iLOQ

iLOQ S50

Z50S Cylindrical Leverset

User Guide

Contents

1. Important product information

1.1 About this manual

This user manual contains important information and instructions for properly installing and using the iLOQ Z50S.1, Z50S.2 and the Z50S.3 cylindrical leversets.

The content of this manual is current at the time of publication. iLOQ reserves the right to change availability of any item in this guide, its design, construction, and/or its materials. For the most current information, please see our website at support.iloq.com.

	Read and follow these instructions and any other instructions provided by iLOQ carefully before installing or using the products. This information is to ensure your safety and the long lifetime of the products. Failure to do so may result in injury, malfunction, damage or a safety hazard.
	After installation, pass these instructions and any maintenance instructions on from the installer to the user. If there are any deviations from the contents in foreign language versions of the documentation, the English original shall apply in case of doubt.

1.2 Intended use

This product is designed and intended for locking doors.

	Do not use this product for any other purpose. Using the product for unintended purposes may result in damage, malfunction, or safety hazards.

1.3 Non-conventional use
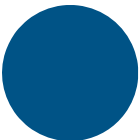
	Only use this product in the ways and for the purposes specified in this manual. Obey all safety information. Only install and use the product as described in this manual.

1.4 Terms of Service and Warranty

- The lock cylinder has a 24 month warranty. By purchasing or using the product, you agree to the Terms of Service found at www.iloq.com.

- If you suspect that this product is broken, do not attempt to repair it. Contact iLOQ customer support for professional assistance.

2. Important safety information

2.1 Signal words and symbols

Sign	Description
⚠ WARNING	"WARNING" indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	"CAUTION" indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	"NOTICE" indicates a potential situation which, if not avoided, might result in property damage.
⚠	Hazard The black symbol inside a yellow triangle with a black border describes the hazard.
🚫	Prohibition The black symbol inside a red ring with a diagonal red bar describes the action that should not be taken.
●	Mandatory action The white symbol inside a blue circle describes the action that must be taken to avoid a hazardous situation.

2.2 Safety symbols used in this manual

Symbols for mandatory action:

	Read the instructions
	General mandatory action

Symbols for prohibited action:

	General prohibited action

Symbols for hazards:

	General hazard

2.3 Important safety for installation and use

> ⚠️ **WARNING**
>
> Choking hazard!
>
> This product contains small parts, including small magnets which can cause death or serious injury.
>
> Do not disassemble the product. Keep the product away from small children. If a child swallows magnets, seek medical help immediately.

> ⚠️ **WARNING**
>
> Magnetic hazard!
>
> This product contains small magnets. Medical devices, such as implanted pacemakers and defibrillators may contain sensors that respond to magnets and radios when in close contact to the product and can cause death or serious injury.
>
> To avoid any potential interactions of medical devices, keep the product a safe distance away from your device (more than 4 inches/10 cm but consult your healthcare provider and your device manufacturer for specific guidelines).
>
> Do not place your credit card or any other magnetic stripe cards near this product.

- This product must be installed only by professional personnel who have received training arranged by or on behalf of iLOQ.

- Only use an authentic iLOQ tailpiece. The use a of non-iLOQ tailpiece can compromise the built-in security features.

- Do not attempt to bypass the locking feature, tamper with the lock or disassemble it. Doing so will compromise the built-in security and damage the product.

- To avoid damage, handle the product with care and do not force any parts during installation and use. The knob should turn easily and the cylinder should operate smoothly.

- Do not apply any liquid to the product, including water, grease, solvent, or corrosive substance, except as specified in this manual.

- Do not expose this product to excessive heat sources, open flames, or heating devices.

- This product contains small magnets. To prevent the batteries of the Programming Key (P55S.1) and the Key Fob (K55S.1) from draining, please store the product in a separate box away from them.

- After operating the lock, make sure that the knob is rotated back to its normal locked position.

- Read and follow these instructions and any other instructions provided by iLOQ carefully before installing or using the products. This information is to ensure your safety and the long lifetime of the products. Failure to do so may result in injury, malfunction, damage or a safety hazard.

3. Overview

3.1 iLOQ Z50S Cylindrical Leverset

The iLOQ Z50S cylindrical leversets are battery-free programmable NFC leversets for the iLOQ S50 product family in the 5 Series platform.

The Z50S leversets are available in three functions:

- Storeroom (Z50S.1)
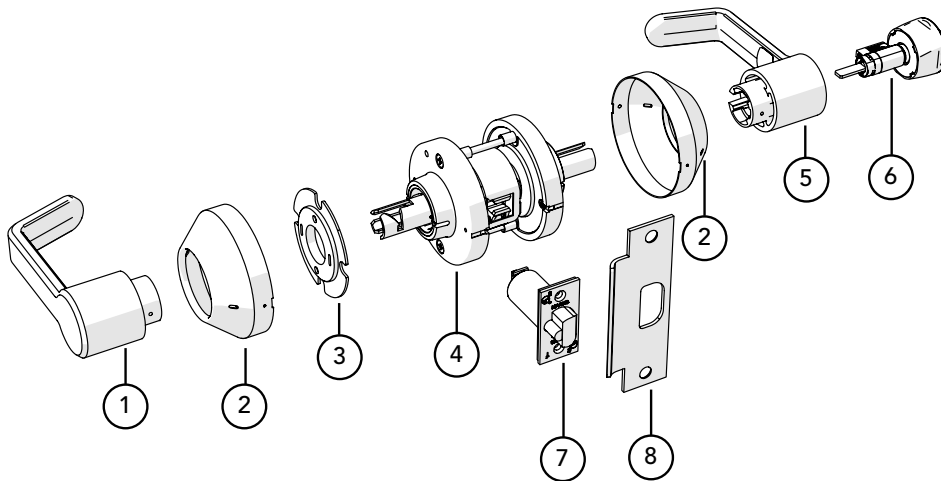
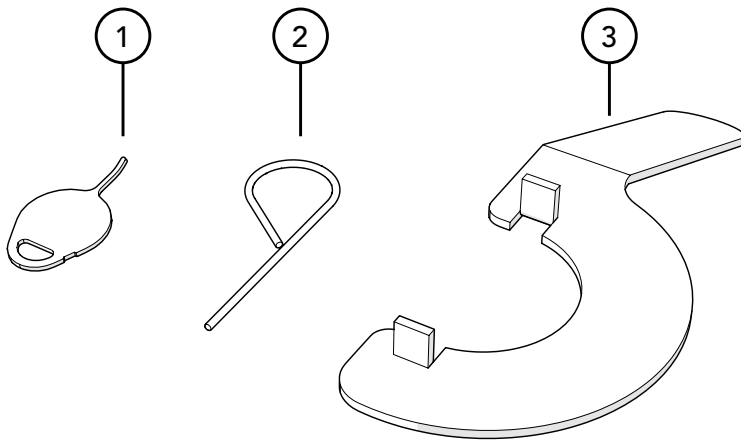- Classroom (Z50S.2)

- Entrance (Z50S.3)

Illustration for the storeroom leverset.

1. Inside Lever

2. Rose shell

3. Inside mounting plate

4. Lock body assembly

5. Outside lever

6. Cylinder

7. Latch

8. Strike plate

3.2 Tools supplied

1. Cap removal tool

2. Wire pin

3. Wrench tool

4. Before installation

4.1 General notes

- If the product is installed on a fire door, examine the fire certification to ensure conformity. If needed, contact an iLOQ sales representative for assistance.

- Make sure that the operation of the product complies with the local building codes, security regulations and any other applicable regulations.

- After installation, make sure that the product operates properly without interference from weatherstripping, or other parts of the door. Make sure that the door opens, closes, and swings freely without interference from any projecting part of the lock assembly.

- After installation, pass these instructions and any maintenance instructions on from the installer to the user. If there are any deviations from the contents in foreign language versions of the documentation, the English original shall apply in case of doubt.
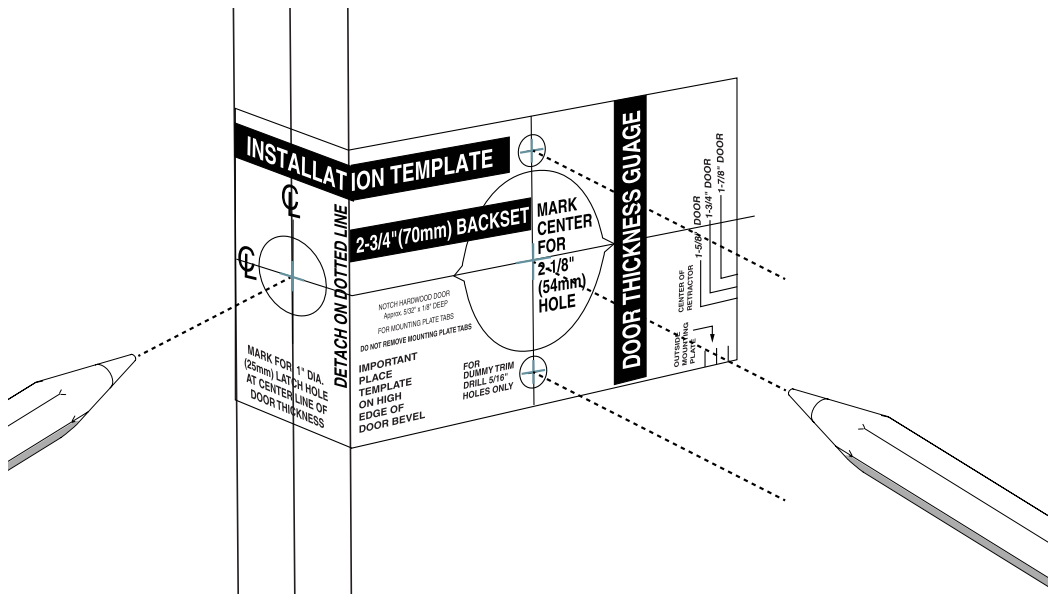
4.2 Care & maintenance

The product is designed to be maintenance-free. It does not require any regular maintenance.
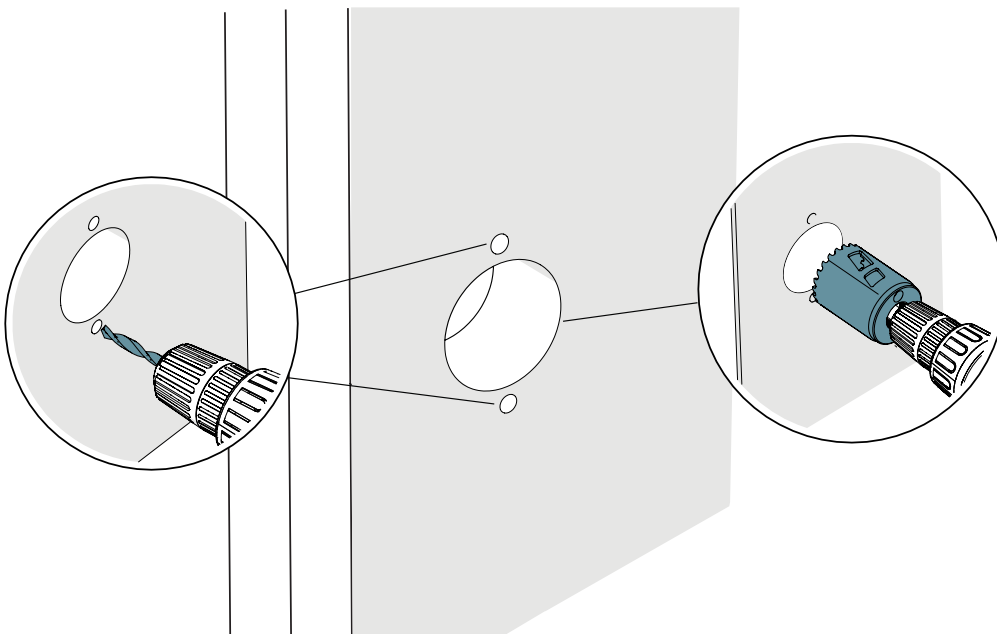
5. Preparing the door

5.1 Drilling the door

1. Fold and apply the template to the high edge of the door bevel at the desired height from the floor.
2. Mark the hole centers on the door and the door edge.

3. Frist, drill the two 5/16" thru-bolt holes, then drill a 2-1/8" hole.

5.1.1 Drilling hollow metal doors

- Use the horizontal and vertical lock and latch support provided by door manufacturer.

