

Assembly instruction

Hydration system *AeroEndurance*



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1 Introduction

We are pleased that you have chosen the hydration system *AeroEndurance* from **4FRAMES**.

We have put a lot of work, sweat and energy into the hydration system and are very proud of the result that you are now holding in your hands and will be carrying on your bike in the future.

This hydration system is designed to carry liquids during your training ride or in a competition. Any other use of the product is not intended and is prohibited for safety reasons.

These assembly instructions are intended to explain point by point how to attach the product to your bike. It is important that you carry out each step according to these assembly instructions, so that the product is optimally and safely attached.

If you have any problems or questions about the installation of the product, you can always contact us by e-mail (info@4-frames.de) or use the chat function on our homepage.

If you would like to share feedback, suggestions or criticism with us, you can also do so by e-mail. We are happy about any feedback.

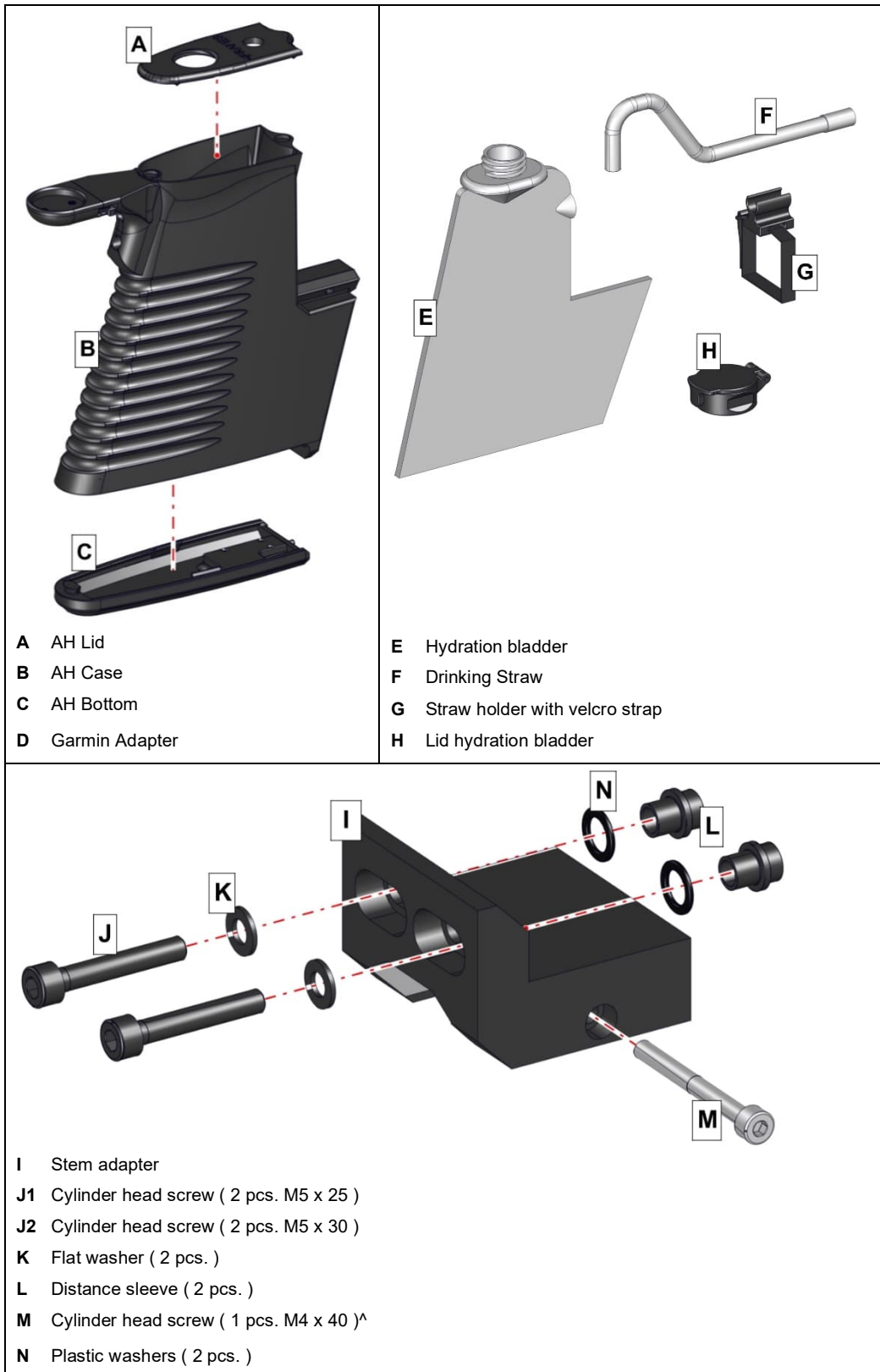
We hope you enjoy using the *AeroEndurance* hydration system. We hope you will achieve your goals and wish you success in all upcoming challenges.

