

ABUS | Security Center GmbH & Co. KG
abus.com

Linker Kreuthweg 5
86444 Affing
Germany

Phone: +49 82 07 959 90-0
Fax: +49 82 07 959 90-100

sales@abus-sc.com

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Security Tech Germany

WAPPLOXX PRO | TECTIQ

ELECTRONIC LOCK

CYLINDER

Fitting instructions



abus.com

Thank you for choosing a product from ABUS Security Center ("ABUS" for short). ABUS access control systems make an important contribution to securing your property and ensure that only authorised persons can enter the secured areas.

About this manual

This manual contains all the important information for safe handling of the described product. The information in this manual has been compiled to the best of our knowledge and is regularly checked and updated. Keep the manual for the duration of the product's service life and ensure that you always have the appropriate manual for the product available.

The latest version of the manual is available at any time in the download area at the following internet address: abus.com/product/TEC-Z-LA and abus.com/product/WLX-PRO-LA

Observe the information and notes in these instructions. ABUS accepts no liability for damage resulting from incorrect installation, start-up or other misuse. The responsibility for the use of the product lies with the purchaser or customer and the end user.

Third-party trademarks and industrial property rights are the property of their respective owners and are recognised.

Customer Service / Customer Support

Dealers/installers

If you have any questions, please contact our known support hotline.

End consumers

Please contact your specialist dealer or installer with any questions. Your trained ABUS specialist retail partner will be happy to advise you.

Conformity

ABUS Security Center GmbH & Co. KG hereby declares that the radio equipment type in this documentation complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available in the download area at the following internet address:

abus.com/product/TEC-Z-LA and
abus.com/product/WLX-PRO-LA

Warranty

- ABUS products are designed and manufactured with the greatest care and tested according to the applicable regulations.
- The warranty only covers defects caused by material or manufacturing errors at the time of sale. If there is a demonstrable material or manufacturing defect, the device will be repaired or replaced at the discretion of the warranty provider.
- In such cases, the warranty ends when the original warranty period of two years expires. All further claims are expressly rejected.
- ABUS will not be held liable for defects and damage caused by external influences (e.g. transport, use of force, operating errors), inappropriate use, normal wear and tear, or failure to observe the instructions in this manual.
- If you discover a defect in the device that was already present at the time of sale, please contact your seller directly within the first two years.
- When asserting a warranty claim, the original proof of purchase with the date of purchase and a brief written description of the defect must be enclosed with the product subject to complaint.

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1. General

ABUS TECTIQ and **ABUS wAppLoxx** are electronic locking systems for commercial and public buildings. Wireless locking technology with digital locking media, PC-supported management software and a well-conceived connection to the internet enable efficient and secure protection of your property at all times.

1.1. ABUS TECTIQ

ABUS TECTIQ is the wireless electronic locking and access control system for commercial and public buildings of almost any size. Developed and manufactured in Germany, the complete solution comprising hardware and software offers a comprehensive, high-performance access control and security solution.

ABUS TECTIQ works according to the data-on-card principle, where access authorisations and information are stored directly on the locking media (transponder, card or ProCap key). This means that the door components are operated offline and do not require a network connection, repeater, or other infrastructure.

Access authorisations are managed with the TECTIQ access control panel and the TECTIQ Access Manager locking system software and are generally only transferred to the locking media with a short validity period. New access authorisations are received, and the validity of the temporary access authorisation extended decentrally at the TECTIQ update terminal, e.g. when passing through the main entrance each day. With this concept, access authorisation or the locking schedule can be updated at any time, so that a flexible response is possible if a locking medium is lost or there are changes in staff.

1.2. ABUS wAppLoxx Pro / Pro Plus

wAppLoxx Pro Plus is the ideal solution for operators of commercial properties and public facilities who want to manage their access digitally and react quickly to changes in authorisation and transponder losses at any time. The wAppLoxx Pro Plus app also makes it possible to turn the smartphone into a key or to control access remotely.


All door components are connected wirelessly to their access control panel. **wAppLoxx Pro Plus** works according to the **wireless online** operating principle, where access rights and information are stored centrally in the control unit database. All locking authorisations and information are queried and logged in real time on the control unit when a locking medium is presented.

The **WLX Pro Plus Manager** PC locking system software – in conjunction with the WLX Pro Control Plus central control unit as a local database – provides an optimum system overview including flexible management of locking authorisations. All new, changed and revoked locking authorisations, events and battery statuses are exchanged online via wireless transmission. It is not necessary to write locking media or program door components locally. Using wireless repeaters, the wireless online network also works in difficult building structures.

Further information can be found at www.abus.com or – for dealers and installers – in the partner portal at www.partner-asc.ab-us.com

1.3. Intended use

- Lock cylinder with electronic access control for building doors with mortice lock
- Indoor and outdoor installation

 **Important!** For escape and rescue routes, install lock cylinders only in suitable mortice locks. Ensure the conformity of the lock cylinder with the mortice lock.

Improper use, repair work or modifications not expressly authorised by ABUS and improper servicing can lead to malfunctions and result in the loss of liability, warranty and separately agreed guarantee claims. Please note the different product types or accessories for the different applications and installation situations.

1.4. Target groups

The products/systems described here may only be installed and maintained by persons who are qualified for the respective task. Qualified personnel for the installation and maintenance of the system is usually a trained ABUS specialised retail partner.



Responsibility for operation of the product after installation and start-up lies with the system operator, main user or owner of the building.

Architects, technical building planners (technical building services) and other consulting institutions are required to obtain all necessary product information from ABUS in order to fulfil their information and instruction obligations. Specialist dealers and installers are required to observe the information in the ABUS documentation and to pass it on to their customers.




1.5. Notices in these instructions

Warnings and safety instructions



Warnings indicate danger to life and limb. Warnings differentiate according to the severity of the danger and use one of the following signal words:

Symbol	Signal word	Meaning
	WARNING!	Indicates a potential hazard which, if not avoided, could result in death or serious injury.
	CAUTION!	Indicates a potential hazard which, if not avoided, can result in minor or moderate injury.

Failure to observe the instructions in this manual can result in damage to the product or building or malfunctions:

Symbol	Signal word	Meaning
	NOTICE	Indicates possible damage to the product or the building.
	Important	Indicates possible malfunctions due to incorrect installation or start-up.
	-	Provides additional important or useful information.

A specific symbol is used instead of the general warning symbol for special hazards or instructions:

	DANGER!	Danger due to electric shock
	NOTICE	Damage to the product due to electrostatic discharge

The instructions mentioned can also be embedded in the continuous text if the subsequent action step involves a risk.

Other mark-ups

- Text passages preceded by a bullet point • are part of an enumeration.
- ▶ Text passages preceded by a triangle mark an action step: You have to do something here. Please adhere to the sequence of action steps – unless otherwise stated.

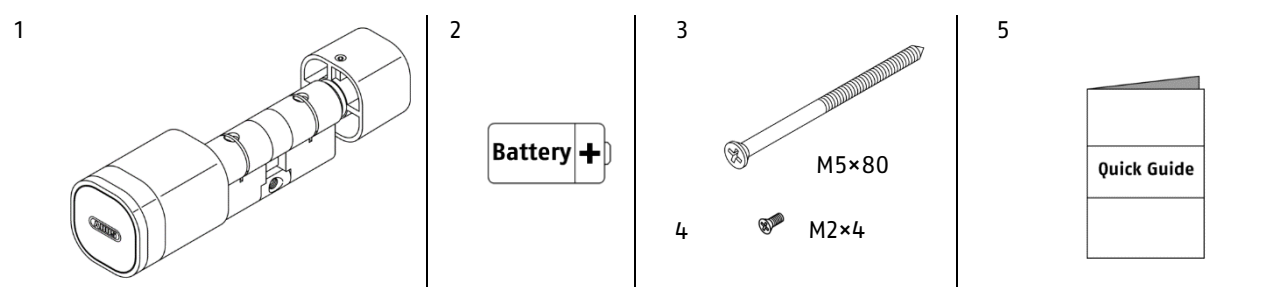
2. Product description

2.1. Function

TECTIQ and wAppLoxx Pro lock cylinders are electronic lock cylinders for entrance doors to public or private buildings. The Euro profile, round profile and oval cylinders cover all typical European lock cylinder profiles. The product types enable variable solutions for different installation situations and requirements, such as single-sided or double-sided access control. In combination with panic locks, they can also be used on escape and rescue routes.

In the security version, anti-drill covers effectively prevent forced entry. Access authorisation is granted via wireless locking media which, depending on the customer's requirements, provide one-off to permanent access.

2.2. Scope of delivery



- 1 Lock cylinder
- 2 Battery (VARTA CR2; inserted depending on the lock cylinder variant, 1× or 2×)
- 3 Screw M5×80 (for Euro and round profile cylinders)
- 4 Electronics screw M2×4 (for variants -LB, -LA-P and -OPZ, 4×)
- 5 Quick Guide

i The supplied screw is suitable for locks with backset ≤ 70 mm. Order screw separately for locks with larger backset: Screw length = backset + 10 mm.

2.3. Variants

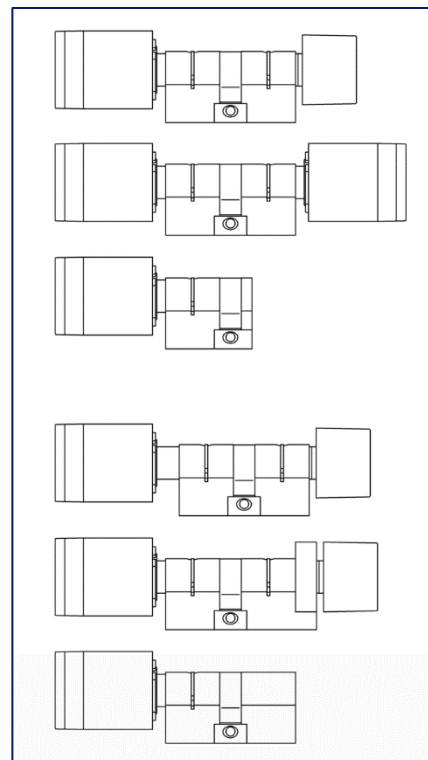
Euro profile cylinder

Lock cylinders are available in a wide range of variants, whereby individual equipment options can also be combined, e.g:

- LA Double knob cylinder with reader outside
- LB Double knob cylinder with reader on both sides
- HZ Half cylinder

- OPZ With shaft extension for doors with core pulling protection
- LA-P Double knob cylinder for panic locks
- LA-OI Lock cylinder without knob on the inside

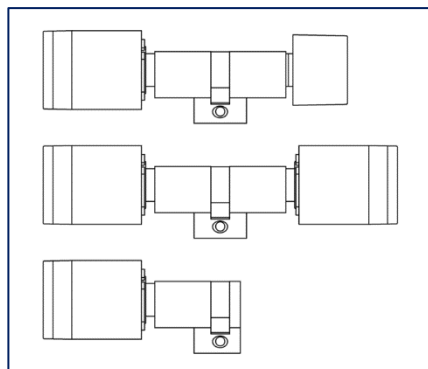
Lock cylinders are available in different lengths and are delivered ex works accordingly. Make sure that you have specified the correct outer and inner length when ordering (see → Chapter 2.6 Dimensions).



Round cylinder for Swiss round profile

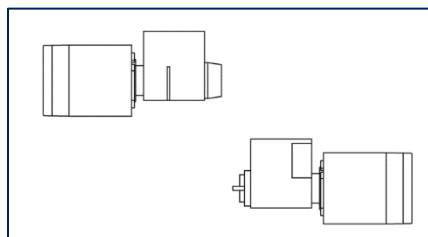
- CH-LA Double knob cylinder with reader outside
- CH-LB Double knob cylinder with reader on both sides
- CH-HZ Half cylinder

Fixed lengths ex works.



Oval cylinder for Scandinavian locks

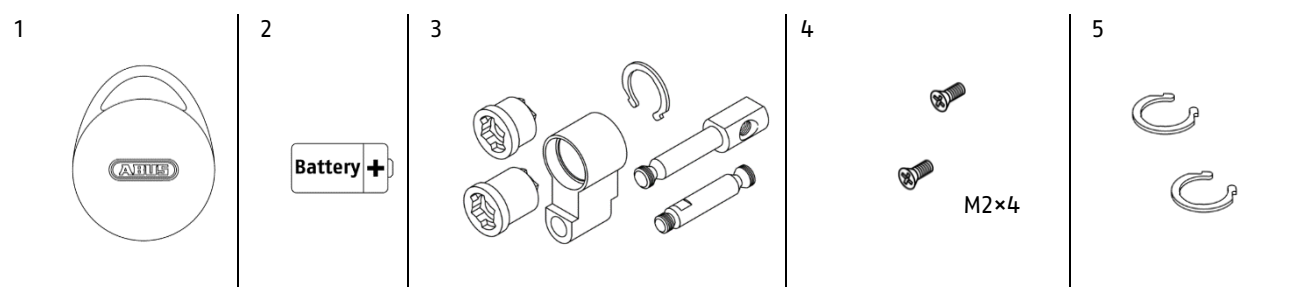
- Oval cylinder for mounting on the outside of the door
- Rococo cylinder for mounting on the inside of the door



Other versions

- T90 for fire doors
- SEC with additional drill protection
- EG, ES, RS Design outside knob (grey/black; square/round)
- EQ, ES, FQ, FS Design/function inside knob (square/narrow; free-running/non-free-running)

2.4. Accessories



- 1 ABUS MIFARE® DESFire® locking medium
- 2 Battery VARTA CR2 (VARTA Type 6202; spare part)
- 3 For Euro profile cylinders: extension sets (in different versions)
- 4 Electronics screws, set of 8 (spare part)
- 5 Core retaining rings, set of 10 (spare part)

Not shown:

ABUS Updater cable (article no: ACAC00043)

2.5. Technical data

Battery type	1× VARTA CR2 (VARTA Type 6206)
Nominal voltage	DC 3 V
Ambient conditions	
Operating temperature	-25 to +65 °C
Protection class	IP67 (dustproof; protected against temporary submersion in water)
Locking media	ABUS MIFARE® DESFire® (3DES, AES128)
Frequency	13.561 MHz
Reading distance	approx. 1 cm
Bluetooth Low Energy (TECTIQ only)	
Radio frequency	2.402 to 2.480 GHz
Transmission range	2 to 3 m (free field)
Transmission power	0.4 dBm
Wireless (wAppLoxx Pro only)	
Radio frequency	868.3 MHz
Transmission range	max. 100 m (open field), typ. 30 m (in buildings)
Transmission power	14 dBm
USB	
Connection	USB2-Micro-B
Line type	ABUS Updater cable → see Chapter 2.4 Accessories
Internal clock	Yes
Battery life (at 20 °C)	up to 45 000 locking cycles, approx. 2 years (with 20 operations per day), up to 3 years if not operated)
Number of locking cycles	>200 000

Conformity

2014/35/EU	Low Voltage Directive (LVD)
2014/30/EU	Electromagnetic Compatibility Directive (EMC)
2014/53/EU	Radio Equipment Directive (RED)
Regulation	
EU 305/2011	Construction Products (CPR)
2001/95/EC	General Product Safety
2011/65/EU	Restriction of Hazardous Substances Directive (RoHS)

EN 15684
 EN 179 / EN 1125
 SKG *** (Netherlands; for SEC variant)

Classification in accordance with EN 15684

1.	2.	3.	4.	5.	6.	7.	8.
1	6	B	3	0	D	3	0/D *

1. Utilisation category	1 – For users with high motivation for diligence and low probability of misuse
2. Durability	6 – 100 000 test cycles
3. Fire/smoke resistance	B – Suitable for use on fire and smoke protection doors
4. Environmental resistance	3 – Corrosion-resistant, water-resistant; +55°C, -10°C (each 16 h)
5. Mechanical key-related security	0 – Not applicable
6. Authorisation security	D – Electronic locking media (RFID), 10 ⁷ code variants, AES128, copy-protected 3 – With log and time range
7. System management	D – Drilling (5 min), chiselling (40 impacts), twisting off (30 rotations), core pulling (5 min/15 kN), torsion (30 Nm/7 Nm), impacts (5 min), vibrations (5 min), electrical voltage (>50 V), ESD (8/21 kV), magnetic field (2 min)
8. Attack resistance *)	

*) Attack resistance level D only for installation with escutcheon or security fitting.