- If a 2-1/8" hole already exists, use the Marks J295 Installation Tool (not sold by iLOQ) to make sure that the thru-bolt holes are accurately drilled. For best results, align the J295 Installation Tool to door and clamp to door before drilling.
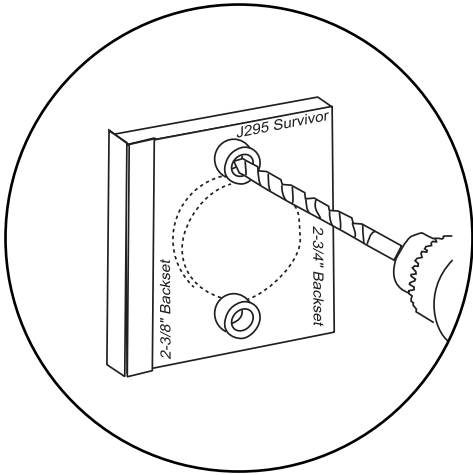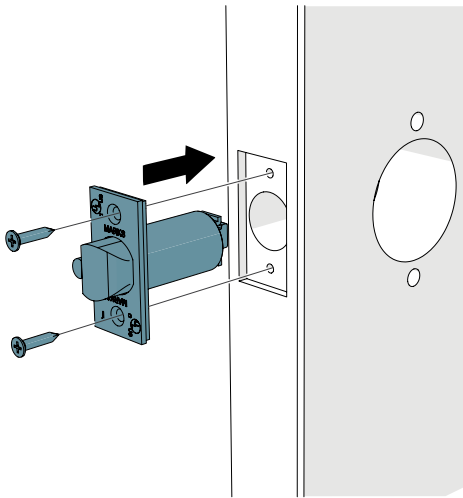

5.2 Installing the latch

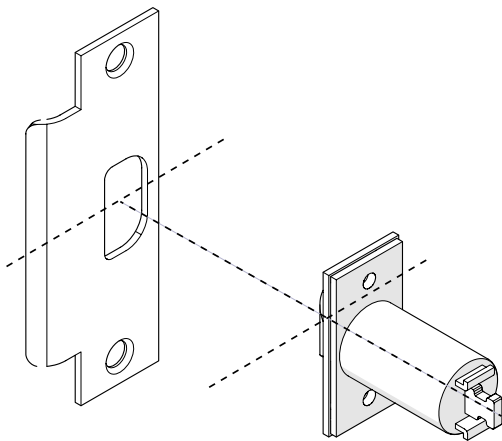1. Drill a 1" diameter hole for the latch and then mortise for latch front.
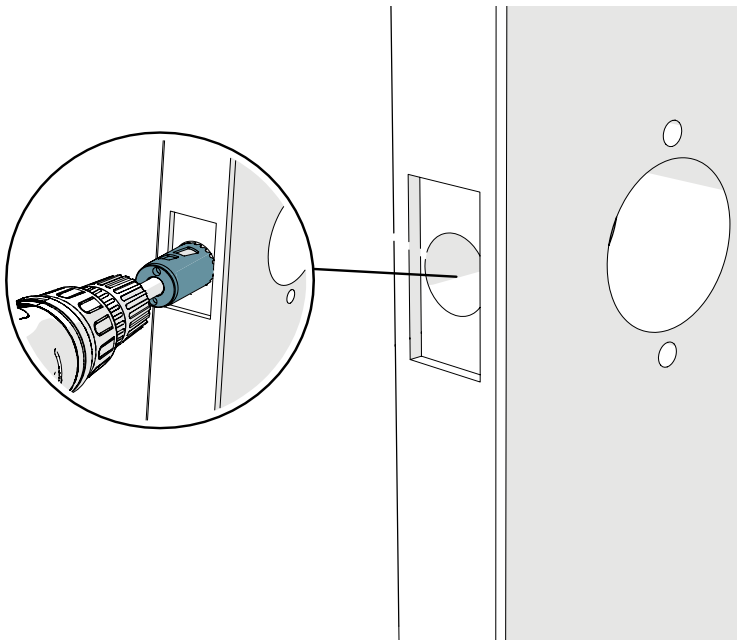
NOTE! Make sure that both 1" and 2-1/8" holes be on the same horizontal center line.

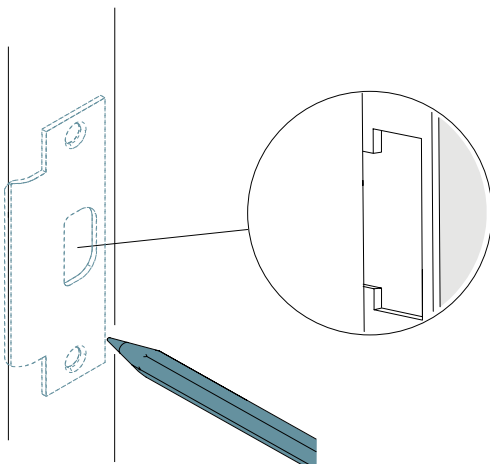2. Insert the latch and fasten it with two screws.
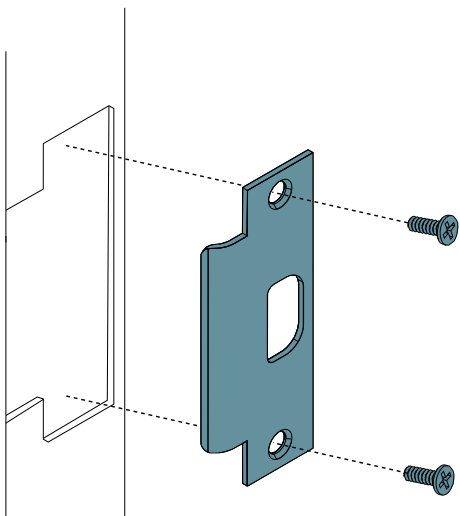

5.3 Installing the strike plate

1. Align the strike plate to be centered to the center line of the latch and the 2-1/8" hole.

2. Trace the strike plate outline onto the door jamb and mortise the door jamb.

3. Install the strike plate with two screws.

6. Preparing the lock

- The lock is factory assembled with a split spacer for standard 1-3/4" thick doors.

- The lock can be used with doors ranging from 1-3/8"to 1-7/8"in thickness.

6.1 Removing the inside lever and rose assembly

1. Depress the lever catch with the wire pin through the small hole in the inside rose assembly and pull the lever off the tube.
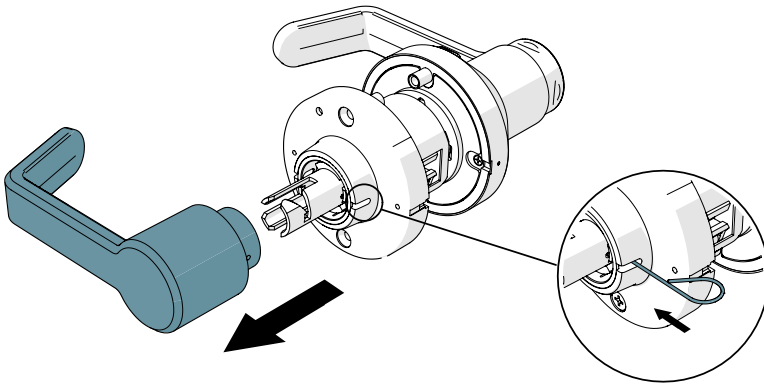
2. Depress lever catch again and remove the inside rose assembly and the mounting plate.
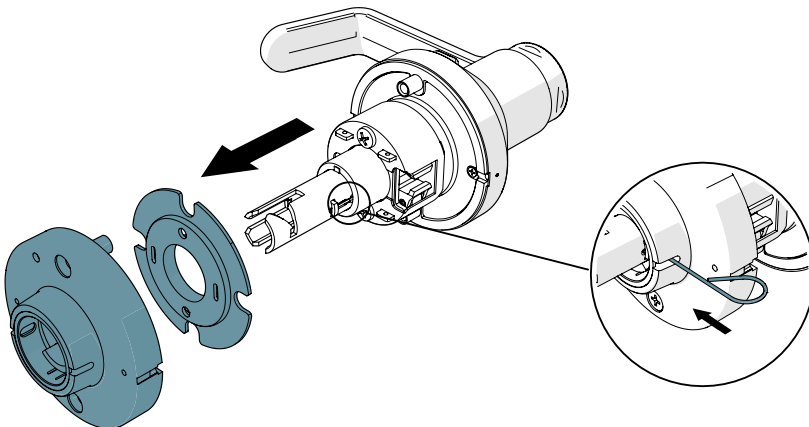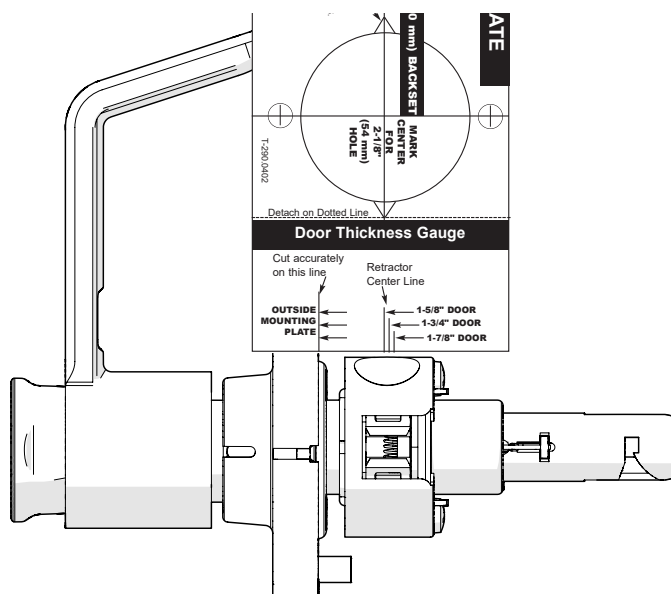
## 6.2 Adjusting for other door thicknesses

> (!) **NOTE:** Skip this section if the door thickness is standard (1 3/4")

1. Use the door thickness gauge on the template to check lock chassis position.

2. To adjust the door thickness, remove the outside lever. See section "8.1 Removing the outside lever".

3. Make sure that the center of the latch retractor aligns with the mark on gauge for appropriate door thickness.

   – If the chassis is not on center, screw the chassis in or out to align with the mark.
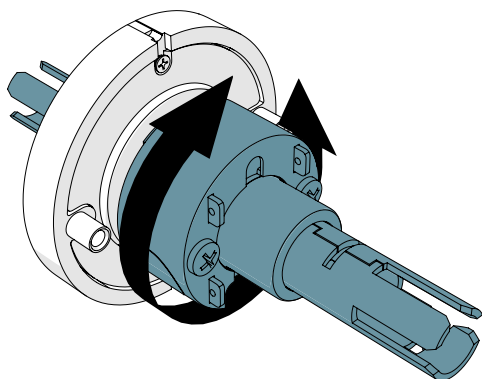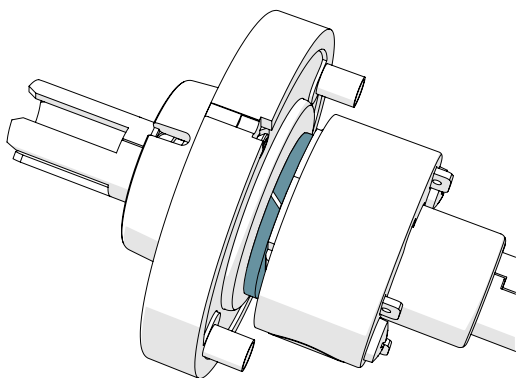
! NOTE! To adjust for doors thinner than 1-3/4", remove the split spacer.
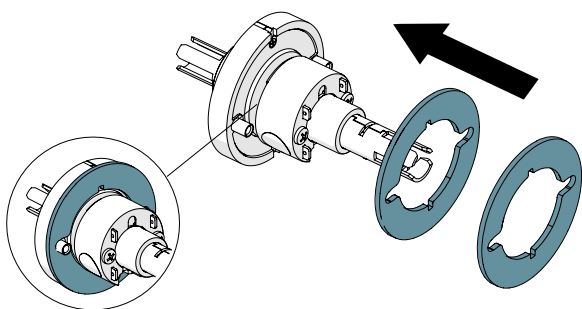

! NOTE! For 1-3/8" doors, adjust for 1-5/8" door thickness, then install spacer rings (Product code #AX50.Z.SP. XX, not included) on each side of the door between the roses and the door.