Greetings,

Your Team

4FRAMES

2 Package contents



Revision 11.2023

3 Assembly

3.1 Personal requirements

The assembly of the hydration system *AeroEndurance* requires some experience in the assembly of mechanical components, especially in the field of assembly of cycling accessories, as well as some skill in the handling of the required tools.



CAUTION

Crushing, cutting or similar injuries possible!

In case of inexperience in the assembly of mechanical components especially in the field of assembly of cycling accessories, as well as in the handling of the required tools!

Read the assembly instructions and especially the individual assembly steps completely before you start with the assembly.

Always carry out the assembly steps calmly and with care and consideration.

If you are not confident enough to carry out the assembly yourself or if you have problems during the assembly, please contact us at info@4-frames.de or the appropriate specialist personnel, e.g. in a specialist workshop for two-wheelers.

3.2 Checking the suitability of the hydration system for your stem

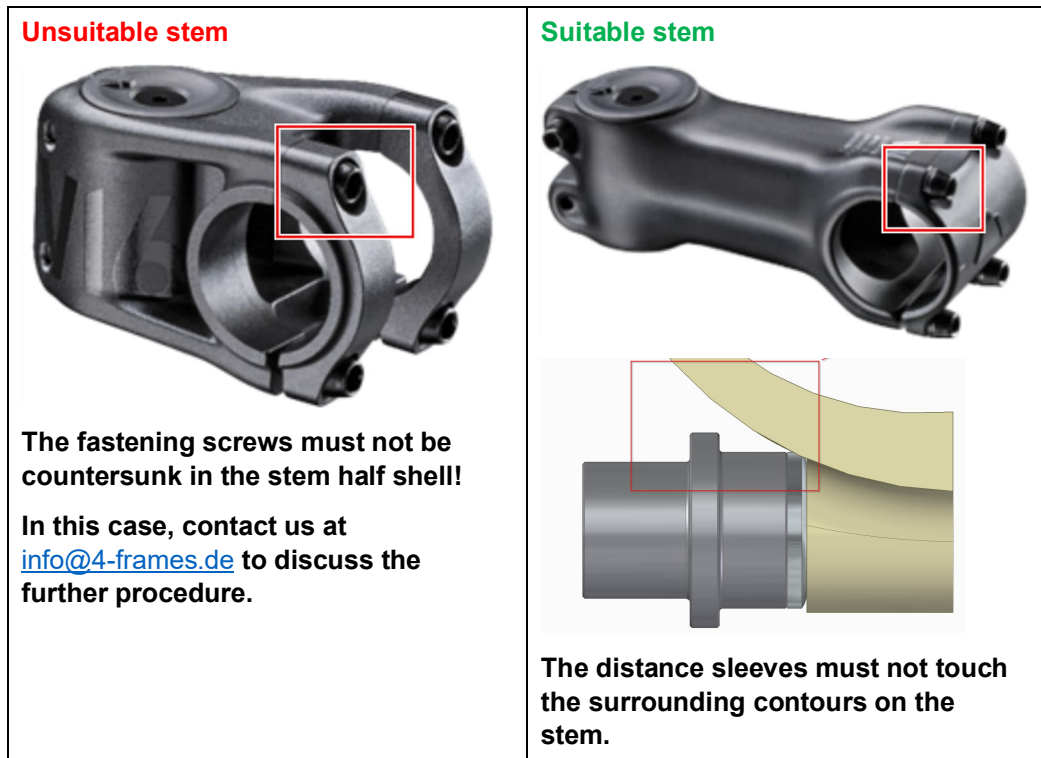
3.2.1 Test 1 - Use template

Download the PDF file with the template for the hydration system *AeroEndurance* from our website and print it out.

