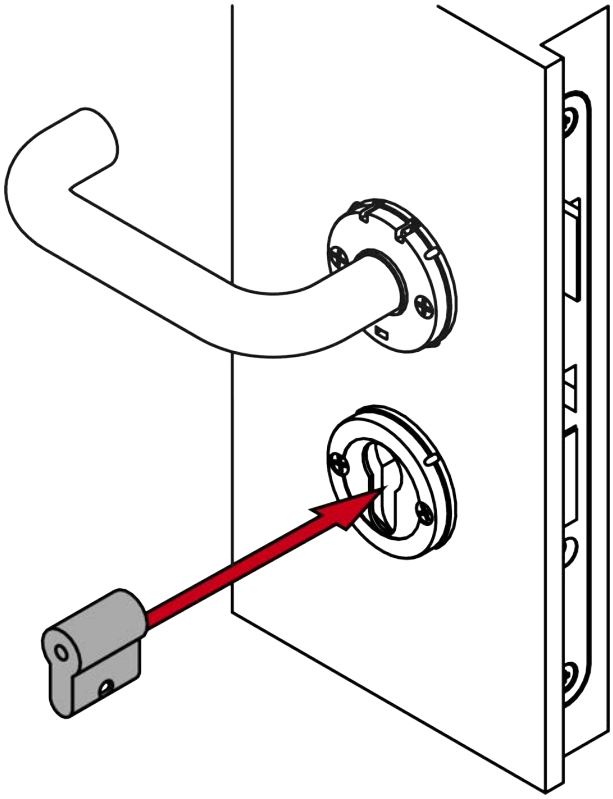
NOTE

Feed the blank cylinder into the hole using a screwdriver

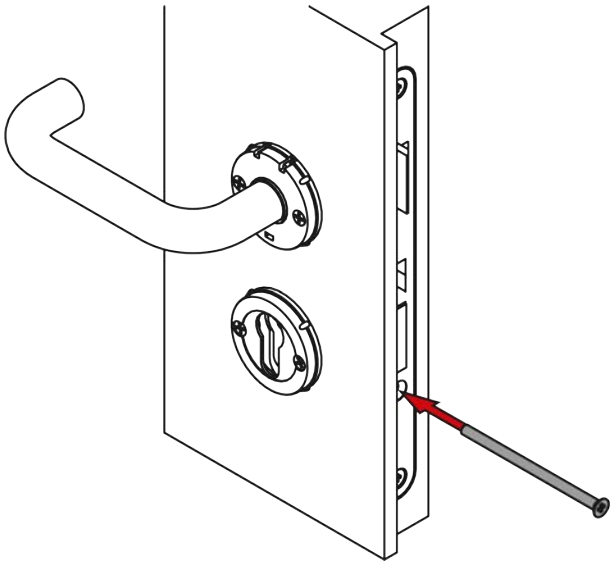
It is difficult to position the blank cylinder correctly, especially in thick doors.

1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.

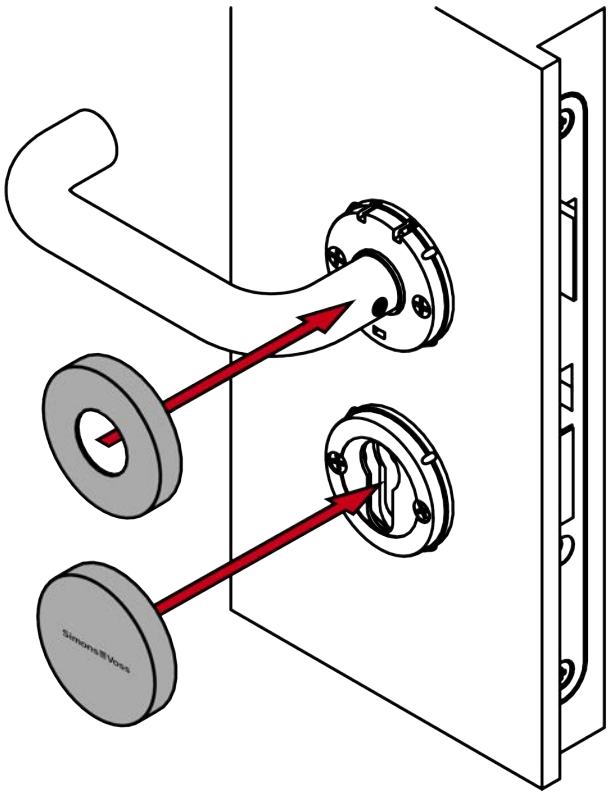




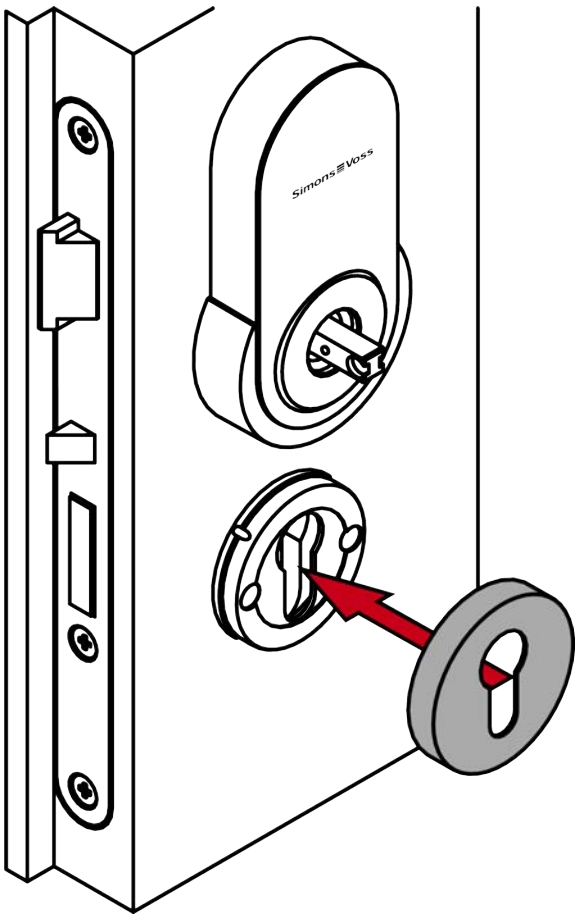
19. For FH: screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



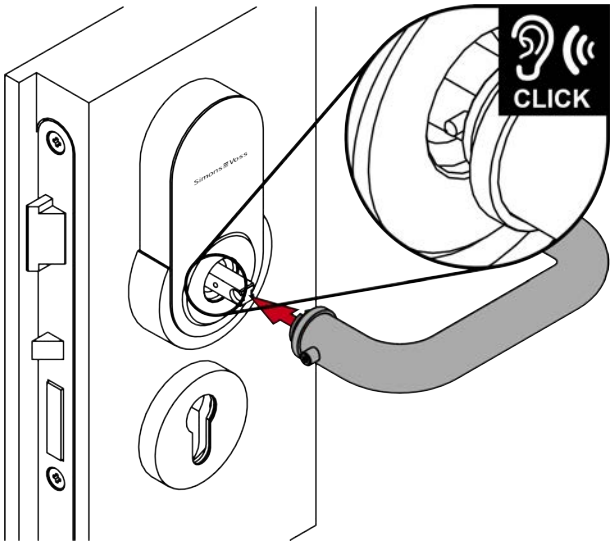
20. Place the two cover plates with the notch facing downwards onto the escutcheon base and the inner handle.



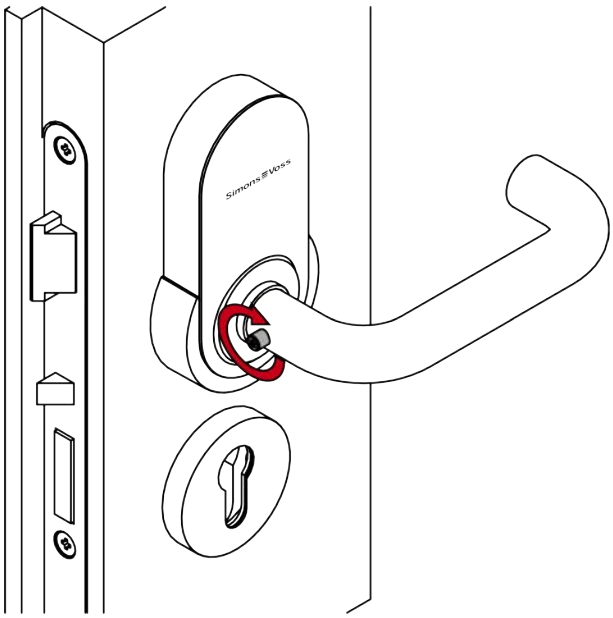
21. On the outside, place the cover with the notch facing downwards onto the escutcheon base.



22. Fit the outside handle into position on the fitting.



23. Firmly fasten the grub screw on the outside handle (TX15; torque: 5.0 Nm).



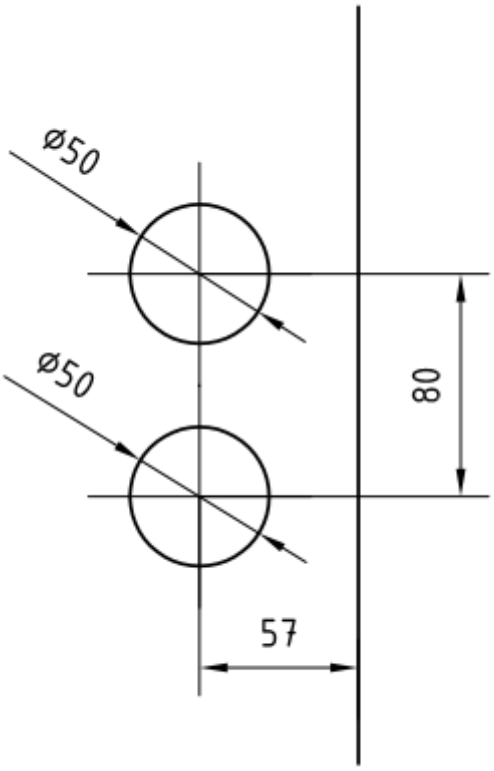
↳ Fitting is now installed.

7.3 Variant A1 and A2 (Downward installation)

7.3.1 Glass door fitting

You can also use the A1 version of SmartHandle AX with an optionally available lock case on glass doors.

SimonsVoss glass door escutcheons require the glass door to have the following mounting holes (dimensions in mm):



7.3.2 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in parallel vertical lines.

NOTE

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

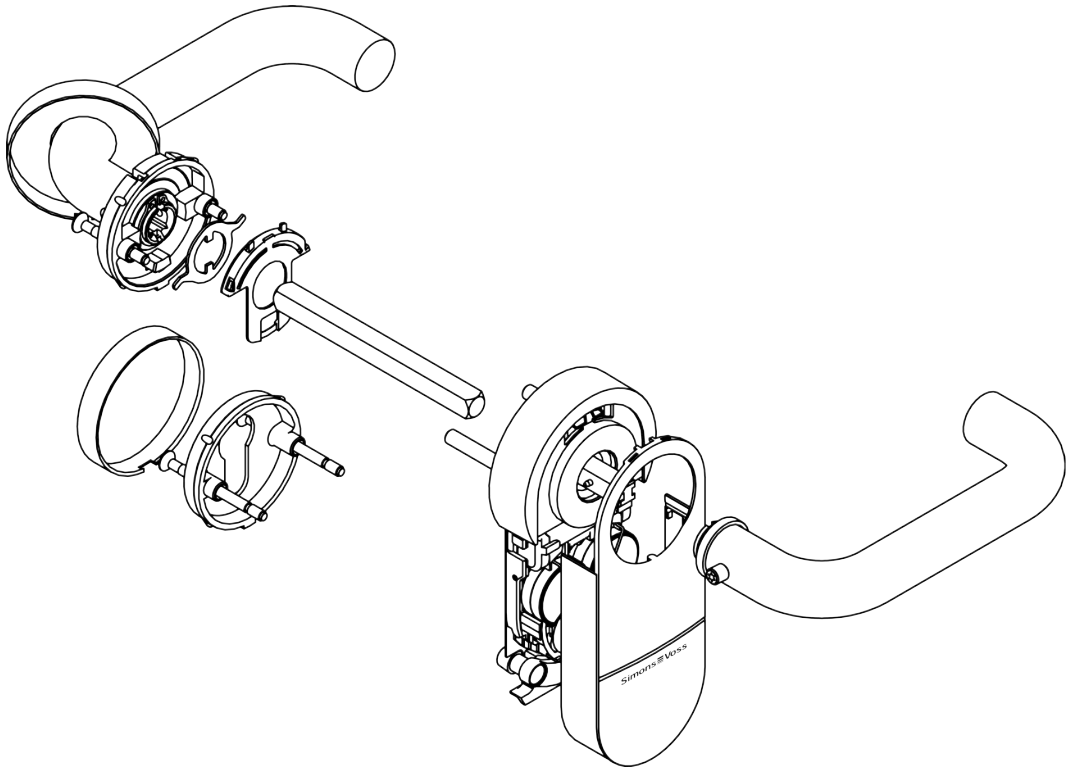
7.3.3 Scope of delivery

- SmartHandle AX (suspended installation)
- Special tool
- Quick guide

Depending on version:

- Adapter set, 7 mm spindle
- Adapter sleeve, 8.5 mm spindle
- Adapter sleeve, 10 mm spindle
- Blank cylinder

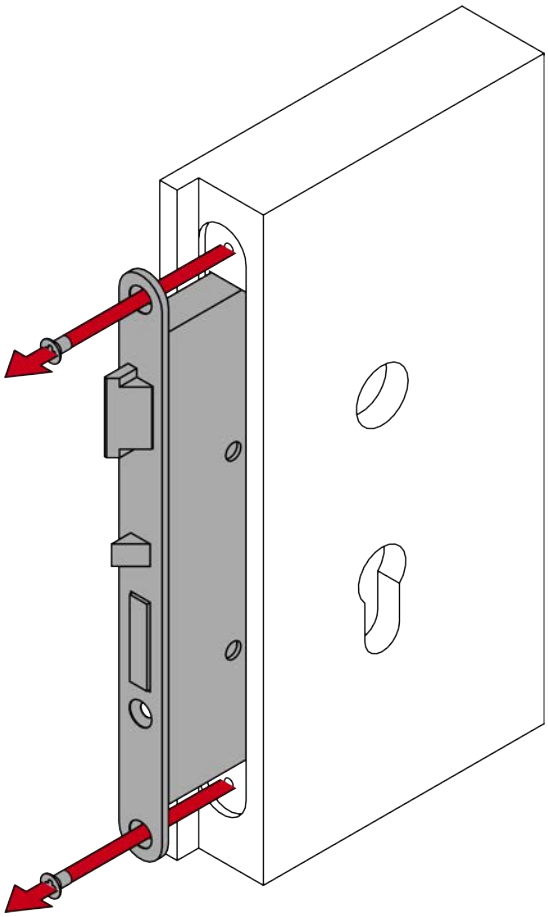
7.3.4 Design



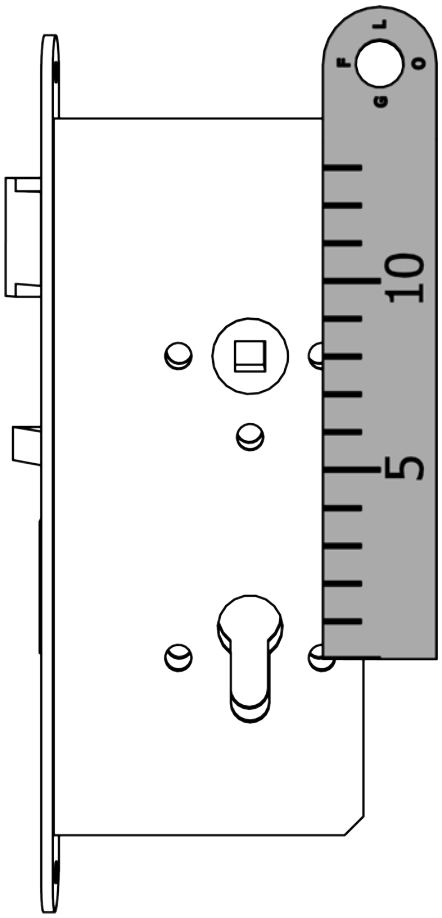
7.3.5 Prepare door (drilling template)

- ✓ Pin or scriber at hand.
- ✓ Drilling template available (see *Drilling template for variant A1 and A2 (Downward mounting) [▸ 296]*).
- ✓ Drill at hand.
- ✓ Suitable drill bit at hand (Ø 8.5 mm).
- ✓ PH2 screwdriver at hand.

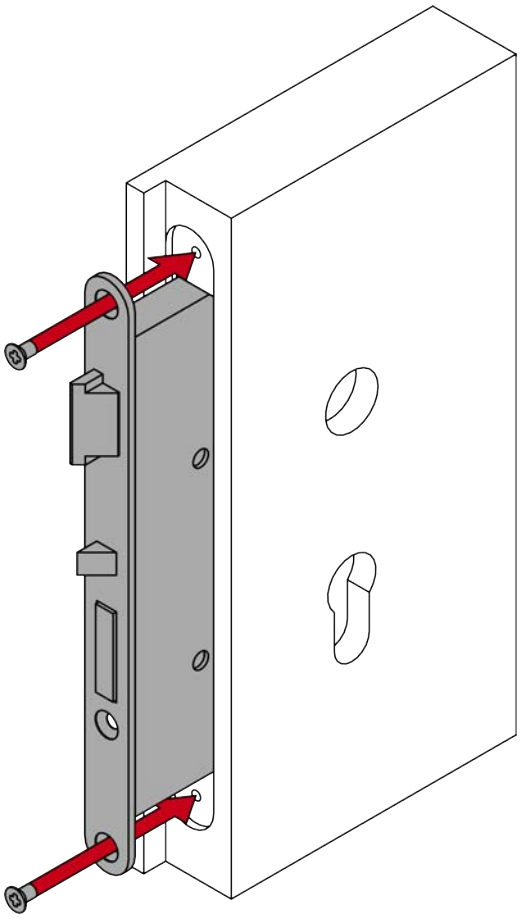
1. Remove the mortise lock (PH2).



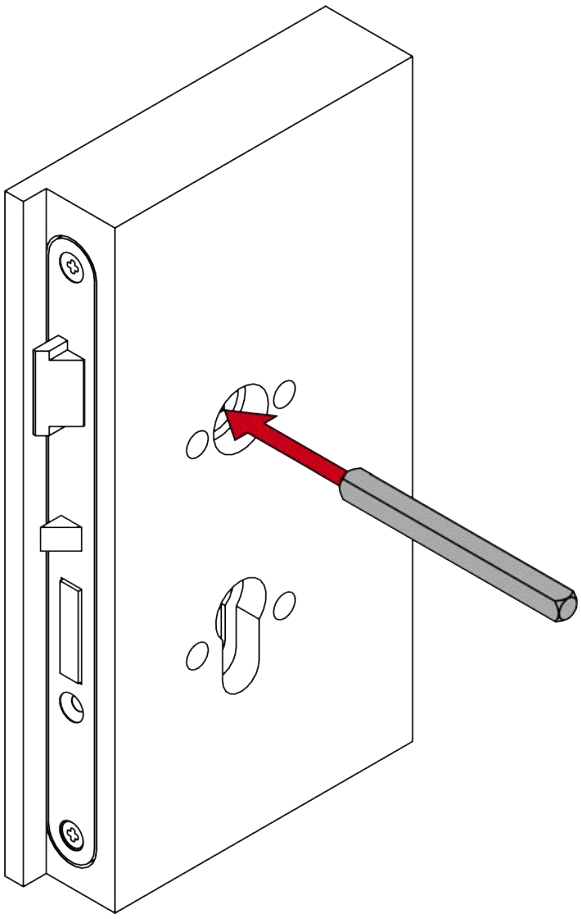
2. Measure the vertical distance between the centres of the fixing holes.



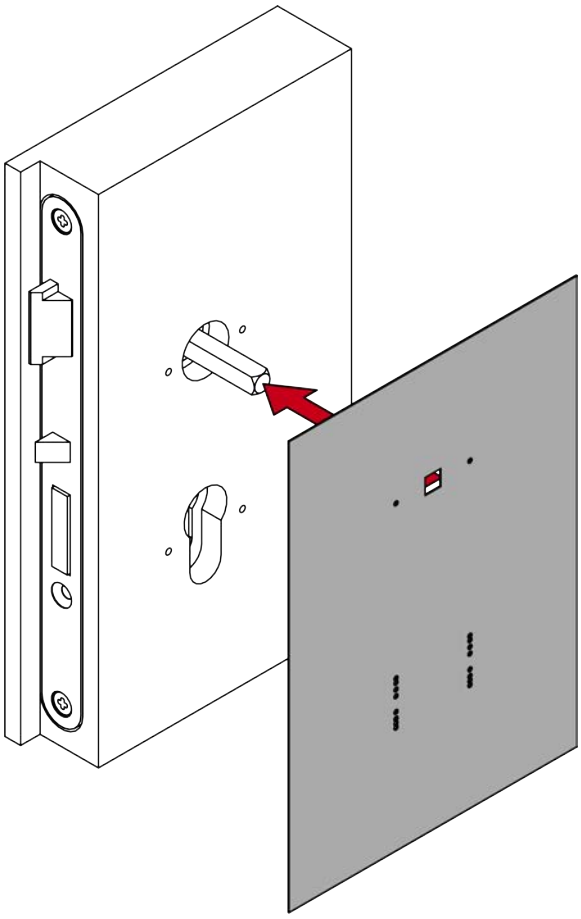
3. Fit the mortise lock (PH2).



4. Insert the spindle into the mortise lock.

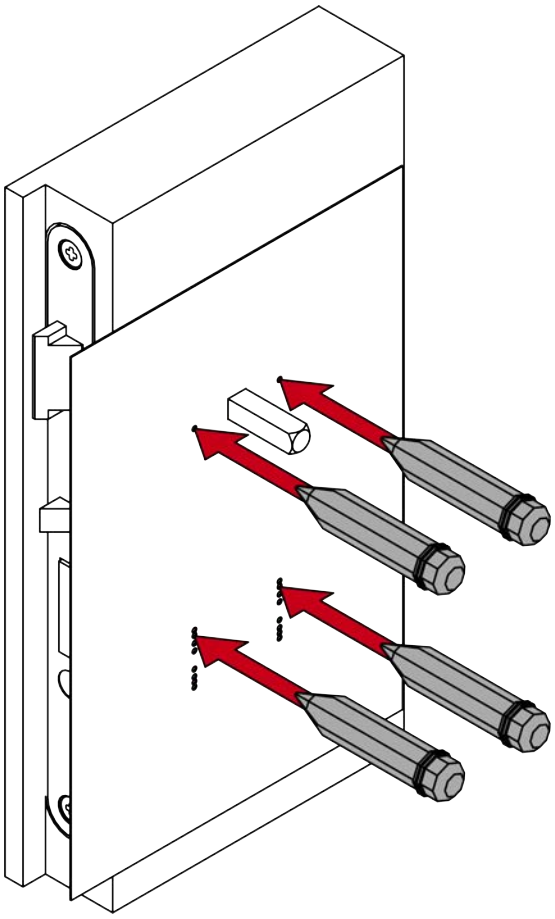


5. Place the drilling template on the spindle.

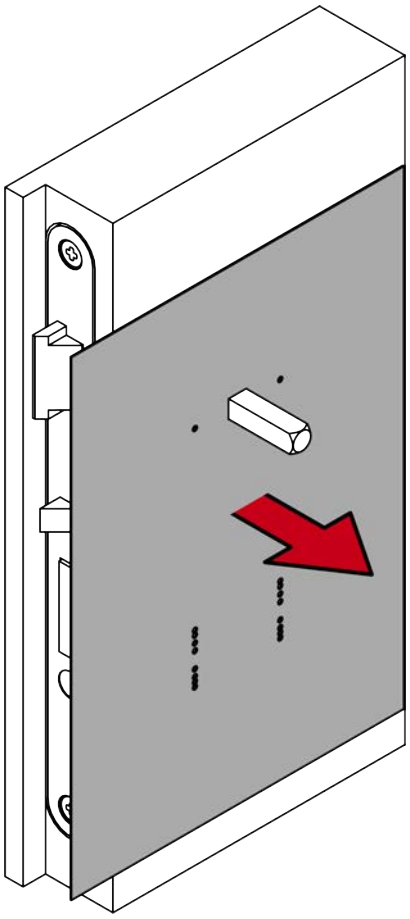


6. Align the drill template vertically using the printed scale.
7. Use the distance you measured previously to determine where the points need to be drilled.

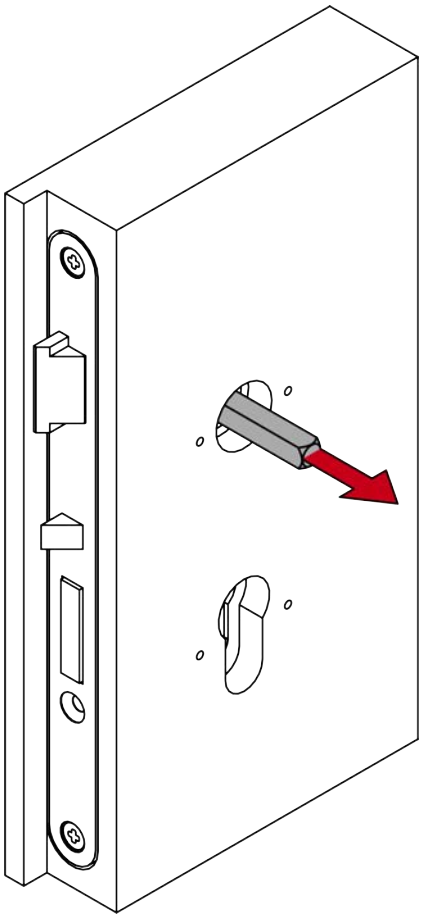
8. Mark the points to be drilled on the door.



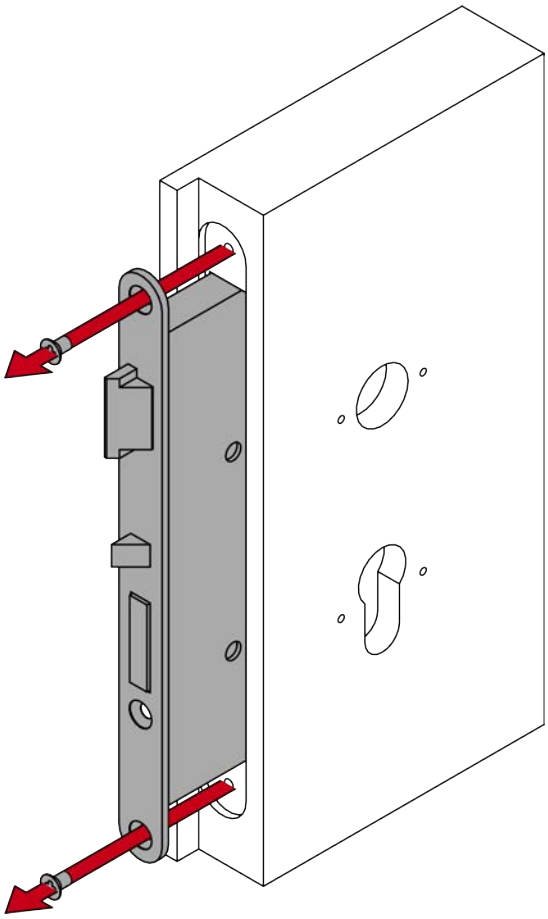
9. Remove the drilling template.



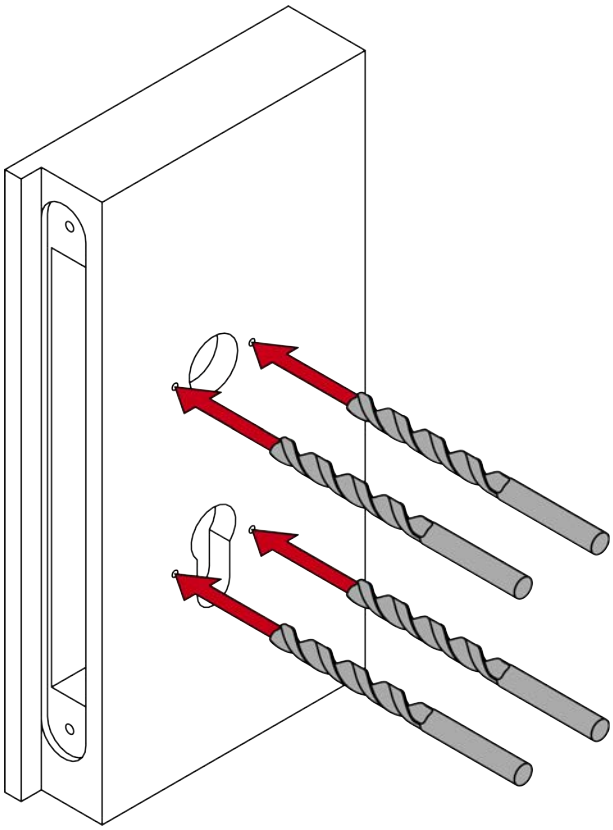
10. Remove the spindle.



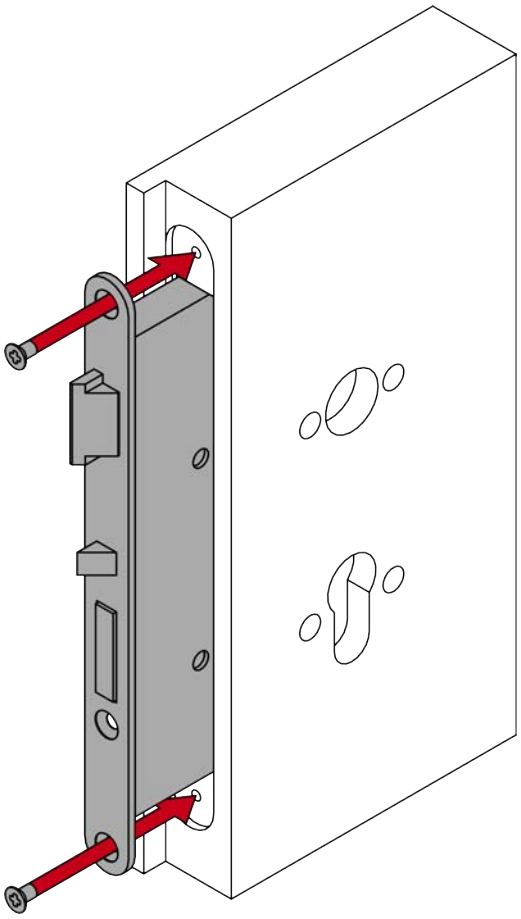
11. Remove the mortise lock (PH2).



12. Drill the required holes.



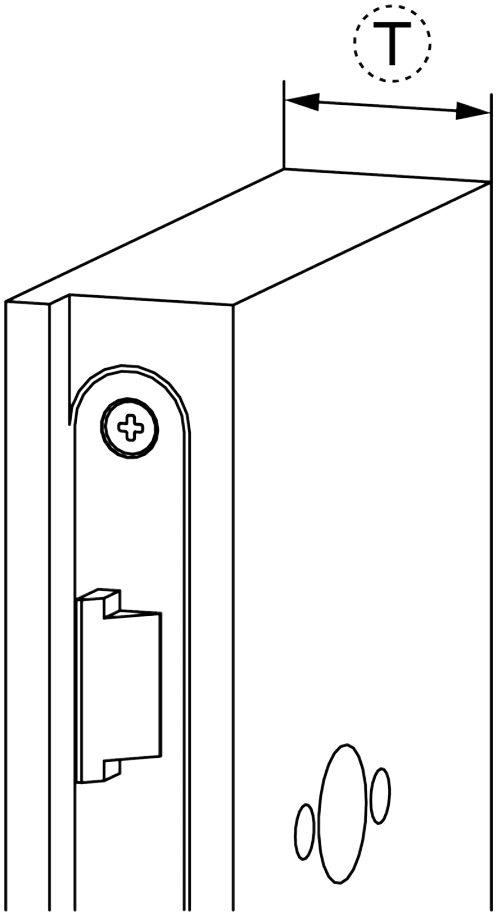
13. Fit the mortise lock (PH2).



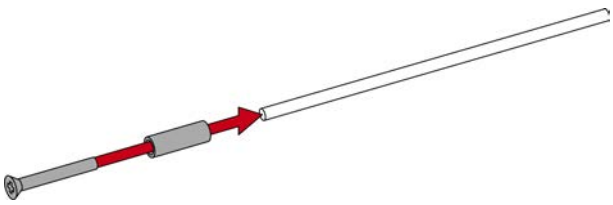
7.3.6 For door thickness X: prepare threaded rods and spindle

- ✓ Saw at hand.
- ✓ Vernier calliper at hand.
- ✓ PH2 screwdriver at hand.

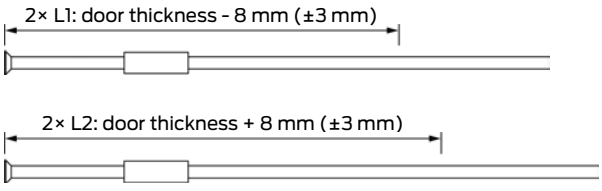
1. For X: measure the door thickness.

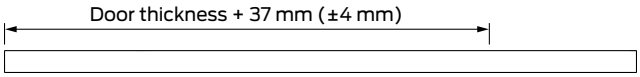


2. For X: fasten the screws, threaded sleeves and threaded rods together.

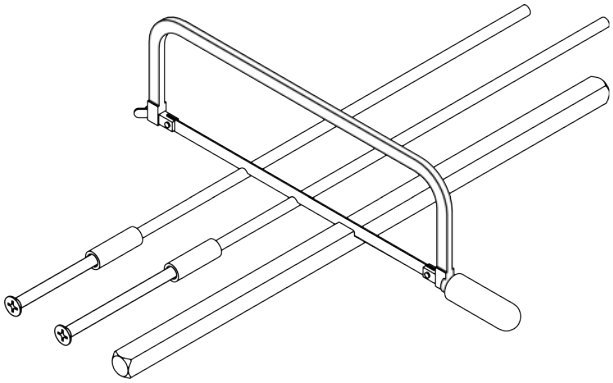


3. For X: mark the sawing points on the threaded rods and spindle.



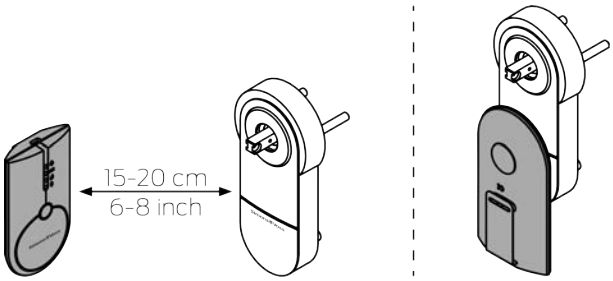


4. For X: use a suitable saw to cut the threaded rods and spindle.



7.3.7 Programming the fitting

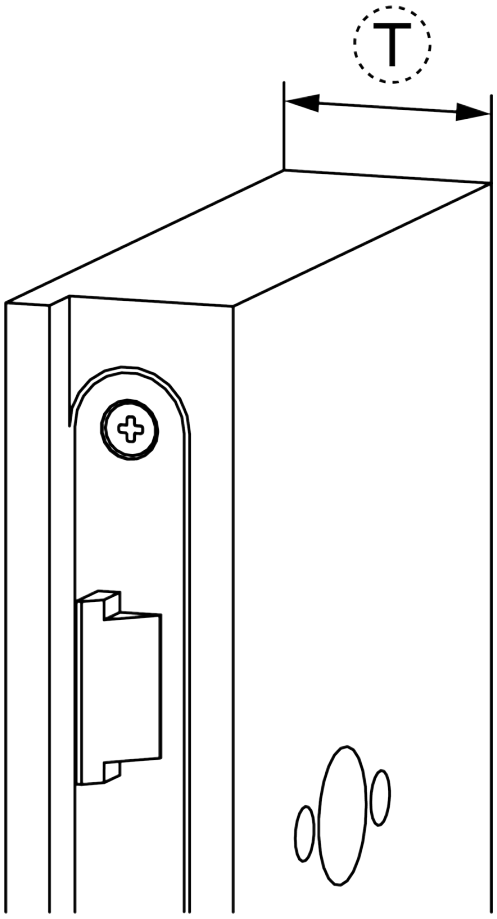
Programme the fitting before installation. You can use different programming devices, depending on the product family.



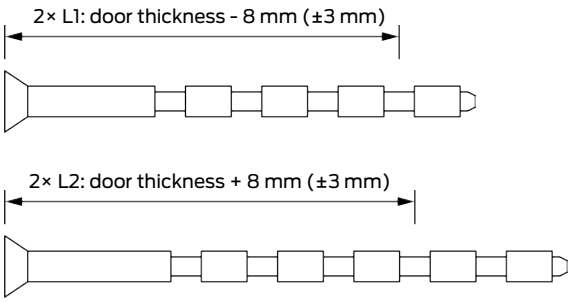
7.3.8 Installing the fitting

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Pincers at hand.

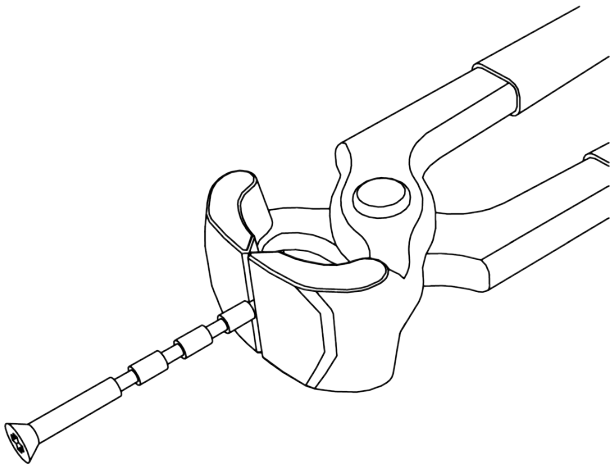
1. For S, M and L: measure the door thickness.



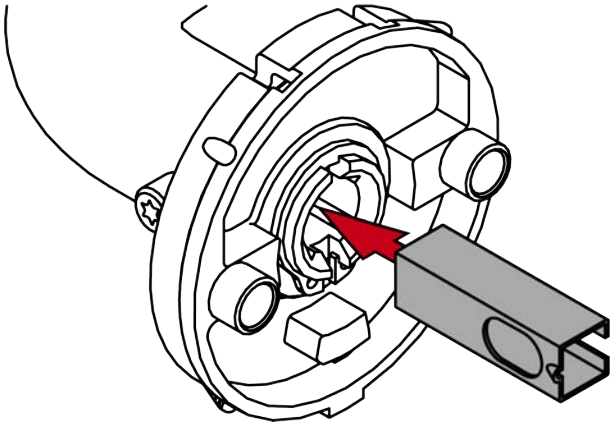
2. For S, M and L: determine the separation points on the cut-to-length screws L1 and L2.



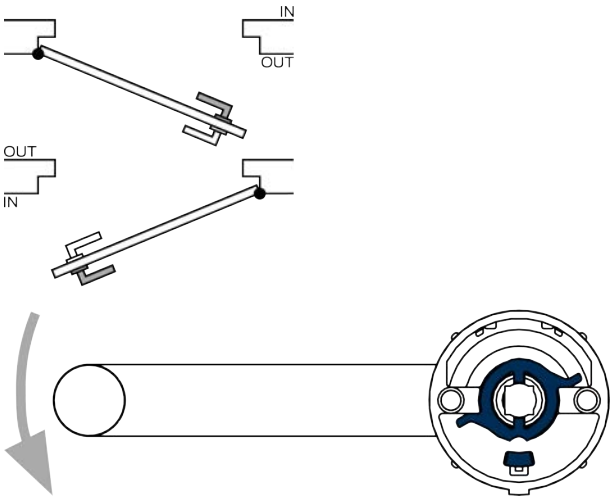
3. For S, M and L: trim the cut-to-length screws L1 and L2.

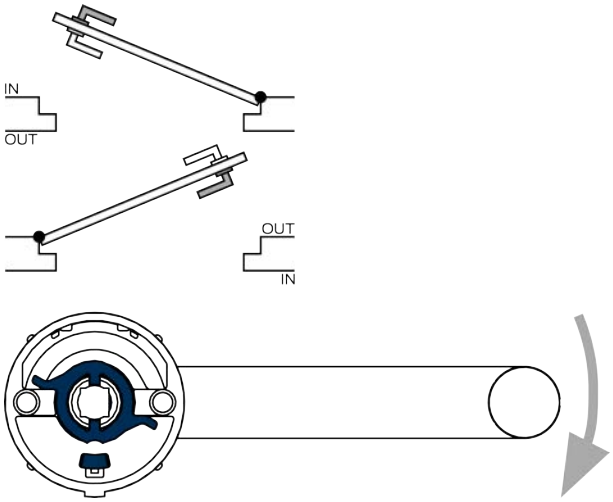


4. For 7 mm spindle: place the adapter sleeve in the inner handle in such a way that the recess faces the grub screw.

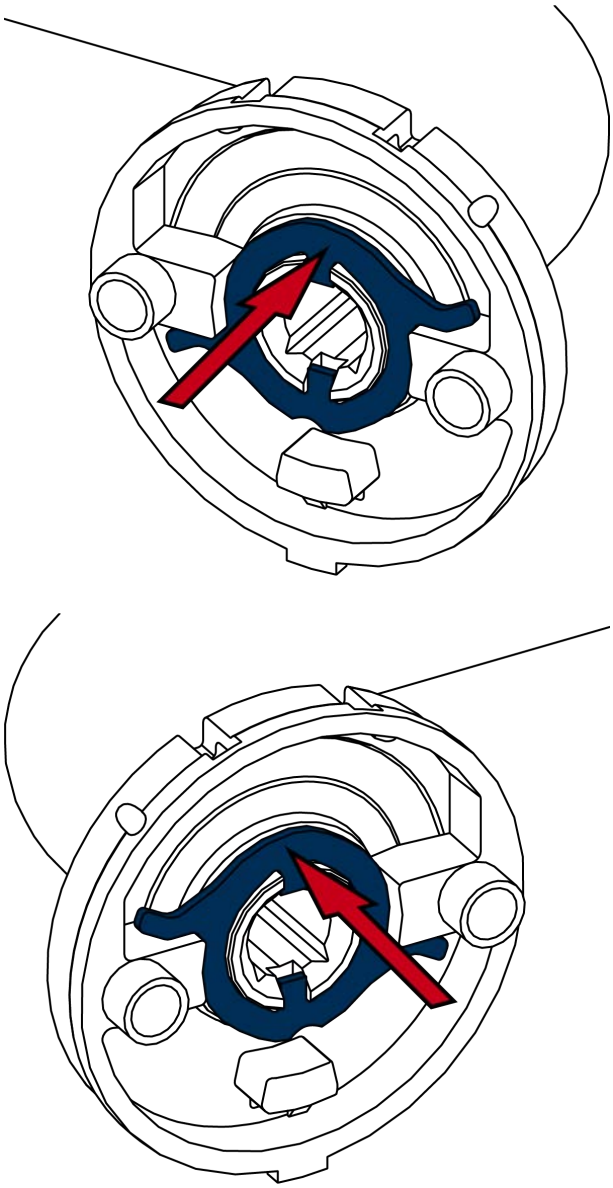


5. Determine your inner handle's direction rotation as viewed from the inside: clockwise (clockwise = CW) or anti-clockwise (counter-clockwise = CCW).

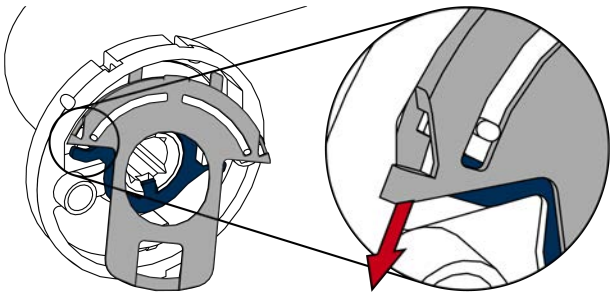




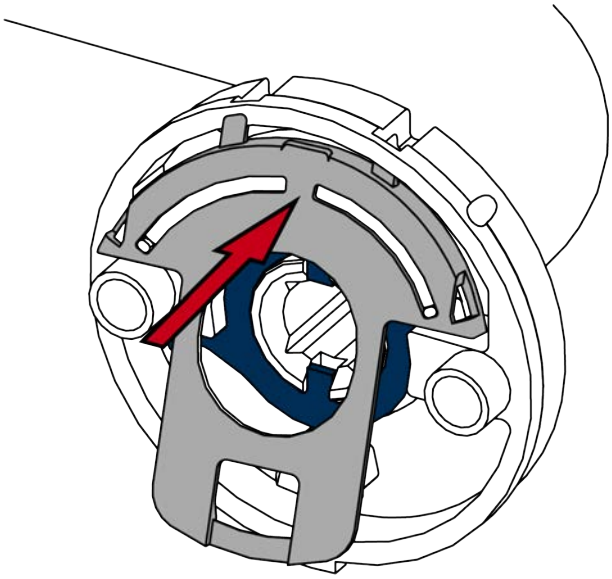
6. Insert the interchangeable plate into the inner handle as required.



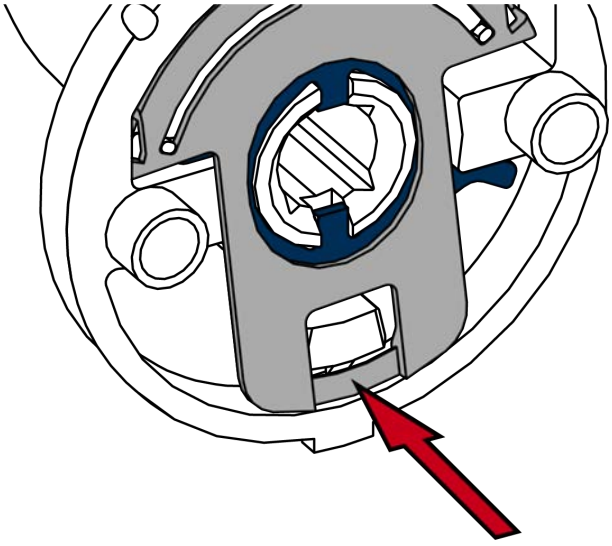
7. Press the spring plate on one side against the interchangeable plate so that the spring is compressed.



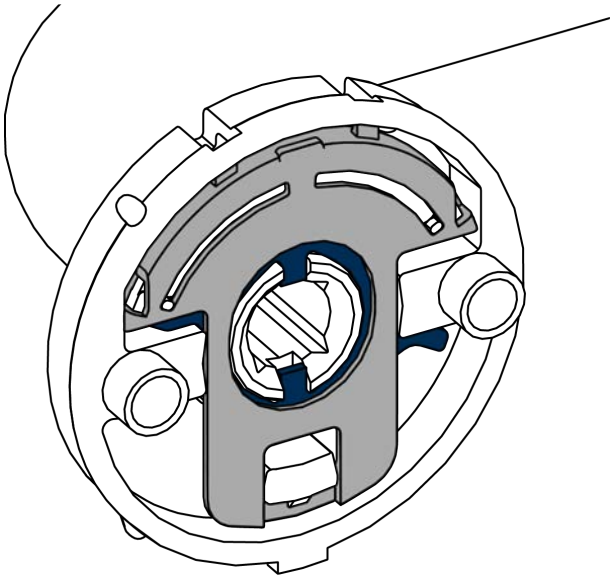
8. At the same time, hook the spring plate tabs into the slot in the inner handle.



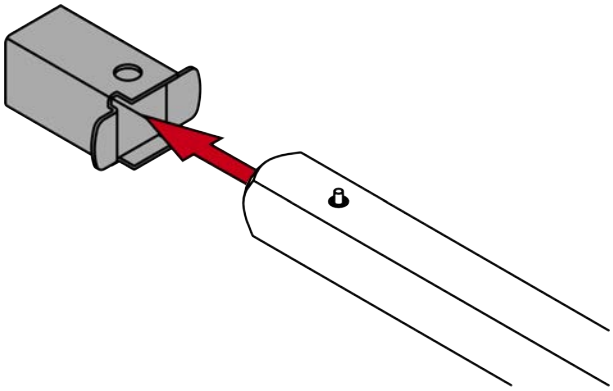
9. Press down the spring plate bracket.



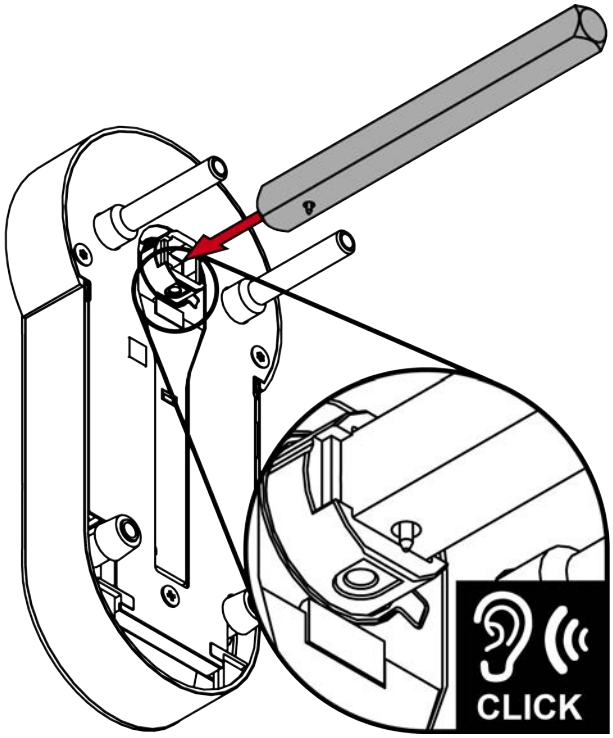
↳ The inner handle is now ready.

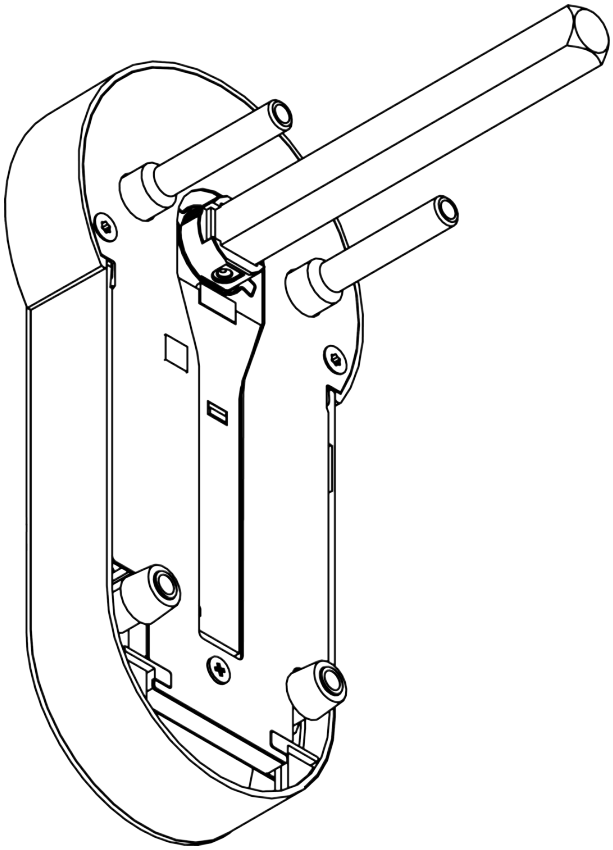


10. For 7 mm spindle: insert the adapter sleeve onto the side of the spindle with the pin.

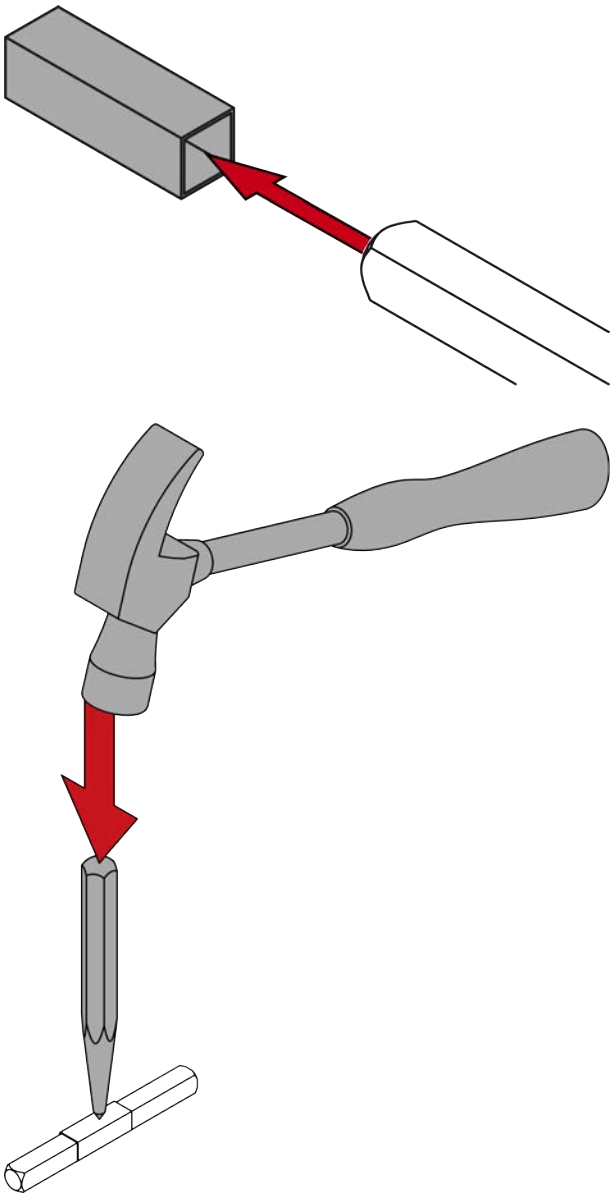


11. Insert the spindle with the pin side into the fitting.
    ↳ Pin will snap into position in the mount.

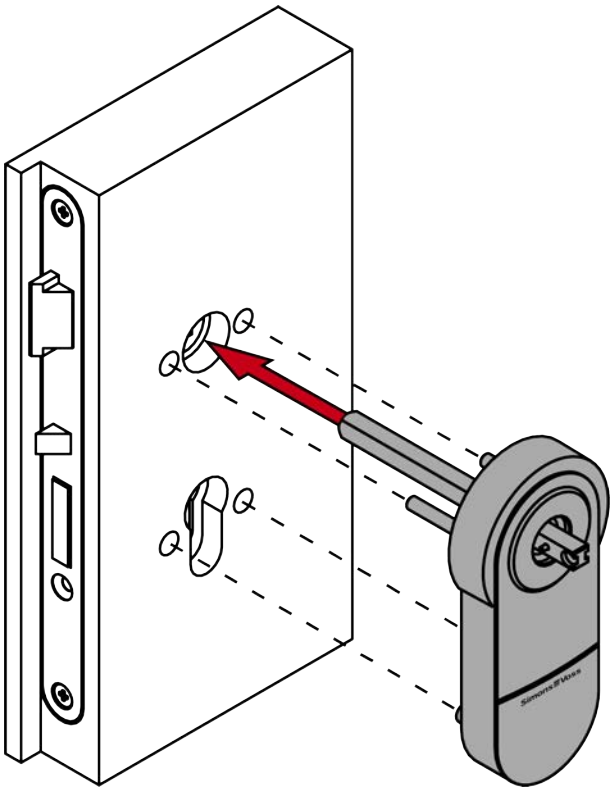

CLICK



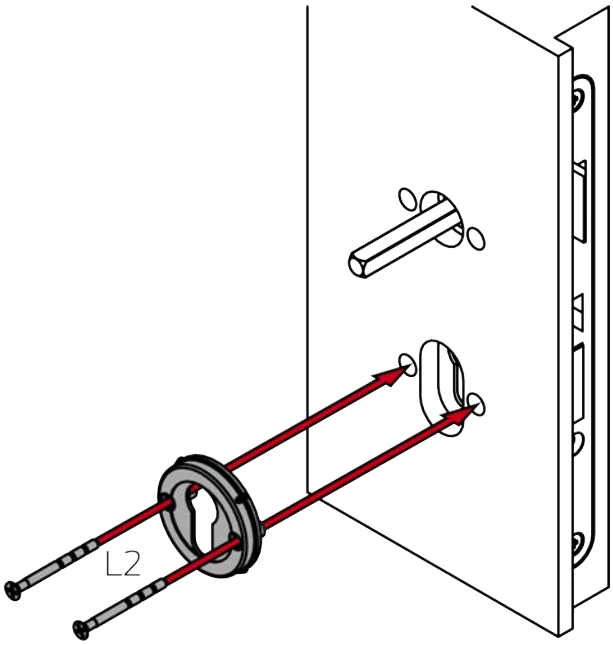
12. For 8.5 mm and 10 mm spindle: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.



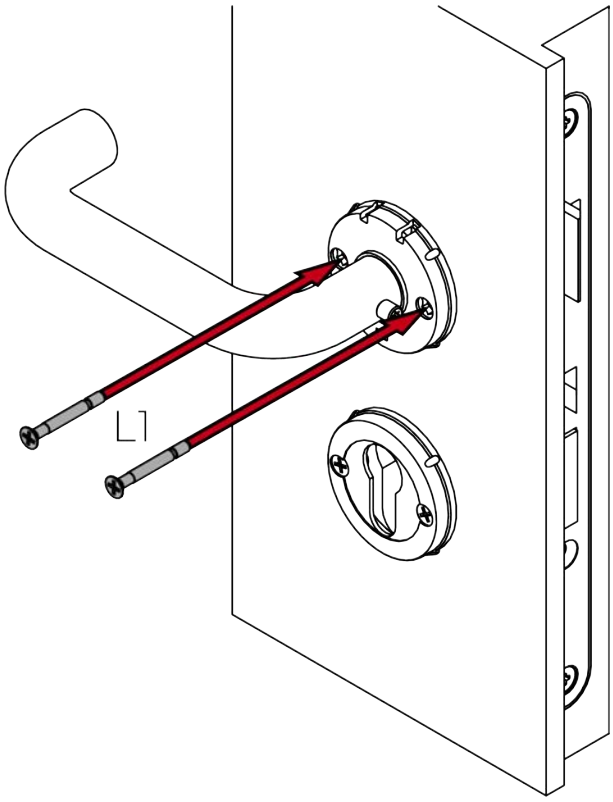
13. Insert the fitting with the spindle into the door.



14. Fasten the escutcheon base to the locking cylinder hole with the L2 screws (PH2, torque: 1.1 Nm).



15. Fasten the inner handle firmly with the L1 screws (PH2, torque 1.1 Nm).



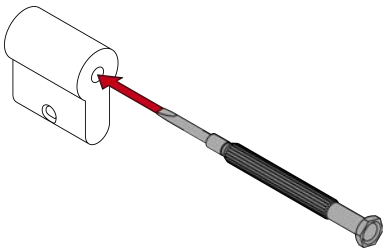
16. For FH: insert the dummy cylinder.

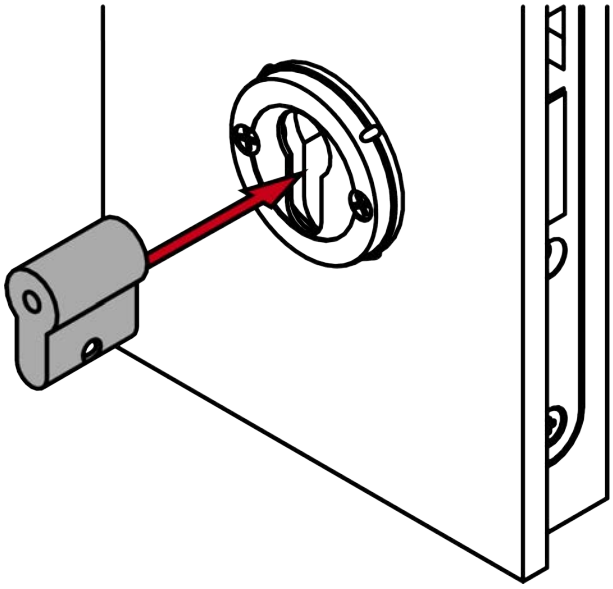
NOTE

Feed the blank cylinder into the hole using a screwdriver

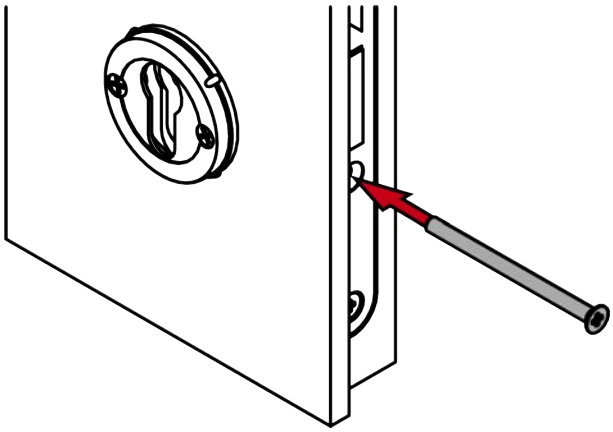
It is difficult to position the blank cylinder correctly, especially in thick doors.

1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.

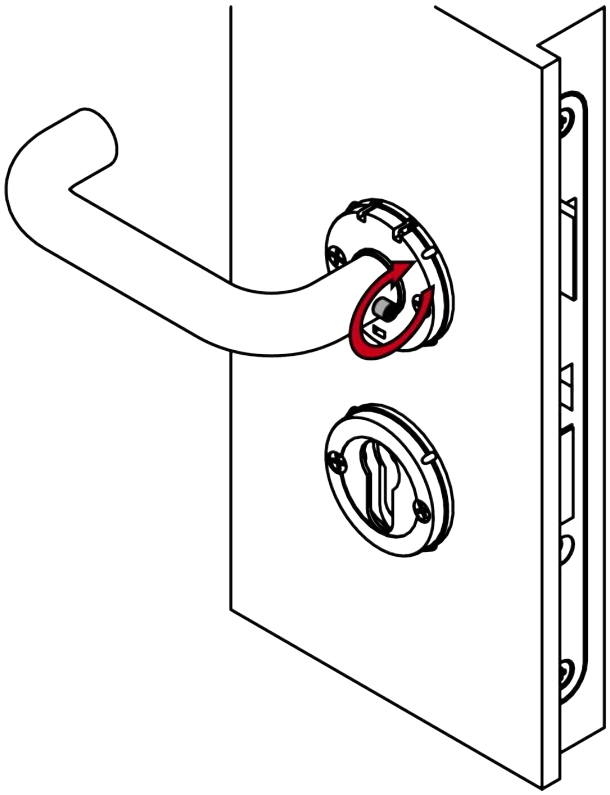




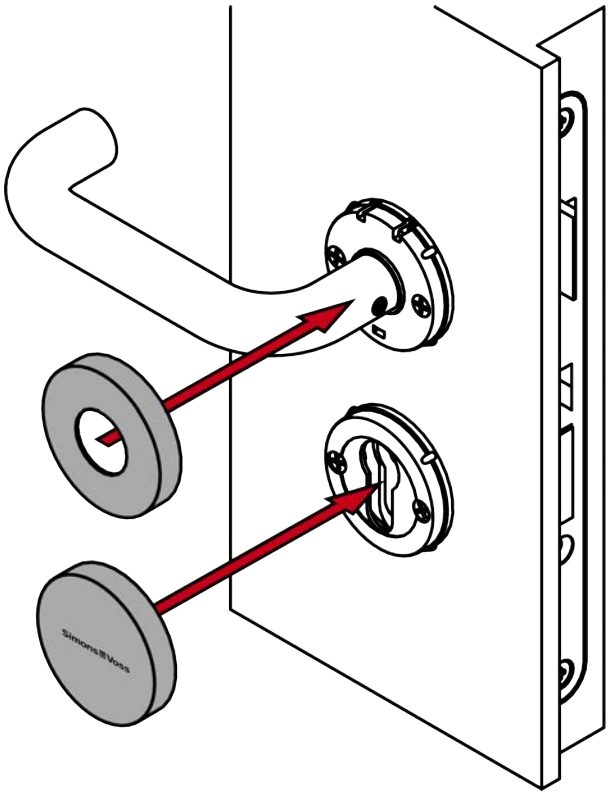
17. For FH: screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



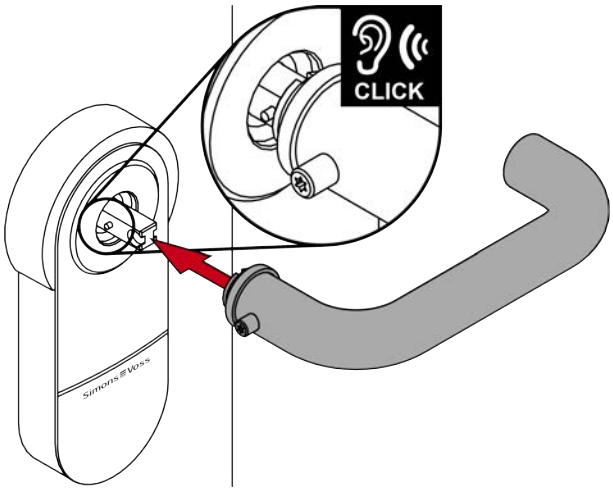
18. Fasten the set screw on the inner handle firmly (TX15, torque 5.0 Nm).



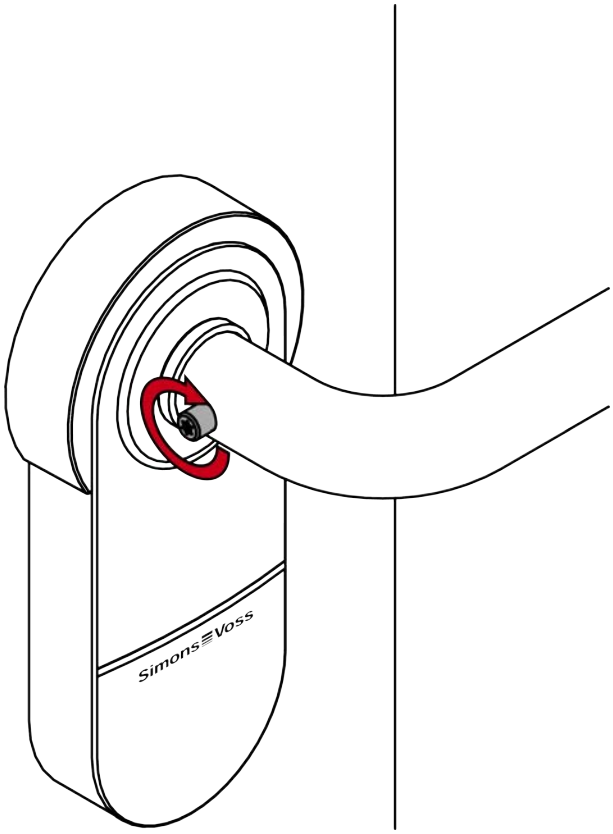
19. Place the two cover plates with the notch facing downwards onto the escutcheon base and the inner handle.



20.Fit the outside handle into position on the fitting.



21. Firmly fasten the grub screw on the outside handle (TX15; torque: 5.0 Nm).



↳ Fitting is now installed.