Fire resistance

Tested in accordance with DIN EN 1634-1:2014+A1:2018 in conjunction with EN 1363-1:2020 for fire and smoke-resistant doors (type: fire doors, sheet steel doors).

T30 (all cylinders) Test report DMT-D0-50-759 & 1093 (DMT test laboratory for fire protection of the TÜV Nord Group)
 T90 (optional) Test report DMT-D0-50-1027 & 1043 (DMT test laboratory for fire protection of the TÜV Nord Group)

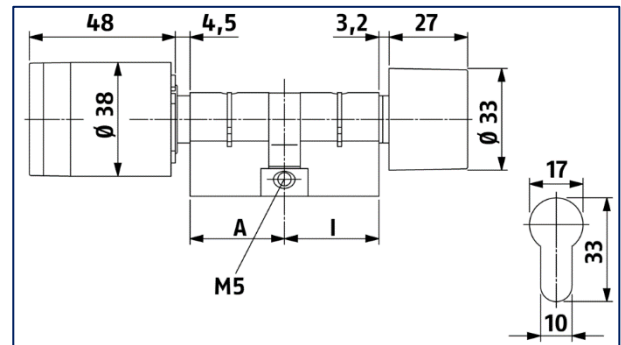
2.6. Dimensions

Measure the external and internal length of profile cylinders from the centre of the screw inwards or outwards.

Euro profile cylinder

Euro profile cylinders are available ex works in different lengths. Dimensions may vary depending on the equipment variant.

A	I
30 mm	30 mm
35 mm	35 mm *)
40 mm	40 mm
...	...
(each +5 mm)	(each +5 mm)
...	...
90 mm	90 mm



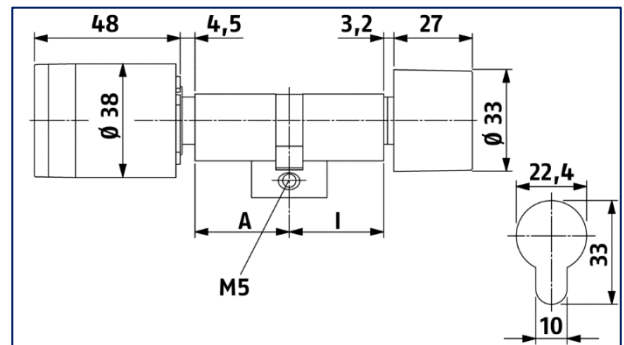
*) T90 available from internal length 35 mm.

Subsequent adaptations possible with suitable extension set for outside and inside.

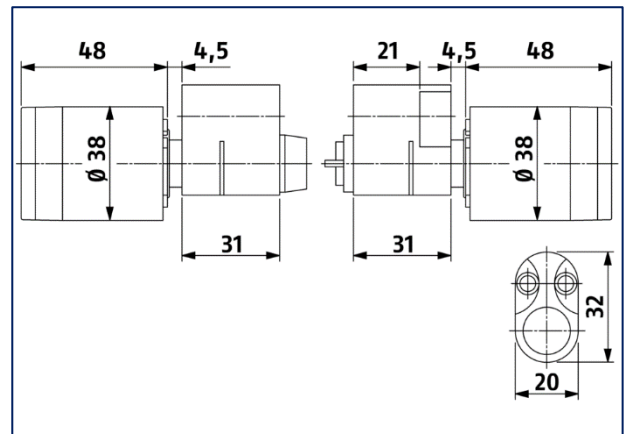
Round profile cylinders

Round profile cylinders are available in different lengths ex works.

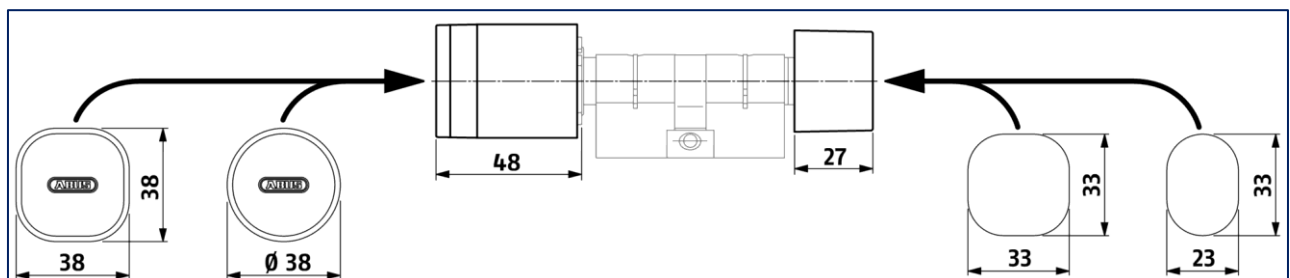
A	I
32.5 mm	32.5 mm
37.5 mm	37.5 mm
42.5 mm	42.5 mm
47.5 mm	47.5 mm
52.5 mm	52.5 mm



Oval/rococo cylinders



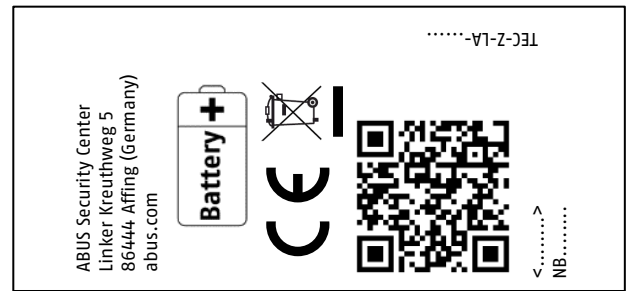
Outside knob/inside knob



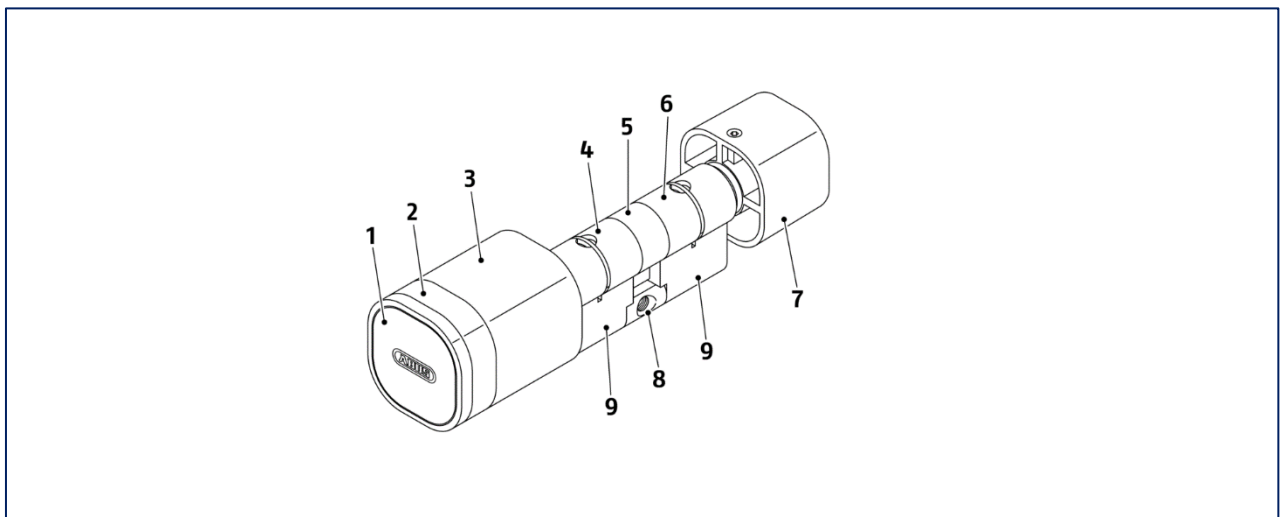
2.7. Labelling

On the inside of the reader, on the basket:

- Manufacturer name/address
- Battery installation position
- Conformity mark
- Symbol for safe disposal
- QR code
- Internal identification
- Serial number
- Product type



2.8. Structure and individual parts



- | | | | |
|---|---------------------------|---|--------------------------------------|
| 1 | Reader | 6 | Cylinder body (inside) |
| 2 | Status display (LED) | 7 | Mechanical inside knob |
| 3 | Electronic knob (outside) | 8 | Hole for screw (Euro/round cylinder) |
| 4 | Cylinder body (outside) | 9 | Bridge |
| 5 | Cam | | |

3. Safety information

3.1. General safety information



WARNING! Explosion hazard!

Installing and operating the fittings and cylinders in potentially explosive atmospheres can lead to serious injury or death.

- Do not install or operate the fittings/cylinders in potentially explosive atmospheres.



CAUTION! Risk of injury from swallowing small parts!

Children can swallow small parts.

- Make sure that small parts such as screws or locking media are kept away from small children.

3.2. Safe handling of batteries



WARNING! Danger due to improper handling of batteries!

Batteries can overheat and cause fires. Damage or exposure to a high level of heat can cause fires or explosions and lead to serious injuries, burns or chemical burns. Leakage can release hazardous substances that are harmful to your health.

- Do not reverse the polarity of the batteries. Note the polarity (+/-).
- Do not recharge, open, dispose of in fire or short circuit batteries.
- Do not use new and used batteries together.
- Do not use together with other battery types.
- Return only fully discharged batteries with the terminals taped over.
- Keep batteries away from children.

3.3. Safety instructions for escape and rescue routes



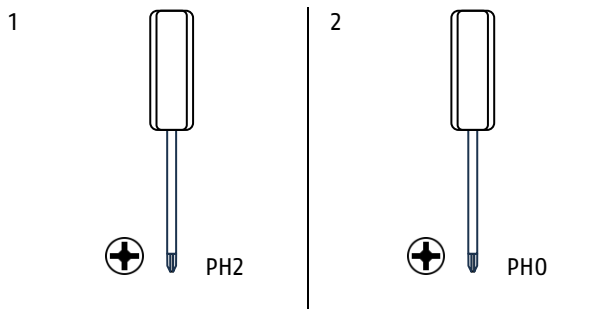
WARNING! Serious injury or death possible if cylinders do not function properly due to improper installation or maintenance!

Poorly installed or maintained cylinders can impair the function of escape doors and fire doors. In emergencies, this can lead to dangerous situations with serious or fatal injuries.

- Have the lock cylinders on escape and fire doors installed and maintained only by specialist personnel.
- Observe and follow all manufacturer's instructions when installing and maintaining the doors, locks and lock cylinders.
- Ensure that only suitable components are installed on escape and rescue routes. Pay particular attention to the compatibility of the installed components. Observe the manufacturer's certificates.
- Observe the prescribed maintenance intervals for doors, locks and cylinders.
- Replace cylinders on escape and fire doors once the maximum number of locking cycles has been reached (see → Chapter 2.5 Technical data).

4. Fitting instructions

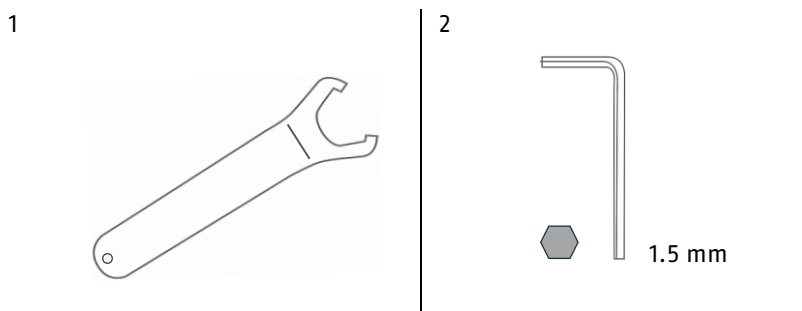
4.1. Tools required



- 1 Phillips screwdriver PH2 for screw
- 2 Phillips screwdriver PH0 (for variants -LB, -LA-P and -OPZ)

Small tool set, article number ACWZ00002

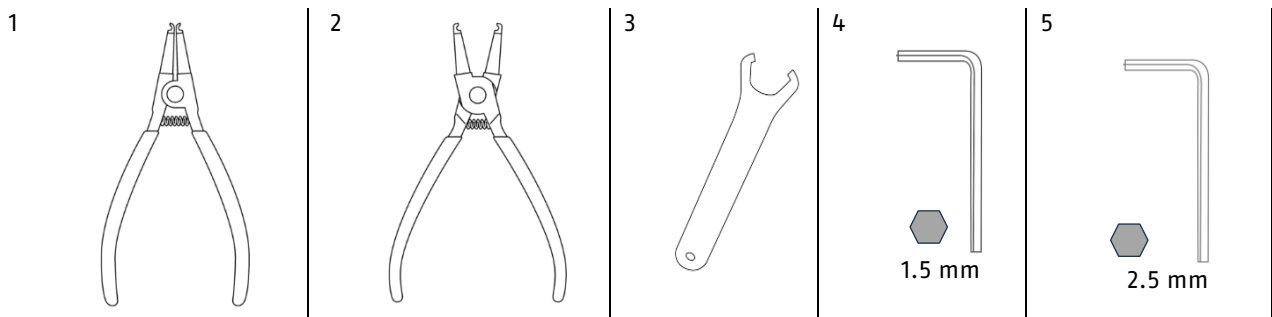
For installation and battery replacement.