4. Reinstall the outside lever. See section "8.2 Installing the outside lever".
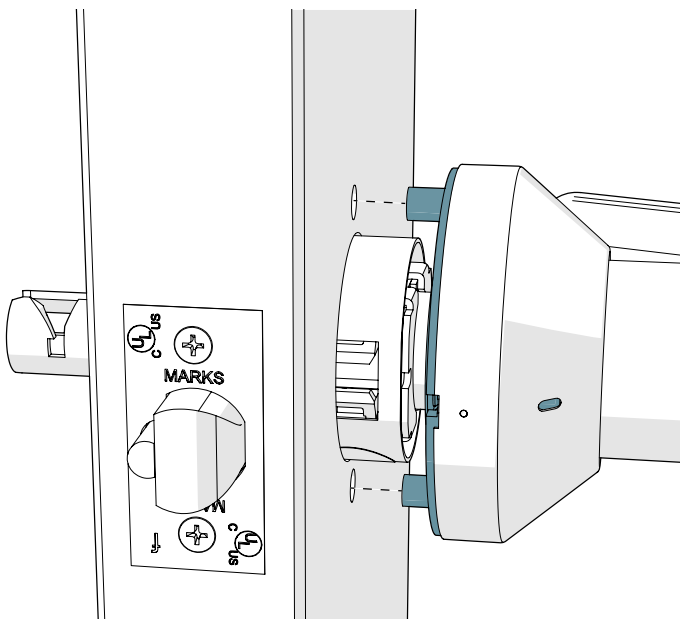
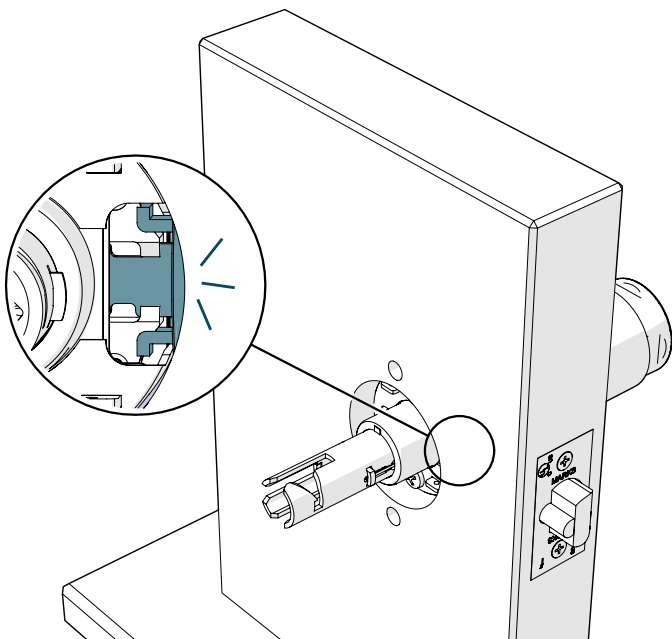# 7. Installation

7.1 Installing the lock

1. Push the lock through the 2-1/8" hole from the access controlled side of the door, while making sure that the prongs engage inside the lock housing.
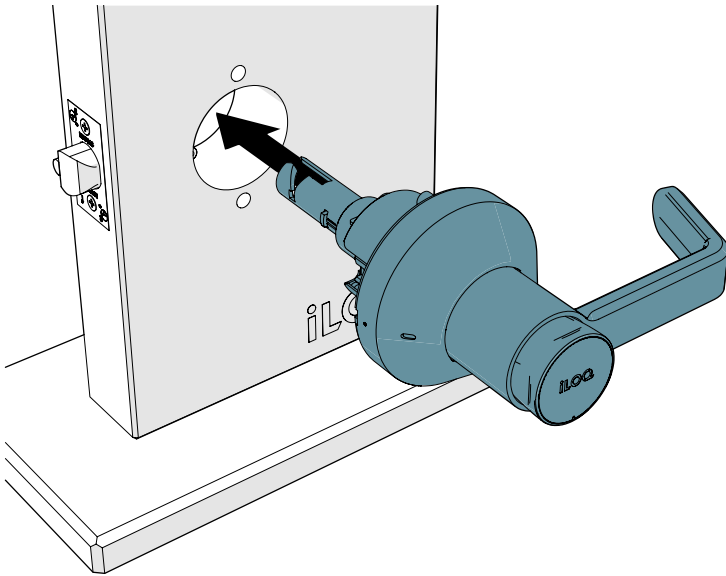
2. Align the outside rose so the rose posts enter the thru-bolt holes in the door.
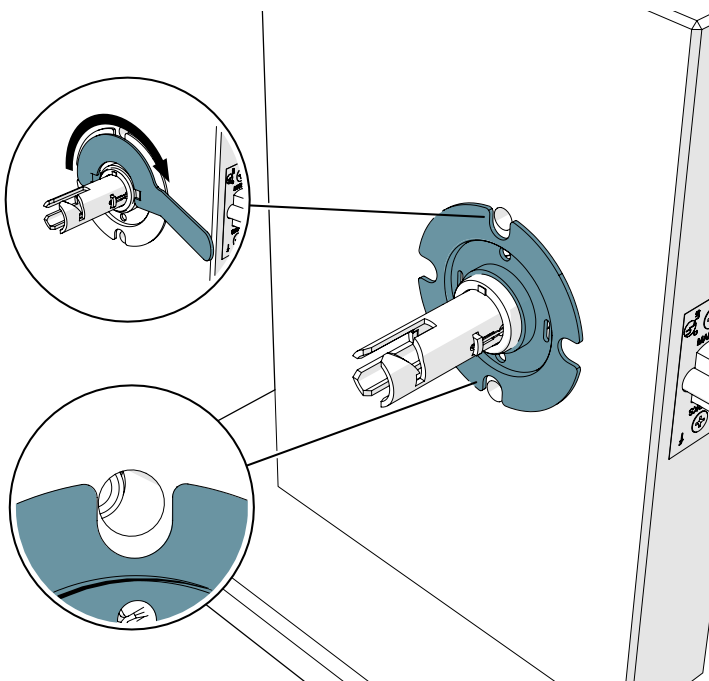
3. Look inside the door to make sure that the latch is properly engaged.

7.2 Installing the inside trim

1. Screw the inside mounting plate in place and tighten it with the wrench tool. Make sure that the mounting plate is flush with the door.
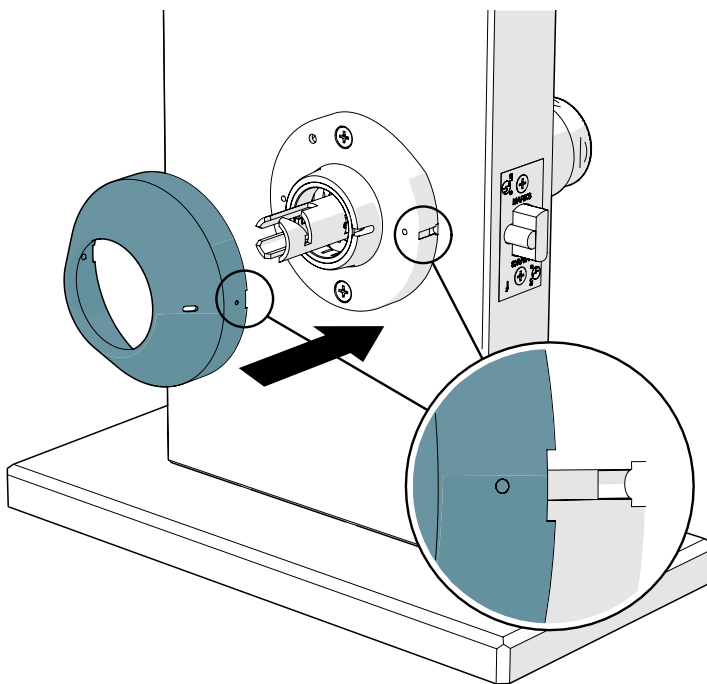

! NOTE! If a spacer ring is used, the spacer needs to be installed before screwing on the mounting plate.

2. Install the inside rose assembly and fasten it to the outside rose with the two long thru-bolts.
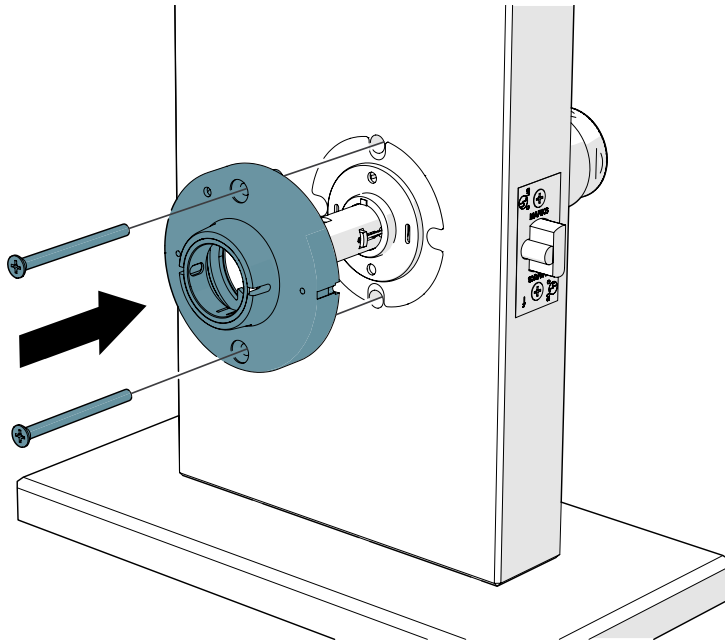
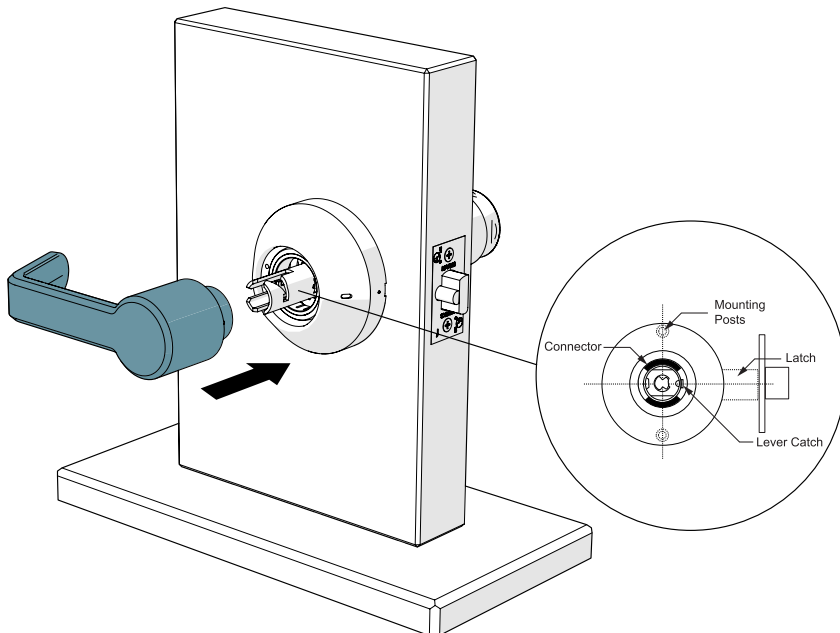3. Align the notch in the rose cover with either of the notches on the inside rose and press together.
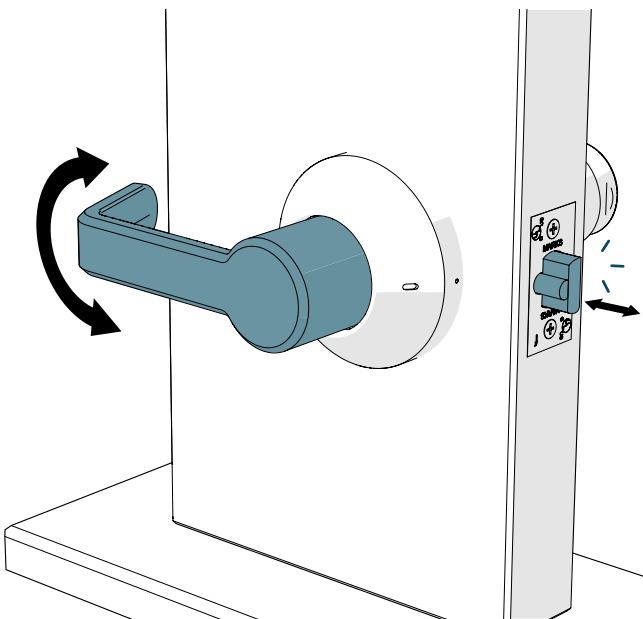
7.3 Installing the inside lever

1. Press the inside lever onto the lock tube, slightly wiggle and push until the lever engages the lever catch and connector.

2. Make sure that the lever is on securely.

3. Make sure that the latch retracts completely, and that the latch properly latches into the strike plate.
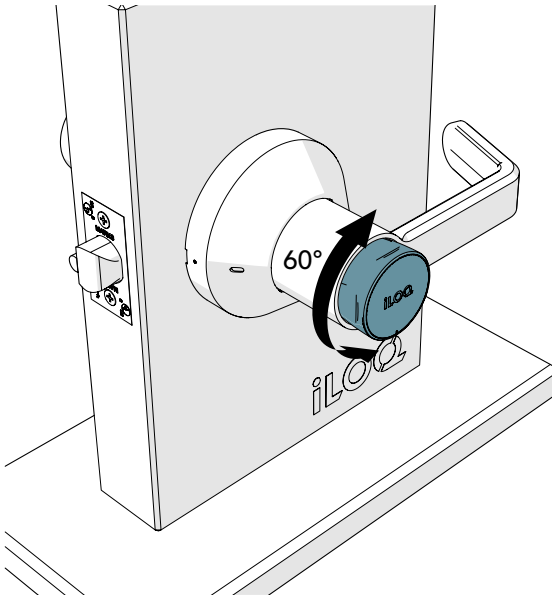
8. Removing and installing the outside lever
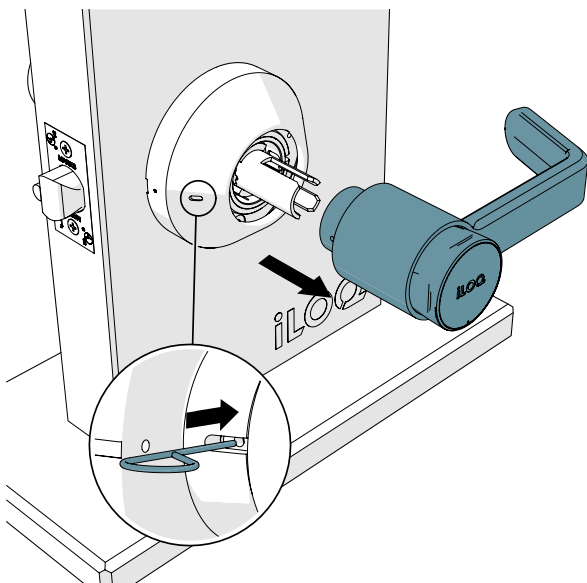
8.1 Removing the outside lever

> **!** NOTE! A valid credential is required in this procedure (to turn the knob).

