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Digital Cylinder AX (Z5) Modularity

Manual

25.02.2025

Simons Voss
technologies

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1. General safety instructions

Signal word: Possible immediate effects of non-compliance

WARNING: Death or serious injury (possible, but unlikely)

IMPORTANT: Property damage or malfunction

NOTE: Low or none



WARNING

Blocked access

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

Blocked access through manipulation of the product

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

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

IMPORTANT

Damage resulting from liquids

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

- ❑ Keep liquids away from the electronics.

Damage resulting from aggressive cleaning agents

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

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



NOTE

Intended use

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

- ❑ Do not use SimonsVoss products for any other purposes.

Qualifications required

The installation and commissioning requires specialized knowledge.

- ❑ Only trained personnel may install and commission the product.

Incorrect installation

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

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

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

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

2. Product-specific safety instructions



WARNING

Malfunction of the anti-panic function due to unauthorised manipulation




In its anti-panic version, the Digital Cylinder AX has a permanently installed anti-panic module and is modular in length to a limited extent: outer side as required, inner side from 50 mm and half cylinder from 50 mm.

1. Do not attempt to dismantle the anti-panic module as this may damage it.
 2. Perform a battery test every time that you modify it.
-

3. Accessories and tools




3.1 Length modularity




The profile cylinder can be extended and shortened with the following parts:

Extension bolt	Core extension for the profile	Profile extension
 <ul style="list-style-type: none"> ■ Z5.BOLT.XX (XX = required basic length) 	 <ul style="list-style-type: none"> ■ Z5.CORE.05: 5 mm ■ Z5.CORE.10: 10 mm ■ Z5.CORE.20: 20 mm 	 <ul style="list-style-type: none"> ■ Z5.PROFILE.05: 5 mm ■ Z5.PROFILE.10: 10 mm ■ Z5.PROFILE.20: 20 mm

Clamps

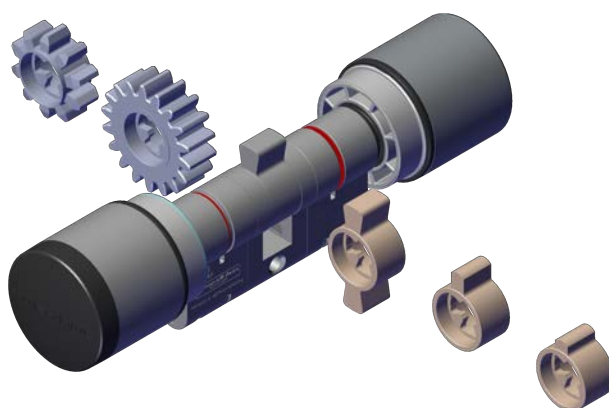
 <ul style="list-style-type: none"> ■ Z5.CLAMPS <p>Set contains 50 units.</p>

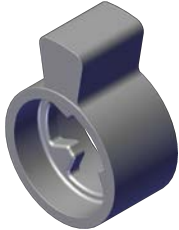





Cylinder centre piece	Half cylinder centre piece	Half cylinder centre section with multi-point
 <ul style="list-style-type: none"> ■ Z5.CNT.EU 	 <ul style="list-style-type: none"> ■ Z5.CNT.HZ 	 <ul style="list-style-type: none"> ■ Z5.CNT.HZ.MR

Inner thumb-turn mount	Inside blank profile without thumb-turn	Thumb-turn mount for glass door thumb-turn
 <p data-bbox="427 640 592 674">■ Z5.PR.IN</p>	 <p data-bbox="778 645 991 678">For .OK variant</p> <p data-bbox="783 703 963 736">■ Z5.PR.OK</p>	 <p data-bbox="1134 624 1437 703">Profile length 30 mm (extensible)</p> <p data-bbox="1139 725 1319 759">■ Z5.PR.GD</p>

3.2 Cam

You can also choose between different cams:



Standard cam	Cam PM1 (long)	Cam PM2 (short)
 <p data-bbox="427 1709 639 1742">■ Z5.CAM.WP</p>	 <p data-bbox="783 1709 995 1742">■ Z5.CAM.PM1</p>	 <p data-bbox="1139 1709 1351 1742">■ Z5.CAM.PM2</p>
Double cam	Cam gear, 10 teeth	Cam gear, 18 teeth
 <p data-bbox="427 2094 715 2128">■ Z5.CAM.DOUBLE</p>	 <p data-bbox="783 2094 1059 2128">■ Z5.CAM.GEAR10</p>	 <p data-bbox="1139 2094 1351 2128">■ Z5.GEAR.18</p>

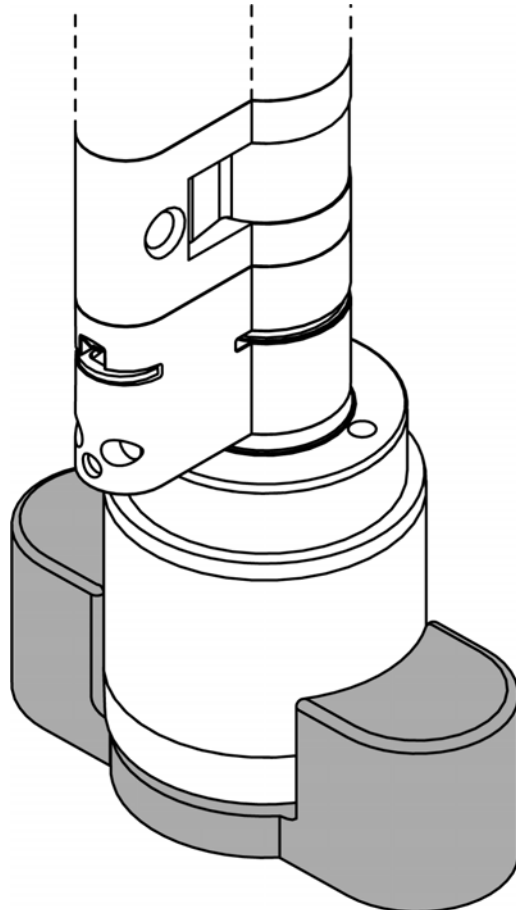
Dimensional drawings can be found in Section Cam dimensions; see *Replacing the cam* [▶ 46] for installation.

3.3 Tools

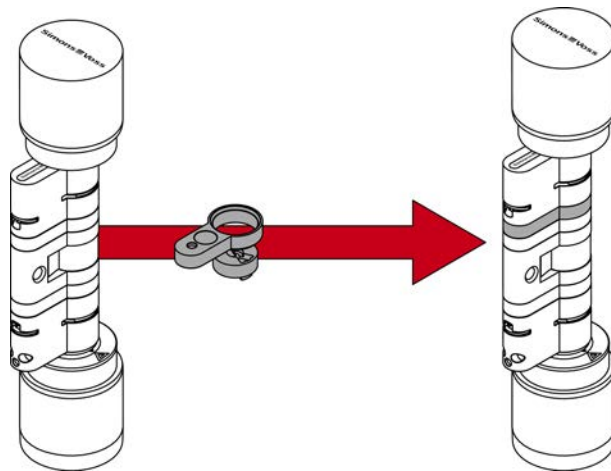
Various tools are available to adjust the Digital Cylinder AX:

Lifter (Z5.LIFTER)	Spacer (Z5.SPACER)	Terminal block (Z5.BLOCK)
		

The Digital Cylinder AX thumb turn installation tool is designed so that you can use it to hold the Digital Cylinder AX in place. Position it with the flat side on a flat surface and place the Digital Cylinder AX together with the thumb-turn in the installation tool. Reassembly is easier when the Digital Cylinder AX is in the holder.



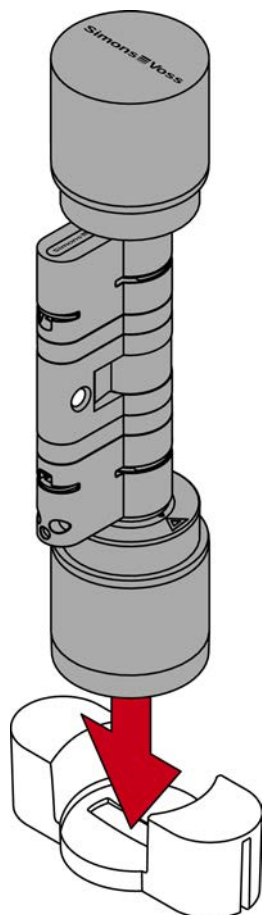
4. Extend Cylinder AX



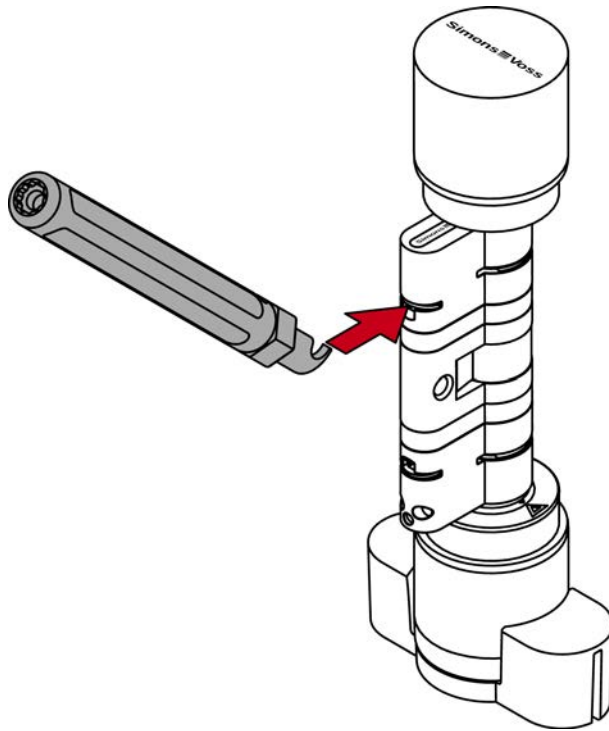
The core extension and profile extension must be the same length. You also need an extension bolt for the desired length.

- ✓ Extractor for releasing the clamp
- ✓ Spacer for aligning the extension bolt
- ✓ Clamp block for pressing in the clamp

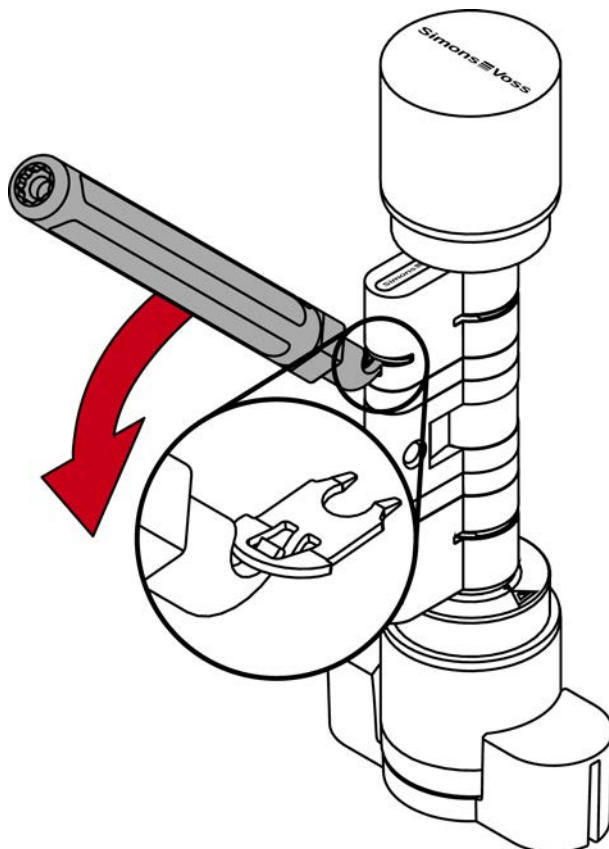
1. Place the Cylinder AX in the thumb-turn assembly tool.



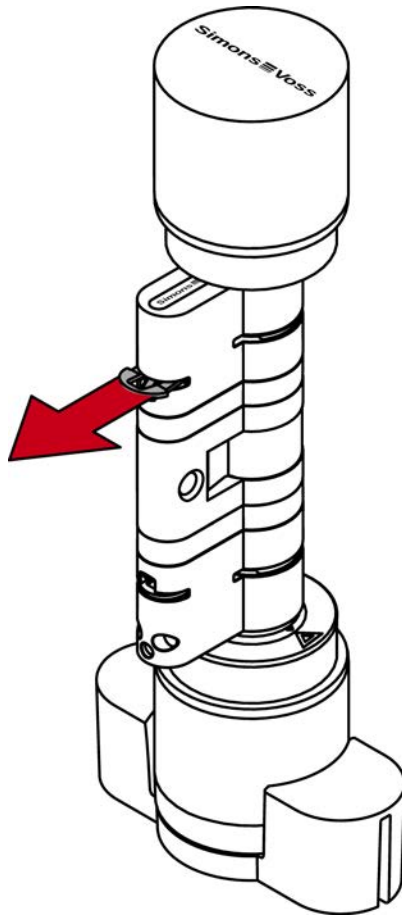
2. Hook the tip of the extractor into the clamp.