- 1 Opening spanner for outside cap
- 2 Hexagon key 1.5 mm for fitting/removing the inside knob

Large tool set, article number ACWZ00001

For installation, battery replacement and length adjustments by ABUS specialist retail partners.



- 1 Opening pliers
- 2 Closing pliers
- 3 Opening key for outside cap
- 4 Hexagon key 1.5 mm for fitting/removing the inside knob
- 5 Hexagon key 2.5 mm for length adjustment by the ABUS specialist retail partner

4.2. Preparations before fitting

- Carcass work on the building site has been completed.
- The door is fully assembled.
- The mortice lock is fitted.

Burglary protection

The electronic lock cylinder offers the guaranteed burglary protection only if it is installed correctly.

- The profile cylinder should be flush with the door plate on the outside and must not protrude by more than 3 mm.
- Alternatively, use an escutcheon or door fitting.

Length adjustment

The lock cylinder is usually supplied to match the thickness of the door leaf and the position of the lock. Euro profile cylinders can adapt subsequently with an extension set, see → Chapter 5.3.

Round profile cylinders are available in all standard sizes. If you have any questions, please contact your ABUS specialist retail partner.

Pre-programming before assembly

On delivery, the electronic lock cylinder is coupled, i.e., access from both sides is guaranteed for installation.

- ⓘ After programming, the read head is in the decoupled state. Access is then blocked from this side.
- If you program the lock cylinder in advance and then fit it, make sure that you do not lock yourself out.
 - Keep the door open or distribute valid locking media promptly.

Delivery status of the battery

Depending on the variant, the battery is already inserted on delivery. For these variants, an insulating tag in the battery compartment must be removed before start-up, see → Chapter 8.

For variants with an enclosed battery, the battery must be inserted before start-up, see → Chapter 9.

5. Fitting the profile cylinder

5.1. Fitting profile cylinders -LA and -HZ

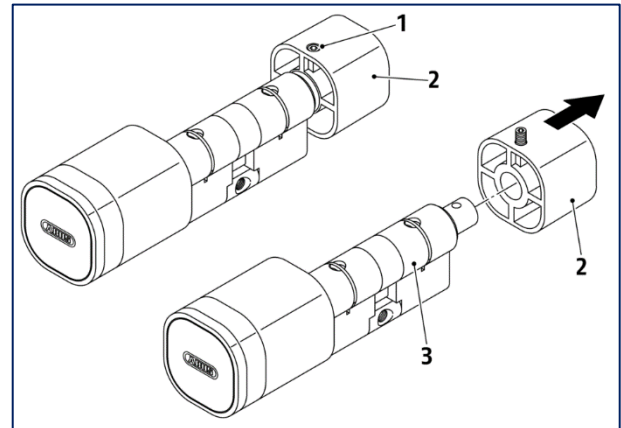
The -LA and -HZ variants are installed from the outside of the door.

i If the profile cylinder does not match the thickness of the door leaf, it can be adapted to the door leaf using the appropriate extension set. For how to install the extension set, see → Chapter 5.3.

Step 1: remove the inside knob

Not necessary for -HZ half cylinders.

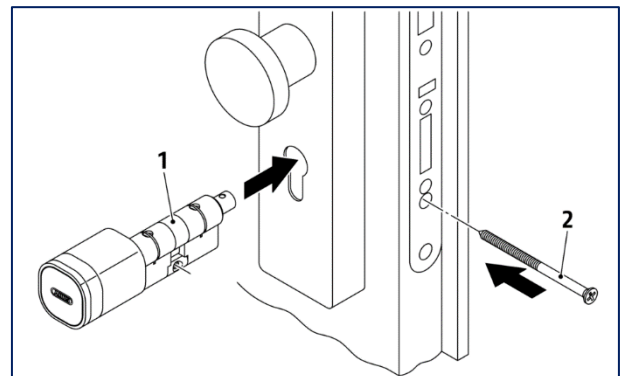
- ▶ Using 1.5 mm hexagon key: Loosen the grub screw (1) on the inside knob (2) until the inside knob can be moved. Do not unscrew the grub screw completely.
- ▶ Pull the inside knob (2) axially off the profile cylinder (3).



Step 2: fit the profile cylinder in the door

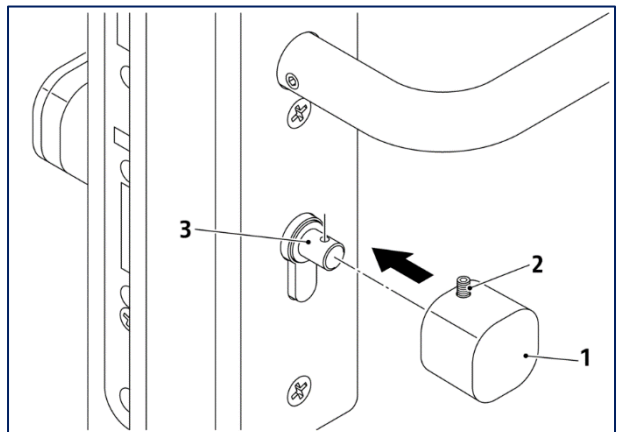
- ▶ Push the profile cylinder (1) into the door from the outside.
- ▶ Extend the lock bolt with the outside knob.
- ▶ Fix the profile cylinder hand-tight in the lock using the screw (2).

i Check that the cylinder moves smoothly. It must be possible to move the lock bolt and latch properly. If in doubt, back off the screw slightly.



Step 3: Fit the inside knob

- ▶ Place the inside knob (1) on the cylinder shaft (3) so that the grub screw (2) can engage in the screw hole in the cylinder shaft (3).
- ▶ Using 1.5 mm hexagon key: Tighten the grub screw (2) on the inside knob (1) until it is flush with the surface.
- ▶ Check the inside knob for tight fit.






Step 4: Activate battery

Depending on the delivery condition:


- ▶ Remove the battery insulation, see → Chapter 8, - or -
- ▶ Insert the battery, see → Chapter 9.

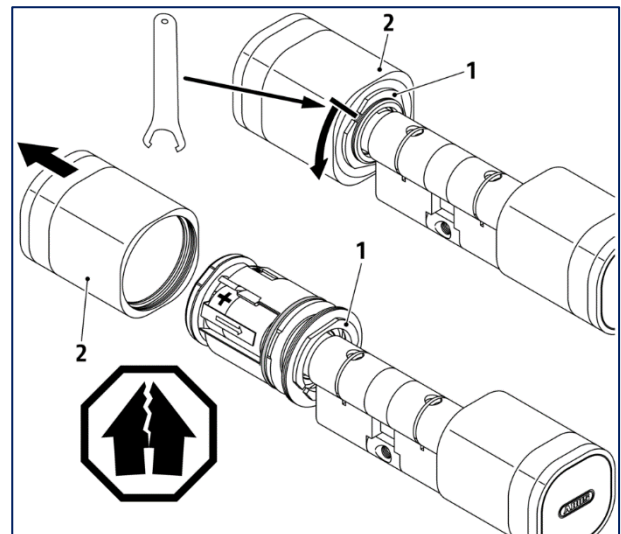
5.2. Fitting profile cylinders -LB, -LA-P, -OPZ

To fit the -LB, -LA-P and -OPZ variants, first remove the electronic knob and then fit the lock cylinder from the inside of the door.



-  **NOTICE:** If installed incorrectly, the electronic knob can draw moisture during operation. Condensed water can damage the electronics. Use new electronics screws with undamaged paint coating for each assembly.
-  If the profile cylinder does not match the thickness of the door leaf, it can be adapted to the door leaf using the appropriate extension set. For how to install the extension set, see → Chapter 5.3.
-  Make sure to activate the batteries on both the outside and inside of the -LB variants with readers on both sides, see → Chapter 8 , see → Chapter 9.

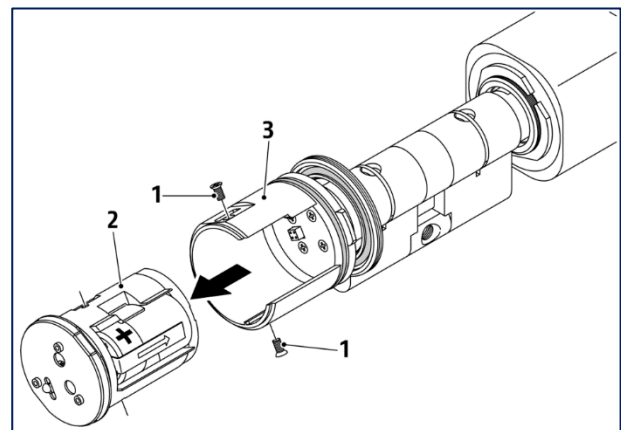
Step 1: Remove outside cap

- ▶ Use the opening spanner to reach into the notch in the lock washer (1) behind the outside knob (2) and loosen the lock washer.
-  **NOTICE:** The seal of the outside knob or the antenna board can be irreparably damaged. Make sure to pull the outside cap off straight.
- ▶ Pull the outside cap (2) axially off the profile cylinder.



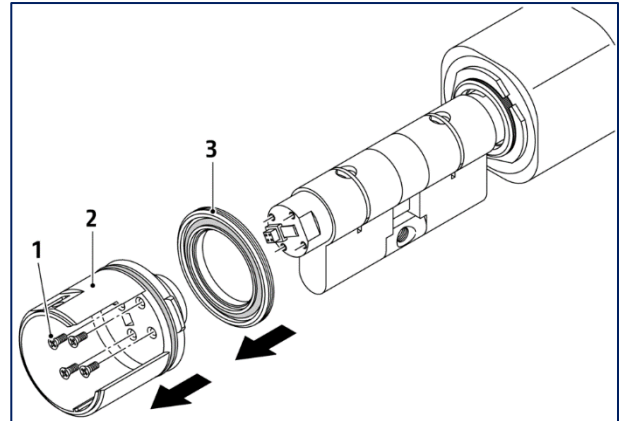
Step 2: Remove electronics from outside knob

-  **NOTICE:** Dirt or mechanical influences can damage the sensitive electronics. Protect the disassembled parts from damage, falling, dust and moisture!
-  **NOTICE:** Damage to the product due to electrostatic discharge. Store the electronics protected against electrostatic influences, e.g. on an ESD mat. Before touching the electronics, ensure that the charge between you, the electronics and the installation environment is equalised. Only touch the electronics by the plastic parts.
- ▶ Use a PH0 screwdriver to undo the two side electronics screws (1).
- ▶ Pull the electronics (2) together with the holder out of the basket (3).



Step 3: Completely dismantle the outside knob

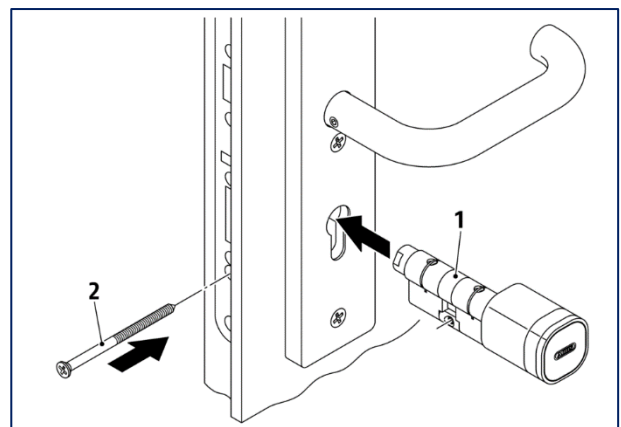
- ▶ Use a PH0 screwdriver to undo the 4 retaining screws (1) on the base of the basket (2).
- ▶ Remove the basket (2) from the cylinder.
- ▶ Also remove the lock washer (3) from the cylinder shaft.



Step 4: Fit the profile cylinder in the door

- ▶ Push the profile cylinder (1) into the door from the inside.
- ▶ Extend the lock bolt with the inside knob.
- ▶ Fix the profile cylinder hand-tight in the lock using the screw (2).

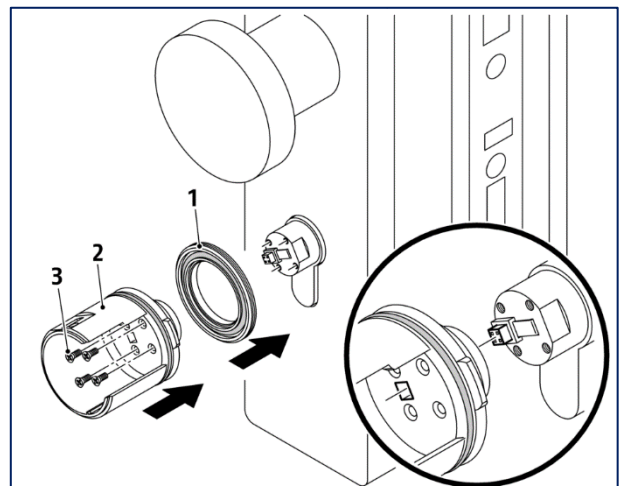
i Check that the cylinder moves smoothly. It must be possible to move the lock bolt and latch properly. If in doubt, back off the screw slightly.




Step 5: Fit the outside knob

🏠 NOTICE: If installed incorrectly, protection class IP67 is no longer guaranteed. The electronics knob can draw moisture and permanently damage the electronics. Use new electronics screws with undamaged paint coating for each assembly. Alternatively, apply new screw locking varnish to the screws.

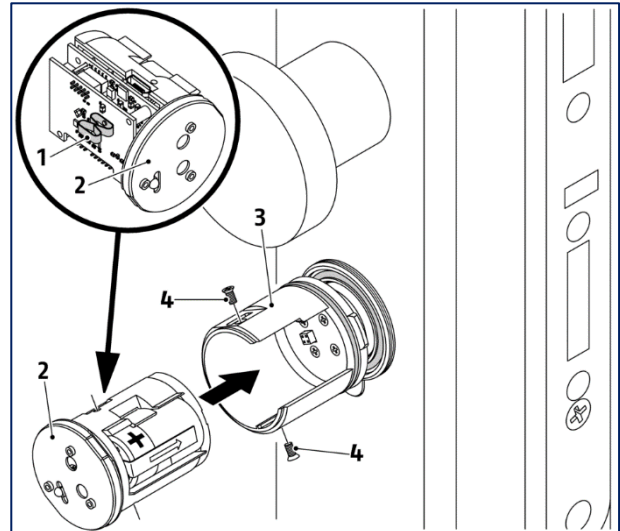
- ▶ Push the lock washer (1) including the sealing ring back onto the shaft. The sealing ring points in the direction of the knob.
- ▶ Push the basket (2) of the outside knob onto the shaft so that the plug connector fits into the opening.
- ▶ Screw the basket back onto the shaft using 4 new electronics screws (3) and screwdriver PH0. Tightening torque: approx. 0.5 Nm.