Cut out the template and hold it to your stem according to the instructions.

If the template does not fit in front of your stem, the *AeroEndurance* hydration system is not suitable for your stem. In this case, please contact us at info@4-frames.de to discuss how to proceed.

3.2.2 Test 2 - Checking the suitability of the stem



3.3 Preparatory activities

3.3.1 Unpacking and checking the scope of delivery



DANGER

Internal injuries!

If small parts of the scope of delivery are swallowed!

Children tend to put things (especially small parts) in their mouths or even swallow them. Do not unpack the components of the hydration system *AeroEndurance* and do not leave them lying around unattended when children are nearby!

Open the delivery packaging of the hydration system *AeroEndurance* and unpack all components.

Check the package contents against Section 2 Package Contents. In the unlikely event that the package is not complete, please contact us at info@4-frames.de. We will assist you immediately. Assembly must not be carried out if any parts are missing, as proper and safe assembly cannot be guaranteed.

3.3.2 Preparing the required tools

**CAUTION**

Damage to the hydration system *AeroEndurance* possible!

When using unsuitable tools!

The use of a cordless screwdriver is **NOT** permitted!

For resulting damage to the hydration system *AeroEndurance* **NO** liability is assumed!

Set out the tools you will need. You will need:

- Allen key, size 4 → [**J**] Cylinder head screws M5
- Allen key, size 4 → [**M**] Cylinder head screws M4
- Torque wrench (original accessories of the wheel/stem manufacturer)

3.3.3 Looking up the required tightening torque (torque)

**DANGER**

Serious and possibly fatal injuries!

If the cylinder head bolts on the stem are not tightened to the prescribed tightening torque!

If the tightening torque (torque) is too low, the handlebar can suddenly twist or swing over while riding and under load in the stem. A severe fall can be the result.

Always tighten the cylinder head bolts on the stem to the prescribed tightening torque (torque) of the wheel/stem manufacturer. Observe the corresponding specifications of the wheel/stem manufacturer!

Always check the tightening torque before starting to ride!

Take the original documents of the wheel/stem manufacturer and look up the value for **the prescribed tightening torque (torque) of the cylinder head bolts on the stem**. In some cases, this value is also stamped on the stem itself.

You will need this value to tighten the stem adapter and handlebars to the correct torque.

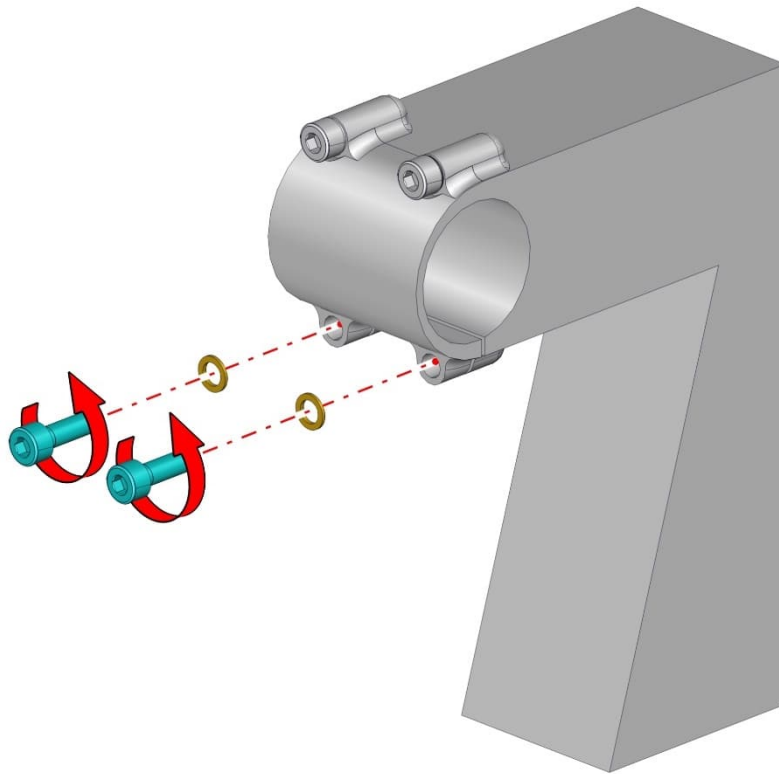
3.3.4 Marking/noting the position of the handlebar

In order to be able to restore the ergonomic and optimized position of the handlebar preset for you after mounting the stem adapter, you should mark the position (inclination) of the handlebar in the stem before starting assembly.