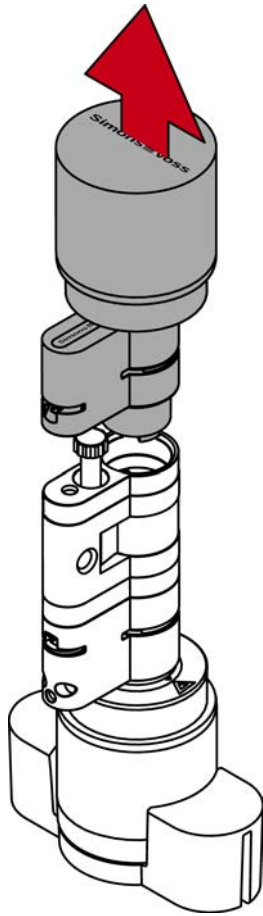
3. Lever the clamp out of the profile cylinder by moving the extractor to the centre of the cylinder.



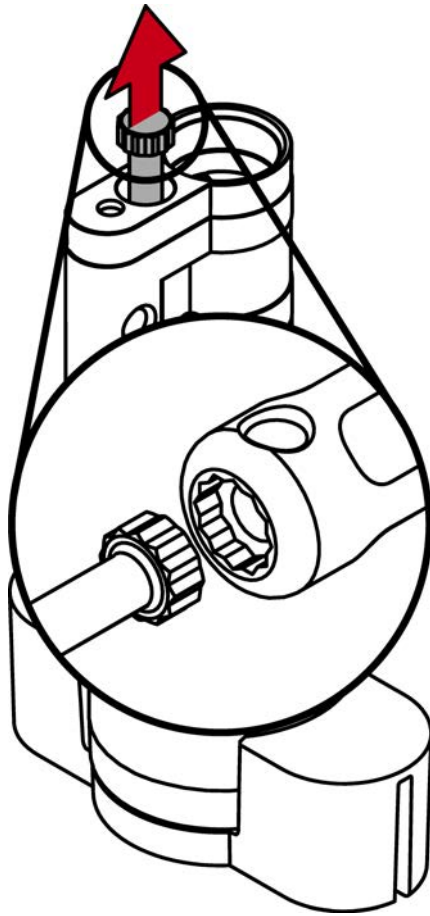
4. Pull the clamp completely out of the profile cylinder.



5. Disassemble the two cylinder halves.

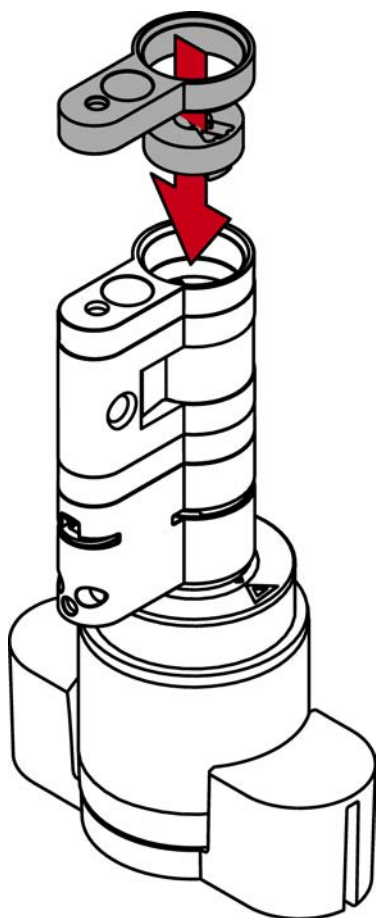


6. Use the extractor to unscrew the extension bolt.

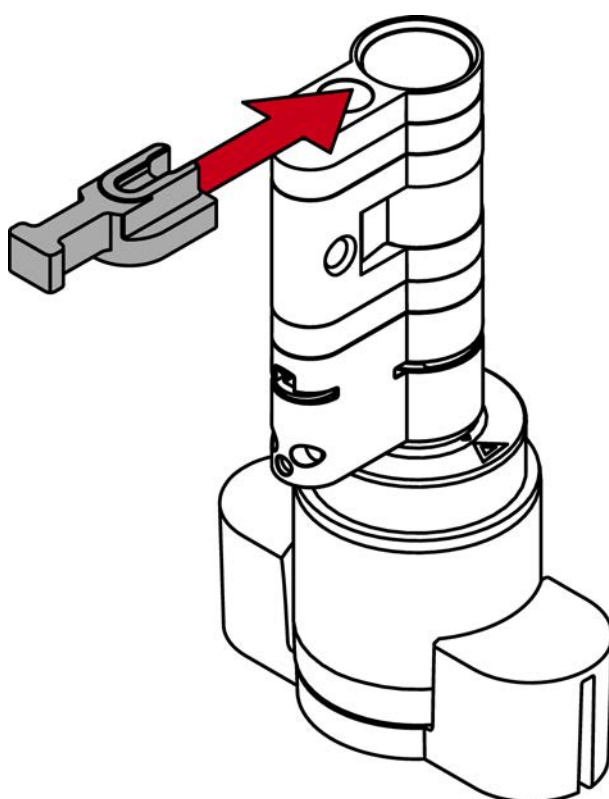


7. Insert suitable core extensions.

8. Attach suitable profile extensions.



9. Place the spacer.



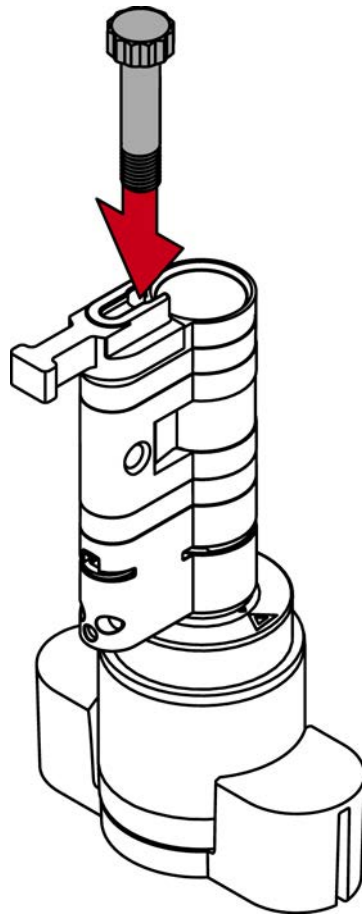
10. Screw in a suitable extension bolt with the extractor until it rests on the spacer.



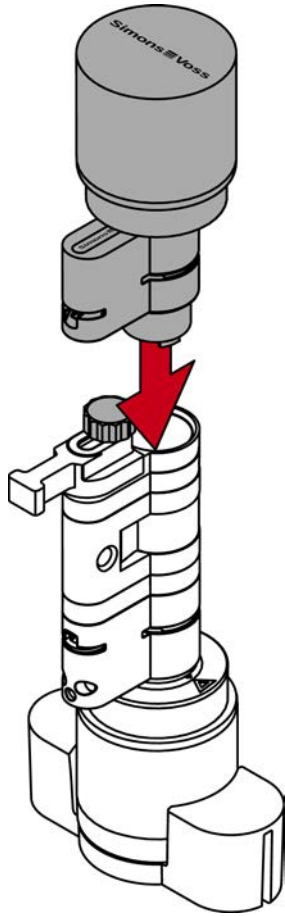
NOTE

Length on bolt head

You will find a number on the bolt head. This number is the length of the cylinder profile to which the bolt fits.

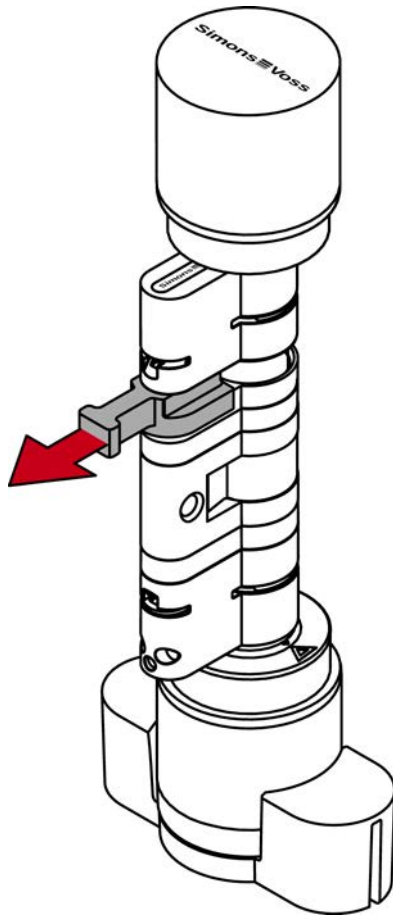


11. Reassemble the two cylinder halves.

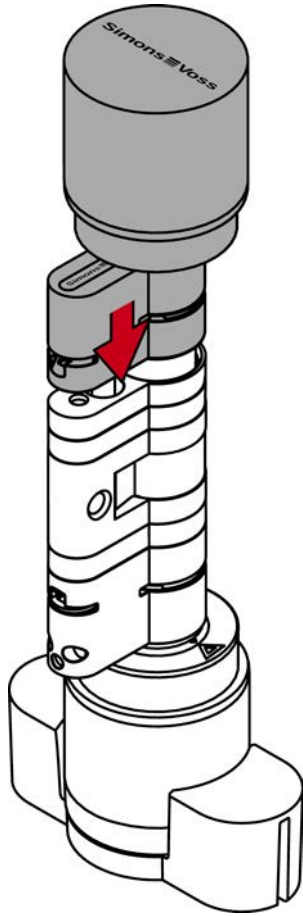


↳ Extension bolt is protected against twisting.

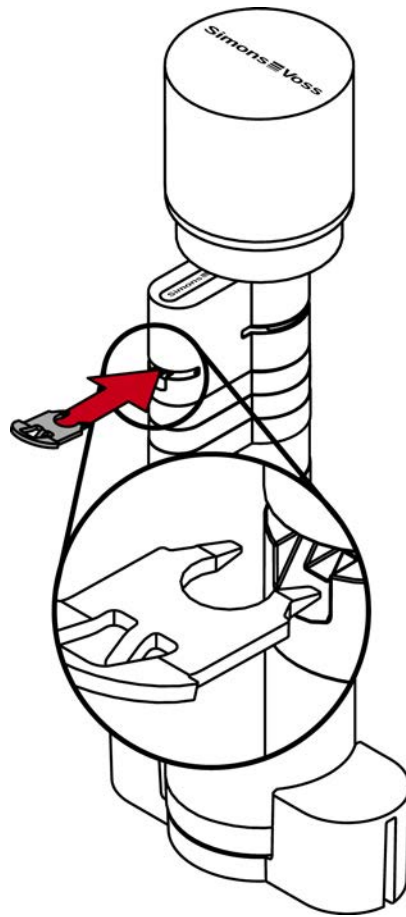
12. Pull the spacer off again.



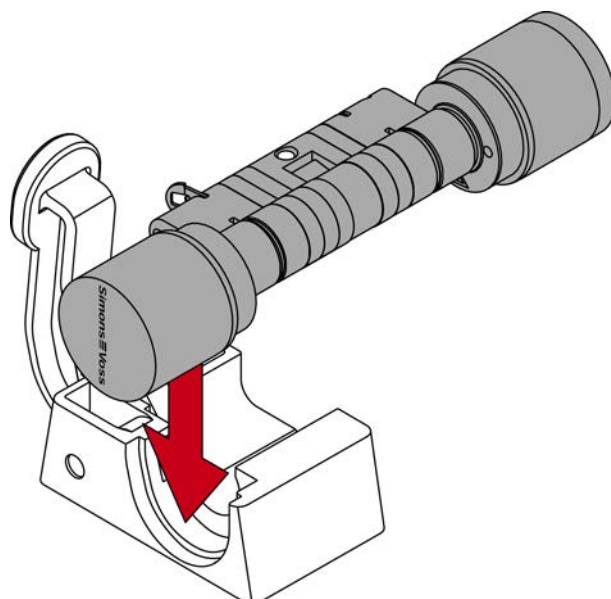
13. Push the halves together completely.



14. Place the clip back into the slot of the profile cylinder with its lug facing the fastening screw and press the clamp with your thumb so that it can no longer fall out.

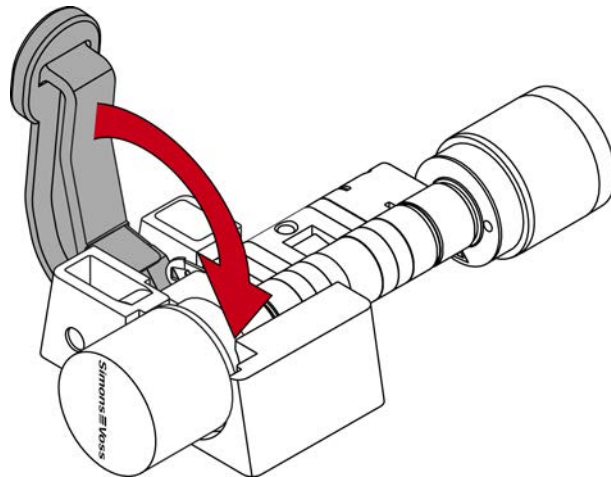


15. Insert the cylinder into the clamping block so that the profile cylinder and the thumb-turn lie flush in the recesses.