7.4 Variant A1.PAS24 (Downward installation with PAS24)

7.4.1 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in parallel vertical lines.

NOTE

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

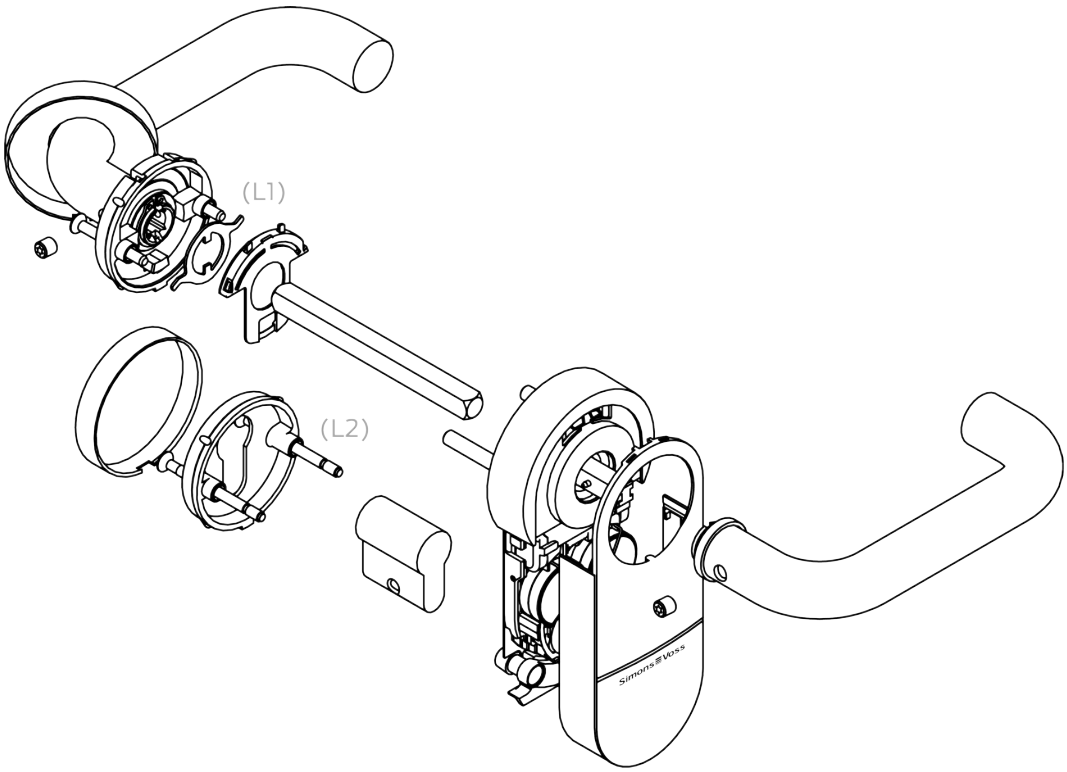
7.4.2 Scope of delivery

- SmartHandle AX (suspended installation for PAS24)
- Special tool
- Quick guide

Depending on version:

- Adapter set, 7 mm spindle
- Adapter sleeve, 8.5 mm spindle
- Adapter sleeve, 10 mm spindle
- Blank cylinder

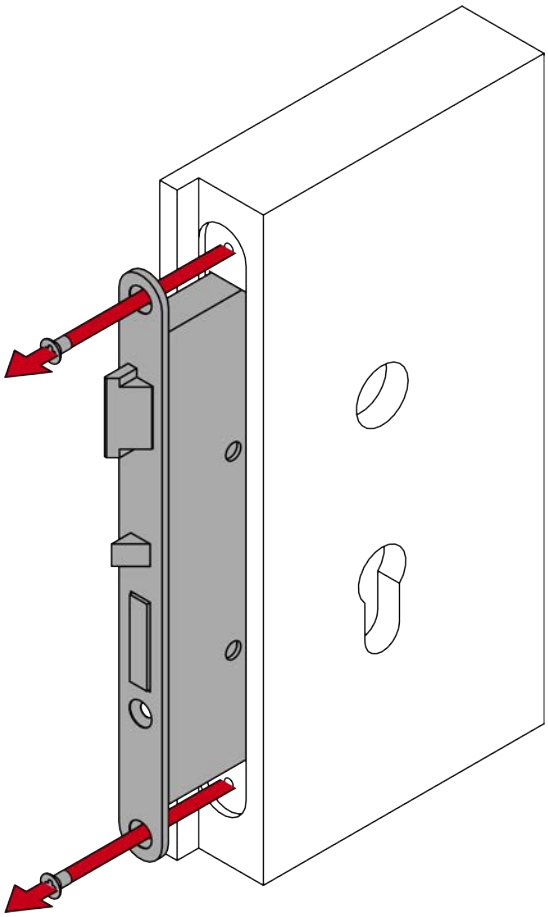
7.4.3 Structure



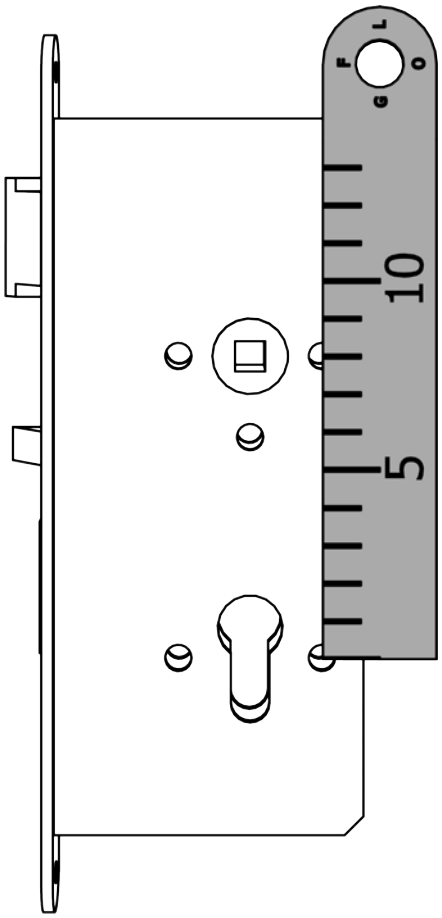
7.4.4 Prepare door (drilling template)

- ✓ Pin or scriber at hand.
- ✓ Drilling template available (see *Drilling template for variant A1 and A2 (Downward mounting) [▸ 296]*).
- ✓ Drill at hand.
- ✓ Suitable drill bit at hand (Ø 8.5 mm).
- ✓ PH2 screwdriver at hand.

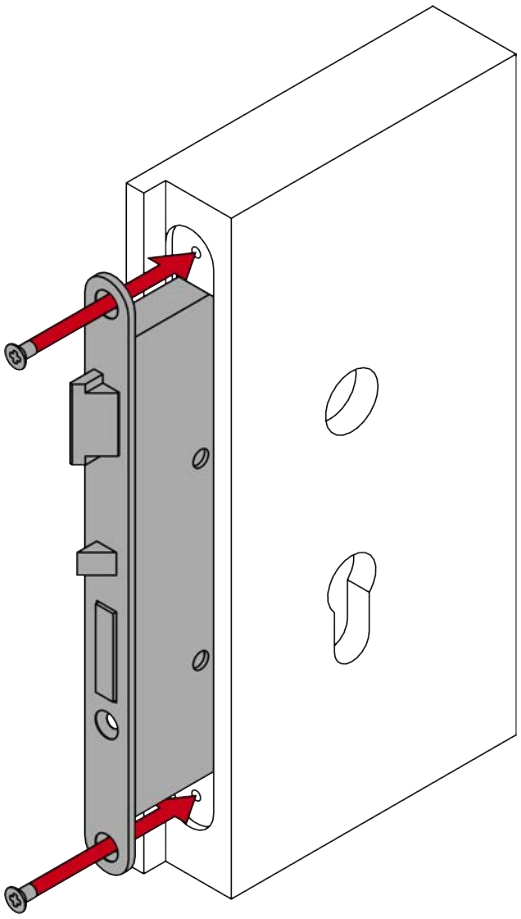
1. Remove the mortise lock (PH2).



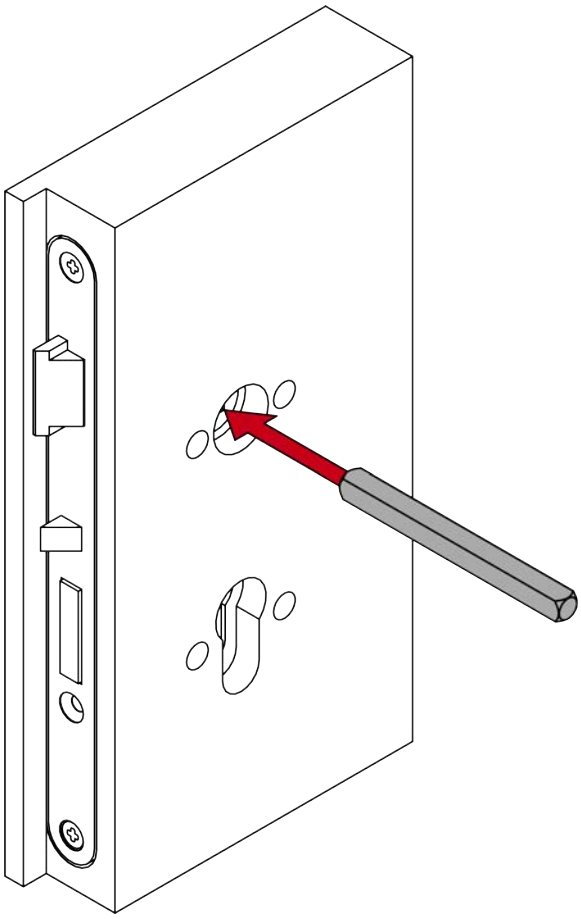
2. Measure the vertical distance between the centres of the fixing holes.



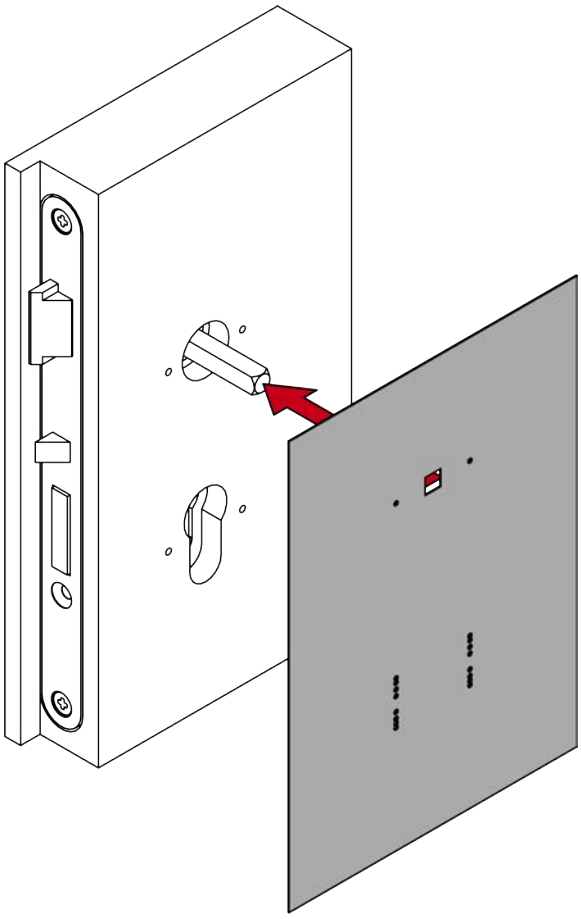
3. Fit the mortise lock (PH2).



4. Insert the spindle into the mortise lock.

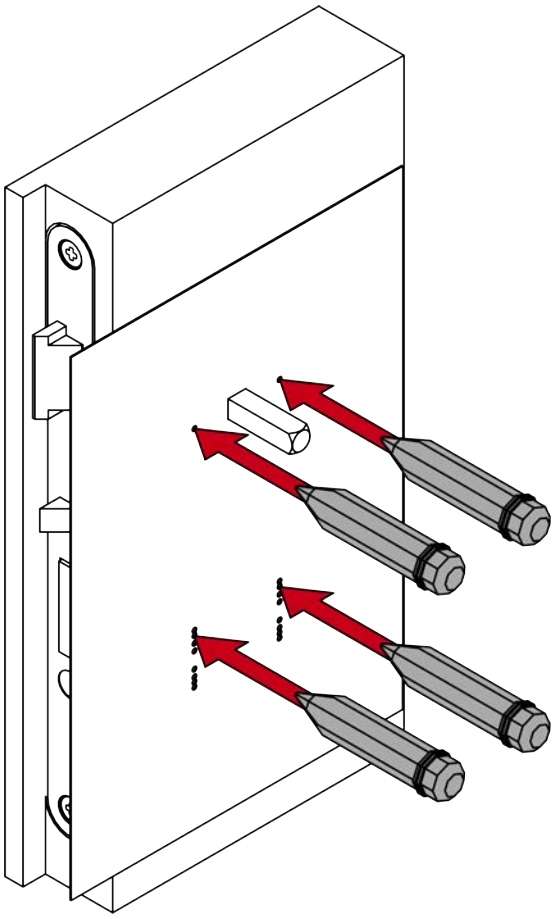


5. Place the drilling template on the spindle.

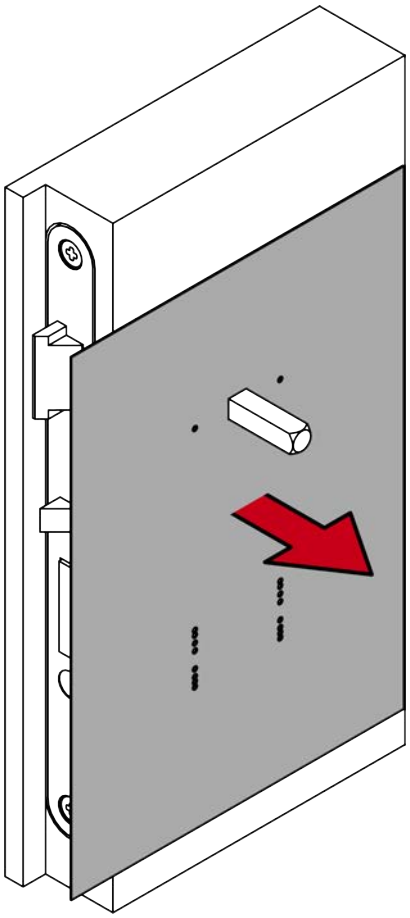


6. Align the drill template vertically using the printed scale.
7. Use the distance you measured previously to determine where the points need to be drilled.

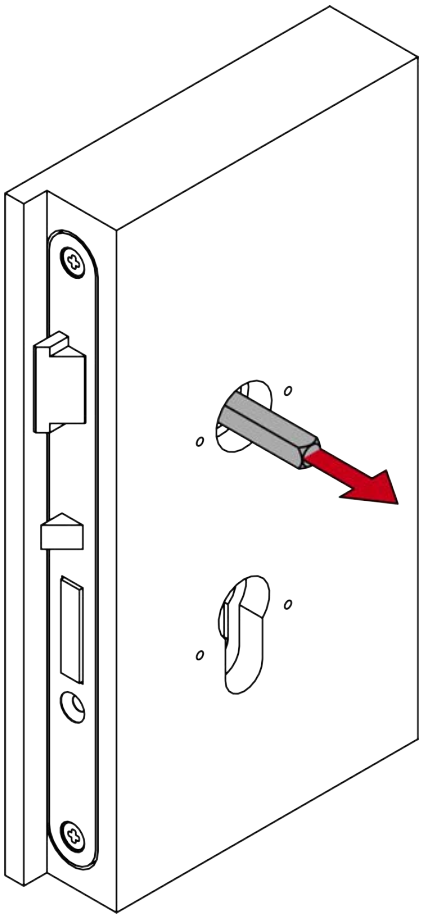
8. Mark the points to be drilled on the door.



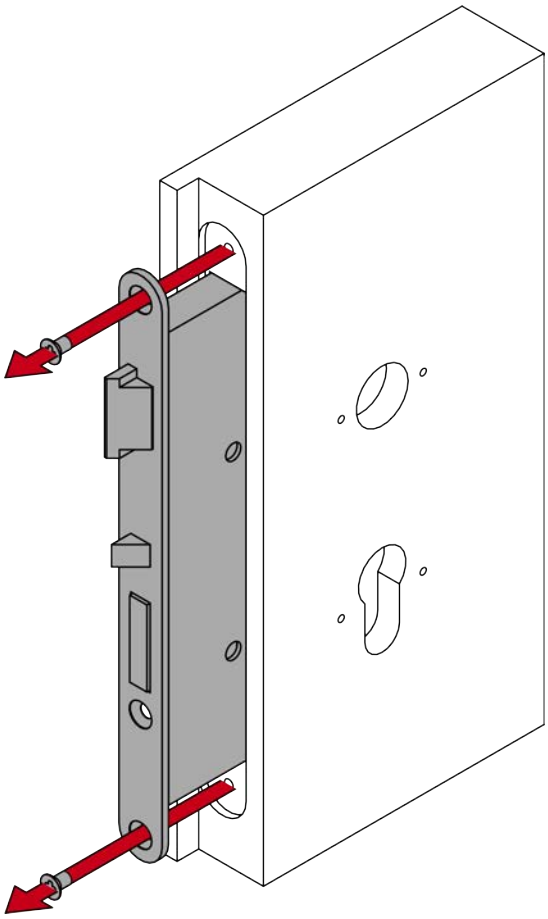
9. Remove the drilling template.



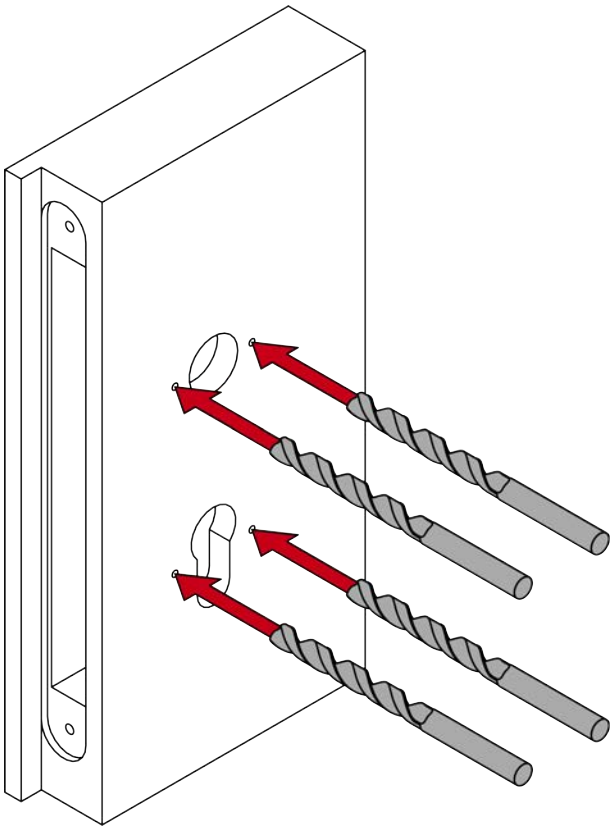
10. Remove the spindle.



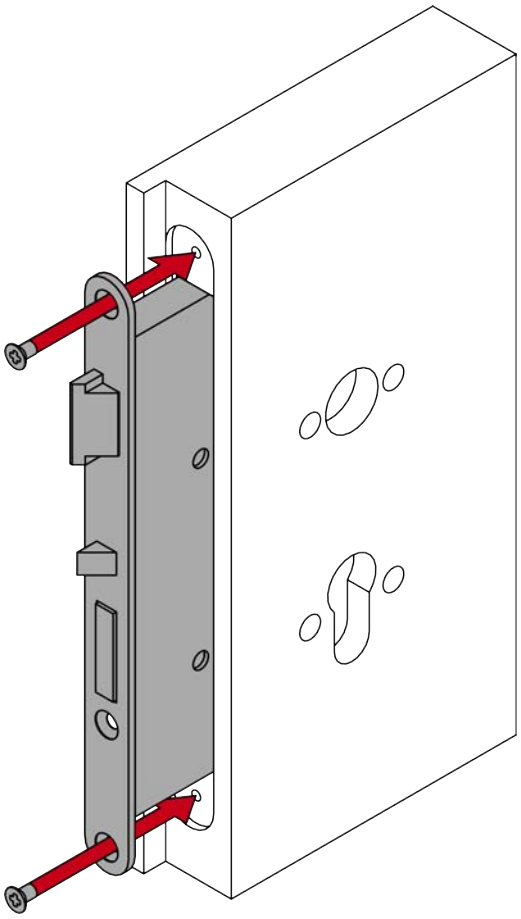
11. Remove the mortise lock (PH2).



12. Drill the required holes.

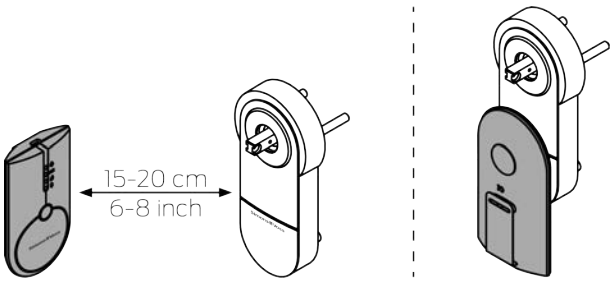


13. Fit the mortise lock (PH2).



7.4.5 Programming the fitting

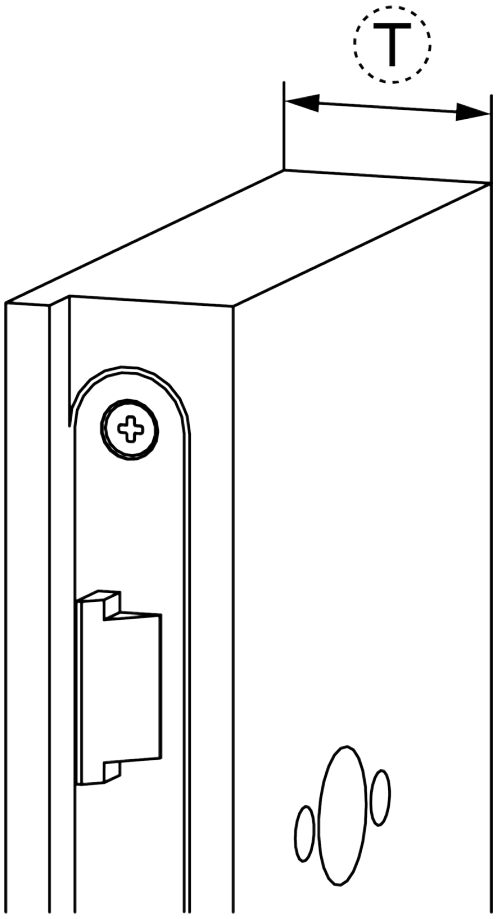
Programme the fitting before installation. You can use different programming devices, depending on the product family.



7.4.6 Installing the fitting

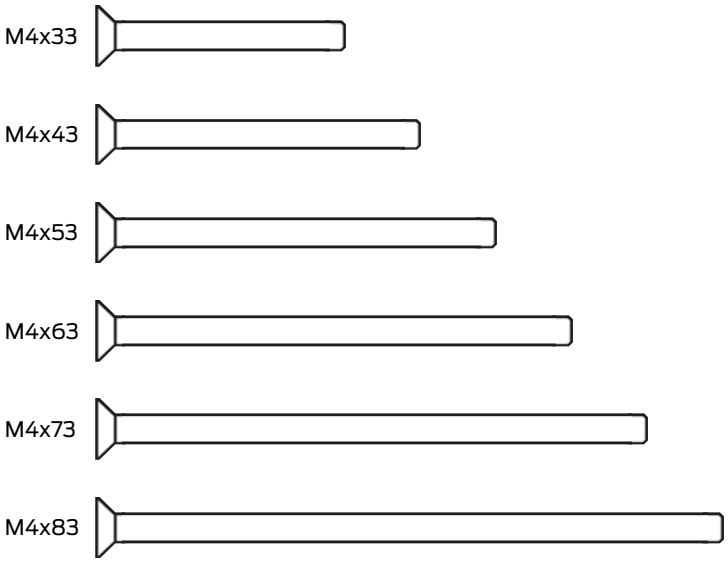
- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Pincers at hand.

1. Measure the door thickness.



Size	Door thickness (mm)	Screws (M4)
S	38 – 50	33
S	49 – 60	43
M	59 – 70	53
M	69 – 80	63
L	79 – 90	73
L	89 – 100	83

2. Identify the L1 screws you need.

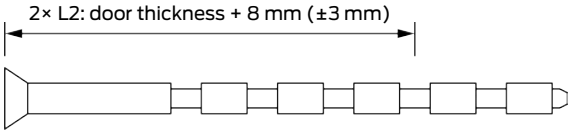


NOTE

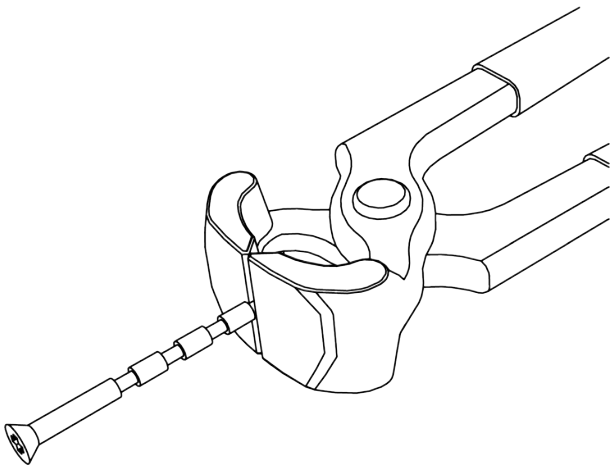
Strength class ≥ 8.8

The L1 screws for the SmartHandle AX in its PAS24 version must have a strength class of at least 8.8.

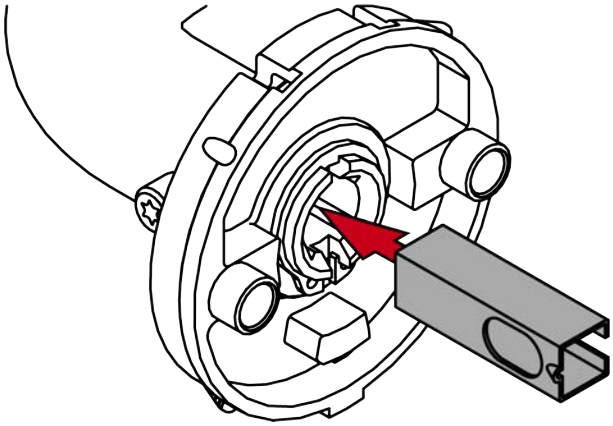
3. Identify the cutting points on the L2 cut-to-size screws.



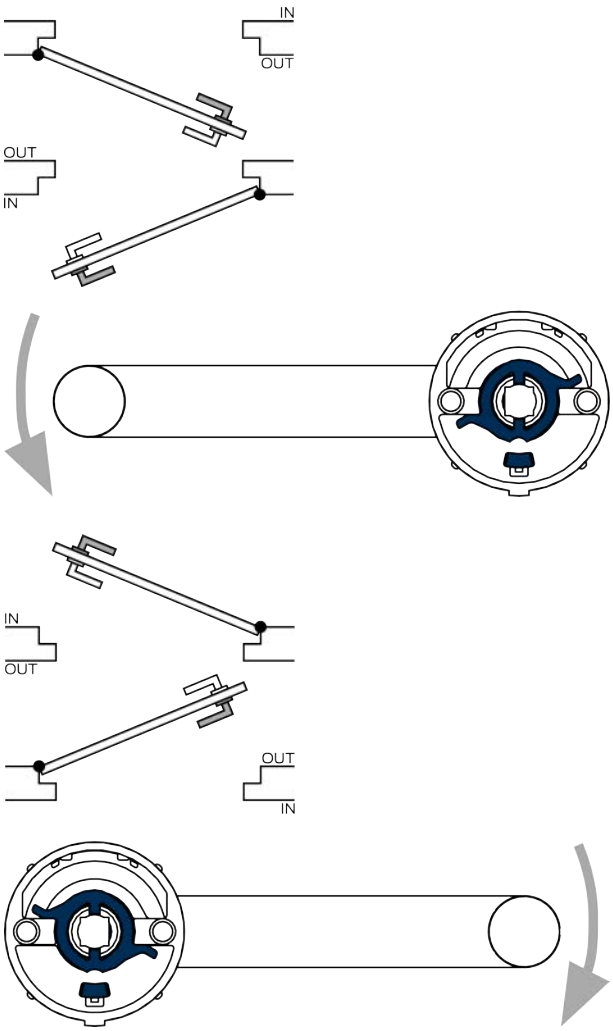
4. Cut the L2 cut-to-size screws.



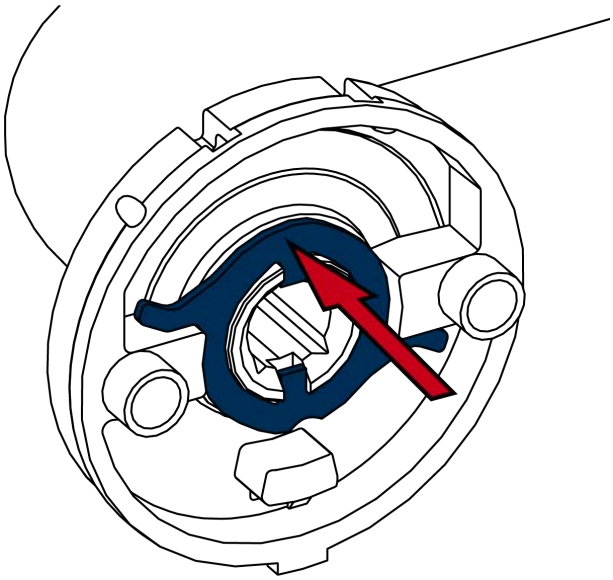
5. For 7 mm spindle: place the adapter sleeve in the inner handle in such a way that the recess faces the grub screw.

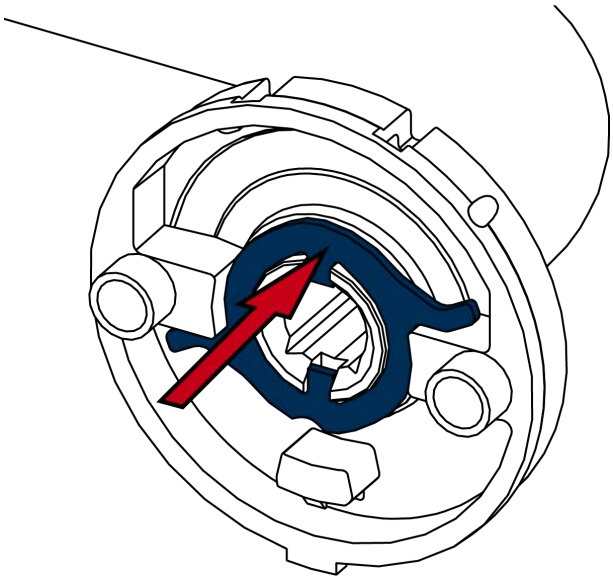


6. Determine your inner handle's direction rotation as viewed from the inside: clockwise (clockwise = CW) or anti-clockwise (counter-clockwise = CCW).

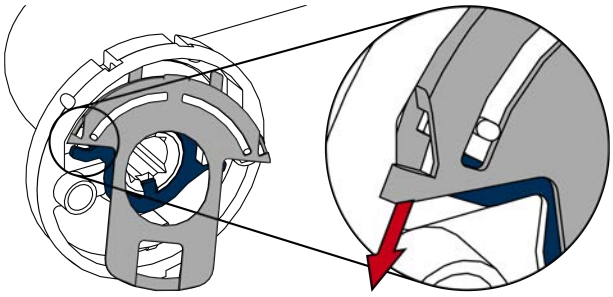


7. Insert the interchangeable plate into the inner handle as required.

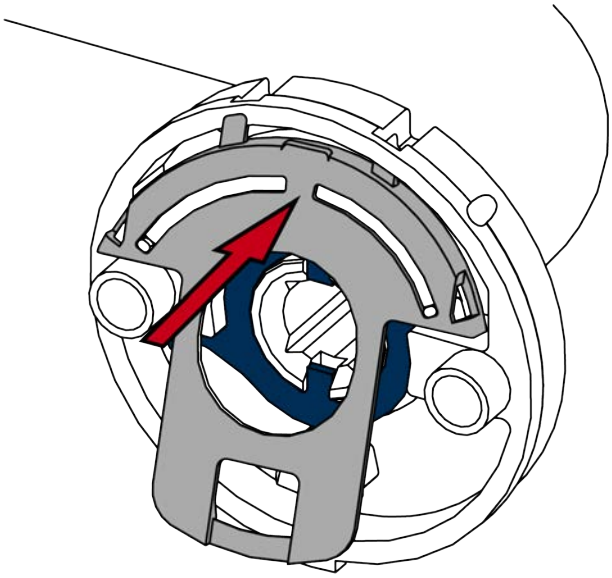




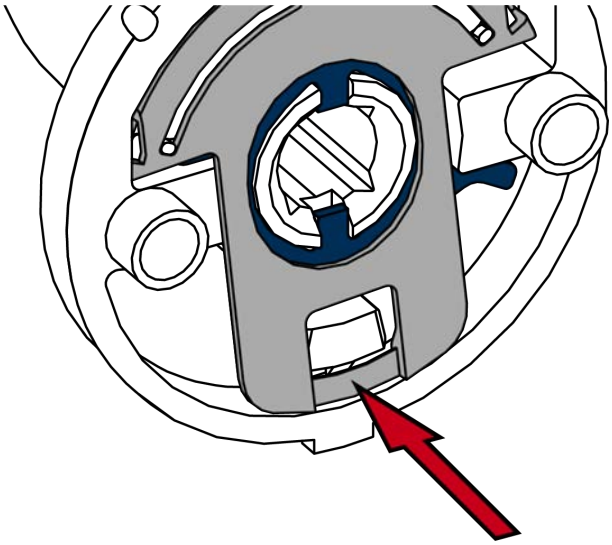
8. Press the spring plate on one side against the interchangeable plate so that the spring is compressed.



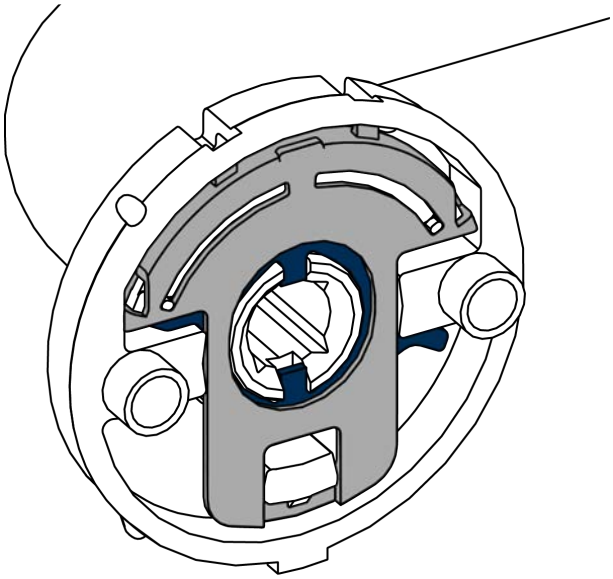
9. At the same time, hook the spring plate tabs into the slot in the inner handle.



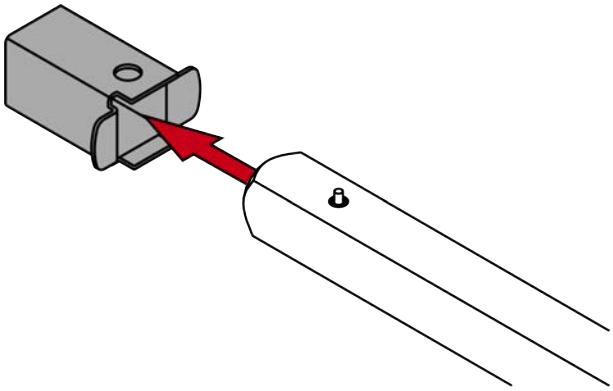
10. Press down the spring plate bracket.



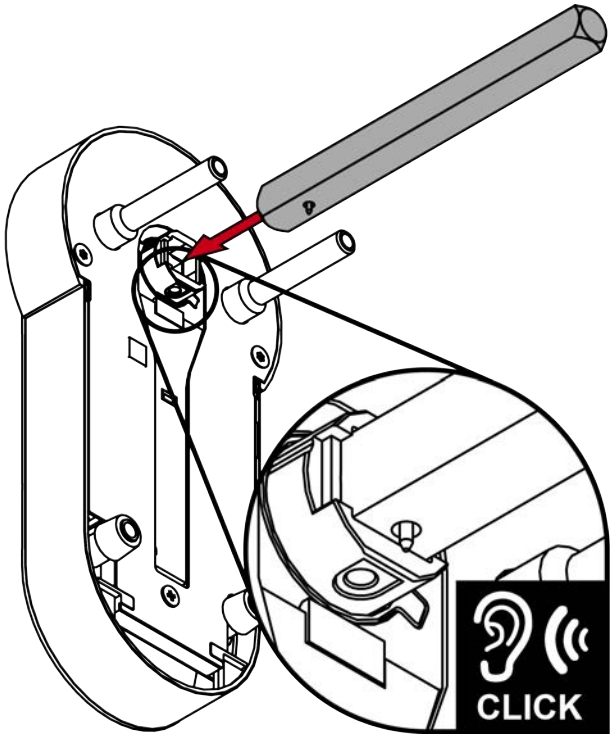
↳ The inner handle is now ready.

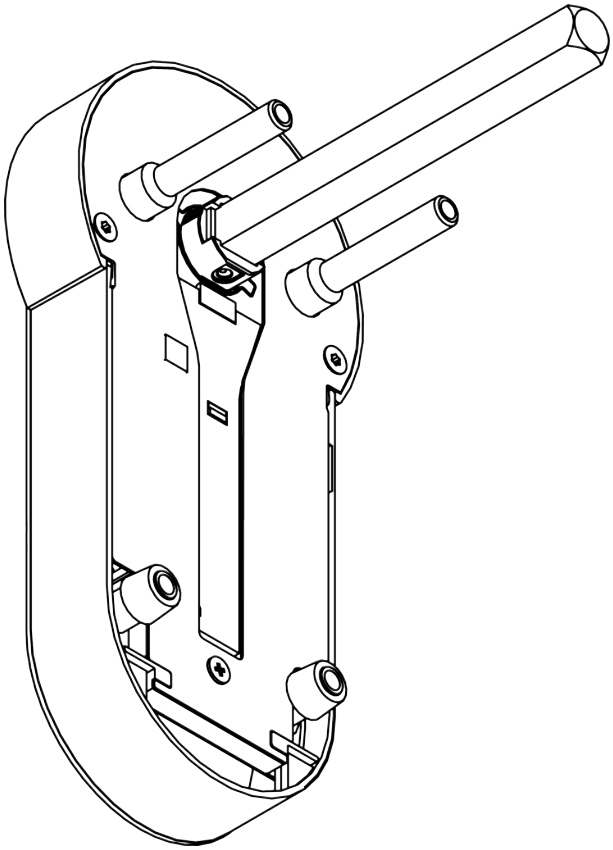


11. For 7 mm spindle: insert the adapter sleeve onto the side of the spindle with the pin.

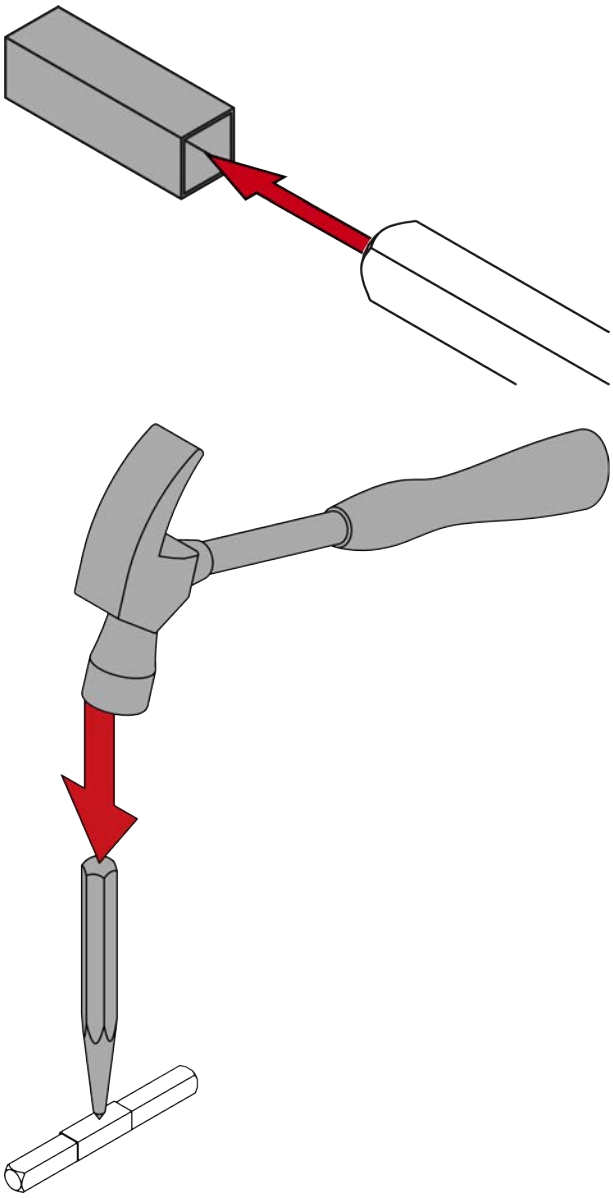


12. Insert the spindle with the pin side into the fitting.
    ↳ Pin will snap into position in the mount.

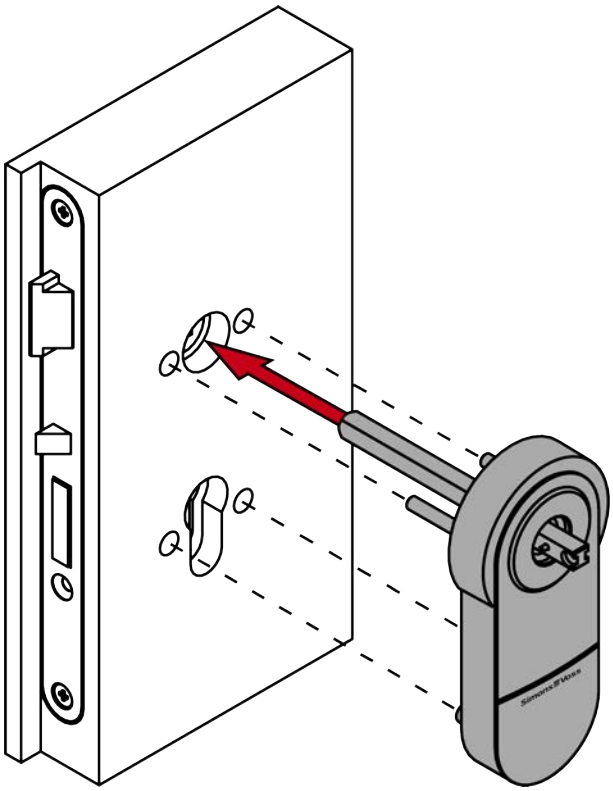

CLICK



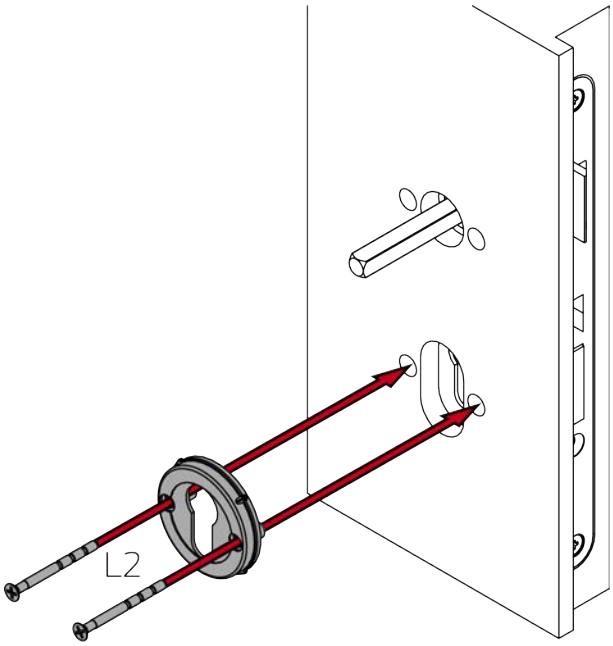
13. For 8.5 mm and 10 mm spindle: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.



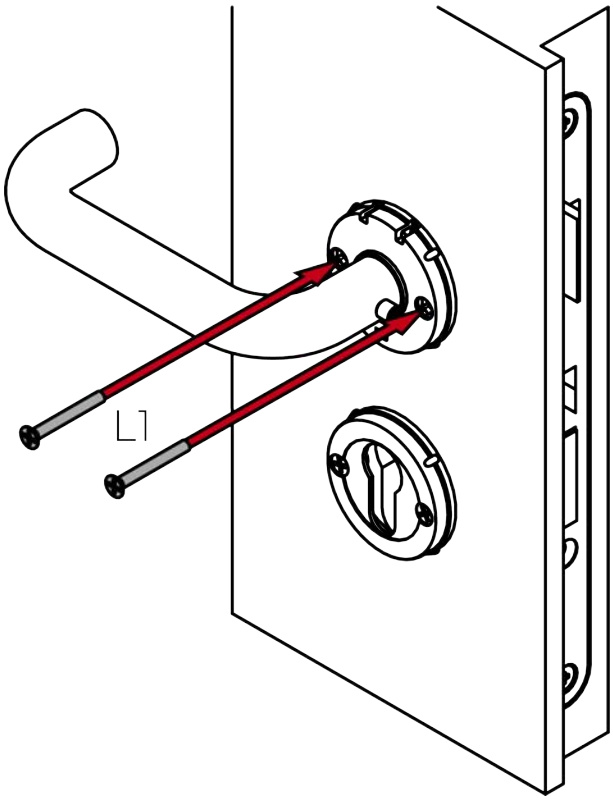
14. Insert the fitting with the spindle into the door.



15. Fasten the escutcheon base to the locking cylinder hole with the L2 screws (PH2, torque: 1.1 Nm).



16. Fasten the inner handle firmly with the L1 screws (PH2, torque 1.1 Nm).



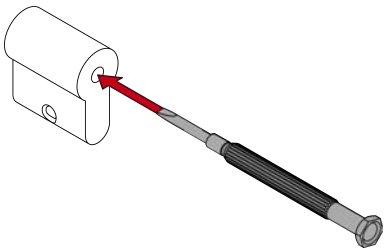
17. For FH: insert the dummy cylinder.

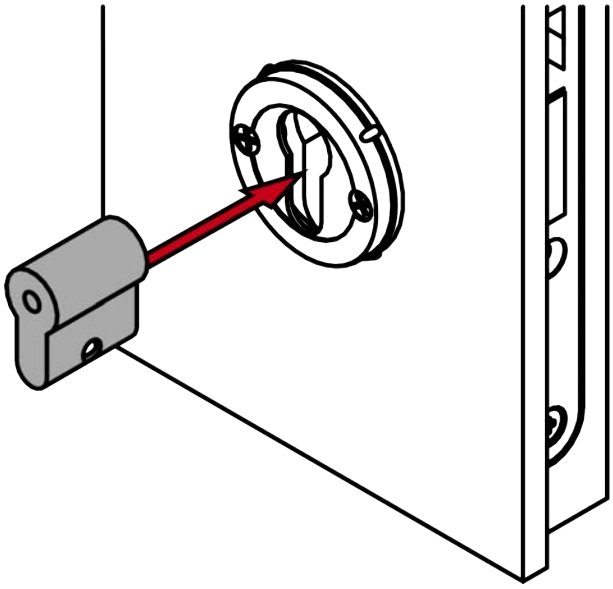
NOTE

Feed the blank cylinder into the hole using a screwdriver

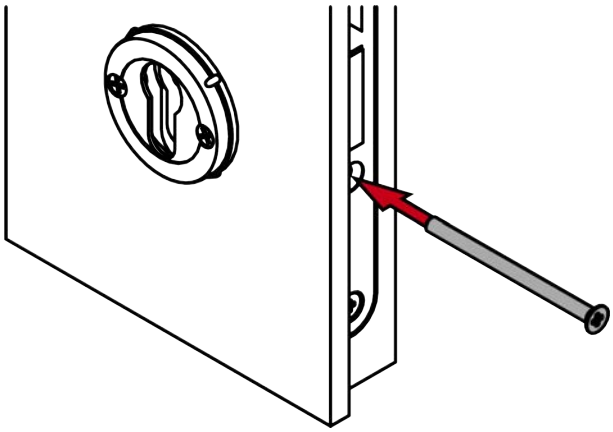
It is difficult to position the blank cylinder correctly, especially in thick doors.

1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.

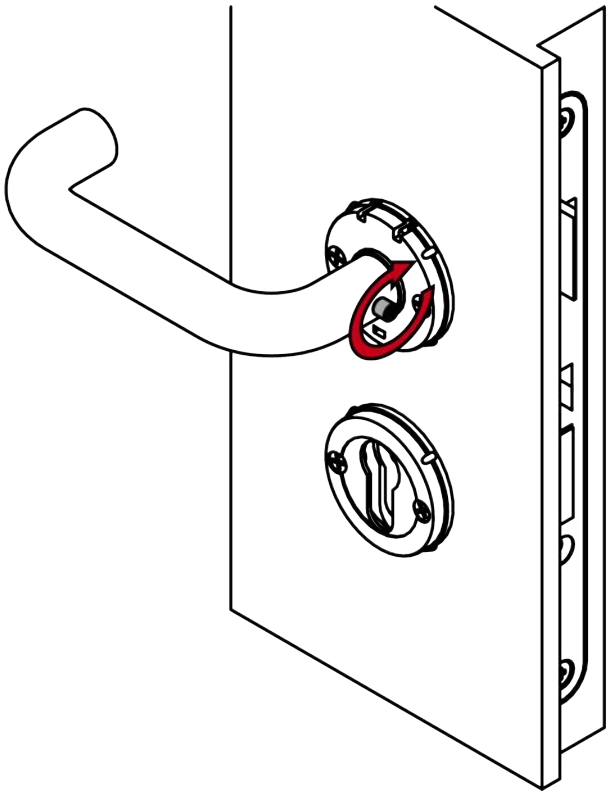




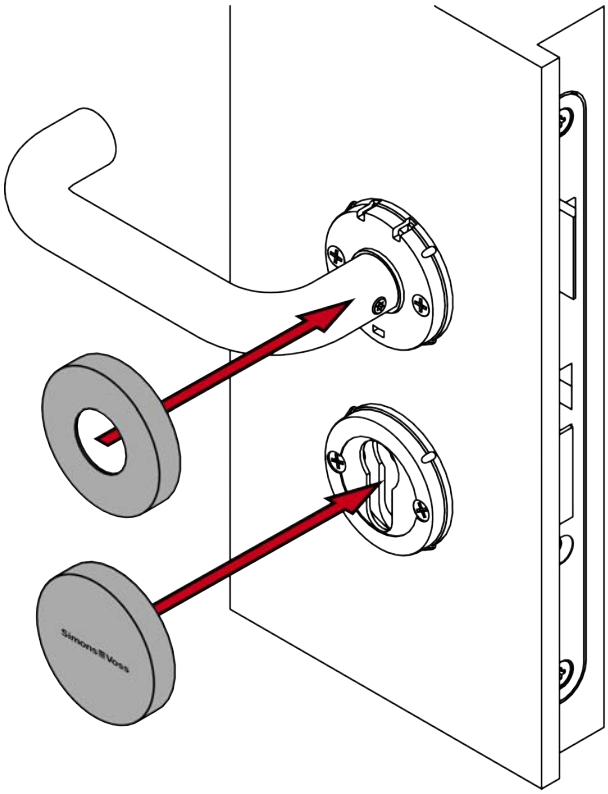
18. For FH: screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



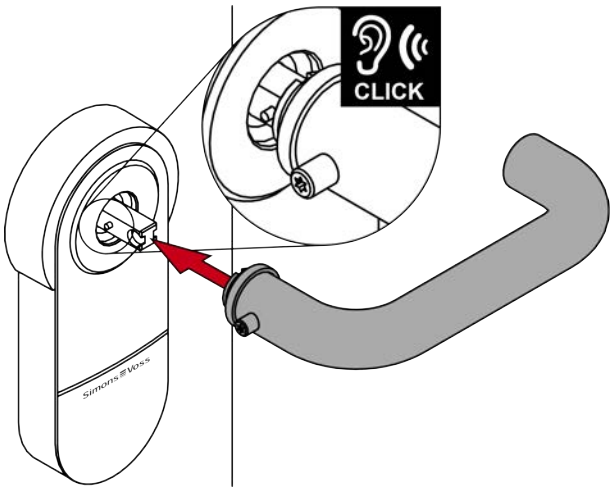
19. Fasten the set screw on the inner handle firmly (TX15, torque 5.0 Nm).



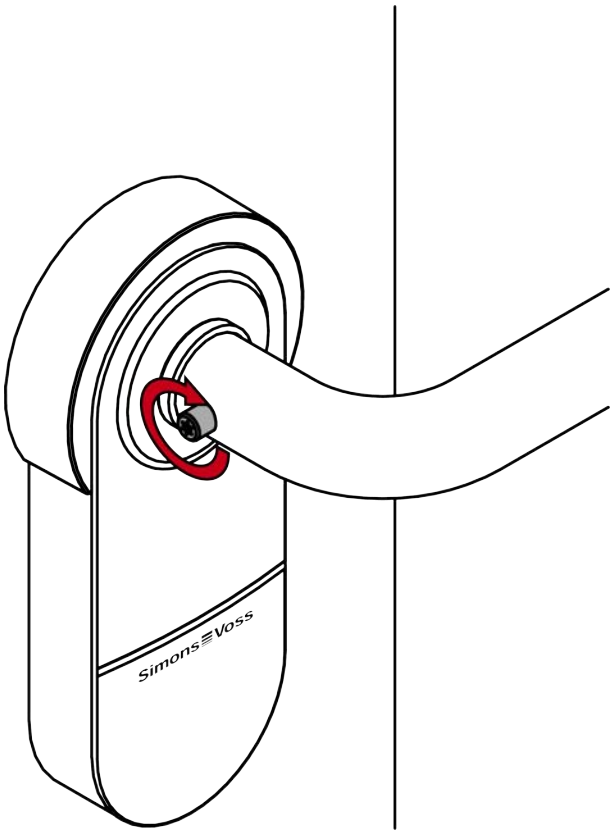
20. Place the two cover plates with the notch facing downwards onto the escutcheon base and the inner handle.



21. Fit the outside handle into position on the fitting.



22. Firmly fasten the grub screw on the outside handle (TX15; torque: 5.0 Nm).



↳ Fitting is now installed.

7.5 Variant A3 (Tubular frame)

7.5.1 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in a vertical line.

NOTE

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

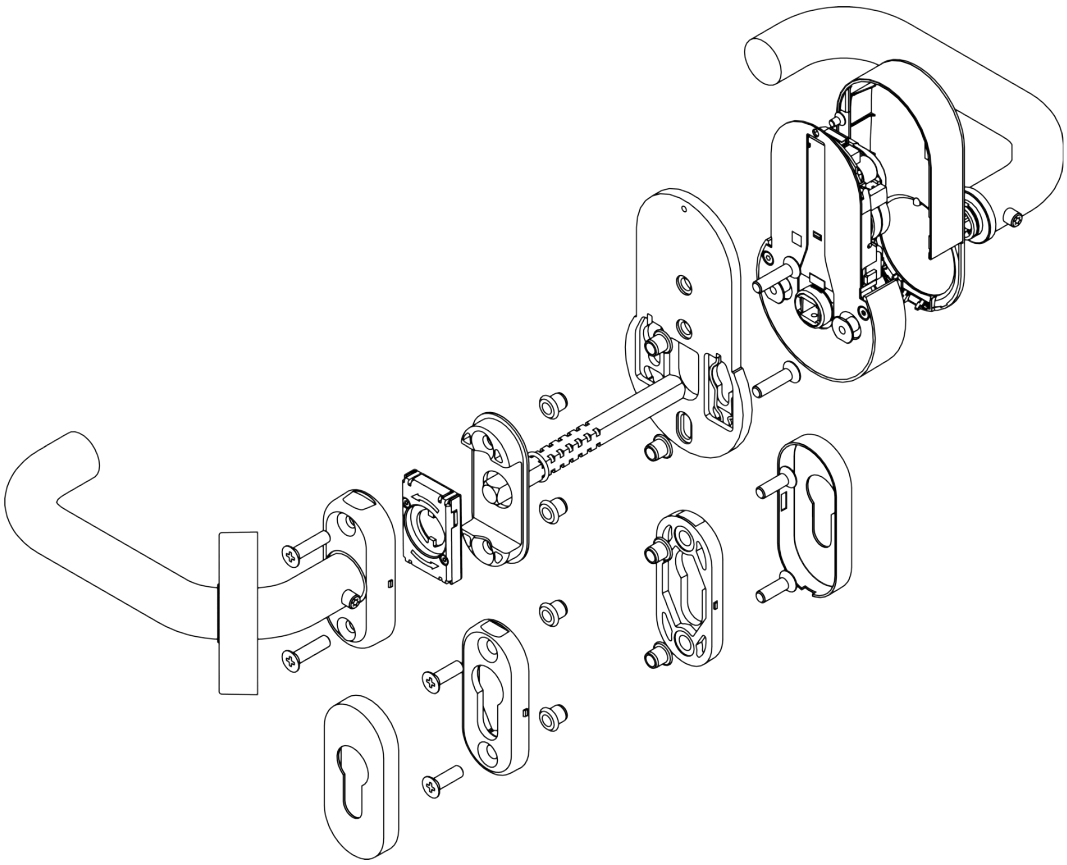
7.5.2 Scope of delivery

- SmartHandle AX (metal frame version)
- Special tool
- Quick guide

For FH version:

- Blank cylinder

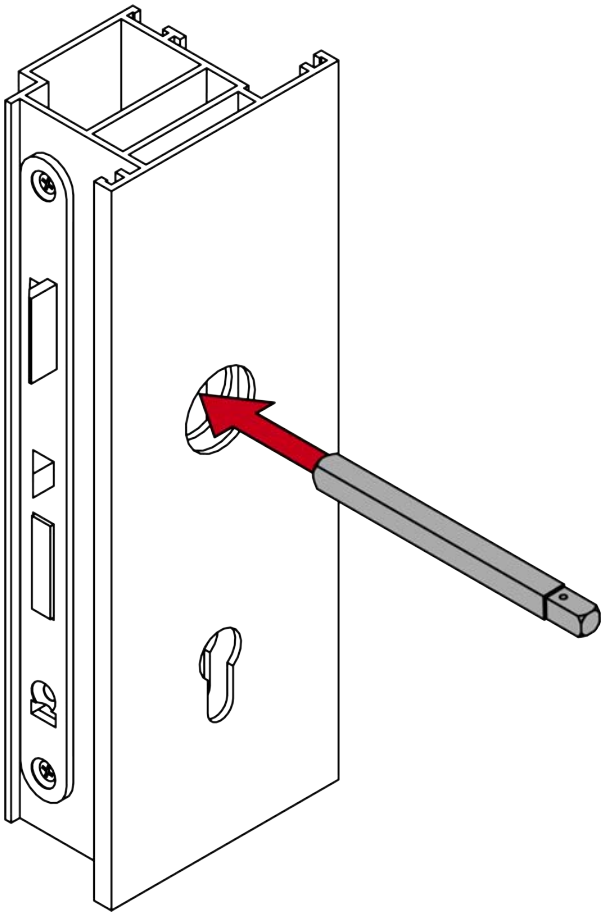
7.5.3 Design



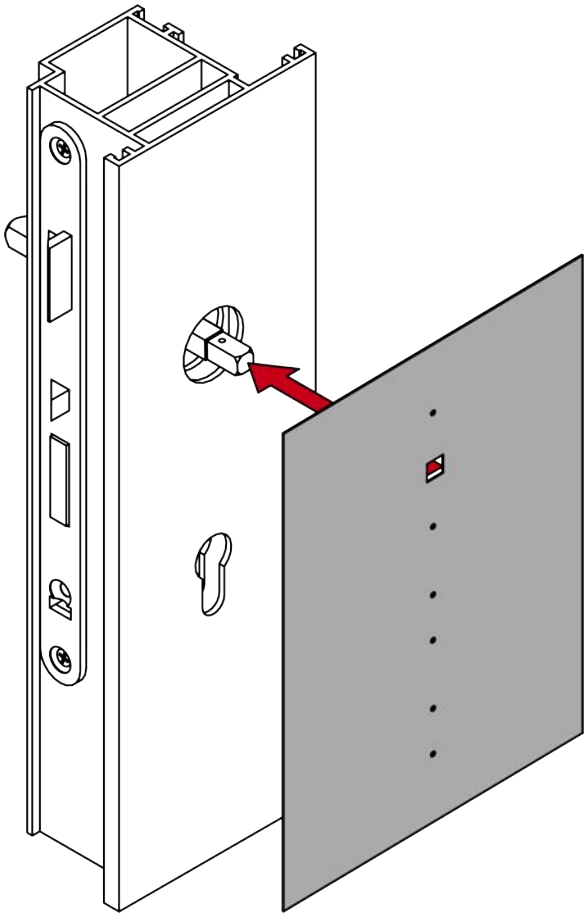
7.5.4 Prepare door (drilling template)

- ✓ PH2 screwdriver at hand.
- ✓ Drilling template available (see *Drilling template for variant A3 (Tubular frame) [▸ 298]*).
- ✓ Pin or scriber at hand.
- ✓ Drill at hand.
- ✓ Suitable drill bit at hand (Ø 7.2 mm).
- ✓ Countersink at hand.

1. Insert the spindle into the mortise lock.

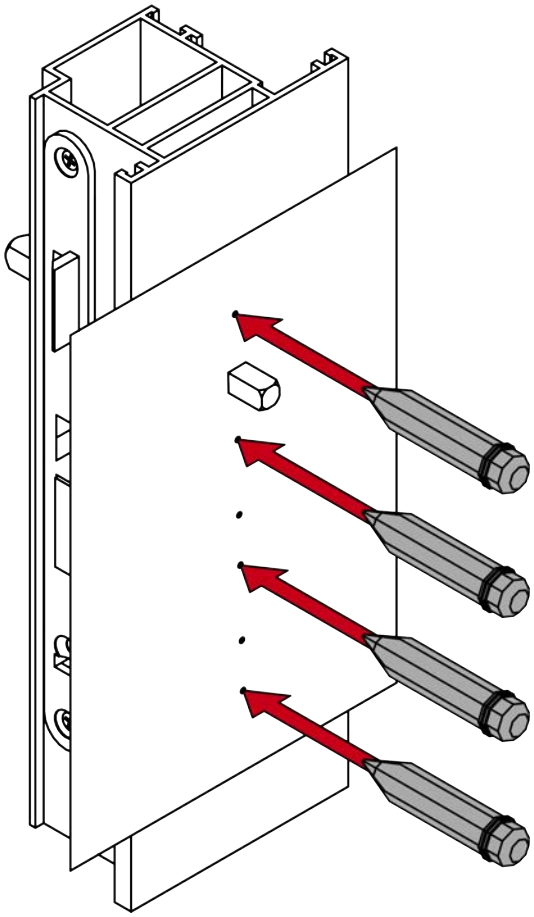


2. Place the drilling template on the spindle.

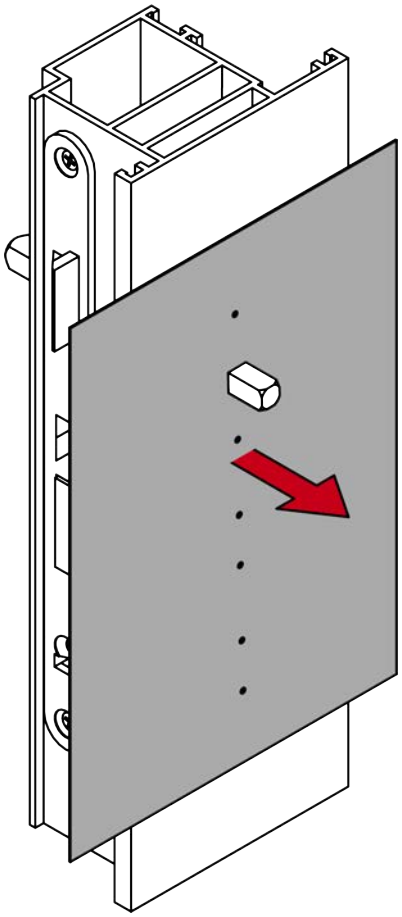


3. Align the drill template vertically using the printed scale.

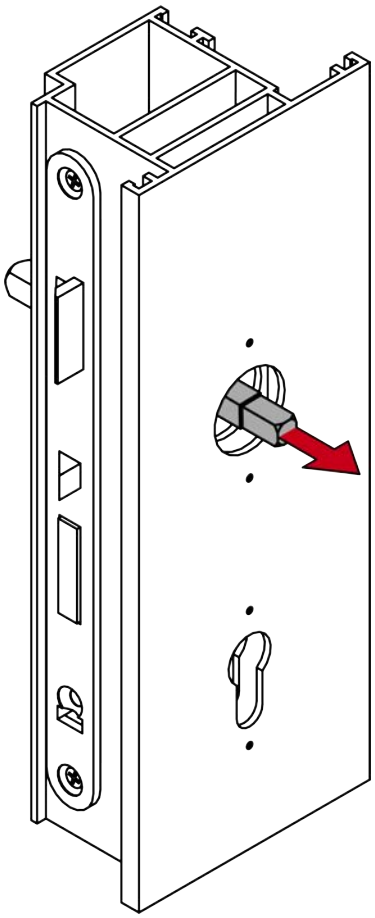
4. Mark the points to be drilled on the door.



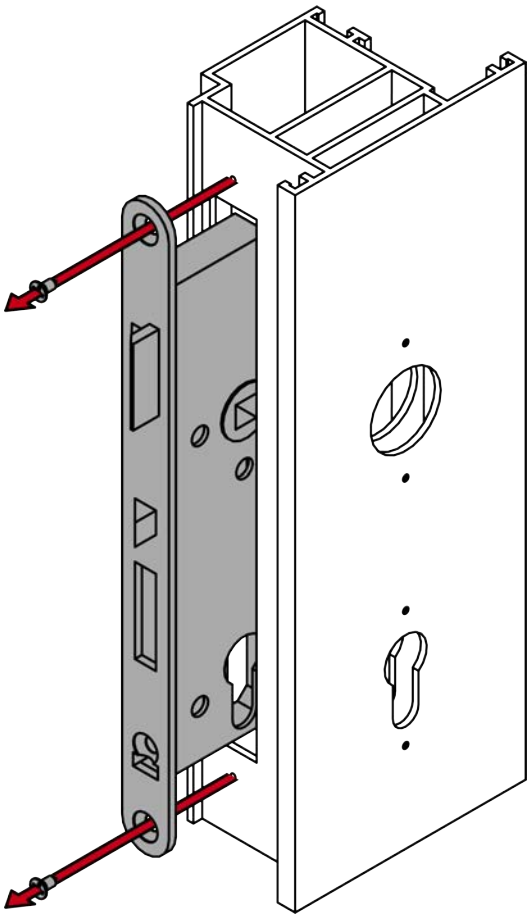
5. Remove the drilling template.