Some stem models have a scale that can be used to set/read the position (inclination). In this case, please note the preset value.

3.4 Mounting the stem adapter

3.4.1 Step 1

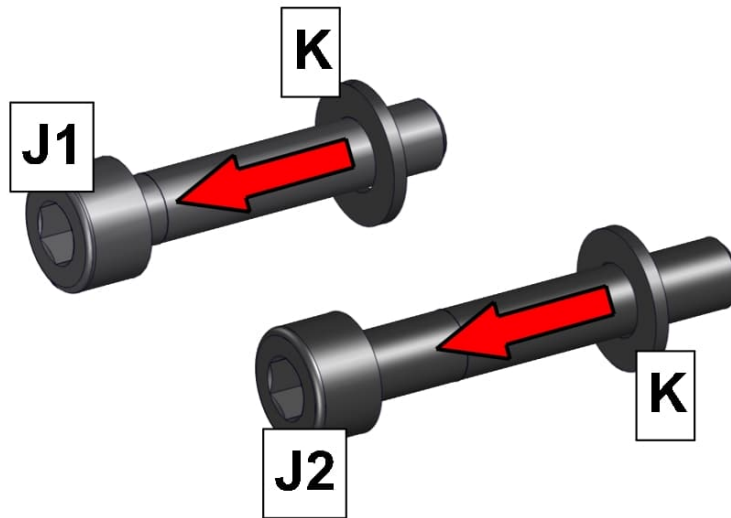


Unscrew the two original cylinder head screws from the stem. One of these will still be required in the further course of assembly.

Remove the two original washers from the original cylinder head bolts. These will be reinstalled in the further course of assembly.

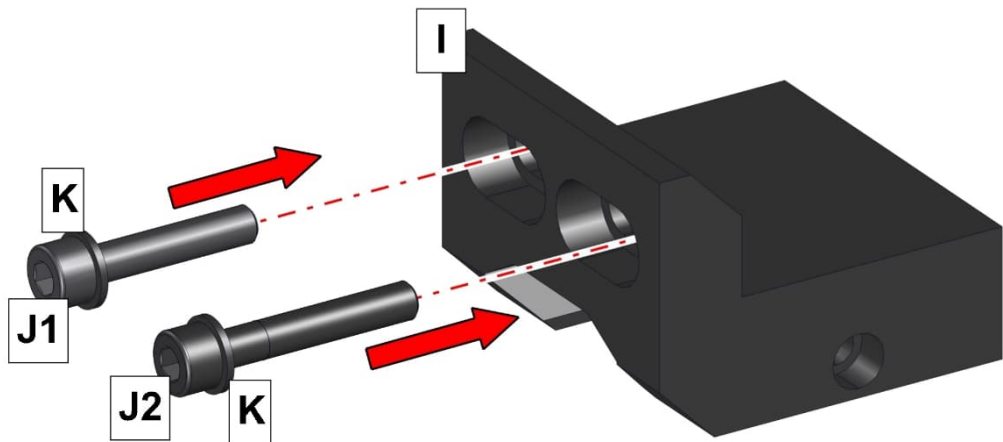
In some cases, the washers have a half-shell shape, which is what makes it possible to create a force-fit connection in the first place. In this case, please note the alignment of the washers.

3.4.2 Step 2



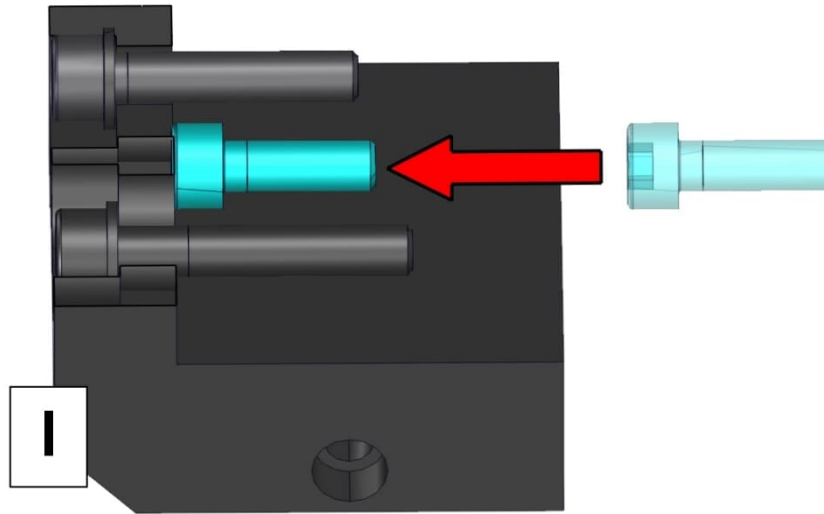
Take one *cylinder head screw* M5 x 25 [J1] and one M5 x 30 [J2] each and put the *washers* [K] on the cylinder head screws.