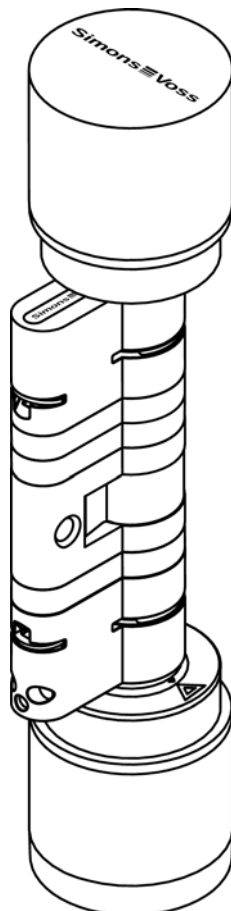


- ↳ The lever of the clamping block is reinforced at one point with a metal plate. The bracket that was previously inserted lies opposite this metal plate.

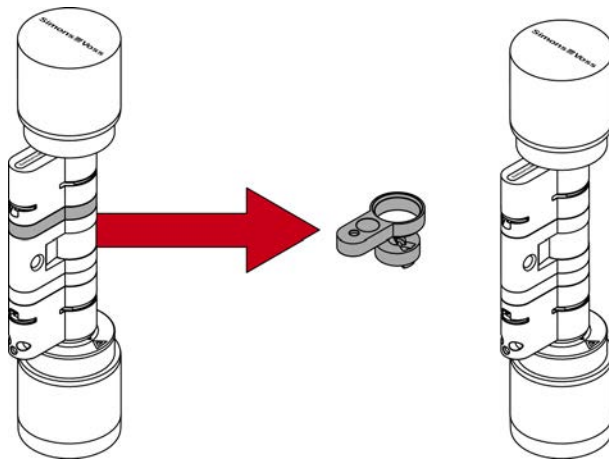
16. Push the clamp block lever towards the base plate until the clamp is fully seated in the profile cylinder.



- ↳ Cylinder AX is extended.



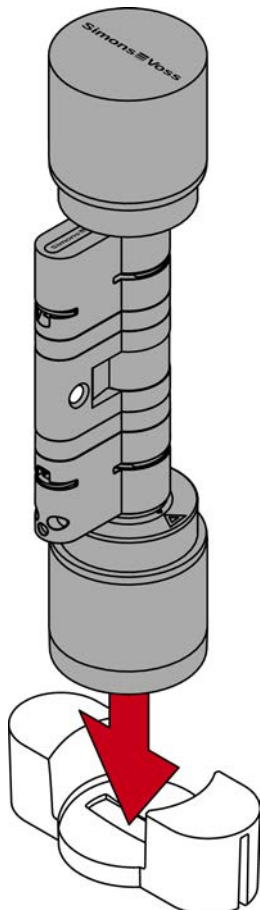
5. Shorten Cylinder AX



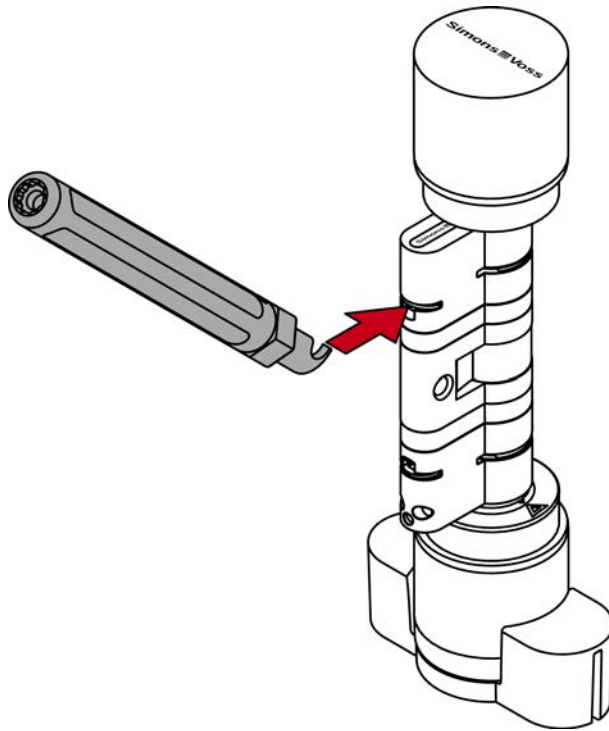
You need a bolt for the desired length.

- ✓ Extractor for releasing the clamp
- ✓ Spacer for aligning the bolt
- ✓ Clamp block for pressing in the clamp

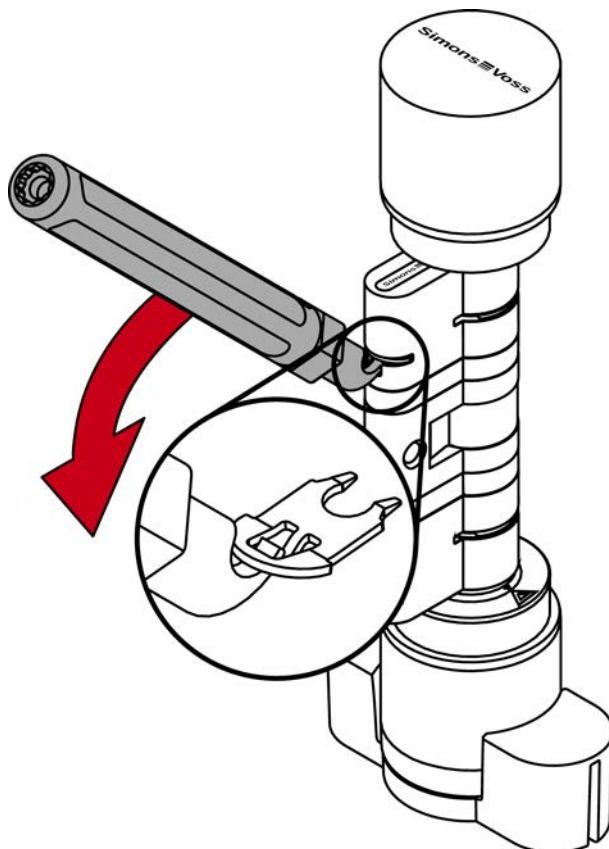
1. Place the Cylinder AX in the thumb-turn assembly tool.



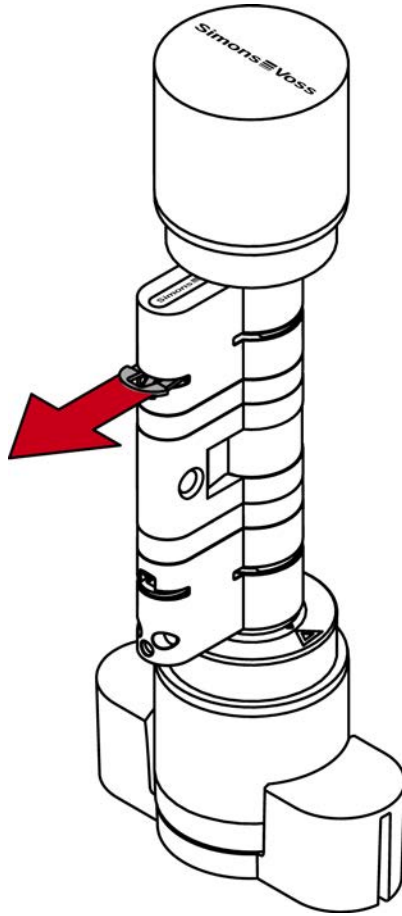
2. Hook the tip of the extractor into the clamp.



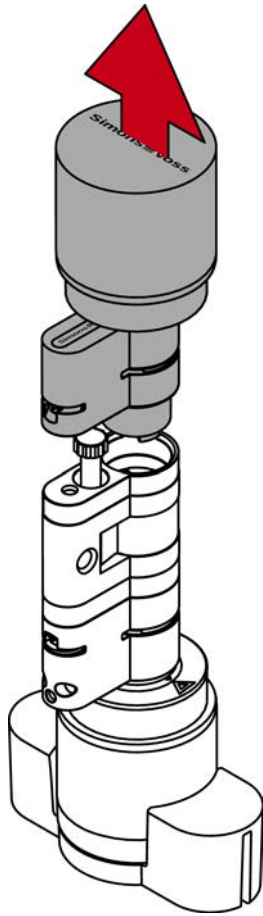
3. Lever the clamp out of the profile cylinder by moving the extractor to the centre of the cylinder.



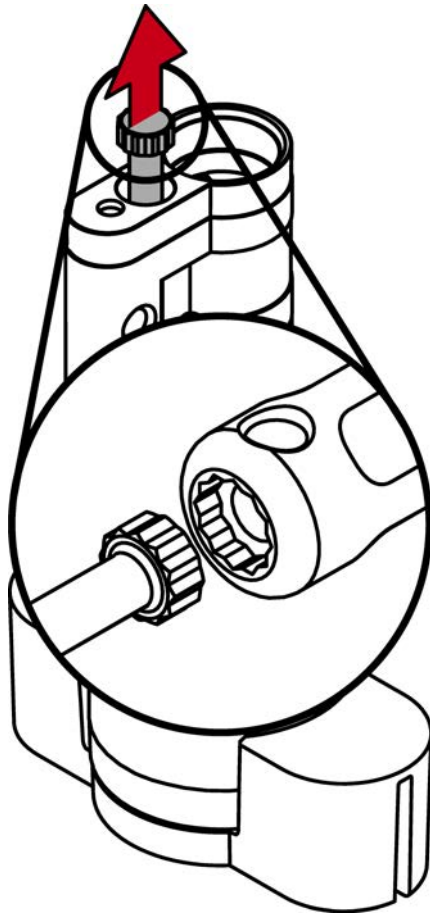
4. Pull the clamp completely out of the profile cylinder.



5. Disassemble the two cylinder halves.

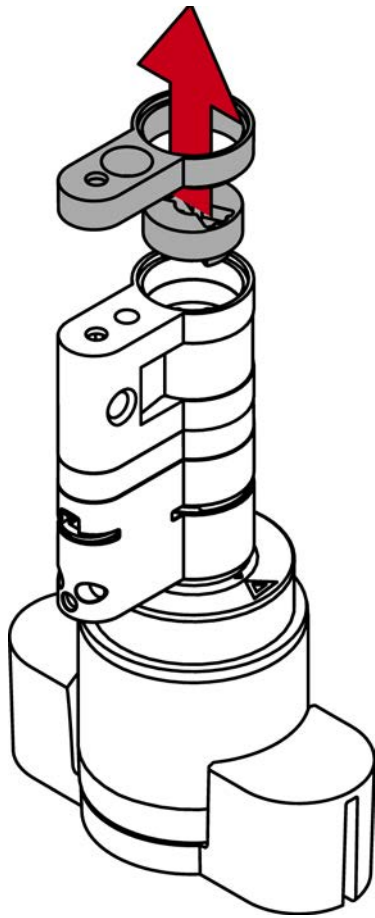


6. Unscrew the bolt with the extractor.

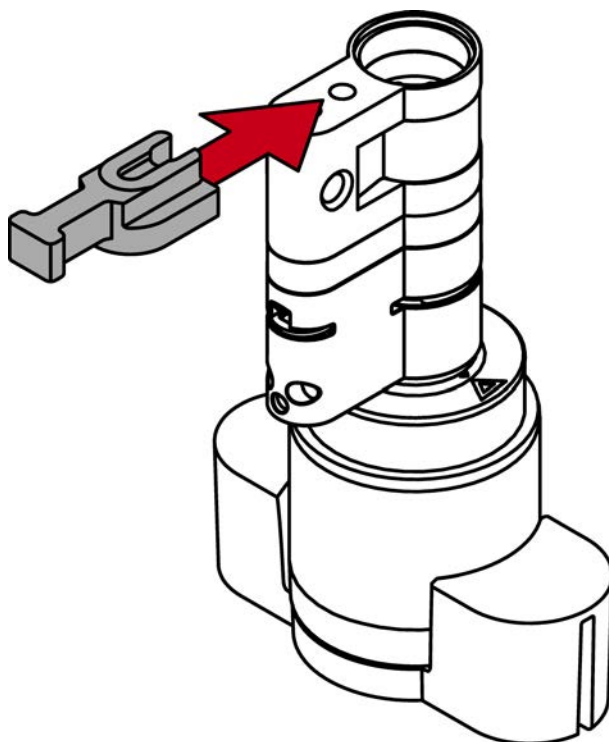


7. Remove the profile extension.

8. Remove the core extension.



9. Place the spacer.



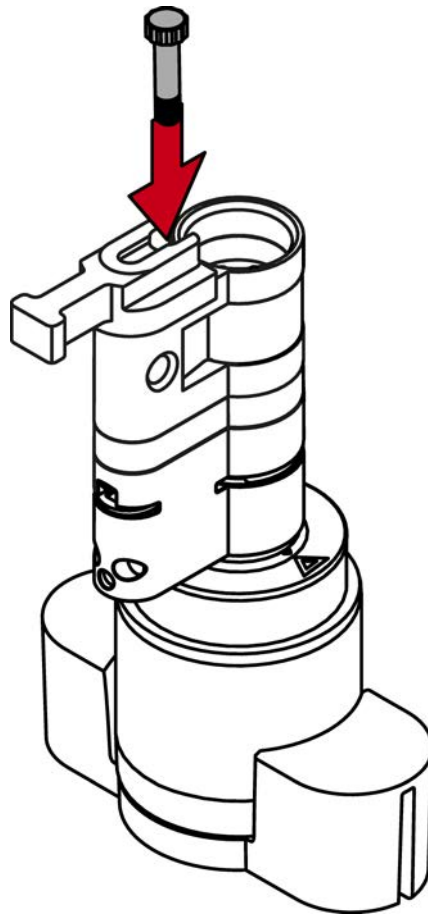
10. Screw in a suitable bolt with the extractor until it rests on the spacer.