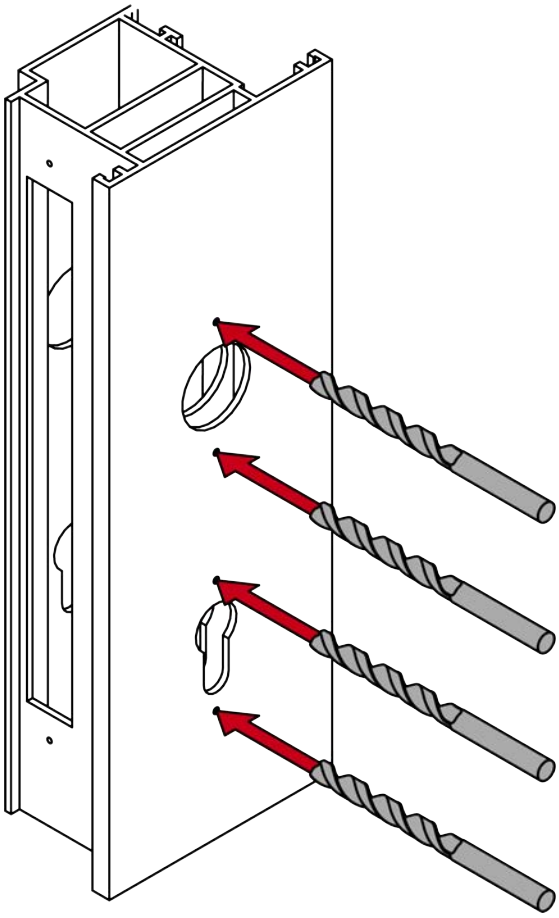
6. Remove the spindle.



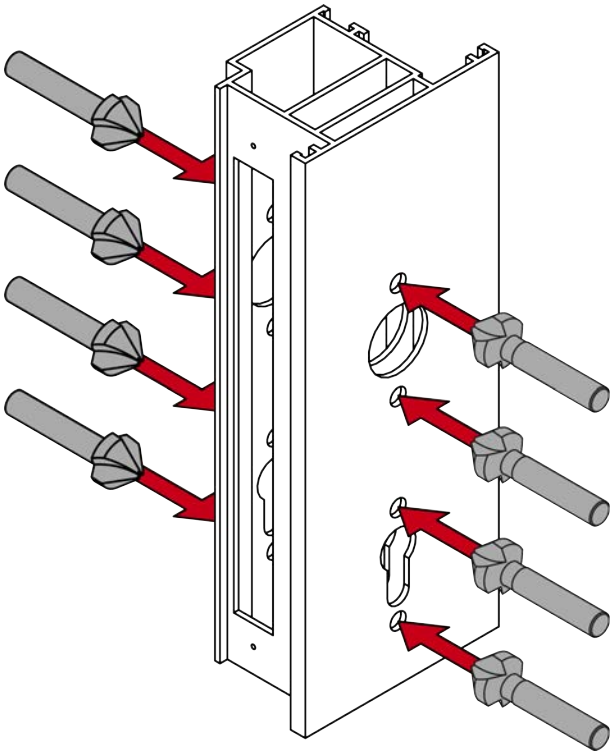
7. Remove the mortise lock (PH2).



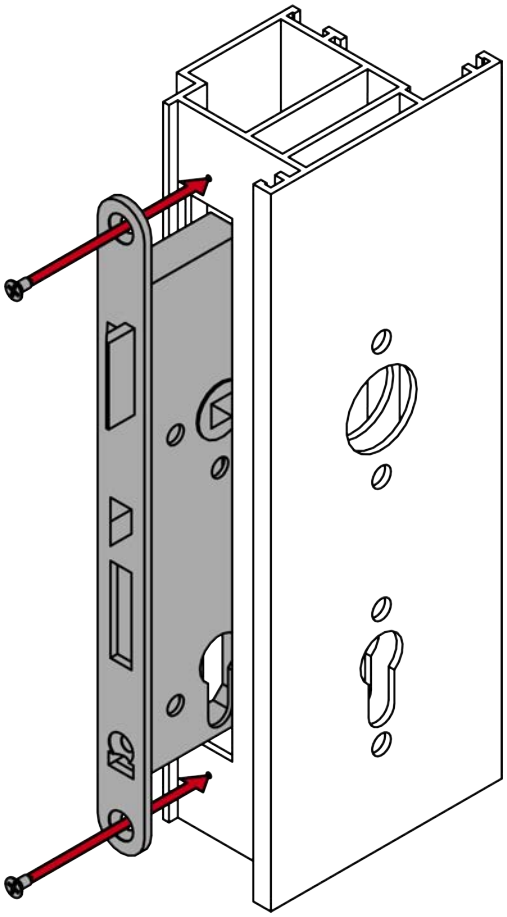
8. Drill the required holes.



9. Countersink the holes with the countersink so that the blind rivet nuts can be pressed into a flush position later.



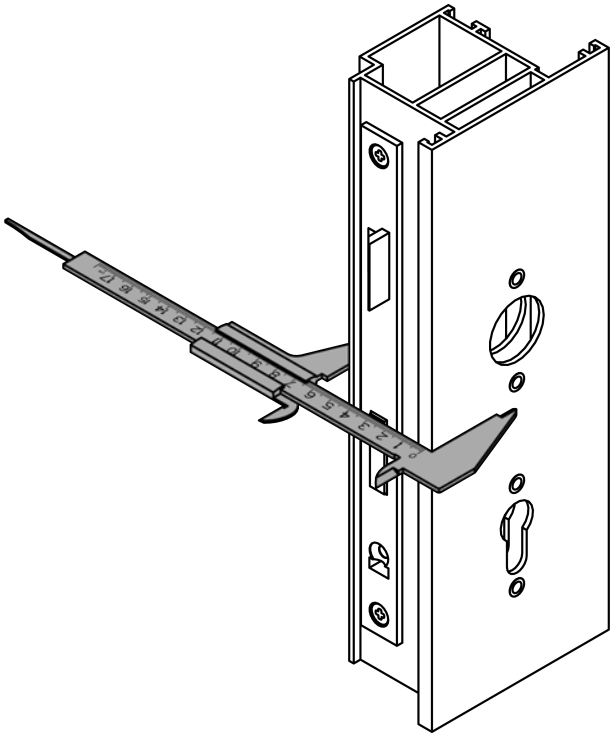
10. Fit the mortise lock (PH2).



7.5.5 For door thickness X: prepare spindle

✓ Saw at hand.
✓ Vernier calliper at hand.
✓ PH2 screwdriver at hand.

1. For X: measure the door thickness.



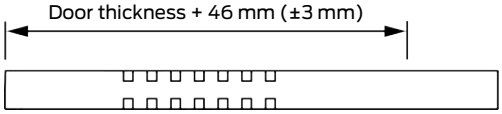
2. For X: mark the sawing point on the spindle.

NOTE

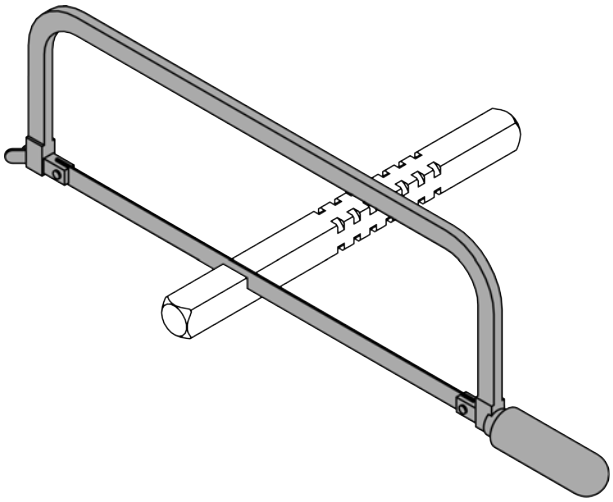
9 mm spindle with 8 mm end

The 9 mm spindle has an 8 mm end. This end is inserted into the electronic fitting.

- Trim the 9 mm spindle, ensuring that the 8 mm end is not the cut part.

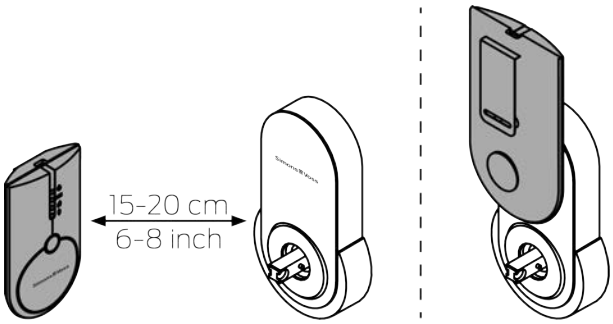


3. For X: trim the spindle with a suitable saw.



7.5.6 Programming the fitting

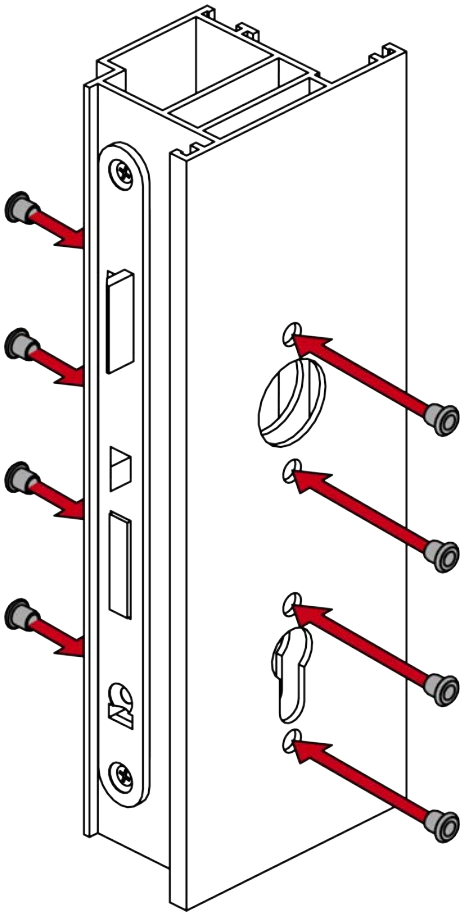
Programme the fitting before installation. You can use different programming devices, depending on the product family.



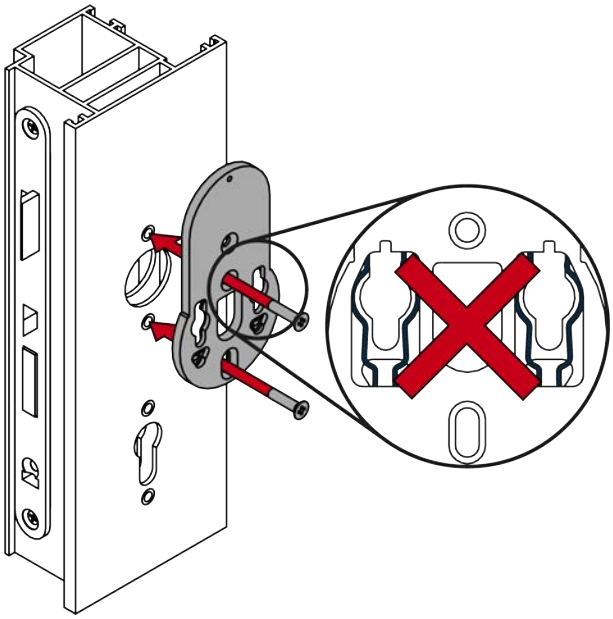
7.5.7 Installing the fitting

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.

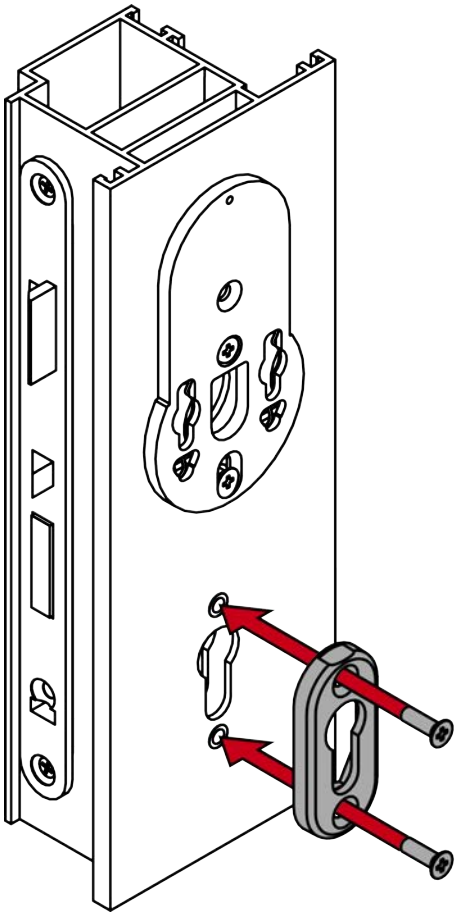
1. Insert the supplied blind rivet nuts into the door frame.



2. Screw the mounting plate firmly into place on the outside so that the spring clips are facing the door (PH2, torque 1.1 Nm).

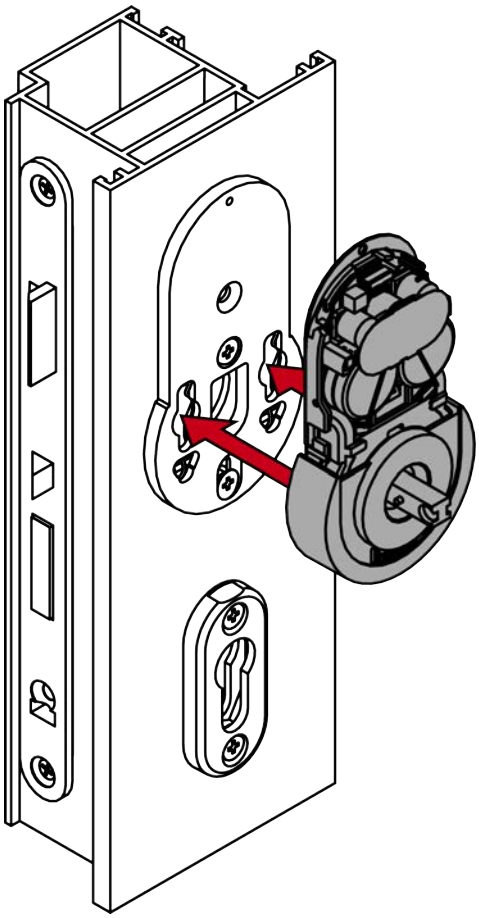


3. Screw the escutcheon base firmly to the outside (PH2, torque 1.1 Nm).

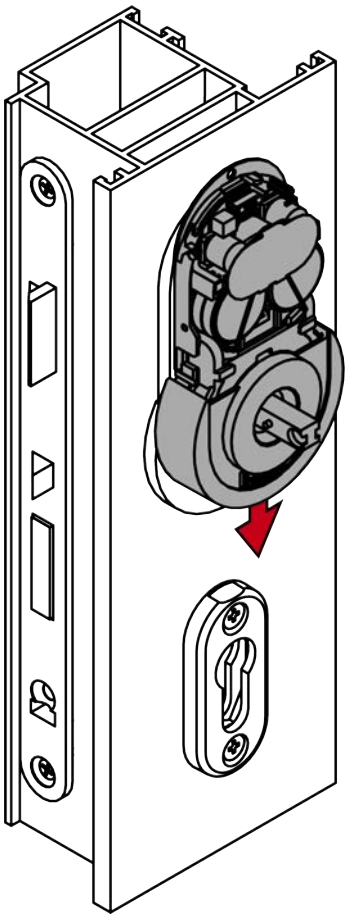


4. Screw the escutcheon base firmly into place on the inside (PH2, torque 1.1 Nm).

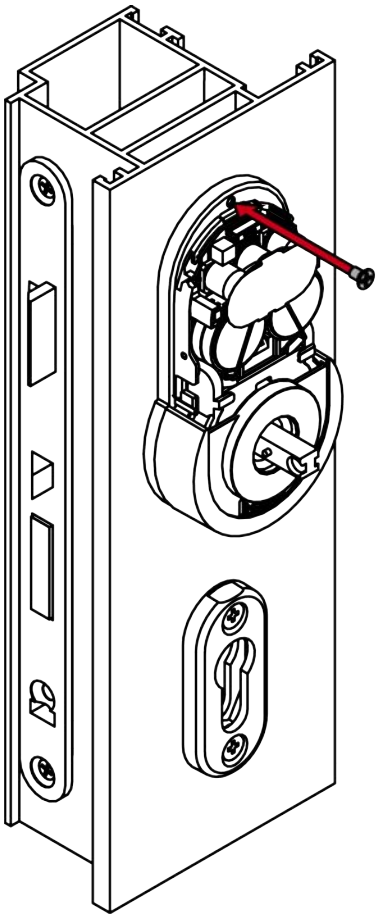
5. Insert the fitting into the mounts on the mounting plate.



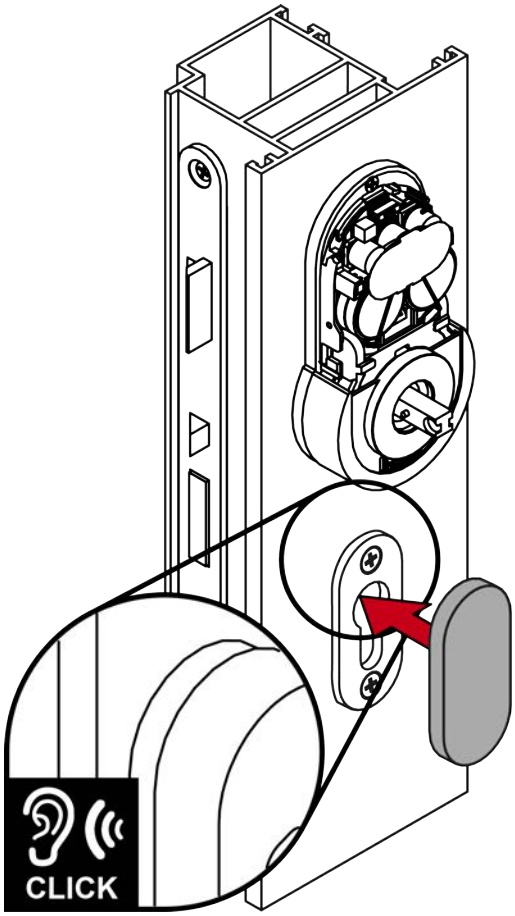
6. Push the fitting into the mounting plate until it locks into position.



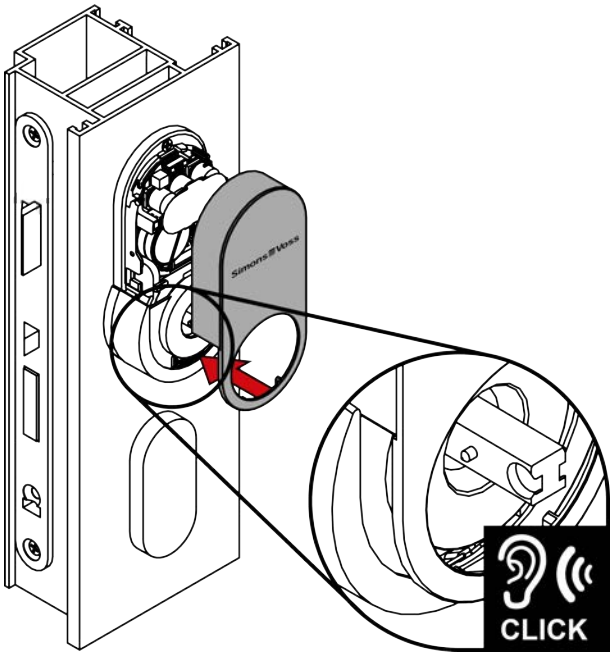
7. Screw the fitting firmly to the mounting plate (PH1, torque 0.8 Nm).



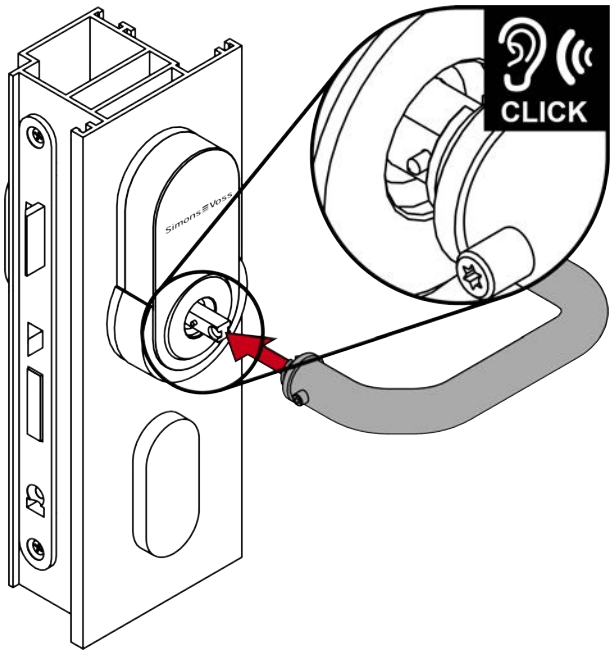
8. Place a cover with the notch facing downwards on the escutcheon base.



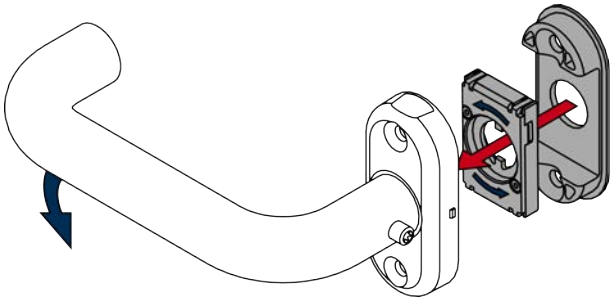
9. Place the cover on the fitting.

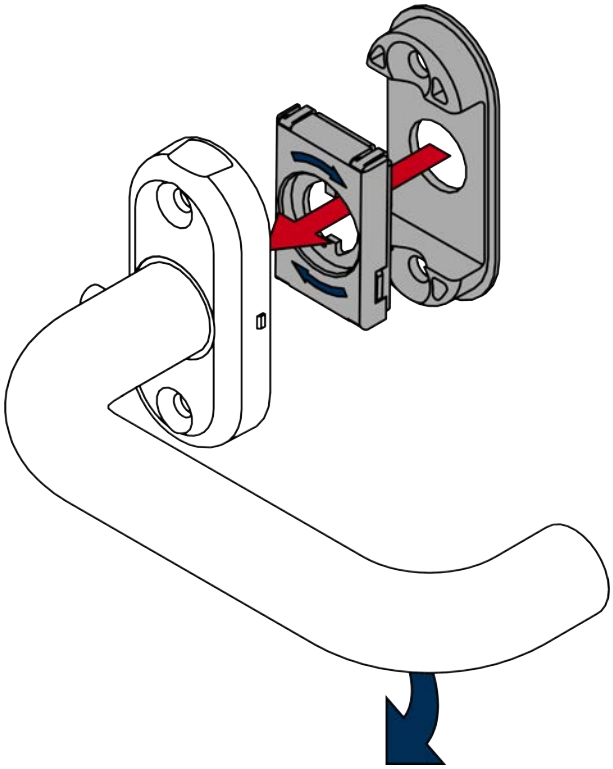


10. Fit the outside handle into position on the fitting.

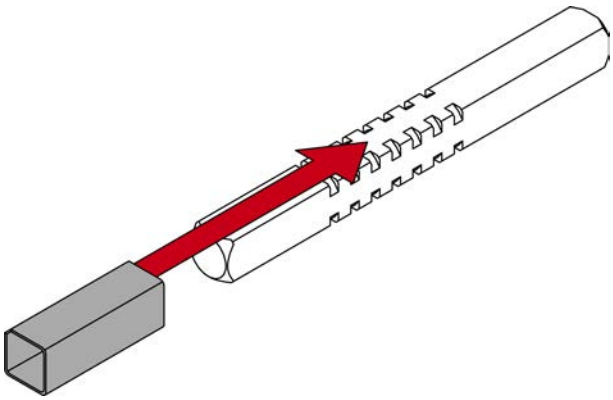


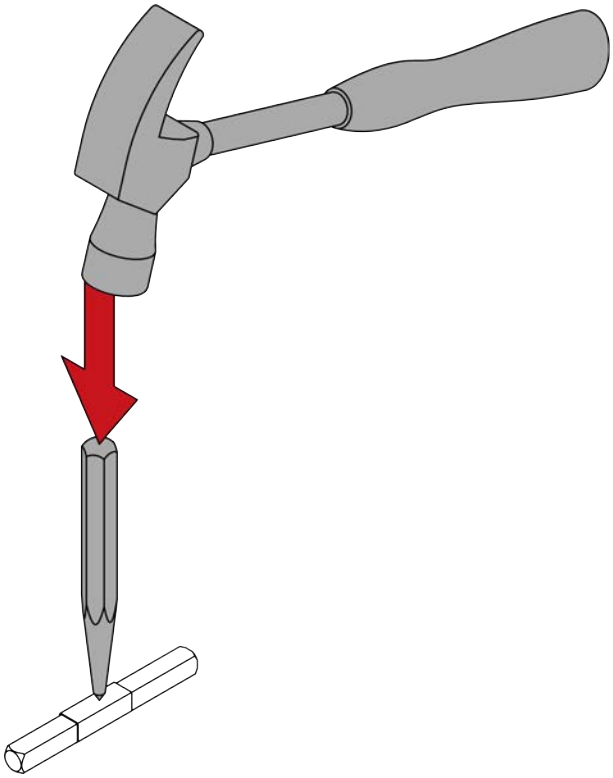
11. Determine the required direction of rotation for your inner handle.
12. Insert the spring element appropriately.
13. Place the underlay in the inner handle unit.



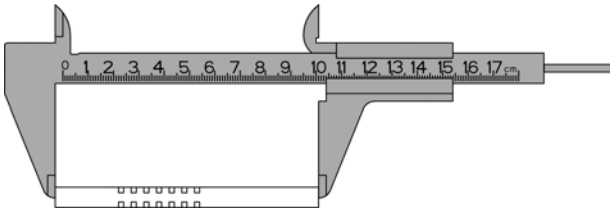


14. For 8.5 mm and 10 mm spindle: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.

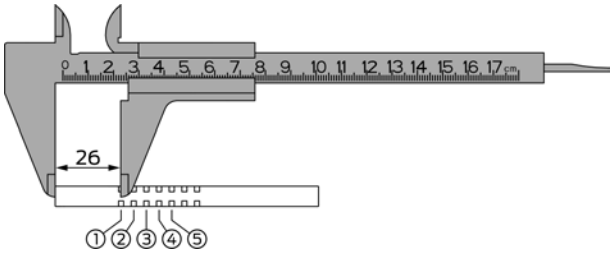




15. Measure the total length of the spindle.

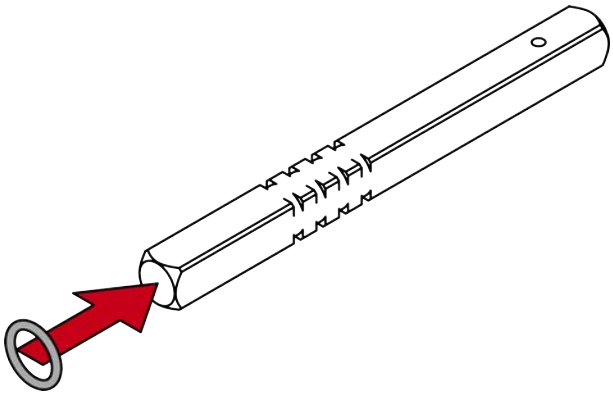


16. Locate the inside of the spindle (four-edge end up to the centre of the first groove = 26 mm).
17. Use the table to determine the position of the O-ring.

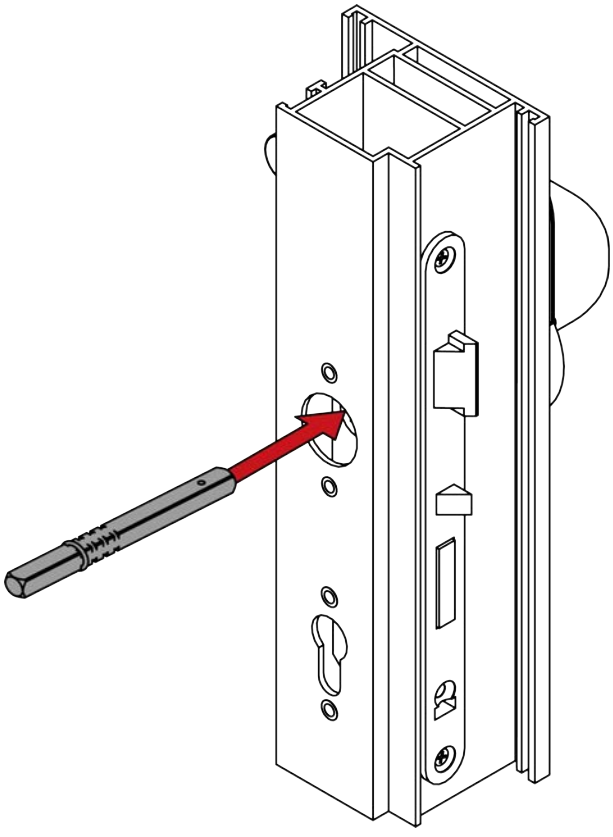


Area	Door thickness (mm)	Spindle length (mm)	Ring position
S	40 - 42	94	3
S	40 - 42	104	5
S	43 - 47	94	2
S	43 - 47	104	4
S	48 - 52	94	1
S	48 - 52	104	3
S	53 - 57	104	2
S	58 - 61	104	1
M	60 - 62	114	3
M	60 - 62	124	5
M	63 - 67	114	2
M	63 - 67	124	4
M	68 - 72	114	1
M	68 - 72	124	3
M	73 - 77	124	2
M	78 - 81	124	1
L	80 - 82	134	3
L	80 - 82	144	5
L	83 - 87	134	2
L	83 - 87	144	4
L	88 - 92	134	1
L	88 - 92	144	3
L	93 - 97	144	2
L	98 - 101	144	1
XL	100 - 184	O-ring is 30–35 mm from the cut end of the spindle.	

18. Slide the O-ring onto the calculated groove.



19. Insert the spindle into the door with the ring-free side as far as it will go.



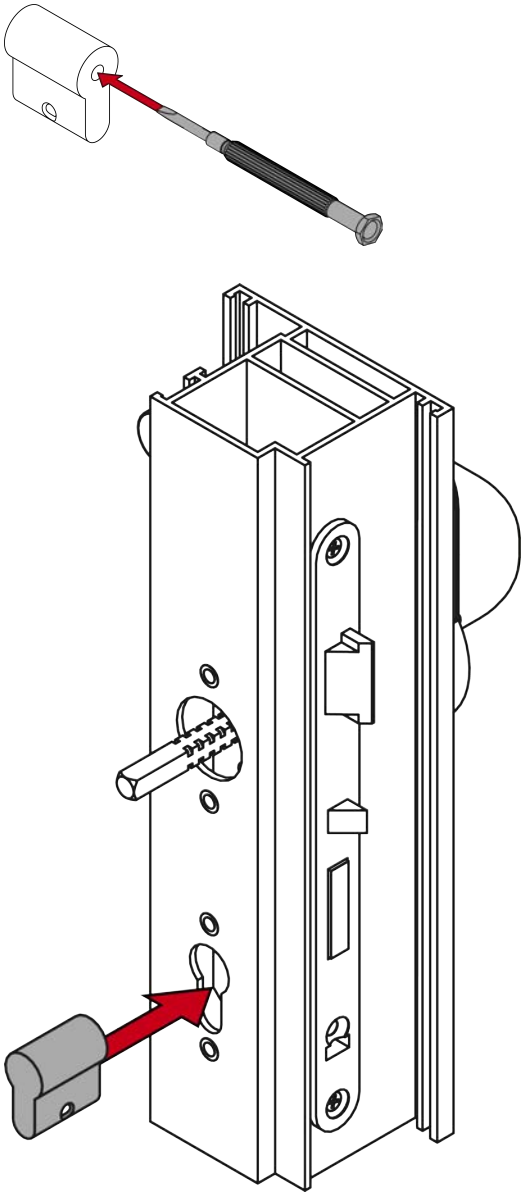
20.For FH: insert the dummy cylinder.

NOTE

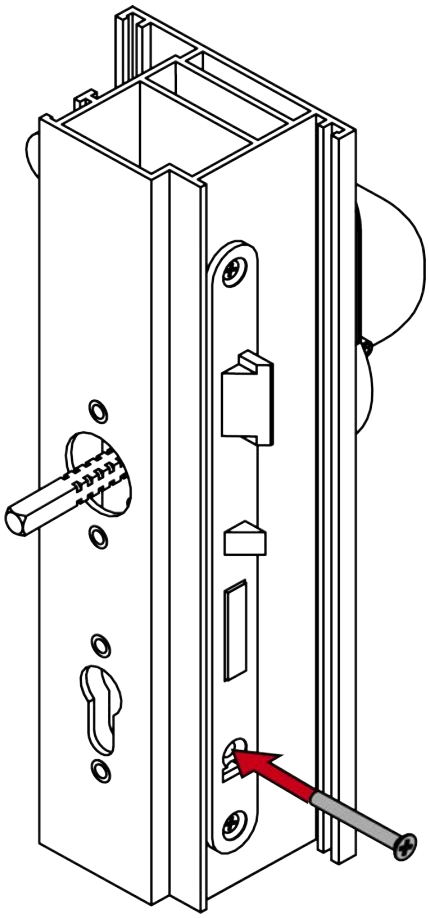
Feed the blank cylinder into the hole using a screwdriver

It is difficult to position the blank cylinder correctly, especially in thick doors.

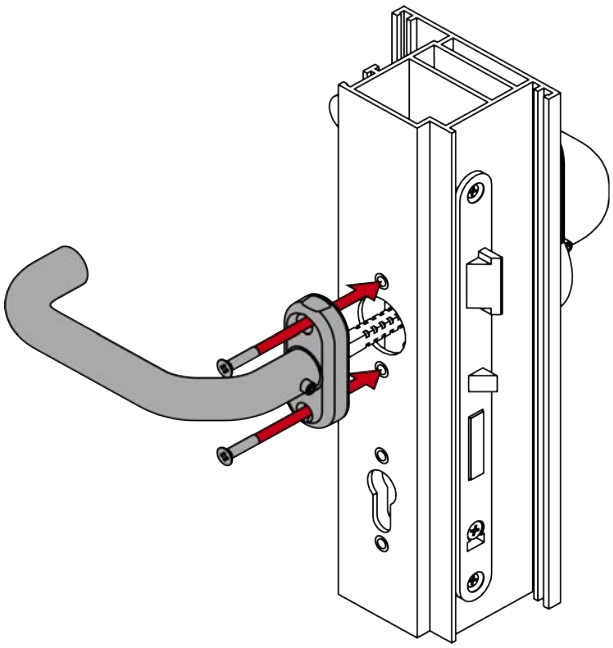
1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.



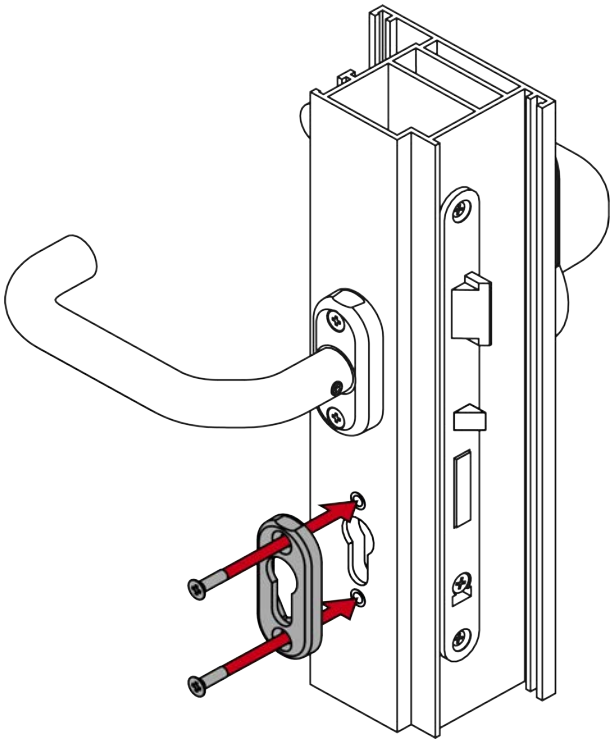
21. For FH: screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



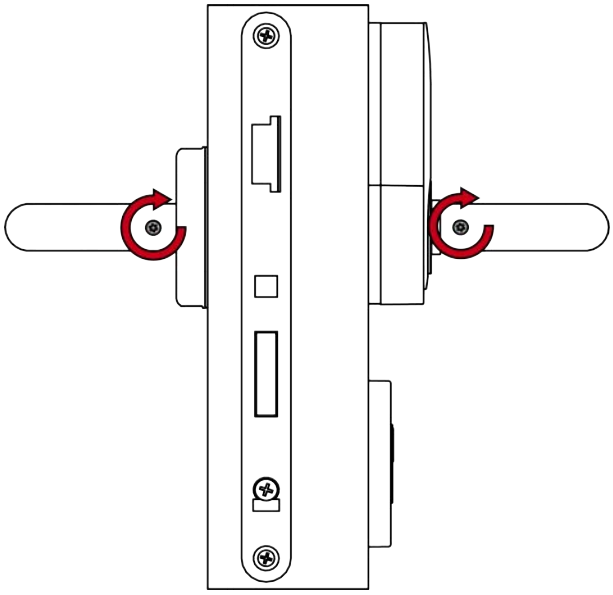
22. Screw the inner handle unit onto the spindle (PH2, torque 1.1 Nm).



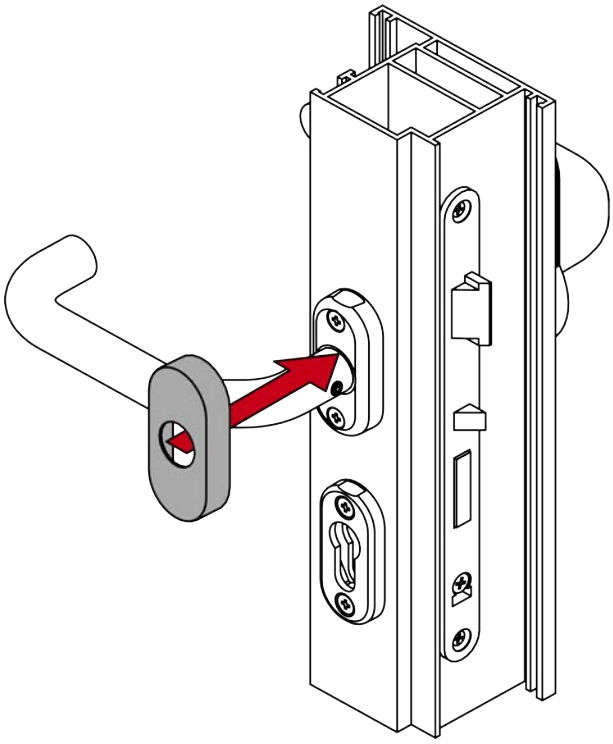
23. Screw the escutcheon base firmly into place on the inside (PH2, torque 1.1 Nm).



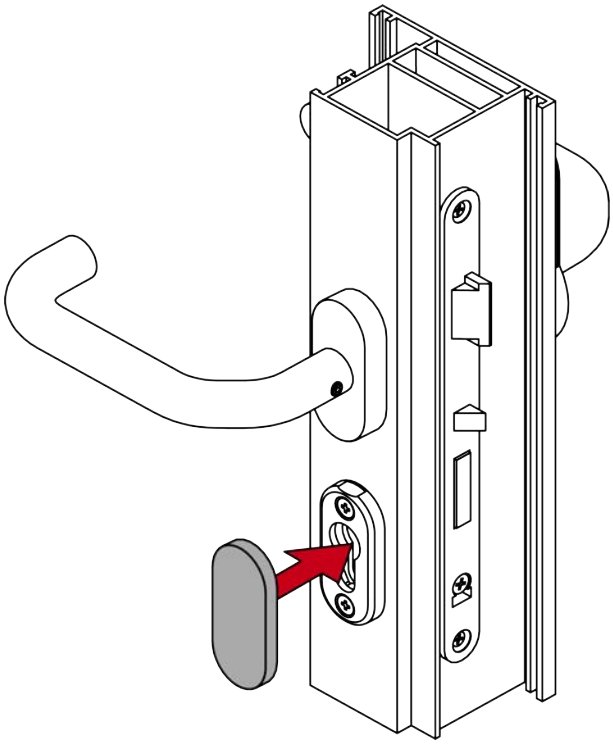
24. Fasten the grub screws firmly onto both handles (TX15, torque 5.0 Nm).



25. Place the inner handle cover with the notch facing downwards onto the inner handle escutcheon.



26. Place a cover with the notch facing downwards on the escutcheon base.



↳ Fitting is now installed.

7.6 Variant A4.P11 (CISA panic bar)

7.6.1 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in parallel vertical lines.

NOTE

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Panic bar manufacturer's documentation

Also observe the panic bar manufacturer's documentation (*www.cisa.com* or *www.g-u.com*).

Pre-bent adapter plate

The adapter plate for the fitting is pre-bent. Its pre-tensioning ensures a frictional connection with the door after installation.

Spare screw included

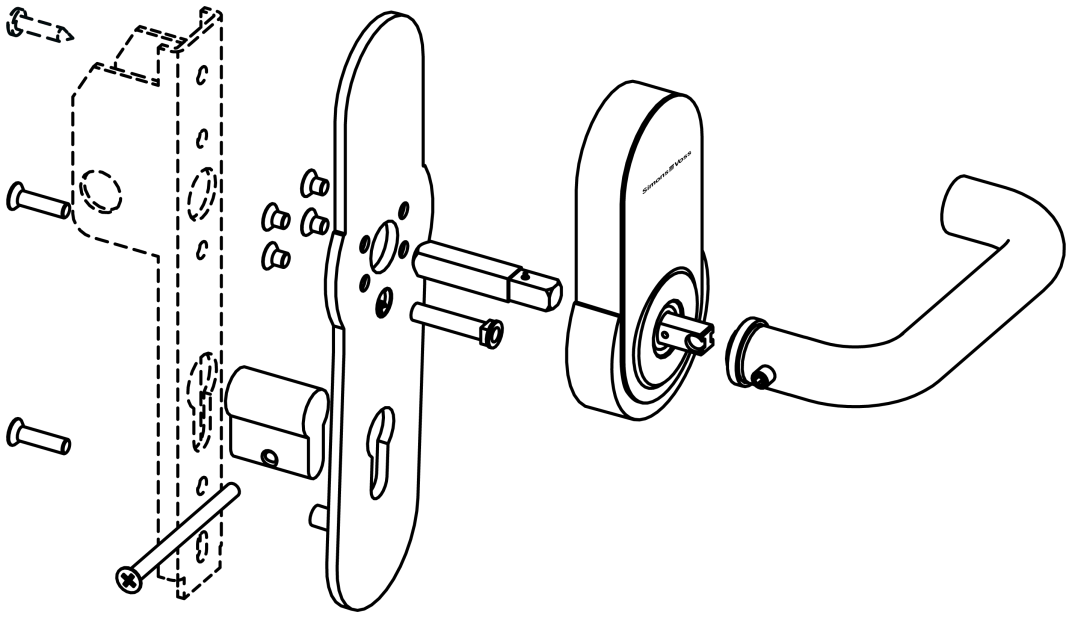
A spare screw is included in the delivery.

- Use this spare screw if you have lost a screw to fit the adapter plate.

7.6.2 Scope of delivery

- SmartHandle AX (Panic bar version for CISA or BKS)
- Special tool
- Quick guide
- Blank cylinder

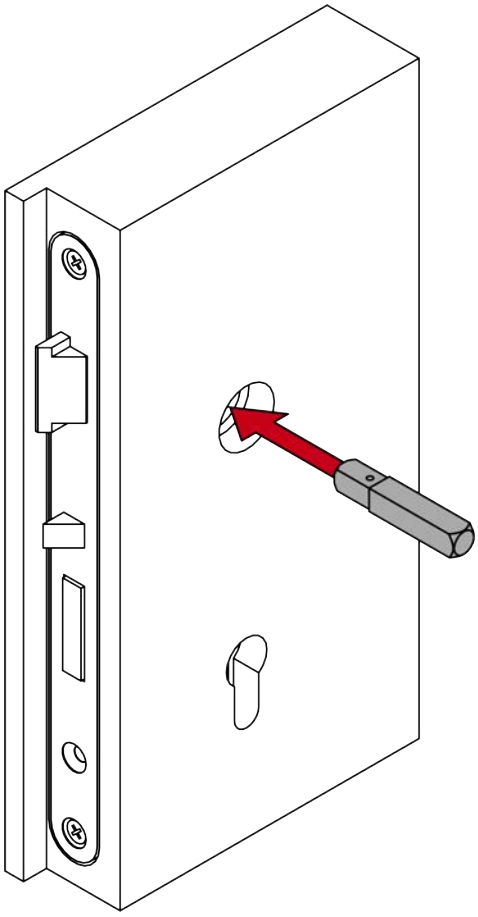
7.6.3 CISA design



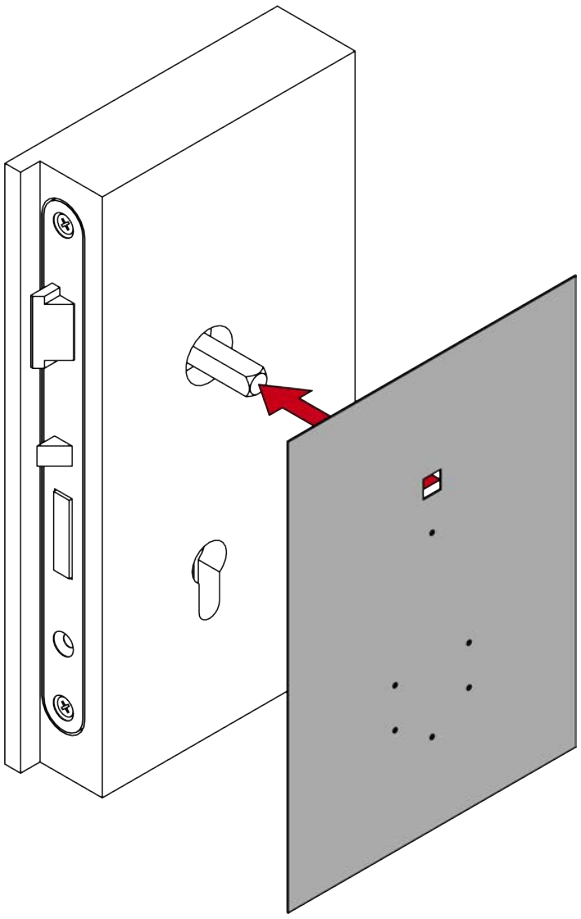
7.6.4 Preparing the door for CISA (drilling template)

- ✓ Pin or scriber at hand.
- ✓ Drilling template available (see *Drilling template for variant A4.P11/ A4.P1/A4.P2 (Panic bars) [▸ 299]*).
- ✓ Drill at hand.
- ✓ Suitable drill bits at hand (Ø6.5 mm and 8.0 mm).
- ✓ PH2 screwdriver at hand.
- ✓ Countersink at hand.

1. Insert the spindle into the mortise lock.

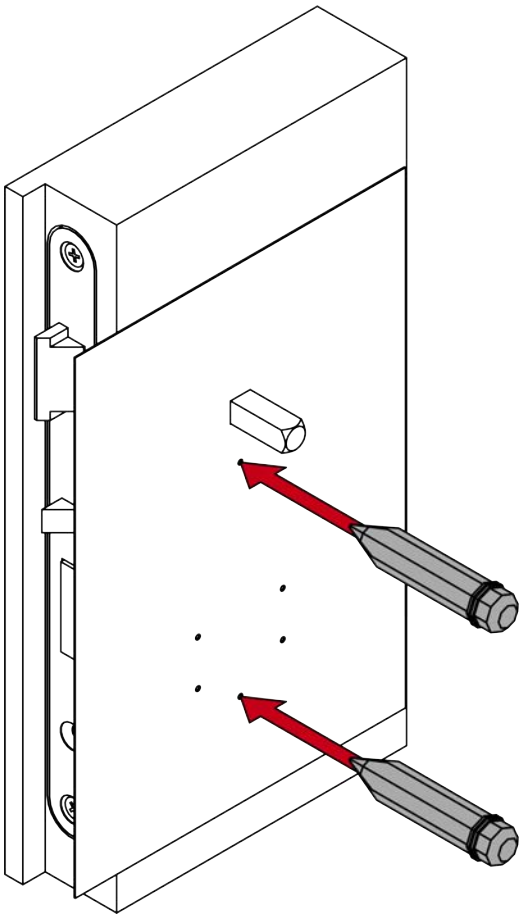


2. Place the drilling template on the spindle.

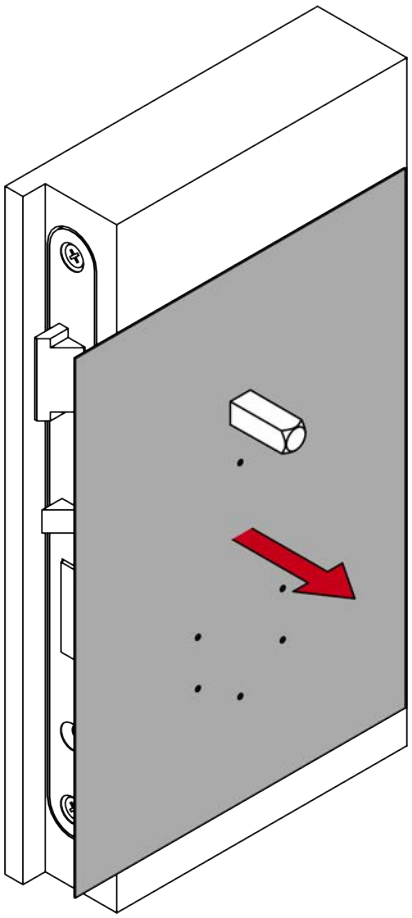


3. Align the drill template vertically using the printed scale.

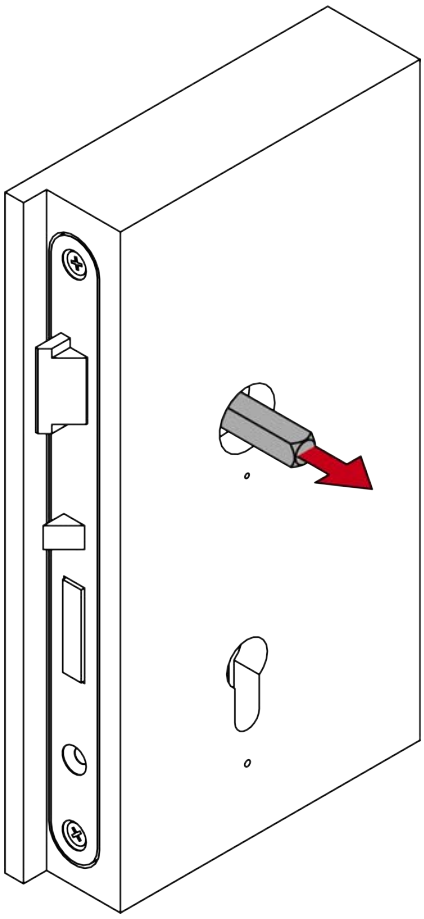
4. Mark the points to be drilled on the door.



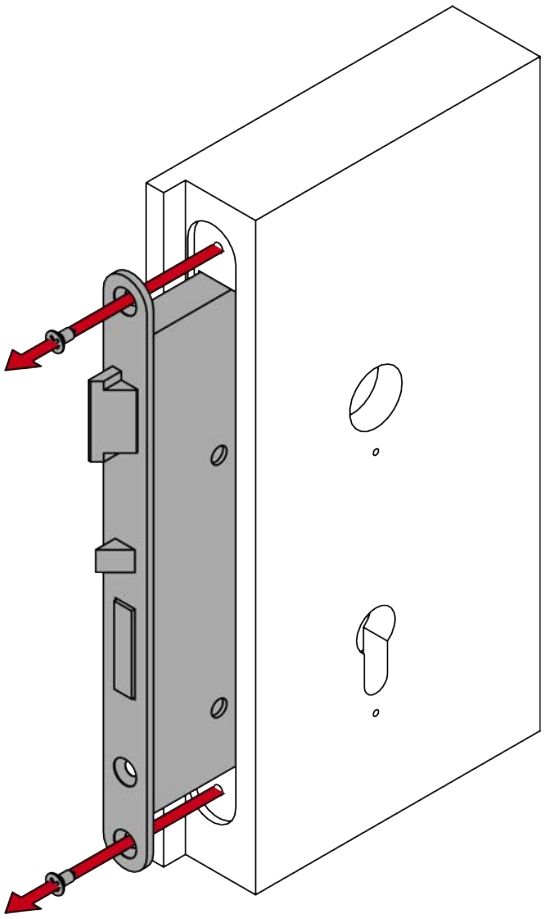
5. Remove the drilling template.



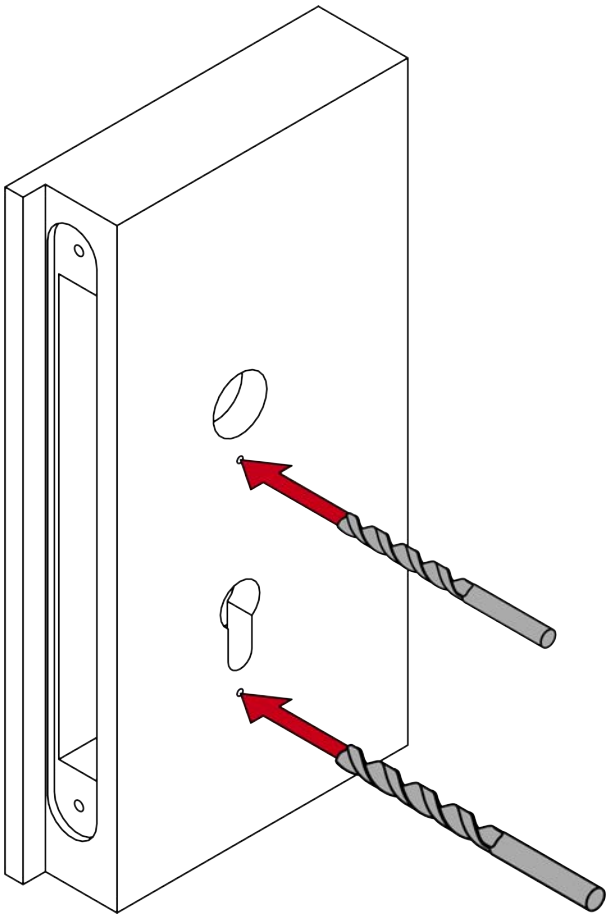
6. Remove the spindle.



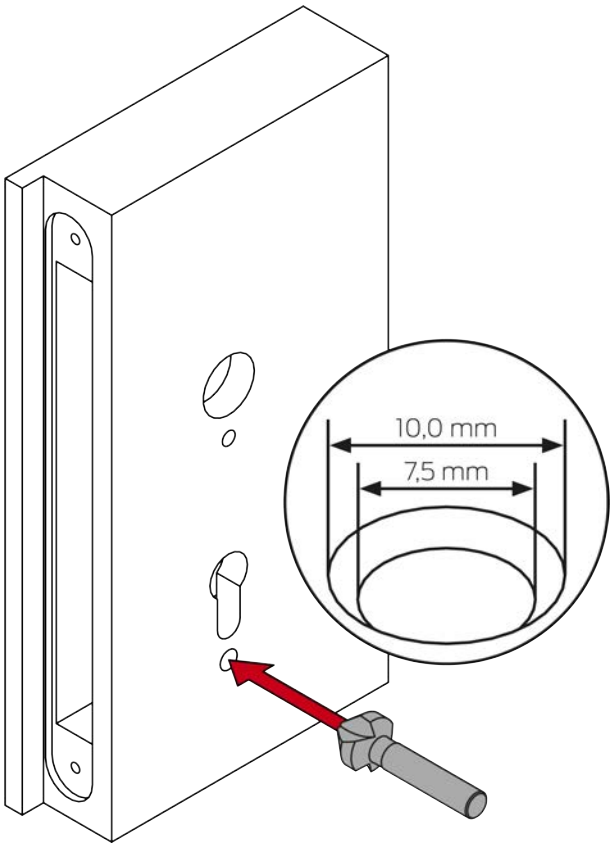
7. Remove the mortise lock (PH2).



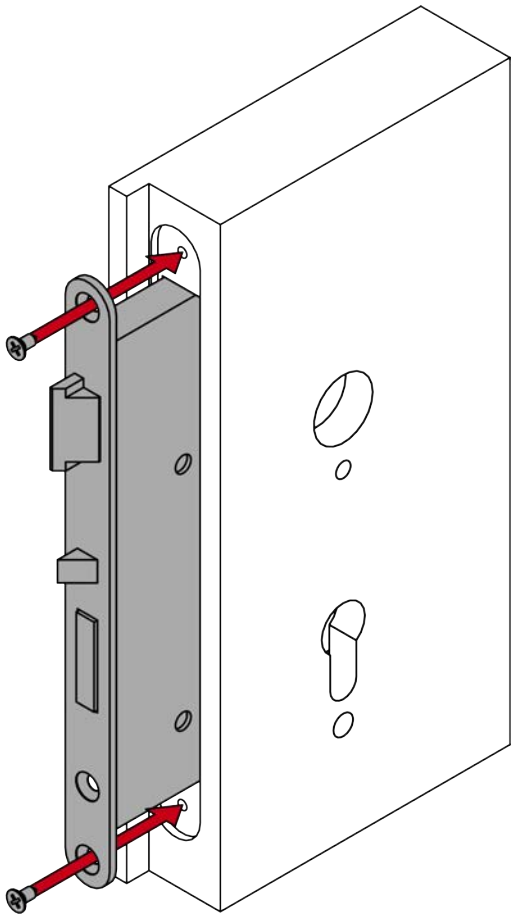
8. Drill the required holes.



9. Countersink the lowest hole with a countersink.

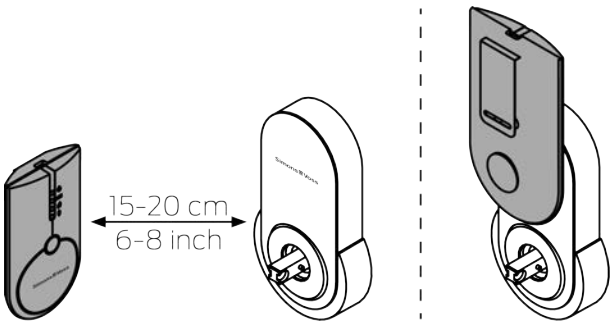


10. Fit the mortise lock (PH2).



7.6.5 Programming the fitting

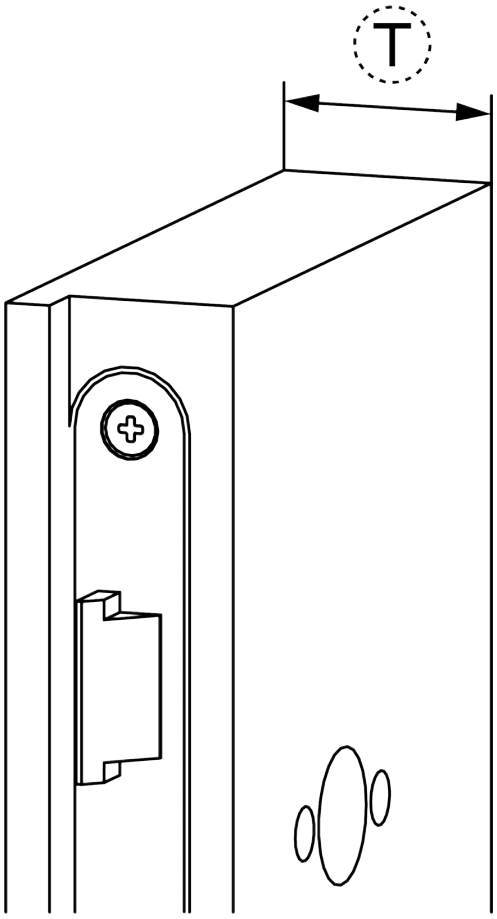
Programme the fitting before installation. You can use different programming devices, depending on the product family.



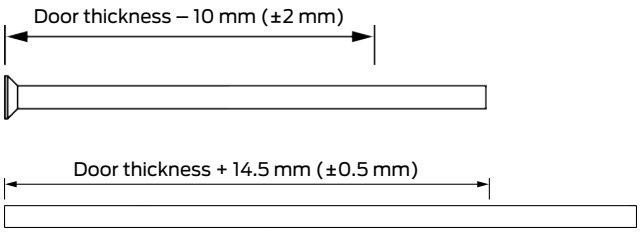
7.6.6 Installing the fitting for CISA

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Saw at hand.

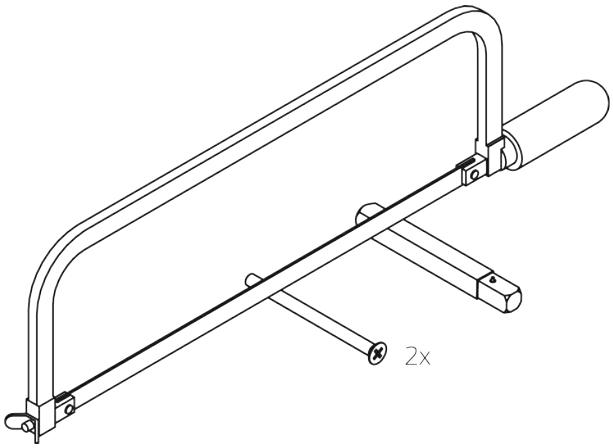
1. Measure the door thickness.



2. Mark the sawing points on the screws and spindle.

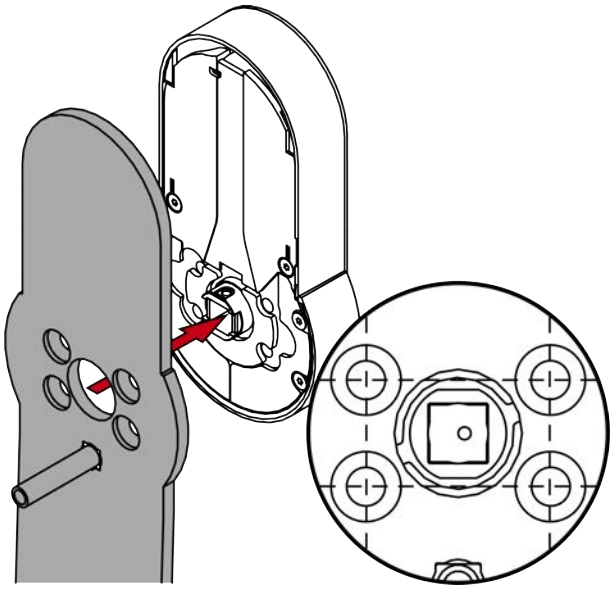


3. Use a suitable saw to cut the screws and spindle.

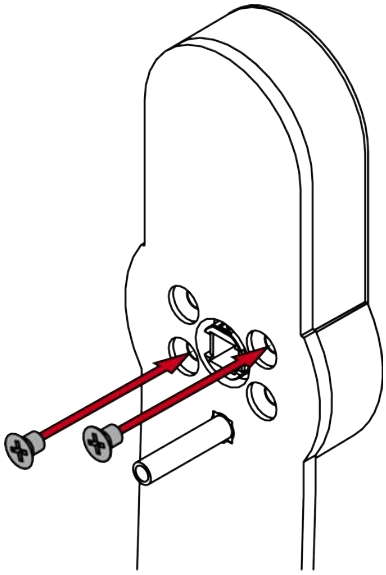


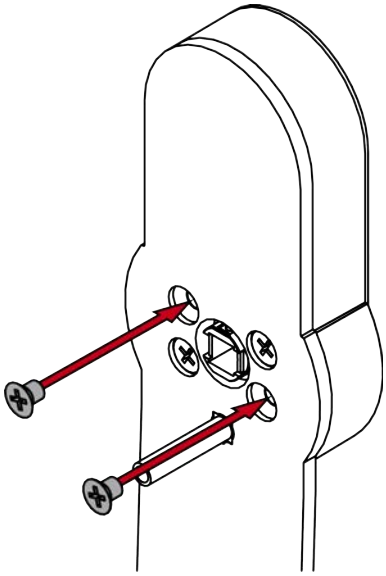
4. Insert the sleeve nuts into the adapter plate.

5. Place the adapter plate on the electronic fitting.

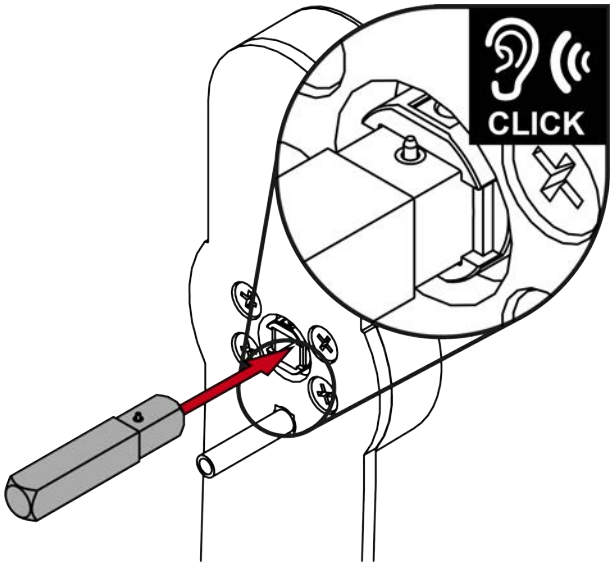


6. Align the holes in the adapter plate with the threads in the fitting.
7. Fasten the adapter plate firmly in a criss-cross sequence (PH2, torque 1.1 Nm).