Step 6: Insert electronics in outside knob


 **NOTICE:** Do not bend the EMC contact (1) on the circuit board when inserting the electronics!

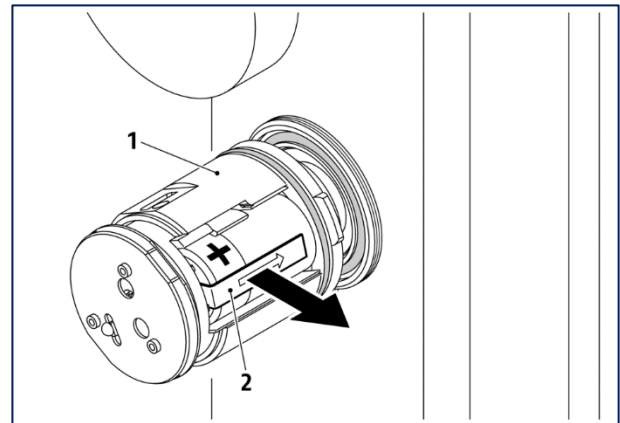
- ▶ Insert the electronics with holder (2) into the basket (3) so that the plug connector fits into the socket in the shaft.
- ▶ Fasten the electronics with the two side electronics screws (4) and screwdriver PH0. Tightening torque: approx. 0.5 Nm.




Step 7: Pull out the battery insulation

 The battery can also be activated at a later time. The electronic cylinder does not function until this is done.

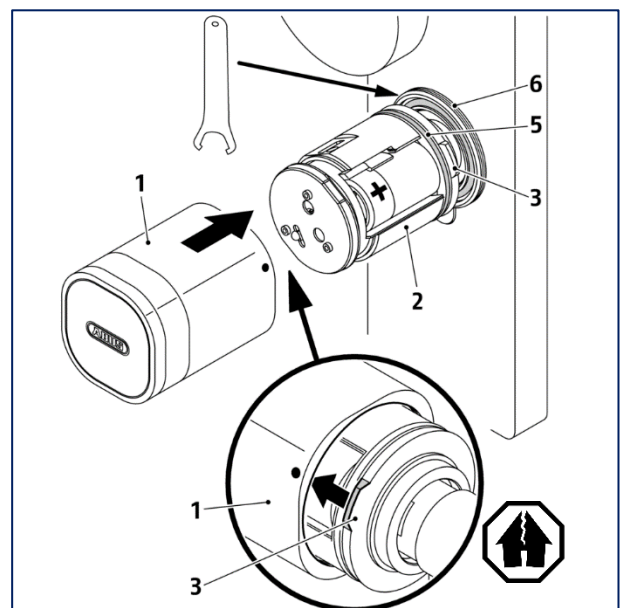
- ▶ Pull out the insulating tag (2) at the battery compartment (1).
-  Depending on the delivery condition: Insert the battery, see → Chapter 9.



Step 8: Close outside knob

 **NOTICE:** The electronic cylinder can be irreparably damaged if the cap is fitted forcibly. Do not tilt the cap when fitting it! Ensure the correct position of the "•" marking!

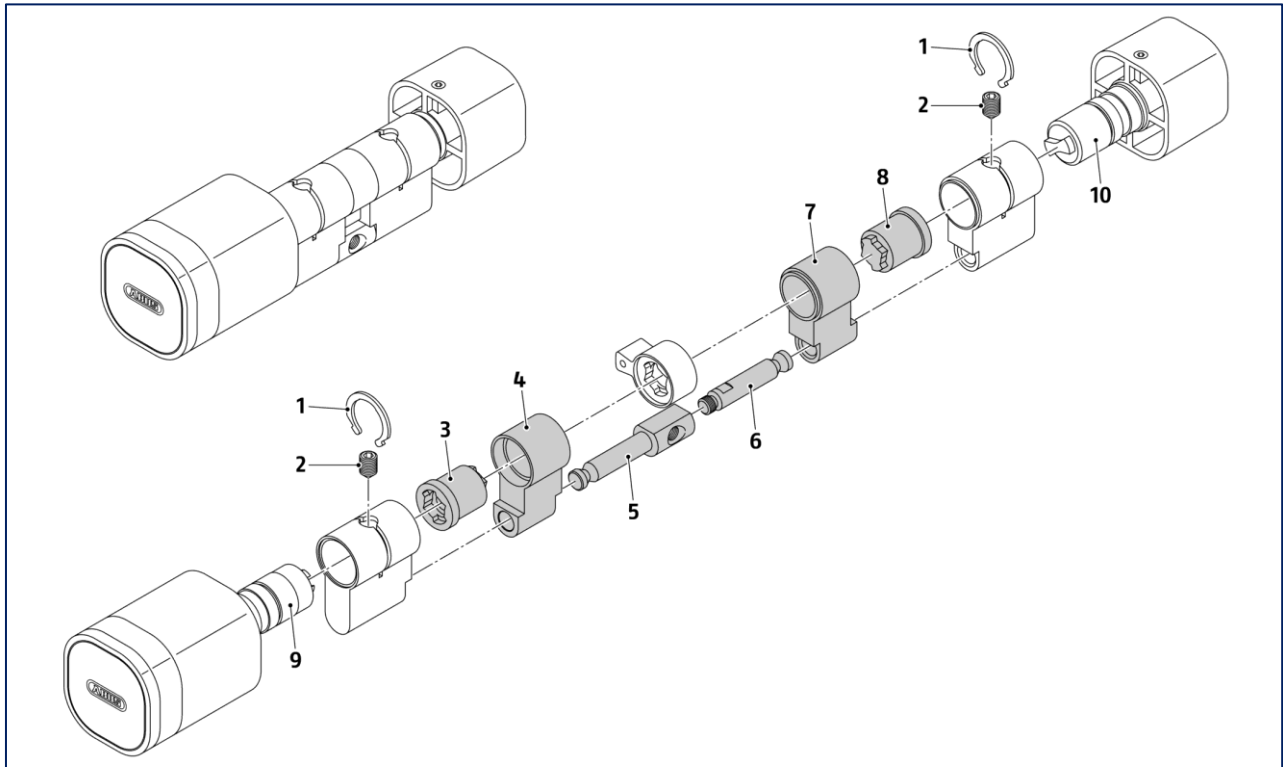
- ▶ Place the cap (1) on the outside knob (2) so that the lug (3) fits into the recess in the cap – see marking "•".
- ▶ Push the cap over the seal (5) with a little pressure.
- ▶ Screw the lock washer (6) back onto the outside knob.
- ▶ Tighten the lock washer with the opening spanner.



5.3. Adapting the profile cylinder to the door thickness

If the lock cylinder does not match the thickness of the door leaf on site, the lock cylinder can be adapted to the specific door thickness using an extension set. Depending on requirements, the profile cylinder can be extended on the inside or outside (5 to 30 mm in each case).

! Important: The core retaining rings lose their holding force after disassembly. Do not reuse removed core retaining rings.



- | | | | |
|---|-------------------------------------|----|--|
| 1 | Core retaining rings | 6 | Inside bridge screw (from extension set) |
| 2 | Grub screws | 7 | Inside body extension |
| 3 | Outside shaft extension | 8 | Inside shaft extension |
| 4 | Outside body extension | 9 | Outside cylinder shaft |
| 5 | Outside bridge (from extension set) | 10 | Inside cylinder shaft |

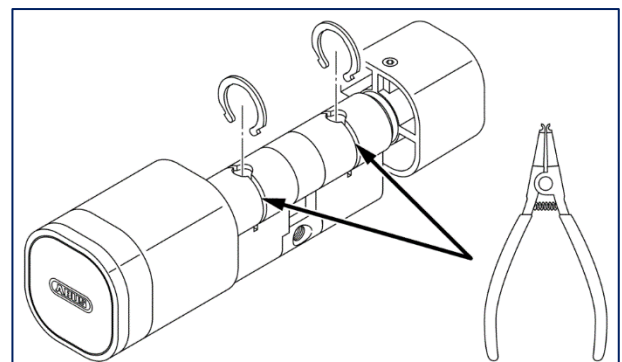
Step 1: Undo core retaining rings

Extension on the cylinder inner side:

- ▶ Use the opening pliers to bend open the core retaining ring on the inside and remove it from the cylinder shaft.
- ▶ Dispose of the old core retaining ring.

Extension on the cylinder outer side:

- ▶ Use the opening pliers to bend open both core retaining rings – inside and outside – and remove them from the cylinder shaft.
- ▶ Dispose of the old core retaining rings.



Step 2: Disassemble cylinder shaft

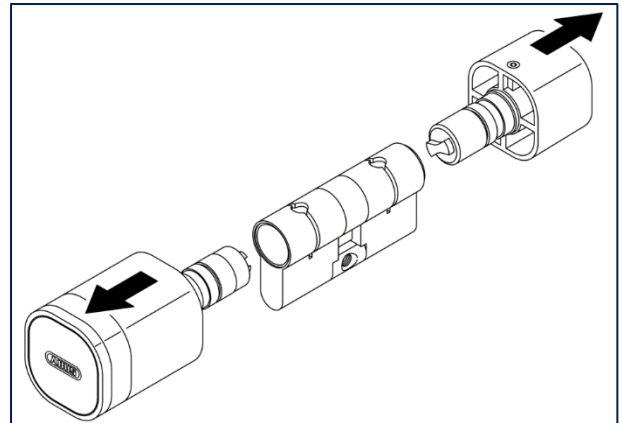
! NOTICE: Component tolerances can lead to malfunctions if parts are installed incorrectly. Do not mix up the removed shaft end pieces on the outside and inside.

Extension on the cylinder inner side:

- ▶ Pull the loosened cylinder shaft out of the cylinder body.

Extension on the cylinder outer side:

- ▶ Pull the loosened cylinder shafts – inside and outside – out of the cylinder body.



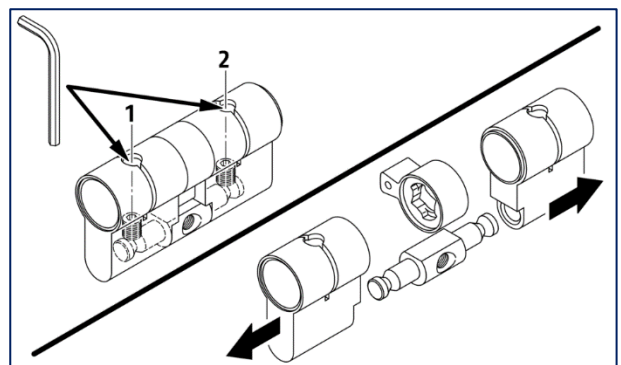
Step 3: Disassemble cylinder body

Extension on the cylinder inner side:

- ▶ Use a 2.5 mm hexagon key to loosen the grub screw (1) on the inside.
- ▶ Remove the loosened cylinder body from the bridge.

Extension on the cylinder outer side:

- ▶ Use a 2.5 mm hexagon key to loosen both grub screws (1+2) – inside and outside.
- ▶ Remove the loosened cylinder bodies from the bridge on both sides.



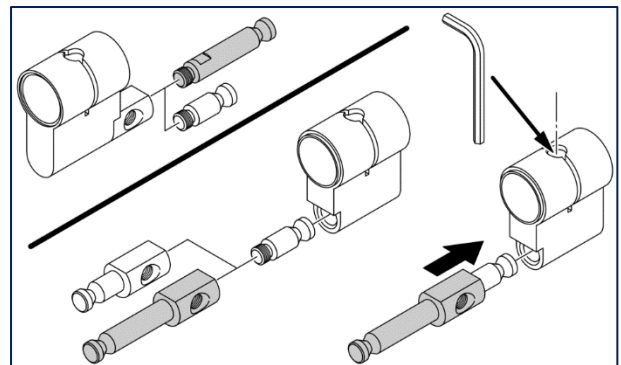
Step 4: Change bridge

Extension on the cylinder inner side:

- ▶ Unscrew the old bridge screw from the bridge.
- ▶ Insert new bridge screw into the bridge.

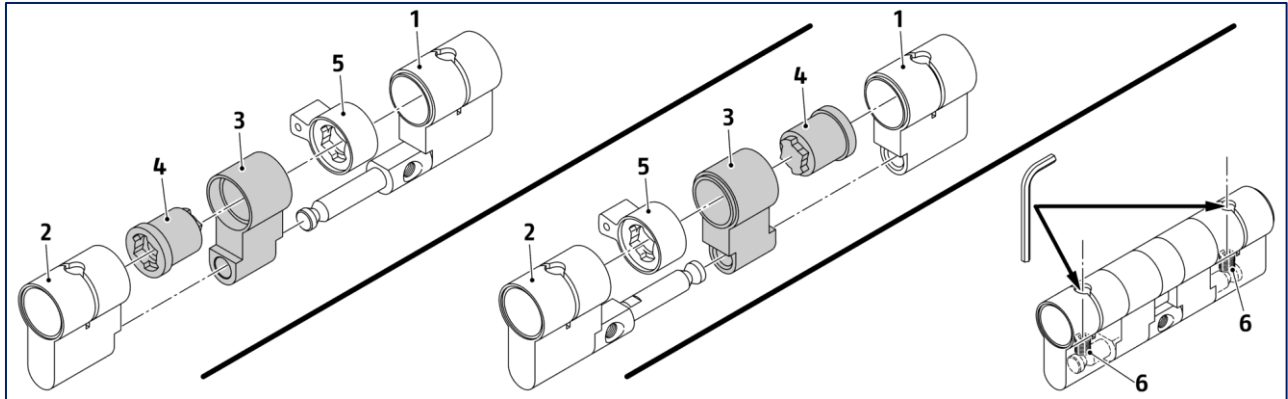
Extension on the cylinder outer side:

- ▶ Unscrew the bridge screw from the bridge.
- ▶ Replace the old bridge with a new bridge from the extension set.
- ▶ Screw the bridge screw into the new bridge.
- ▶ Insert the bridge with the fitted bridge screw into the inner cylinder body.
- ▶ Using a 2.5 mm hexagon key, tighten the grub screw in the inner cylinder body.