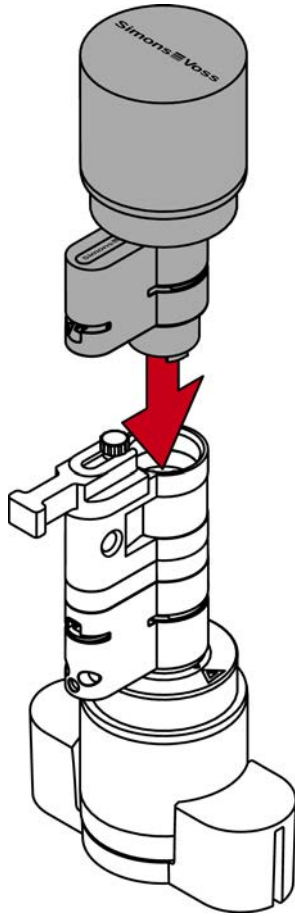
NOTE

Length on bolt head

You will find a number on the bolt head. This number is the length of the cylinder profile to which the bolt fits.

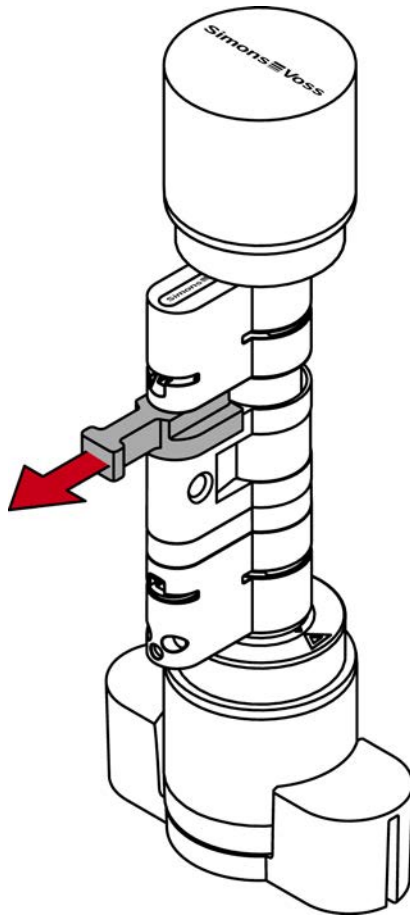


11. Reassemble the two cylinder halves.

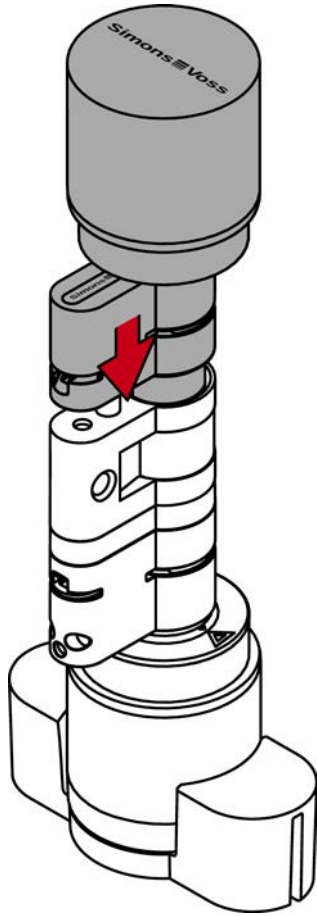


↳ Bolt is protected against twisting.

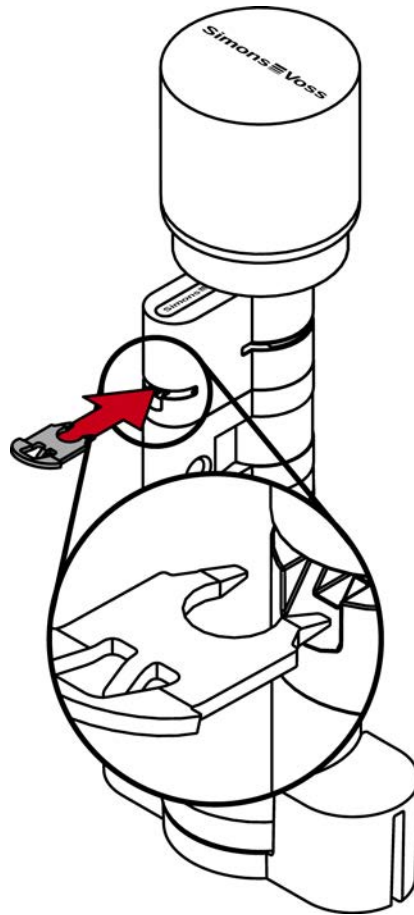
12. Pull the spacer off again.



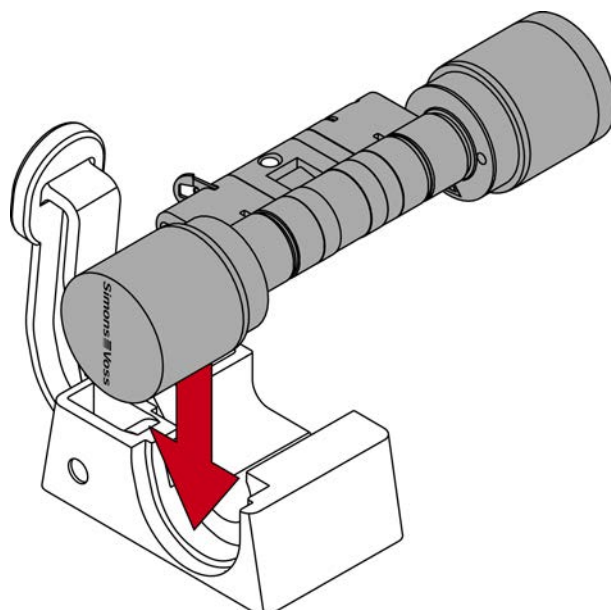
13. Push the halves together completely.



14. Refit the clip into the slot of the profile cylinder with the lug facing the fastening screw.

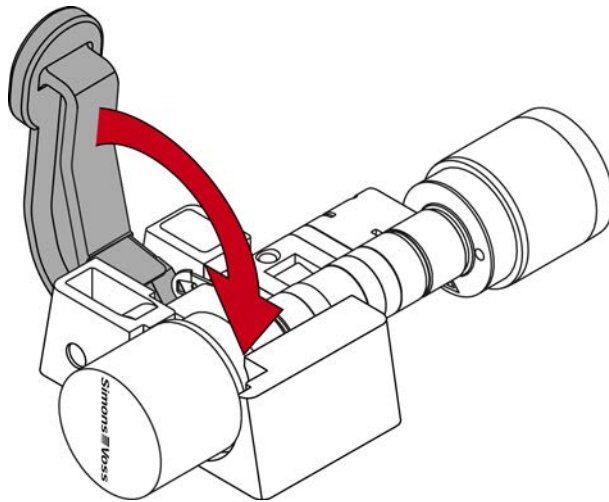


15. Insert the cylinder into the clamping block so that the profile cylinder and the thumb-turn lie flush in the recesses.

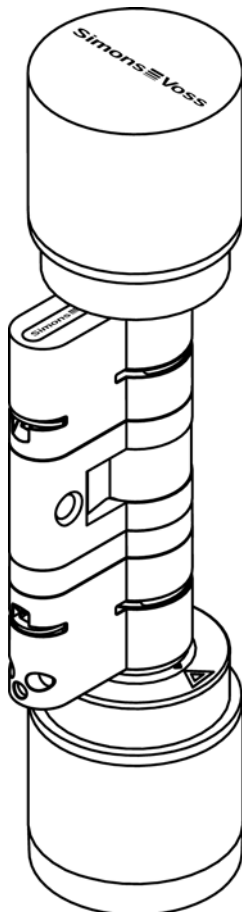


- ↳ The lever of the clamping block is reinforced at one point with a metal plate. The bracket that was previously inserted lies opposite this metal plate.

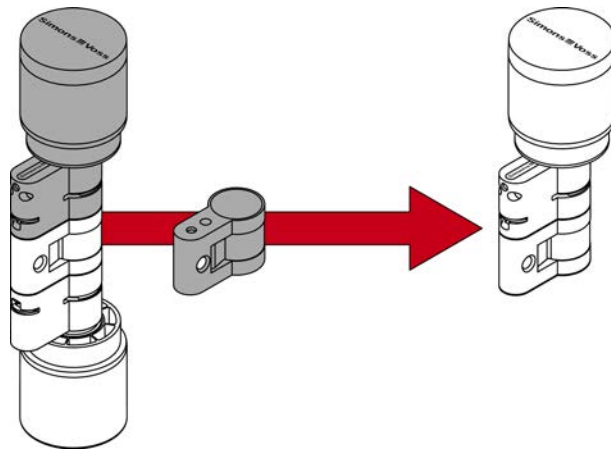
16. Push the clamp block lever towards the base plate until the clamp is fully seated in the profile cylinder.



- ↳ Cylinder AX is shortened.



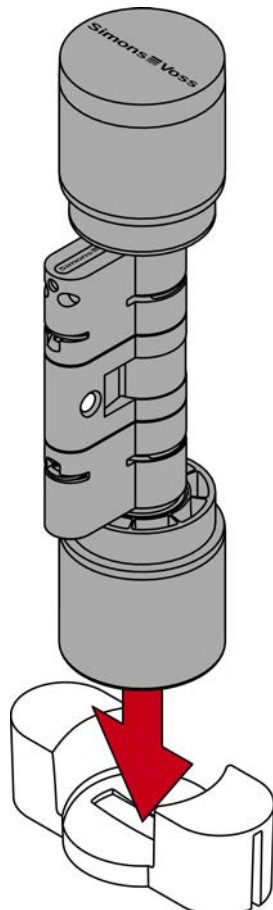
6. Reduce CO cylinders to HZ



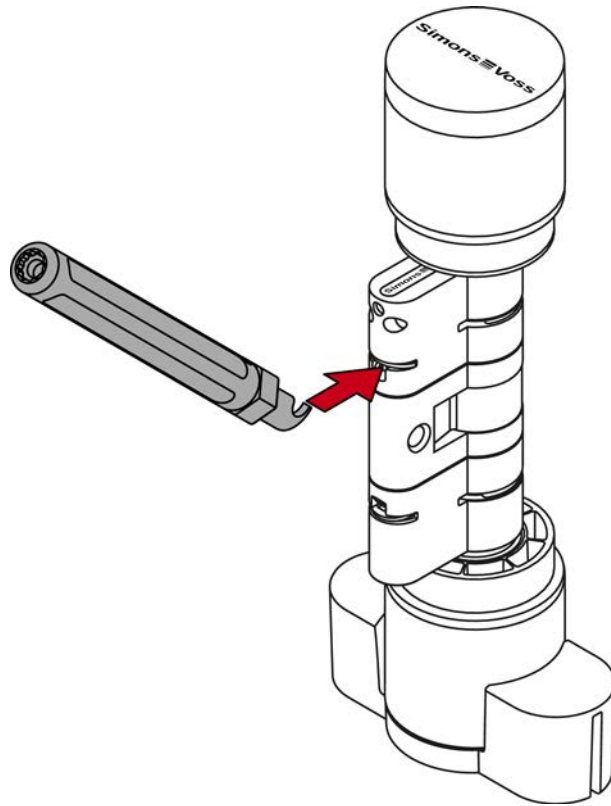
You can use a special centre piece to assemble a half cylinder from an AX comfort cylinder or a freely rotating cylinder.