3.4.3 Step 3



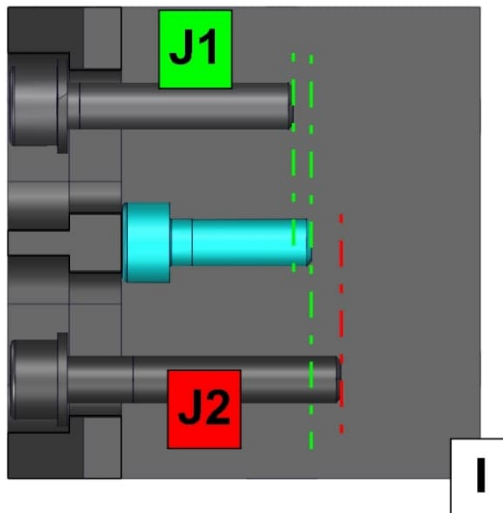
Insert the *cylinder head screws* M5 x 25 [J1] and M5 x 30 [J2] with the *washers* [K] from the front as far as they will go into the slotted holes of the *stem adapter* [I].

3.4.4 Step 4



Take one of the original cylinder head screws of the stem and place it against the slotted holes of the *stem adapter* [I] from the rear as far as it will go.

3.4.5 Step 5

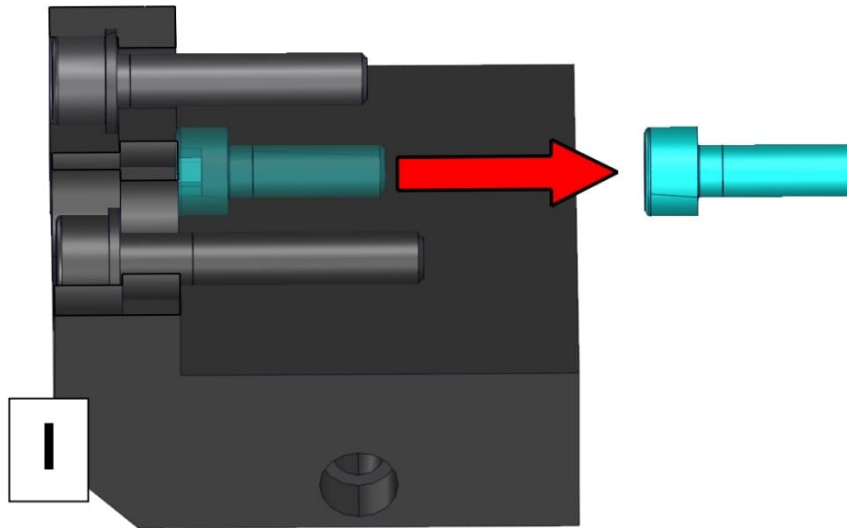


Check which of the two *cylinder head screws* M5 x 25 [J1] and M5 x 30 [J2] comes closest to the screw-in depth of the original screw. In this **example**, the *cylinder head screw* M5 x 25 [J1].

Which of the two *cylinder head screws* M5 x 25 [J1] and M5 x 30 [J2] is the most suitable in your case depends on the original cylinder head screws of your particular stem.