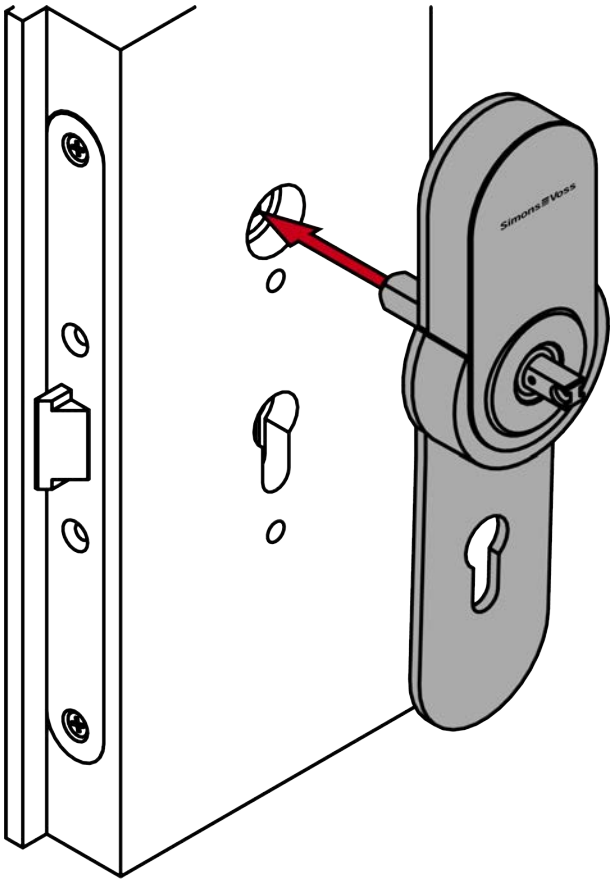




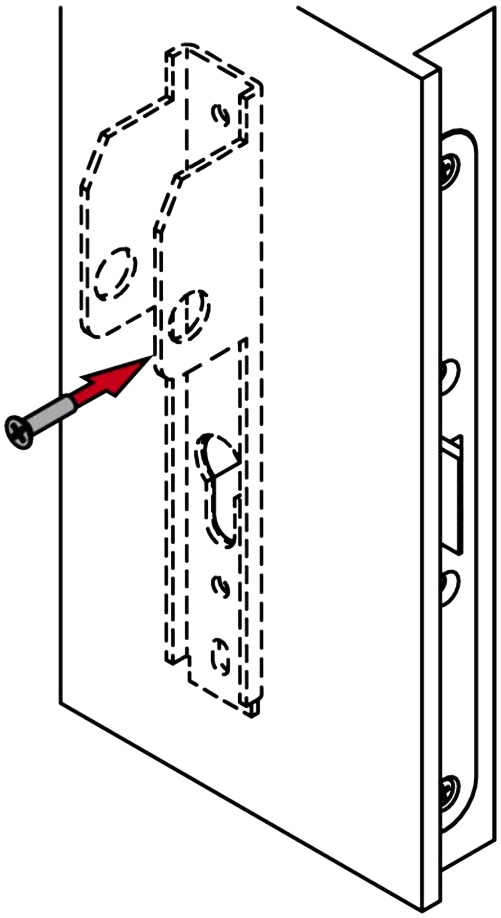
8. Insert the spindle with the pin side into the fitting.



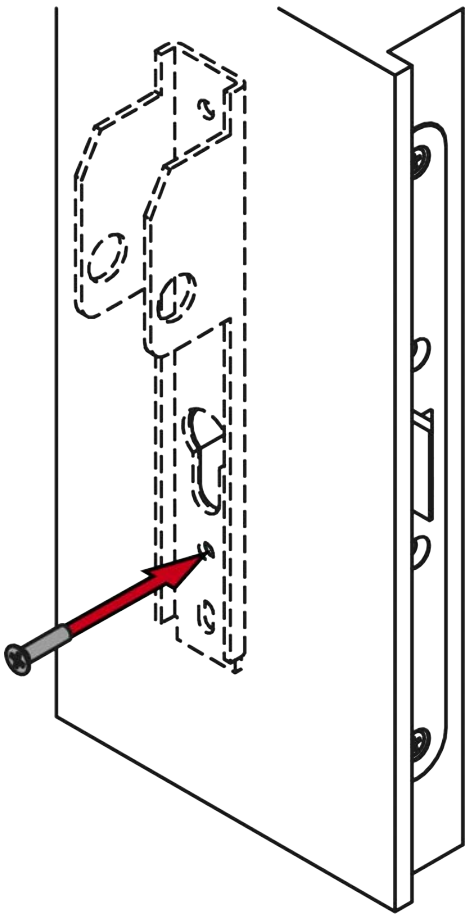
9. Insert the fitting with the adapter plate and spindle into the door.



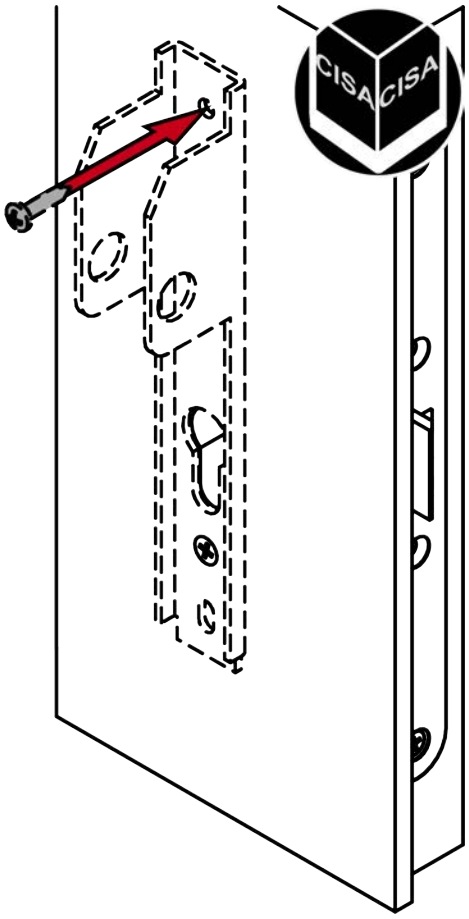
10. Screw the fitting firmly into place in the centre (PH2, torque 1.1 Nm).



11. Screw the adapter plate firmly into place below the keyhole (PH2, torque 1.1 Nm).



12. Fasten the wood screw as described in the CISA documentation.



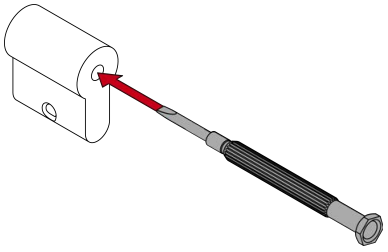
13. Insert the dummy cylinder.

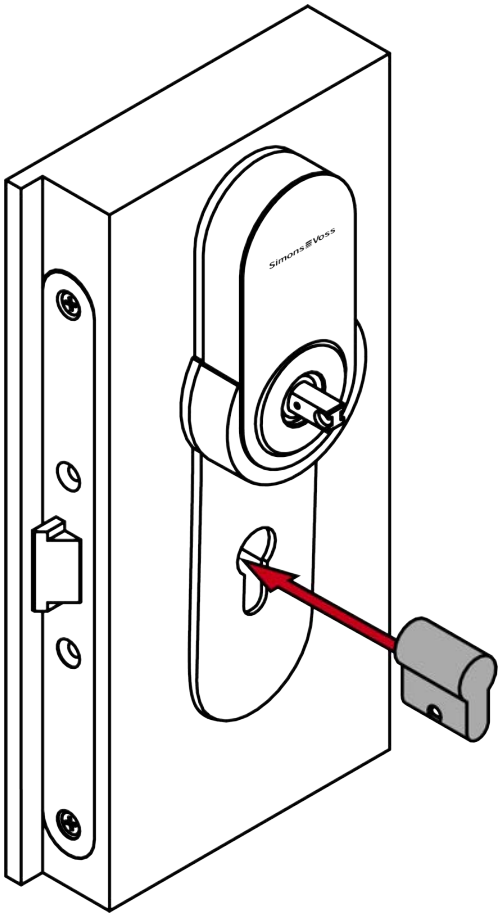
NOTE

Feed the blank cylinder into the hole using a screwdriver

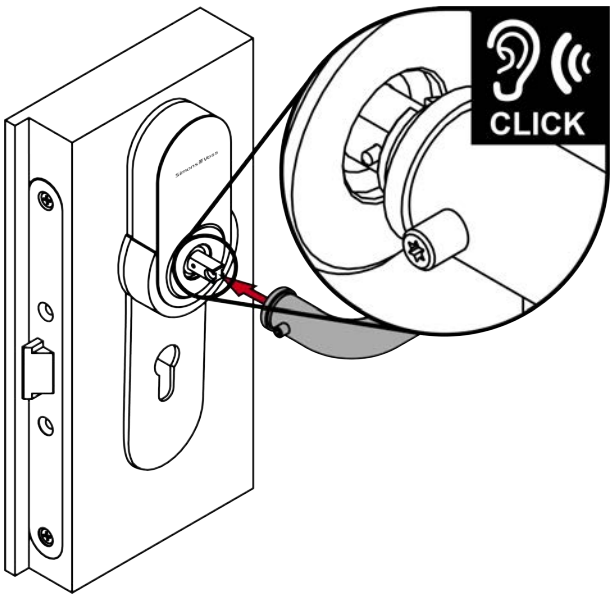
It is difficult to position the blank cylinder correctly, especially in thick doors.

1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.

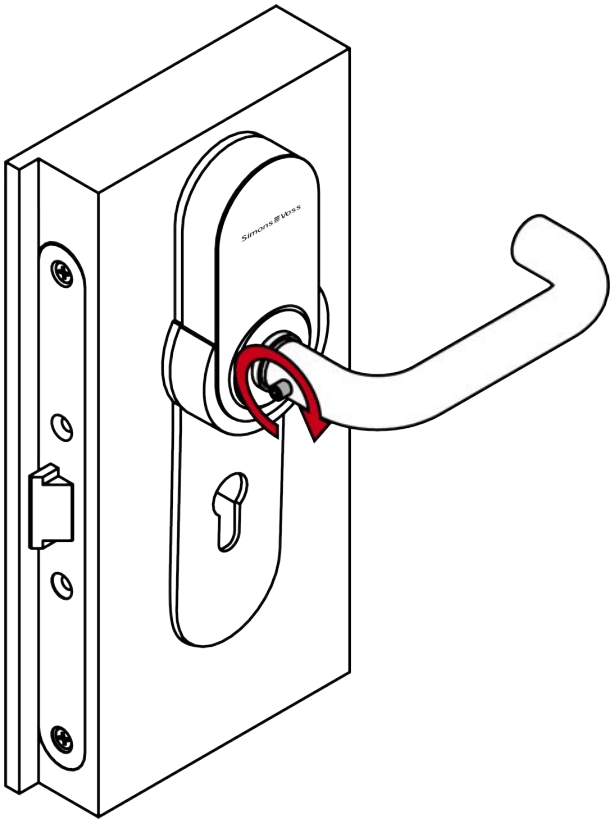




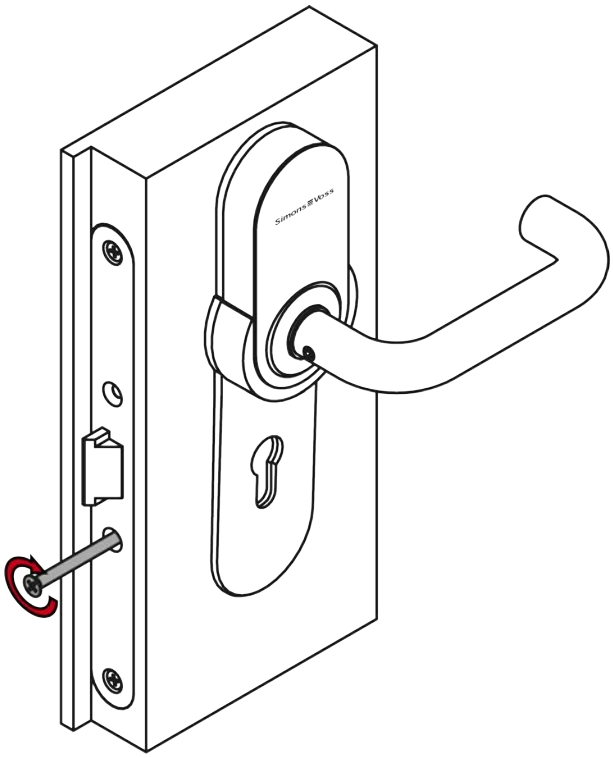
14. Push the handle onto the outer fitting.



15. Firmly fasten the grub screw on the outside handle (TX15; torque: 5.0 Nm).



16. Screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



↳ Fitting is now installed.

7.7 Variant A4.P1/A4.P2 (BKS panic bar)

7.7.1 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in parallel vertical lines.

NOTE

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Panic bar manufacturer's documentation

Also observe the panic bar manufacturer's documentation (*www.cisa.com* or *www.g-u.com*).

Pre-bent adapter plate

The adapter plate for the fitting is pre-bent. Its pre-tensioning ensures a frictional connection with the door after installation.

Spare screw included

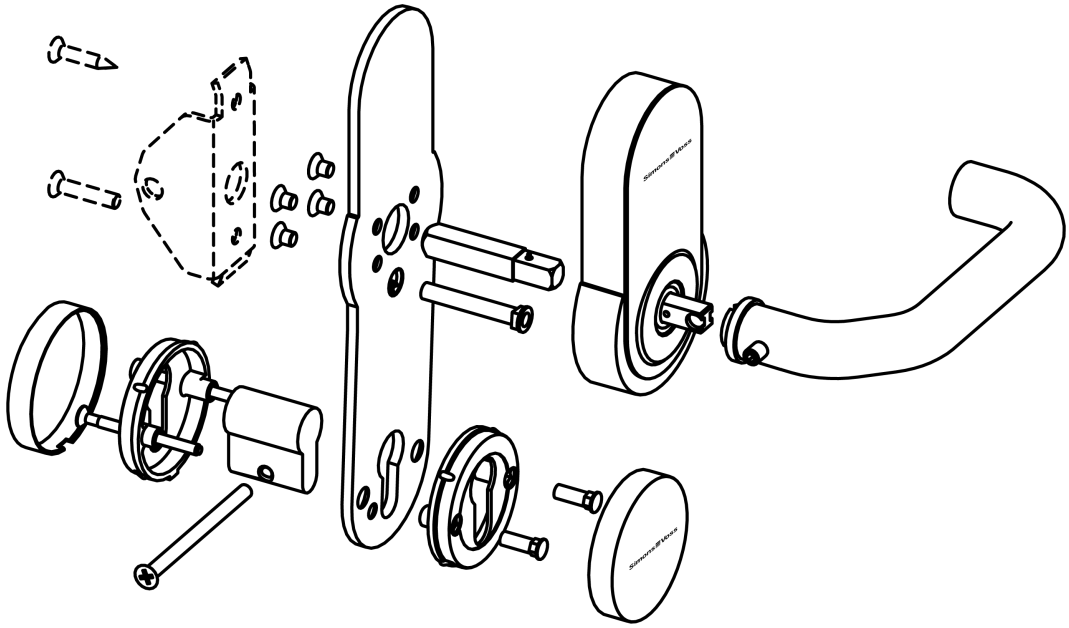
A spare screw is included in the delivery.

- Use this spare screw if you have lost a screw to fit the adapter plate.

7.7.2 Scope of delivery

- SmartHandle AX (Panic bar version for CISA or BKS)
- Special tool
- Quick guide
- Blank cylinder

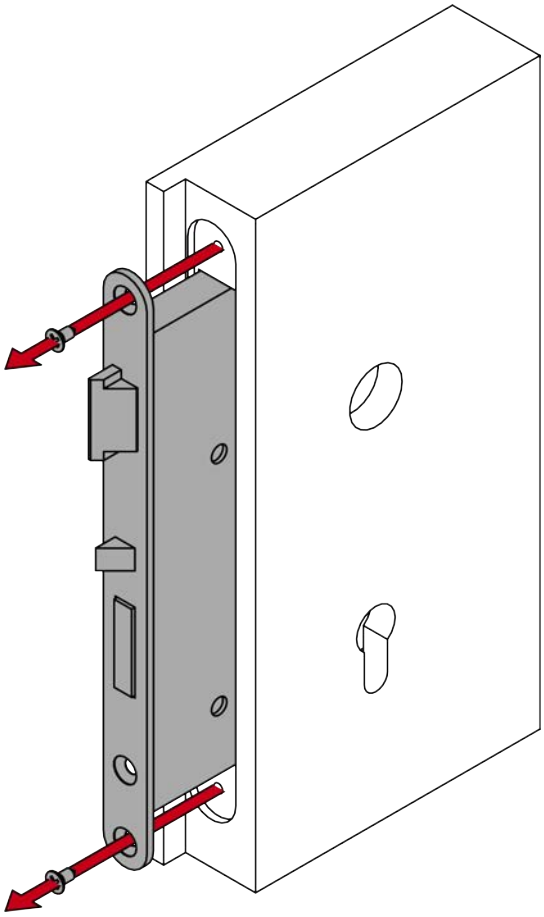
7.7.3 BKS design



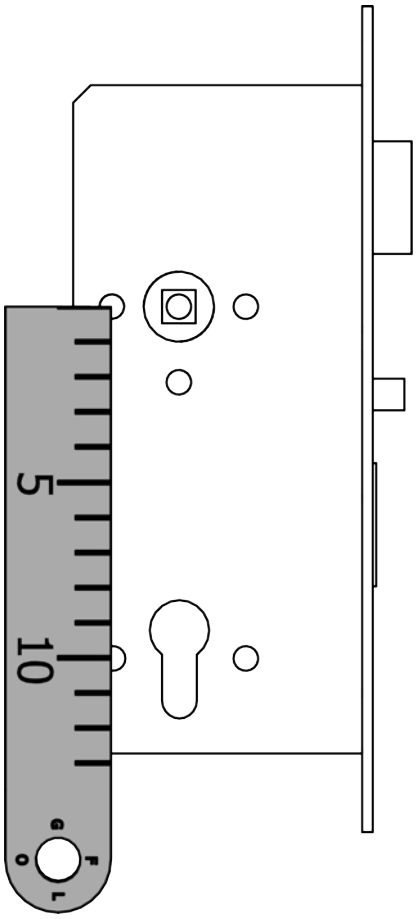
7.7.4 Preparing the door for BKS (drilling template)

- ✓ Pin or scriber at hand.
- ✓ Drilling template available (see *Drilling template for variant A4.P11/ A4.P1/A4.P2 (Panic bars) [▸ 299]*).
- ✓ PH2 screwdriver at hand.
- ✓ Ruler at hand.
- ✓ Drill at hand.
- ✓ Suitable drill bits at hand (Ø6.5 mm and 8.0 mm).

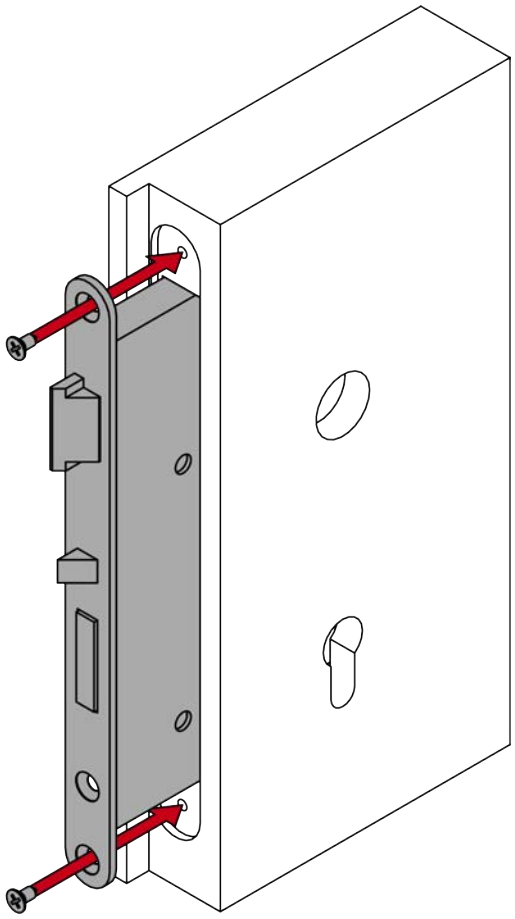
1. Remove the mortise lock (PH2).



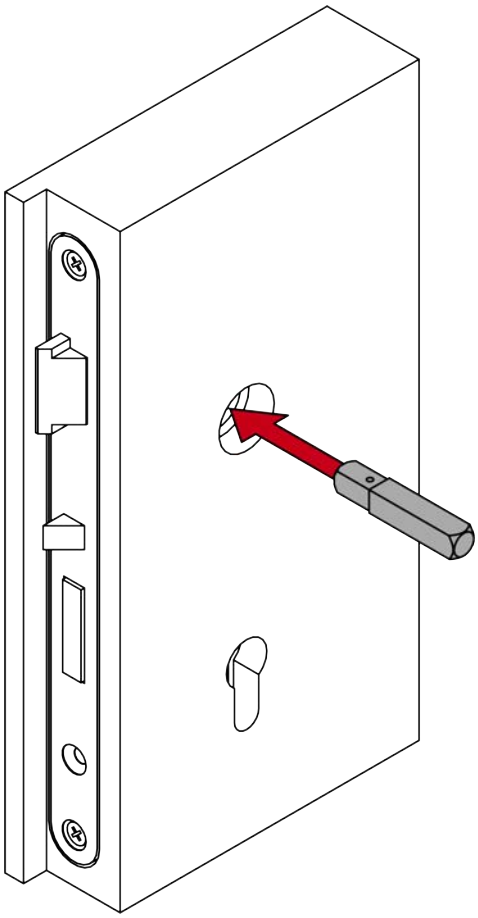
2. Measure the vertical distance between the centres of the fixing holes.



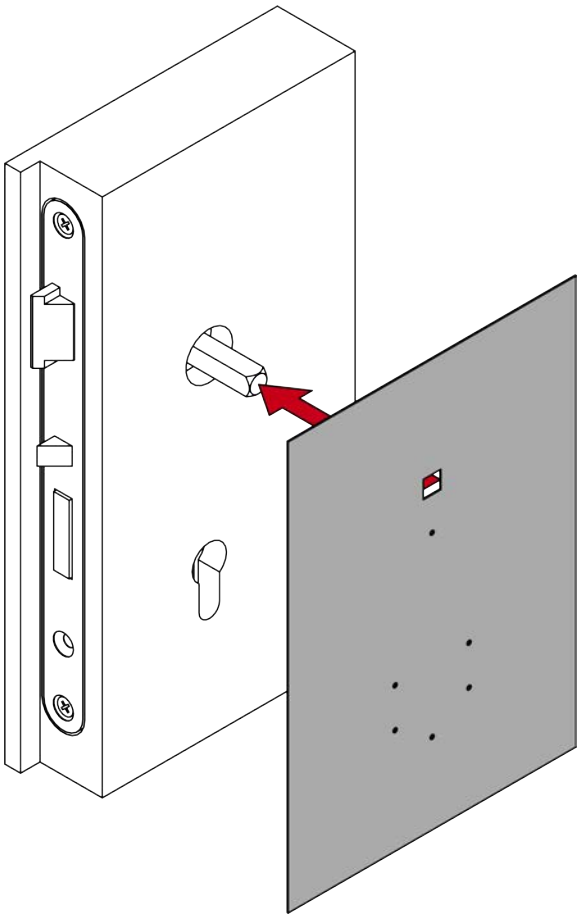
3. Fit the mortise lock (PH2).



4. Insert the spindle into the mortise lock.

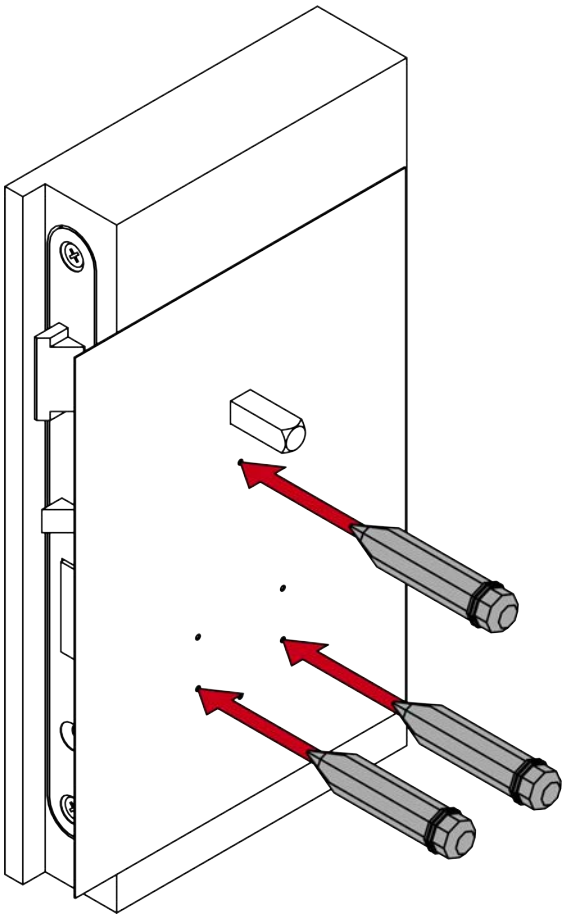


5. Place the drilling template on the spindle.

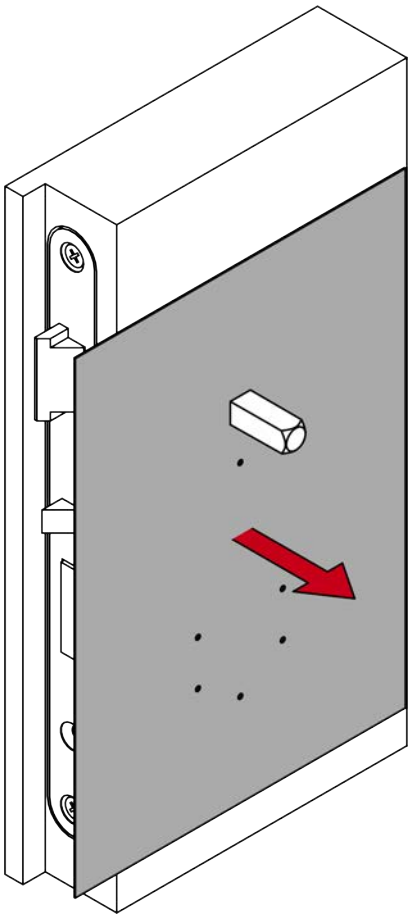


6. Align the drill template vertically using the printed scale.
7. Use the distance you measured previously to determine where the points need to be drilled.

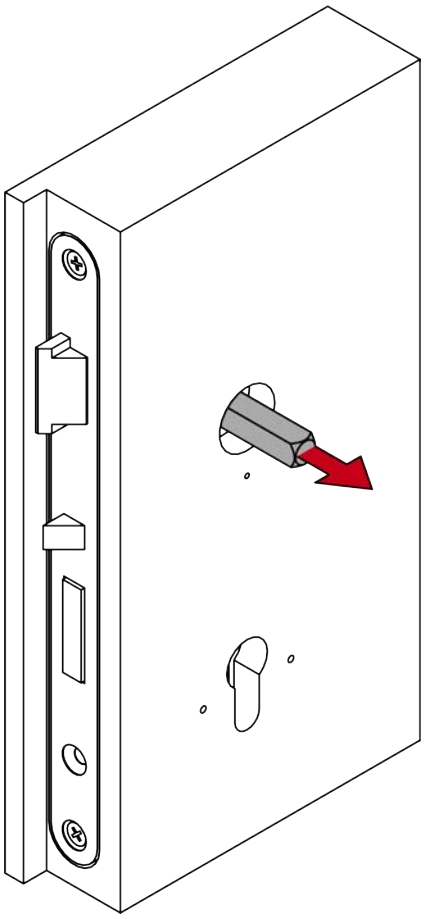
8. Mark the points to be drilled on the door.



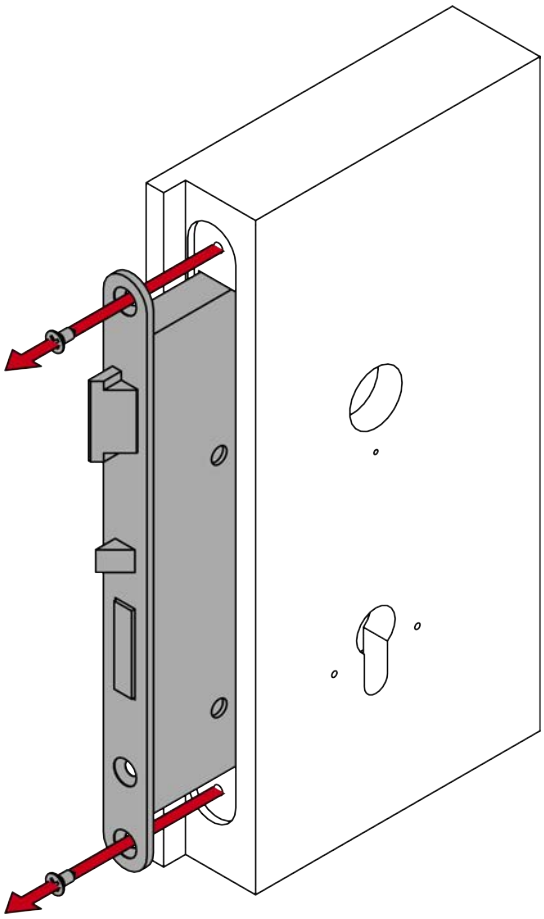
9. Remove the drilling template.



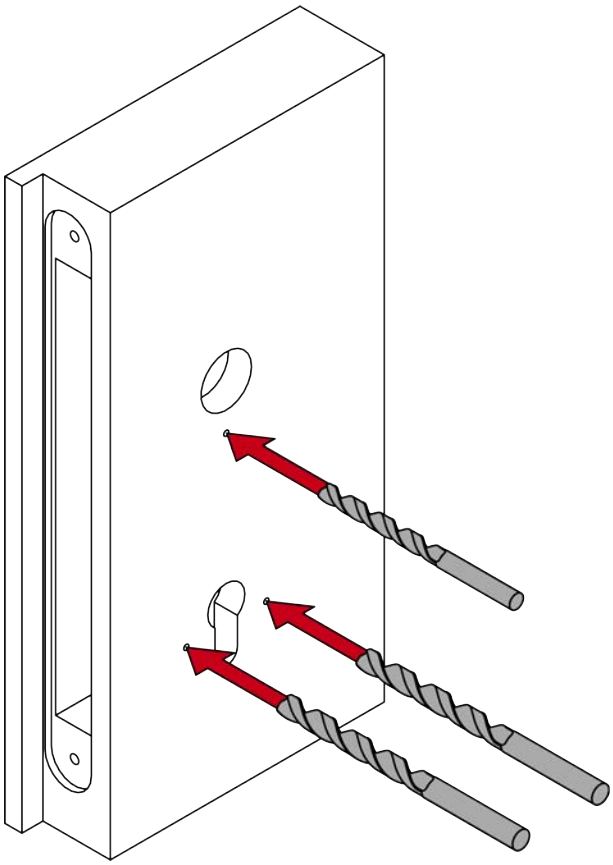
10. Remove the spindle.



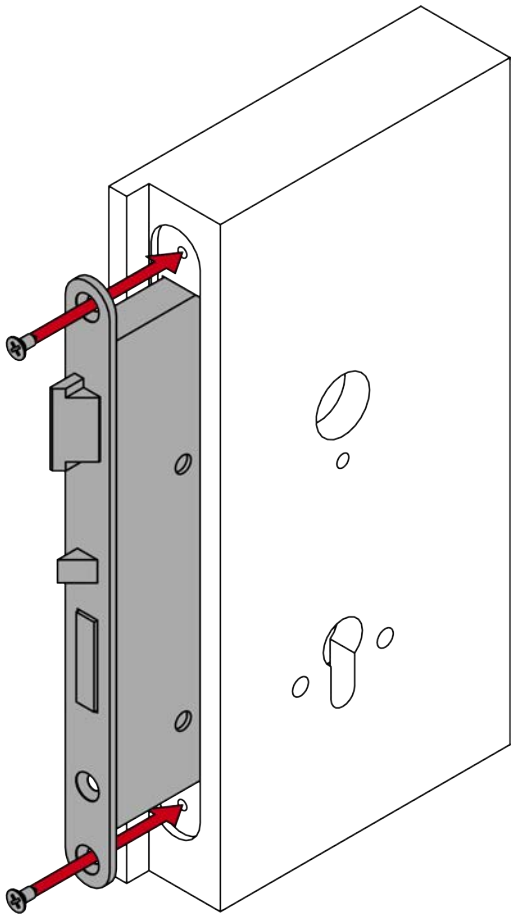
11. Remove the mortise lock (PH2).



12. Drill the required holes.

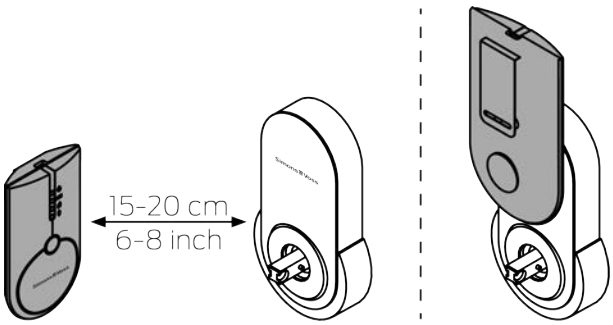


13. Fit the mortise lock (PH2).



7.7.5 Programming the fitting

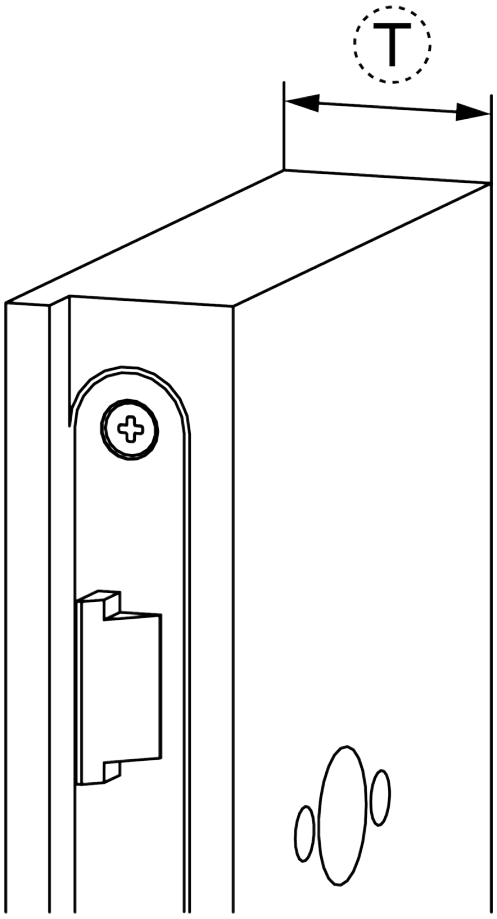
Programme the fitting before installation. You can use different programming devices, depending on the product family.



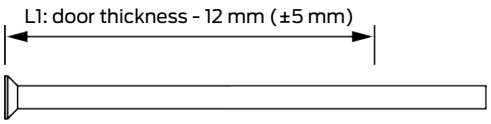
7.7.6 Installing the fitting for BKS

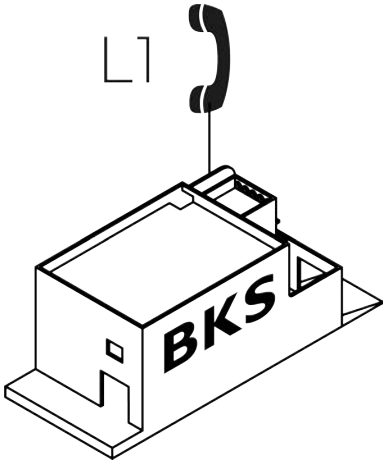
- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Saw at hand.

1. Measure the door thickness.

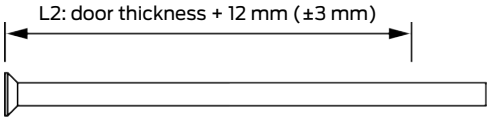


2. Order the L1 screw of the appropriate length from BKS.

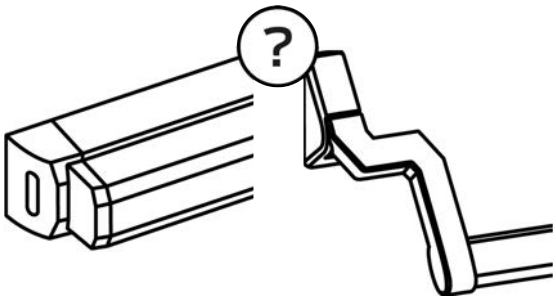




3. Mark the sawing points on the L2 screws.

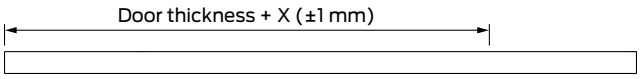


4. Determine the length X, depending on the panic bar type.

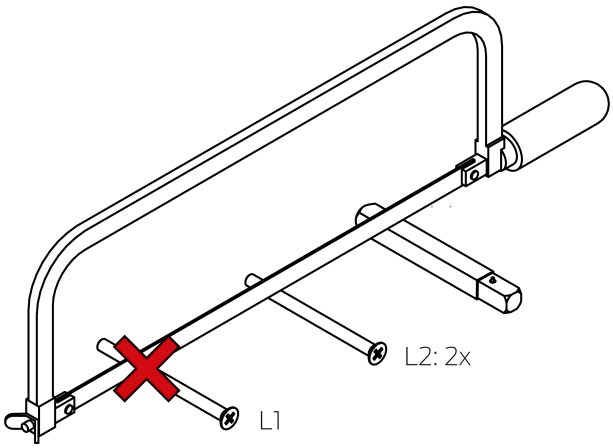


X = 32 mm X = 23 mm

5. Mark the sawing point on the spindle.

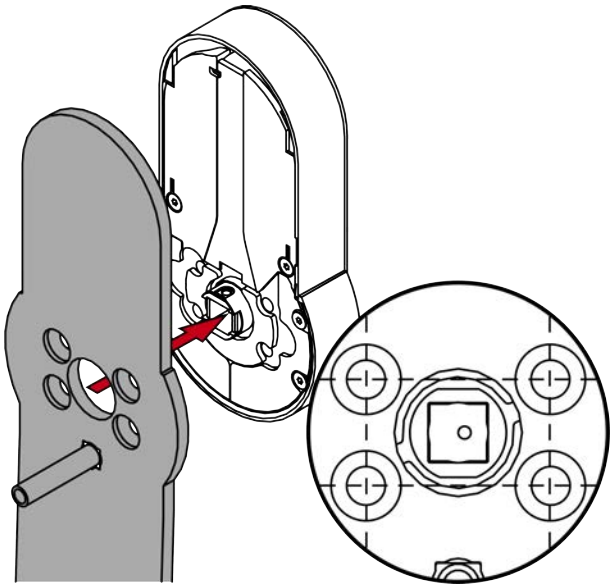


6. Use a suitable saw to cut the screws and spindle.



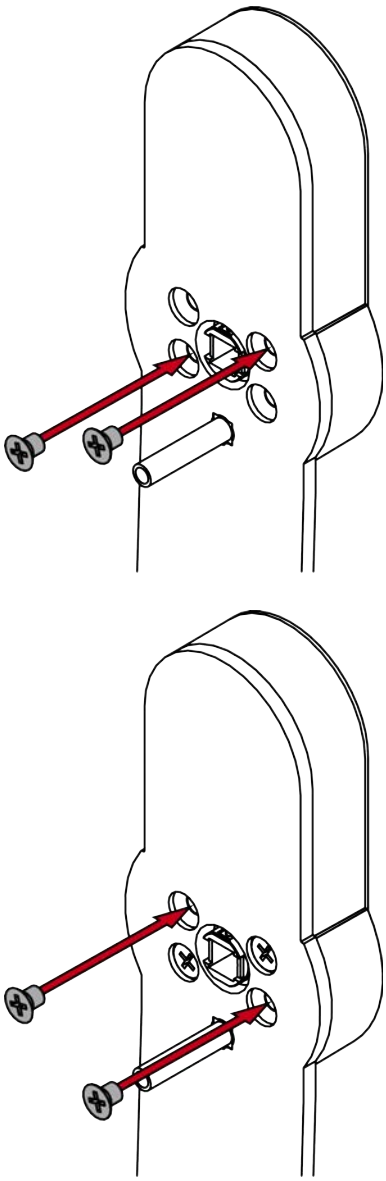
7. Insert the sleeve nuts into the adapter plate.

8. Place the adapter plate on the electronic fitting.

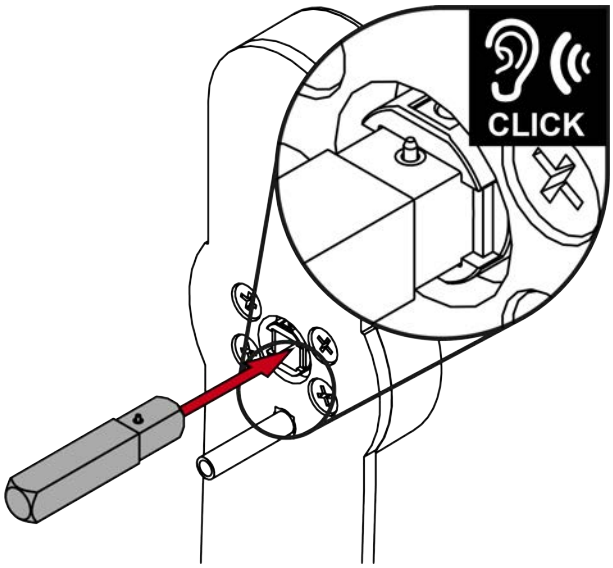


9. Align the holes in the adapter plate with the threads in the fitting.

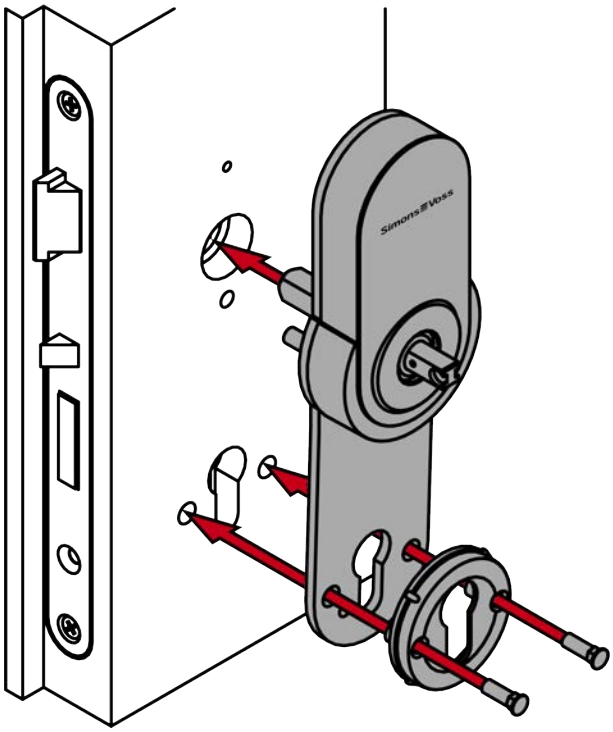
10. Fasten the adapter plate firmly in a criss-cross sequence (PH2, torque 1.1 Nm).



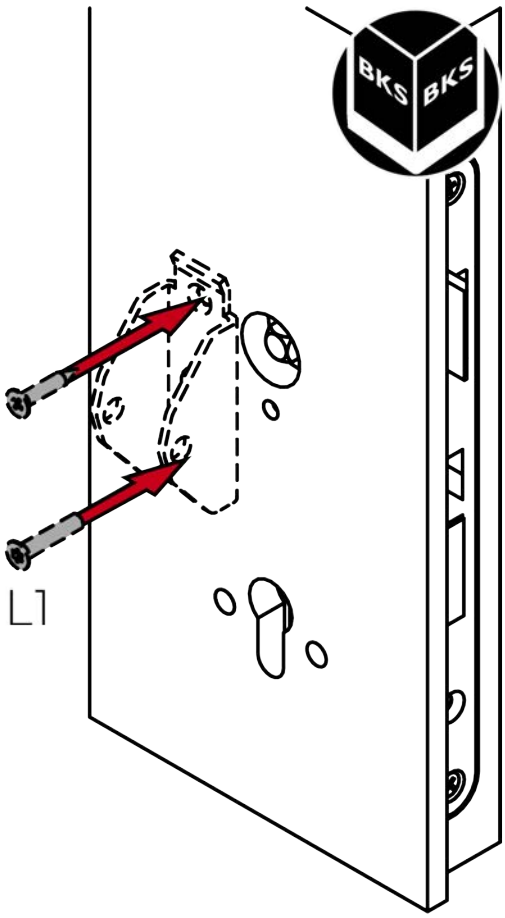
11. Insert the spindle with the pin side into the fitting.



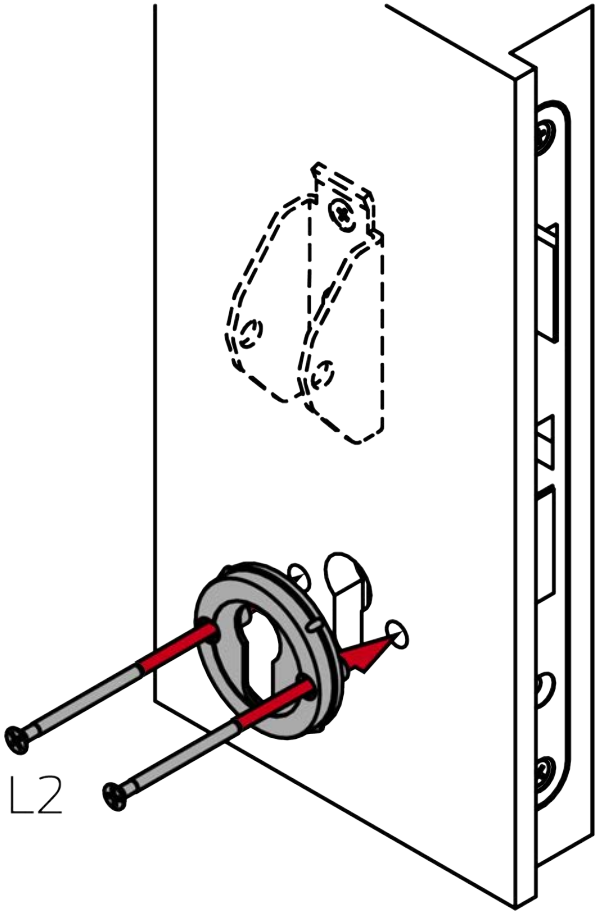
12. Insert the fitting with adapter plate, spindle and escutcheon base into the door.



13. Screw the fitting into place in the centre as described in the BKS documentation (use the L1 screw and the wood screw ordered from BKS).



14. Screw the escutcheon base to the assembly using the L2 screws (PH2, torque: 1.1 Nm).



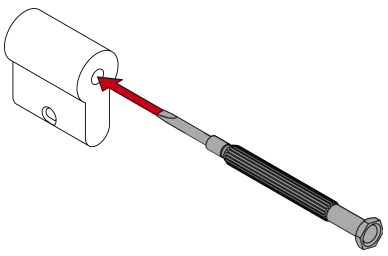
15. Insert the dummy cylinder.

NOTE

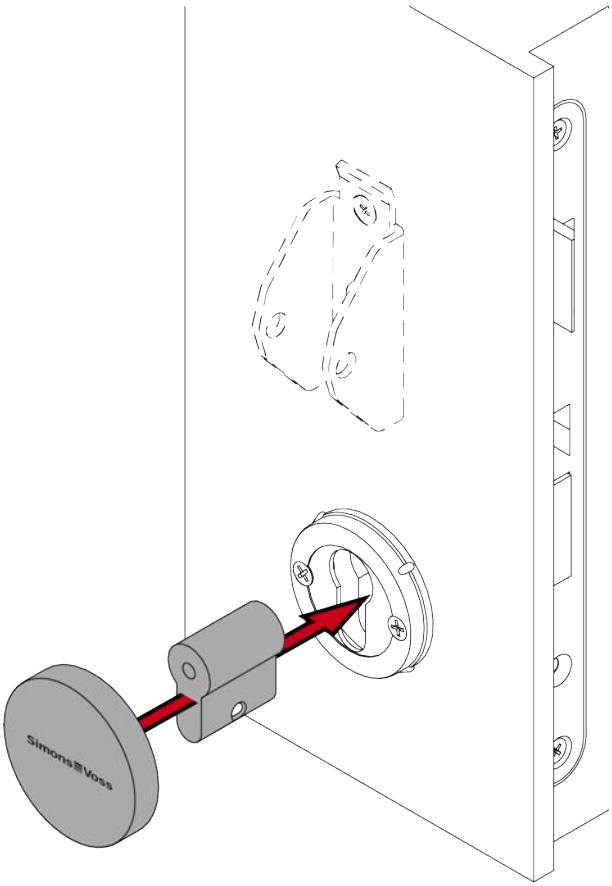
Feed the blank cylinder into the hole using a screwdriver

It is difficult to position the blank cylinder correctly, especially in thick doors.

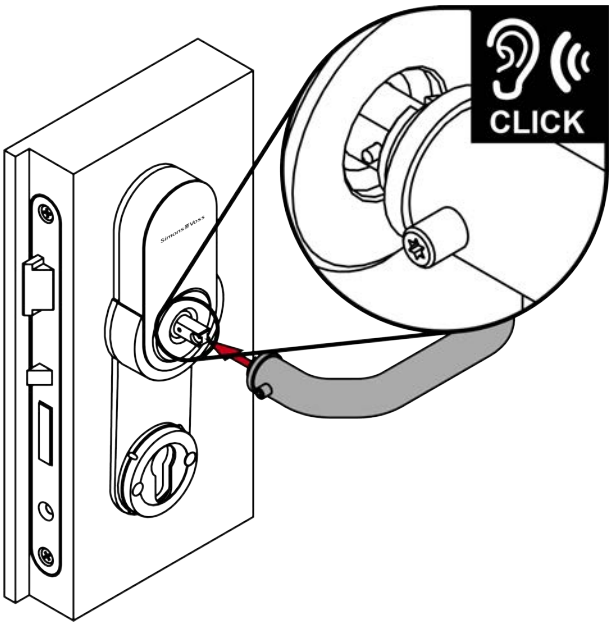
1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.



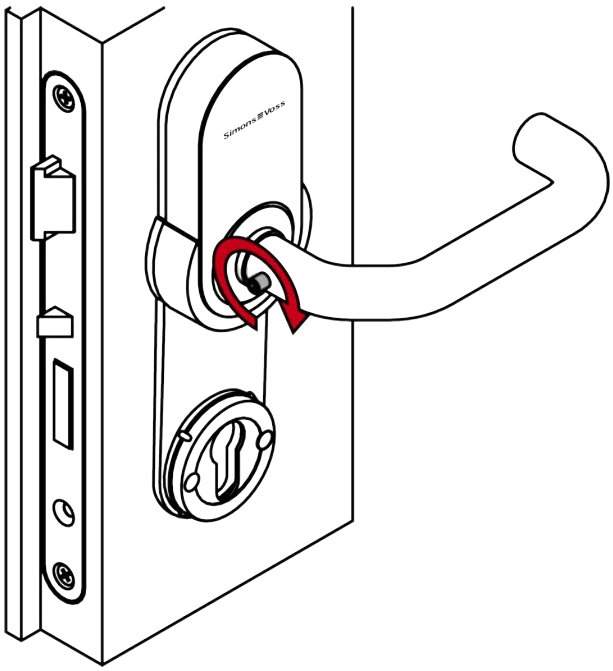
16. Place the escutcheon cover on the escutcheon base.



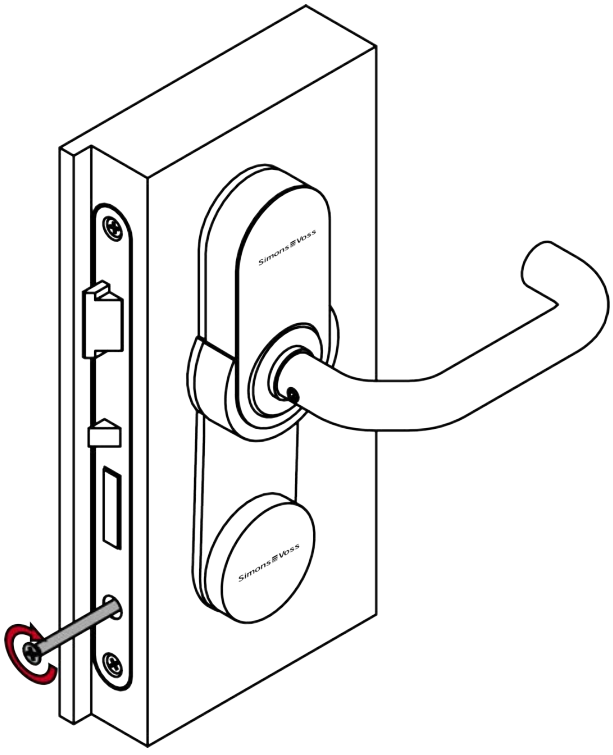
17. Push the handle onto the outer fitting.



18. Firmly fasten the grub screw on the outside handle (TX15; torque: 5.0 Nm).



19. Screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



↳ Fitting is now installed.

7.8 Variant DS (Reader on both sides)

7.8.1 Product-specific safety instructions

IMPORTANT

Damage by drilling

You drill at your own risk. SimonsVoss Technologies GmbH is not liable for damage caused by drilling.

- Please also observe the safety instructions of the drilling machine.

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

Difficult installation due to inaccurate holes

The fitting cannot be installed if the fastening holes and the spindle do not match.

- Make sure that the fastening holes and the spindle are in parallel vertical lines.

NOTE

Active and hybrid technology only with shortened range

The active and hybrid technologies have a significantly greater range. Under normal operating conditions, both SmartHandle AX are reached at the same time and communication errors may occur.

- Activate the checkbox for a shortened range for both sides on the SmartHandle AX in LSM/AXM.

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

Rest time for anti-slip surface

The supplied adapter plate feature a non-slip surface. This requires a settling time for it to be fully effective.

1. After installing the adapter plate, wait five hours before continuing with the installation.
2. If you need to finish installing beforehand, do not turn the handle as far as it will go.

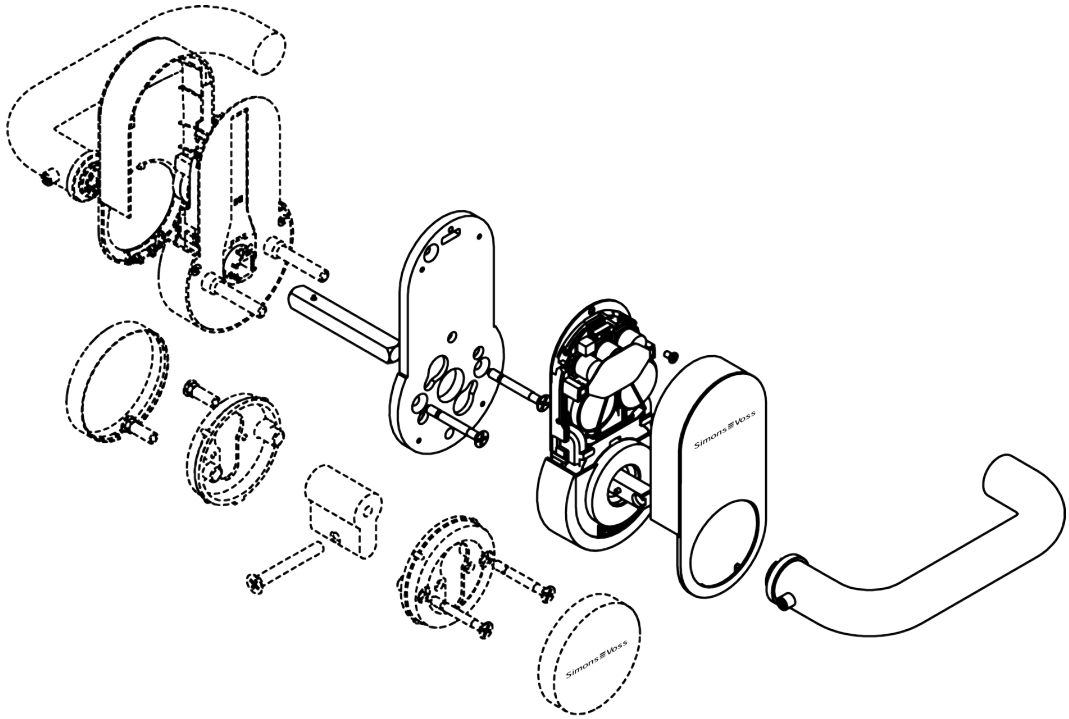
7.8.2 Scope of delivery

- SmartHandle AX (For installation on both sides, consisting of adapter plates and inner part. The stationary SmartHandle AX for the outer part is not included.)
- Special tool
- Quick guide

Depending on version:

- Adapter set, 7 mm spindle
- Adapter sleeve, 8.5 mm spindle
- Adapter sleeve, 9 mm spindle
- Adapter sleeve, 10 mm spindle

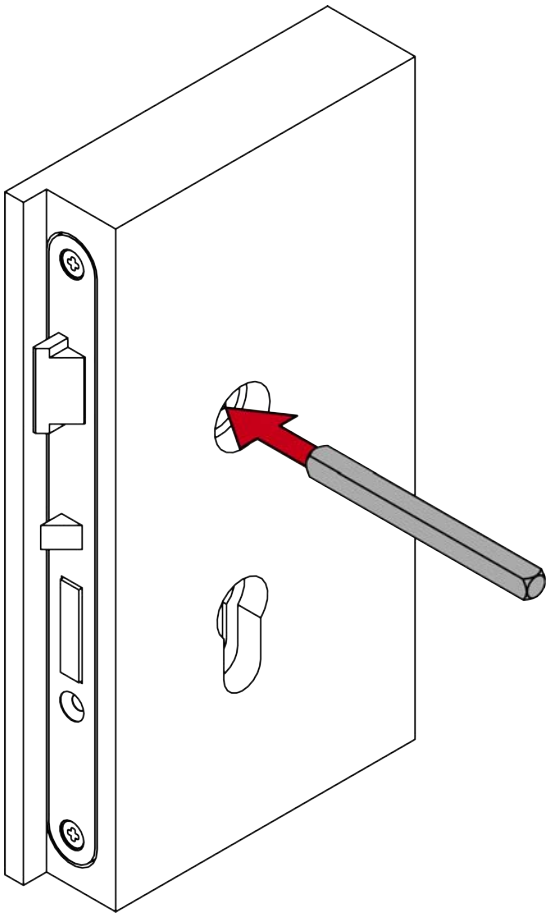
7.8.3 Design



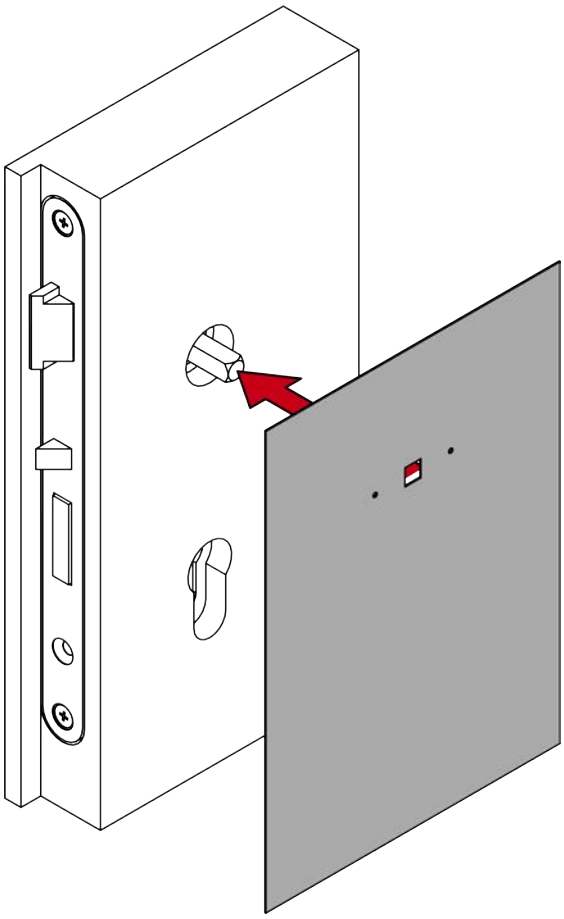
7.8.4 Prepare door (drilling template)

- ✓ Pin or scriber at hand.
- ✓ Drilling template available (see *Drilling template for DS variant (Reading on both sides) [▸ 300]*).
- ✓ Drill at hand.
- ✓ Suitable drill bit at hand (depending on mortise lock hole diameter: 8.5 mm/9.5 mm/10.5 mm).
- ✓ PH2 screwdriver at hand.

1. Insert the spindle into the mortise lock.

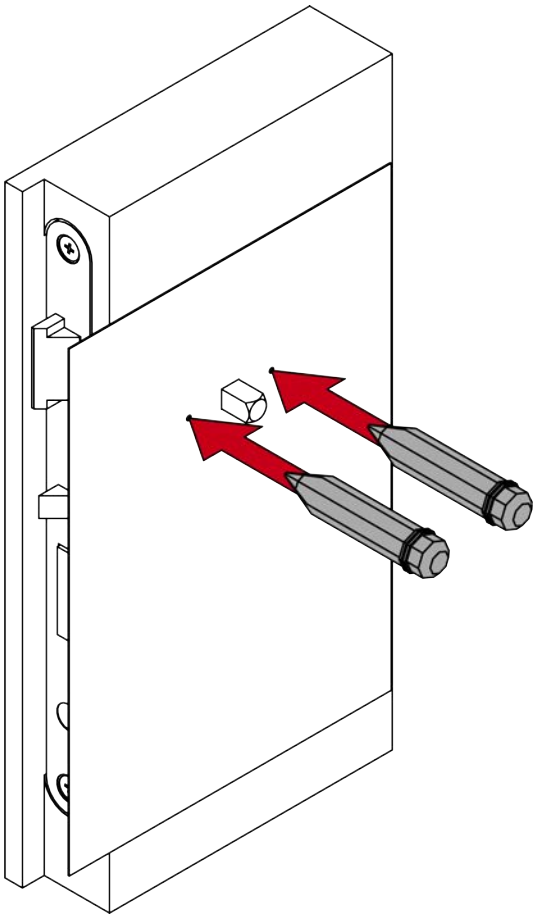


2. Place the drilling template on the spindle.

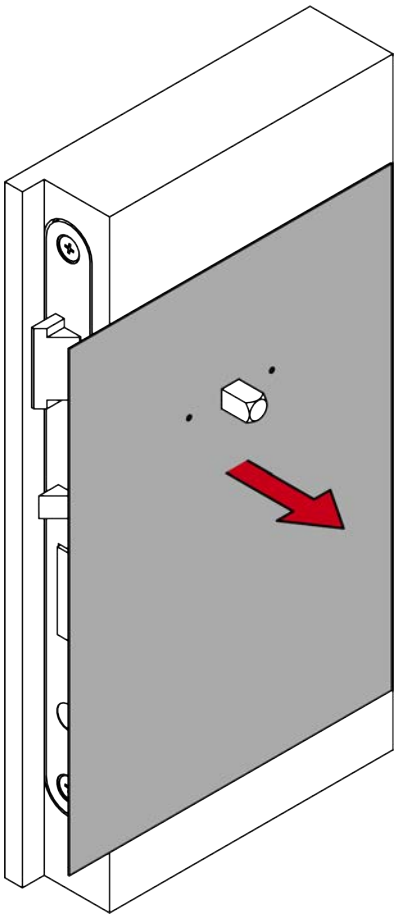


3. Align the drill template vertically using the printed scale.

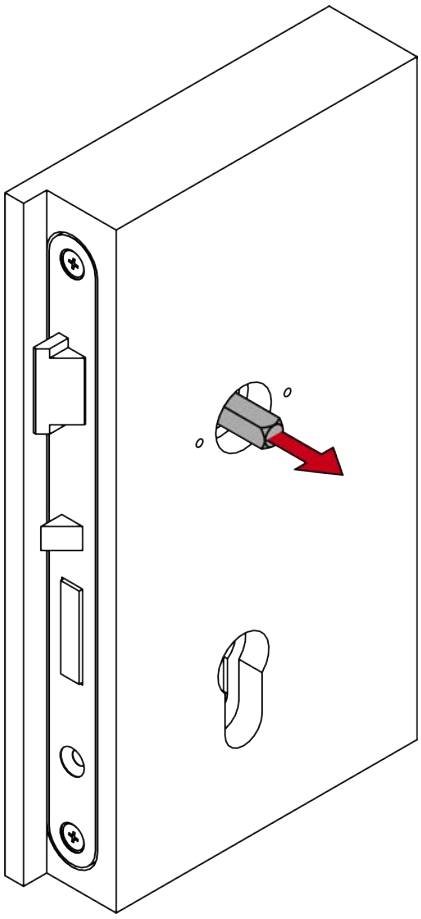
4. Mark the points to be drilled on the door.



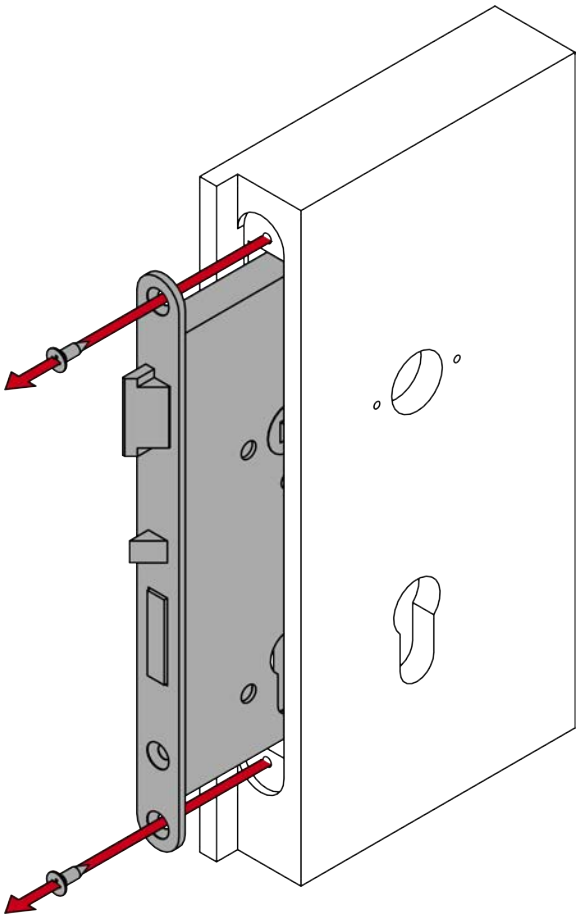
5. Remove the drilling template.



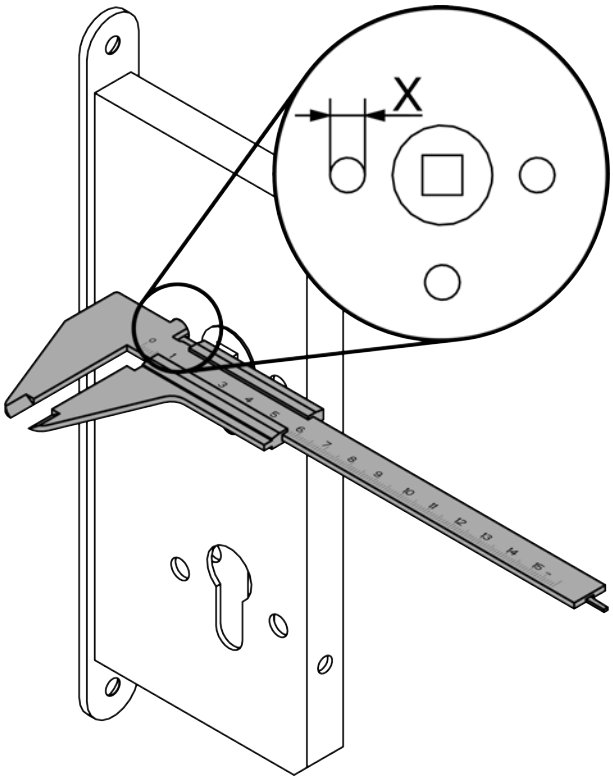
6. Remove the spindle.