Step 5: Assemble cylinder body, body extension and cam

- ▶ Assemble the cylinder bodies inside (1) and outside (2), body extension (3), shaft extension (4) and cam (5).
- ▶ If the cam does not rotate properly: Check whether the cam has been twisted. Correct the position of the cam.
- ▶ Using a 2.5 mm hexagon key, tighten the grub screws (6) in the cylinder body.



Step 6: Fit the cylinder shaft

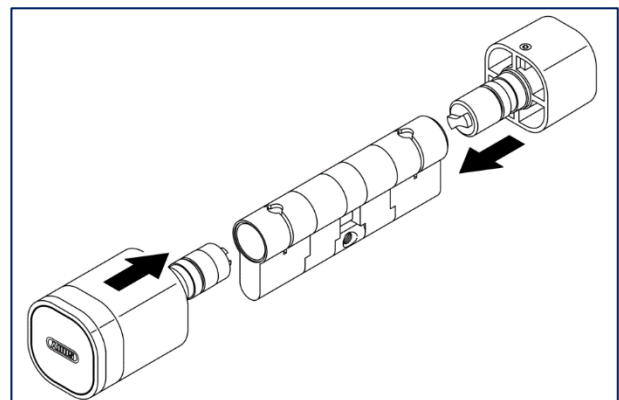
Extension on the inside:

- ▶ Push the cylinder shaft into the cylinder so that the cam can be moved over the knob.

Extension on the outside:

- ▶ Insert the cylinder shaft for the inner side into the cylinder.
- ▶ Push the cylinder shaft with the electronic knob into the outer side of the lock cylinder.

It must be possible to move the cam over both knobs.



Step 7: Fix the shaft with new core retaining rings

! Important! Only with new core retaining rings is the perfect and permanent locking function of the lock cylinder guaranteed! Do not use core retaining rings that have already been fitted!

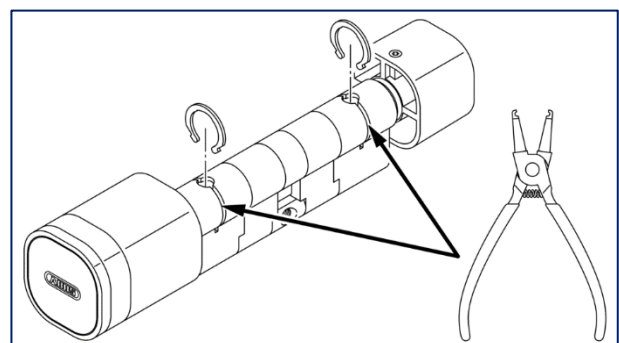
Extension on the inside:

- ▶ Insert a new core retaining ring into the groove.

Extension on the outside:

- ▶ Insert new core retaining rings on both sides of the cylinder – inside and outside.

- ▶ Press the core holder rings together at both ends using the closing pliers. Make sure that the core retaining rings do not protrude.



6. Fitting round cylinders

6.1. Fitting double knob cylinder with Swiss round profile


Cylinders with a Swiss round profile are fitted from the inside of the door.

Preparation

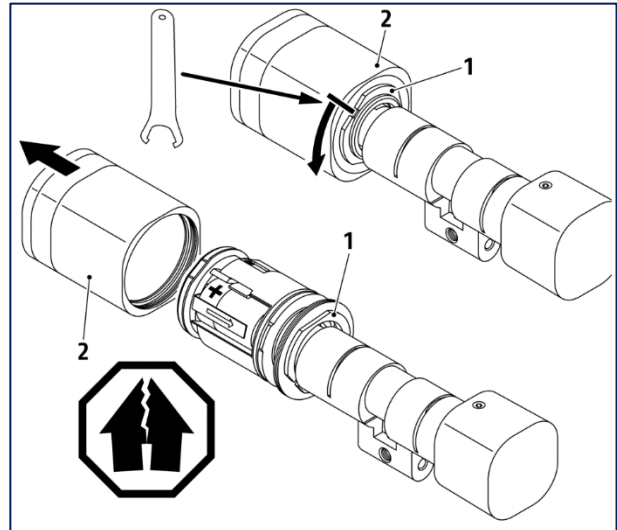
- The door plate and door handle on the outside of the door are fitted.
- The door plate and door handle on the inside of the door are not fitted.

Step 1: Remove outside cap


- ▷ Use the opening spanner to reach into the notch in the lock washer (1) behind the outside knob (2) and loosen the lock washer.


 **NOTICE:** The seal of the outside knob or the antenna board can be irreparably damaged. Make sure to pull the outside cap off straight.

- ▷ Pull the outside cap (2) axially off the profile cylinder.

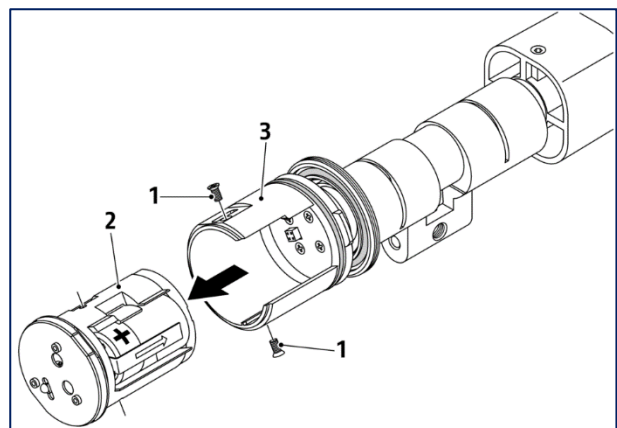


Step 2: Remove electronics from outside knob

 **NOTICE:** Dirt or mechanical influences can damage the sensitive electronics. Protect the disassembled parts from damage, falling and from dust and moisture!

 **NOTICE:** Damage to the product due to electrostatic discharge. Store the electronics protected against electrostatic influences, e.g. on an ESD mat. Before touching the electronics, ensure that the charge between you, the electronics and the installation environment is equalised. Only touch the electronics by the plastic parts.

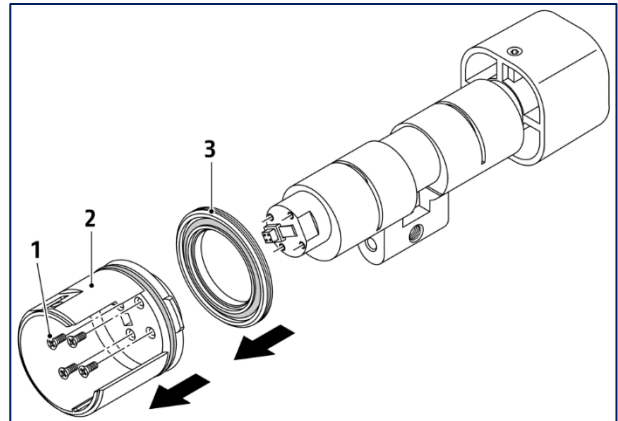
- ▷ Use a PH0 screwdriver to undo the two side electronics screws (1).
- ▷ Pull the entire electronics (2) together with the holder out of the basket (3).



Step 3: Completely dismantle the outside knob

NOTICE: Do not lose the screws for the outside knob!

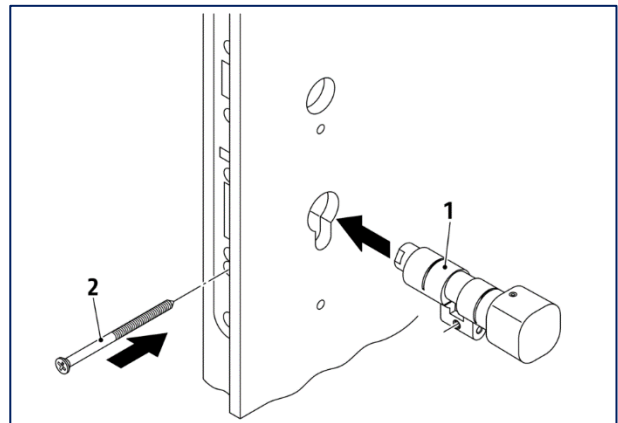
- Use a PH0 screwdriver to loosen the 4 retaining screws (1) on the base of the basket (2).
- Remove the basket (2) from the cylinder.
- Also remove the lock washer (3) from the cylinder shaft.



Step 4: Fit round cylinder in door

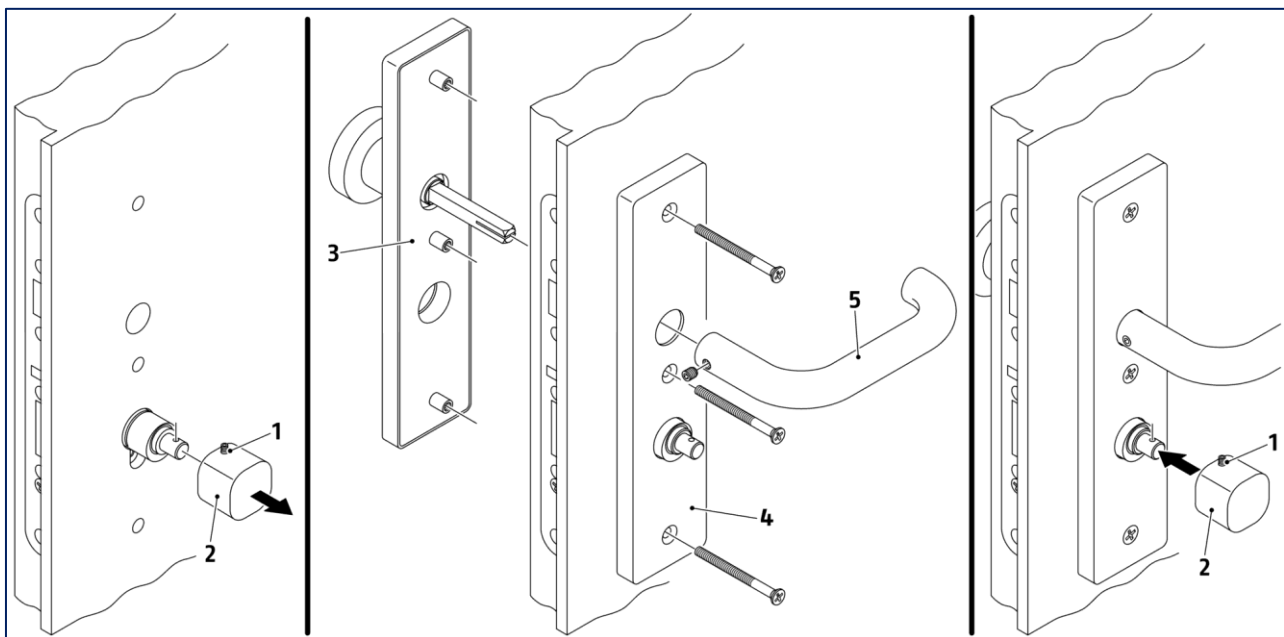
- Push the round cylinder (1) into the door from the inside.
- Extend the lock bolt with the inside knob.
- Fix the round cylinder hand-tight in the lock using the screw (2).

Check that the cylinder moves smoothly. It must be possible to move the lock bolt and latch properly. If in doubt, back off the screw slightly.




Step 5: Fit the door plate and door handle

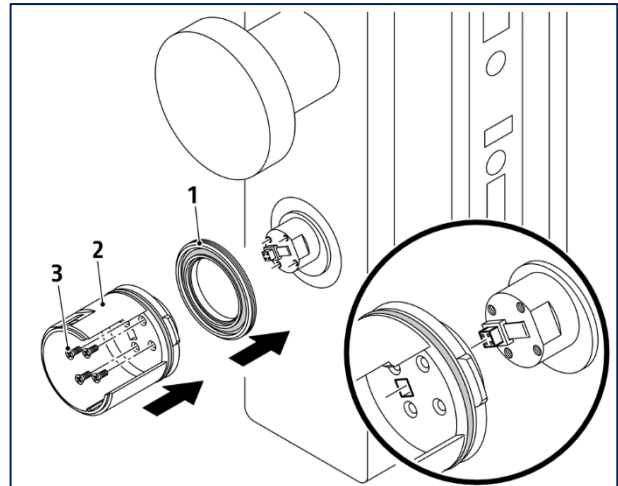
- Using 1.5 mm hexagon key: Loosen the grub screw (1) on the inside knob (2) until the inside knob can be moved.
- Pull the inside knob (2) axially off the profile cylinder.
- Fit door fittings – e.g., inside and outside door plates (3, 4) and door handle (5).
- Place the inside knob (1) on the cylinder shaft so that the grub screw (2) fits into the screw hole in the cylinder shaft. Using 1.5 mm hexagon key: Tighten the grub screw (2) until it is flush with the surface.




Step 6: Fit the outside knob

 **NOTICE:** If installed incorrectly, protection class IP67 is no longer guaranteed. The electronics knob can draw moisture and permanently damage the electronics. Use new electronics screws with undamaged paint coating for each assembly. Alternatively, apply new screw locking varnish to the screws.

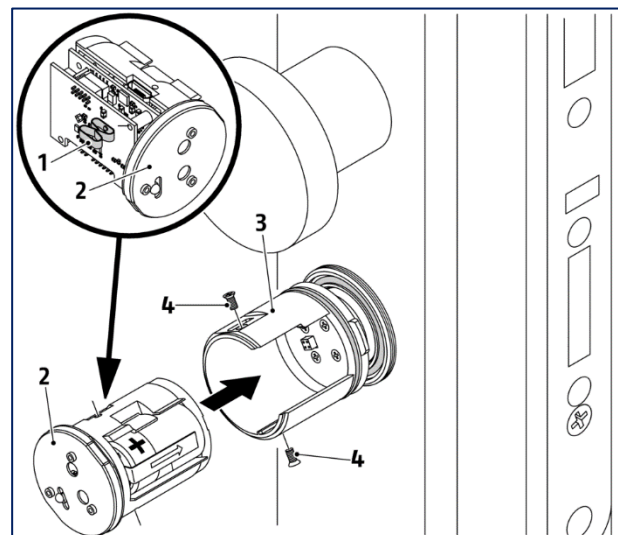
- ▶ Push the lock washer (1) including the sealing ring back onto the shaft. The sealing ring points in the direction of the knob.
- ▶ Push the basket (2) of the outside knob onto the shaft so that the plug connector fits into the opening.
- ▶ Screw the basket back onto the shaft using 4 new electronics screws (3) and screwdriver PH0. Tightening torque: approx. 0.5 Nm.