1. Turn and hold the knob at 60° in either direction.

2. Use the wire pin to depress the outside lever catch through the small hole in the rose and pull the lever off the tube.

8.2 Installing the outside lever

⚠ NOTE! A valid credential is required in this procedure (to turn the knob).

8.2.1 For the storeroom and entrance functions

⚠ NOTE! If the lock is not in the door, the mounting posts must be on the vertical center line.

1. Align the lever catch to the face latch front.
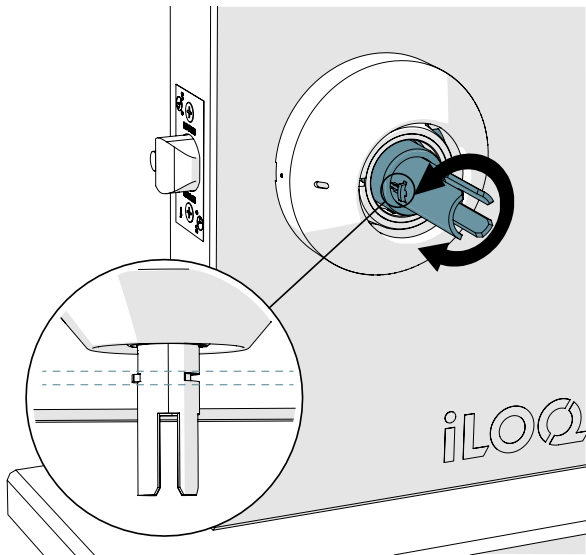
2. Slide the lever onto tube until it stops at the lever catch.

3. Turn and hold the knob at 60° in either direction.

4. Slightly wiggle and push the lever until the lever engages the lever catch and connector.
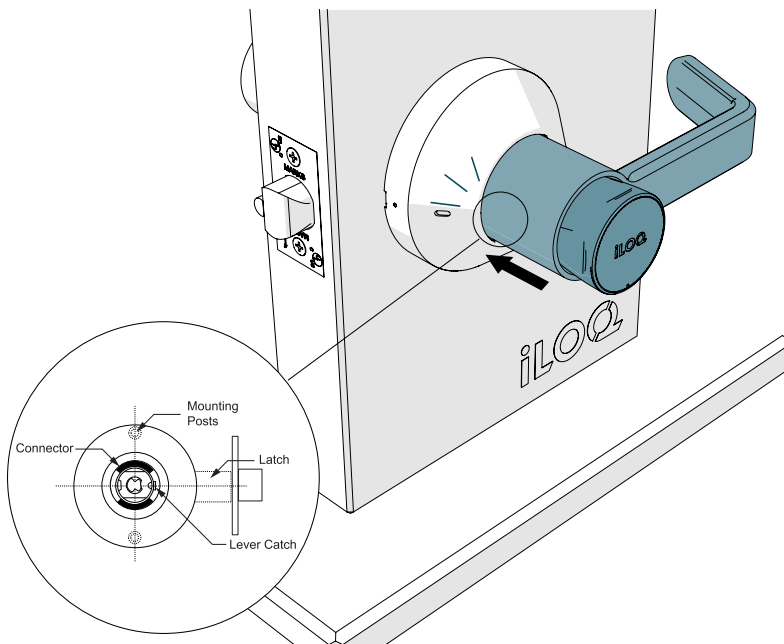
5. Make sure that the lock operates properly before closing the door.
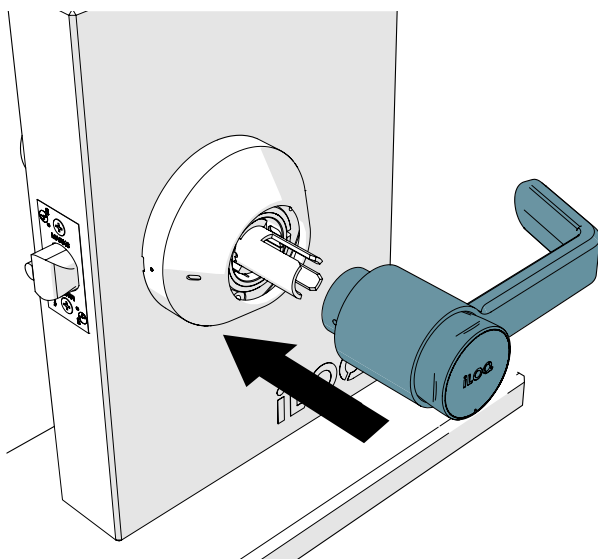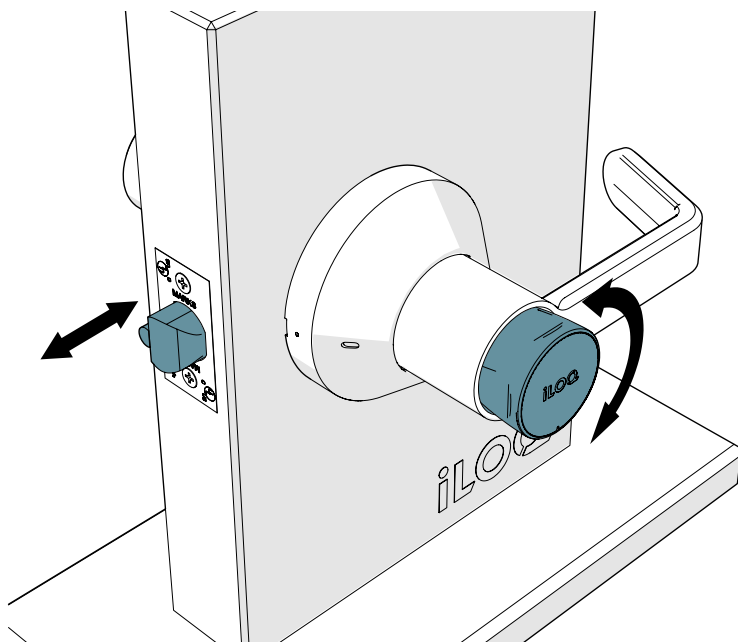

8.2.2 For the classroom function

! NOTE! If the lock is not in the door, the mounting posts must be on the vertical center line.

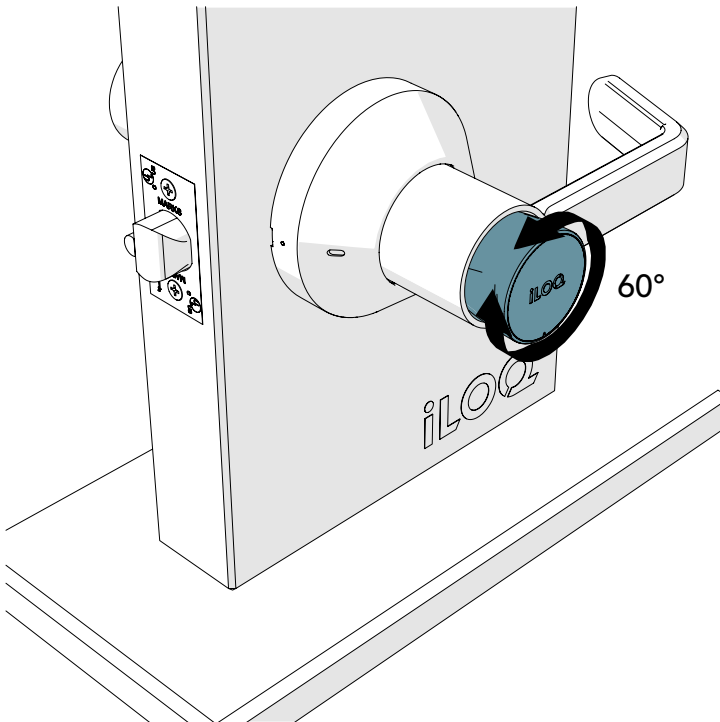1. Insert a screwdriver into the key cam slot and turn it fully clockwise until it stops.

2. Turn the screwdriver counter-clockwise 180° and remove it from the key cam slot.

3. Turn and hold the knob counter-clockwise at 90°. Slide the lever onto the tube with the tailpiece aligned properly. Slightly wiggle and push the lever until the lever engages the lever catch and connector.

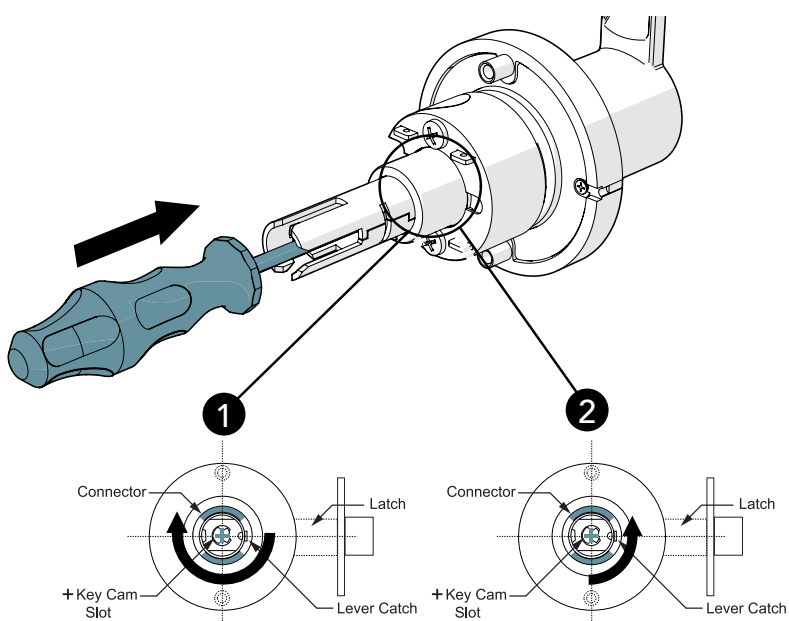4. Make sure that the lock operates properly before closing the door.
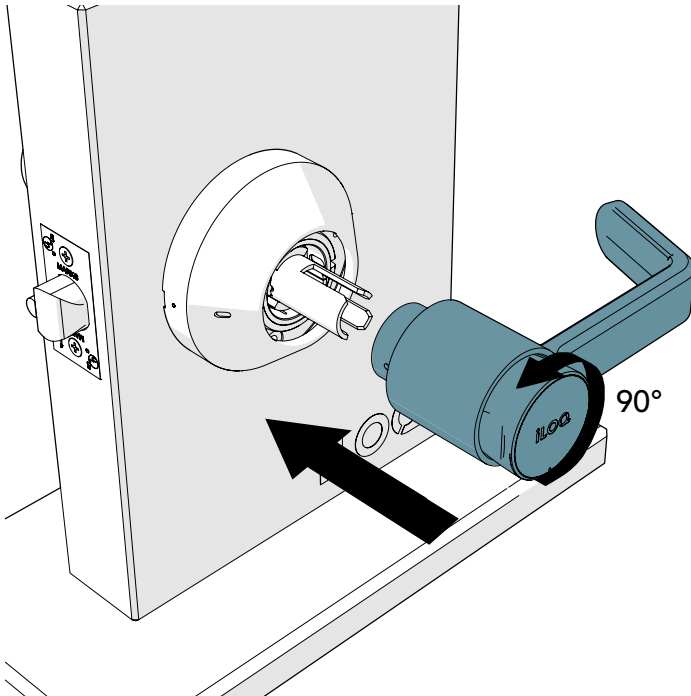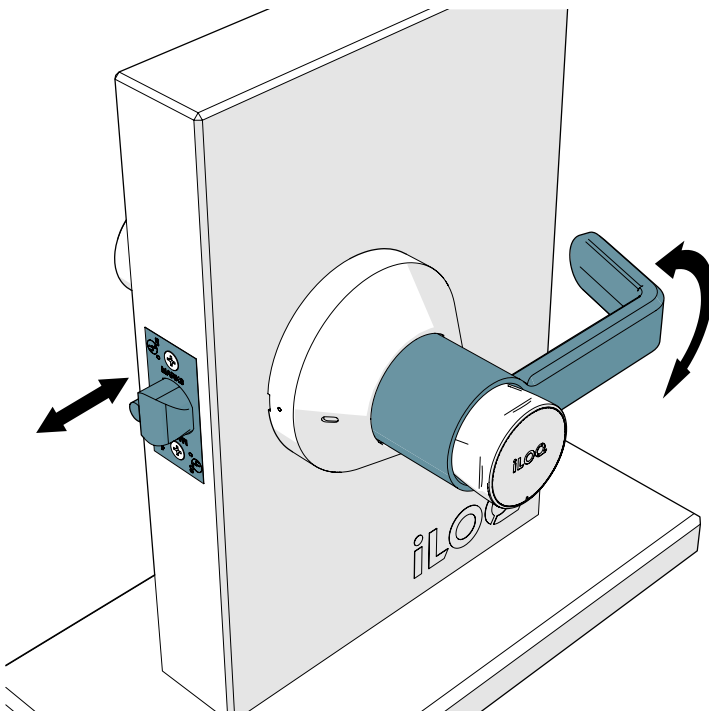
9. Operating instructions

9.1 Lock functions

The iLOQ Z50S Cylindrical Leverset is available in three functions: Storeroom, Classroom and Entrance.