7. Remove the mortise lock (PH2).

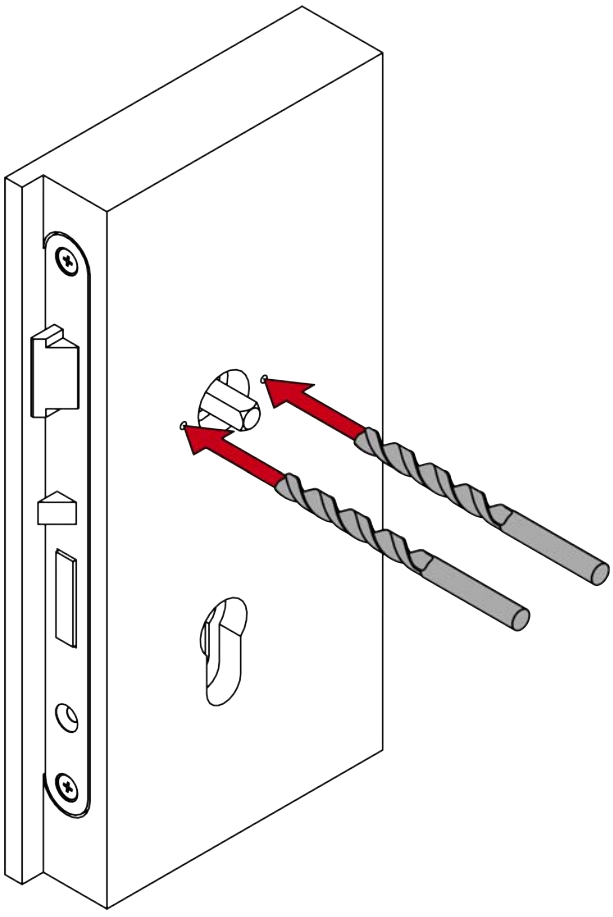


8. Measure the diameter of the fastening holes.

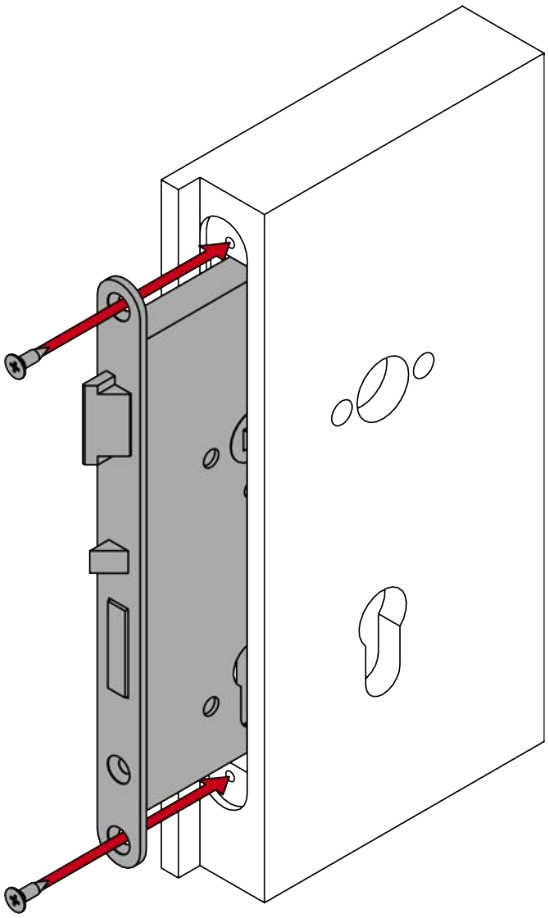


Ø fastening holes	Drill bits required
5.5 mm–6.3 mm	8.5 mm
6.4 mm–7.3 mm	8.5 mm
7.4 mm–8.7 mm	9.5 mm
≥ 8.8 mm	10.5 mm

9. Determine the required drill bit based on the measured diameter.
10. Drill the required holes.



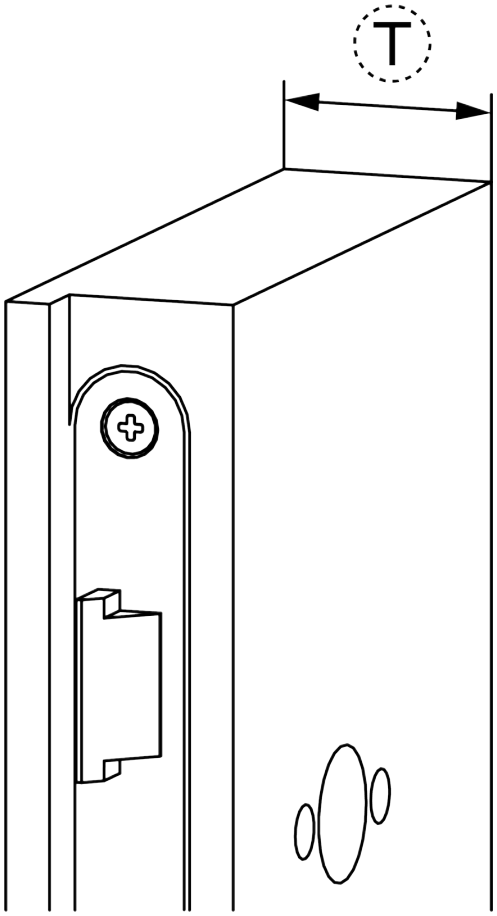
11. Fit the mortise lock (PH2).



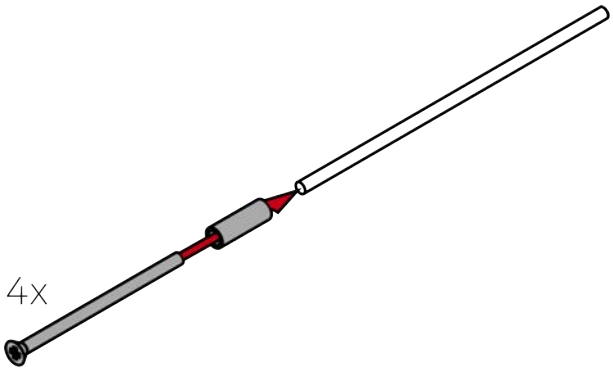
7.8.5 For door thickness X: prepare threaded rods and spindle

- ✓ Saw at hand.
- ✓ Vernier calliper at hand.
- ✓ PH2 screwdriver at hand.

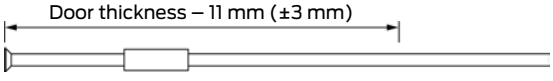
1. For X: measure the door thickness.

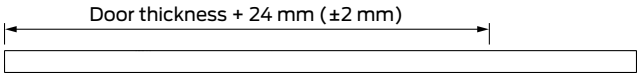


2. For X: fasten the screws, threaded sleeves and threaded rods together.

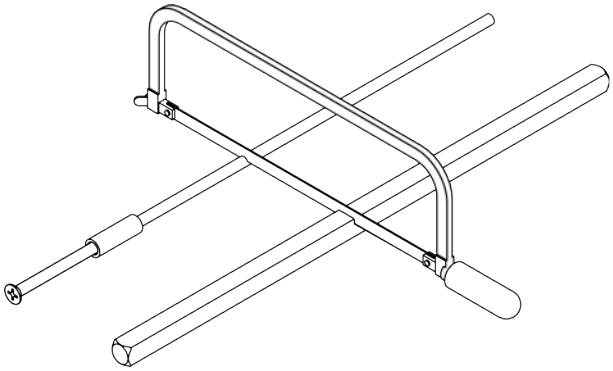


3. For X: mark the sawing points on the threaded rods and spindle.





4. For X: use a suitable saw to cut the threaded rods and spindle.



7.8.6 Programming the fitting

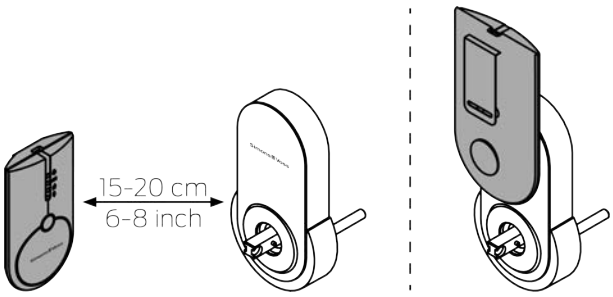
Programme the fitting before installation. You can use different programming devices, depending on the product family.

NOTE

Active technology only with shortened range

Active transponder technology offers a significantly longer range. During normal operation, both are reached SmartHandle AX at the same time and communication errors can occur.

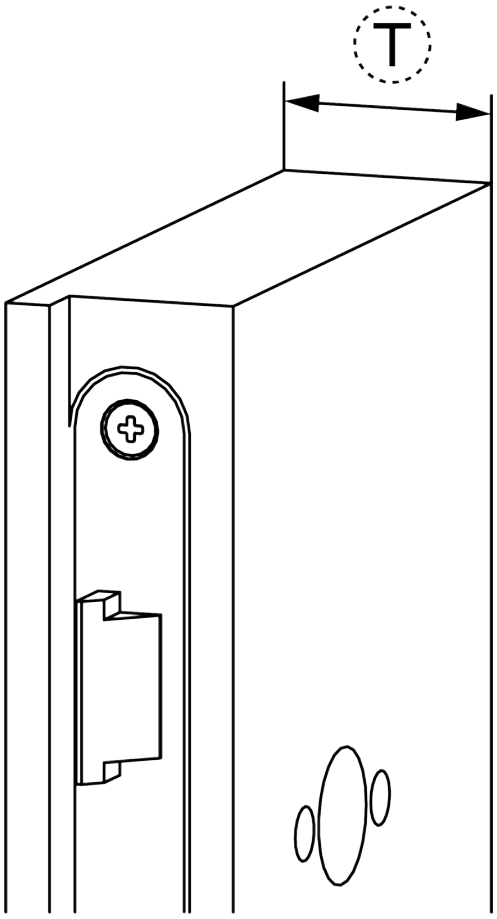
- Activate the checkbox for a shortened range for both sides on the SmartHandle AX in LSM/AXM.



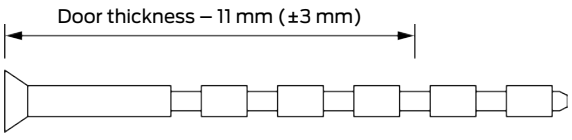
7.8.7 Installing the fitting

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Pincers at hand.

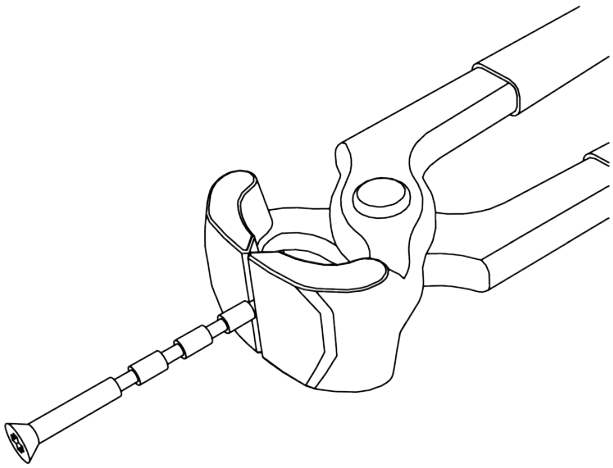
1. For S, M and L: measure the door thickness.



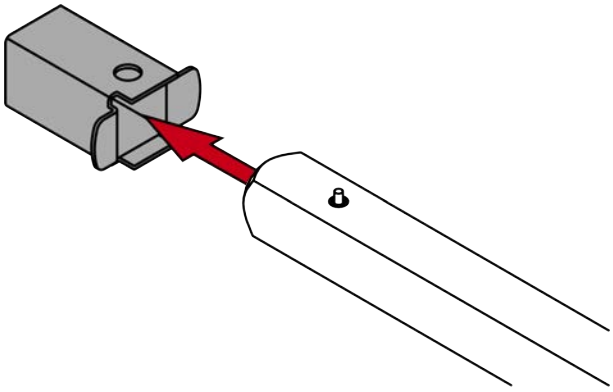
2. For S, M and L: determine the cutting points on the cut-to-length screws.



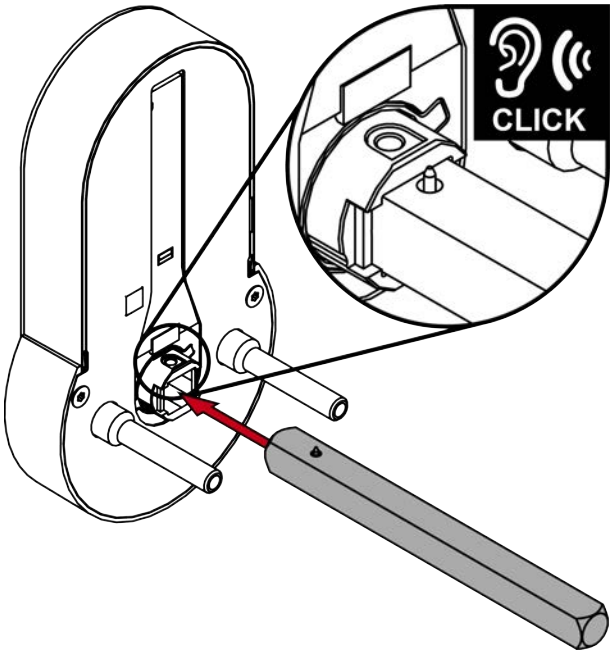
3. For S, M and L: shorten the cut-to-length screws.

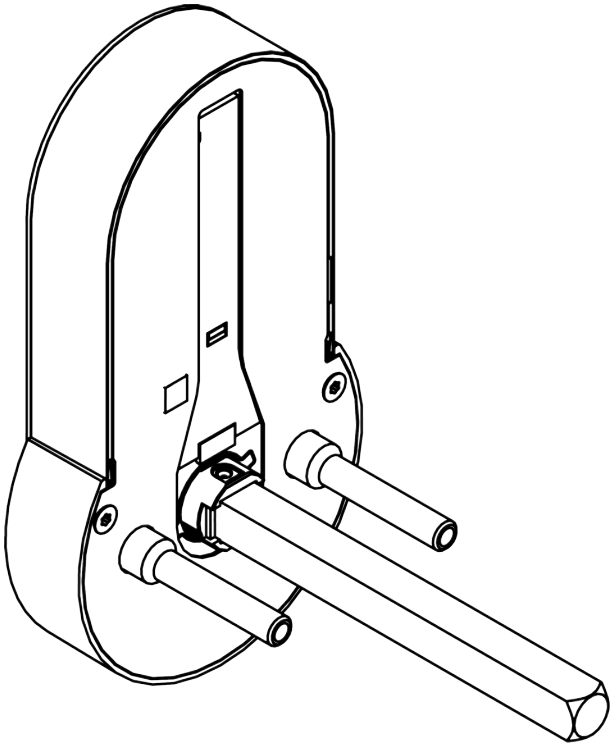


4. For 7 mm spindle: insert the adapter sleeve onto the side of the spindle with the pin.

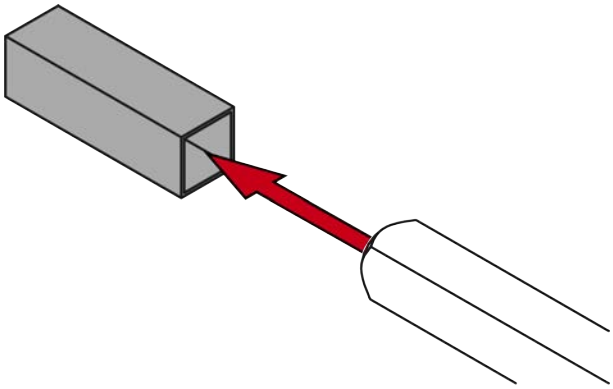


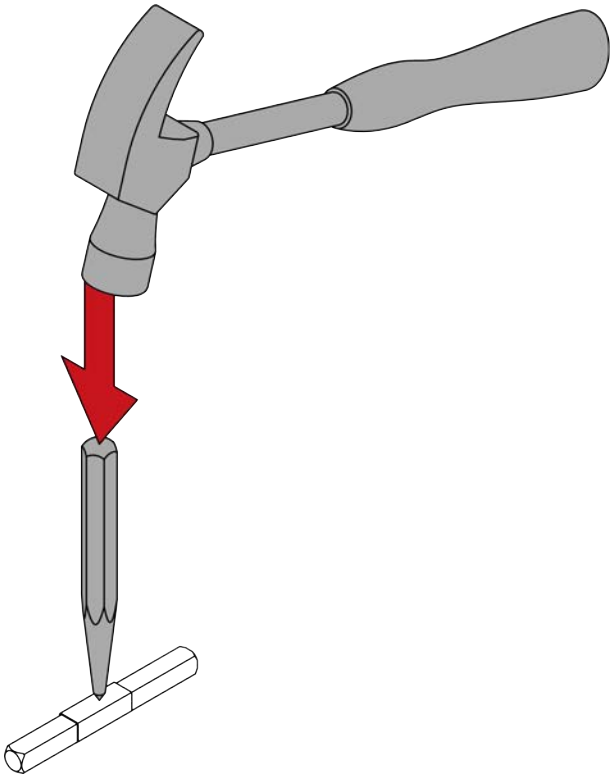
5. Insert the spindle with the pin side into the fitting.
   ↳ Pin will snap into position in the mount.



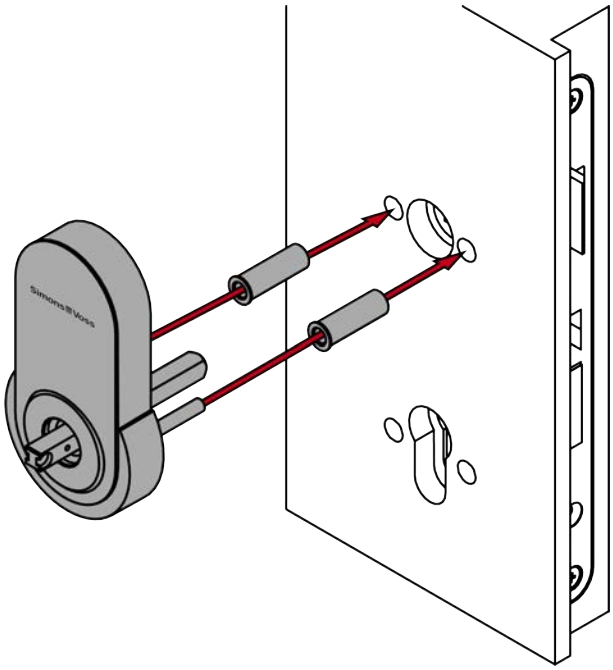


6. For 8.5 mm, 9 mm and 10 mm spindles: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.



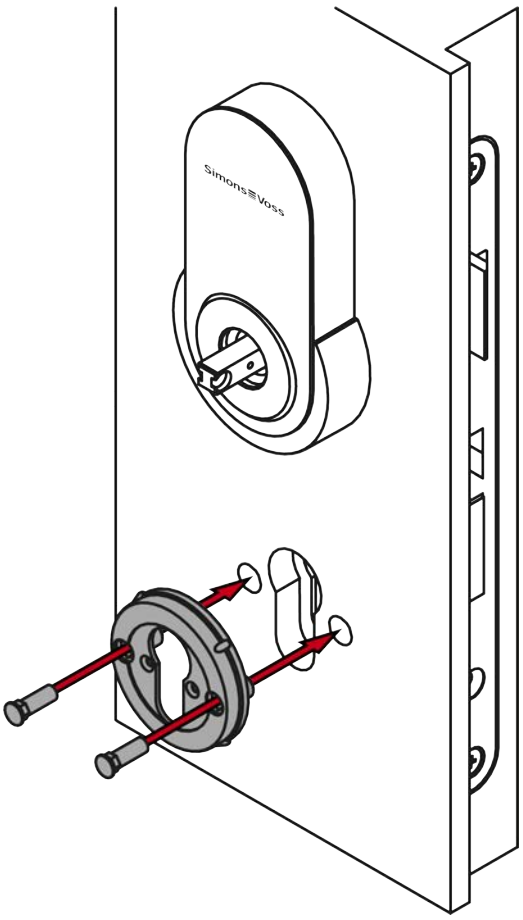


7. Insert the outer fitting, with adapter sleeves if necessary, into the door from the outside.

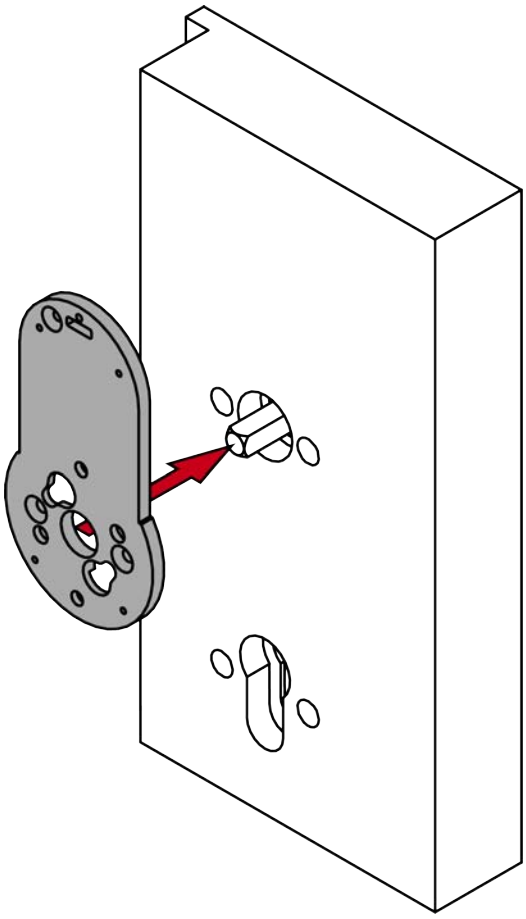


Ø mortise lock fastening hole	Adapter sleeves
5.5 mm–6.3 mm	No adapter sleeves
6.4 mm–7.3 mm	6.4 mm
7.4 mm–8.7 mm	7.4 mm
≥ 8.8 mm	8.8 mm

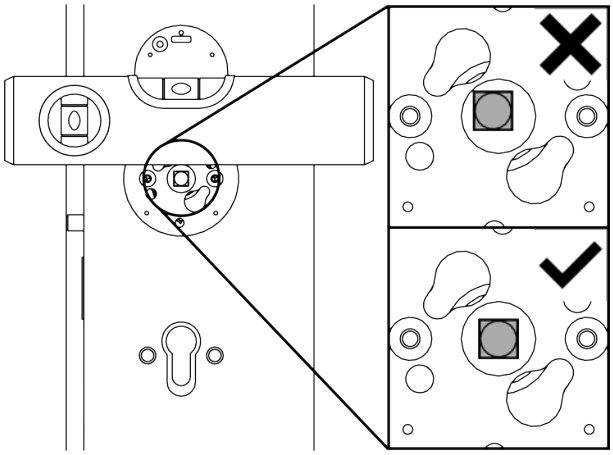
8. Insert the escutcheon base into the door with the sleeve nuts on the outer side.



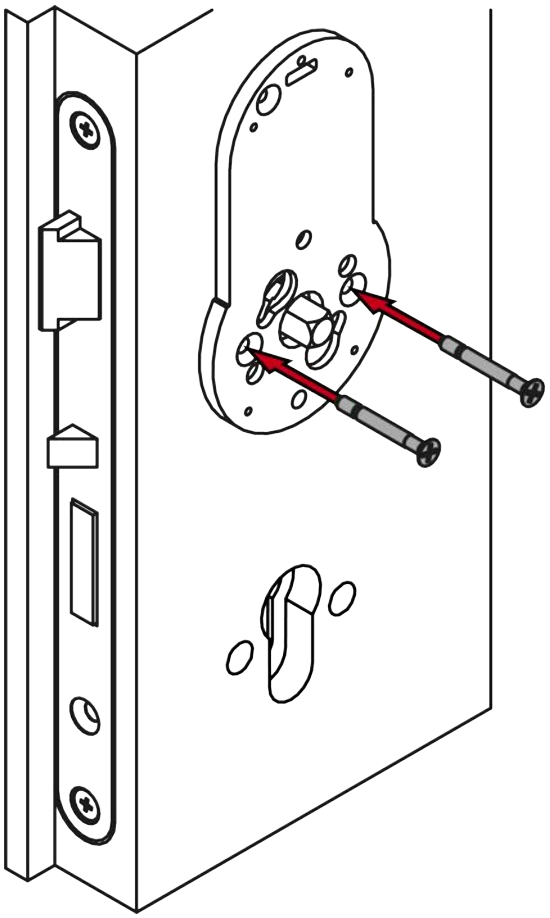
9. Position the adapter plate on the door.



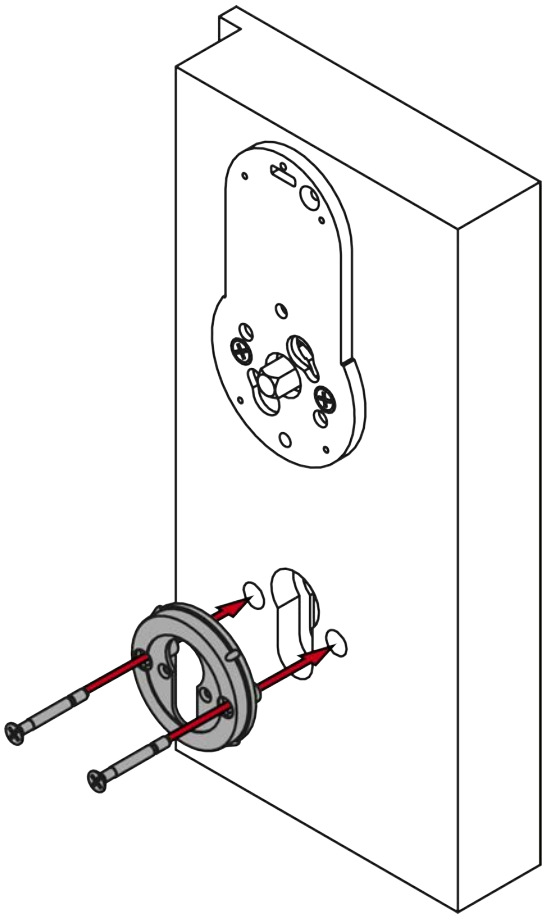
10. Align the adapter plate so that the spindle is precisely centred and the adapter plate is perfectly perpendicular.



11. Screw the adapter plate firmly into place (PH2, torque 1.1 Nm).



12. Screw the escutcheon base into place on the inner side.



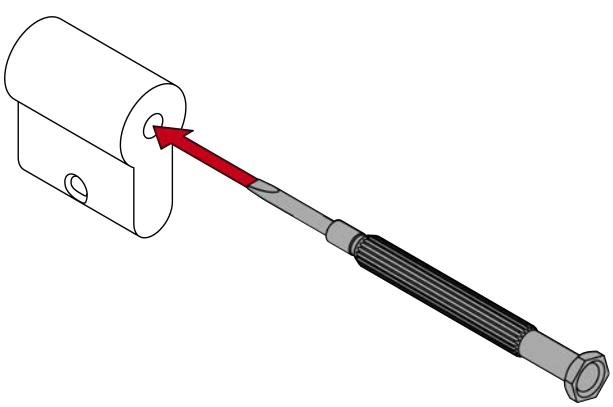
13. Insert the dummy cylinder.

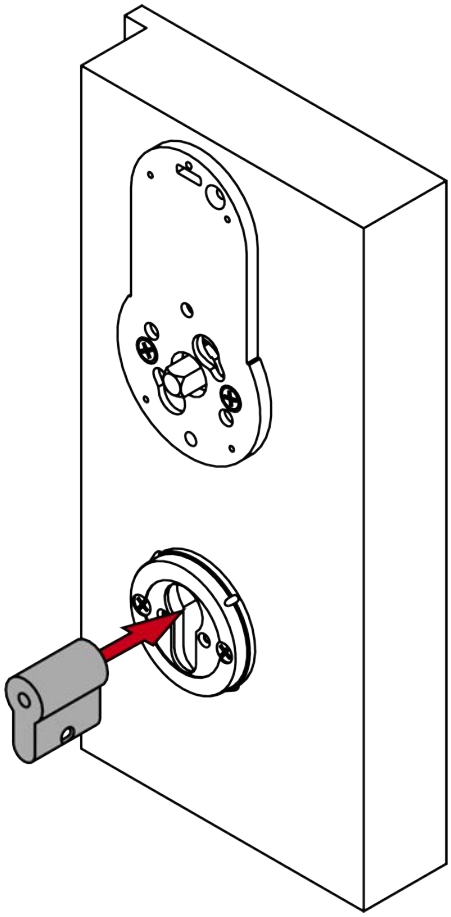
NOTE

Feed the blank cylinder into the hole using a screwdriver

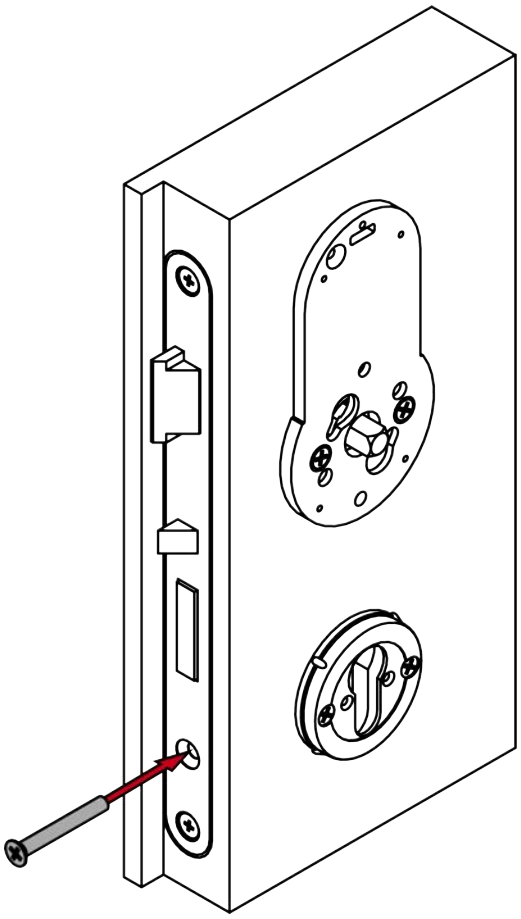
It is difficult to position the blank cylinder correctly, especially in thick doors.

1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.





14. Screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



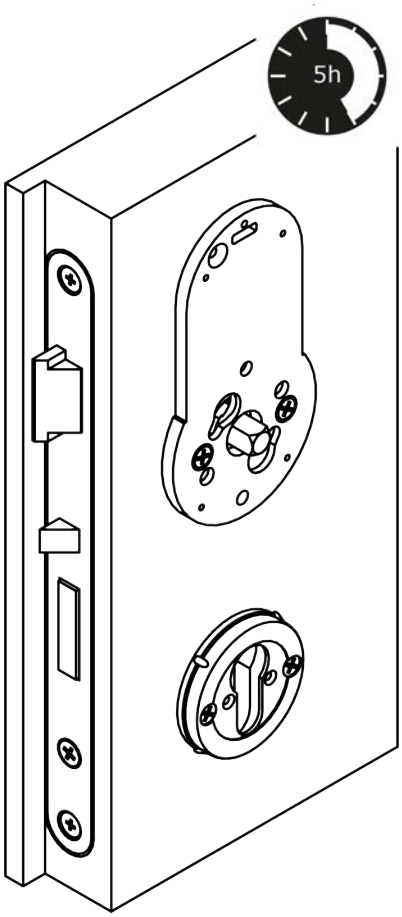
15. Wait five hours for the anti-slip coating to set.

NOTE

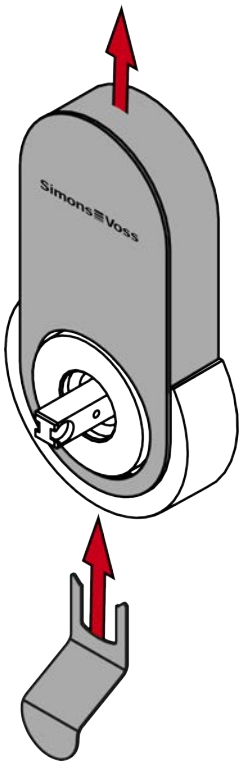
Rest time for anti-slip surface

The supplied adapter plate feature a non-slip surface. This requires a set-tling time for it to be fully effective.

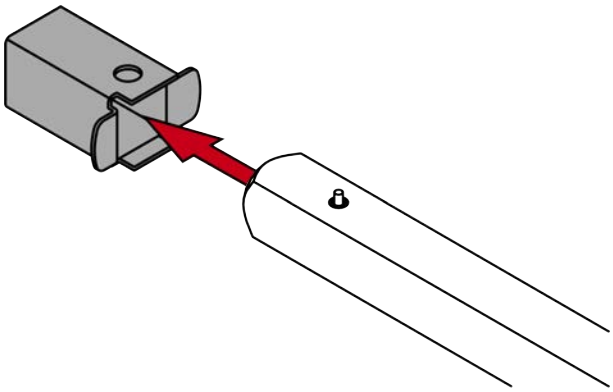
1. After installing the adapter plate, wait five hours before continuing with the installation.
2. If you need to finish installing beforehand, do not turn the handle as far as it will go.



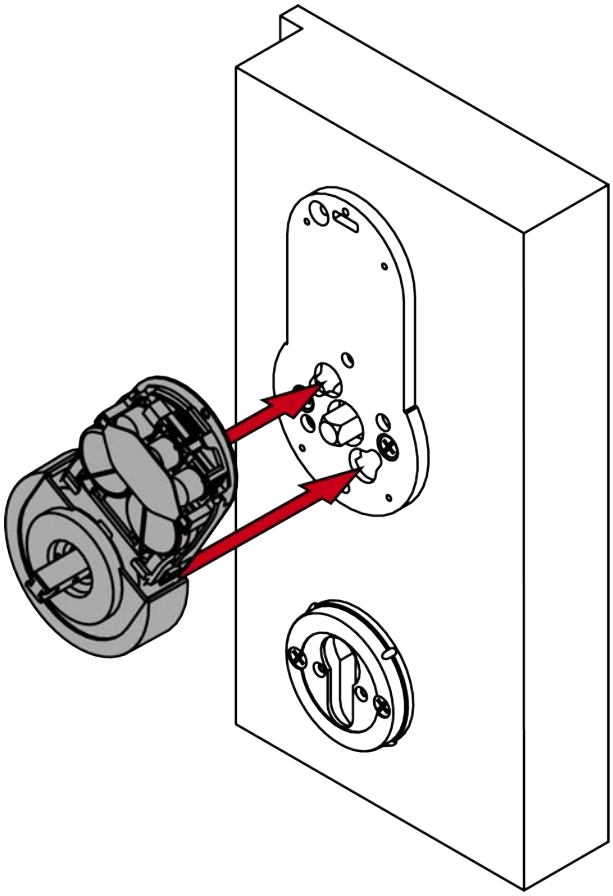
16. Remove the cover with the tool.



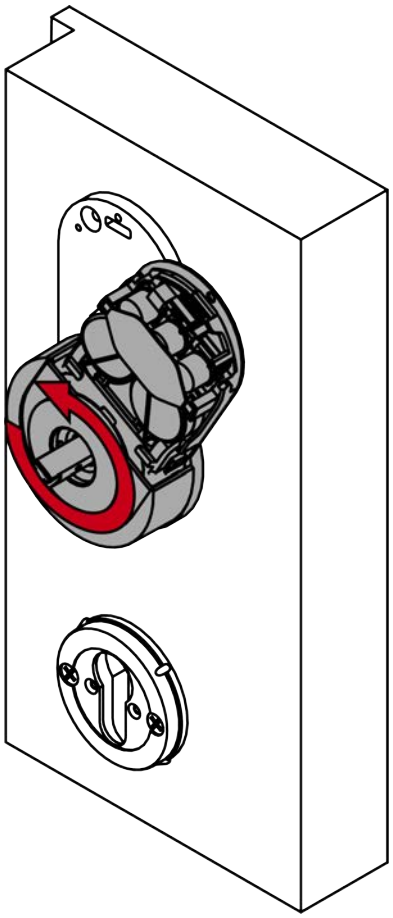
17. For 7 mm spindle: attach the adapter sleeve to the spindle.



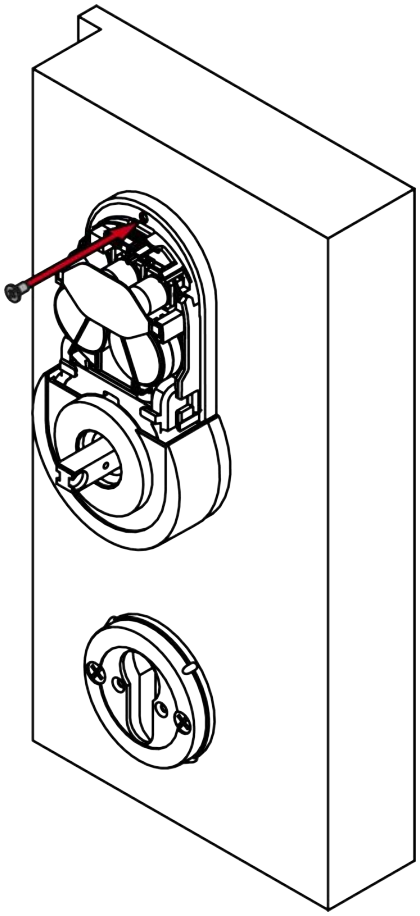
18. Insert the fitting into the adapter plate.



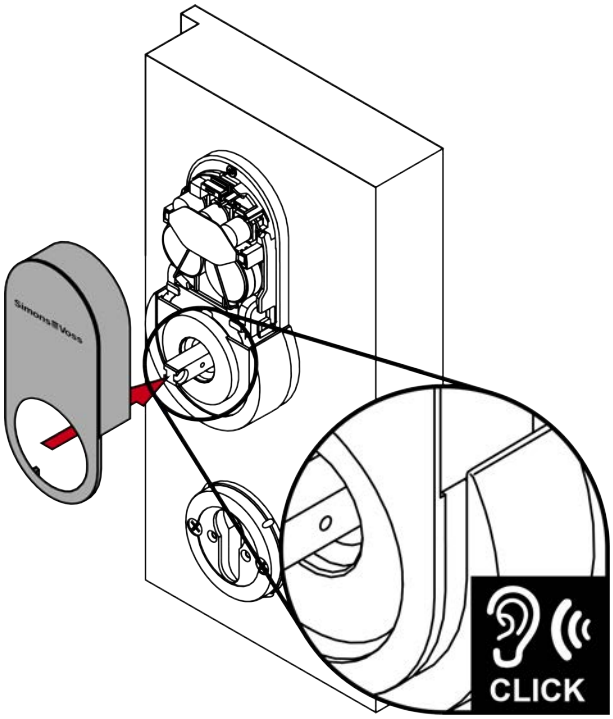
19. Rotate the fitting until it is straight.



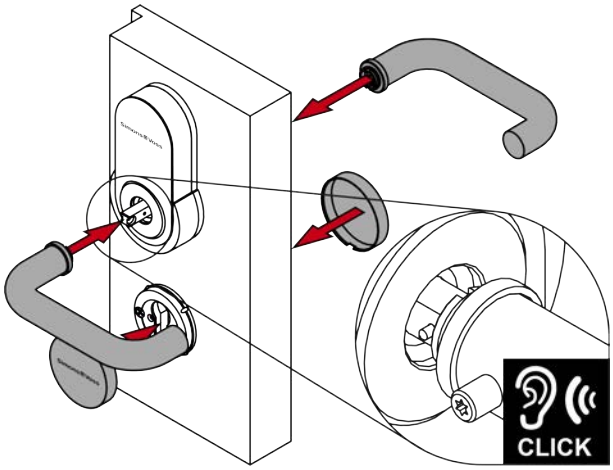
20. Screw the fitting firmly onto the adapter plate to prevent it from twisting.



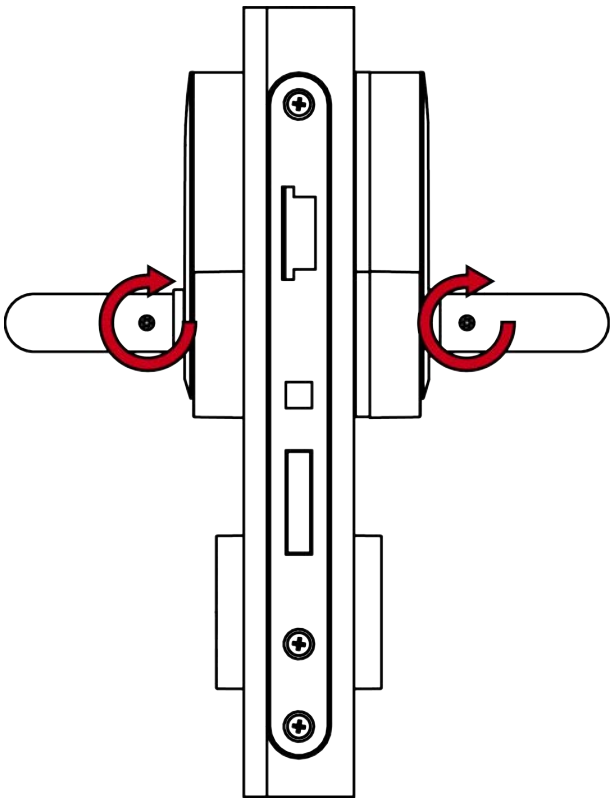
21. Place the cover on the fitting.



22. Place the outside handles on the fittings.
23. Place the covers on the escutcheon bases.



24. Fasten the grub screws firmly onto both handles (TX15, torque 5.0 Nm).



↳ Fitting is now installed.

7.9 Variants E0 and E1 (Scandinavian Oval)

7.9.1 Product-specific safety instructions

IMPORTANT

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

NOTE

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

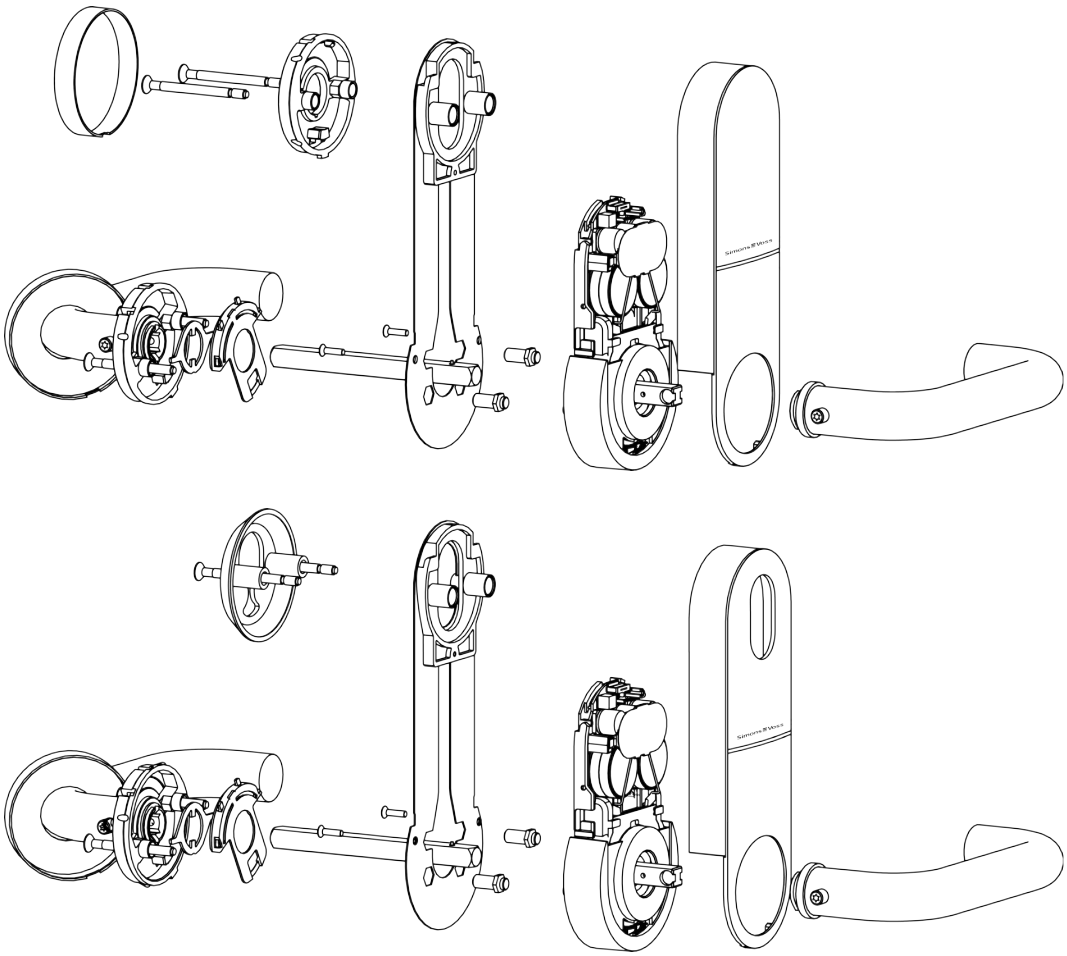
7.9.2 Scope of delivery

- SmartHandle AX (Scandinavian Oval)
- Special tool
- Quick guide

Depending on version:

- Adapter set, 7 mm spindle
- Adapter sleeve, 8.5 mm spindle
- Adapter sleeve, 10 mm spindle
- Blank cylinder

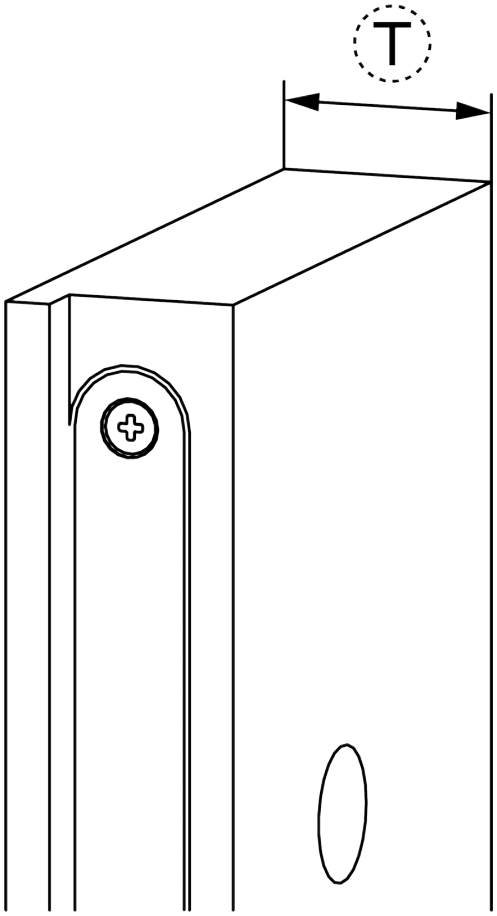
7.9.3 Design



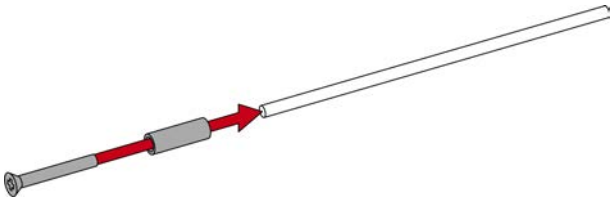
7.9.4 For door thickness X: prepare threaded rods and spindle

- ✓ Saw at hand.
- ✓ Vernier calliper at hand.
- ✓ PH2 screwdriver at hand.

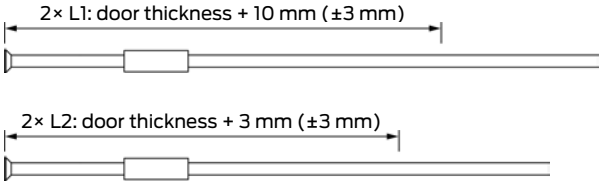
1. For X: measure the door thickness.

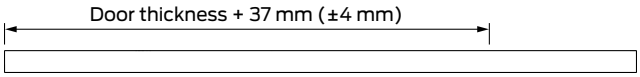


2. For X: fasten the screws, threaded sleeves and threaded rods together.

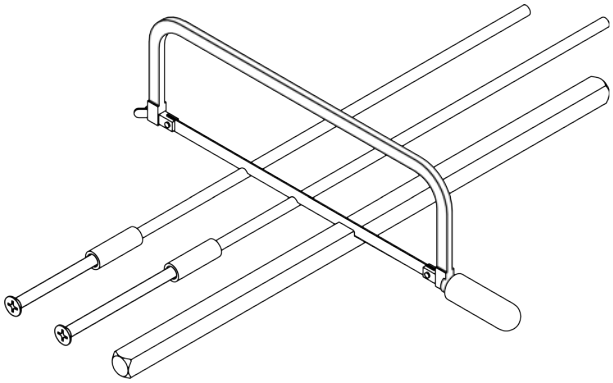


3. For X: mark the sawing points on the threaded rods and spindle.





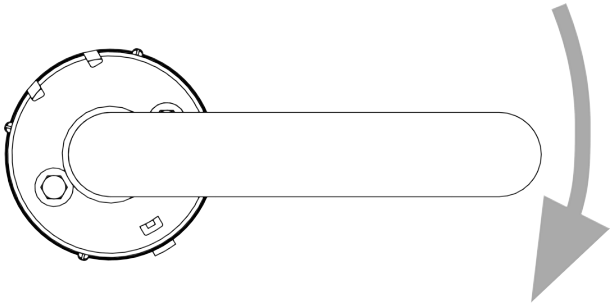
4. For X: use a suitable saw to cut the threaded rods and spindle.



7.9.5 For inner door handle, clockwise: prepare stud bolts

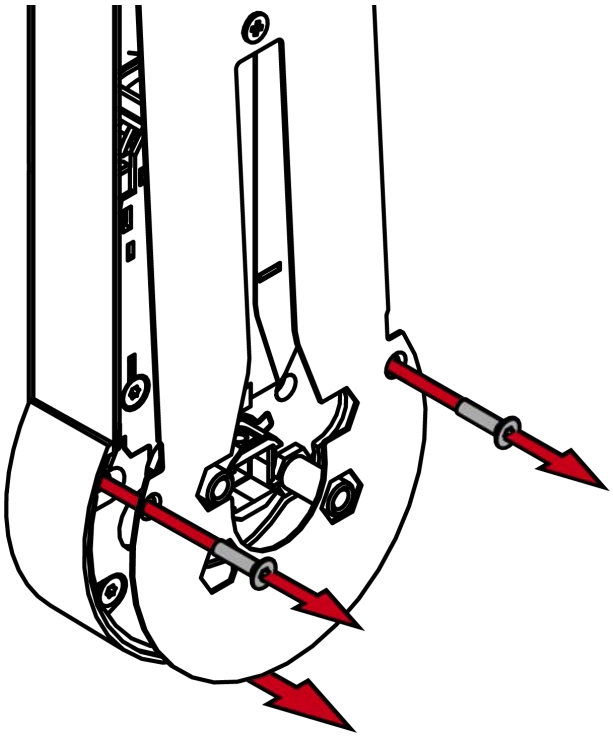
✓ TX3 screwdriver at hand.

1. Check whether you need to turn the inner handle clockwise.

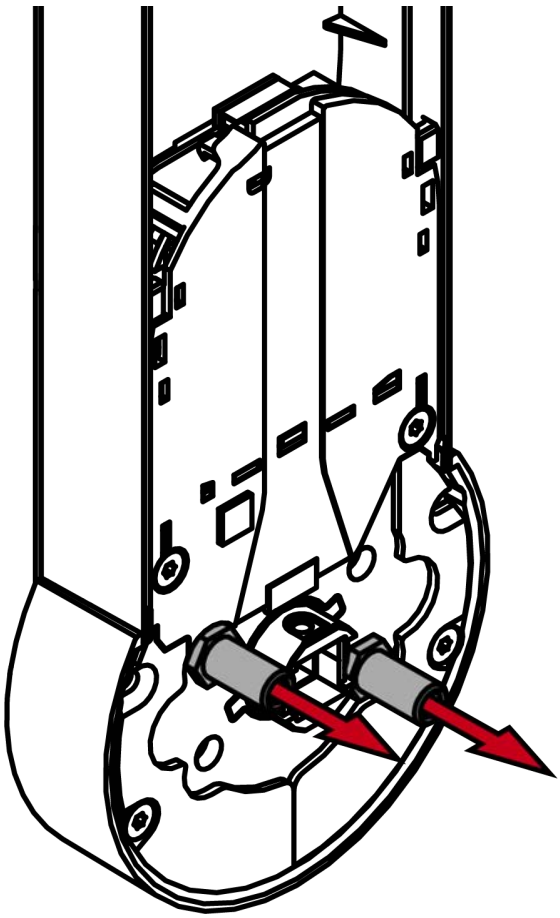


↳ If yes, refit the SmartHandle AX's stud nuts as described.

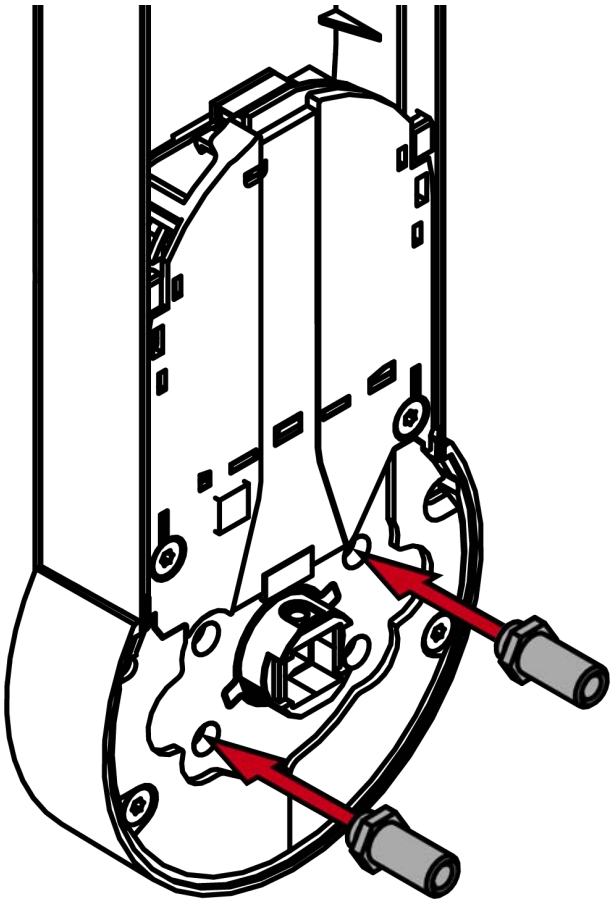
2. Unscrew the SmartHandle AX rear (TX8).



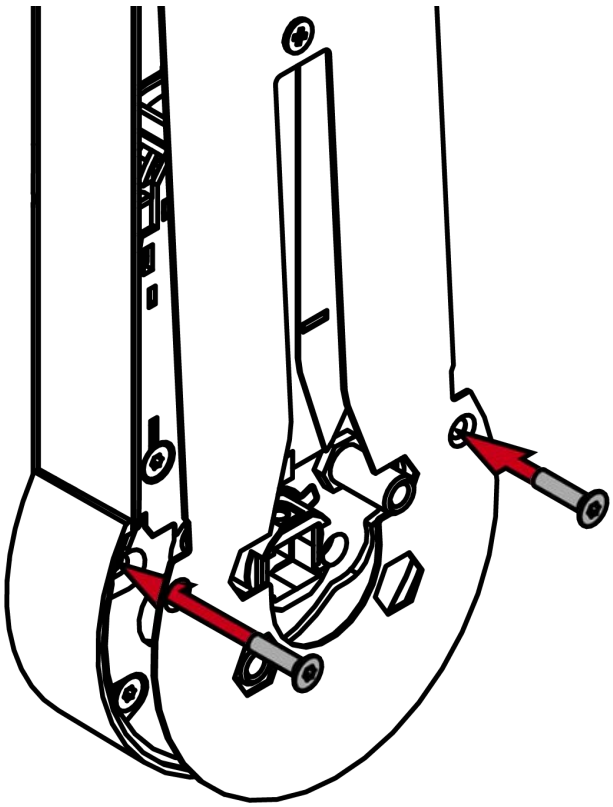
3. Unscrew the stud nuts.



4. Re-fasten the stud nuts firmly in the new positions.



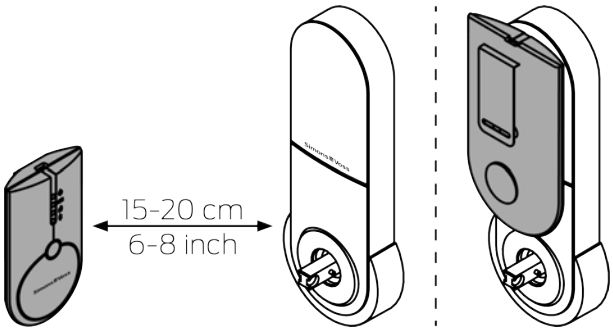
5. Screw the SmartHandle AX rear firmly into place again (TX8, torque 1.1 Nm).

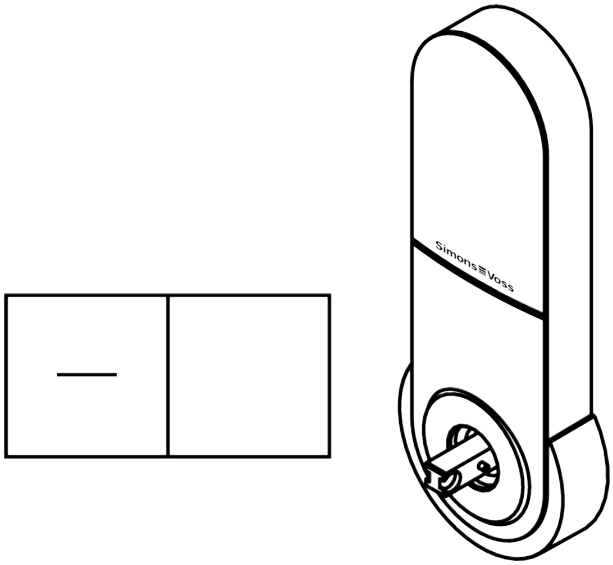


↳ Stud nuts are fastened through the SmartHandle AX rear again.

7.9.6 Programming the fitting

Programme the fitting before installation. You can use different programming devices, depending on the product family.

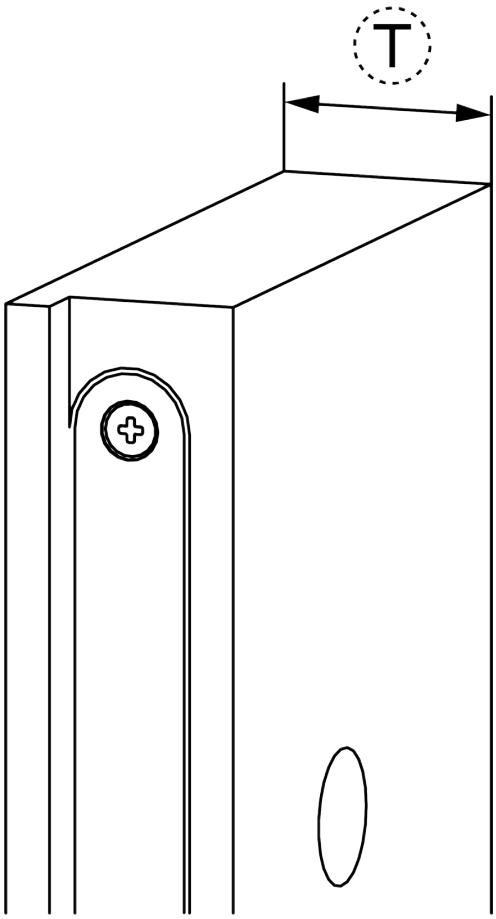




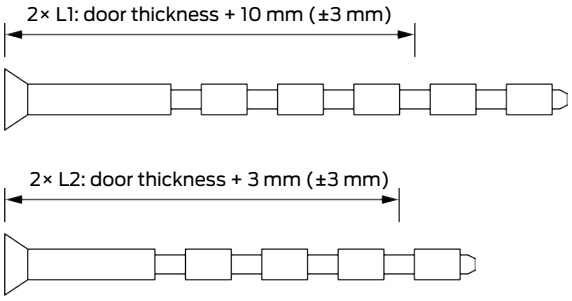
7.9.7 Installing the fitting

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Pincers at hand.

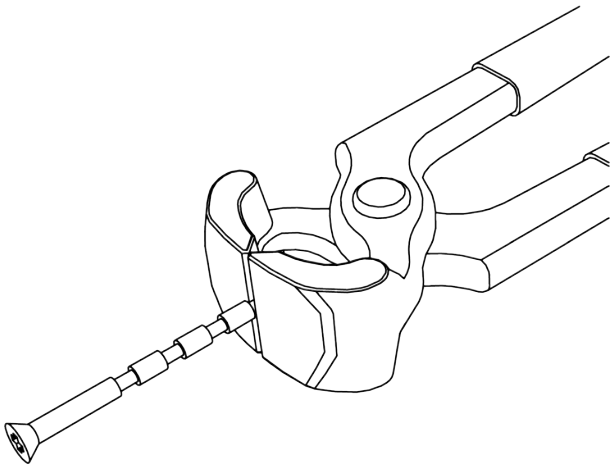
1. For S, M and L: measure the door thickness.



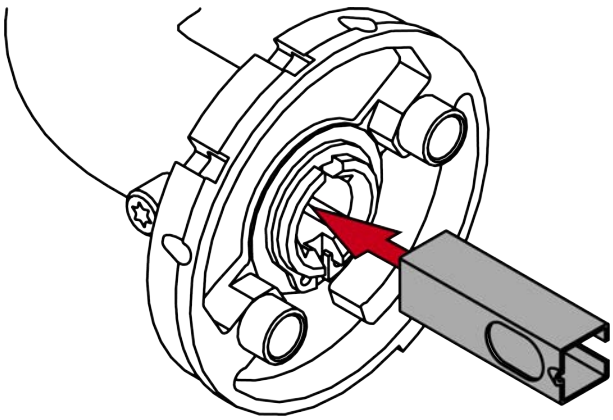
2. For S, M and L: determine the separation points on the cut-to-length screws L1 and L2.



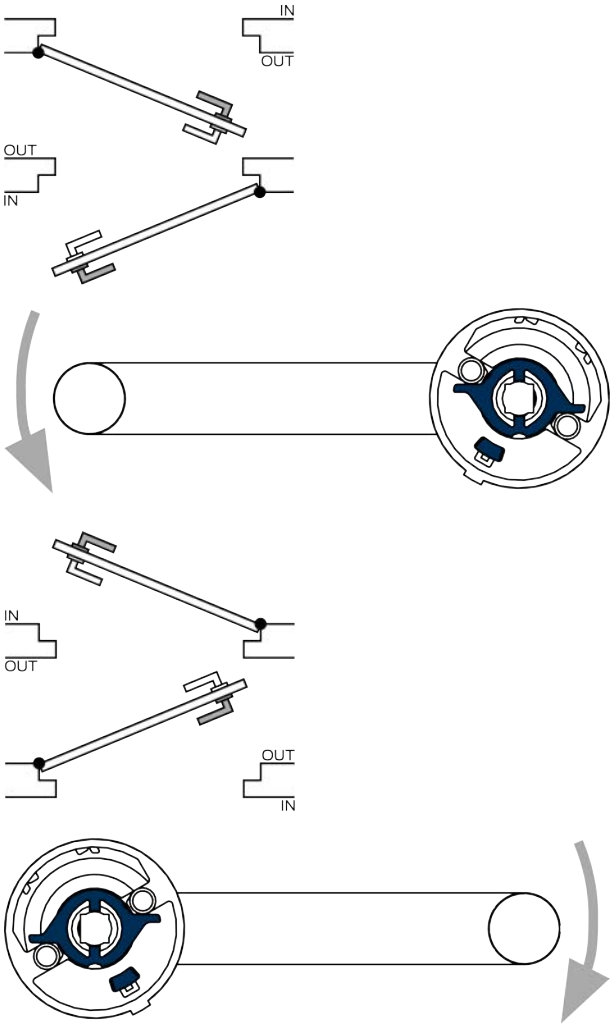
3. For S, M and L: trim the cut-to-length screws L1 and L2.



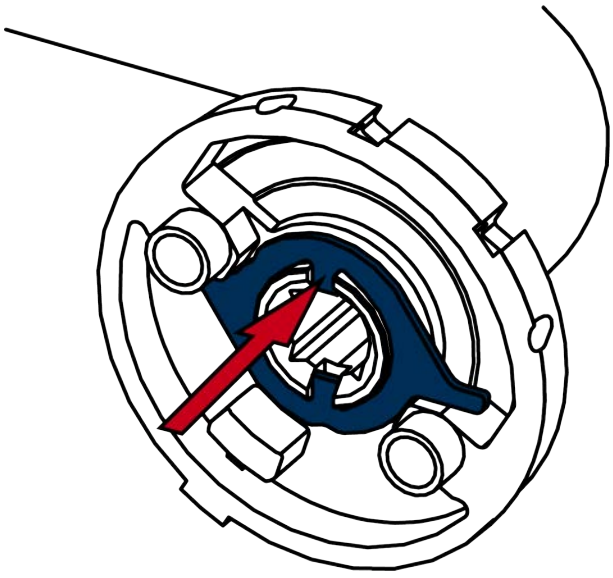
4. For 7 mm spindle: place the adapter sleeve in the inner handle in such a way that the recess faces the grub screw.

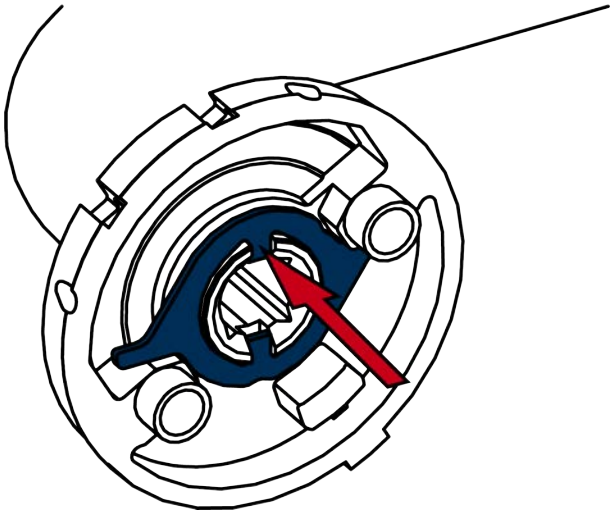


5. Determine your inner handle's direction rotation as viewed from the inside: clockwise (clockwise = CW) or anti-clockwise (counter-clockwise = CCW).