Step 7: Insert electronics in outside knob

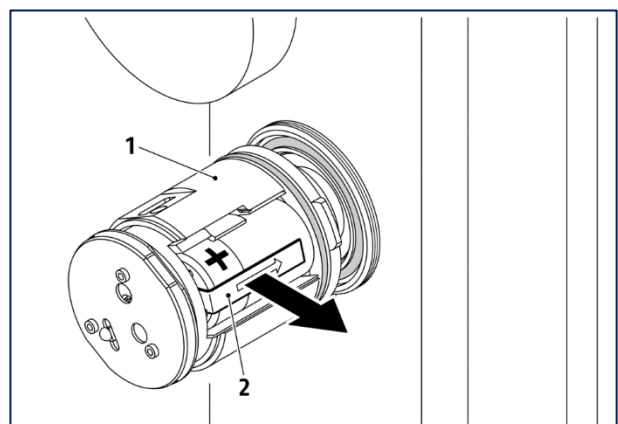
 **NOTICE:** Do not bend the EMC contact (1) on the circuit board when inserting the electronics!

- ▶ Insert the electronics with holder (2) into the basket (3) so that the plug connector fits into the socket in the shaft.
- ▶ Fasten the electronics with the two side electronics screws (4) and screwdriver PH0. Tightening torque: approx. 0.5 Nm.




Step 8: Pull out the battery insulation

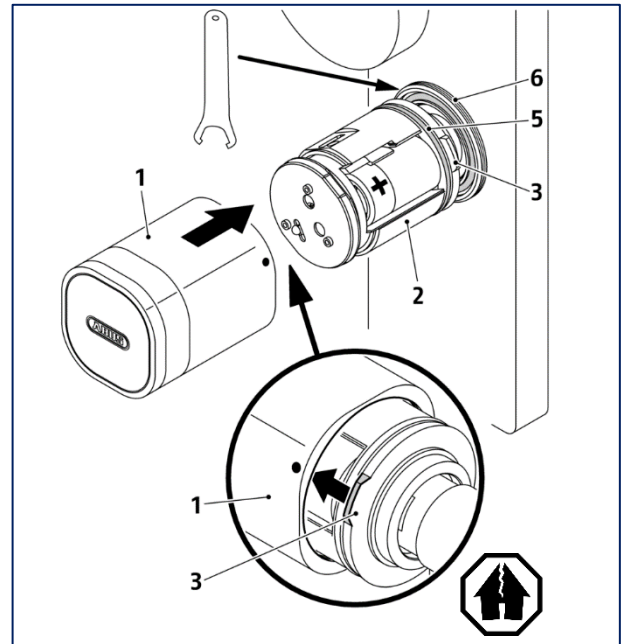
-  The battery can also be activated later. The electronic cylinder does not function until this is done.
- ▶ Pull out the insulating tag (2) at the battery compartment (1).
-  Depending on the delivery condition: Insert the battery, see → Chapter 9.



Step 9: Close outside knob

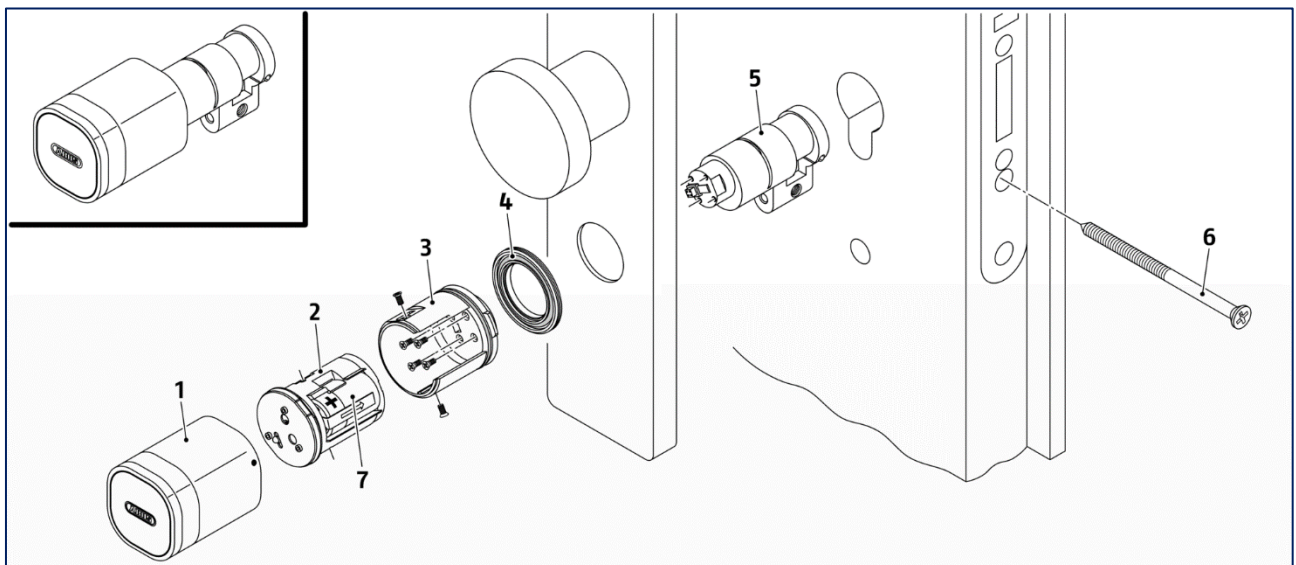
 **NOTICE:** The electronic cylinder can be irreparably damaged if the cap is fitted forcibly. Do not tilt the cap when fitting it! Ensure the correct position of the "•" marking!

- ▷ Place the cap (1) on the outside knob (2) so that the lug (3) fits into the recess in the cap – see marking "•".
- ▷ Push the cap over the seal (5) with a little pressure.
- ▷ Screw the lock washer (6) back onto the outside knob.
- ▷ Tighten the lock washer with the opening spanner. Tightening torque: approx. 0.5 Nm.




6.2. Fitting half cylinder with Swiss round profile

Depending on the installation situation – e.g., for garage door locks, key switches – half cylinders with a Swiss round profile are fitted from the inside or outside. Installation is essentially the same as for double knob cylinders. Please refer to the descriptions in Chapter 6.1.



- | | | | |
|---|--------------------|---|---------------|
| 1 | Cap | 5 | Cylinder body |
| 2 | Electronics | 6 | Screw |
| 3 | Electronics basket | 7 | Battery |
| 4 | Lock washer | | |

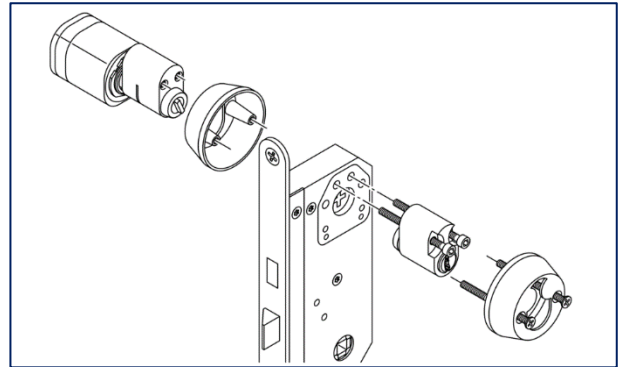
 After installation, check that the cylinder moves smoothly. It must be possible to move the lock cylinder easily even when it is engaged. If in doubt, back off the screw slightly.

7. Fitting oval cylinder

For doors with mortice lock to SS 817375. Existing oval cylinders or rococo cylinders are replaced with the corresponding electronic cylinder on the outside or inside of the door, depending on the user's requirements. This means that various configurations are possible:

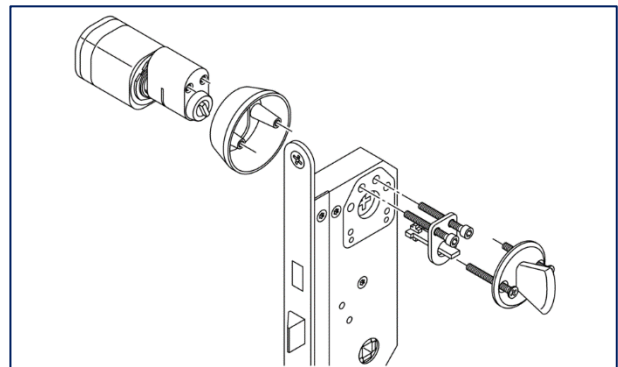
- Outside with electronic oval cylinder,
Inside with mechanical rococo lock cylinder

See → Chapter 7.1



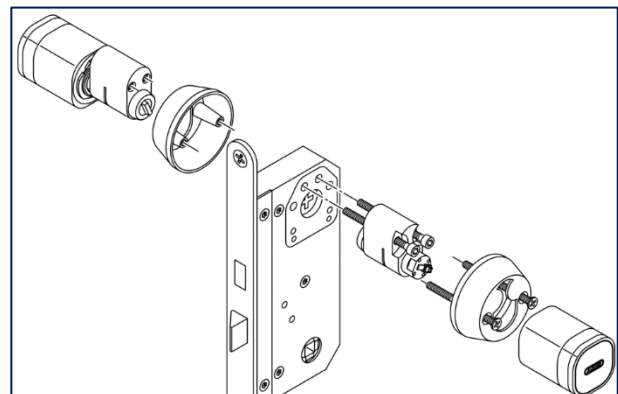
- Outside with electronic oval cylinder,
Inside with mechanical knob

See → Chapter 7.1



- Outside with electronic oval cylinder,
Inside with electronic rococo cylinder

See → Chapter 7.2



The lock cylinders are completed with standard escutcheon fittings.

- ⓘ For doors where the distance between the outside and the centre of the lock is > 36 mm: Use a cylinder extension (available from specialist dealers).

7.1. Fitting electronic oval cylinder

The electronic oval cylinder is mounted on the outside of the door and combined with a knob or rococo cylinder on the inside.

Step 1: Cut retaining screws for cylinder to size

The retaining screws connect the oval cylinder on the outside, the mortice lock and the cylinder or knob on the inside.

- ▶ Cut the retaining screws for the cylinder to the required length.

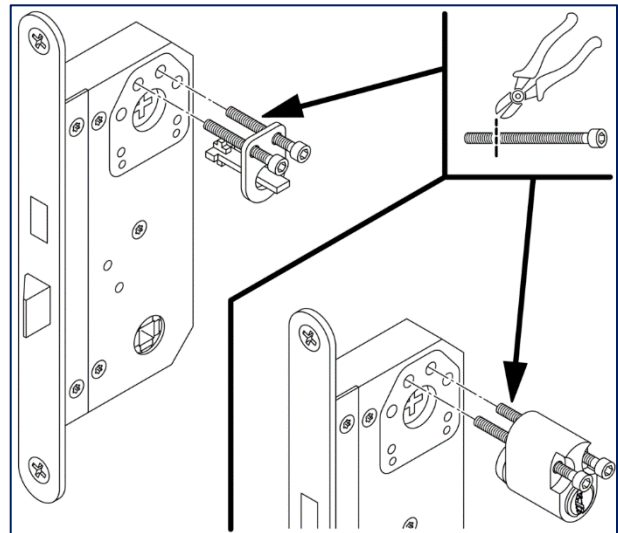
Step 2: Fit the inside fittings

With mechanical knob on the inside:

- ▶ Insert the driver plate and screw plate into the lock on the inside.
- ▶ Insert the retaining screws through the screw plate and the lock.

With mechanical rococo cylinder on the inside:

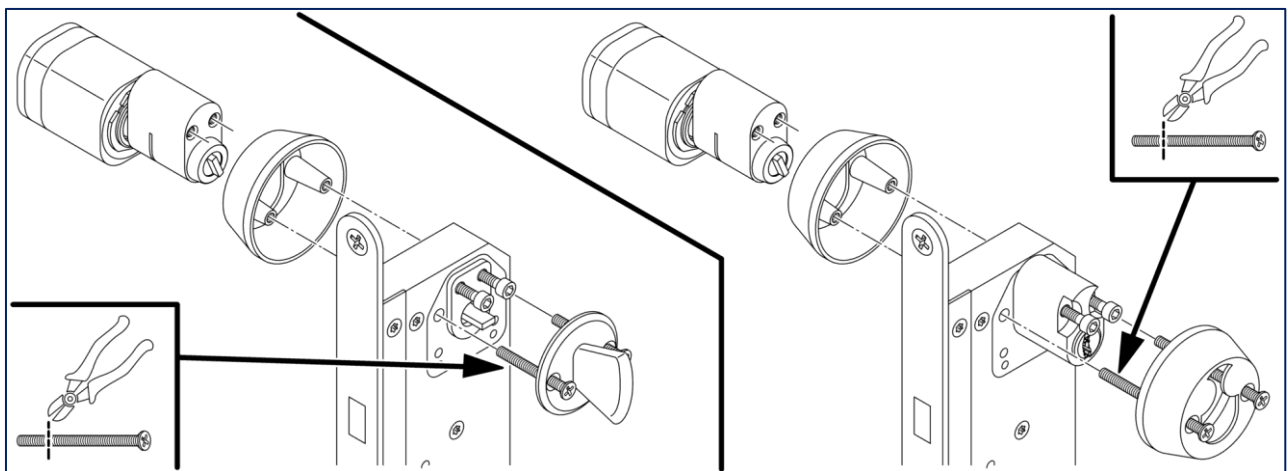
- ▶ Fit the rococo cylinder on the inside of the lock.
- ▶ Insert the retaining screws through the cylinder and the lock.



Step 3: Cut the retaining screws for the escutcheon to size

The retaining screws for the escutcheon take into account the thickness of the mechanical knob or the inside escutcheon, the door thickness and the outside escutcheon.

- ▶ Cut the retaining screws to the required length.



Step 4: Fitting oval cylinder with escutcheon

- ▷ Fit the escutcheon and the oval cylinder on the outside.
- ▷ Tighten the oval cylinder with the retaining screws. Tightening torque typ. 2 Nm.
- ▷ Fit the inside knob on the inside – the inside escutcheon in the case of a rococo cylinder.
- ▷ Screw the inside fittings and the outside escutcheon tight with the retaining screws. Tightening torque typ. 2 Nm.

Step 4: Activate battery

Depending on the delivery condition:


- ▷ Remove the battery insulation, see → Chapter 8
- or -
- ▷ Insert the battery, see → Chapter 9.

7.2. Fitting electronic rococo cylinder

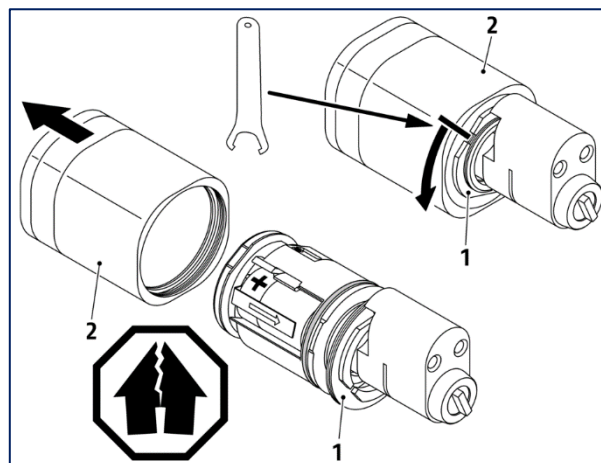
The rococo cylinder is mounted on the inside of the door and combined with an oval cylinder on the outside. The electronic knob must first be removed in order to fit the inside escutcheon.