9.1.1 Storeroom (Z50S.1)

The outside lever is always locked. To unlock the outside lever, turn the knob just over 90° in either direction. The inside lever is always free for immediate egress.

9.1.2 Classroom (Z50S.2)

The outside lever can remain locked or unlocked. To unlock the outside lever, turn the knob 360° and the lever will remain unlocked.

To lock the outside lever, turn the knob 360° in the opposite direction and the lever will remain locked. The inside lever is always free for immediate egress.

9.1.3 Entrance (Z50S.3)

The thumbpiece on the inside lever is used to control the outside lever.
The inside lever is always free for immediate egress.

The thumbpiece is not pushed in

The outside lever remains unlocked.

The thumpiece is pushed in

The outside lever is temporarily locked. Using the internal lever or turning the knob will release the thumbpiece.

The thumbpiece is pushed in and turned

The outside lever remains locked. Using the internal lever or turning the knob will not release the thumbpiece.

9.2 Operating the leverset

> ⚠️ **WARNING**
>
> Magnetic hazard!
> This product contains small magnets. Medical devices, such as implanted pacemakers and defibrillators may contain sensors that respond to magnets and radios when in close contact to the product and can cause death or serious injury.
> To avoid any potential interactions of medical devices, keep the product a safe distance away from your device (more than 4 inches/10 cm but consult your healthcare provider and your device manufacturer for specific guidelines).
> Do not place your credit card or any other magnetic stripe cards near this product.

1. Hold a valid key against the knob and wait until the key shows a green light.
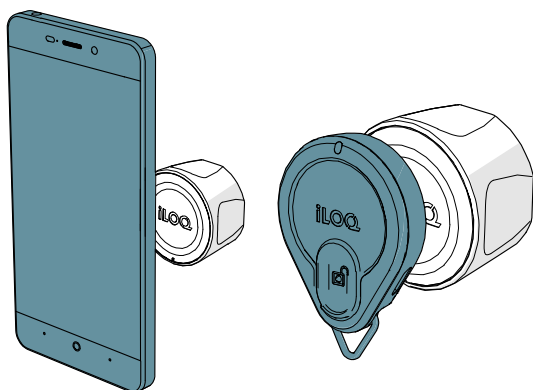
! NOTE! Due to the large variety of phone models and operating system versions, iLOQ cannot guarantee that all NFC-enabled phones will work seamlessly with our NFC locks.
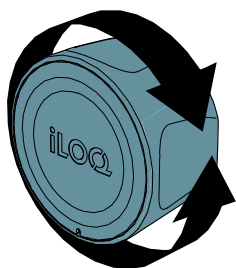
! NOTE! Before using the locks, check where the NFC antenna is located in your phone so that you know the best position to hold the phone against the knob.
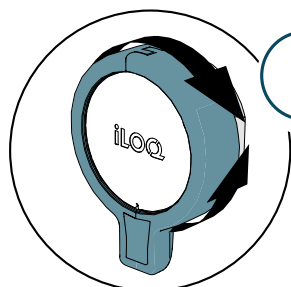
! NOTE! Do not use excessive force when operating the lock (Max. 2 Nm of torque).

2. Turn the knob to unlock or lock the door.

! NOTE! Depending on the configuration, the lock will stay in the open status for 5-15 seconds. Do not force the knob.

! NOTE! If the iLOQ ADA adapter is installed, do not use it to pull the door. The ADA adaprer is designed solely to open the lock cylinder. Using it to pull the door will shorten the cylinder's lifespan.

3. Make sure that the knob is in the original locked position and **cannot be rotated** before leaving the door.

10. Installing the ADA Adapter

Parts needed:

- AX50.G.KT.3 - Cap removal tool
- AX50.G.KT.1 - ADA Adapter for TorQ Knob:
    - ADA Adapter for TorQ Knob
   - Knob removal tool

> ⚠ **CAUTION**
>
> Do not leave the knob removal tool inside the knob. Hold the knob securely during installation and removal to prevent the tool from accidentally popping off.
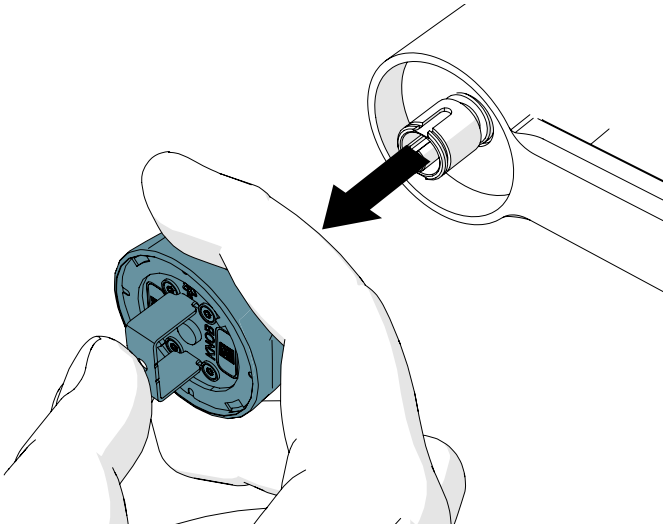
1. Insert the cap removal tool into the hole of the cap to remove the front cap from the knob.
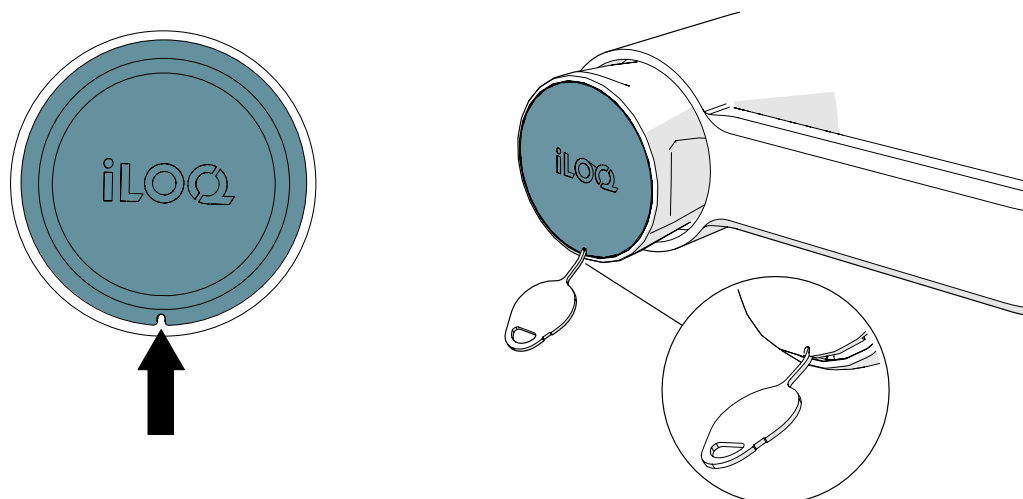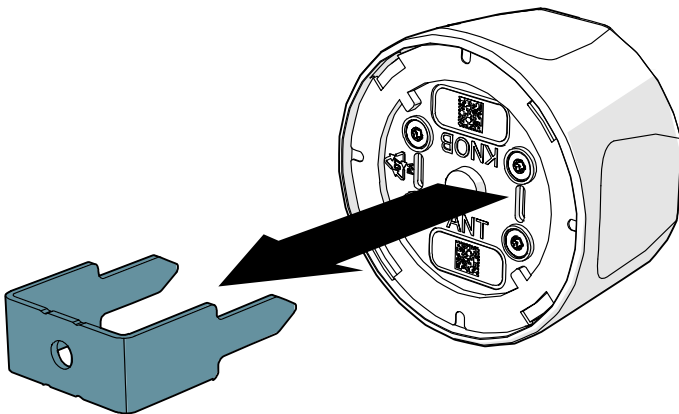
2. Insert the knob removal tool into the front of the knob. While holding the knob, press firmly on the tool until it clicks.
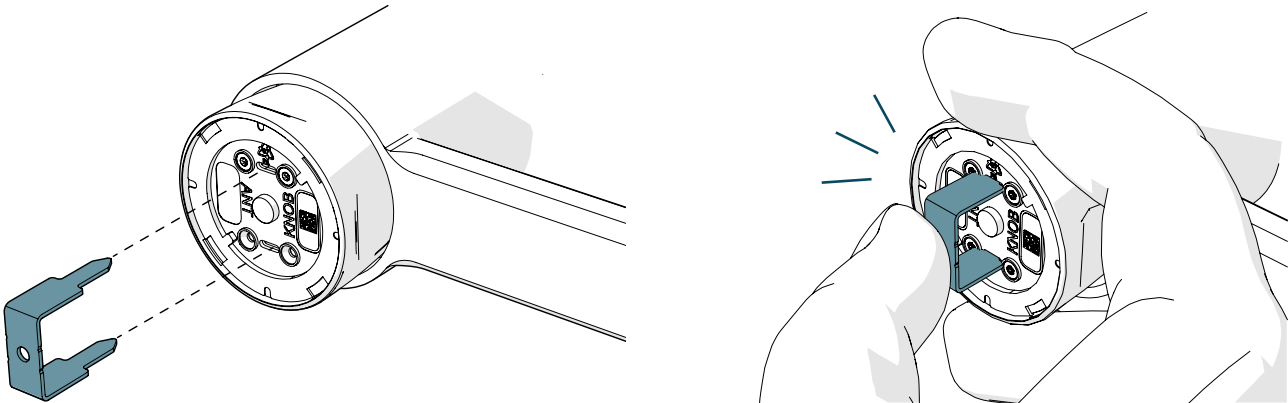
3. Pull the knob from the cylinder.
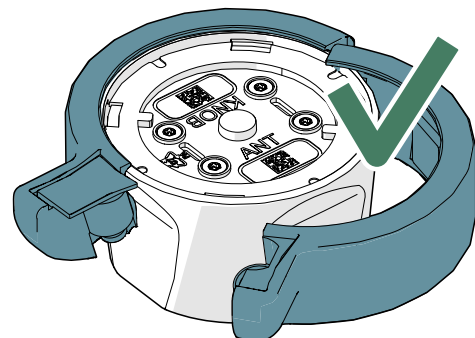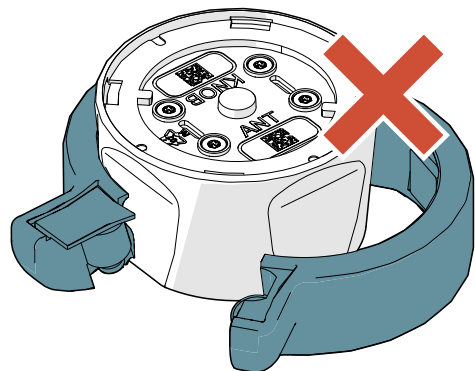
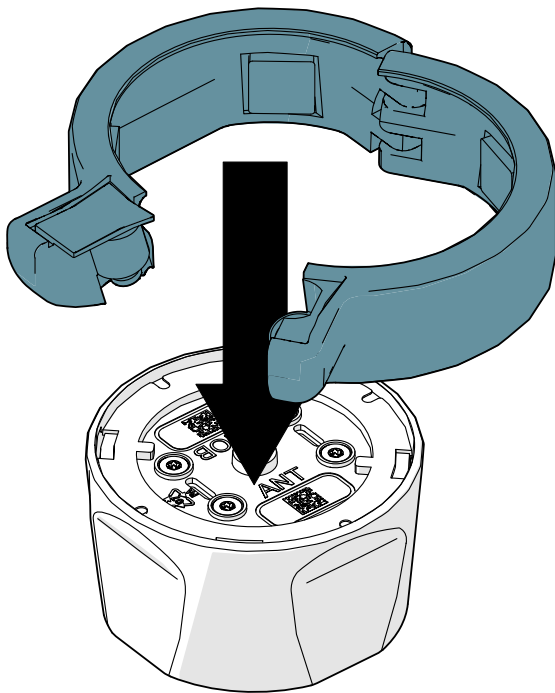4. Remove the tool from the knob.