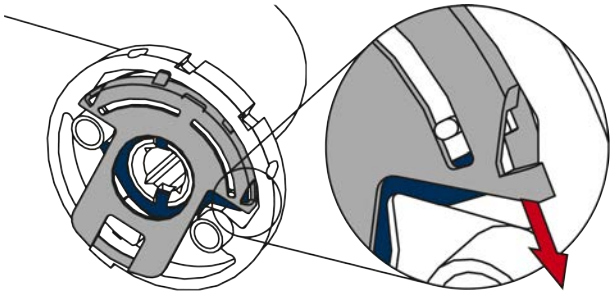


6. Insert the interchangeable plate into the inner handle as required.

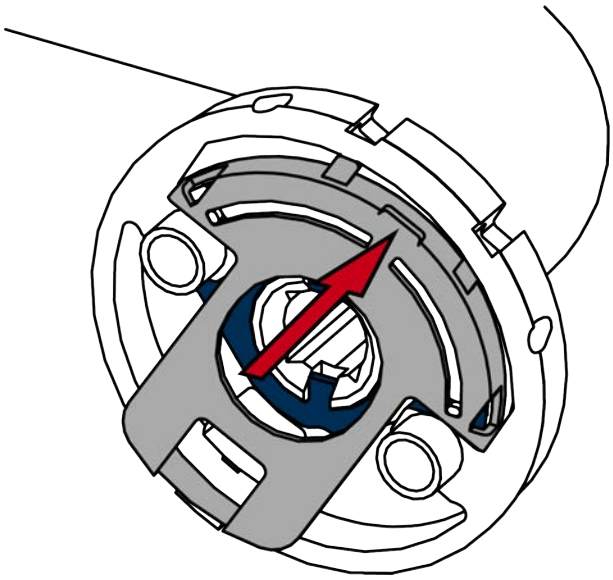




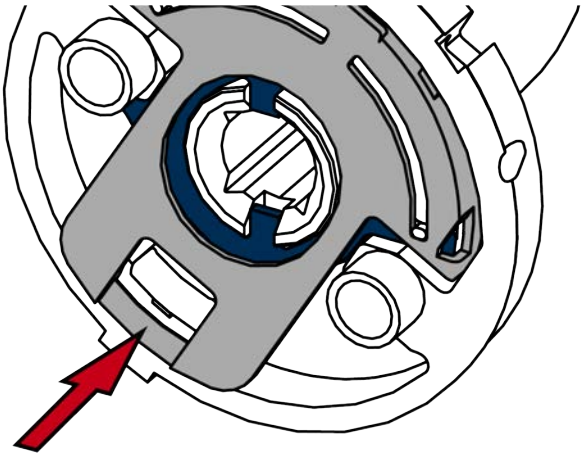
7. Press the spring plate on one side against the interchangeable plate so that the spring is compressed.



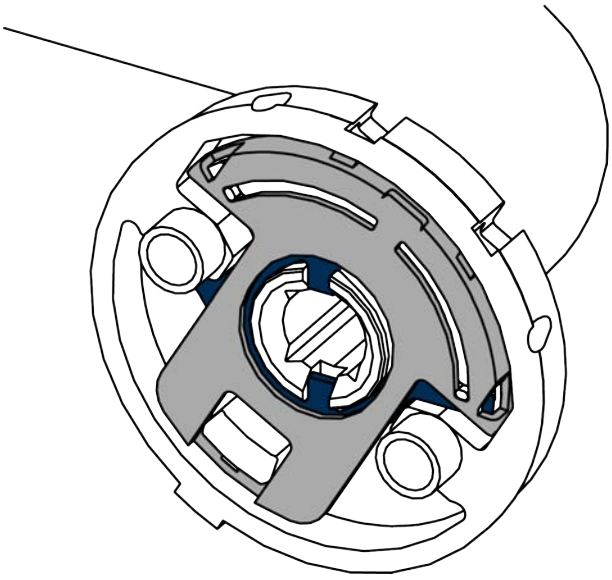
8. At the same time, hook the spring plate tabs into the slot in the inner handle.



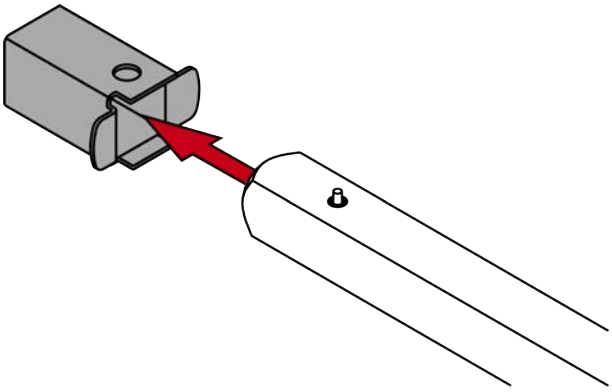
9. Press down the spring plate bracket.



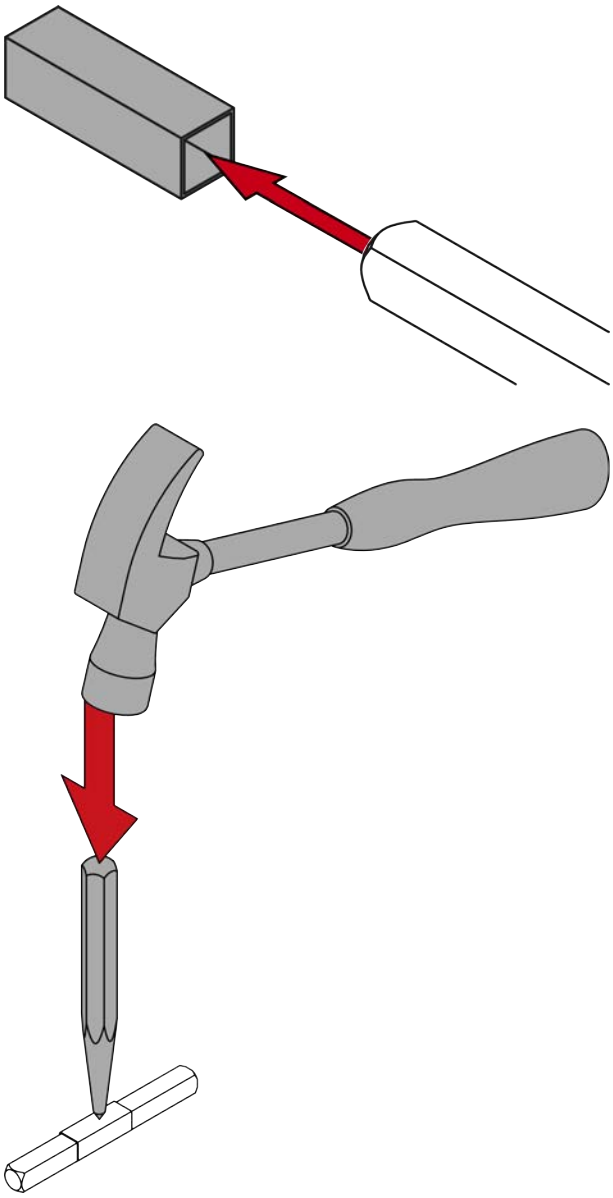
↳ The inner handle is now ready.



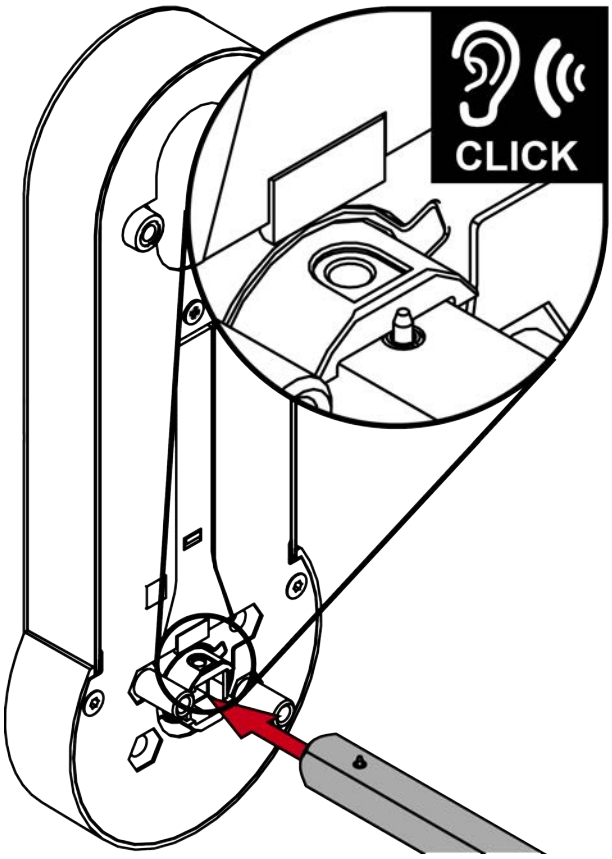
10. For 7 mm spindle: insert the adapter sleeve onto the side of the spindle with the pin.



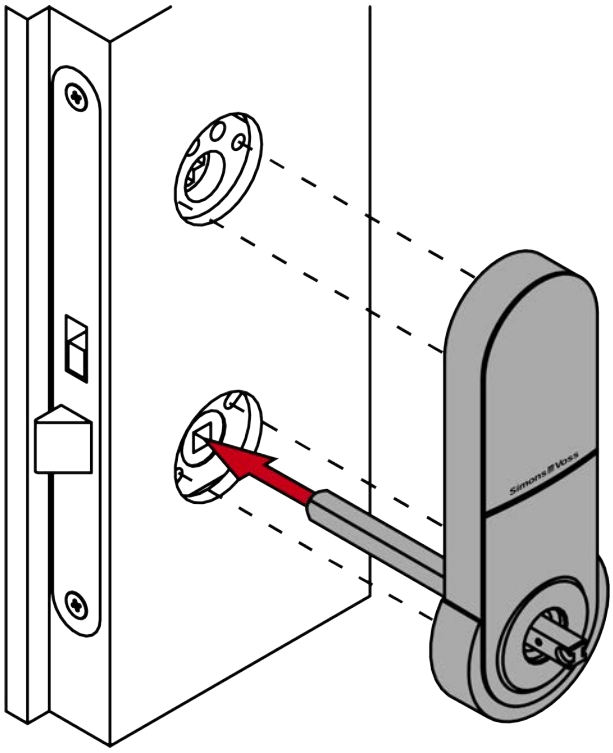
11. For 8.5 mm and 10 mm spindle: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.



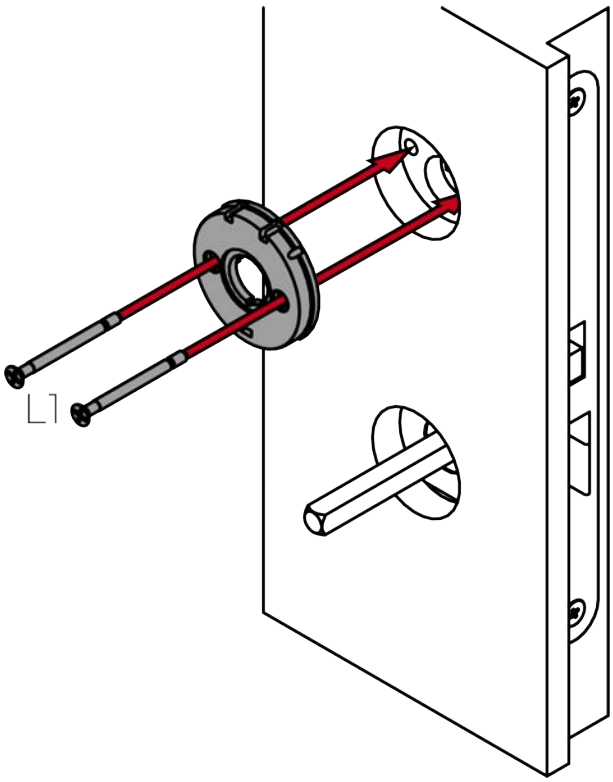
12. Insert the spindle with the pin side into the fitting.
    ↳ Pin will snap into position in the mount.

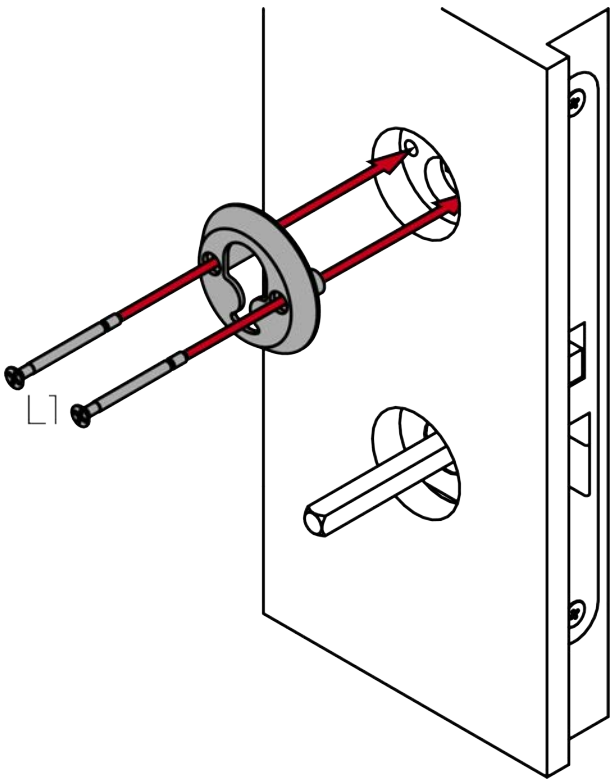


13. Insert the fitting with the spindle into the door from the outside.

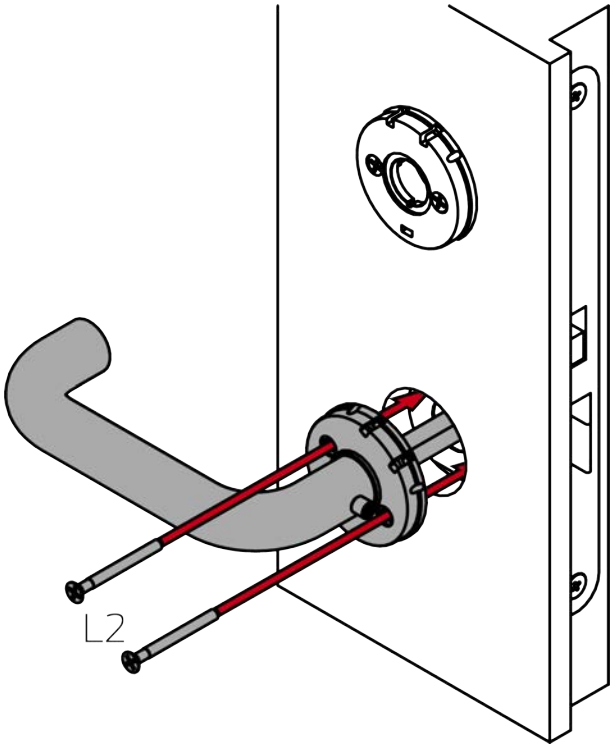


14. Fasten the escutcheon base firmly with the L1 screws (PH2, torque 1.1 Nm).

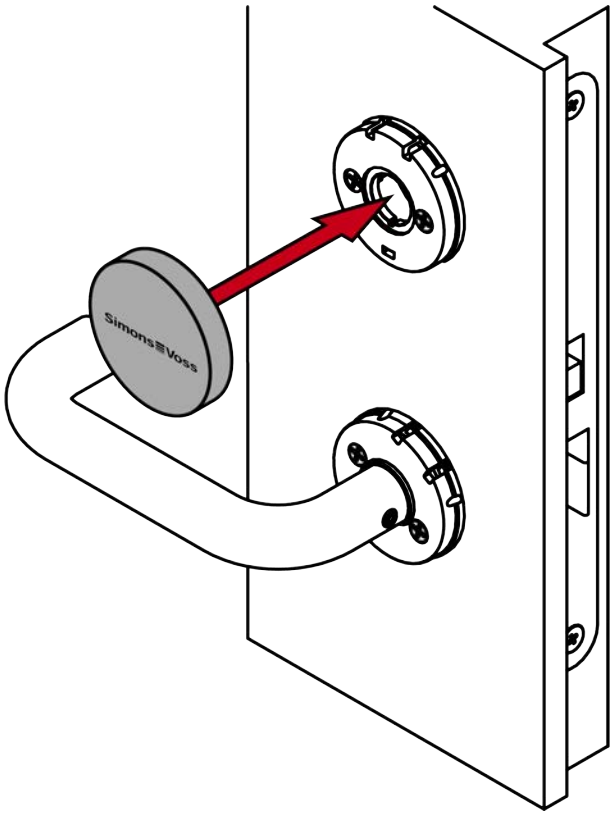




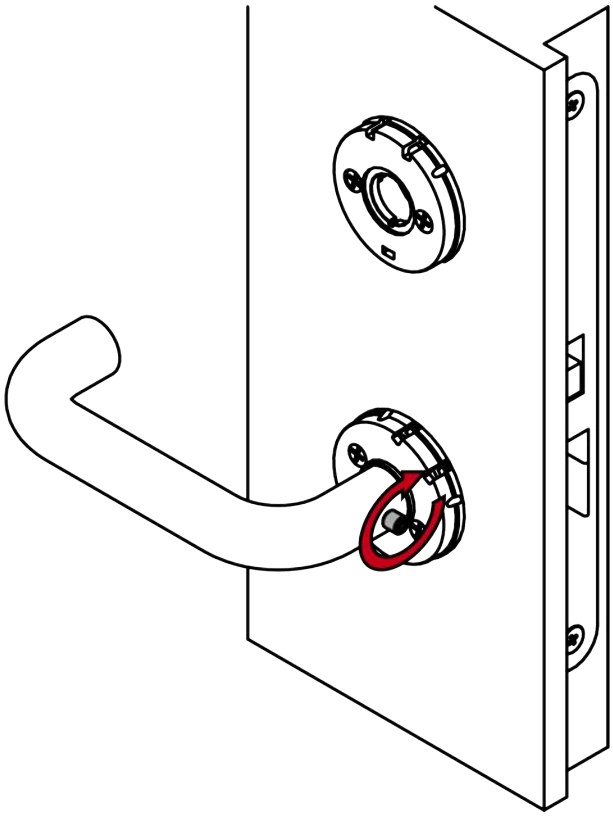
15. For non-MO: fasten the inner handle with the L2 screws (PH2, torque 1.1 Nm).



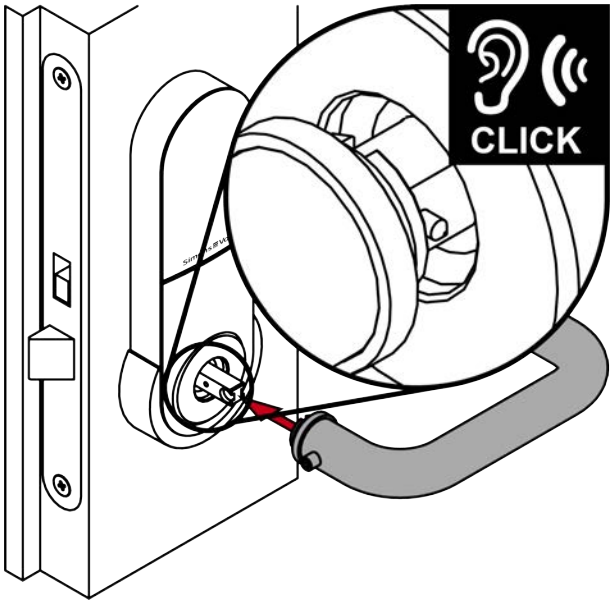
16. For non-MO: position the escutcheon cover on the escutcheon base.



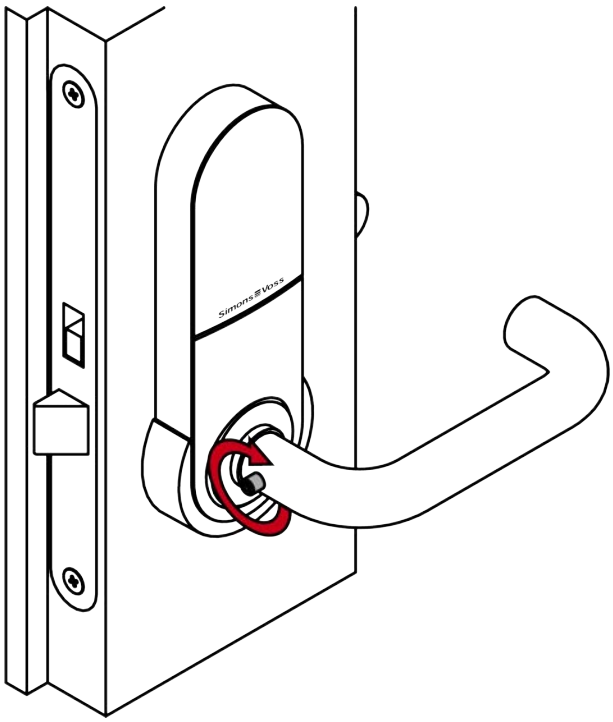
17. Fasten the set screw on the inner handle firmly (TX15, torque 5.0 Nm).



18. Fit the outside handle into position on the fitting.



19. Firmly fasten the grub screw on the outside handle (TX15; torque: 5.0 Nm).



↳ Fitting is now installed.

7.10 Variant F1 (French 195 mm backplate)

7.10.1 Product-specific safety instructions

IMPORTANT

Damage caused by unsuitable tools

If you try to open the case with unsuitable tools, the case may be damaged.

- Use only the supplied SimonsVoss opening tool.

Loss of the precise guidance of the handle

It may be difficult to install on mortise locks with a retaining nut.

- Do not mechanically alter the locking nut. The handle would then lose its precise guidance.

NOTE

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Effect on the mortise lock

The SmartHandle AX acts exclusively on the latch of the mortise lock.

Locking and insurances

Insurance companies place increased demands on a closure.

1. If you want to lock the door under insurance law, use a self-locking panic lock or a locking cylinder in addition to the SmartHandle AX.
2. Pay attention to the approvals according to EN 179.

SmartHandle AX with self-locking panic lock

The SmartHandle AX only offers full functionality with a self-locking panic lock.

1. Combine the SmartHandle AX with a self-locking panic lock.
2. Pay attention to the declarations of conformity of the lock manufacturers according to EN 179.

Conditions for authorisation security

Operation with Mifare Classic and/or PinCode keypad excludes authorisation security class D according to DIN EN 16867:2020.

Sealing escutcheon holes

Any escutcheon holes that exist may be used to manipulate the lock.

1. Seal any escutcheon holes with a blind cylinder, for example.
2. In the case of FH versions, you must be install a brass dummy cylinder or locking cylinder.

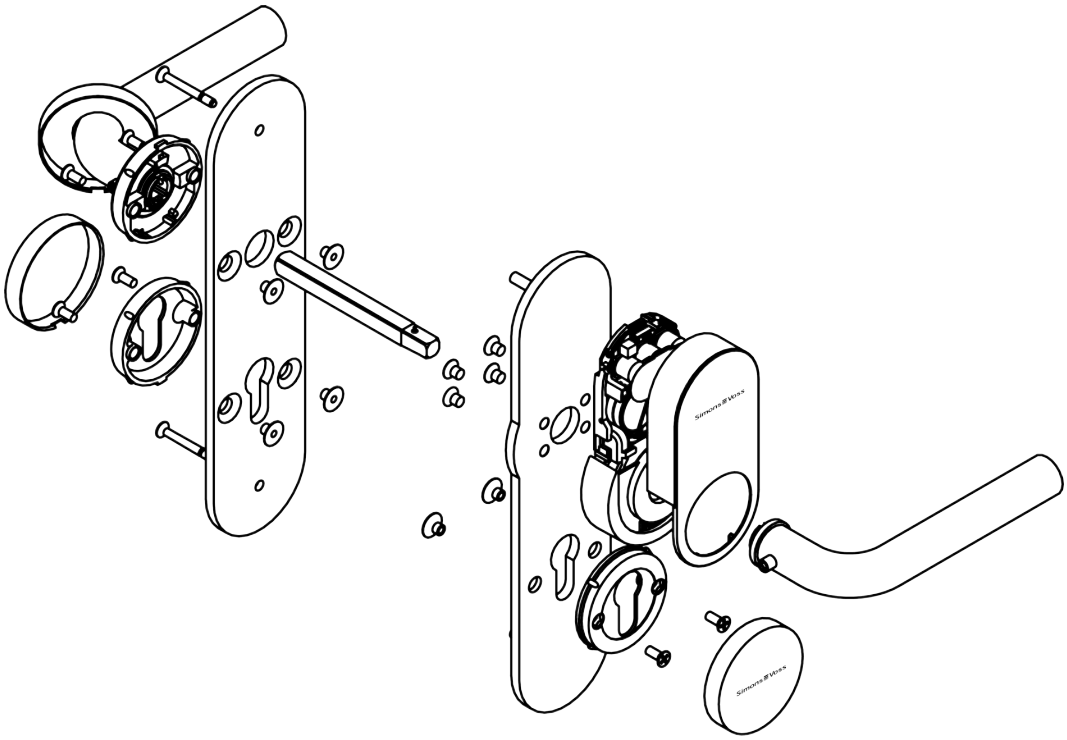
7.10.2 Scope of delivery

- SmartHandle AX (Version for 195 mm French backplate)
- Special tool
- Quick guide

Depending on version:

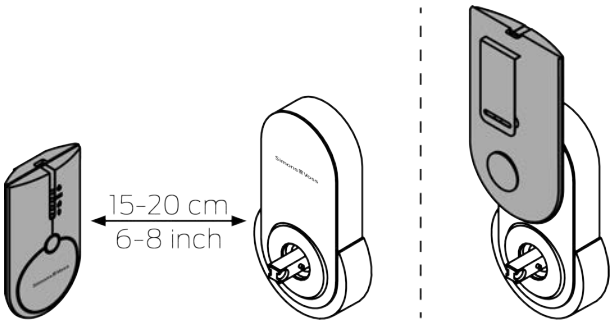
- Adapter set, 7 mm spindle
- Adapter sleeve, 8.5 mm spindle
- Adapter sleeve, 10 mm spindle
- Blank cylinder

7.10.3 Design



7.10.4 Programming the fitting

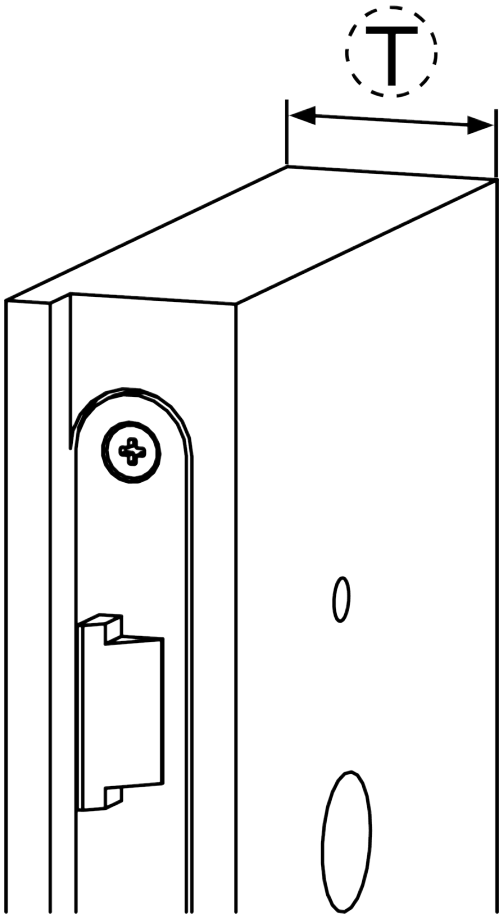
Programme the fitting before installation. You can use different programming devices, depending on the product family.



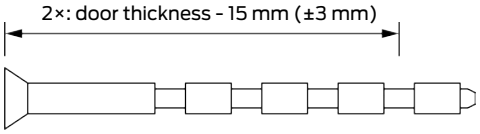
7.10.5 Installing the fitting

- ✓ Door pre-drilled.
- ✓ PH2 screwdriver at hand.
- ✓ TX15 screwdriver at hand.
- ✓ Vernier calliper at hand.
- ✓ Pincers at hand.

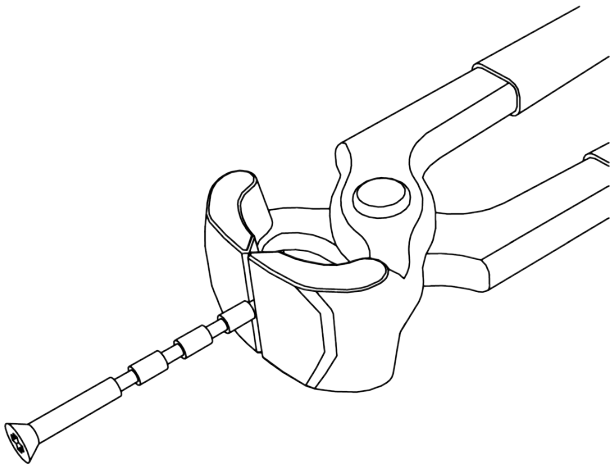
1. Measure the door thickness.



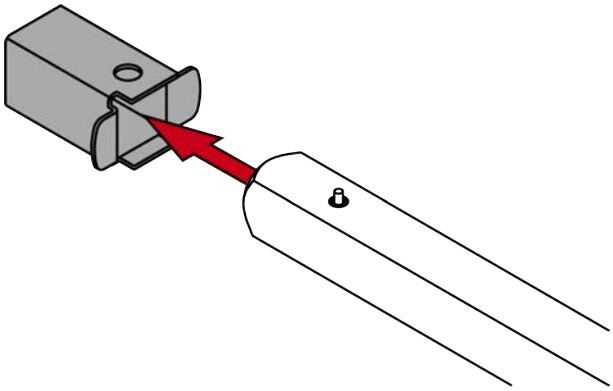
2. Determine the cutting points on the cut-to-length screws.



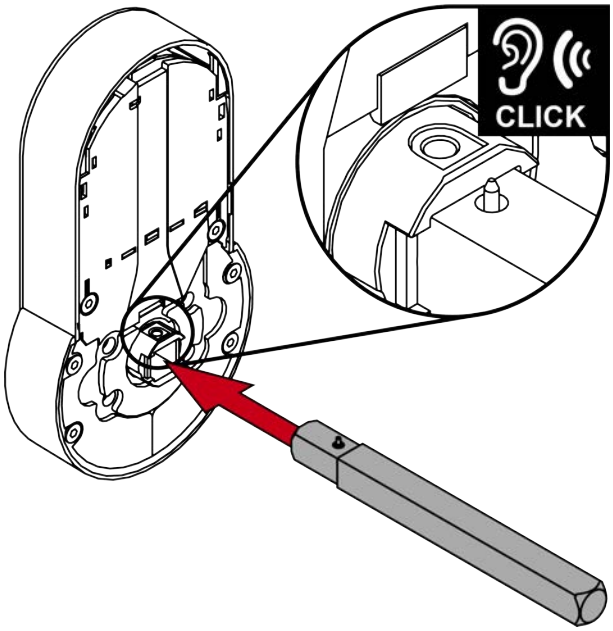
3. Trim the cut-to-length screws.



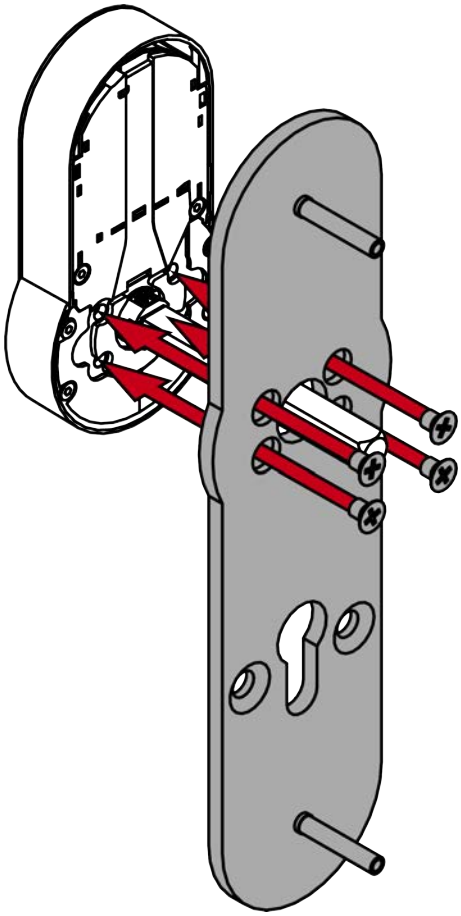
4. For 7 mm spindle: insert the adapter sleeve onto the side of the spindle with the pin.



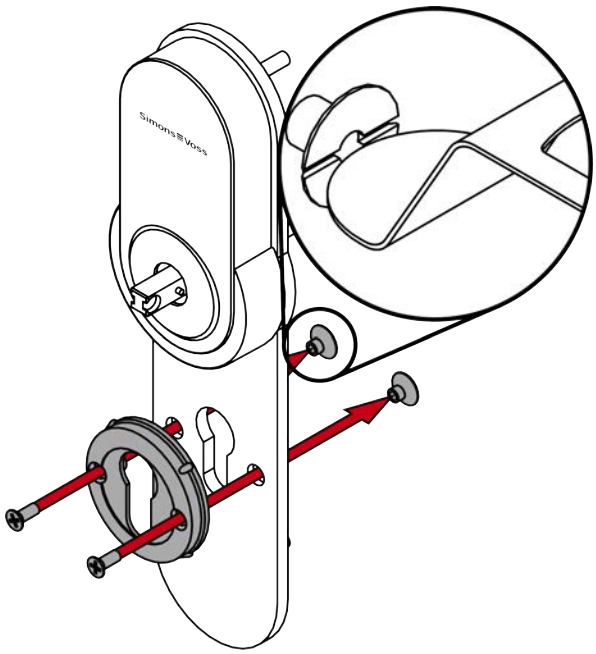
5. Insert the spindle with the pin side into the fitting.



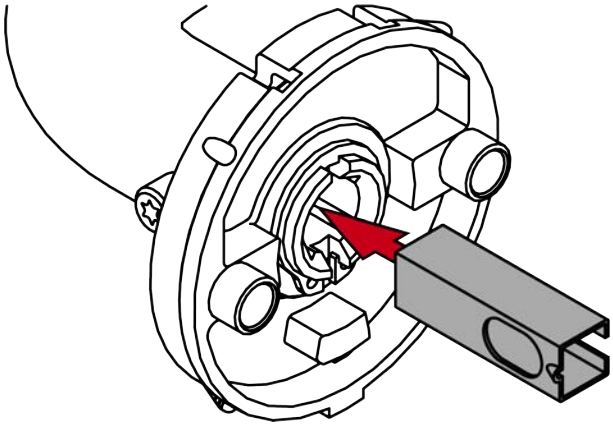
6. Screw the outer adapter plate to the fitting (PH2, torque 1.1 Nm). You can identify the outer adapter plate by the welded stud bolt nuts.



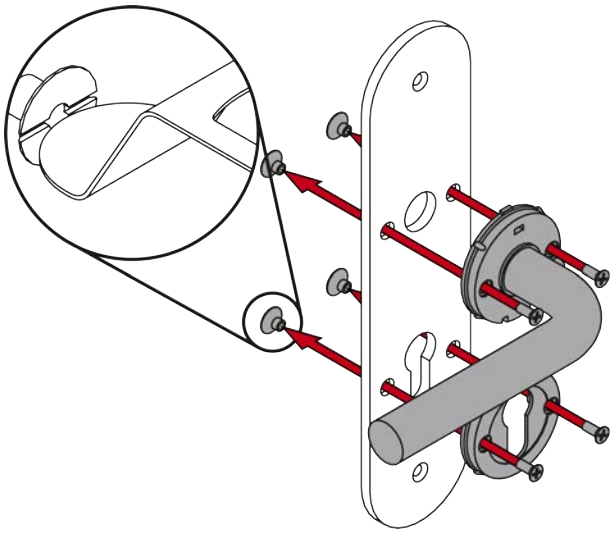
7. Hold the countersunk nuts with the special tool and screw the escutcheon base firmly to the outer adapter plate (PH2, torque 1.1 Nm).



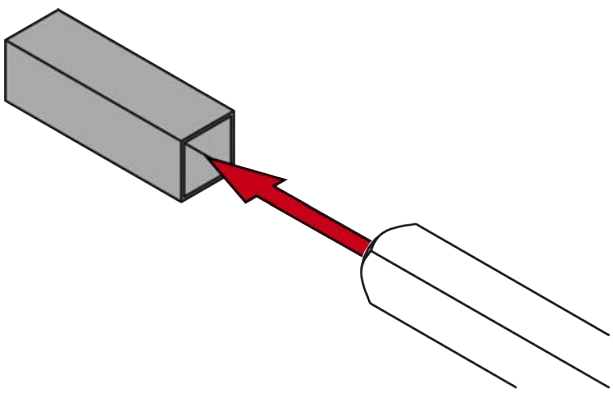
8. For 7 mm spindle: place the adapter sleeve in the inner handle in such a way that the recess faces the grub screw.

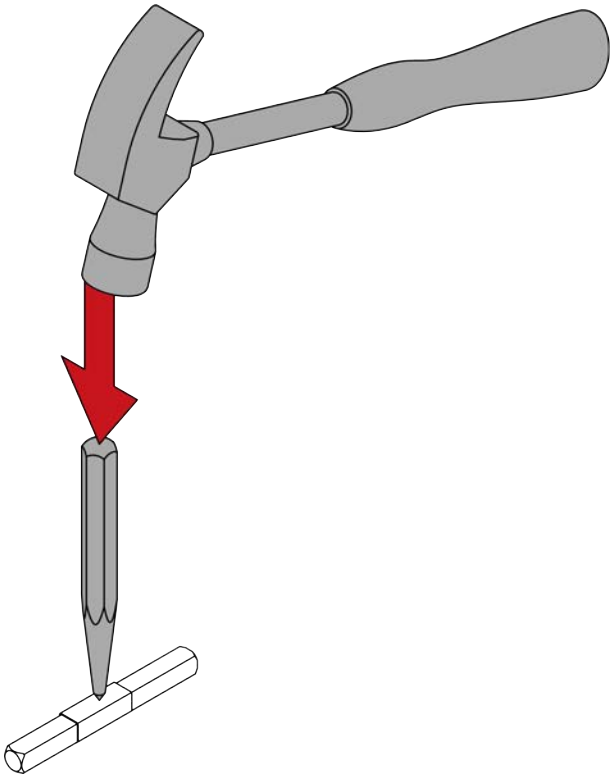


9. Hold the countersunk nuts firmly with the special tool and screw the inner handle and the escutcheon base tightly onto the inner adapter plate (PH2, torque: 1.1 Nm).

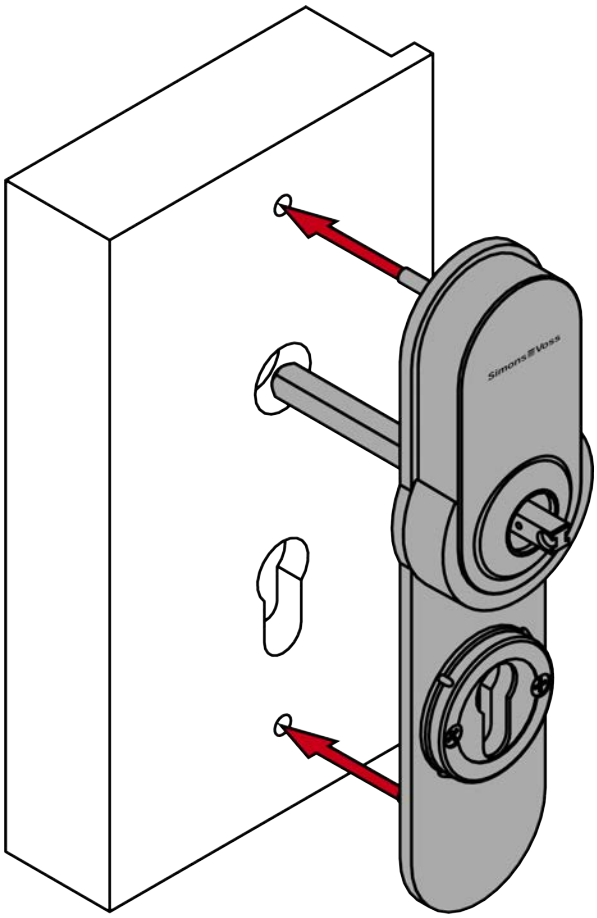


10. For 8.5 mm and 10 mm spindle: slide the adapter sleeve into the centre of the spindle. Use a punch and hammer to make an indent in the adapter sleeve to prevent it from slipping.

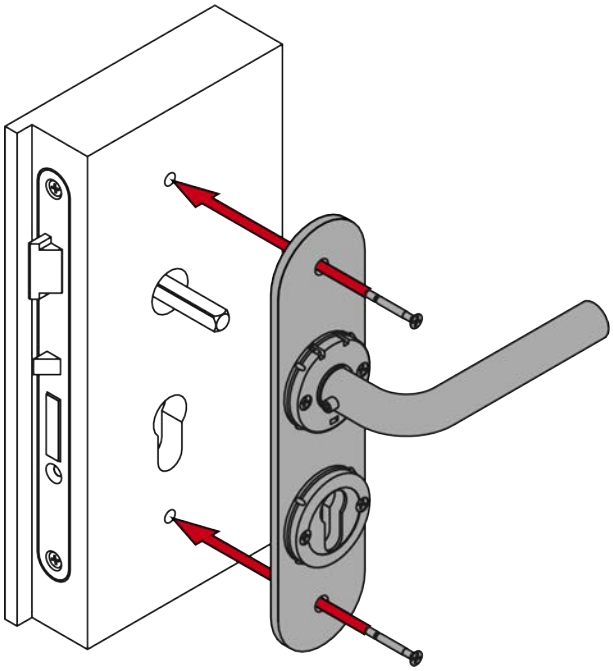




11. Insert the fitting with the adapter plate and the spindle into the door from the outside.



12. Screw the inner handle and adapter plate firmly into place (PH2, torque 1.1 Nm).



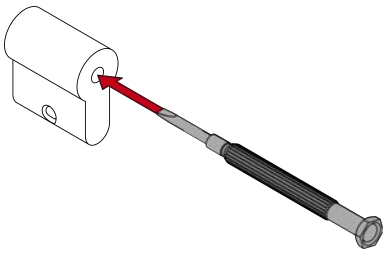
13. For FH: insert the dummy cylinder.

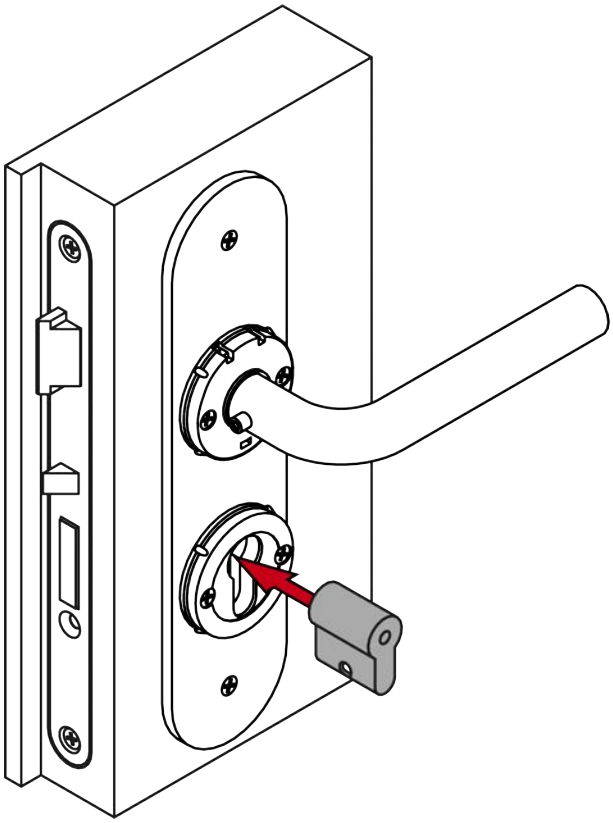
NOTE

Feed the blank cylinder into the hole using a screwdriver

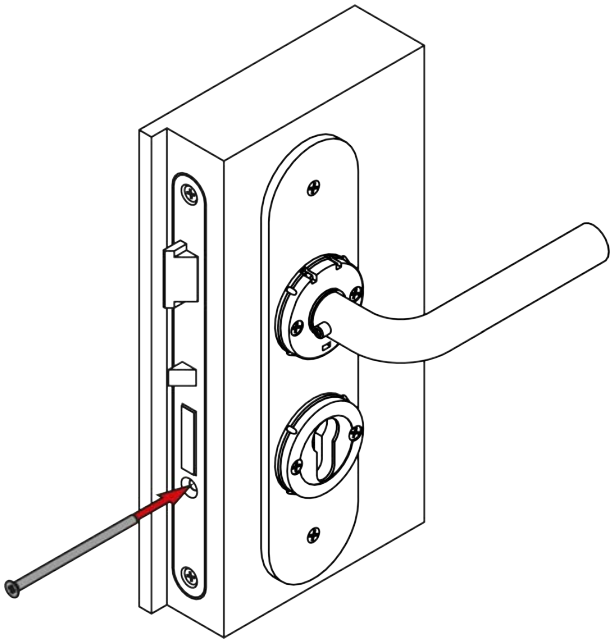
It is difficult to position the blank cylinder correctly, especially in thick doors.

1. Insert a screwdriver into the hole in the blank cylinder.
2. Position the blank cylinder using the screwdriver.

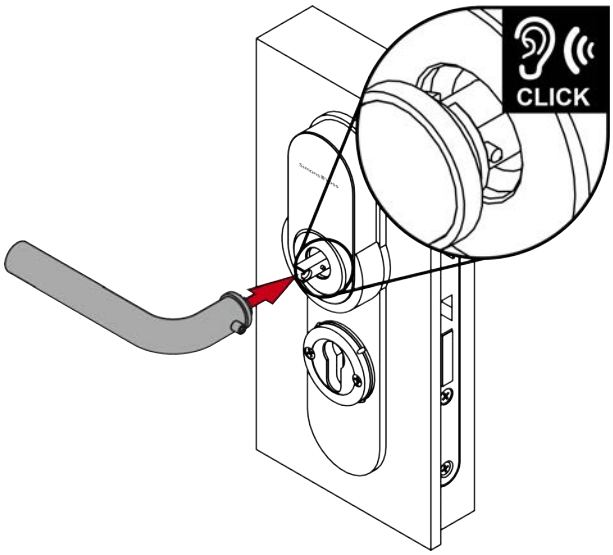




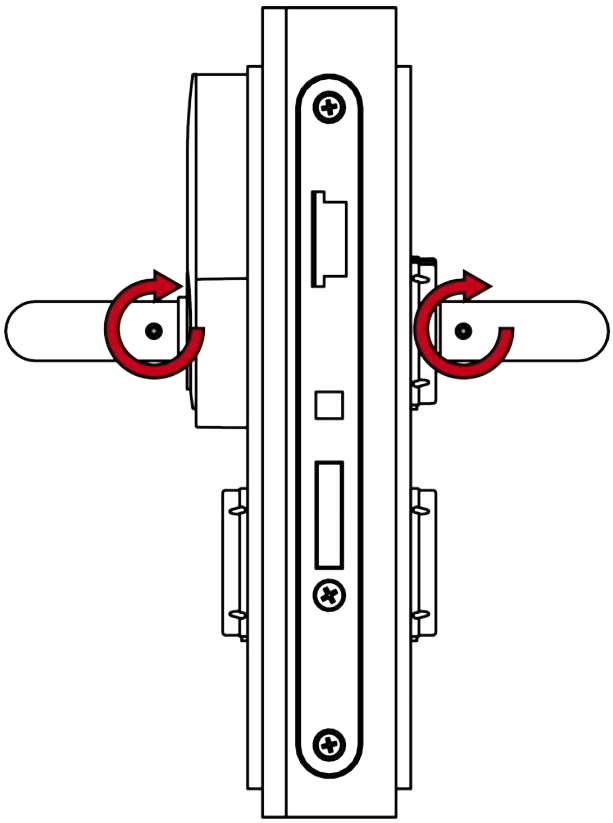
14. For FH: screw the dummy cylinder firmly into place (PH2, torque 1.1 Nm).



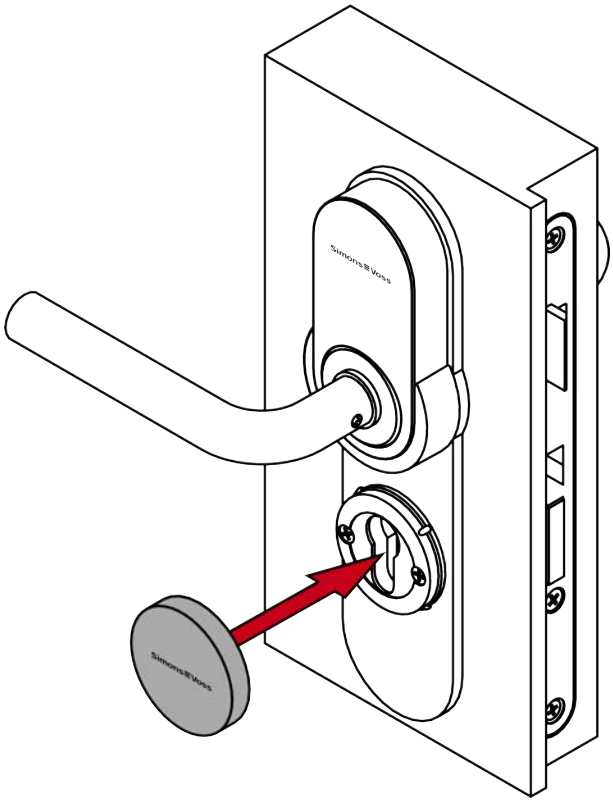
15. Fit the outside handle into position on the fitting.



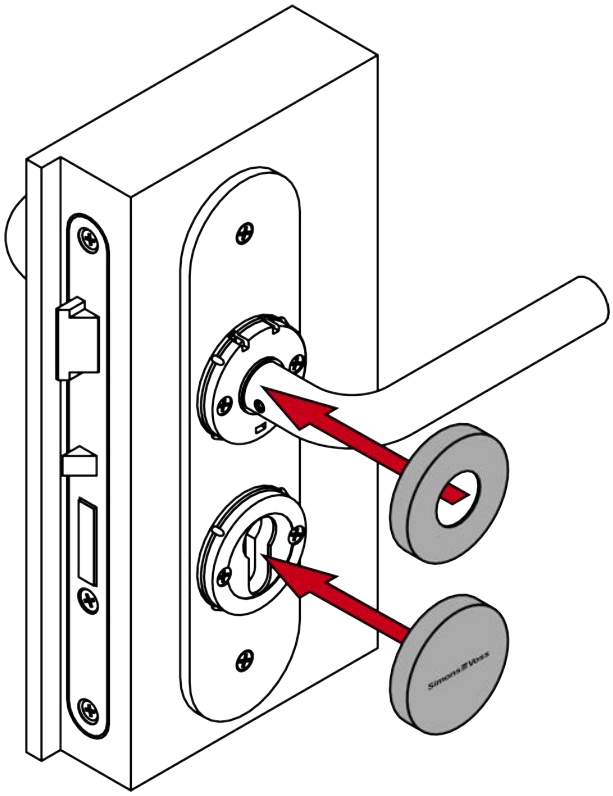
16. Fasten the grub screws firmly onto both handles (TX15, torque 5.0 Nm).



17. Place a cover with the notch facing downwards on the escutcheon base.



18. Place the two cover plates with the notch facing downwards onto the escutcheon base and the inner handle.



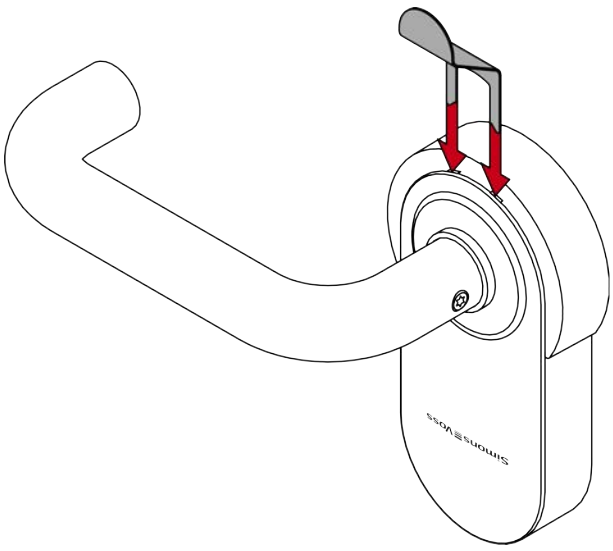
↳ Fitting is now installed.

7.11 LockNode (LN)

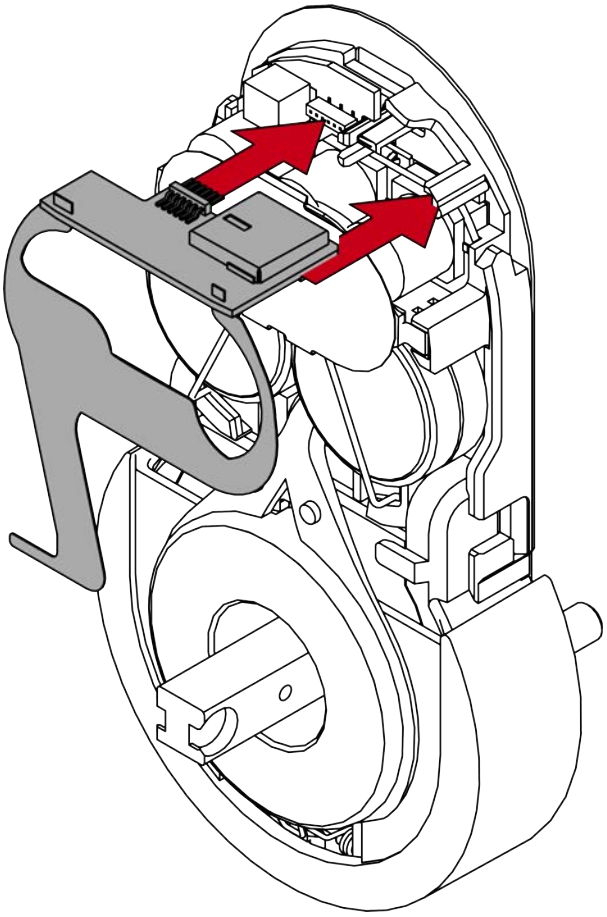
7.11.1 Fitting the LockNode

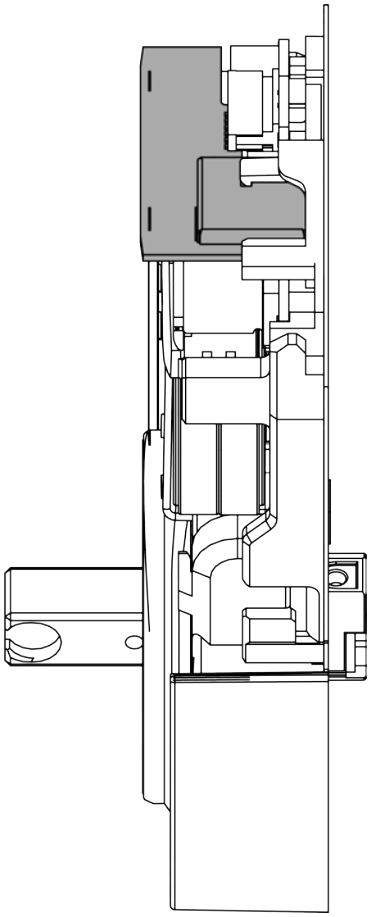
✓ Special tool at hand.

1. Insert the special tool into the fitting's cover inlay.

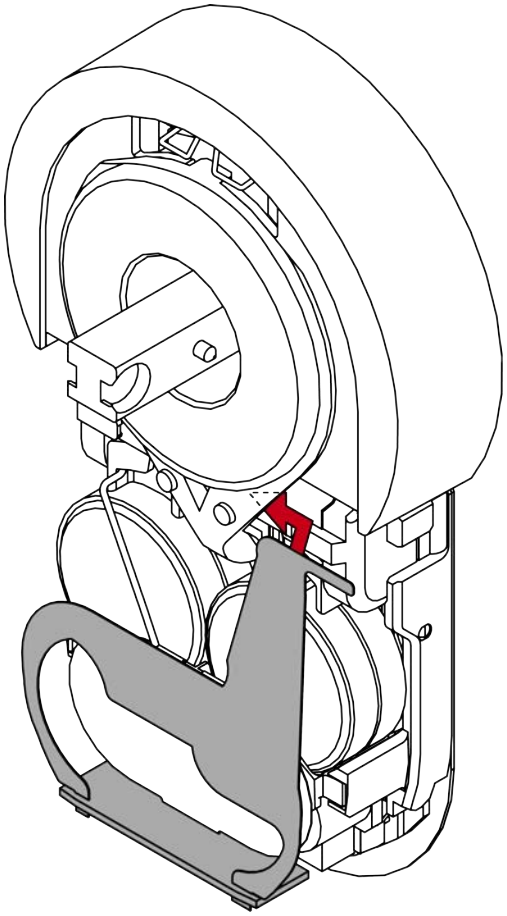


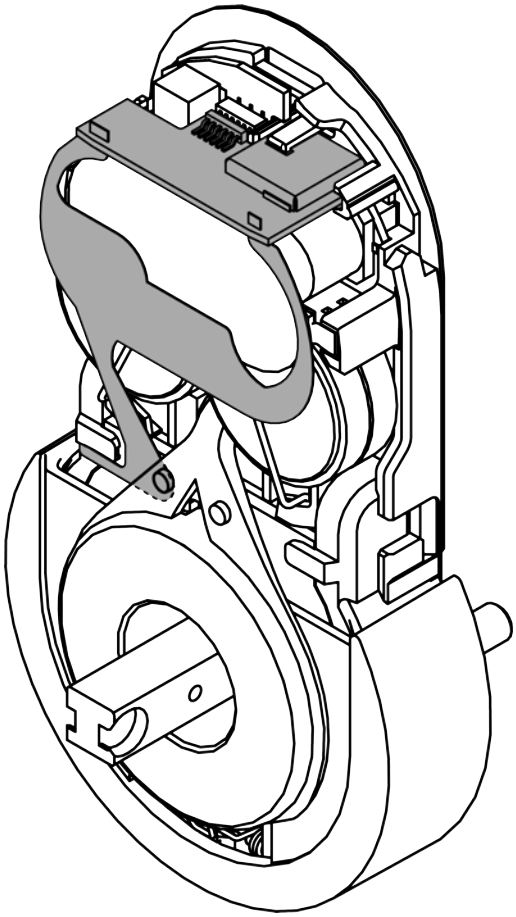
2. Slide the cover downwards and remove it completely.
3. Insert the LockNode circuit board into the slot provided.
   ↳ SmartHandle AX will bleep and flash red four times.





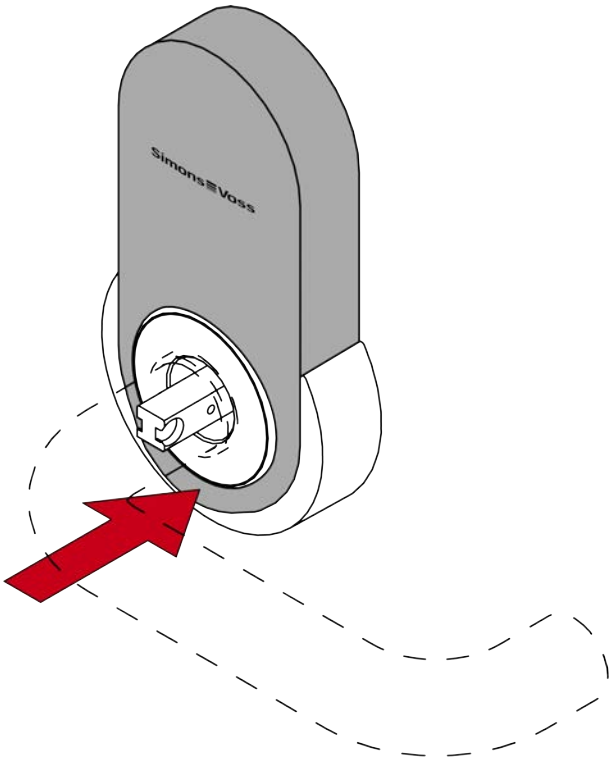
4. Insert the corner of the extension piece under the transparent plastic ring.





5. Place the cover on the fitting.

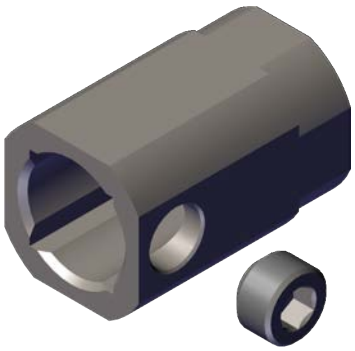
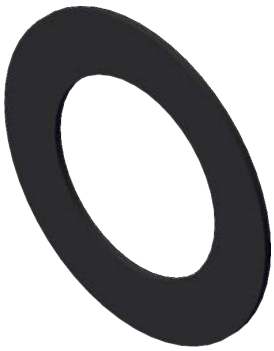
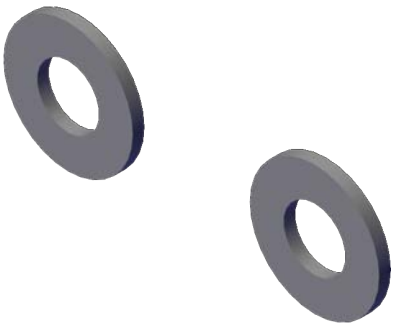
6. Press the cover firmly until it clicks into place.



↳ The LockNode is now installed.

7.12 FSB adapter

7.12.1 Scope of delivery

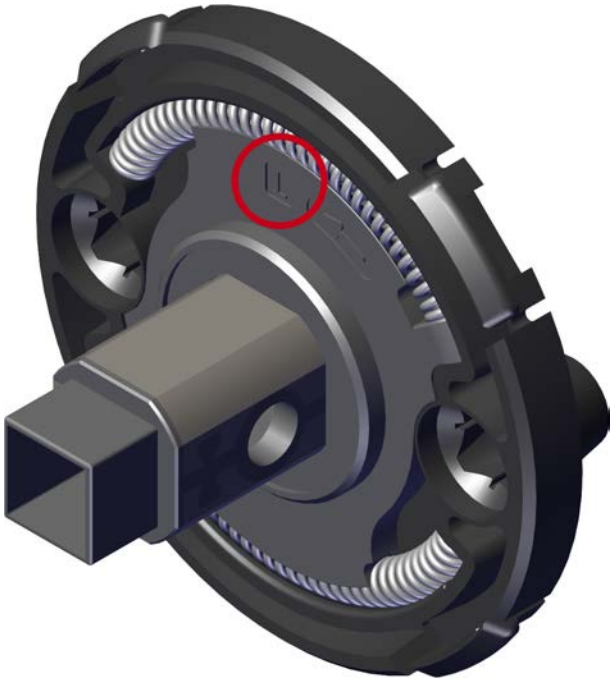
Adapter sleeve for the outer side incl. grub screw 	Black plastic disc for the outer side handle 	Washers for use with the M4 screws in the M5 mount of the FSB adapter on the inner side 

All other parts are available separately from SimonsVoss or FSB, including:

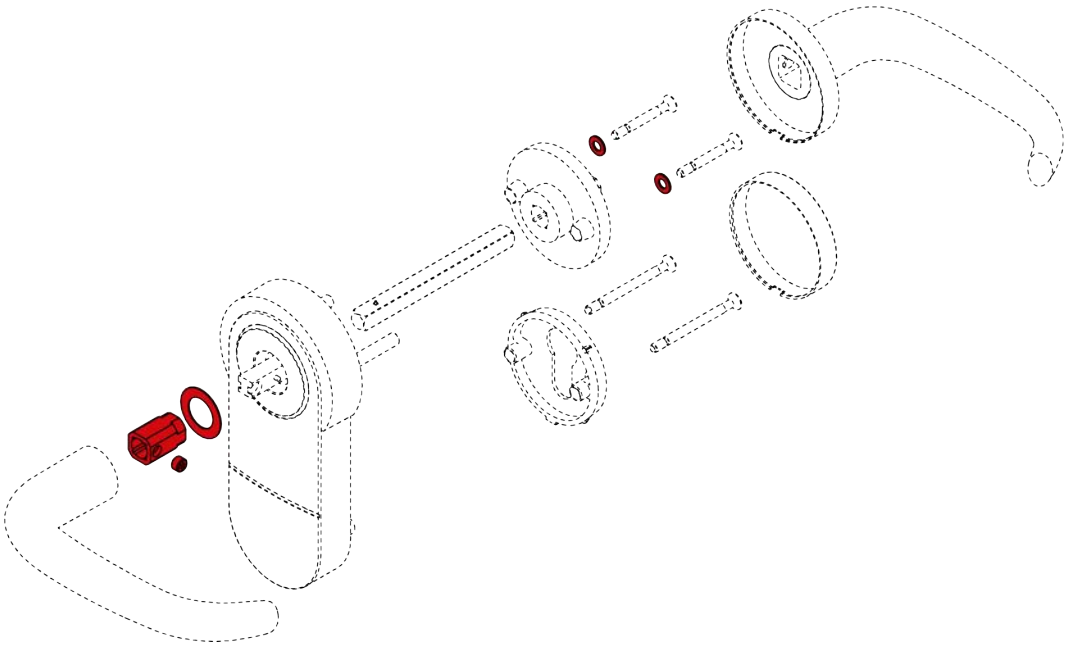
- FSB bearing for the inner side
  - AGL bearing: Direction-dependent, the direction can be identified by an L or R marking on the outer side

- ASL bearing: direction-independent
- FSB handles in various designs
- Rosettes and trim panels
- SmartHandle AX

FSB-AGL bearing for inner side with L marking:



7.12.2 Structure



7.12.3 Install FSB handle with adapter

Preparation for assembly

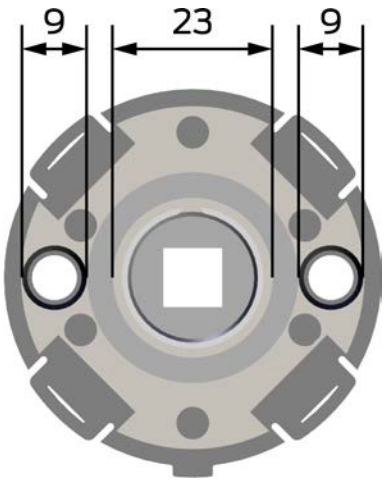
- The SmartHandle AX must be dismantled to replace the outer side handle SmartHandle AX (alternative: order without handle).

  It must also be dismantled if the mounting holes in the door need to be customised.