- ✓ Extractor for releasing the clamp
- ✓ Spacer for aligning the extension bolt
- ✓ Clamp block for pressing in the clamp
- ✓ Half Cylinder Center Section

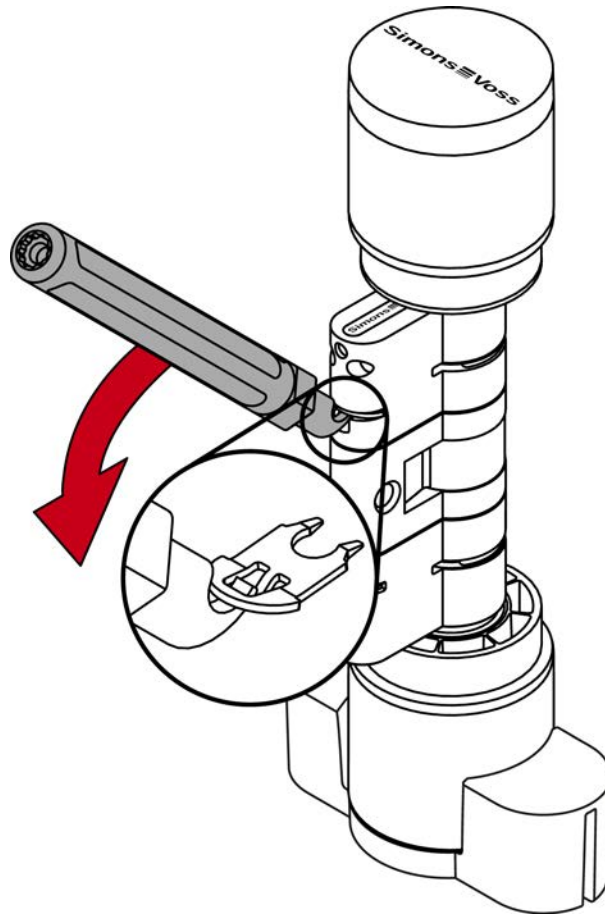
1. Place the Cylinder AX in the thumb-turn assembly tool with the electronic thumb-turn facing upwards.



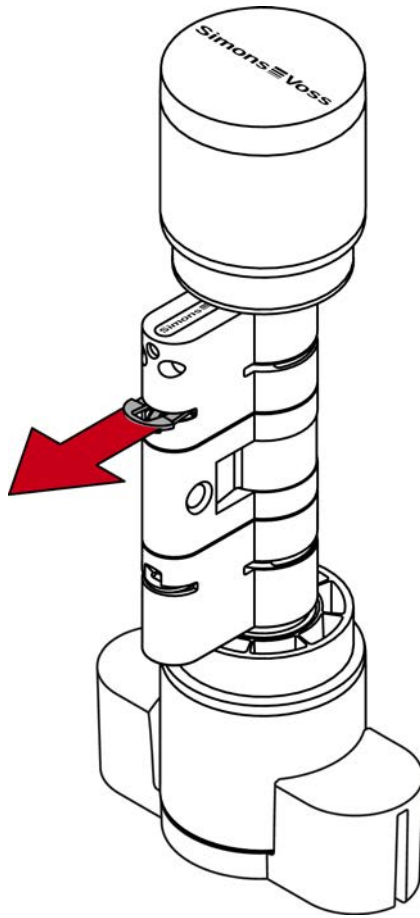
2. Hook the tip of the extractor into the clamp.



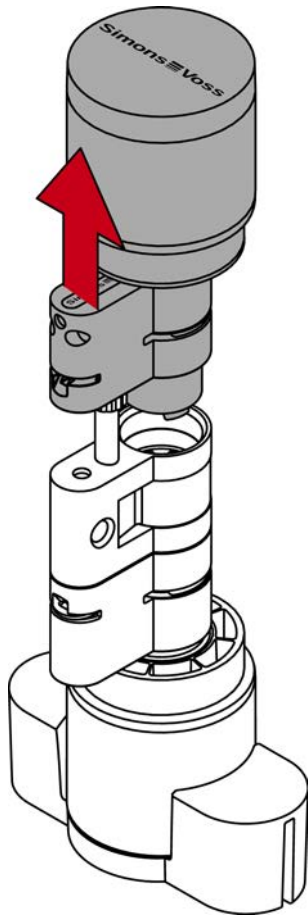
3. Lever the clamp out of the profile cylinder by moving the extractor to the centre of the cylinder.



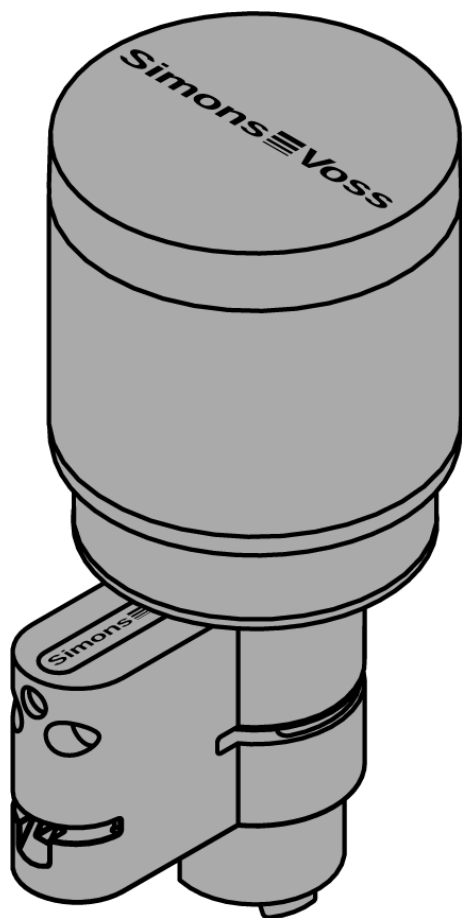
4. Pull the clamp completely out of the profile cylinder.



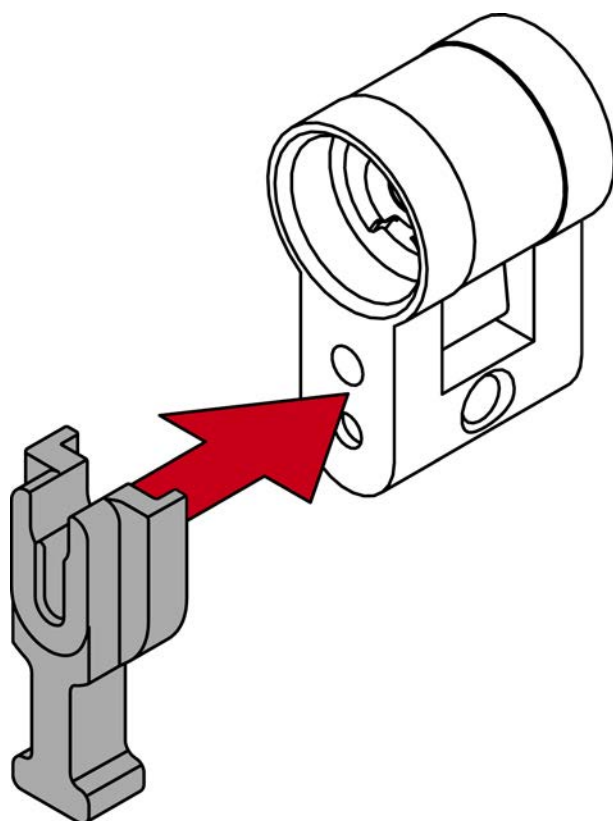
5. Disassemble the two cylinder halves.



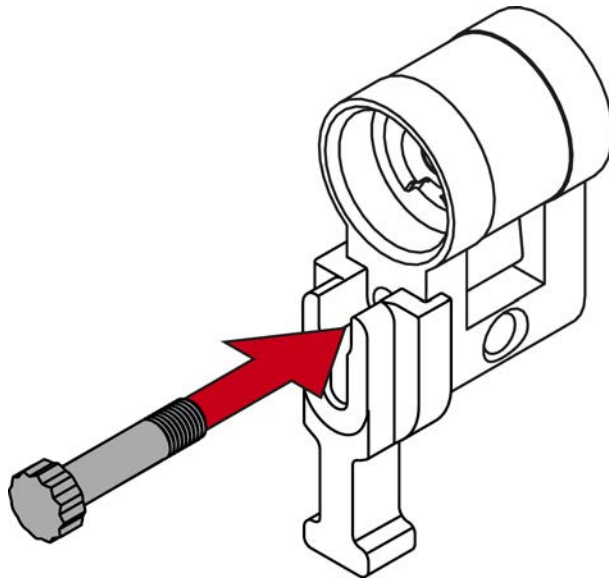
↳ First cylinder half prepared without centre piece.



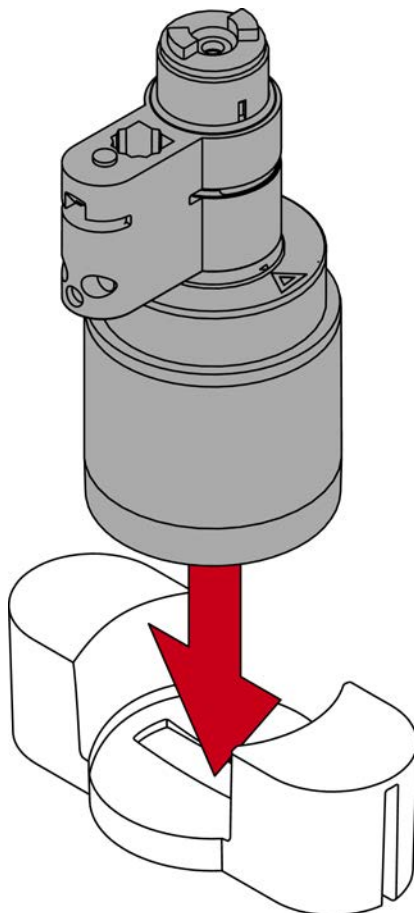
6. Place the spacer on the half-cylinder centre piece.



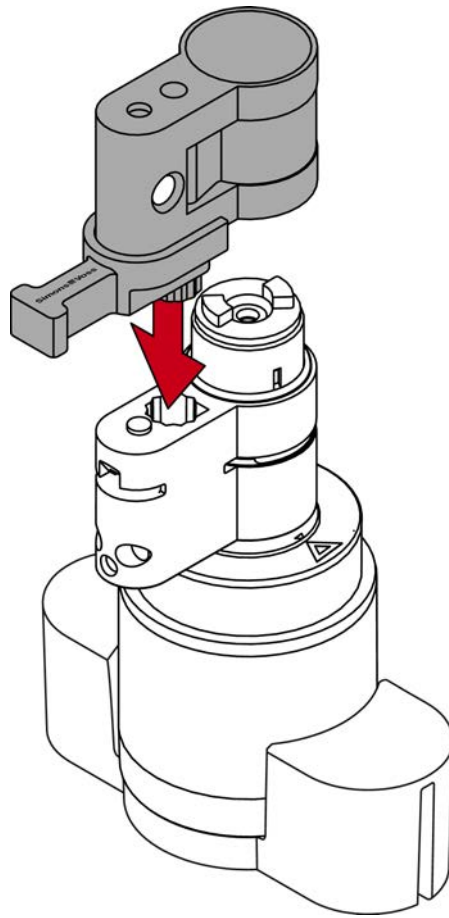
7. Screw in a suitable extension bolt with the extractor until it rests on the spacer.



8. Place the prepared cylinder half in the thumb-turn assembly tool.

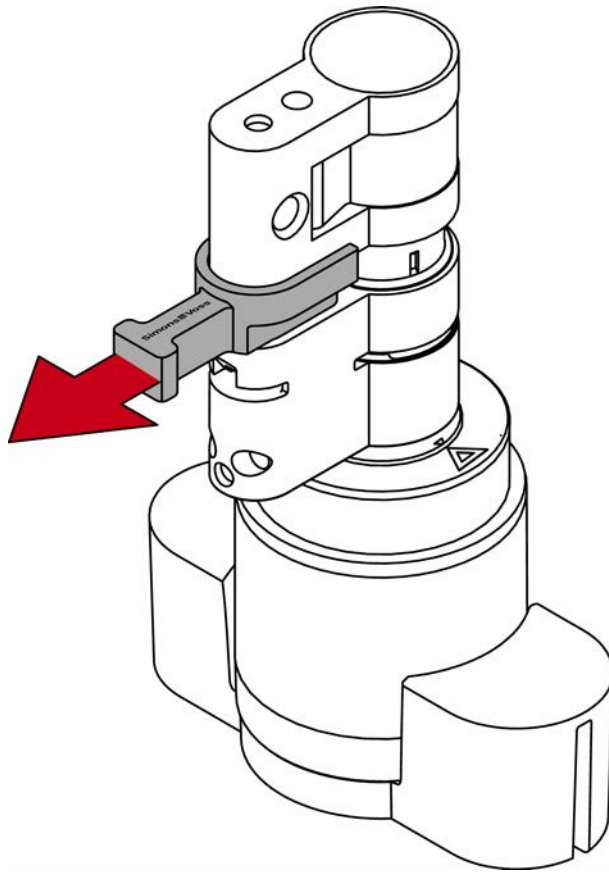


9. Place the half cylinder centre piece on the prepared cylinder half.

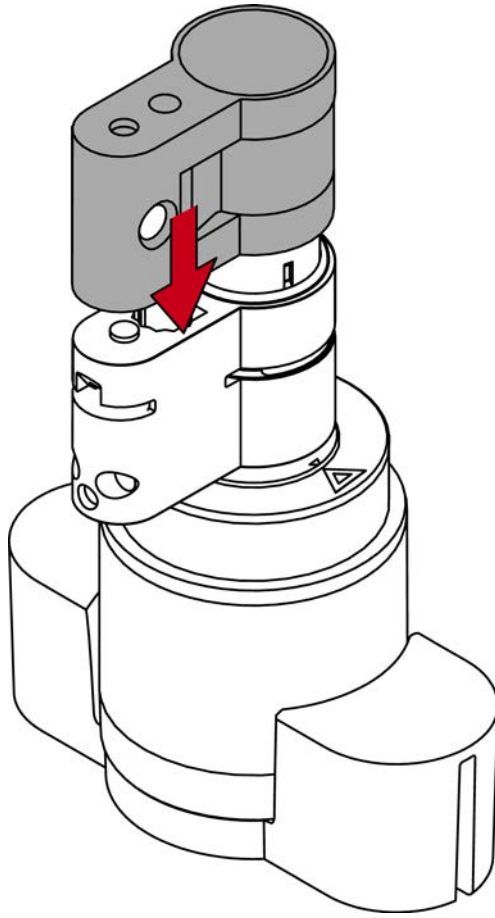


↳ Extension bolt is protected against twisting.