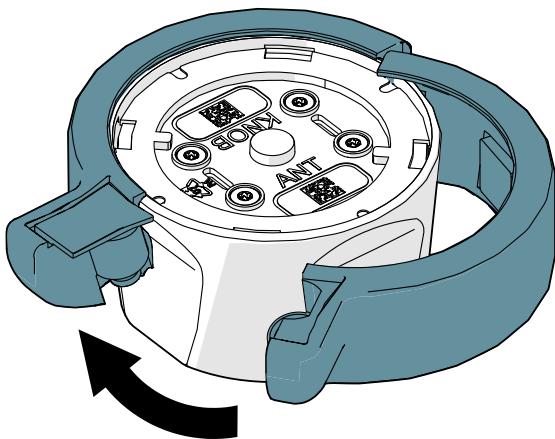5. Bring the ADA Adapter around the knob.

> ⚠ NOTE! The screw side should be facing the door and the upper lip of the adapter should sit on top of the upper lip of the knob
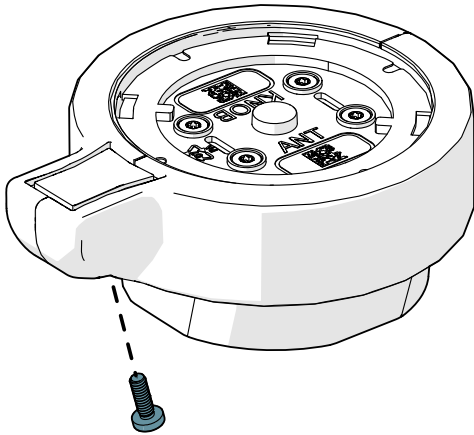
> ⚠ NOTE! The ADA adapter can be installed in four different orientations (0°, 90°, 180° and 270° angles).

6. Close the ADA-adapter.

7. Tighten the T6 fixing screw on the bottom of the adapter (Max 0.1 Nm of torque).

8. Insert the knob removal tool into the front of the knob. While holding the back of the knob, press firmly on the tool until it clicks.
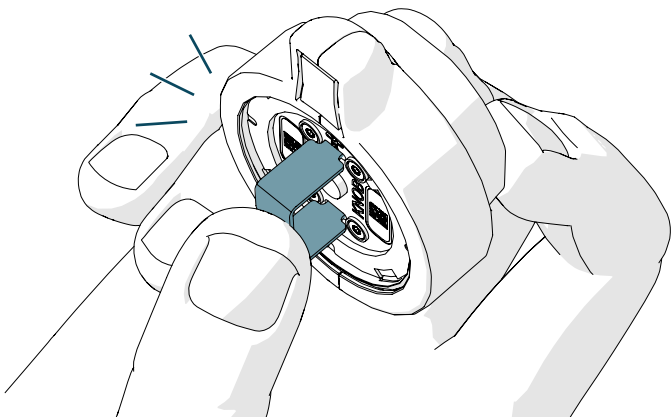
9. While pressing on the tool, slide the knob into the cylinder. Push the knob until it stops.
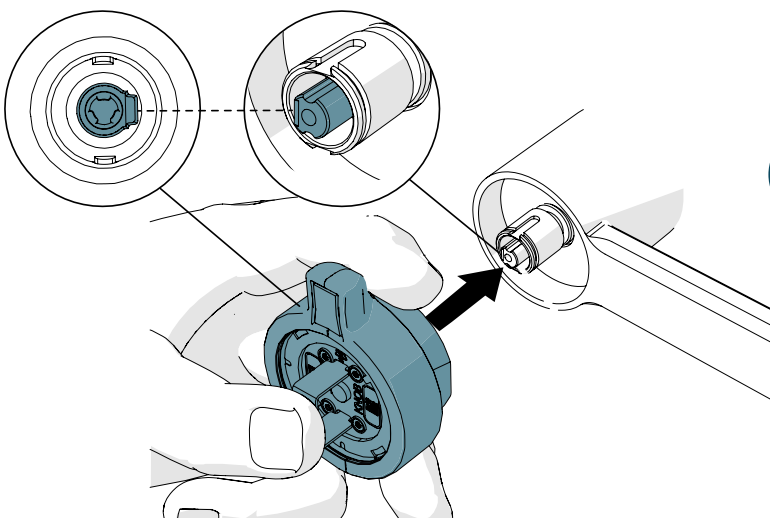
! NOTE! Make sure that the knob is inserted the correct way around so that the straight edges of the cylinder and knob align vertically.

10. Remove the tool from the knob.
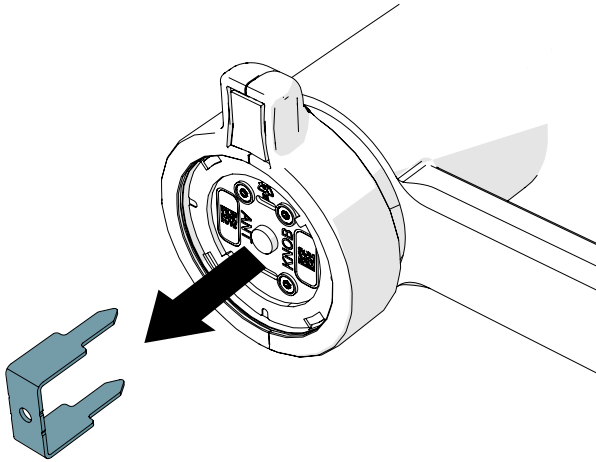
11. Insert the front cap into the knob by aligning the four tabs of the cap with the four pockets in the knob. The iLOQ logo on the cap should be horizontal when the cylinder is locked.

! NOTE! The front cap can be installed in four different orientations (0°, 90°, 180° and 270° angles) based on the orientation of the lock.

11. Replacing the KIK Cylinder

Parts needed:

- AX50.G.KT.3 - Cap removal tool
- AX50.G.KT.2 - Knob removal tool

11.1 Cylinder removal

> ⚠️ **CAUTION**
>
> Do not leave the knob removal tool inside the knob. Hold the knob securely during installation and removal to prevent the tool from accidentally popping off.

1. Remove the outside lever. See section"8.1 Removing the outside lever".

2. Remove the front cap from the knob by inserting the cap removal tool into the hole of the cap.
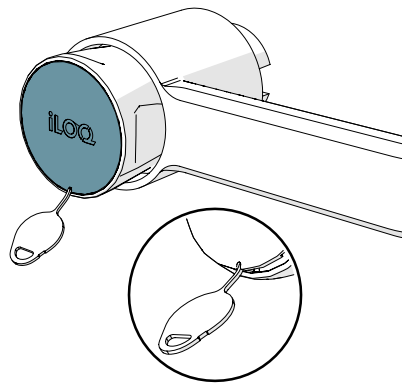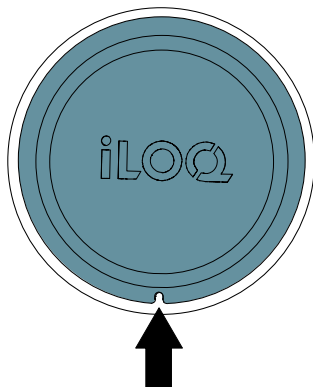
3. Insert the knob removal tool into the front of the knob to remove the existing knob from the cylinder Press firmly on the tool until it clicks while holding the knob.
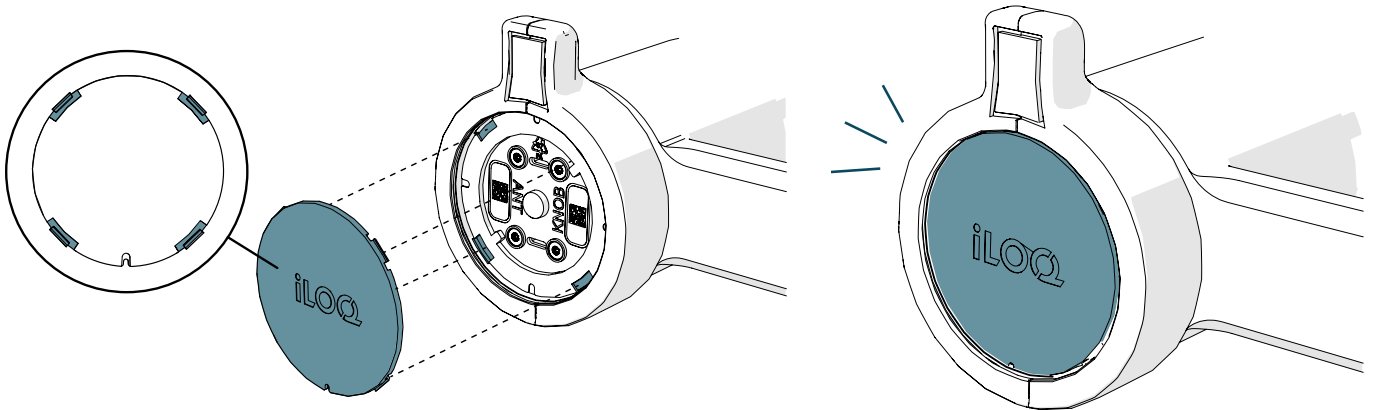
4. Pull the knob from the cylinder.

5. Remove the cylinder.
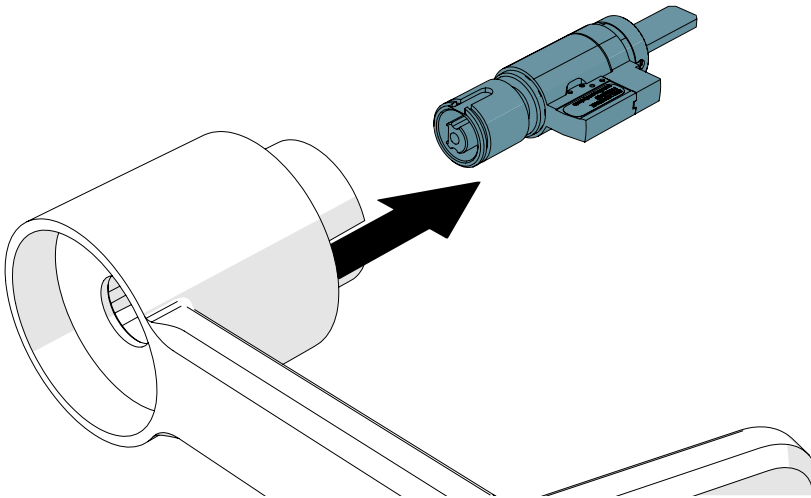
11.2 Cylinder installation

> ⚠️ **CAUTION**
>
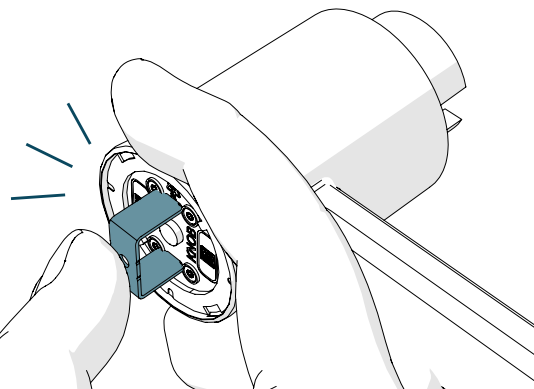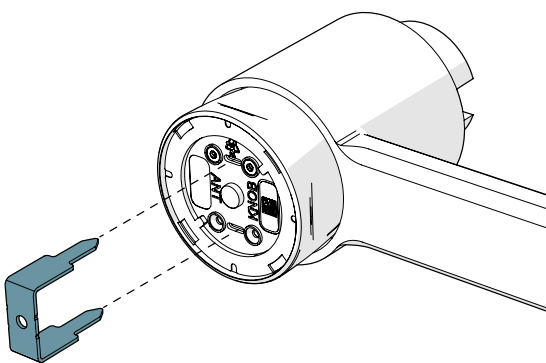> Do not leave the knob removal tool inside the knob. Hold the knob securely during installation and removal to prevent the tool from accidentally popping off.