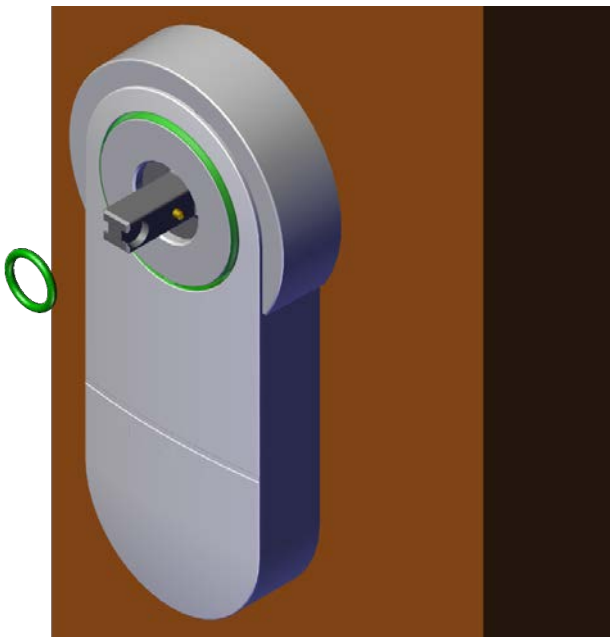
- The support cams of the inner FSB adapter have a diameter of 9 mm; the ring on the door side has a diameter of 23 mm Depending on the door, the mounting holes must be customised accordingly.

- The screws and square spindle previously used SmartHandle AX continue to be used.

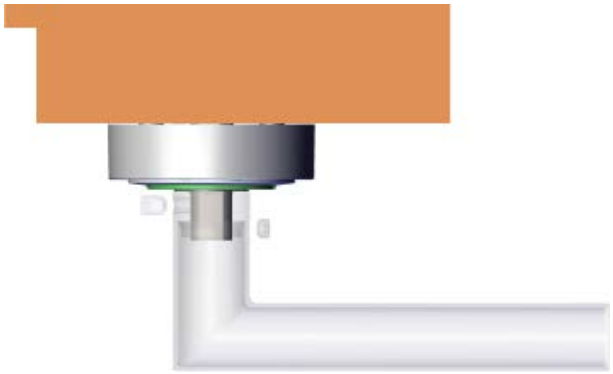
  Depending on the door installation type, it may be necessary to customise the door.



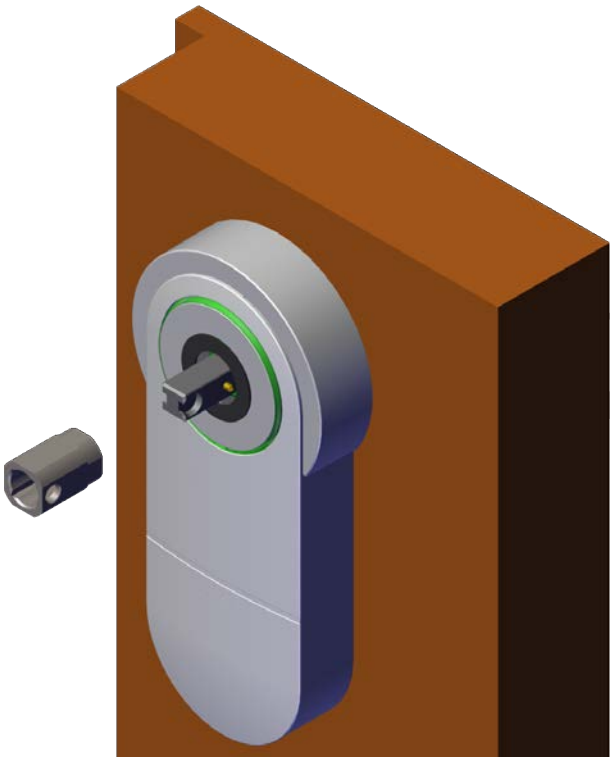
1. Remove the rubber ring from the outer square spindle of the Smart-Handle AX.



2. Place the black plastic disc on the outer square spindle.
3. Align the FSB adapter so that the hole for the handle grub screw is further inwards in the direction of the door.

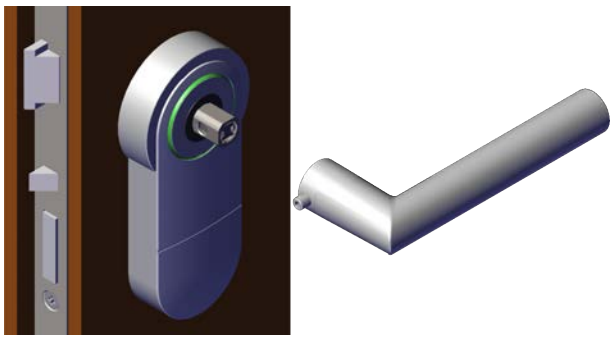


4. Mount the FSB adapter on the outer square spindle.

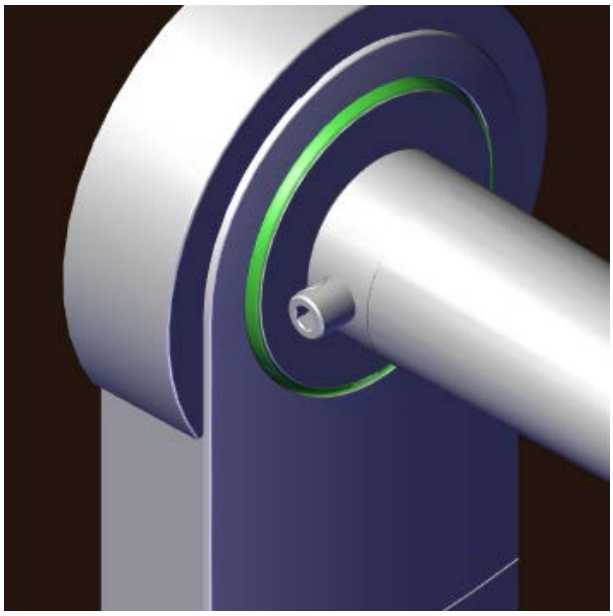


5. Tighten the FSB adapter with the short grub screw.

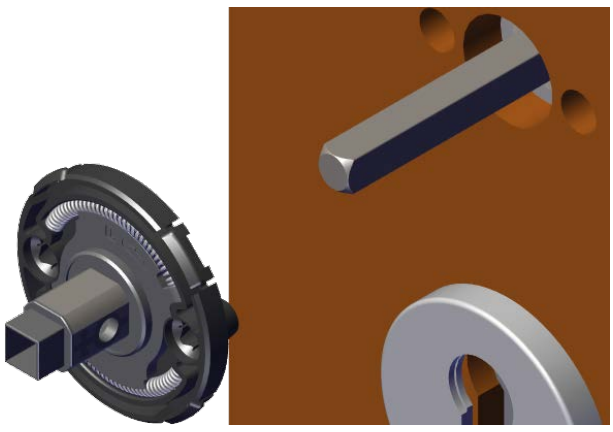
6. Place the FSB outer side handle including pre-assembled grub screw on the adapter.



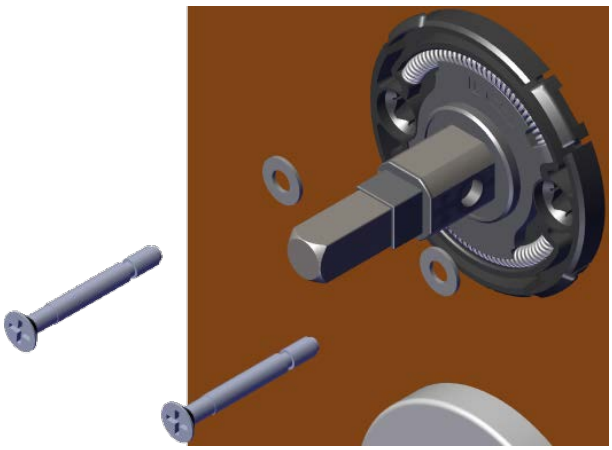
7. Fasten the half cylinder with the fastening screw.



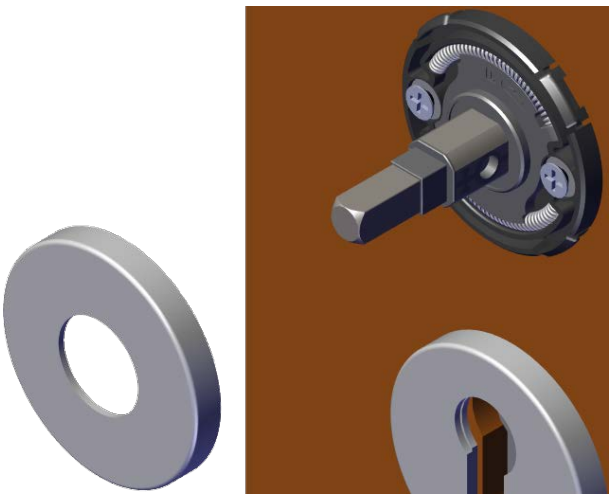
8. Push the FSB bearing onto the square spindle.



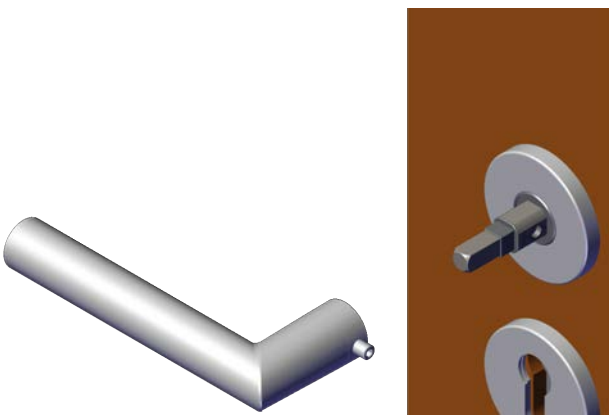
9. Fasten the FSB bearing with the previously used screws and washers. It may be necessary to customise the length of the screws.



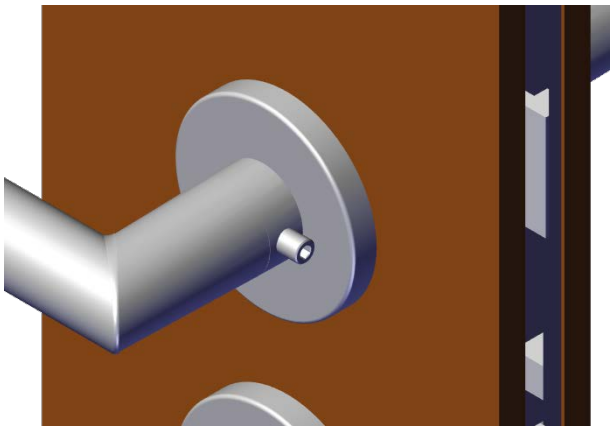
10. Place the FSB rosette cover on the FSB bearing.



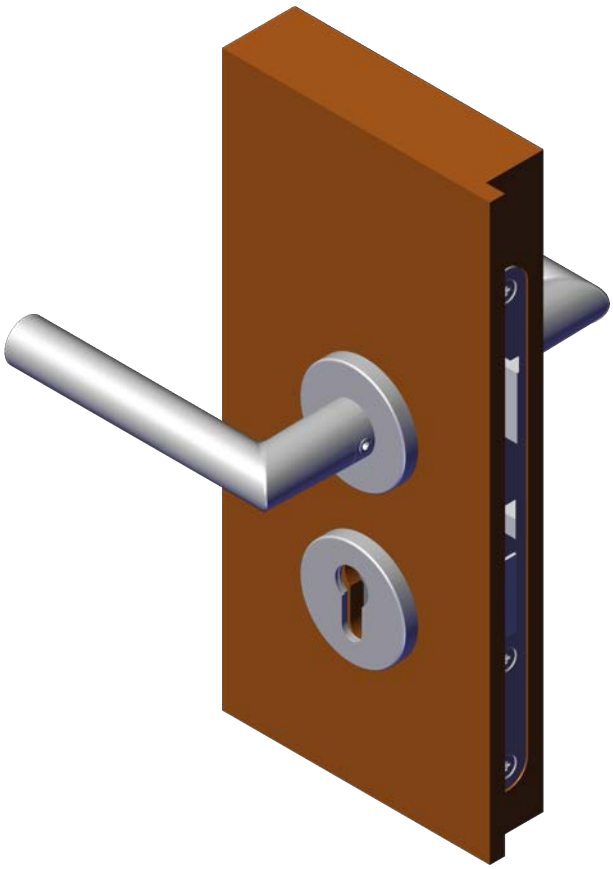
11. Place the FSB inner side handle including pre-assembled grub screw on the spindle.



12. Fasten the FSB inner side lever handle with the grub screw.



↳ The SmartHandle AX is supplied with an FSB handle set.



8. Programming

The configuration is described in the LSM, but is also included in the AXM in a similar form.

✓ Current version of LSM/AXM installed.

NOTE

Compatibility between driver and firmware

To use MIFARE DESFire ident media with a SmartHandle AX with firmware version 1.1.604 or higher, the SV driver 7.27 (from LSM 3.5) or higher is required.

✓ LSM open.

✓ SmartStick AX, SmartCD.MP or SmartCD2.G2 connected (recommendation: SmartStick AX).

1. Select the locking system that you require. Use the ... button to open the locking system properties and use the ▸ and ◂ buttons to select the required lock system.
2. Click on the button to add a new locking device.
   ↳ The "New lock" window will open.
3. Open the ▼ **Area** drop-down menu.
4. Select the area.
5. Open the drop-down menu ▼ **Lock type**.
6. Select the "AX SmartHandle" item.
7. Complete the rest of the form.
8. Click the button Save & next.
   ↳ Locking device has been added.
9. Click on the Exit button.
   ↳ Window closes.
10. Highlight the entry on the SmartHandle AX in the matrix.
11. Tap SmartStick AX on or SmartHandle AX to align with SmartCD.MP SmartHandle AX or position SmartCD.G2 about ten centimetres from SmartHandle AX.

NOTE

Duration of initial programming

A large amount of data is transferred during initial programming. The data transfer speed is significantly higher with a SmartStick AX or a SmartCD.MP (and the programming time is therefore shorter).

- If possible, use a SmartStick AX or a SmartCD.MP for initial programming.

12. Right-click on the SmartHandle AX entry in the matrix to open the context menu.
13. Select the Programming item.
14. Open the drop-down menu ▼ Type.
15. Select the entry "Card reader (SmartCD MP)" or "SmartCD".
16. Click on the Programming button.
    ↳ Programming launches.
17. Wait for programming to complete.

↳ SmartHandle AX is programmed.

NOTE

First transponder activation rejected after initial programming of AX products

If a transponder is the first identification medium to be activated after initial programming, the transponder is rejected once and synchronised with the locking device in the background. Transponders will then function as normal.

9. Configuration

9.1 Set the pulse length

SmartHandle is pre-set to engage for about 5 seconds. The time that it engages can be freely configured between 1 and 25 seconds for each lock in the software. This does not result in a shorter battery life.

9.2 Access control

Identification media bookings are logged if access control is activated. The following information is stored in SmartHandle.

- Date
- Time
- Identification medium ID

Each SmartHandle AX can store up to 3,000 bookings.

NOTE

These settings are only available in the .ZK version.

✓ LSM open.

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Configuration/Data] tab.
3. Enable the ☑ Audit trail checkbox.
4. Click on the Apply button.
5. Click on the Exit button.

↳ Access control is enabled.

Only authorised transponder operations are logged by default. However, you can also log non-authorised bookings (see *Logging unauthorised attempted access events [▸ 247]*). You will find information on how to read access lists in the LSM manual.

9.3 Time zone control

You can load a time zone plan. Identification media will then be granted or denied access based on their time zone group. Up to 100+1 time groups are possible.

You can also implement automatic time-controlled changeover using a time zone plan (see *Time switch-over function [▸ 248]*).

NOTE

These settings are only available in the .ZK version.

✓ LSM open.
✓ Add time zone plan (see LSM manual).

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Door] tab.
3. Open the ▼ **Time zone** drop-down menu.
4. Select your time zone.
5. Click on the Apply button.
6. Click on the Exit button.

↳ Time zone is selected.

9.4 Logging unauthorised attempted access events

Only authorised accesses are logged in storage mode. There is an option to log unauthorised access attempts too.

NOTE

These settings are only available in the .ZK version.

✓ LSM open.

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Configuration/Data] tab.
3. Enable the ☑ Log unauthorised attempts checkbox.
4. Click on the Apply button.
5. Click on the Exit button.
6. Execute programming (see).

↳ Unauthorised access attempts are now also logged.

9.5 Flip flop

Pulse mode (default setting) is switched off and the pulse duration is no longer in effect. When flip flop mode is activated, the SmartHandle changes its status from engaged to disengaged or vice versa each time it is

activated using a transponder/SmartCard. This mode is suitable for situations such as when a door needs to be used freely without a transponder/SmartCard to allow visitors to enter, for instance

9.6 Close range mode

A reduced reader range is required in some situations. The near-field mode reduces the reader range for transponders. This diminishes the impact of possible interferences and prevents the transponder from overriding.

✓ LSM open.

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Configuration/Data] tab.
3. Enable the ☑ Close-up range mode checkbox.
4. Click on the Apply button.
5. Click on the Exit button.
6. Execute programming (see).

↳ Near-field mode is activated.

9.7 Time switch-over function

The fifth group in the time zone plan is relevant for time change-over.

NOTE

These settings are only available in the .ZK version.

Assignment of a time zone plan

✓ LSM open.

✓ Add time zone plan (see LSM manual).

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Door] tab.
3. Open the ▼ **Time zone** drop-down menu.
4. Select your time zone.
5. Click on the Apply button.
6. Click on the Exit button.

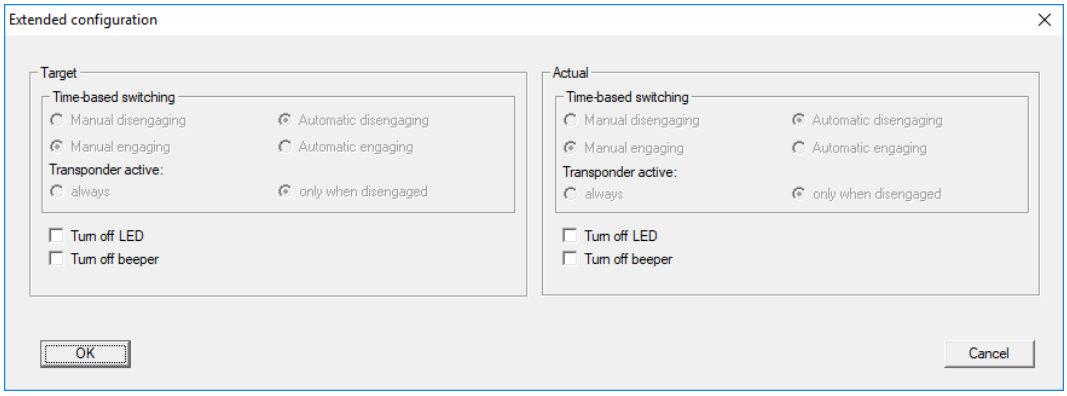
↳ Time zone is selected.

Activating time zone control and time change-over

Whereas time zone control itself can only influence identification media authorisations, the time change-over also activates time-dependent switching of the relay in the controller. Both need to be enabled.

✓ LSM open.
✓ Time zone plan assigned.

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Configuration/Data] tab.
3. Enable the ☑ Time zone management checkbox.
4. Enable the ☑ Time switching checkbox.
5. Click on the Extended configuration button.
   ↳ The "Extended configuration" window will open.



6. Set the options for automatic and manual locking and unlocking in the "Time-based switching" section as you require (see *Time-controlled changeover [▸ 250]*).
7. Click on the OK button.
   ↳ Window closes.
8. Click on the Apply button.
9. Click on the Exit button.

↳ Time zone control and time change-over are activated.

Editing the time zone plan

See LSM manual to edit the time zone plan.

9.8 Ignore activation or expiry date

Identification media can be given a validity date. This validity date can be ignored if identification media need to be used regardless.

✓ LSM open.

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Configuration/Data] tab.
3. Enable the ☑ Ignore activation or expiry date checkbox.
4. Click on the Apply button.
5. Click on the OK button.
6. Execute programming (see).

↳ Activation or expiry date is ignored.

9.9 No audible programming feedback signals

You should check this field if you do not want audible programming feedback signals to be emitted while you are programming a SmartHandle, for example.

This function is particularly advantageous when programming via the WaveNet (network) as the audible signal from SmartHandle cannot be heard as a general rule due to distance.

9.10 Activate card reader

You need to activate the ☑ Card interface box in the locking device properties when using a SmartHandle Hybrid or MP.

9.11 Extended configuration

9.11.1 Time-controlled changeover

NOTE

These settings are only available in the .ZK version.

Unlock in the authorised time period			
Engage automatically		Engage manually	
always	only when disengaged	always	only when disengaged

Unlock in the authorised time period			
SmartHandle AX: engages to open as soon as authorisation starts in the time zone plan. Behaves in the same way as a flip-flop for the remaining authorised time period.	SmartHandle AX: engages to open as soon as authorisation starts in the time zone plan. No influence by identification media for the rest of the authorised time period.	SmartHandle AX: engages to open as soon as identification medium is activated after authorisation starts in the time zone plan. Behaves in the same way as a flip-flop for the remaining authorised time period.	SmartHandle AX: engages to open as soon as identification medium is activated after authorisation starts in the time zone plan. No influence by identification media for the rest of the authorised time period.

Locking in the non-authorised time period			
Disengage automatically		Disengage manually	
always	only when disengaged	always	only when disengaged
SmartHandle AX: disengages as soon as authorisation ends in the time zone plan. Identification media engage ready to open during non-authorised time period for pre-set pulse duration.	SmartHandle AX: disengages as soon as authorisation ends in the time zone plan. Identification media engage ready to open during non-authorised time period for pre-set pulse duration.	SmartHandle AX: disengages as soon as the identification medium is activated. Identification media engage ready to open during non-authorised time period for pre-set pulse duration.	Not possible

9.11.2 Turn off LED/beeper

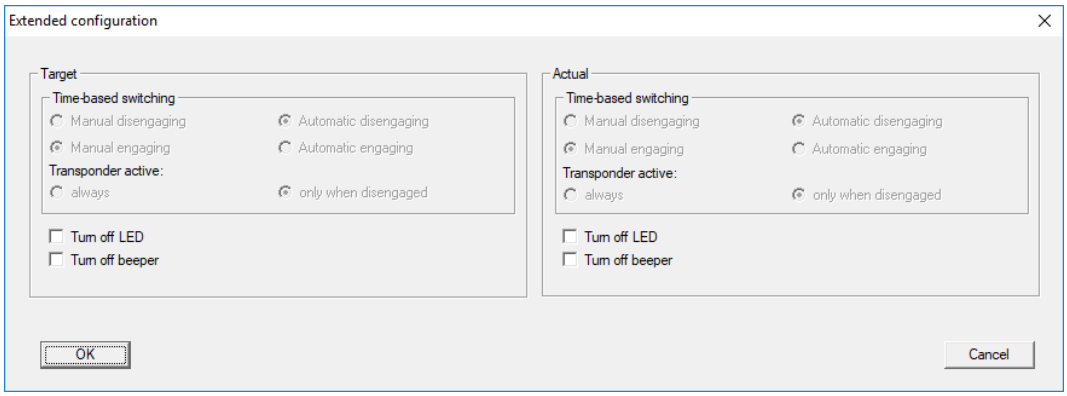
You can also adjust signal settings as you wish.

Open extended configuration

✓ LSM open.

1. Double-click on the SmartHandle AX entry in the matrix to open the settings.
2. Change to the [Configuration/Data] tab.

3. Click on the Extended configuration button.
   ↳ The "Extended configuration" window will open.



Turn off LED/beeper

✓ LSM open.
✓ "Extended configuration" window open.

1. Enable the ☑ Turn off LED checkbox or the ☑ Turn off beeper checkbox.
2. Click on the OK button.
   ↳ Window closes.
3. Click on the Apply button.
4. Click on the Exit button.
5. Execute programming (see).

↳ LED or beeper is switched off.

10. Operation

The SmartHandle AX can be operated in different ways, depending on the programming.

NOTE

Gap

The size of the gap affects the wireless connection.

1. If you use a transponder, you must position it between five and thirty centimetres away.
2. If you use a passive medium, place it under the groove on the cover. If there is no groove, position the identification medium on the SimonsVoss inscription.

Pulse opening

To use pulse opening, ensure that the ☐ Flip Flop checkbox is disabled.

✓ Identification medium is authorised to use the SmartHandle AX.

1. Position the identification medium.
2. If you are using a transponder, press it once.
   ↳ SmartHandle AX will beep and flash green twice.

↳ The SmartHandle AX will remain open for the pre-set pulse interval.

Flip-flop mode

To use flip-flop mode, ensure that the ☑ Flip Flop checkbox is enabled.

✓ Identification medium is authorised to use the SmartHandle AX.

1. Position the identification medium.
2. If you are using a transponder, press it once.
   ↳ When the SmartHandle AX engages to open, it will beep and flash (short-long).
   ↳ When SmartHandle AX is decoupled, it will beep and flash (long-short).

↳ The SmartHandle AX will remain engaged to open or decoupled until it is activated again.

11. Status messages

11.1 Battery status feedback

OK	Batteries OK. You do not need to do anything.
Low	Batteries low. Change the batteries.
Very low	Batteries very low. Replace the batteries immediately.

11.2 Emergency release

11.3 Deactivated

If SmartHandle is deactivated via a SimonsVoss Block Lock or the SV network, the programming software automatically checks this box.

11.4 Engaged

This box is checked when SmartHandle is engaged for use if a time switch-over or flip-flop mode is programmed.

12. Signal

Signal	Meaning
2x short before engaging to open (green)	Identification medium accepted – normal activation
1 x short (red)	Identification medium not authorised
1× short, 1× long (green)	Flip-flop mode: Locking device is now engaged ready to open
1× long, 1× short (green)	Flip-flop mode: Locking device is now disengaged

13. Battery warning

You or the user will be warned of a failure of the SmartHandle AX by flat batteries. Replace the batteries in time (see *Battery replacement [▸ 257]*). The electronic part with the batteries is located on the outside. If the batteries are completely empty, you can still reach the SmartHandle AX to change the batteries.

13.1 Warning level

warning level	Signalling	Meaning
Warning Level 1	8 x short bleep/flash before engagement (red)	Batteries are nearly dead and must be changed.
Warning Level 2	16 x short bleep/flash before engagement (red)	Batteries are very weak and must be changed immediately.

14. Battery replacement

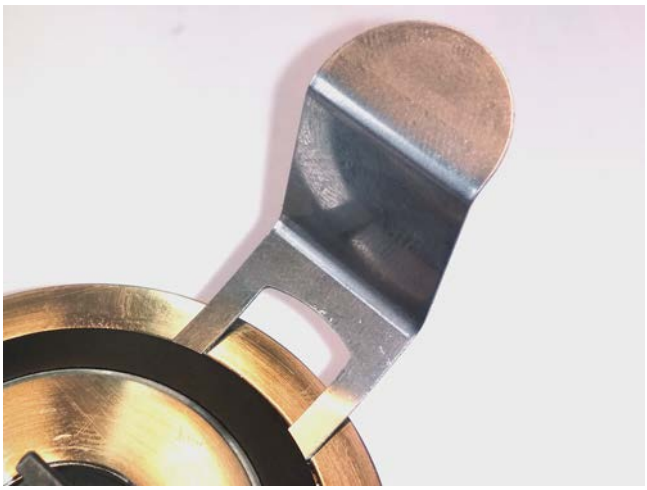
14.1 Instructions on battery replacement

- Only specialists may replace the batteries.
- Do not touch electronics/components; do not allow them to come into contact with oil, paint, moisture, alkali or acids.
- Only use batteries approved by SimonsVoss.
- The batteries used may pose a fire or burn hazard if handled incorrectly. Do not recharge, open, heat or burn these batteries. Do not short-circuit!
- Dispose of old or used batteries correctly. Store out of children's reach.
- Check the polarity of the batteries.
- The batteries will have discharged to roughly the same level. That is why you must replace all batteries.
- Do not touch the contacts on the new batteries with your hands when replacing the old ones. Use cotton gloves free of fat or grease.
- When replacing the batteries, make sure that no pressure is applied to the electronics or that they are not damaged in any other way.

14.2 Procedure

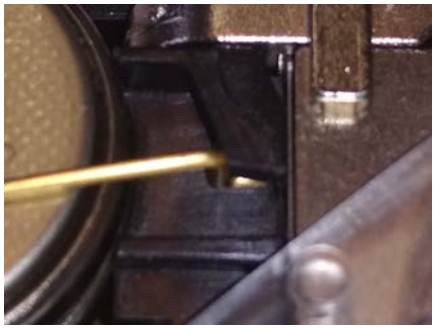
The batteries are located under the cover of the SmartHandle AX. You will need the SimonsVoss installation tool to change the batteries.

1. Place the SimonsVoss installation tool in the recesses provided in the cover. These are located on the side facing away from the electronics.



2. Push the SimonsVoss mounting tool into the recesses until the cover pops out.
3. Pull the cover downwards until it clicks loose.
4. Remove the cover.

5. Press the end of the battery clip inwards until it pops out.

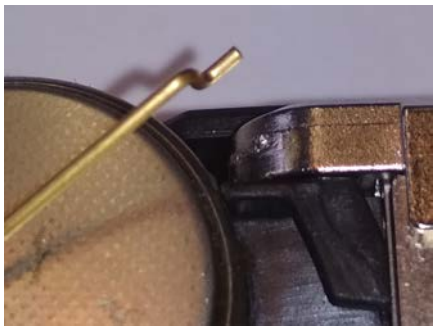


IMPORTANT

Loss of the battery clip

The battery clip is plugged in. If both ends of the clip are pushed inwards and released from the holder at the same time, the battery clip may fall out.

1. Change one side first, then the other.
2. Do not open both ends of the battery clip at the same time.



6. Remove the batteries.
7. Insert new batteries.
8. Slide the end of the battery clip back in.
9. Push the end of the battery clip down.
10. Slide the end of the battery clip into the holders provided.
11. Do the same with the other side.

12. Slide the cover back onto the SmartHandle AX.
13. Press the cover firmly in the area of the recesses for the mounting tool until it snaps into place.
14. Read off the battery status (see LSM Handbook).

↳ Batteries are replaced.

15. Maintenance, cleaning and disinfection

- If necessary, clean the SmartHandle AX with a soft and, if necessary, damp cloth.
- When disinfecting the SmartHandle AX, only use agents that are expressly intended for disinfecting sensitive metal or plastic surfaces.
- If necessary, change the battery.

16. Disassembly

You will also find information on disassembly in the supplied quick guides.

16.1 Variante A0 (Standing/PAS24)

The following tools are required for disassembly:

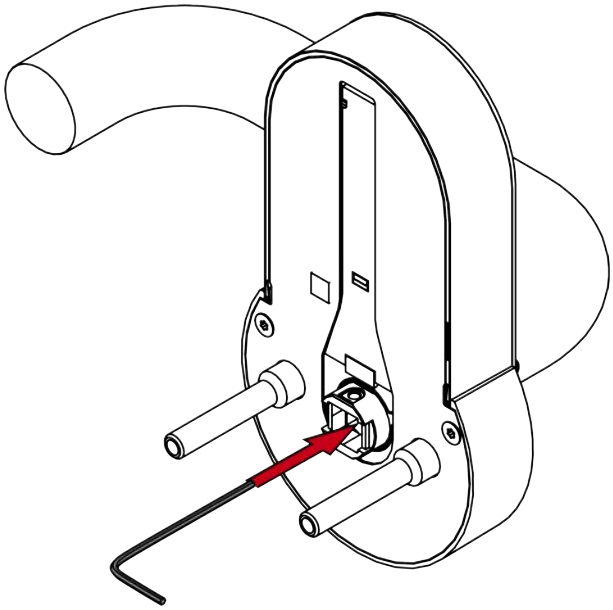
- TX-15 screwdriver
- Slotted-head screwdriver
- PH-2 screwdriver
- 1.5 mm hex key

Remove escutcheons

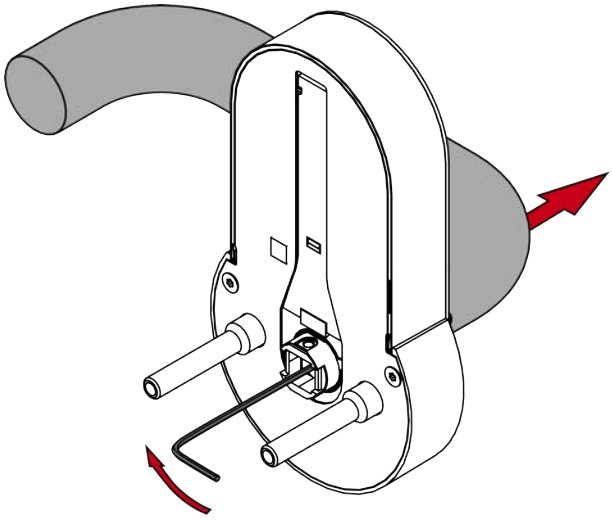
1. Disassemble electronic cylinders if necessary.
2. Unscrew the headless screws of both handles.
3. If necessary, remove the escutcheon covers with a slotted screwdriver.
4. If necessary, remove the escutcheon covers.
5. If necessary, unscrew the escutcheon bases.
6. Remove the inlay of the inside handle with a slotted screwdriver.
7. Unscrew the screws of the base of the inside handle.
8. Remove the inside handle.
9. Pull out the assembly with the square.
   ↳ SmartHandle AX is removed from the door.
10. Push the locking pin of the square inward and pull the square out of the assembly.
    ↳ The square is removed.

Remove handle from assembly

1. Insert the hex key into the hole provided in the square socket.



2. Push the hex key towards the closest edge and hold it down.
3. Pull the handle off the assembly.



↳ SmartHandle AX is now removed.

16.2 Variant A1/A2 (suspended short/long)

The following tools are required for disassembly:

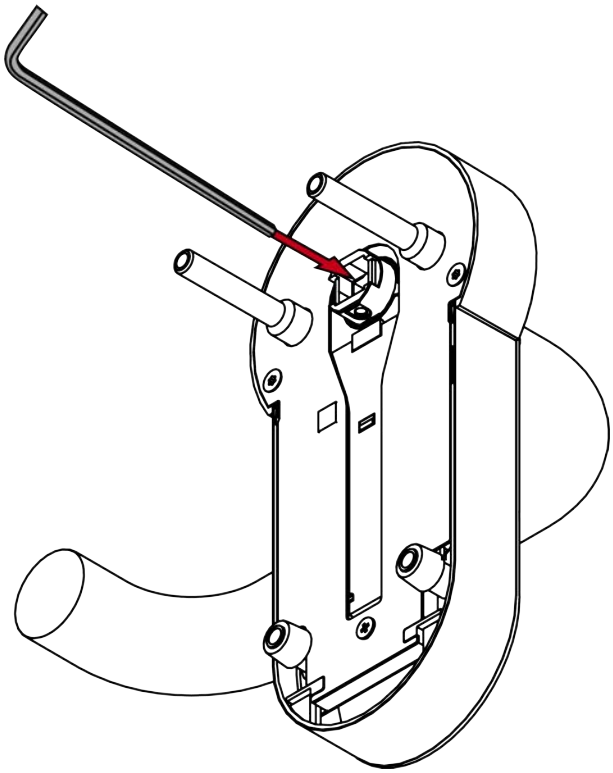
- TX-15 screwdriver
- Slotted-head screwdriver
- PH-2 screwdriver
- 1.5 mm hex key

Remove escutcheons

1. Disassemble electronic cylinders if necessary.
2. Unscrew the headless screws of both handles.
3. If necessary, remove the escutcheon covers with a slotted screwdriver.
4. If necessary, remove the escutcheon covers.
5. If necessary, unscrew the escutcheon bases.
6. Remove the inlay of the inside handle with a slotted screwdriver.
7. Unscrew the screws of the base of the inside handle.
8. Remove the inside handle.
9. Pull out the assembly with the square.
   ↳ SmartHandle AX is removed from the door.
10. Push the locking pin of the square inward and pull the square out of the assembly.
    ↳ The square is removed.

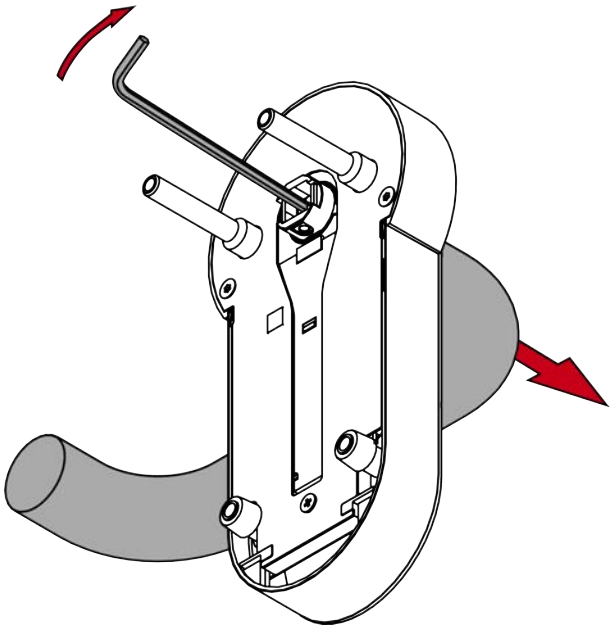
Remove handle from assembly

1. Insert the hex key into the hole provided in the square socket.



2. Push the hex key towards the closest edge and hold it down.

3. Pull the handle off the assembly.



↳ SmartHandle AX is now removed.

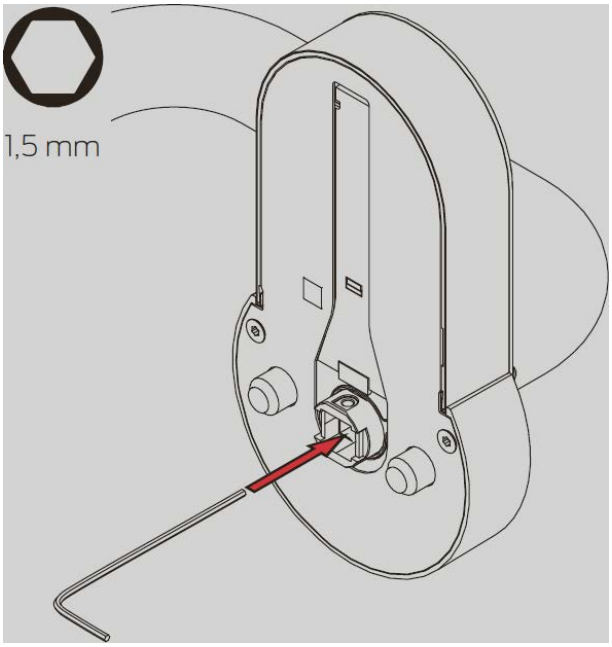
16.3 Variant A3 (steel frame)

Remove fittings

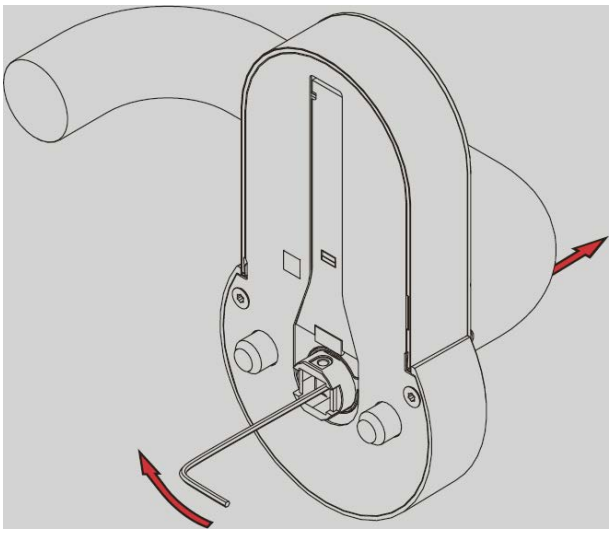
1. Disassemble electronic cylinders if necessary.
2. Unscrew the headless screws of both handles.
3. If necessary, remove the escutcheon covers with a slotted screwdriver.
4. If necessary, remove the escutcheon covers.
5. If necessary, unscrew the escutcheon bases.
6. Remove the inlay of the inside handle with a slotted screwdriver.
7. Unscrew the screws of the base of the inside handle.
8. Remove the inside handle.
9. Take off the cover.
10. Unscrew the small screw at the round end.
11. Slide the assembly upwards.
12. Pull the assembly with the square end out of the adapter plate.
13. Unscrew the adapter plate.
    ↳ SmartHandle AX is removed from the door.
14. Push the locking pin of the square inward and pull the square out of the assembly.

Removing the handle from the assembly

1. Insert the Allen wrench into the hole provided in the square socket.



2. Push the Allen wrench towards the nearer edge and hold it pressed.



3. Remove the handle from the assembly.

↳ SmartHandle AX is disassembled.

16.4 Variant A4 (Panic bar)

16.4.1 BKS

Remove fittings

1. Remove the panic bar as described in the manufacturer's documentation except for the adapter plate.

NOTE

Third party product with own documentation

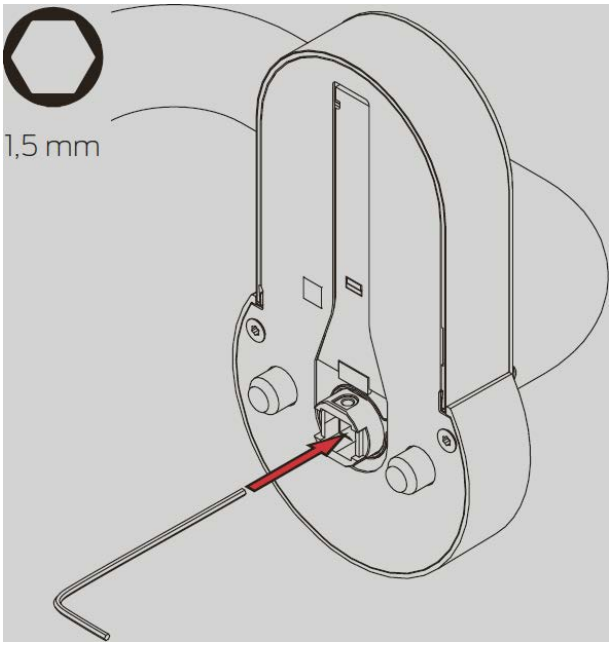
The panic bar holder is a third-party product.

- Please follow the manufacturer's instructions and safety instructions.

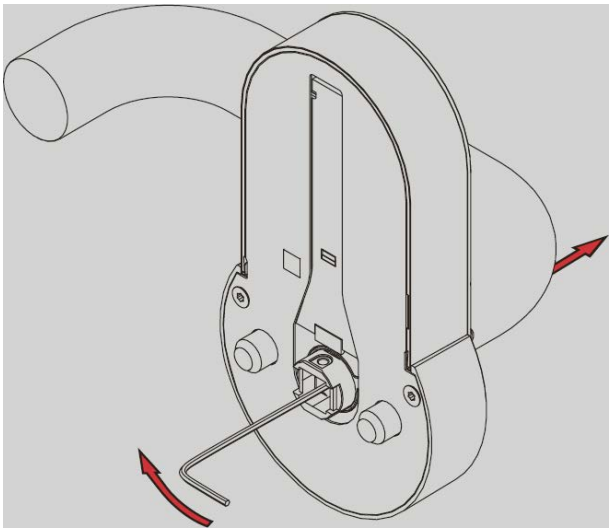
2. Remove the covers of the escutcheons with a slotted screwdriver.
3. Unscrew the screws of the escutcheon bases.
4. Unscrew the screws of the mounting plate.
5. Pull out the fitting with the adapter plate and the square.
   ↳ SmartHandle AX is removed from the door.
6. Unscrew the screws that fix the SmartHandle AX to the adapter plate.
   ↳ Adapter plate is removed.
7. Push the locking pin of the square inward and pull the square out of the assembly.
   ↳ The square is removed.

Removing the handle from the assembly

1. Insert the Allen wrench into the hole provided in the square socket.



2. Push the Allen wrench towards the nearer edge and hold it pressed.



3. Remove the handle from the assembly.

↳ SmartHandle AX is disassembled.

16.4.2 CISA

1. Remove the panic bar as described in the manufacturer's documentation except for the adapter plate.

NOTE

Third party product with own documentation

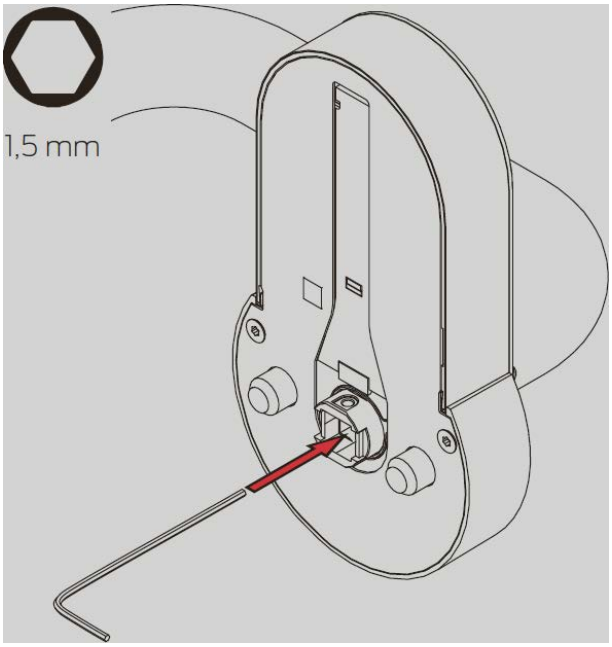
The panic bar holder is a third-party product.

- Please follow the manufacturer's instructions and safety instructions.

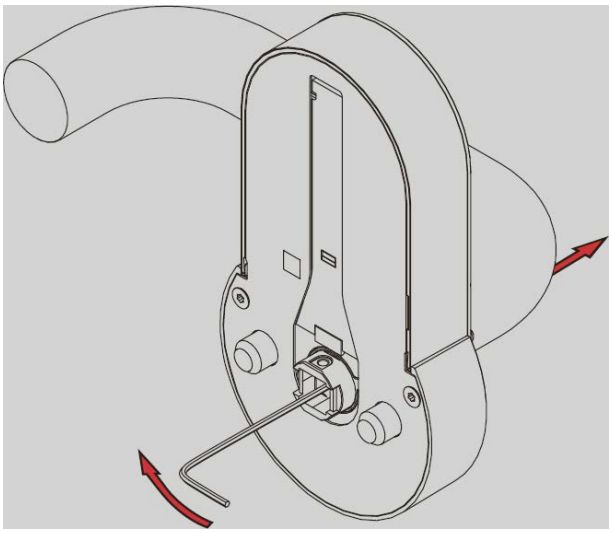
2. Unscrew the screws of the mounting plate.
3. Pull out the fitting with the adapter plate and the square.
   ↳ SmartHandle AX is removed from the door.
4. Unscrew the screws that fix the SmartHandle AX to the adapter plate.
   ↳ Adapter plate is removed.
5. Push the locking pin of the square inward and pull the square out of the assembly.
   ↳ The square is removed.

Removing the handle from the assembly

1. Insert the Allen wrench into the hole provided in the square socket.



2. Push the Allen wrench towards the nearer edge and hold it pressed.



3. Remove the handle from the assembly.

↳ SmartHandle AX is disassembled.

16.5 DS variant (reader on both sides)

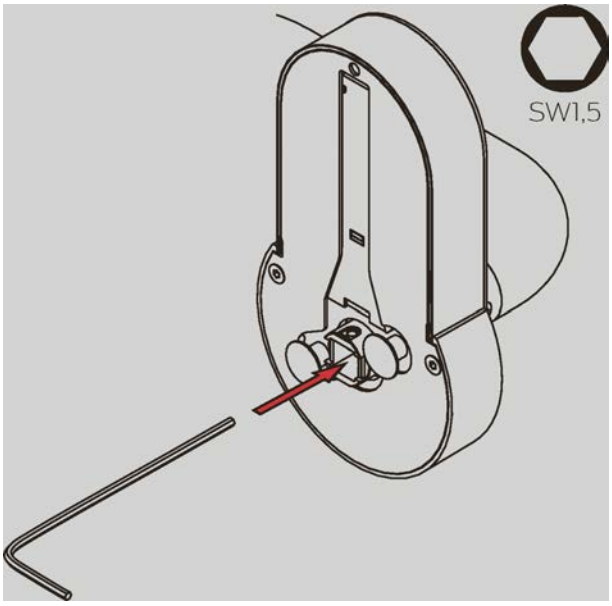
Remove fittings

1. Disassemble electronic cylinders if necessary.
2. Unscrew the set screws of both handles.
3. If necessary, remove the escutcheon covers with a slotted screwdriver.
4. If necessary, remove the escutcheon covers.

5. If necessary, unscrew the escutcheon bases.
6. Remove the cover of the SmartHandles AX that is attached to the adapter plate.
7. Unscrew the screw above the card reader.
8. Turn the entire SmartHandle AX clockwise until it can be removed.
9. Remove the SmartHandle AX.
10. Unscrew the adapter plate.
11. Pull out the second SmartHandle AX.
    ↳ SmartHandle AX are removed from the door.
12. Push the locking pin of the square inward and pull the square out of the assembly.

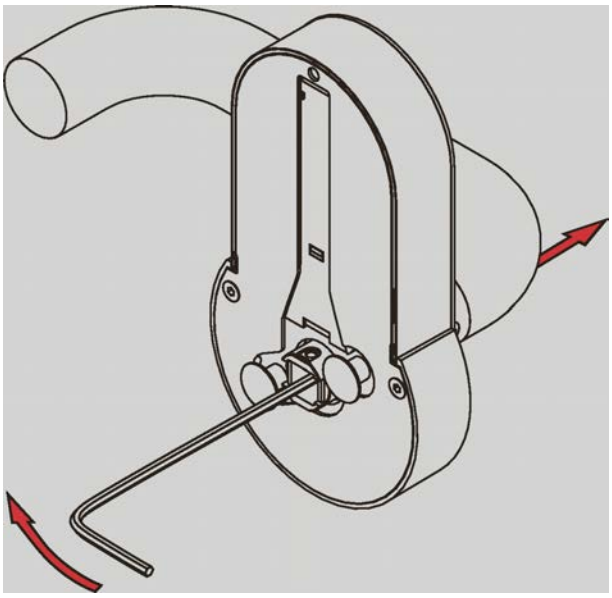
Removing the handle from the assembly

1. Insert the Allen wrench into the hole provided in the square socket.



2. Push the Allen wrench towards the nearer edge and hold it pressed.

3. Remove the handle from the assembly.



↳ SmartHandle AX is disassembled.

16.6 Variant E0 and E1 (Scandinavian Oval)

You need the following tools for disassembly:

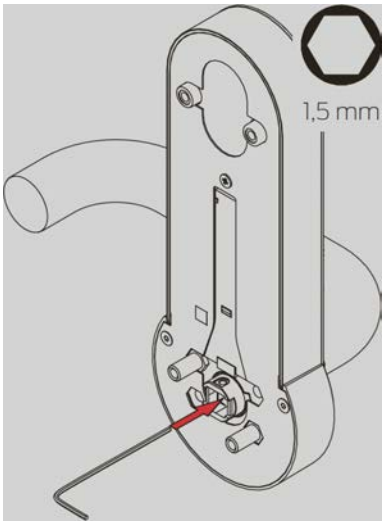
- TX-15 screwdriver
- Slotted-head screwdriver
- PH-2 screwdriver
- 1.5 mm hex key

Remove fittings

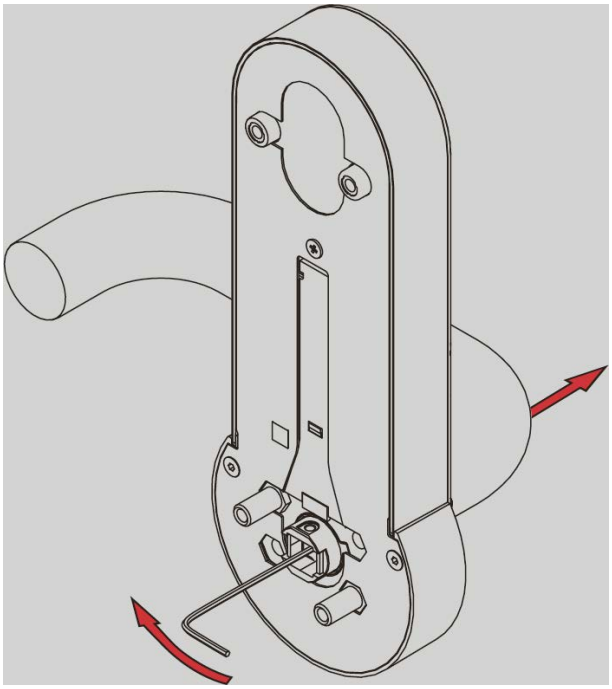
1. Disassemble electronic cylinders if necessary.
2. Unscrew the headless screws of both handles.
3. If necessary, remove the escutcheon covers with a slotted screwdriver.
4. If necessary, remove the escutcheon covers.
5. If necessary, unscrew the escutcheon bases.
6. Remove the inlay of the inside handle with a slotted screwdriver.
7. Unscrew the screws of the base of the inside handle.
8. Remove the inside handle.
9. Pull out the assembly with the square.
   ↳ SmartHandle AX is removed from the door.
10. Push the locking pin of the square inward and pull the square out of the assembly.
    ↳ The square is removed.

Removing the handle from the assembly

1. Insert the Allen wrench into the hole provided in the square socket.



2. Push the Allen wrench towards the nearer edge and hold it pressed.



3. Remove the handle from the assembly.

↳ SmartHandle AX is disassembled.

16.7 Variant F1 (French 195 mm backplate)

The following tools are required for disassembly:

- TX-15 screwdriver
- Slotted-head screwdriver
- PH-2 screwdriver

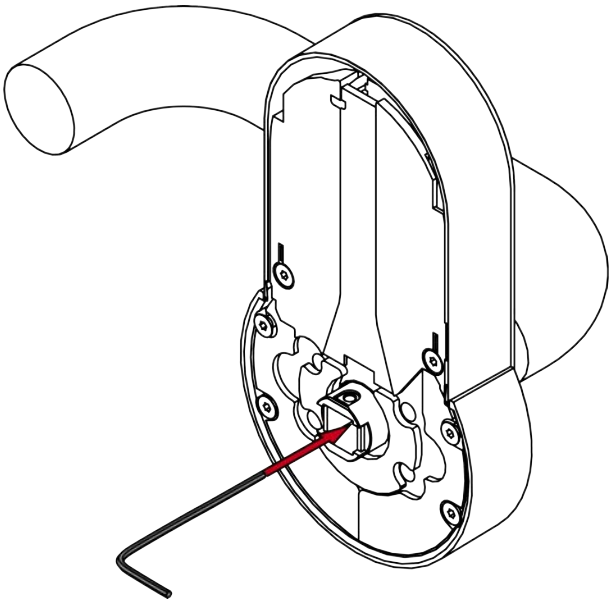
- 1.5 mm hex key

Remove escutcheons

1. If necessary, remove the electronic cylinder.
2. Use the grub screws to tighten both handle.
3. If necessary, lever off the rosette covers with a flat-blade screwdriver.
4. If necessary, remove the rosette covers.
5. Use a flat screwdriver to pry off the inlay on the inner side of the lever handle.
6. Unscrew the adapter plate fastening screws on the inner side.
7. Remove the inner side handle together with the adapter plate from the spindle.
8. Unplug the electronic escutcheon together with the adapter plate and remove it from the door.
   ↳ SmartHandle AX is removed from the door.
9. Unscrew the inner side handle and the profile cylinder rosette from the inner adapter plate.
10. Unscrew the electronic connector and the profile cylinder rosette from the outer adapter plate.
11. Push the locking pin of the square inward and pull the square out of the assembly.
    ↳ The square is removed.

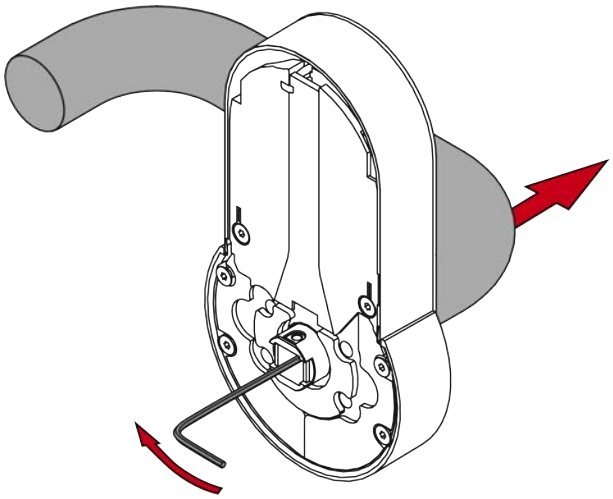
Remove handle from assembly

1. Insert the hex key into the hole provided in the square socket.



2. Push the hex key towards the closest edge and hold it down.

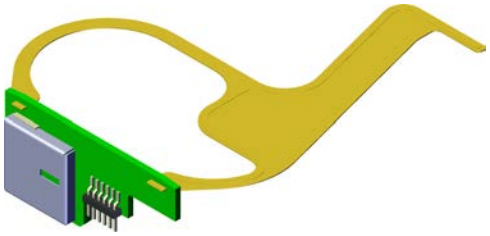
3. Pull the handle off the assembly.



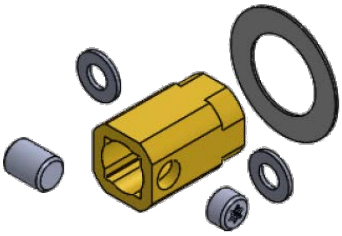
↳ SmartHandle AX is now removed.

17. Accessories

Networking

Order code	Description
WNM.LNI.S2	LockNode can be integrated into your SmartHandle AX for direct networking (with auto-configuration).  See also *Network [▸ 18]* and *LockNode (LN) [▸ 231]*.

Third-party handle adapter

Order code	Description	Compatibility
S2.ADAPTER.FSB	Adapter set for FSB handle (*www.FSB.de*) from FSB model year 2018  More information; see *FSB adapter [▸ 236]*.	All FSB models from 2018 onwards equipped with one of the following mountings: ▪ Standard (FSB ASL®) ▪ Object (FSB AGL®)
S2.ADAPTER.GLUTZ	Adapter set for Glutz handle (*www.glutz.com*)	▪ 5083 | Tulln ▪ Others on request/ after qualification.

Handle and square spindle

Order code	Description
S2.LEVER.x.x	Inner side and outer side handle for retrofitting (see *Handle variants [▸ 19]*). Please specify variant: ▪ A ▪ □ ▪ C ▪ D ▪ L Please specify square spindle (see *Spindle [▸ 17]*): ▪ 7 mm ▪ 8 mm ▪ 9 mm
S2.SQUARE.x.x	Please specify length of square spindle (see *Distances and door thicknesses [▸ 15]*): ▪ S ▪ M ▪ L ▪ X Please specify diameter (see *Spindle [▸ 17]*): ▪ 7 mm ▪ 8 mm ▪ 9 mm
SH.HUELSE.8.5	Extension sleeve from 8 mm to 8.5 mm length (10 pieces)

Cover

Black-grey	White	Deep black

Order code	Description
S2.COVER.0.SG	Cover for variant A0/B0 (standing), RR (tubular frame) and DS (both sides) in black-grey
S2.COVER.0.W	Cover for variant A0/B0 (standing), RR (tubular frame) and DS (both sides) in white
S2.COVER.0.TS	Cover for variant A0/B0 (standing), RR (tubular frame) and DS (both sides) in deep black
S2.COVER.1.SG	Cover for variant A1/B1 (suspended short) in black-grey
S2.COVER.1.W	Cover for variant A1/B1 (suspended short) in white
S2.COVER.1.TS	Cover for variant A1/B1 (suspended short) in deep black
S2.COVER.2.SG	Cover for variant A2/B2 (suspended long) in black-grey
S2.COVER.2.W	Cover for variant A2/B2 (suspended long) in white
S2.COVER.2.TS	Cover for variant A2/B2 (suspended long) in deep black
S2.COVER.E0.SG	Cover for variant E0 (Scandinavian Oval without locking cylinder break-out) in black-grey
S2.COVER.E0.W	Cover for variant E0 (Scandinavian Oval without locking cylinder break-out) in white

Order code	Description
S2.COVER.E0.TS	Cover for variant E0 (Scandinavian Oval without locking cylinder break-out) in deep black
S2.COVER.E1.SG	Cover for variant E1 (Scandinavian Oval with locking cylinder break-out) in black-grey
S2.COVER.E1.W	Cover for variant E1 (Scandinavian Oval with locking cylinder break-out) in white
S2.COVER.E1.TS	Cover for variant E1 (Scandinavian Oval with locking cylinder break-out) in deep black

Small parts

Order code	Description
S2.SLEEVENUT	Sleeve nut for rosette (pack of 50
S2.SCREW.x	Screw set, please specify length (see *Distances and door thicknesses [▸ 15]*): ▪ S ▪ M ▪ L ▪ X
S2.COMPSHELL	Equalising bushes for variants A0/ B0 (10 bags with 2x3 pieces each in three different lengths)

Rosette

Order code	Description
S2.ROSE	Rosette cover without locking cylinder opening, for retrofit
S2.ROSEPZ	Rosette cover with locking cylinder opening for Euro Profile cylinder; for retrofit
S2.ROSESO	Rosette cover with locking cylinder opening for Scandinavian Oval; for retrofit

Blank cylinder

Order code	Description
DUMMY CYLINDER.PZ	Dummy cylinder (15-15 mm) to fill the locking cylinder opening (Euro profile cylinder)
DUMMY CYLINDER.SR	Dummy cylinder (15-15 mm) to fill the locking cylinder opening (Swiss Round cylinder)

18. Technical specifications

18.1 Electronics

Scanning methods and reading ranges

Reader systems	■ Active ■ Passive ■ Bluetooth Low Energy (BLE)	
Read ranges	Active	5 cm to 30 cm
	Passive	Near field
	BLE	Up to 300 cm

Power supply

Battery type	4× CR2450 (3 V)
Battery manufacturer	■ Murata ■ Varta ■ Panasonic
Battery life	■ Up to 300,000 actuations (active) ■ Up to 200,000 actuations (passive) ■ Up to 10 years stand-by without actuation

Ambient conditions

Temperature range	Operation: -25 °C to +50 °C
	Storage (short-term): -40 °C to +50 °C
	Storage (long-term): 0 °C to +30 °C
Protection rating	IP40

Feedback

Feedback signals	■ Audible (beeper) ■ Optical (two-colour LED)

Radio emissions

15.24 kHz - 72.03 kHz	10 dBµA/m (3 m distance)
13.560006 MHz - 13.560780 MHz	1.04 dBµA/m (3 m distance)

868.000 MHz - 868.600 MHz / 869.700 MHz - 870.000 MHz Only for item numbers: SV-S2.*LN*	<25 mW ERP
2402 MHz - 2480 MHz	2.5 mW

18.2 Mechanical system

Dimensions

The dimensions refer to the side with the electronic escutcheon.

Height	■ A0 (standing) ■ A3 (tubular frame) ■ DS (reader on both sides)	120 mm
	A1 (suspended, short)	140 mm
	■ A2 (suspended, long) ■ E0/E1 (Scandinavian Oval)	174 mm
	A4 (panic bar)	■ BKS (distance: 72 mm): 193.4 mm ■ BKS (distance: 92 mm): 213.4 mm ■ CISA (distance: 72 mm): 224.4 mm (information with adapter plate)
Width	66 mm	

Depth	■ A0 (standing) ■ A1 (suspended, short) ■ A2 (suspended, long) ■ E0/E1 (Scandinavian Oval)	21 mm
	A3 (tubular frame)	26 mm (information with adapter plate)
	A4 (panic bar)	25 mm (information with adapter plate)
	DS (reader on both sides)	■ 21 mm (side without adapter plate) ■ 26 mm (side with adapter plate

You will find detailed dimension drawings at the end of the section.