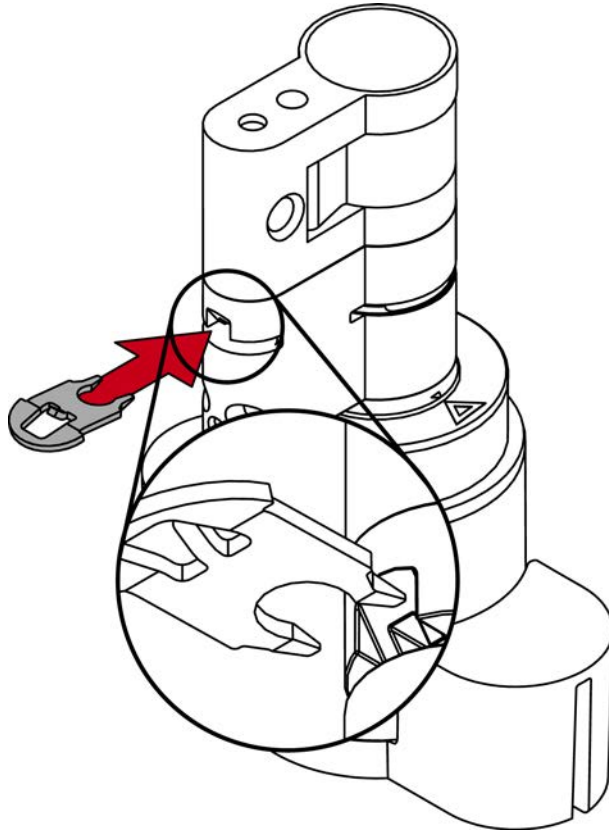
10. Pull the spacer off again.



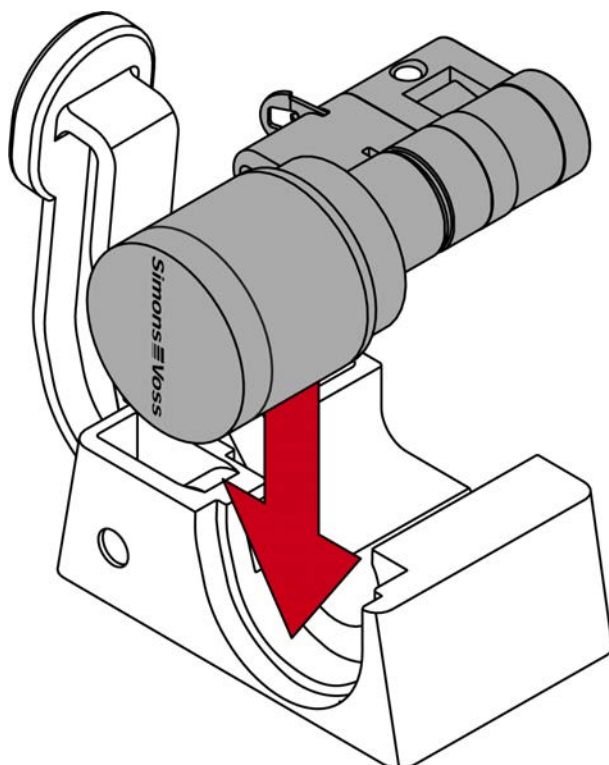
11. Push the cylinder parts together completely.



12. Refit the clip into the slot of the profile cylinder with the lug facing the fastening screw.

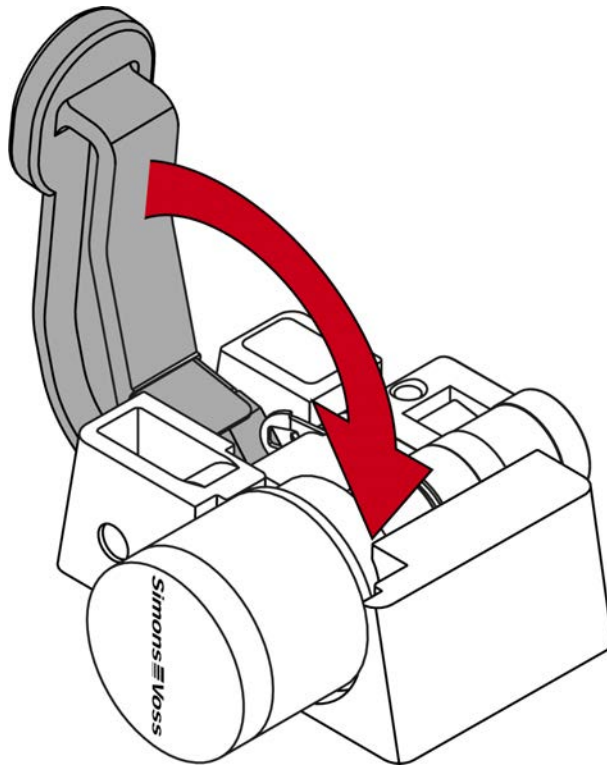


13. Insert the cylinder into the clamping block so that the profile cylinder and the thumb-turn lie flush in the recesses.

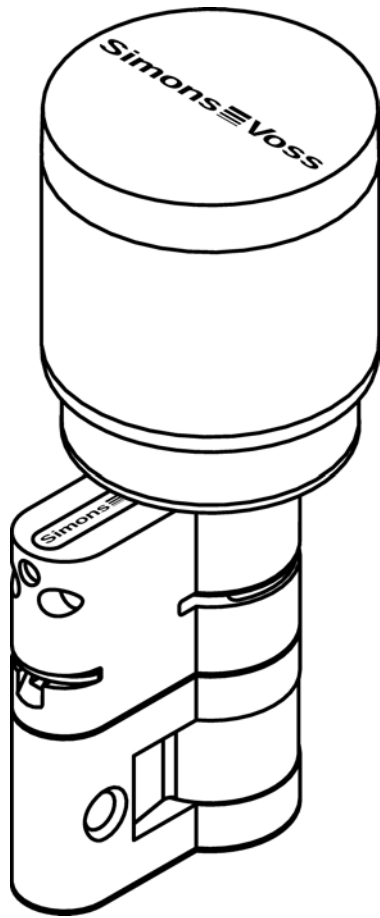


- ↳ The lever of the clamping block is reinforced at one point with a metal plate. The bracket that was previously inserted lies opposite this metal plate.

14. Push the clamp block lever towards the base plate until the clamp is fully seated in the profile cylinder.

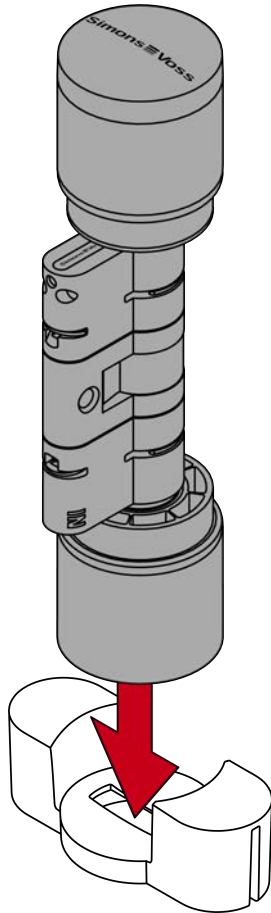


- ↳ Half cylinder AX is fully assembled.

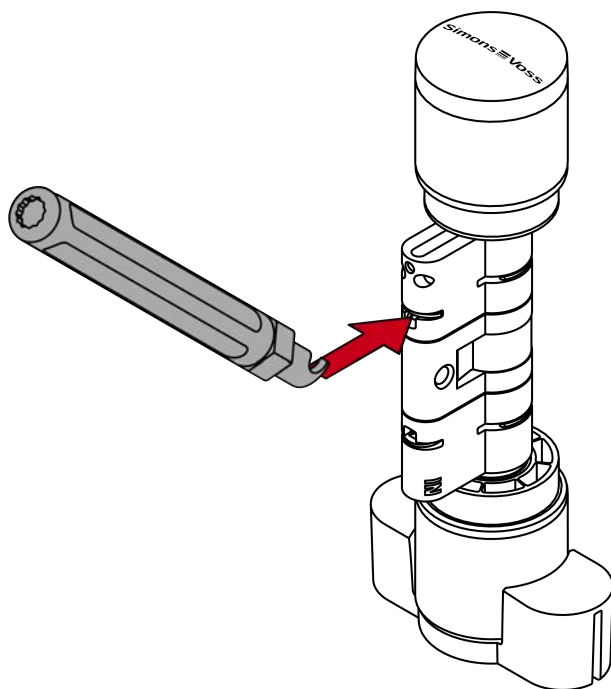


7. Replacing the cam

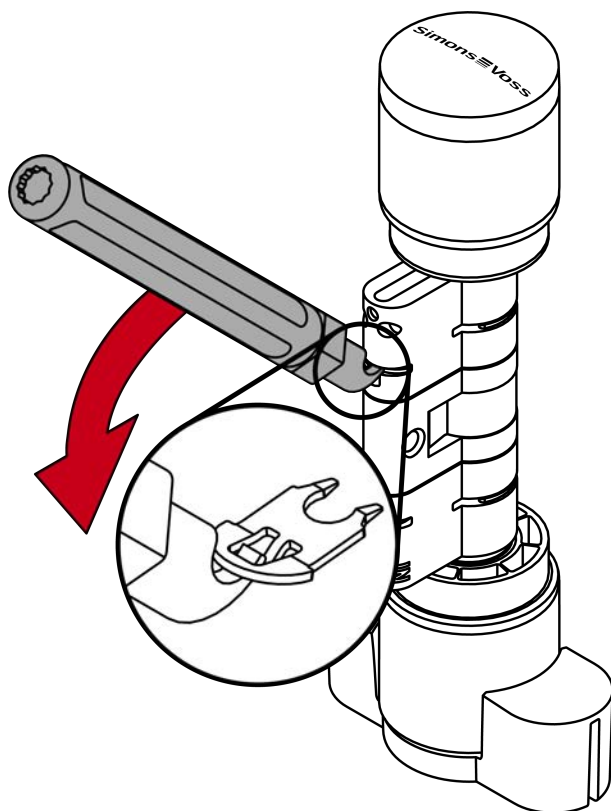
- ✓ Lifter for releasing clamp present.
 - ✓ Spacer for aligning the extension bolt are present.
 - ✓ Suitable tool for pressing the clamp in (e.g. clamping block or fitting pliers) is available.
1. Place the Digital Cylinder AX in the thumb turn installation tool.



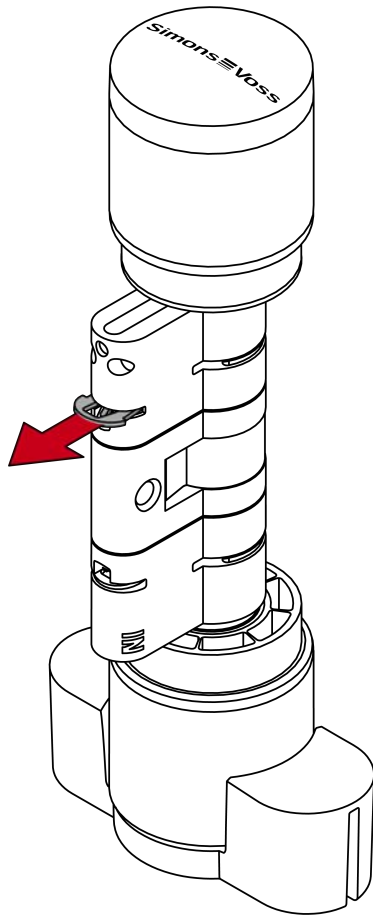
2. Attach the tip of the lifter into the clamp.