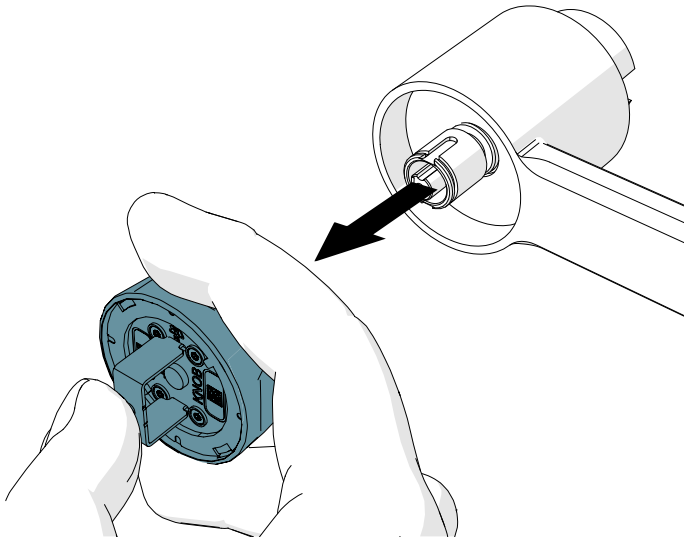1. Insert the cap removal tool into the hole of the cap to remove the front cap from the knob.
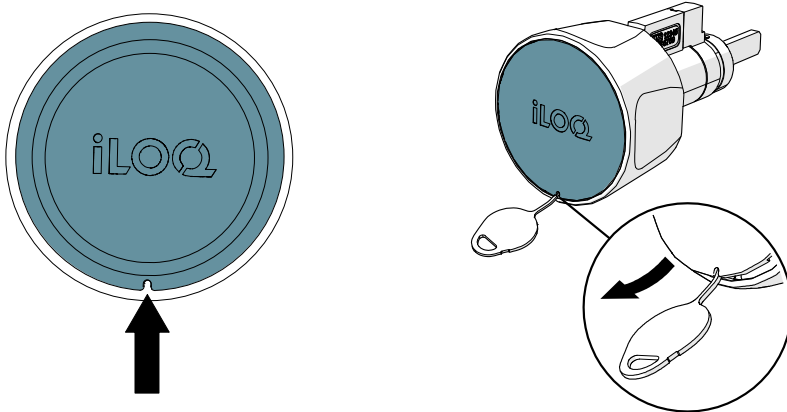
2. Insert the knob removal tool into the front of the knob. While holding the back of the knob, press firmly on the tool until it clicks.
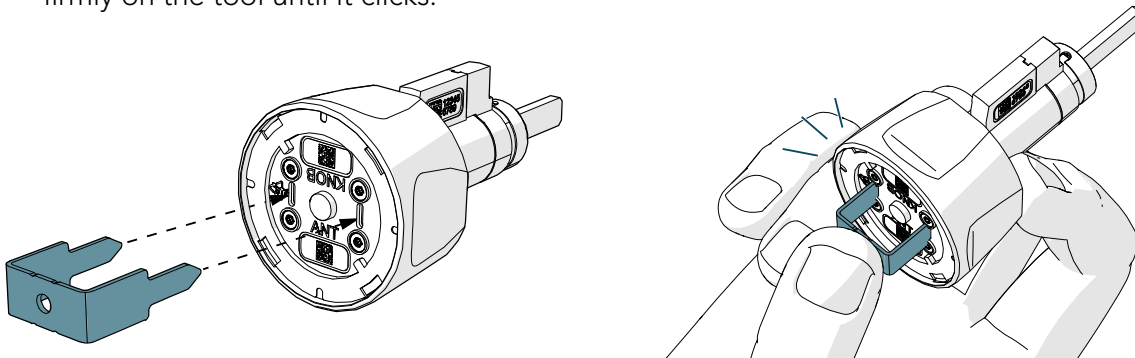
3. Pull the knob from the cylinder.

4. Remove the tool from the knob.

5. Slide the KIK cylinder into the outside lever.

6. Insert the knob removal tool into the front of the knob. While holding the back of the knob, press firmly on the tool until it clicks.
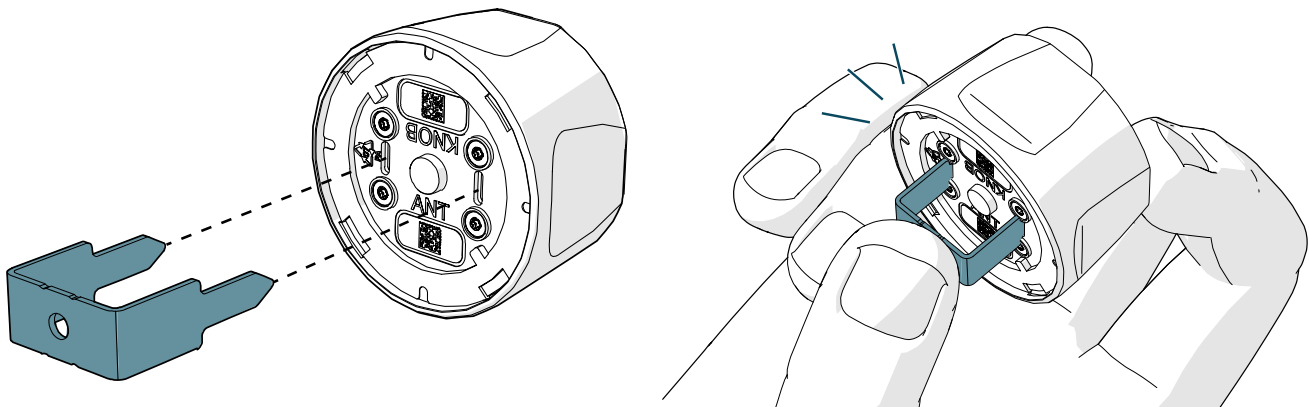
7. While pressing on the tool, slide the knob into the cylinder and hold the tailpiece with the other hand until you secure the knob in place.

> **!** NOTE! Make sure that the knob is inserted the correct way around so that the straight edges of the cylinder and knob align vertically.
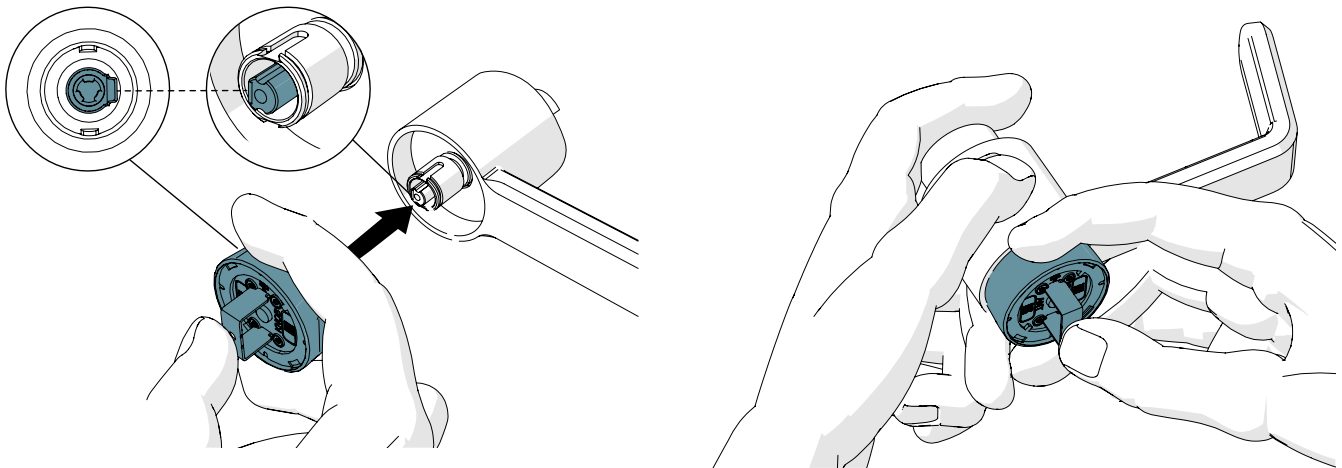
8. Remove the tool from the knob.
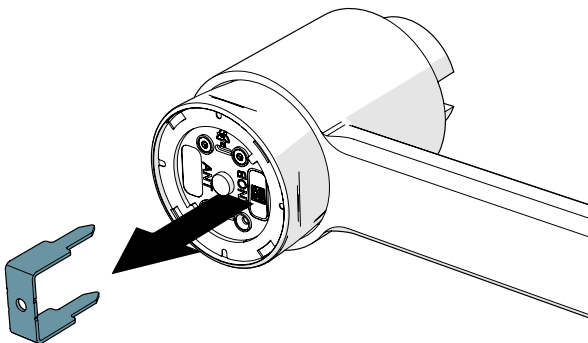
9. Insert the front cap into the knob by aligning the four tabs of the cap with the four pockets in the knob. The iLOQ logo on the cap should be horizontal when the cylinder is locked.
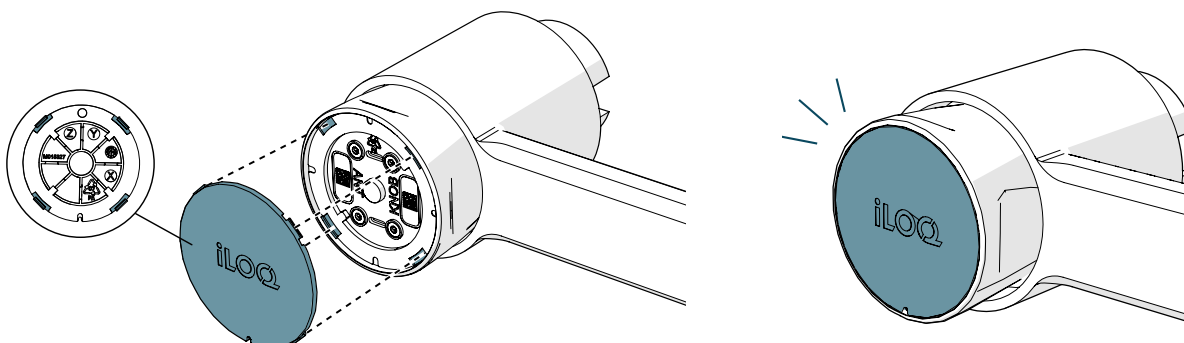
10. Reinstall the outside lever. See section "8.2 Installing the outside lever".

12. Replacing the knob

If necessary, use the following instructions to replace the knob. Parts needed:

- AX50.G.KT - TorQ Knob Without Cap
- AX50.G.KT.A.1 - Black Flat Cap for TorQ Knob
- AX50.G.KT.3 - Cap removal tool
- AX50.G.KT.2 - Knob removal tool