Step 1: Remove the cap from the electronic knob


- ▷ Use the opening spanner to reach into the notch in the lock washer (1) behind the knob (2) and undo the lock washer.


 **NOTICE:** The knob seal or the antenna board can be irreparably damaged. Make sure to pull off the cap straight.

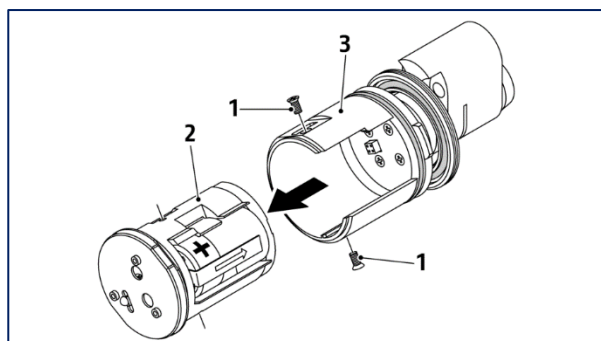
- ▷ Pull the cap (2) axially off the cylinder.
- ▷ Remove the lock washer (1) from the shaft.



Step 2: Remove the electronics from the electronic knob


 **NOTICE:** Dirt or mechanical influences can damage the sensitive electronics of the outside knob. Protect the disassembled parts from falling and from dust and moisture!

 **NOTICE:** Damage to the product due to electrostatic discharge. Store the electronics protected against electrostatic influences, e.g., on an ESD mat. Before touching the electronics, ensure that the charge between you, the electronics and the installation environment is equalised.

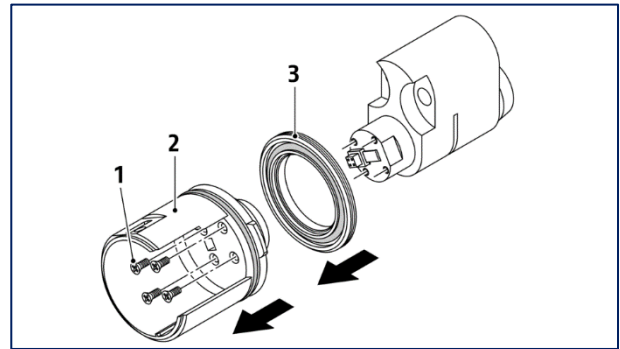


- ▷ Loosen the two electronics screws (1) with a PH0 screwdriver.
- ▷ Pull the entire electronics out of the basket (3) together with the holder (2).

Step 3: Completely disassemble the electronic knob

 NOTICE: Do not lose the screws for the outside knob!

- Use a PH0 screwdriver to loosen the 4 retaining screws (1) on the base of the basket (2).
- Remove the basket (2) from the cylinder.
- Also remove the lock washer (3) from the cylinder shaft.



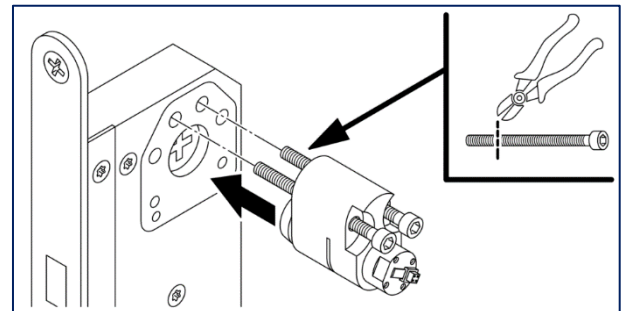
Step 4: Cut retaining screws for cylinder to size

The retaining screws connect the oval cylinder on the outside, the mortice lock and the rococo cylinder on the inside.

- Cut the retaining screws for the cylinder to the required length.

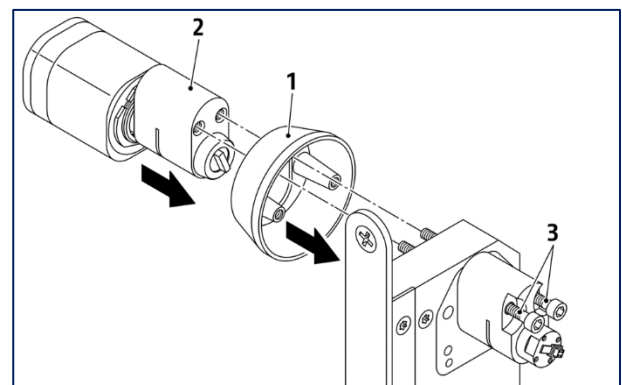
Step 5: Fit the rococo cylinder on the lock

- Fit the rococo cylinder on the inside of the lock.
- Insert the retaining screws through the cylinder and the lock.



Step 6: Fit the lock cylinder with escutcheon on the outside

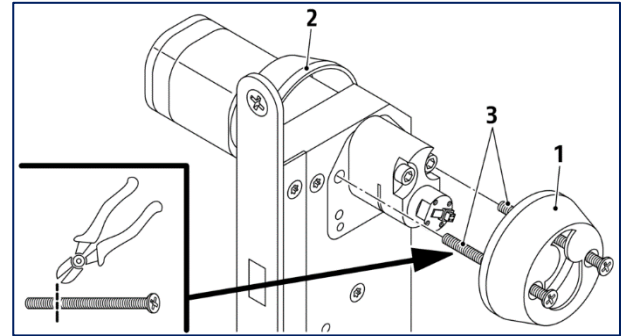
- Fit the escutcheon (1) on the outside.
- Fit the lock cylinder (2) on the lock on the outside.
- Screw tight the lock cylinder with the retaining screws (3).



Step 7: Cut the retaining screws for the escutcheon to size

The length of the retaining screws for the escutcheon takes into account the thickness of the mechanical knob or inside escutcheon, the door thickness and the outside escutcheon.

- ▶ Cut the retaining screws to the required length.



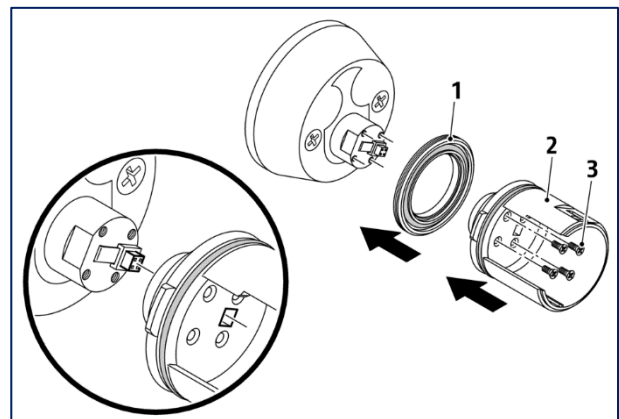
Step 8: Fit the inside escutcheon

- ▶ Fit the inside escutcheon (1) on the rococo cylinder.
- ▶ Screw tight the inside escutcheon (1) and outside escutcheon (2) with the retaining screws (3).

Step 9: Fit the electronic knob

NOTICE: If installed incorrectly, protection class IP67 is no longer guaranteed. The electronics knob can draw moisture and permanently damage the electronics. Use new electronics screws with undamaged paint coating for each assembly. Alternatively, apply new screw locking varnish to the screws.

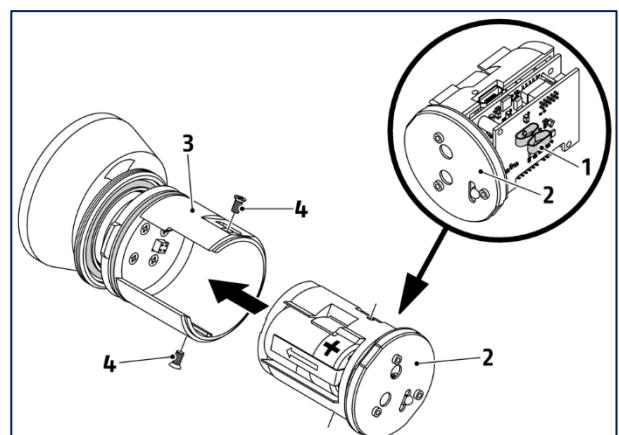
- ▶ Push the lock washer (1) including the sealing ring back onto the shaft. The sealing ring points in the direction of the knob.
- ▶ Push the basket (2) of the electronic knob onto the shaft so that the plug connector fits into the opening.
- ▶ Screw the basket back onto the shaft using 4 new electronics screws (3) and screwdriver PH0. Tightening torque: approx. 0.5 Nm.



Step 10: Insert electronics in electronics knob

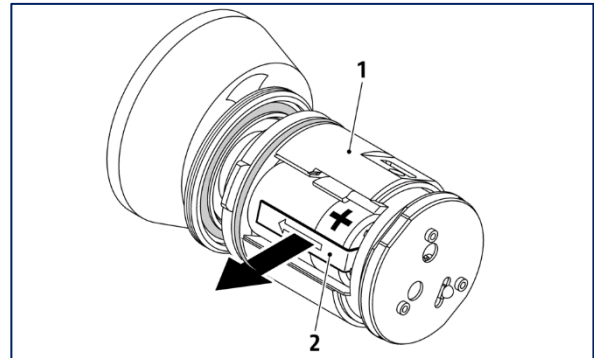
NOTICE: Do not bend the EMC contact (1) on the circuit board when inserting the electronics!

- ▶ Insert the electronics with holder (2) into the basket (3) so that the plug connector fits into the socket in the shaft.
- ▶ Fasten the electronics with the two side electronics screws (4) and screwdriver PH0. Tightening torque: approx. 0.5 Nm.



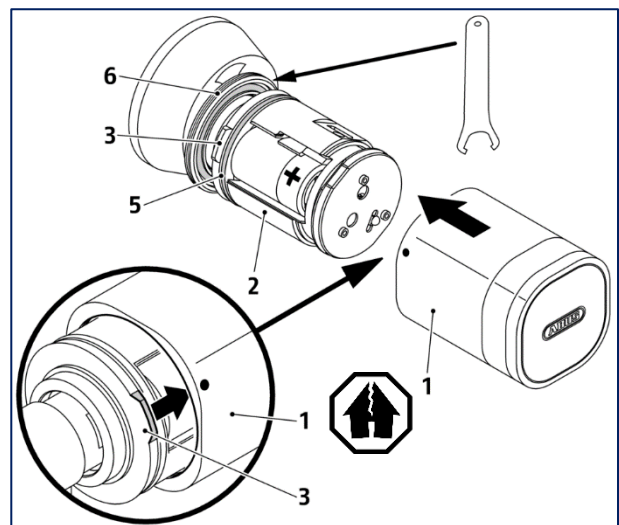
Step 11: Pull out the battery insulation

- ⓘ The battery can also be activated later. The electronic cylinder does not function until this is done.
- Pull out the insulating tag (2) at the battery compartment (1).
- ⓘ Depending on the delivery condition: Insert the battery, see → Chapter 9.



Step 12: Close electronic knob

- ⚠ **NOTICE:** The electronic cylinder can be irreparably damaged if the cap is fitted forcibly. Do not tilt the cap when fitting it! Ensure that the marking is in the correct position!
- Place the cap (1) on the knob so that the lug (3) on the underside of the knob fits into the recess in the cap - see marking "•".
- Push the cap (1) over the seal (5) with a little pressure.
- Screw the lock washer (6) back onto the knob.
- Tighten the lock washer (6) with the opening spanner. Tightening torque: approx. 0,5 Nm.




8. Removing battery insulation

For lock cylinders with inserted battery.

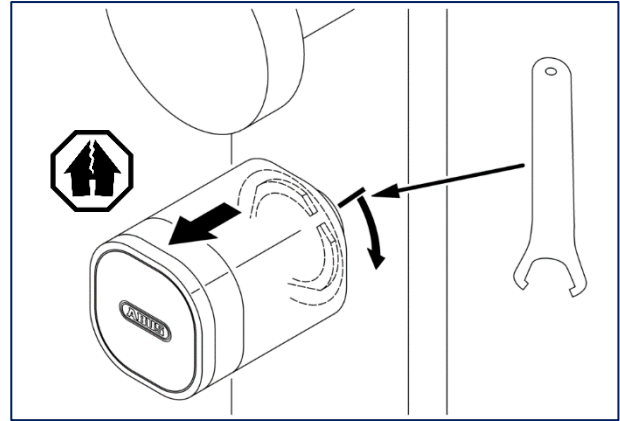
This step is necessary if the battery insulation has not yet been removed during installation.

Step 1: Open electronic knob

- ▶ Use the opening spanner to reach into the notch in the lock washer behind the electronic knob and loosen the lock washer.

 **NOTICE:** The seal of the electronic knob or the antenna board can be irreparably damaged. Make sure to pull off the cap straight.

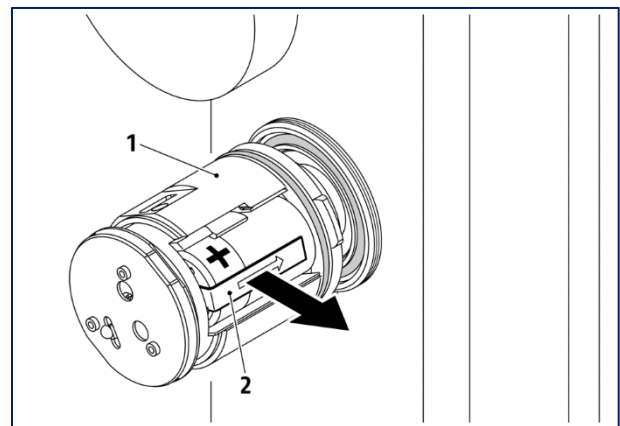
- ▶ Pull the cover of the electronic knob axially off the profile cylinder.




Step 2: Pull out the battery insulation

- ▶ Pull out the insulating tag (2) at the battery compartment (1).