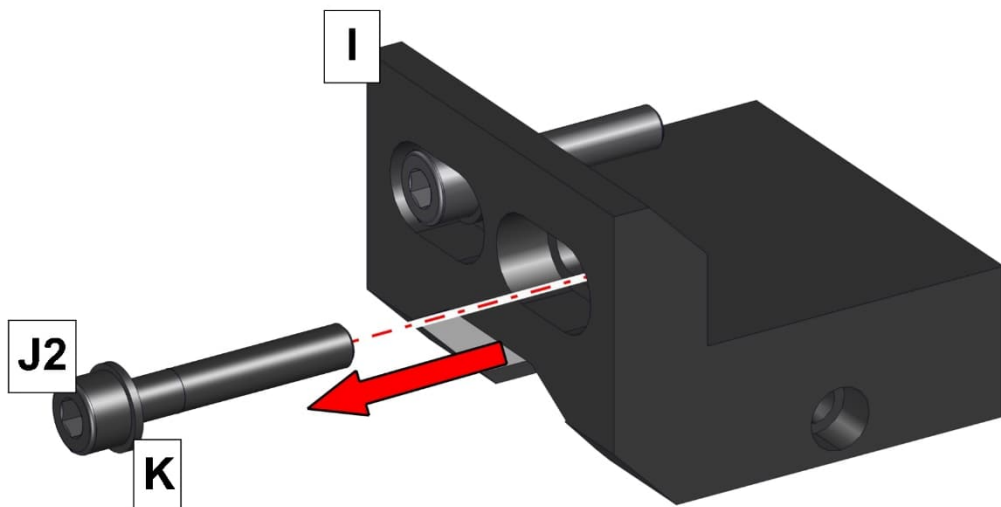
It must be ensured that a minimum screw-in depth of 5 mm into the thread of the stem is guaranteed when screwing on later.

3.4.6 Step 6



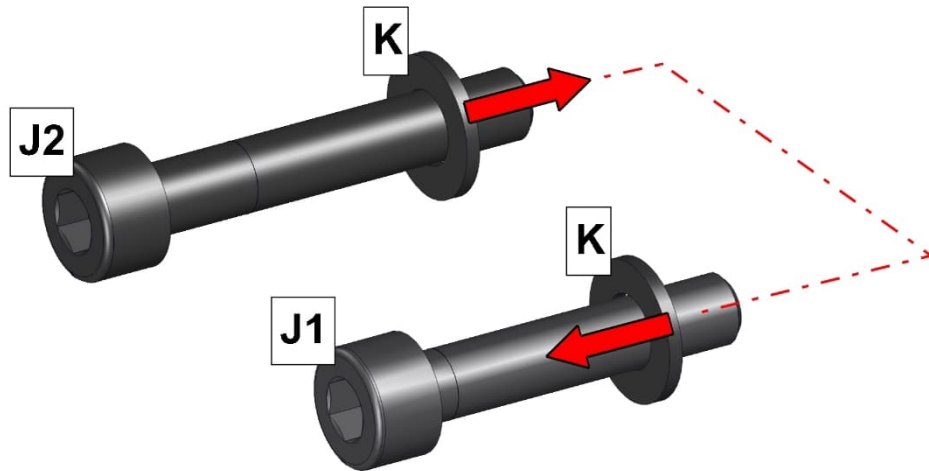
Remove the original cylinder head screw of the stem. Keep it in a safe place together with the second original cylinder head screw.

3.4.7 Step 7



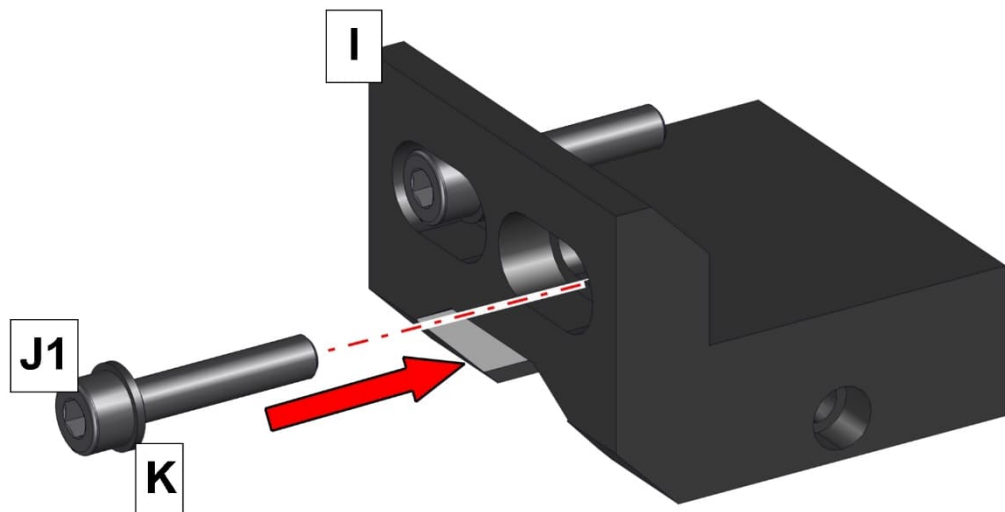
Remove the unsuitable cylinder head screw – in this **example** the *cylinder head screw M5 x 30 [J2]* – together with the *washer [K]* from the slotted hole of the *stem adapter [I]*.