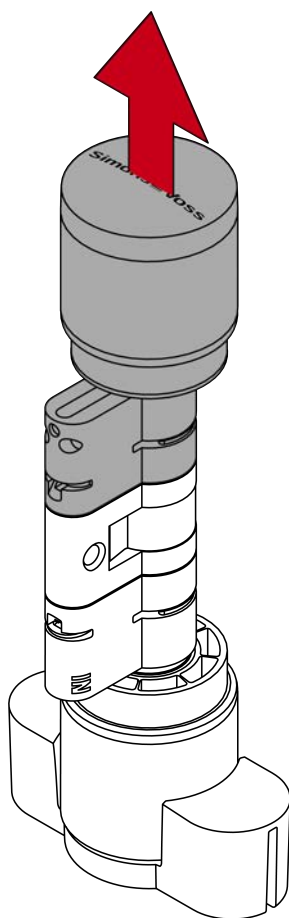
3. Lever the clamp out of the profile cylinder by positioning the lifter in the centre of the cylinder.



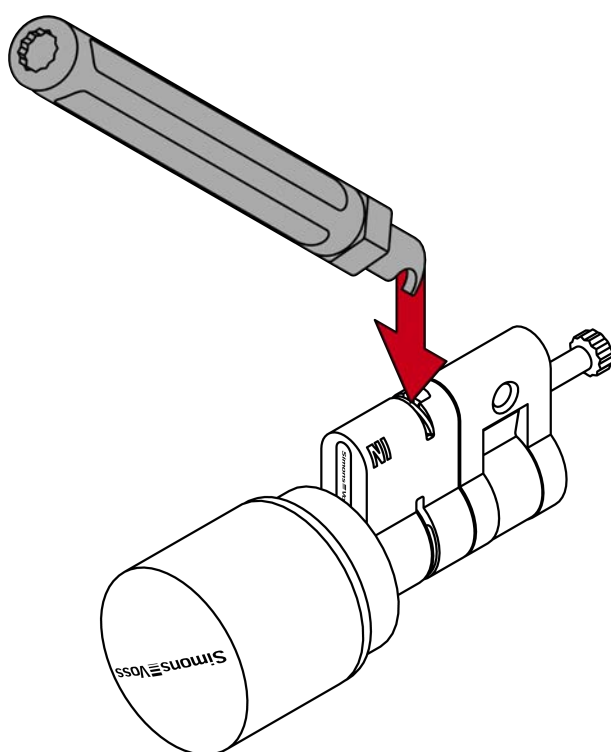
4. Pull the clamp out of the profile cylinder completely.



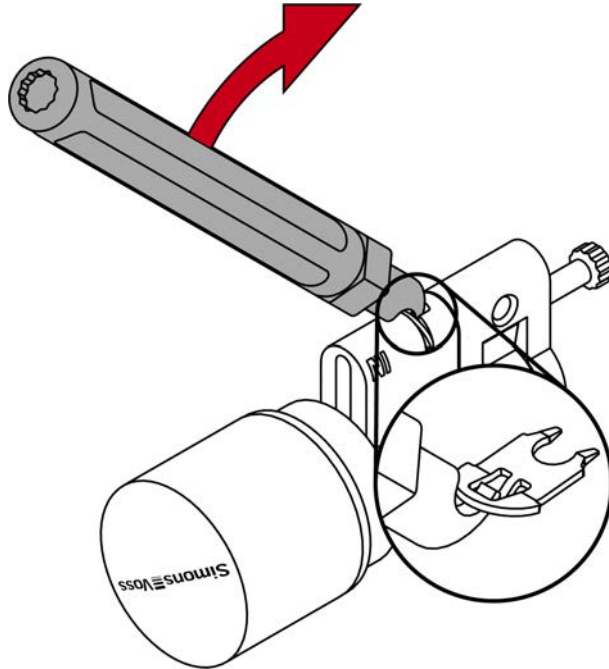
5. Disassemble the two halves of the cylinder.



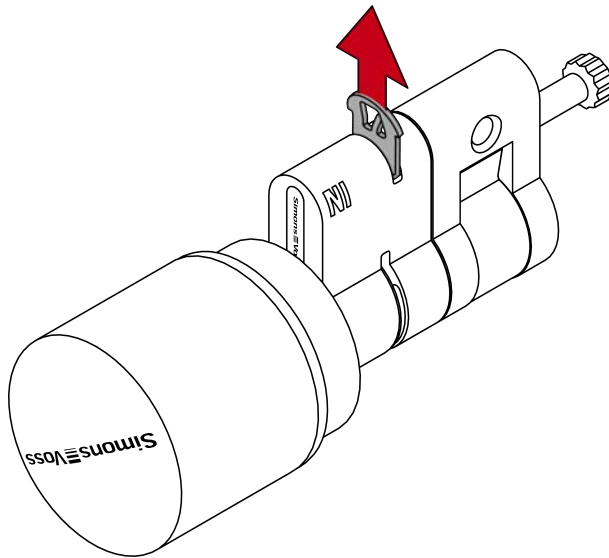
6. Attach the tip of the lifter into the second clamp.



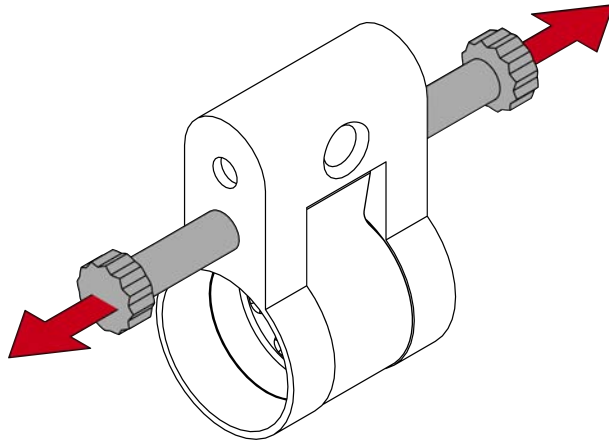
7. Lever the second clamp out of the profile cylinder by positioning the lifter in the centre of the cylinder.



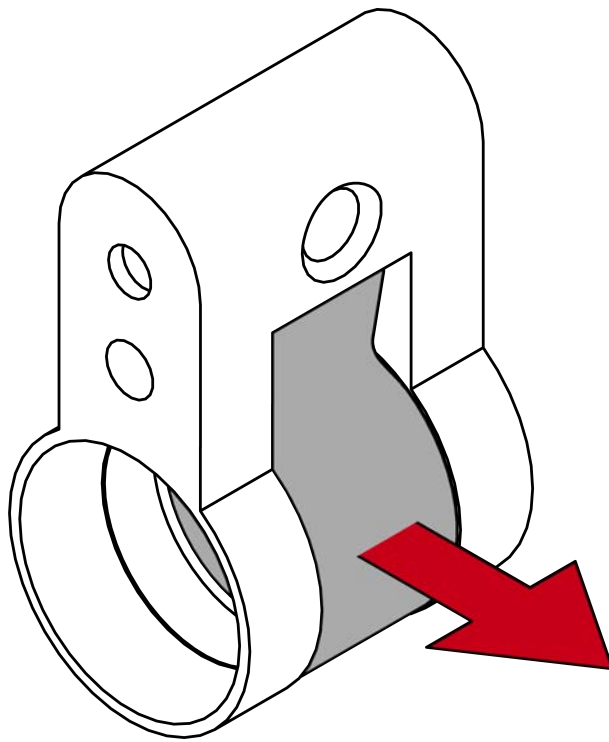
8. Pull the second clamp completely out of the profile cylinder.



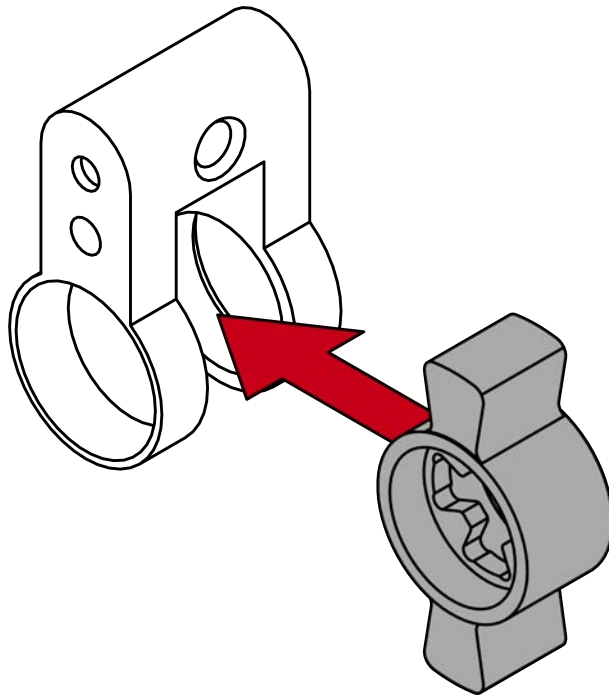
9. Unscrew both extension bolts.



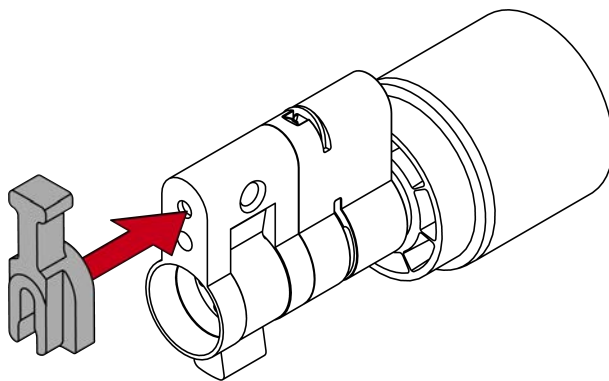
10. Remove the cam.



11. Insert a new cam.



12. Fit the spacer.



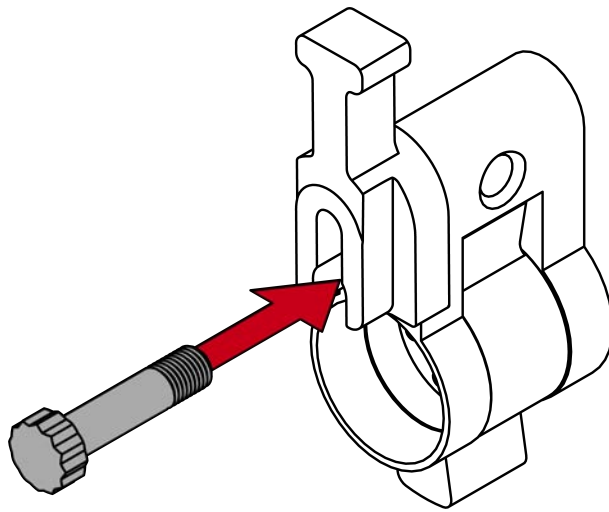
13. Using the lifter, screw in a suitable extension bolt until it is in contact with the spacer.



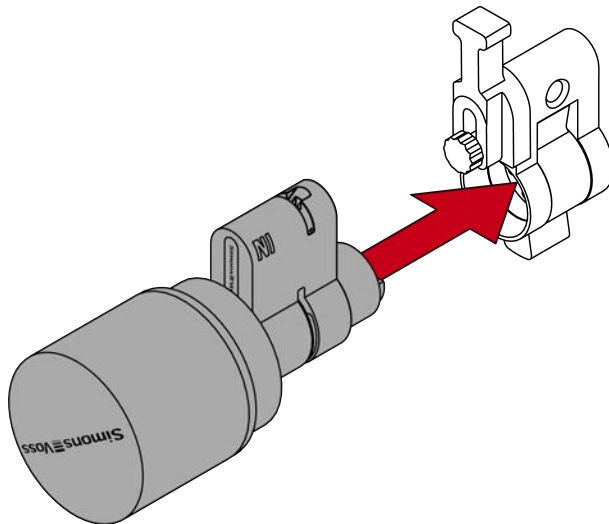
NOTE

Length on bolt head

You will find a number on the bolt head. This number is the length of the cylinder profile to which the bolt fits.

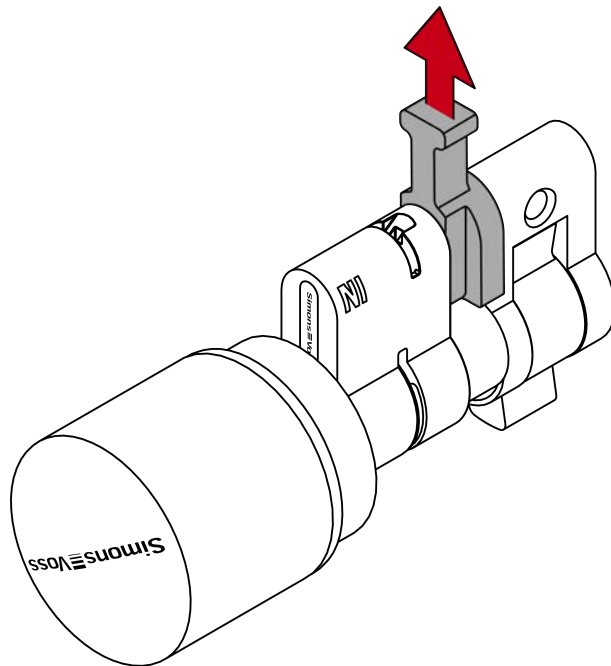


14. Place one half of the cylinder on the extension bolt.

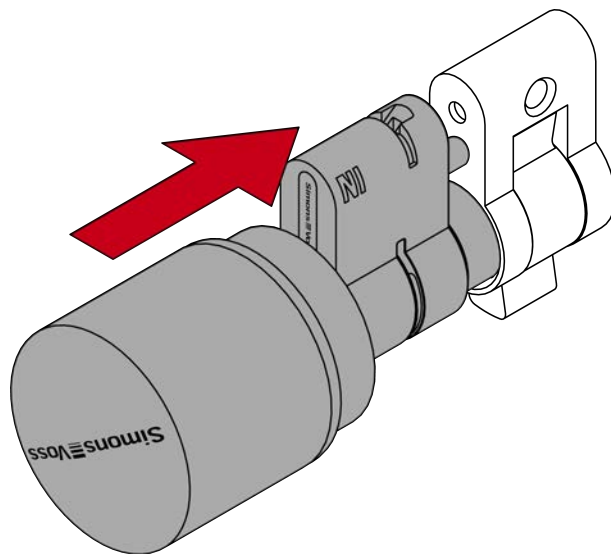


↳ Extension bolt is protected against twisting.