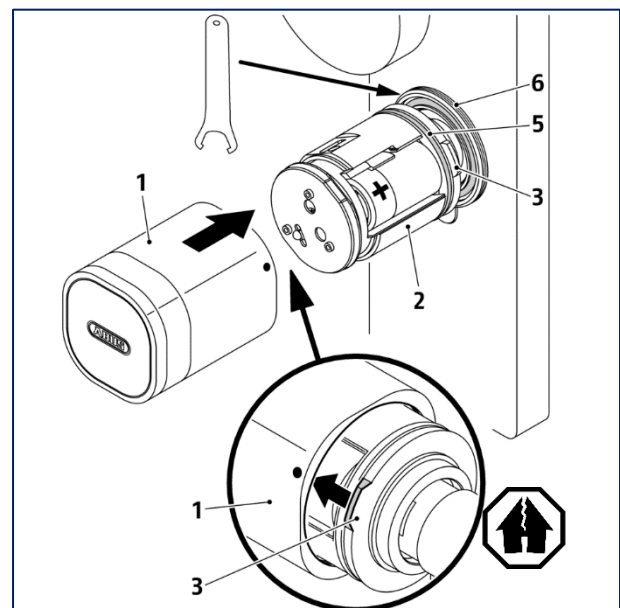
= As soon as the cylinder is supplied with power, the LEDs flash briefly (green-red-green-red).



Step 3: Close electronic knob

 **NOTICE:** The electronic cylinder can be irreparably damaged if the cap (1) is fitted forcibly. Do not tilt the cap when fitting it! Ensure the correct position of the "•" marking!

- ▶ Fit the cap (1) on the electronic knob (2) so that the lug (3) on the underside of the knob fits into the recess in the cap – see marking "•".
- ▶ Carefully slide the cap onto the electronic knob so that the cap slides onto the lug (3) of the knob.
- ▶ Push the cap over the seal with a little pressure.
- ▶ Screw the lock washer back onto the electronic knob.
- ▶ Tighten the lock washer with the opening spanner. Tightening torque: approx. 0,5 Nm.



9. Inserting battery



Important! Sudden functional failure possible if incorrect batteries are used.

The electronics are designed for the specified battery type. If other battery manufacturers, battery types or used batteries are used, permanent and fault-free function cannot be guaranteed. In particular, the low battery warning is not guaranteed so that the door may remain locked without warning.

- Use only new batteries.
- Use only batteries of the specified type (see → Chapter 2.5 Technical data).
- Do not use batteries from other manufacturers.

For lock cylinders with enclosed battery.

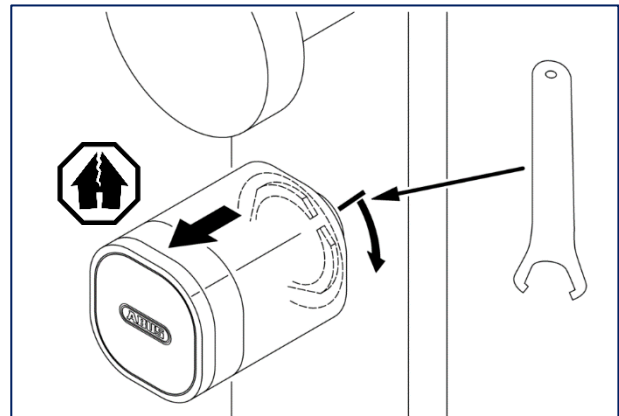
Step 1: Open electronic knob

- ▶ Use the opening spanner to reach into the notch in the lock washer behind the electronic knob and loosen the lock washer.



NOTICE: The seal of the electronic knob or the antenna board can be irreparably damaged. Make sure to pull off the cap straight.

- ▶ Pull the cover of the electronic knob axially off the profile cylinder.



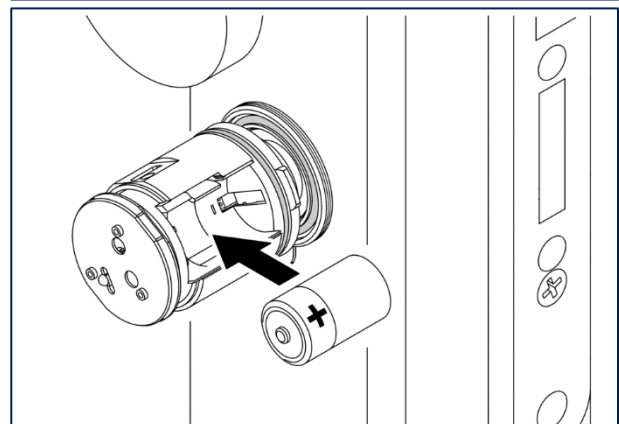
Step 2: Inserting the battery



NOTICE: Reverse polarity of the battery will lead to malfunctions and damage. Observe the battery polarity!

- ▶ Insert the battery into the battery compartment so that the tag disappears behind the battery.

= As soon as the cylinder is supplied with power, the LEDs flash briefly (green-red-green-red).

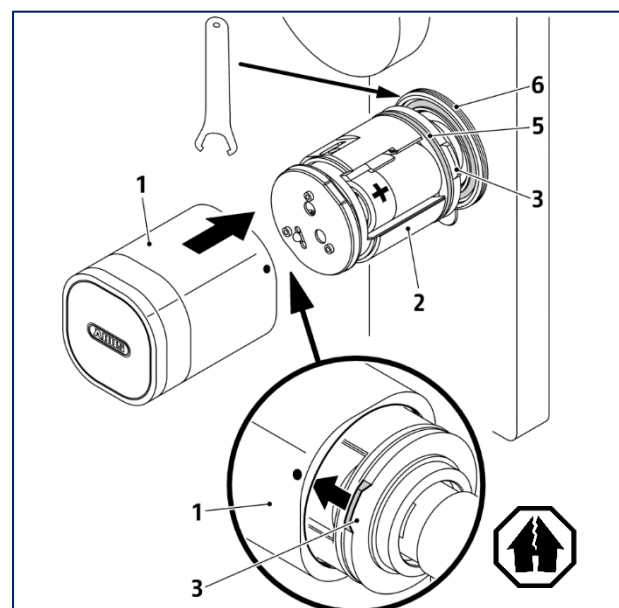


Step 3: Close electronic knob



NOTICE: The electronic cylinder can be irreparably damaged if the cap (1) is fitted forcibly. Do not tilt the cap when fitting it! Ensure the correct position of the "•" marking!

- ▶ Fit the cap (1) on the electronic knob (2) so that the lug (3) on the underside of the knob fits into the recess in the cap – see marking "•".
- ▶ Carefully slide the cap onto the electronic knob so that the cap slides onto the lug (3) of the knob.
- ▶ Push the cap over the seal with a little pressure.
- ▶ Screw the lock washer back onto the electronic knob.
- ▶ Tighten the lock washer with the opening spanner. Tightening torque: approx. 0, 5 Nm.



10. Start-up

Start-up of the product is described in the system documentation for ABUS wAppLoxx Pro Plus or ABUS TECTIQ, depending on the system family.

11. Operation

Depending on the system family, operation of the product is described in the system documentation for ABUS wAppLoxx Pro Plus or ABUS TECTIQ.



12. Care and maintenance

12.1. Cleaning the product



NOTICE The product can be irreparably damaged.

- Do not lubricate the cylinder with unsuitable lubricants or greases.
- Do not use abrasive cleaning agents or cleaning agents containing solvents.
- Do not use sharp-edged tools.

- ▷ Clean the lock cylinder with a clean, slightly damp (microfibre) cloth.
- ▷ Use a mild cleaning agent for stubborn dirt.

12.2. Maintaining mechanical parts



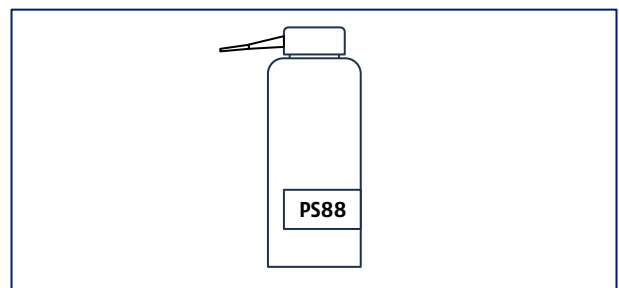
NOTICE The product can be damaged.

- Do not lubricate the cylinder with unsuitable lubricants or greases.
- Do not use any resinous or organic lubricants.
- Do not allow lubricant to seep haphazardly into the inside of the cylinder.

If the lock cylinder is stiff:

- ▷ Lubricate the shaft with Abus lubricant spray PS88.
- ▷ Collect any excess liquid that emerges with a cloth and dispose of it.

If you are unsure, please contact your specialist dealer or ABUS specialist retail partner.




12.3. Changing the battery

Multi-stage battery warning system

The electronic lock cylinder has a two-stage battery warning system to ensure reliable operation.

Stage 1: As soon as the battery charge level is no longer sufficient to permanently supply the cylinder, the cylinder indicates this:

- by delayed opening on access (5 seconds)
- by changed signalling (see → System documentation ABUS TECTIQ or ABUS wAppLoxx Pro Plus)
- by display in the TECTIQ Access Manager or wAppLoxx Pro Plus Access Manager)
- by notification via e-mail (with corresponding setting)

-  If the battery is weak, the lock cylinder will only function for a limited time.
- Replace the battery as soon as the lock cylinder signals a weak battery.

Stage 2: If the battery is empty, the lock cylinder only has power left for 3 opening attempts, which are carried out only with an authorised emergency medium - fallback medium with wAppLoxx, emergency transponder with TECTIQ.



WARNING! Function failure with empty battery!

If the battery is not replaced in good time, the lock cylinder will no longer function and will not display any feedback. In an emergency, access is made more difficult for rescue services and lives may be endangered!

- Replace a flat battery immediately!


Replacing empty battery




WARNING! Danger from exhausted lithium batteries!

Even exhausted lithium batteries can still contain enough energy to cause harm to life and limb. Improper handling or damage can lead to serious injuries, burns or chemical burns or cause fires.

- Do not store exhausted lithium batteries in your trouser pocket or toolbox.
- Secure used lithium batteries against short circuits and tape over the terminals.
- Do not recharge, open, dispose of in fire or short circuit batteries.
- Do not mix old and new batteries.
- Do not reverse the polarity of the batteries.
- Keep batteries away from children.

-  Important! Only use original type from Varta, see → Chapter 2.5 Technical data. Otherwise, no permanent and fault-free functioning is guaranteed.

- The battery is replaced in the same way as when the battery is first inserted, see → Chapter 8.

-  For TECTIQ: After changing the battery, the internal clock of the device must be reset. Follow the instructions in the TECTIQ system documentation.

12.4. Opening the door when the battery is flat

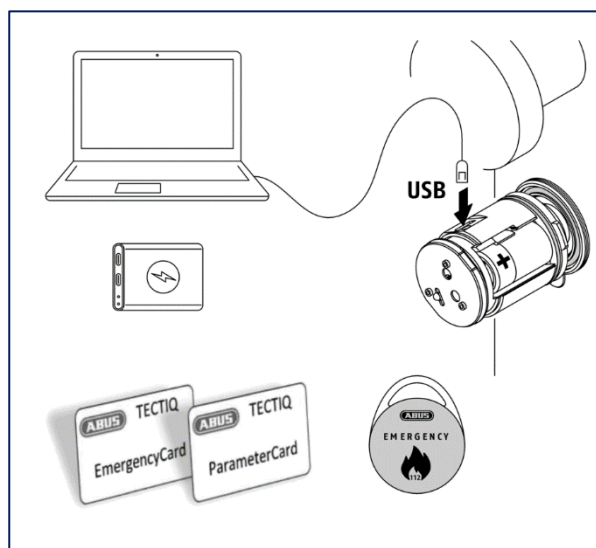
If the lock cylinder does not respond despite current access authorisation, the battery may be so low that there is no longer enough power to open it. If there is no new battery as replacement and no emergency medium is available, the USB port in the electronic knob can be used for emergency opening.

i Then replace the battery before closing the door again.

- ▶ Remove the cap from the electronics knob, see → Chapter 8.
- ▶ Connect the USB battery pack, power bank, PC or similar to the USB port.
- ▶ With ABUS TECTIQ: Synchronise date/time, e.g. with parameter card.
- ▶ Present locking medium with current access authorisation and open door.

i Alternatively, opening is possible with an emergency medium – TECTIQ emergency opening transponder or wAppLoxx fallback medium. Do not forget to reset emergency opening afterwards (with TECTIQ).

- ▶ After opening the door and changing the battery, disconnect the USB connection and close the knob again.



12.5. Firmware update

TECTIQ (Admin App / Micro USB Update)

The firmware can be updated via the **Admin App**. The **Admin App** displays new firmware versions for the door component and can be triggered by pressing a button in the app. The firmware update is then transferred to the door component via Bluetooth (BLE) and then installed.

Alternatively, updates can be installed on the cylinder via the Micro USB interface: Special Micro USB **updater cable** (accessory) and updater software on a laptop required. You can obtain the USB Mini Updater cable from our ABUS specialist retail partner. The updater software, new firmware version and the instructions can be found on the homepage in the download area of the cylinder.

wAppLoxx Pro (via Micro USB)

Updates can be installed via the Micro USB interface on the cylinder: Special Micro USB **updater cable** (accessory) and updater software on a laptop required. You can obtain the USB Mini Updater cable from our ABUS specialist retail partner. The updater software, new firmware version and the instructions can be found on the homepage in the download area of the cylinder.



i Firmware updates should always be installed!

13. Taking out of service and disassembly

13.1. Deregistering cylinders from the locking system

Lock cylinders that are removed from the system should be deregistered from the locking system using the locking software. This ensures that invalid access authorisations are deleted from the system.

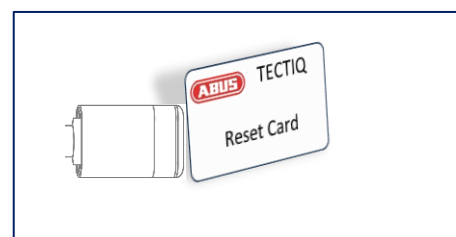
- ▶ For deregistration, follow the instructions in the system documentation for ABUS TECTIQ or ABUS wAppLoxx.

13.2. Disassembling cylinder

- ▶ Disassembly is carried out in the reverse order to assembly. Observe the installation chapters.

13.3. Resetting to factory setting

- ▶ Observe the instructions in the system documentation for ABUS TECTIQ or ABUS wAppLoxx (teach-out via reset card).



14. Disposal



Dispose of the device in accordance with EU Directive 2012/19/EU – WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the municipal authority responsible for disposal. You can find information on collection points for waste equipment from your local community and city government, from local waste disposal companies or your dealer.

Battery disposal

Only return lithium batteries in discharged condition to the designated collection points! Avoid short circuits and insulate the battery terminals with adhesive tape.

In accordance with legal requirements, end users of the product are obliged to return batteries. Information on environmentally appropriate disposal can be obtained from the local authority.