3.4.8 Step 8



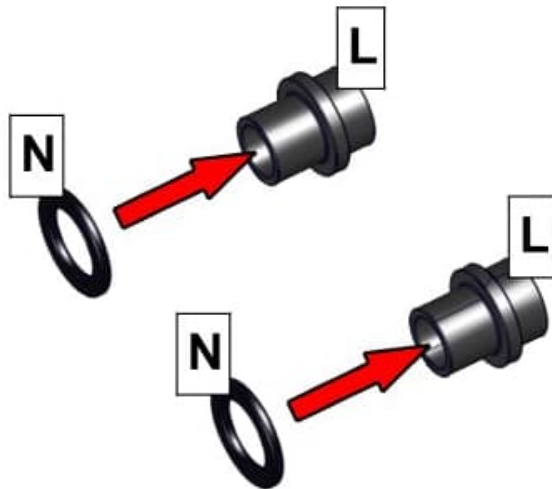
Remove the *washer* [K] from the unsuitable cylinder head screw – in this **example** the *cylinder head screw* M5 x 30 [J2] – and place it on the second suitable cylinder head screw – in this **example** the *cylinder head screw* M5 x 25 [J1].

3.4.9 Step 9



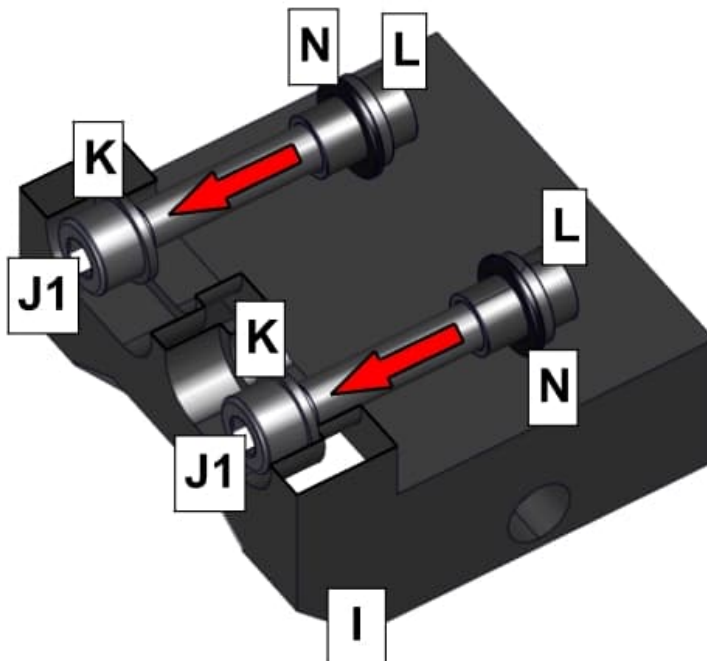
Insert the appropriate cylinder head screw – in this **example** the *cylinder head screw* M5 x 25 [J1] – with the *washer* [K] from the front as far as it will go into the slotted hole of the *stem adapter* [I].

3.4.10 Step 10



Place the *plastic washers* [N] on the *distance sleeves* [L].