15. Detach the spacer again.



16. Push the halves together completely.



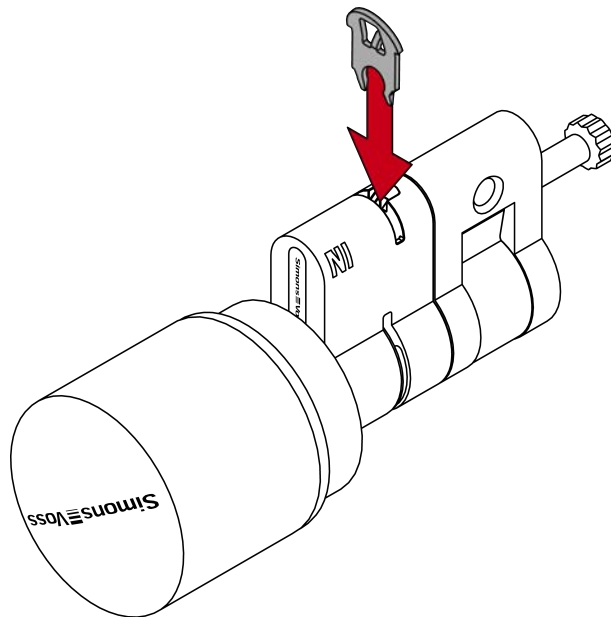
17. Insert the clamp with the tab facing the fastening screw back into the slot in the profile cylinder. Then press the clamp firmly with your thumb so that it can no longer fall out.
18. Press the clamp into the profile cylinder with a suitable tool (e.g. clamping block or fitting pliers).



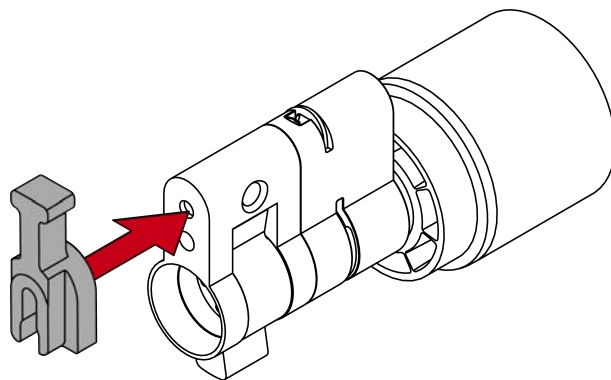
NOTE

Clamping block incompatible with replacement cams

Some replacement cams do not fit into the recess in the clamping block. On cylinders with these cams, the clamps cannot be pressed in with the clamping block.



19. Refit the spacer.



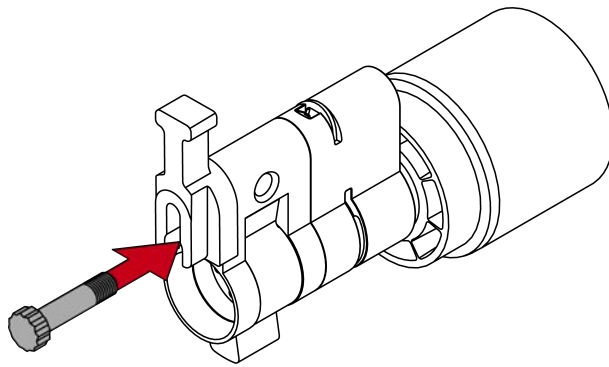
20. Using the lifter, screw in a suitable extension bolt until it is in contact with the spacer.



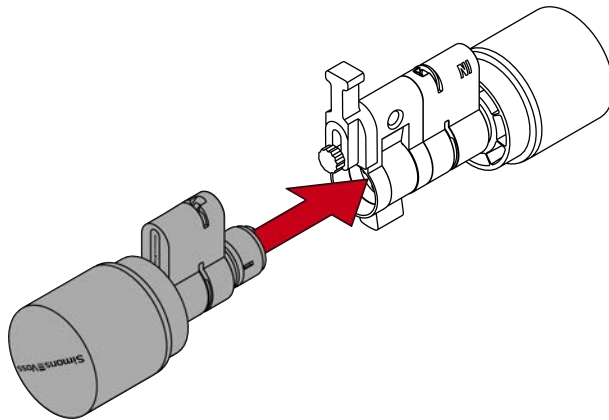
NOTE

Length on bolt head

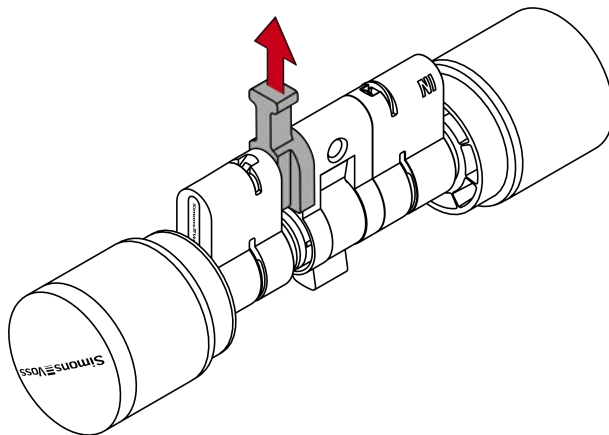
You will find a number on the bolt head. This number is the length of the cylinder profile to which the bolt fits.



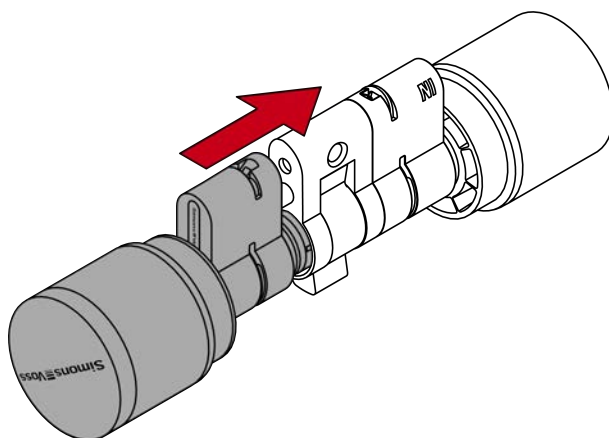
21. Place one half of the cylinder on the extension bolt.
↳ Extension bolt is protected against twisting.



22. Detach the spacer again.



23. Push the halves together completely.



24. Insert the clamp with the tab facing the fastening screw back into the slot in the profile cylinder. Then press the clamp firmly with your thumb so that it can no longer fall out.

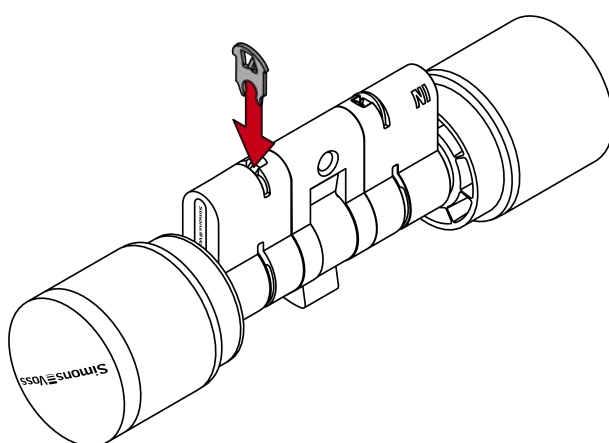
25. Press the clamp into the profile cylinder with a suitable tool (e.g. clamping block or fitting pliers).



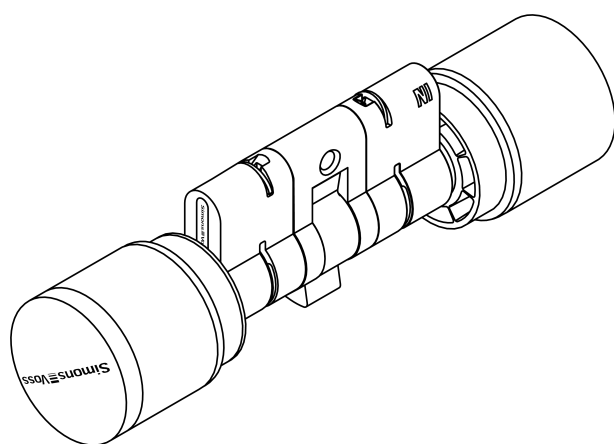
NOTE

Clamping block incompatible with replacement cams

Some replacement cams do not fit into the recess in the clamping block. On cylinders with these cams, the clamps cannot be pressed in with the clamping block.



↳ Cam on the Digital Cylinder AX has been replaced.



8. Incompatible hardware versions of nodes and cores

Since the market launch of the Digital Cylinder AX we were also able to identify a wide range of optimisation potential through feedback from the market. This potential has now been implemented in an optimised generation of electronics.

This has resulted in improvements in terms of energy management (battery life), improved system stability at low temperatures (especially for networked components) and various other optimisations. The new generation of electronics will be delivered from August 2024.

Nothing changes in the application, all extensions and accessories are still compatible and there are no functional differences.

Components with new electronics can be recognised by the following features:

- Firmware version of the component > 1.2.1154
- Product label (star symbol before the date of manufacture)
- PZ housing (star symbol in front of the manufacturing date of the component)
- White marking on the battery compartment cover of the electronic knob
- Bezel for plug contact (socket strip for knob) is now beige instead of black

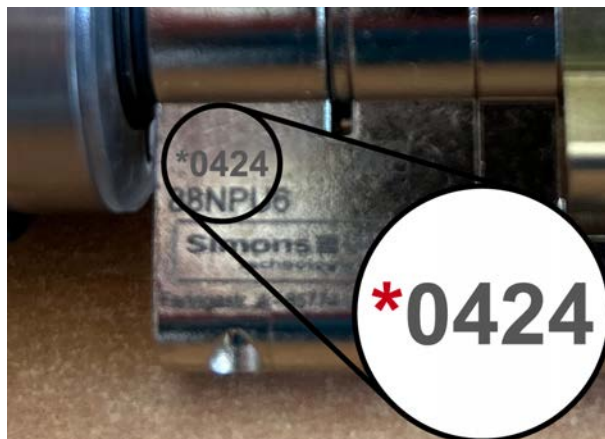
IMPORTANT

Knobs and cores not compatible with different hardware versions

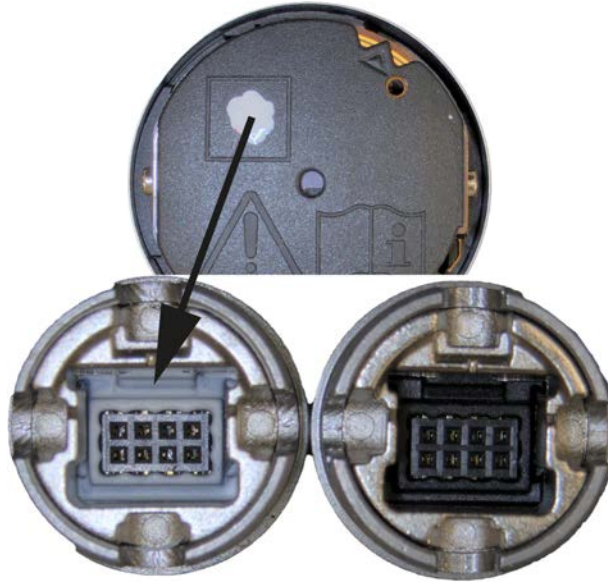
Old and new electronics generation must not be paired.

- Please pay explicit attention to the distinguishing features listed above.

Marking on the PZ housing:



New reader knob with marked battery compartment cover is compatible with new cylinder with beige knob holder:



9. Help and other information

Information material/documents

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

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

Declarations of conformity

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

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

Technical support

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

+49 (0) 89 / 99 228 333

Email

You may prefer to send us an email.

support-simonsvoss@allegion.com

FAQs

You will find information and help in the FAQ section:

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

Address

SimonsVoss Technologies GmbH
Feringastr. 4
D-85774 Unterfoehring
Germany



This is SimonsVoss

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

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

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

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

Made in Germany

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

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