> ⚠️ **CAUTION**
>
> Do not leave the knob removal tool inside the knob. Hold the knob securely during installation and removal to prevent the tool from accidentally popping off.
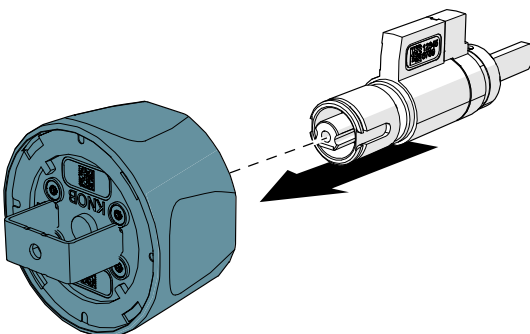
1. Insert the cap removal tool into the hole of the cap to remove the front cap from the knob.
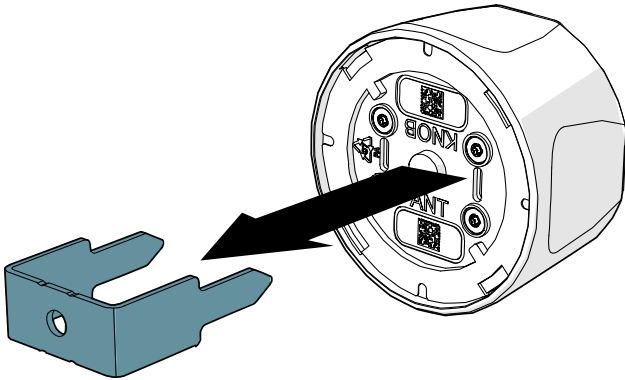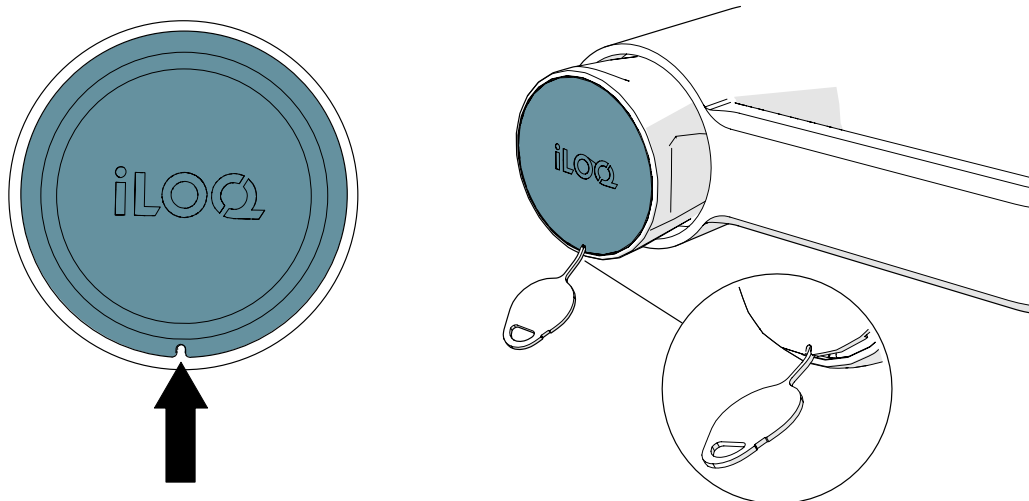
2. Insert the knob removal tool into the front of the knob. While holding the knob, press firmly on the tool until it clicks.
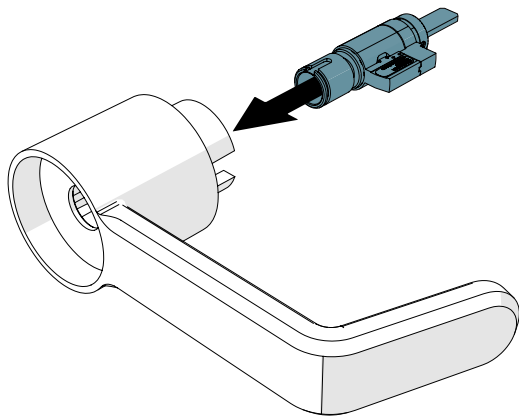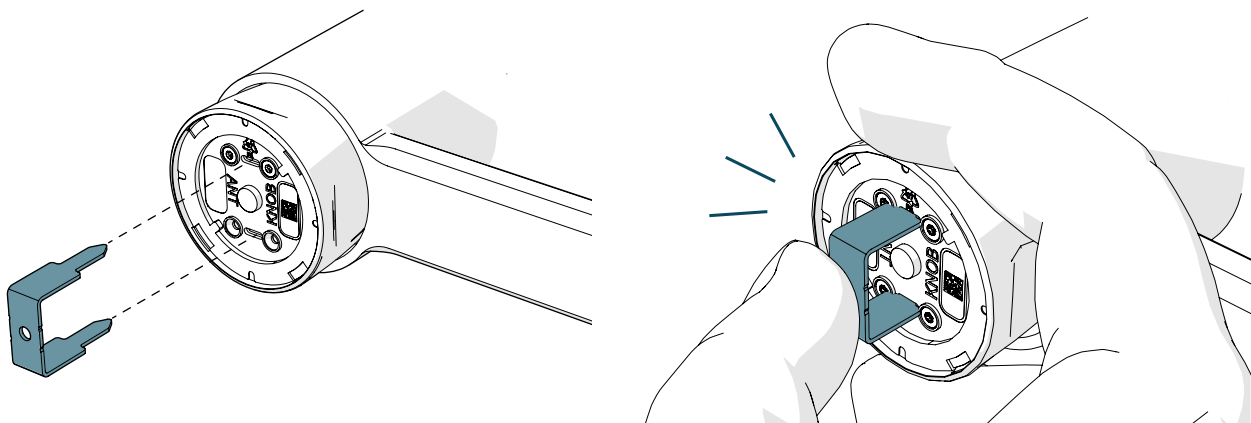
3. Pull the knob from the cylinder.
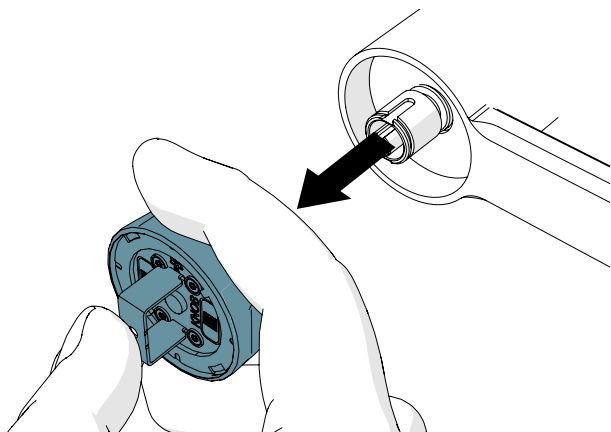
4. Insert the knob removal tool into the front of the new knob. While holding the back of the knob, press firmly on the tool until it clicks.
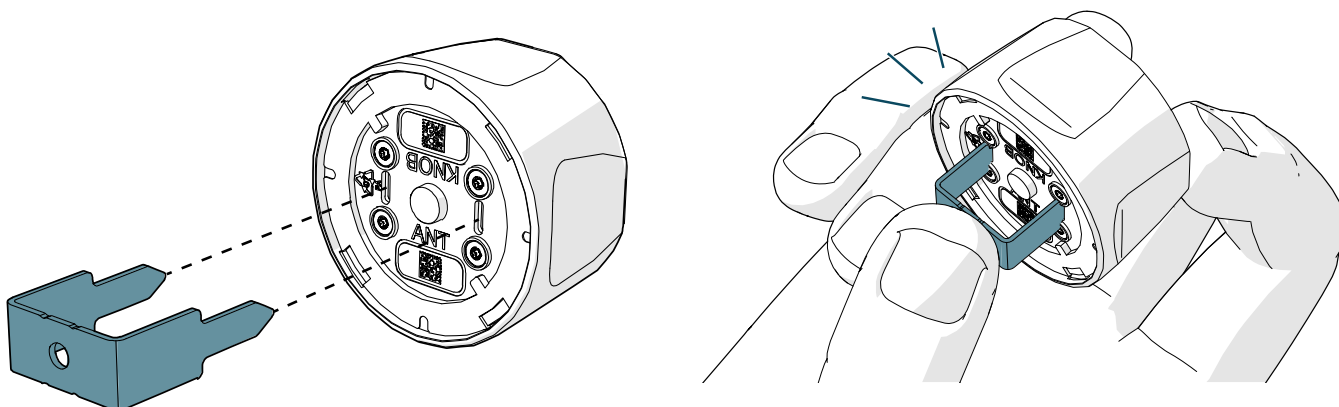

5. While pressing on the tool, slide the knob into the cylinder.
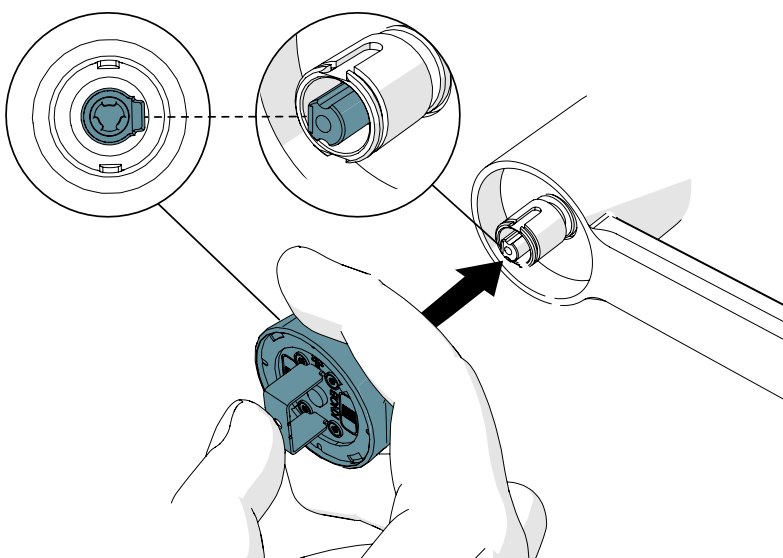
> ! NOTE! Make sure that the knob is inserted the correct way around so that the straight edges of the cylinder and knob align vertically.

6. Remove the tool from the knob.
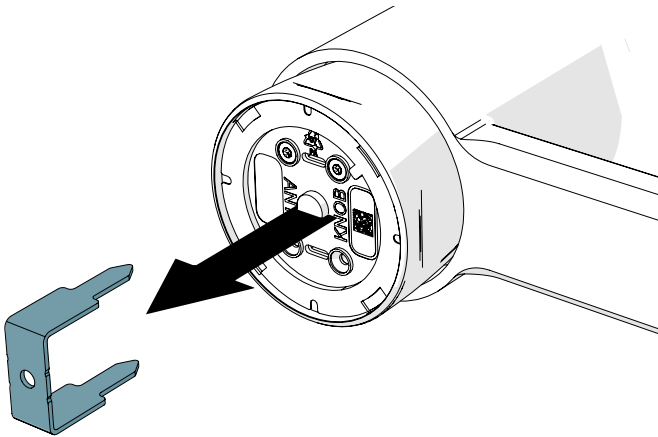
7. Insert the front cap into the knob by aligning the four tabs of the cap with the four pockets in the knob. The iLOQ logo on the cap should be horizontal when the cylinder is locked.

! NOTE! The front cap can be installed in four different orientations (0°, 90°, 180° and 270° angles) based on the orientation of the lock.
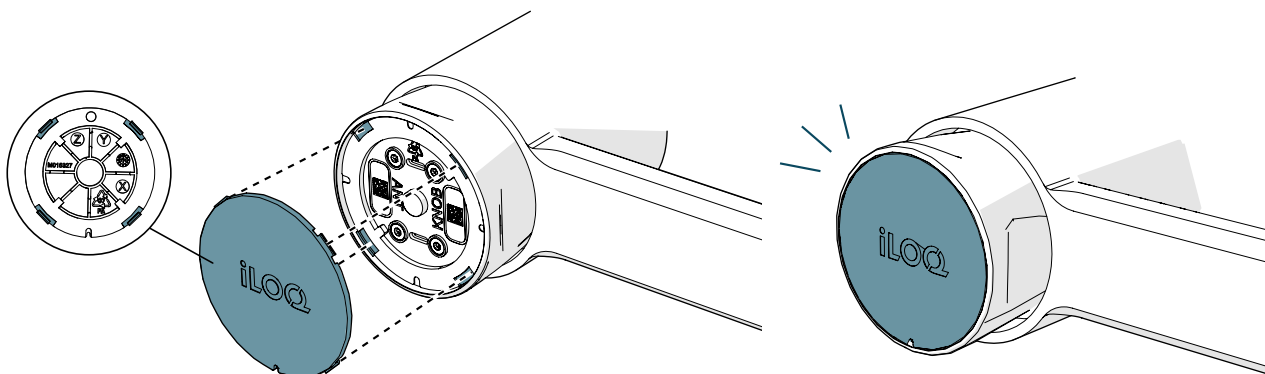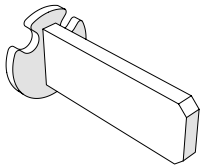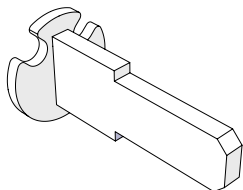
13. Troubleshooting

Problem	Solution
Levers pull off	• The lever catch does not engage. The lock may not be centered, or the door is too thick. • The outside rose is located improperly.
Unable to assemble outside lever	• The cylinder knob is incorrectly orientated. • The outside rose is located improperly.
Outside lever removable without using a credential	• The tailpiece installed in the incorrect orientation. • Incorrect tailpiece. See the available tailpieces from the table "iLOQ Cylindrical Leverset Tailpieces".
Latch won't retract	• Incorrect retractor/latch engagement or alignment. • Poor door preparation or misaligned thru-bolts.

CLASSROOM FUNCTION ONLY

Lever retracts latch in one direction but not other	• Incorrect installation of the cylinder.

iLOQ Cylindrical Leverset Tailpieces

Code	Description	
AX50.Y.TF01	Fixed Tail for iLOQ leverset (Storeroom and Entrance Functions)	
AX50.Y.TF02	Fixed Tail for iLOQ leverset (Classroom Function)	

14. Installation template

INSTALLATION TEMPLATE

DETACH ON DOTTED LINE

Mark for
1" dia. (25 mm)
Latch Hole
at Center Line
of Door Thickness

2-3/4" (70 mm) BACKSET

Notch Hardwood Door
Approx. 5/32" x 1/8" Deep
For Mounting Plate Tabs
DO NOT REMOVE
MOUNTING PLATE TABS.

IMPORTANT
PLACE TEMPLATE
ON HIGH EDGE OF
DOOR BEVEL

MARK
CENTER
FOR
2-1/8"
(54 mm)
HOLE

T-290.0402

Detach on Dotted Line

Door Thickness Gauge

Cut accurately
on this line

Retractor
Center Line

1-5/8" DOOR
1-3/4" DOOR
1-7/8" DOOR

**OUTSIDE
MOUNTING
PLATE**

TEST SQUARE

Make sure
this square is
1x1" after
printing

1"

1"

15. Disposal of decommissioned products

	Never discard an electrical appliance in household waste. Follow the local laws and regulations for safe and environmentally friendly product disposal.

NOTE! Before discarding products, bear in mind that most iLOQ products are **reusable**. All programmable products can be reset to factory settings, after which they can be reused in another system.

Recycling instructions of decommissioned products are depicted below.

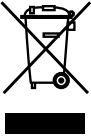| Sorting	Decommissioned product
	Decommissioned iLOQ Lock Cylinders, keys, iLOQ fittings, mounting accessories and thumb turn knobs can be recycled as scrap metal.
	Decommissioned iLOQ products containing electronics and circuit boards, such as net bridges, door modules, key and RFID readers, and relay cards, must be recycled at an electrical and electronic equipment collection point.
	iLOQ products containing batteries and accumulators, such as key fobs, programming keys and clock circuits, should be recycled at a regional collection point for batteries and small accumulators.
	Most iLOQ packaging materials are suitable for cardboard and plastic recycling.

16. Compliance

FCC

Chapter 1, Subpart A, Part 2 of Title 47 of the Code of Federal Regulations
The conformity was assessed in accordance the following standard:
FCC - FCC Rule Part 15

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

ISED

Innovation, Science and Economic Development Canada (ISED)
The conformity was assessed in accordance the following standard:
ISED - ICES 003, Issue 7: 2020 - class B

iLOQ

iLOQ S50

Z50S Cylindrical Leverset

User Guide