Centres distances and door thicknesses

A* = Euro Profile, B* = Swiss Round, E* = Scandinavian Oval

Versions	Centre distance	Door thickness
A0/B0 Stationary	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
A0.PAS Standing (PAS24)	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm

Versions	Centre distance	Door thickness
A1/B1 Suspended, short	70 - 79 mm	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
A2/B2 Suspended, long	70 - 110 mm	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
A3 Metal frame	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 57 mm
		M: 58 - 77 mm
		L: 78 - 97 mm
		X: 97 - 196 mm
A4 Panic bar	92 mm (BKS Full-leaf door, without backplate) 72 mm (CISA Solid Door with backplate or BKS Solid Door without backplate)	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
DS Double-sided scanning (Double-sided)	not relevant (standing installation: handle shaft axis and profile cylinder axis not connected to the escutcheon)	S: 38 - 58 mm
		M: 59 - 78 mm
		L: 79 - 99 mm
		X: 100 - 200 mm
E0, E1 Scandinavian Oval	105 mm	S: 38 - 60 mm
		M: 59 - 80 mm
		L: 79 - 100 mm
		X: 100 - 200 mm
F1 French 195 mm backplate	70 mm	S: 38 - 60 mm
		M: 58 - 80 mm
		L: 78 - 100 mm

Handle turning angle and colours

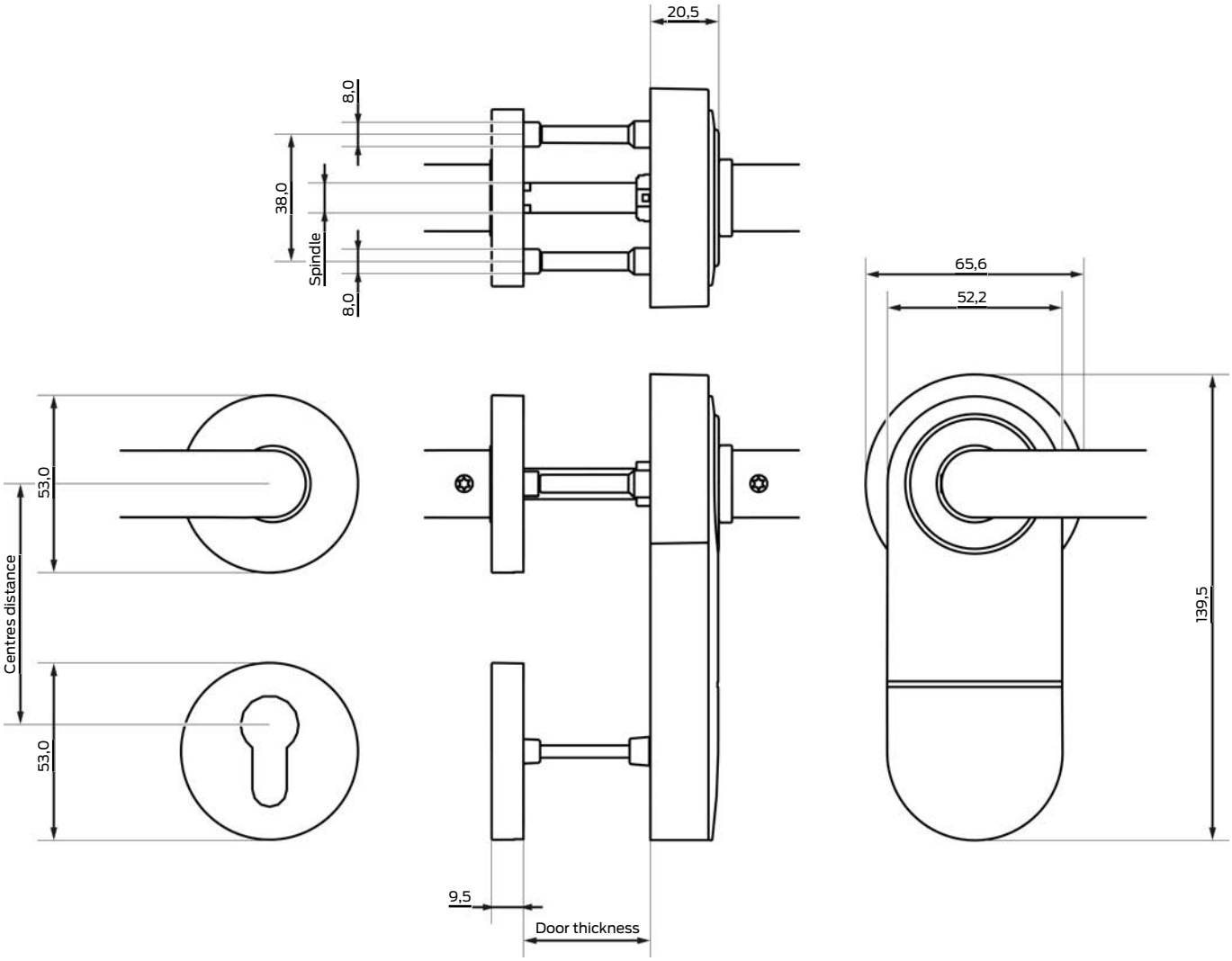
Handle turning angle		48° effective
Colours	Cover	■ Traffic white (similar to RAL 9016) ■ Dark grey (similar to RAL 7021) ■ Deep black (similar to RAL 9005) ■ Brass For cover colours, see also *Surface finishes [▸ 20]*
	Rosette	■ Brushed nickel, coated ■ Brushed brass, coated
	Handle	■ Brushed stainless steel, painted ■ Brushed brass, coated

18.2.1 Dimensional drawings SmartHandle AX

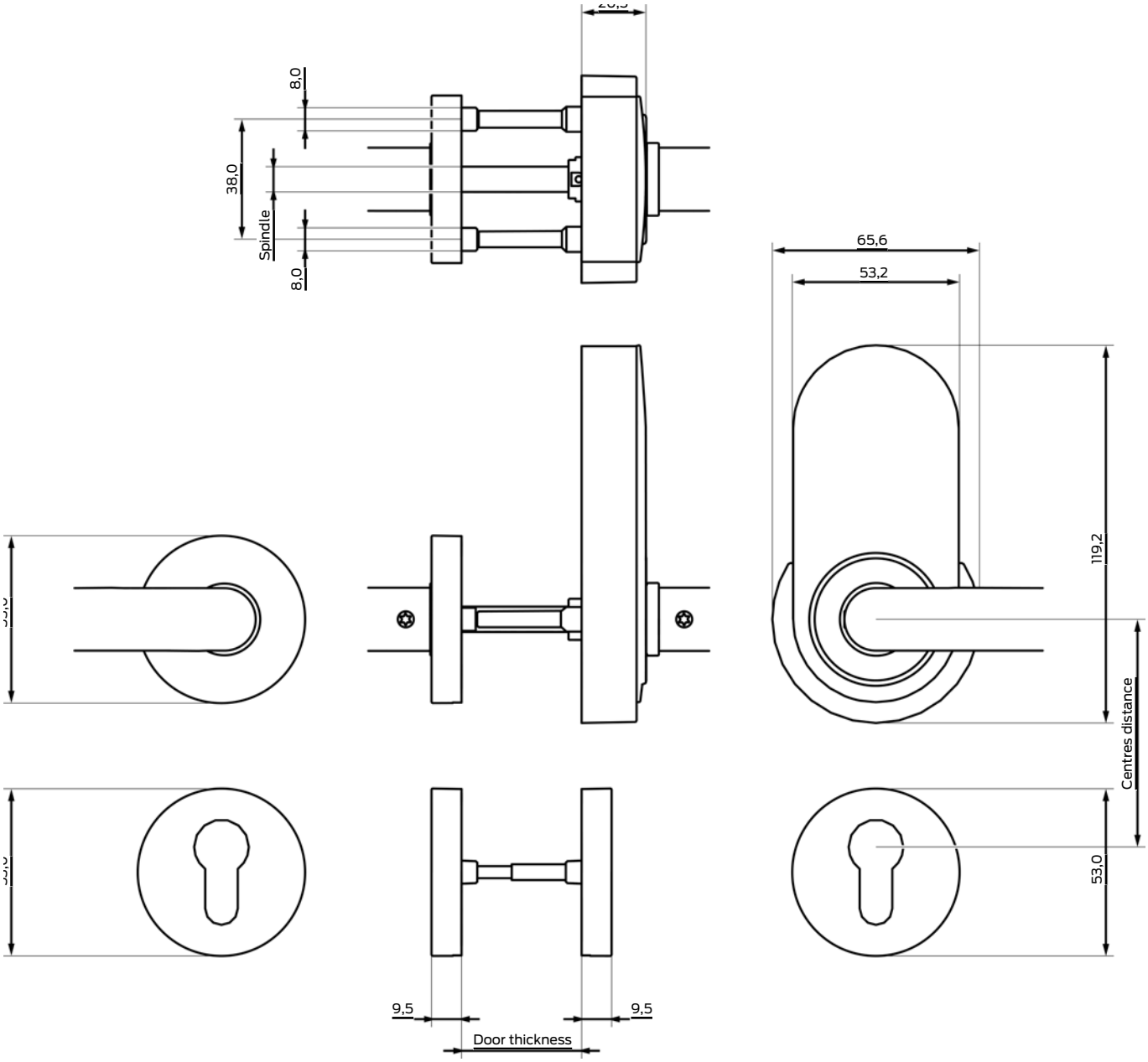
NOTE

Height depends on the variant (see table).

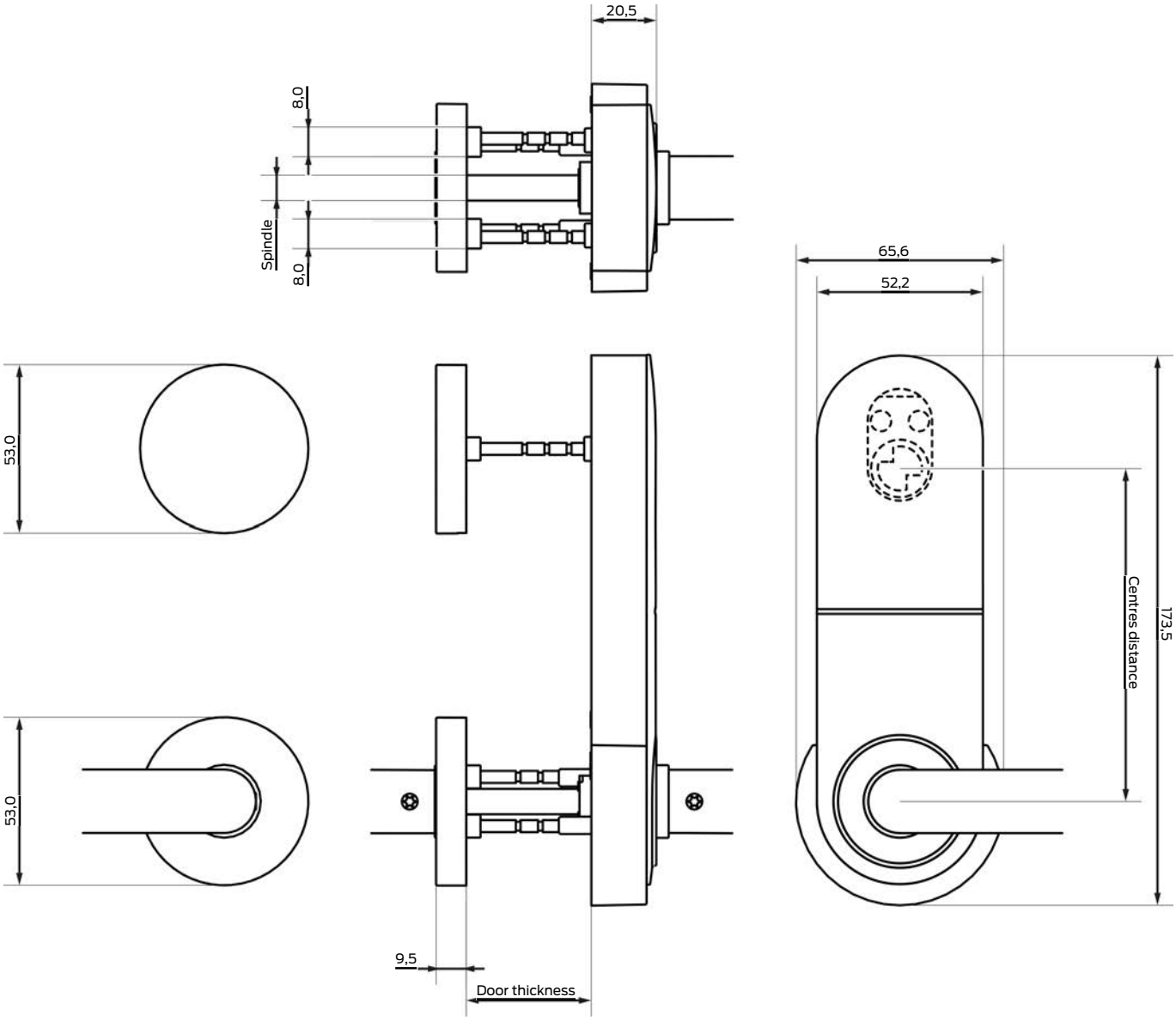
Suspended installation



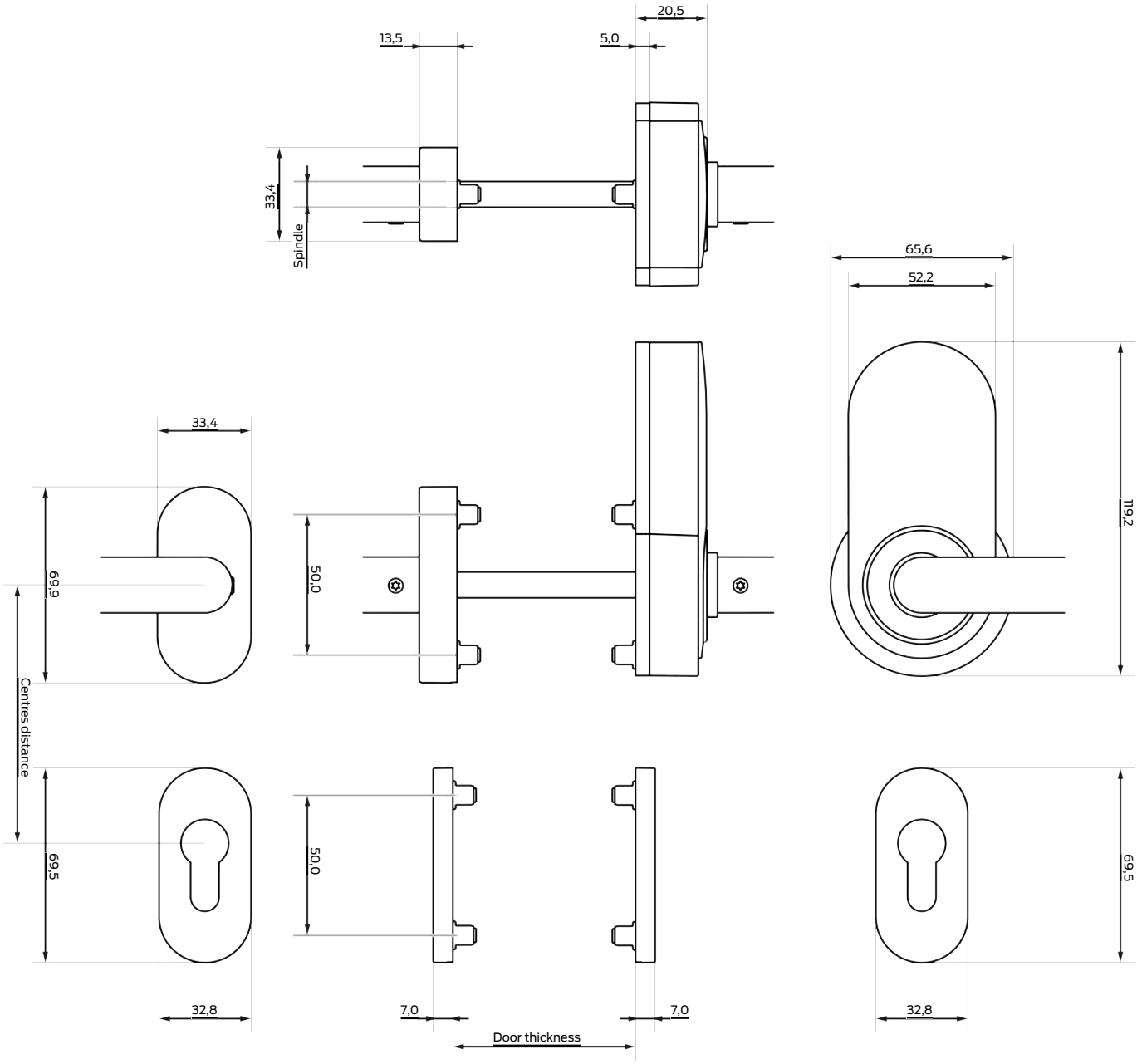
Stationary installation



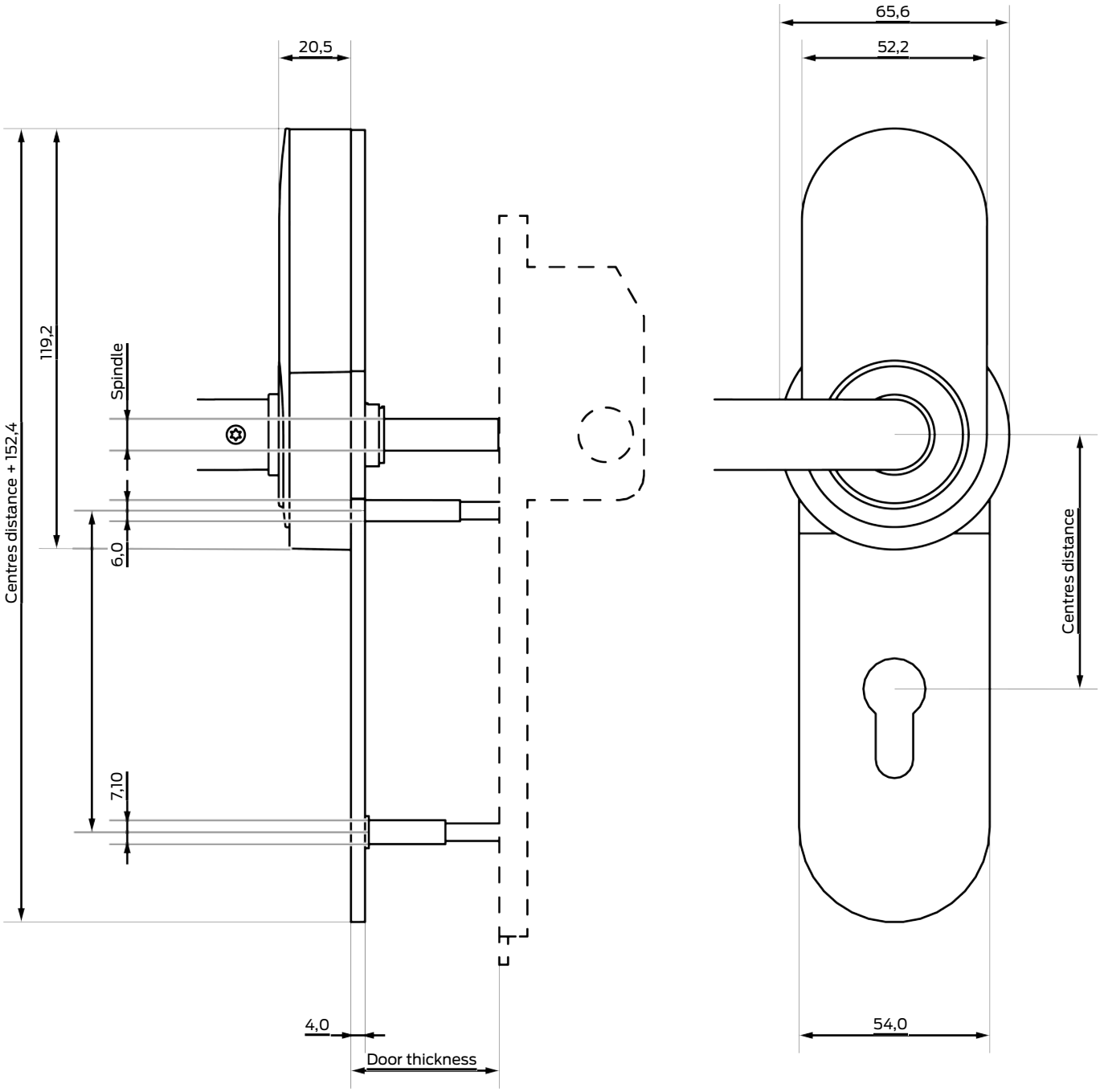
Scandinavian Oval



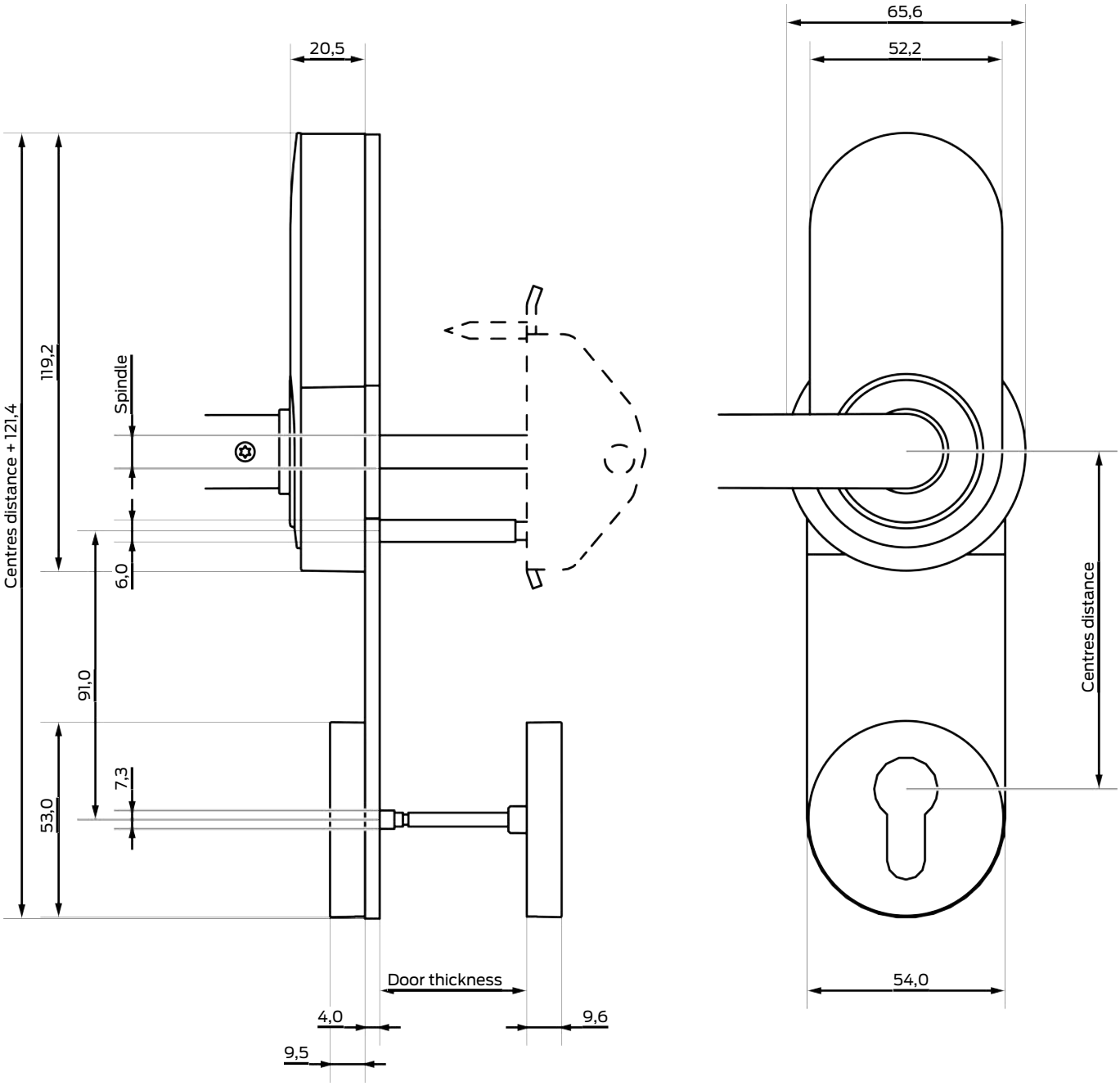
Metal frame


20,5
13,5
5,0
33,4
Spindle
65,6
52,2
33,4
69
50,0
191,2
Centres distance
69,5
50,0
69,5
32,8
7,0
7,0
Door thickness
32,8

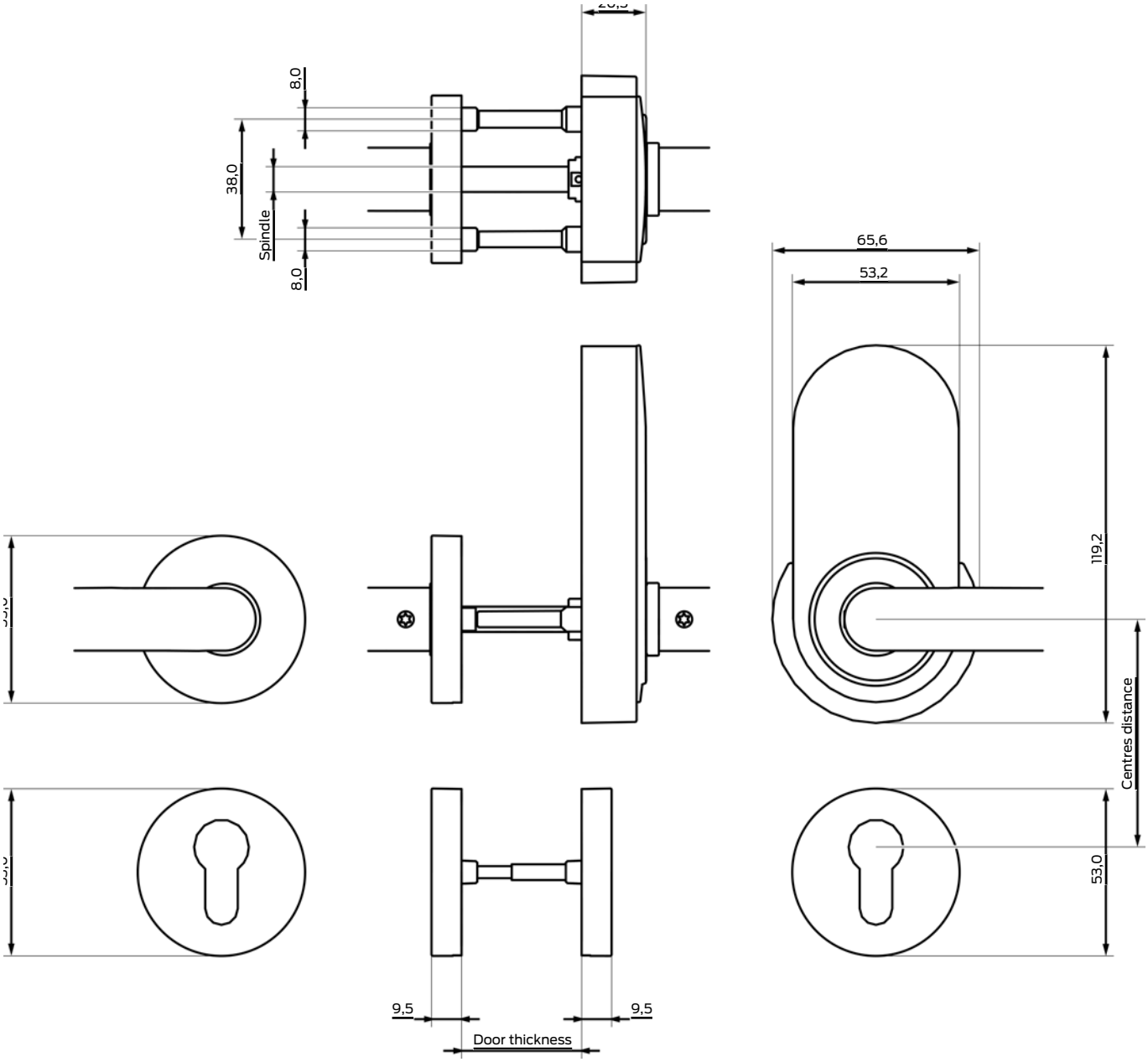
Panic bars (CISA)



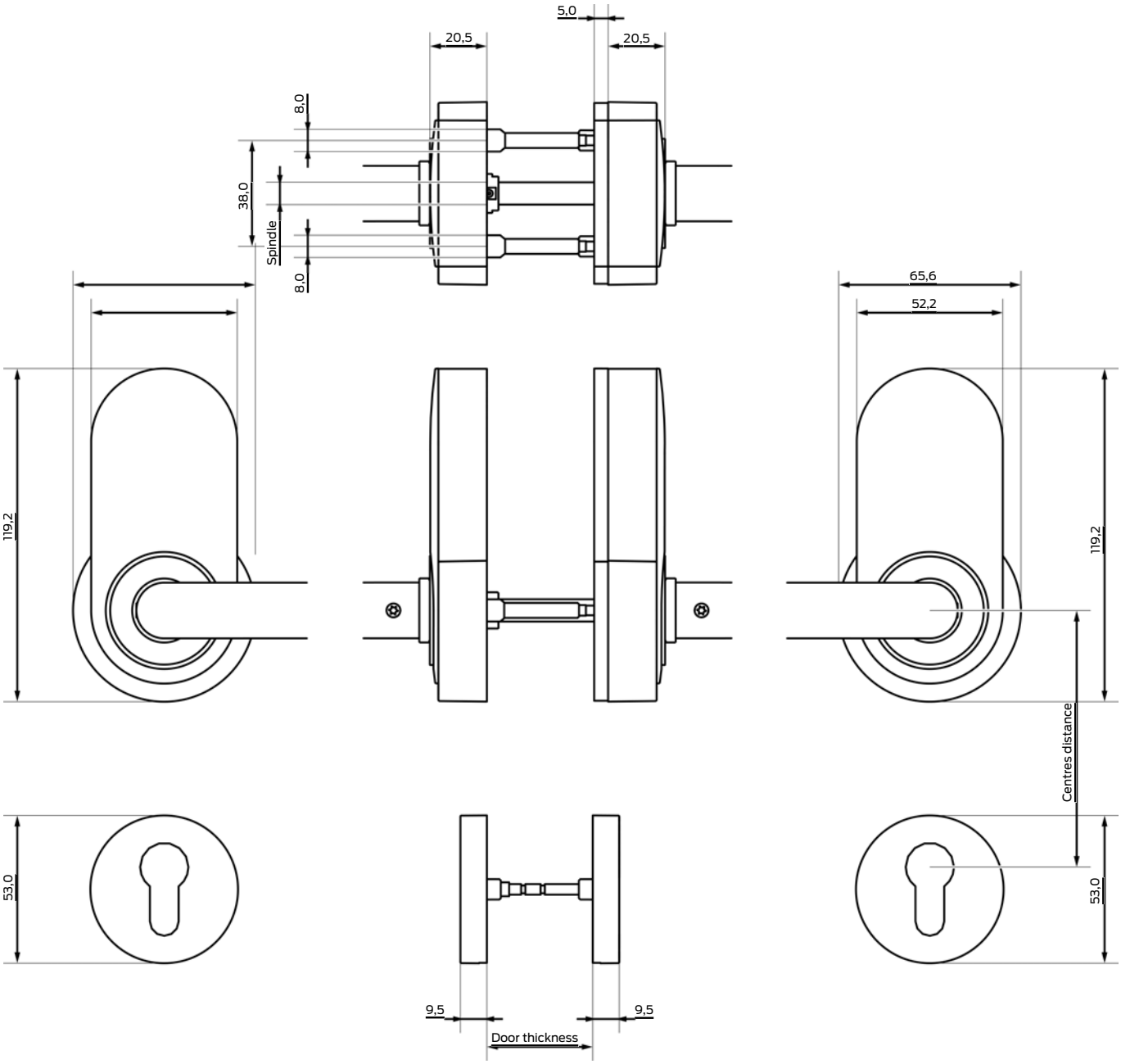
Panic bar (BKS)



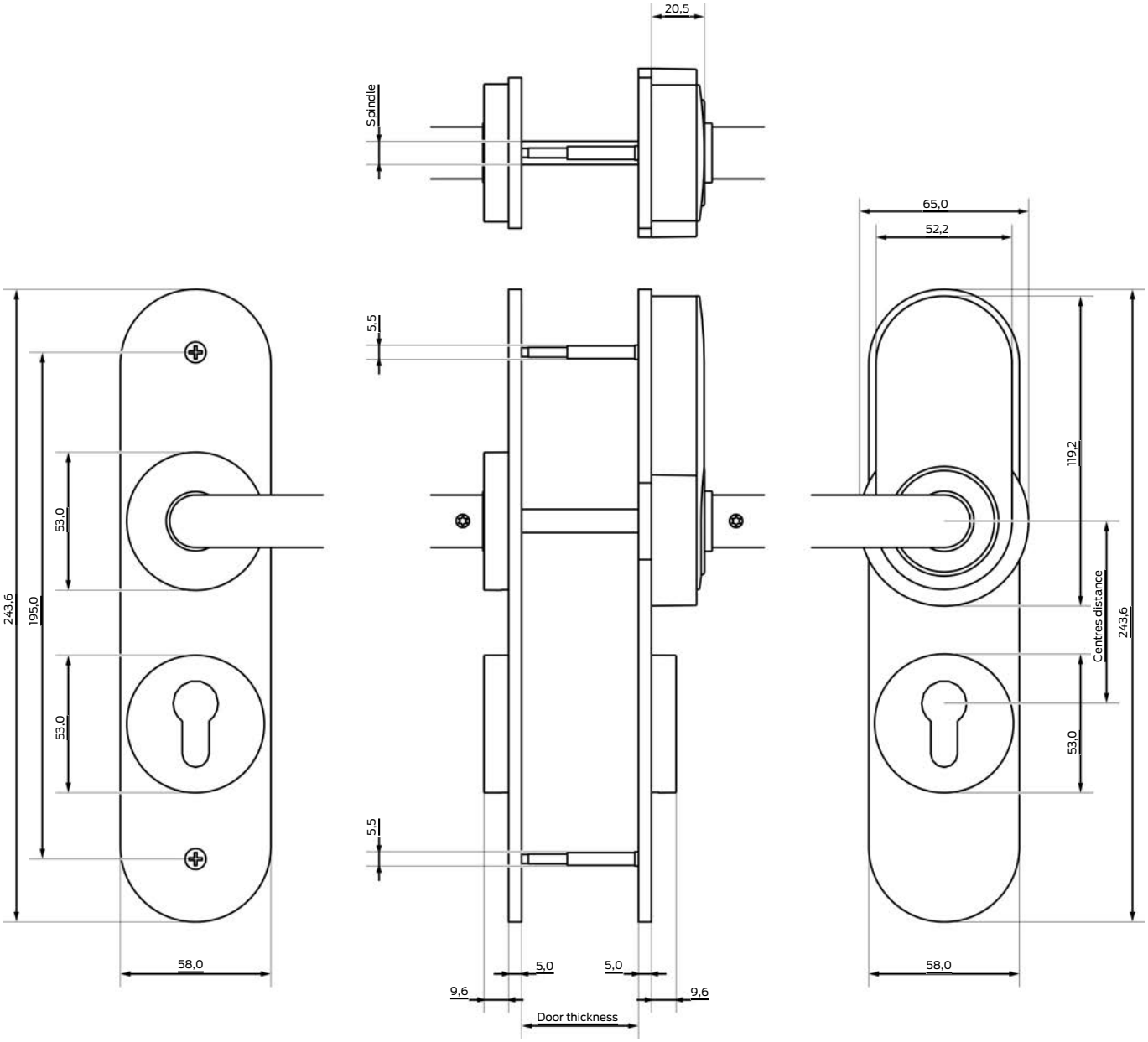
PAS24


8,0
38,0
Spindle
8,0
65,6
53,2
119,2
Centres distance
53,0
9,5
9,5
Door thickness

Reader on both sides

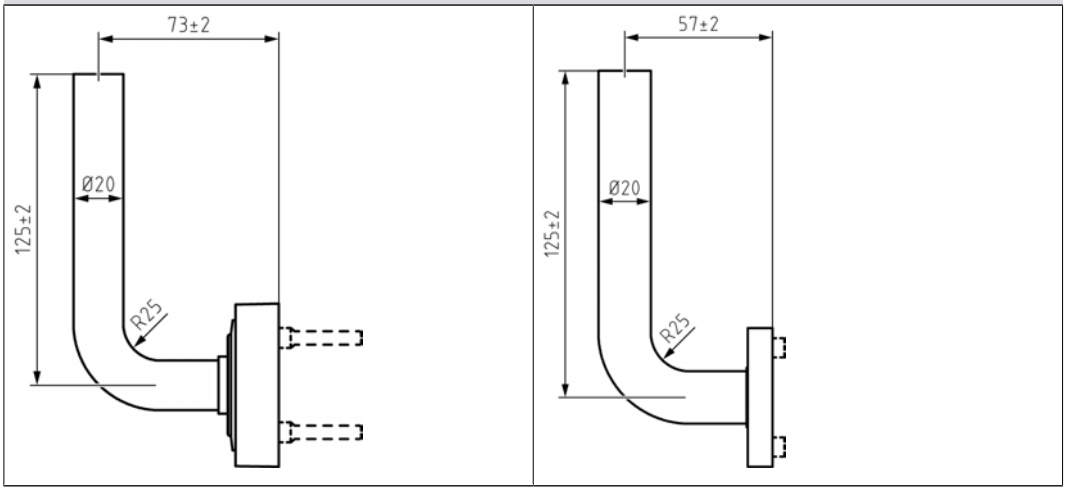


French 195 mm backplate

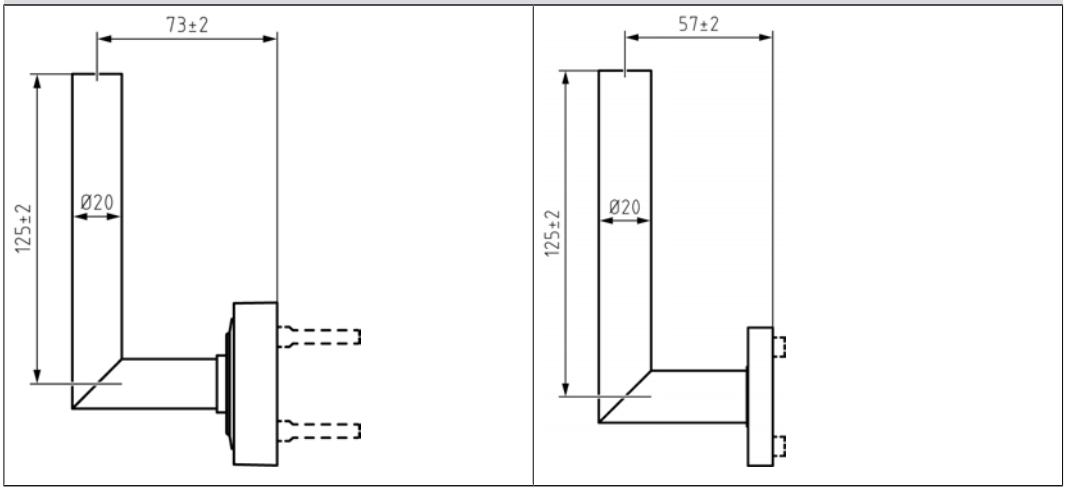


18.2.2 Dimensional drawings handles

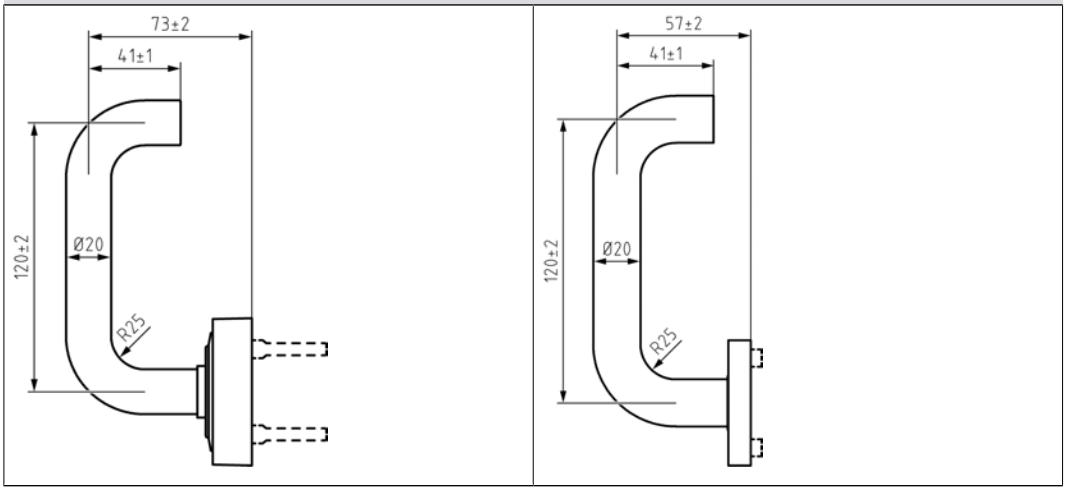
Shape A (Outside/Inside)



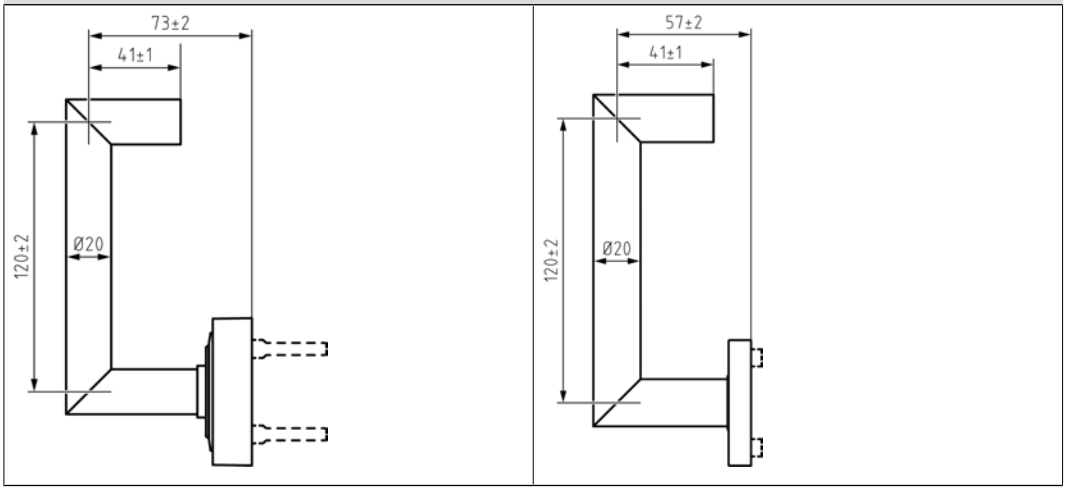
Shape B (Outside/Inside)



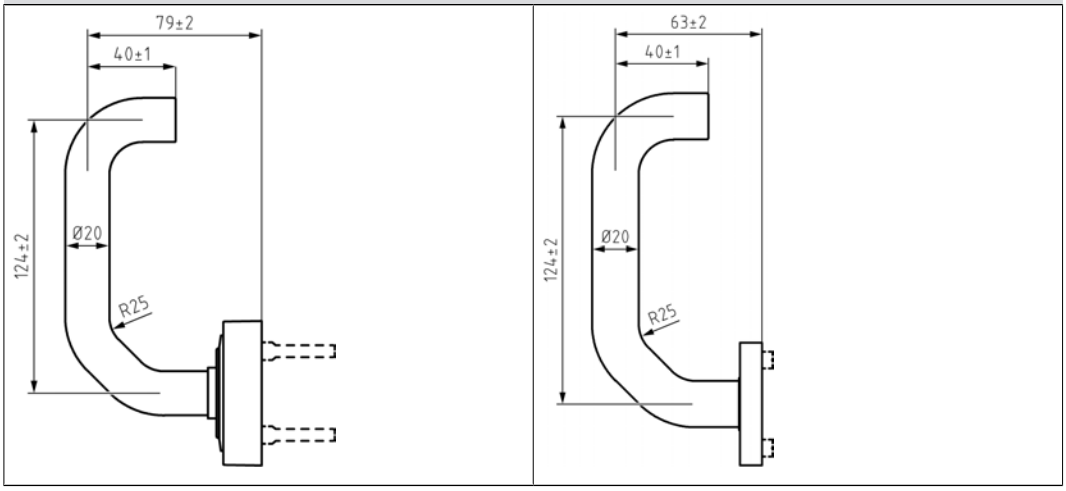
Shape C (Outside/Inside)



Shape D (Outside/Inside)

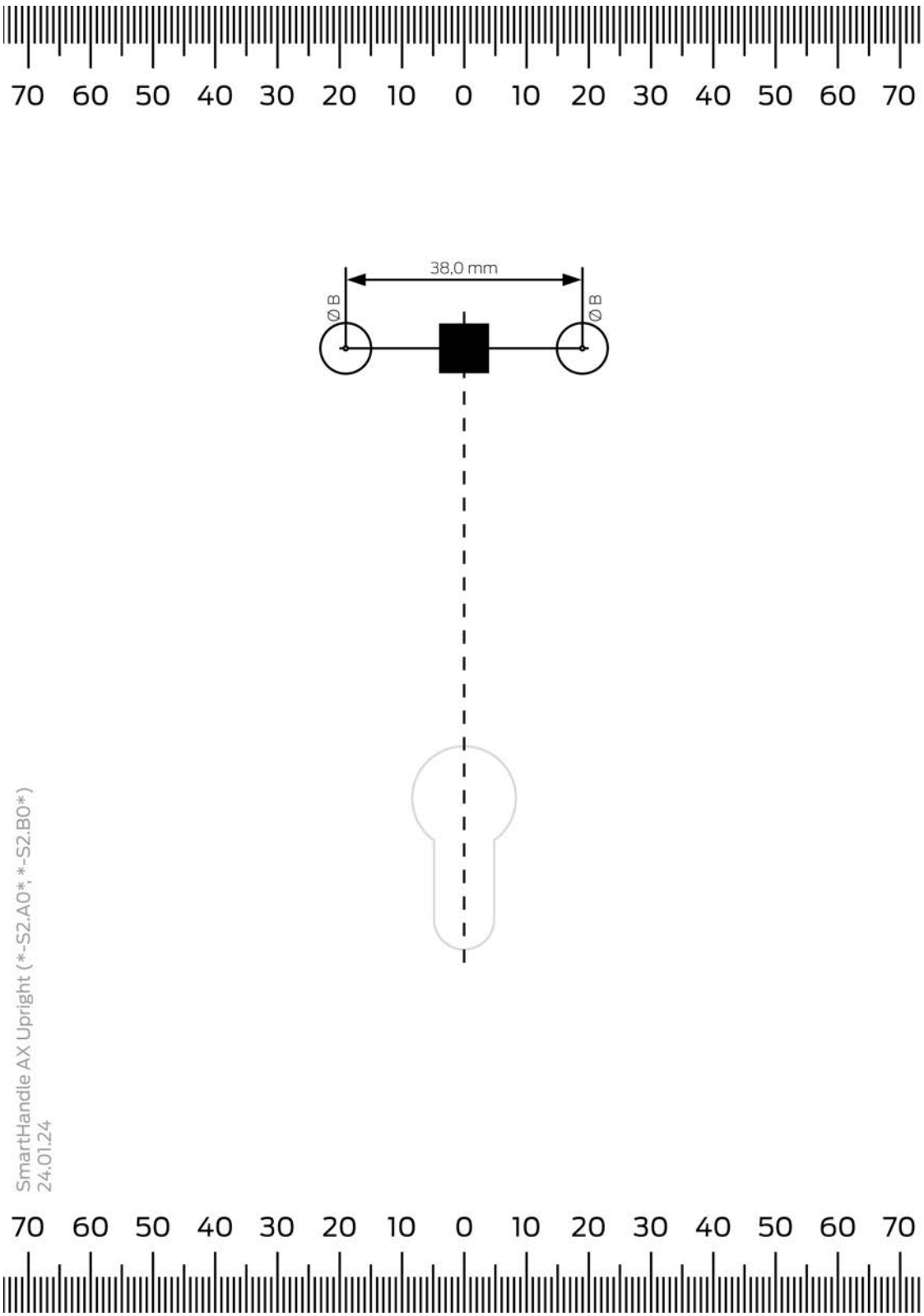


Shape L (Outside/Inside)

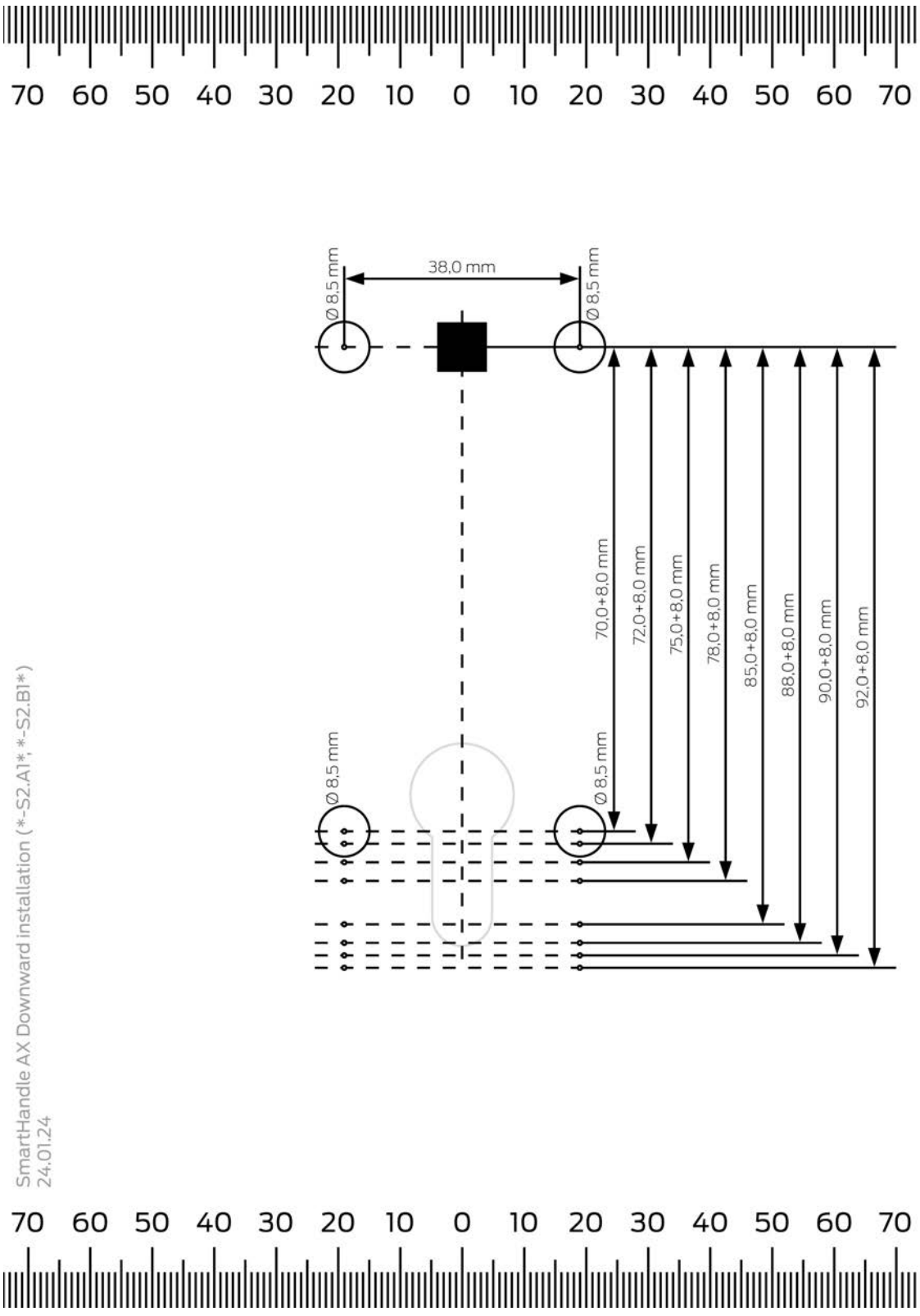


18.2.3 Drilling templates

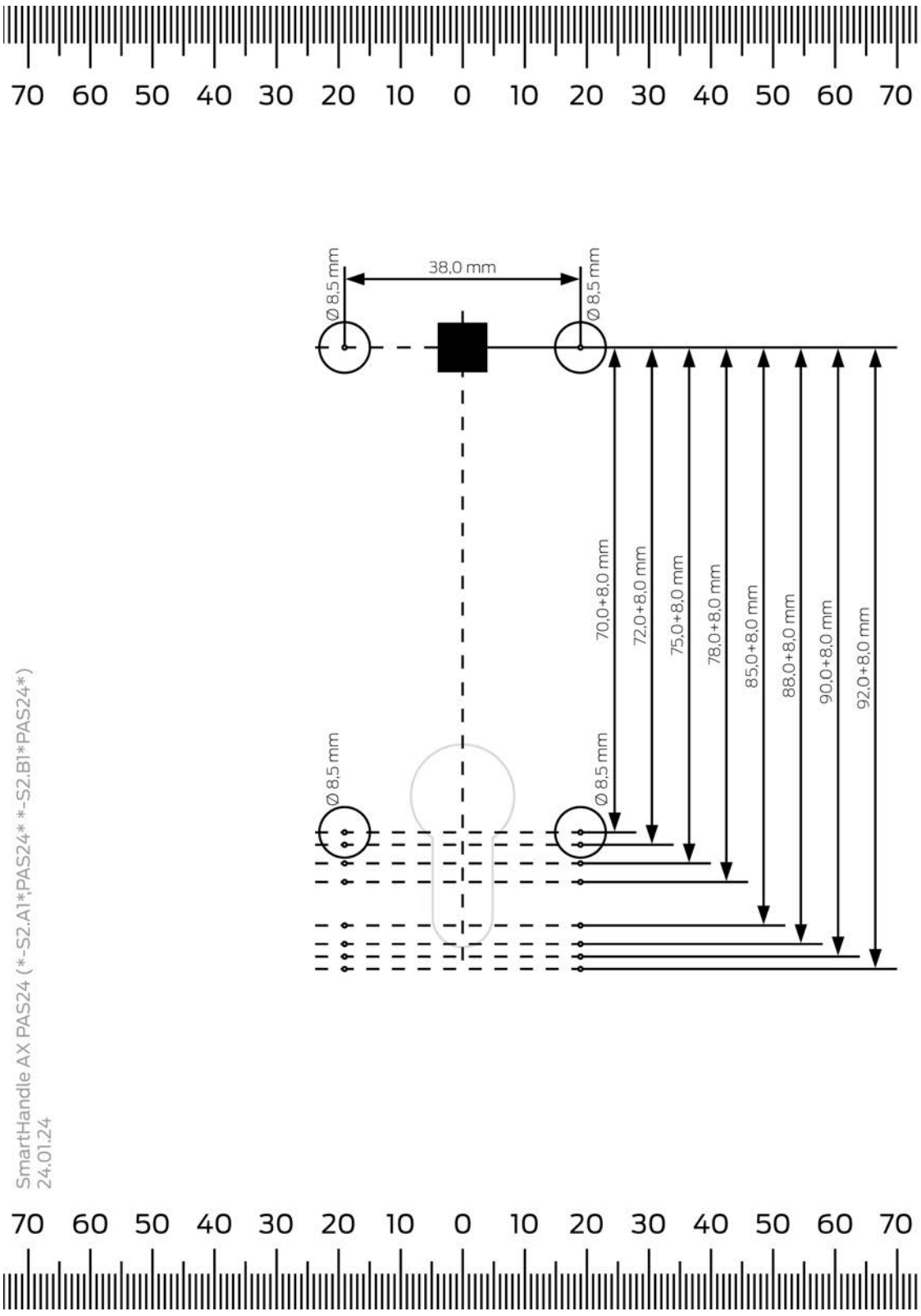
18.2.3.1 Drilling template for variant A0 (Upright installation)



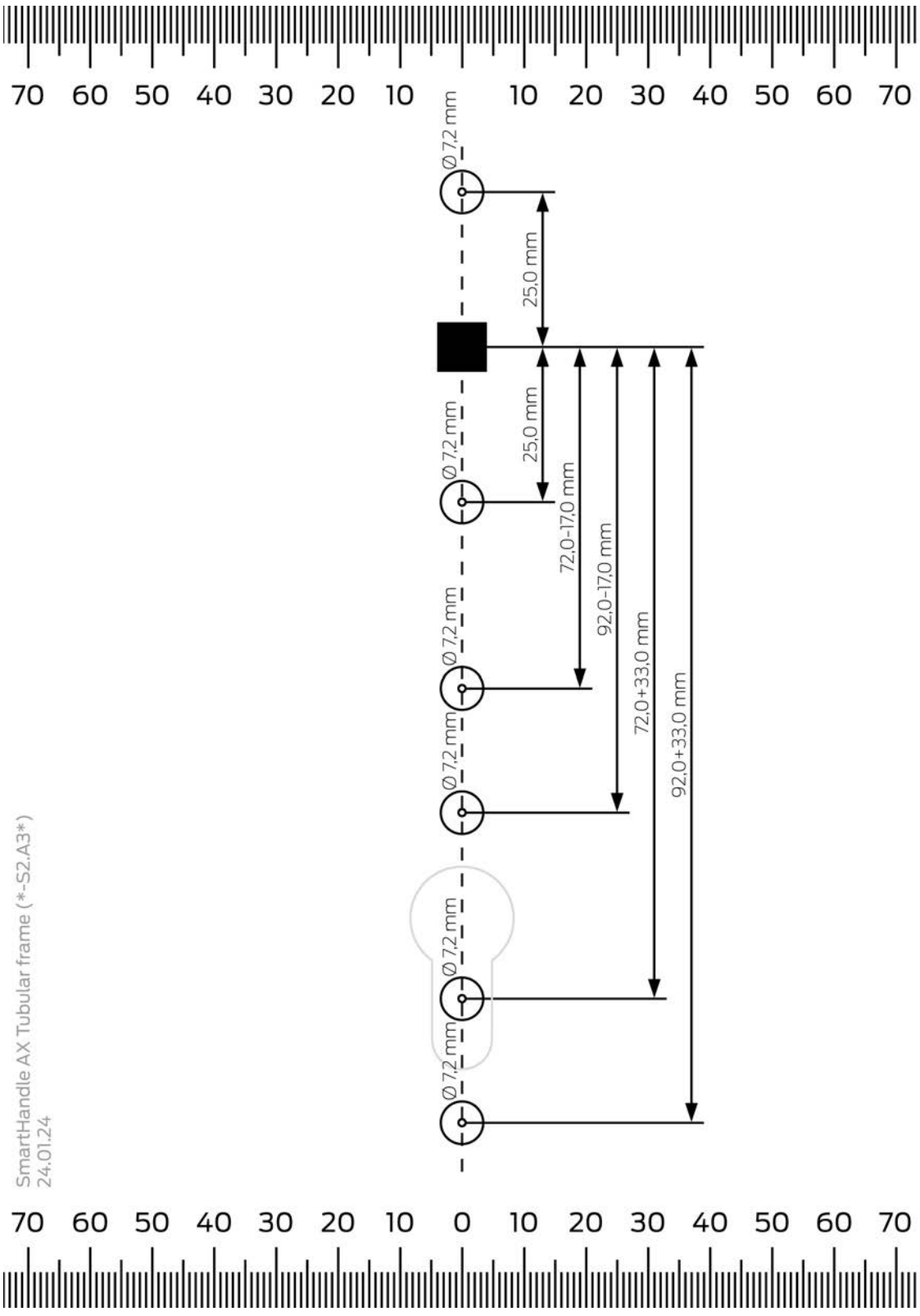
18.2.3.2 Drilling template for variant A1 and A2 (Downward mounting)



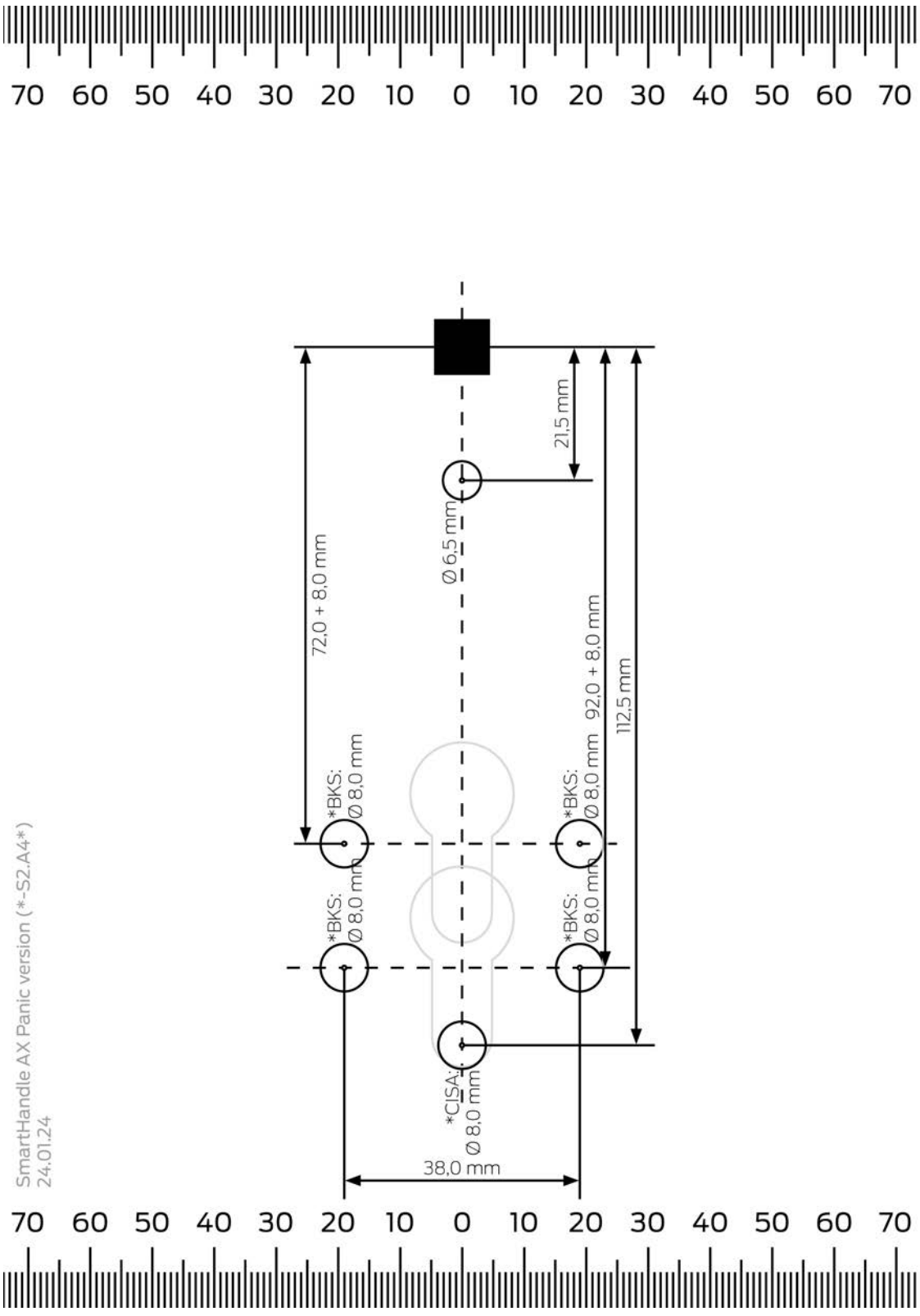
18.2.3.3 Drilling template for variant A1.PAS24 (Downward mounting with PAS24)



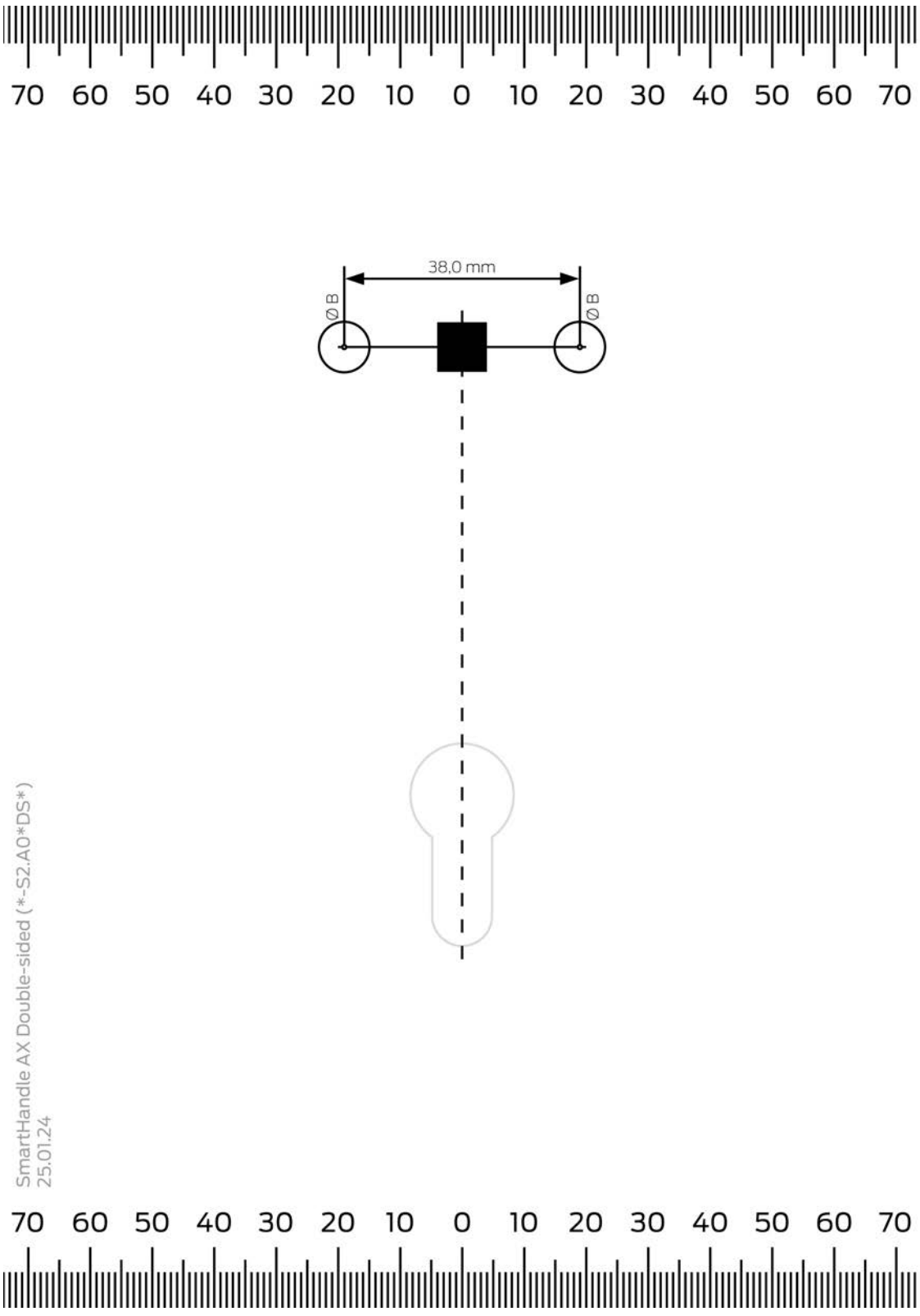
18.2.3.4 Drilling template for variant A3 (Tubular frame)



18.2.3.5 Drilling template for variant A4.P11/A4.P1/A4.P2 (Panic bars)



18.2.3.6 Drilling template for DS variant (Reading on both sides)



18.3 Configuration

Administration and settings

Loggable access events	max. 3,000

Time zone groups	100+1
Max. Transponder per SH AX	max. 64,000
Max. SmartCards per SH AX	max. 64,000 (depending on card configuration)
Engage interval	▪ Impulse opening 1 s bis 25 s ▪ Flip-flop
Networking capability	Retrofittable LockNode

Other

Can be upgraded	Upgradeable firmware

19. Declaration of conformity

The company SimonsVoss Technologies GmbH hereby declares that the articles (SV-S2.*A*, SV-S2.*AM*, SV-S2.*LN*) comply with the following guidelines:

- 2014/53/EU -RED-
  or for the UK: UK statutory 2017 No. 1206 -Radio equipment-
- 2011/65/EU -RoHS-
  or for the UK: UK statutory 2012 No. 3032 -RoHS-

CE UKCA

The full text of the EU Declaration of conformity is available at the following internet address: *www.simons-voss.com/en/certificates.html*.
The full text of the UK Declaration of conformity is available at the following internet address: *www.simons-voss.com/en/certificates.html*.

20. Help and other information

Information material/documents

You will find detailed information on operation and configuration and other documents on the website:

https://www.simons-voss.com/en/documents.html

Declarations of conformity

You will find declarations of conformity and other certificates on the website:

https://www.simons-voss.com/en/certificates.html

Information on disposal

- Do not dispose the device (SV-S2.*A*, SV-S2.*AM*, SV-S2.*LN*) in the household waste. Dispose of it at a collection point for electronic waste as per European Directive 2012/19/EU.
- Recycle defective or used batteries in line with European Directive 2006/66/EC.
- Observe local regulations on separate disposal of batteries.
- Take the packaging to an environmentally responsible recycling point.

Technical support

Our technical support will be happy to help you (landline, costs depend on provider):

+49 (0) 89 / 99 228 333

Email

You may prefer to send us an email.

support-simonsvoss@allegion.com

FAQs

You will find information and help in the FAQ section:

https://faq.simons-voss.com/otrs/public.pl

Address

SimonsVoss Technologies GmbH
Feringastr. 4
D-85774 Unterfoehring
Germany

This is SimonsVoss

SimonsVoss, the pioneer in remote-controlled, cable-free locking technology provides system solutions with a wide range of products for SOHOs, SMEs, major companies and public institutions. SimonsVoss locking systems combine intelligent functionality, high quality and award-winning design Made in Germany.

As an innovative system provider, SimonsVoss focuses on scalable systems, high security, reliable components, powerful software and simple operation. As such, SimonsVoss is regarded as a technology leader in digital locking systems.

Our commercial success lies in the courage to innovate, sustainable thinking and action, and heartfelt appreciation of employees and partners.

SimonsVoss is a company in the ALLEGION Group, a globally active network in the security sector. Allegion is represented in around 130 countries worldwide (www.allegion.com).

Made in Germany

SimonsVoss is truly committed to Germany as a manufacturing location: all products are developed and produced exclusively in Germany.

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SimonsVoss technologies

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