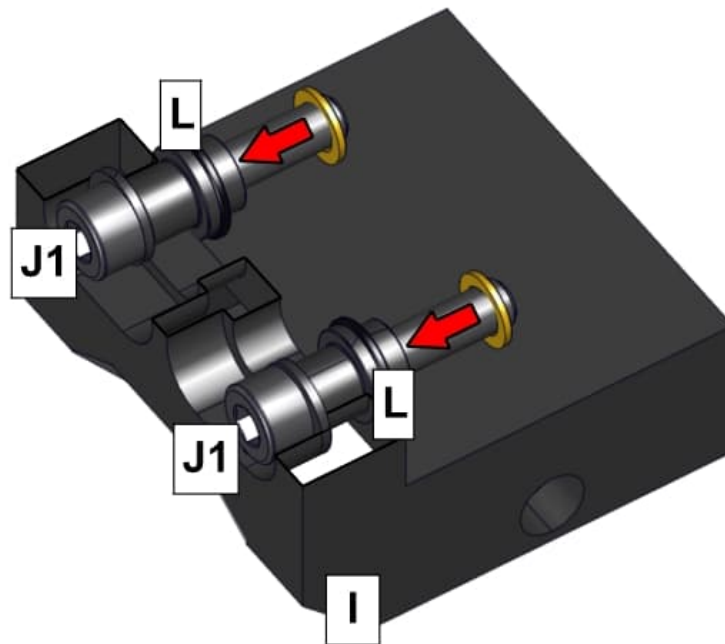
3.4.11 Step 11



Insert the *distance sleeves* [L] from behind onto the cylinder head bolts - in this **example** the *cylinder head screws* M5 x 25 [J1] - and push them through the slotted holes up to in front of the *washers* [K].

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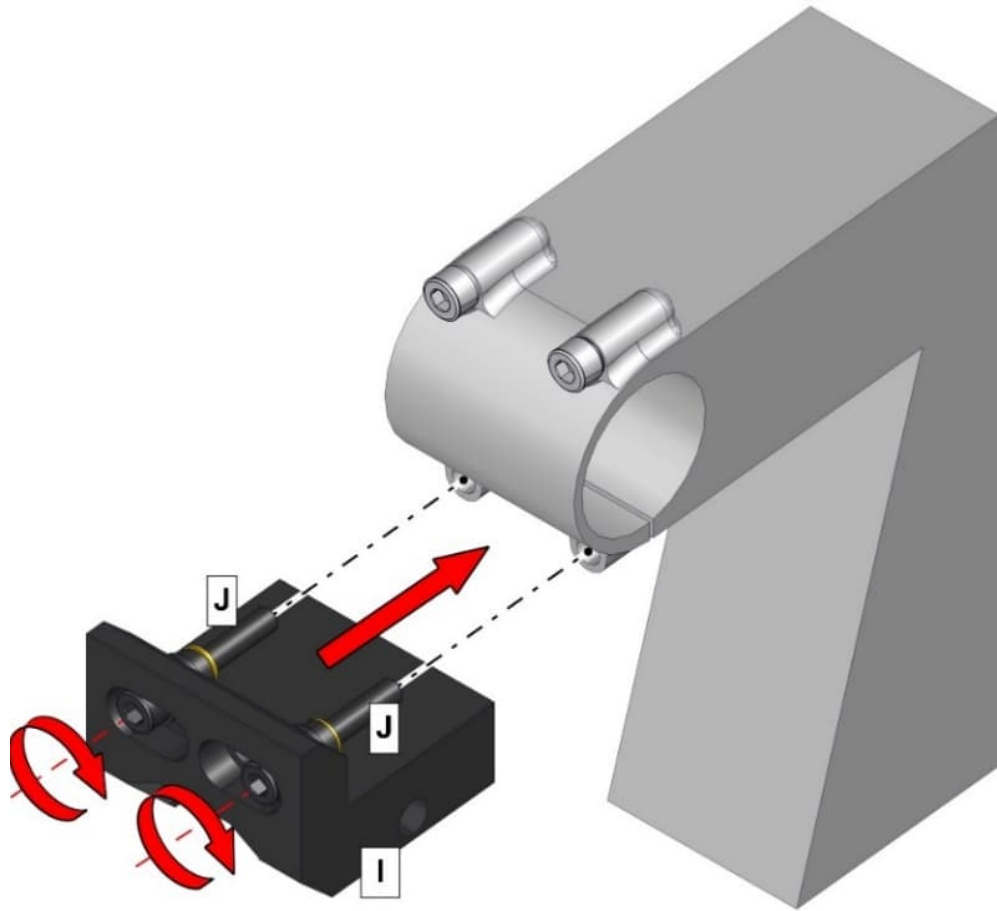
3.4.12 Step 12



It is **essential** that you insert the original washers from behind onto the cylinder head screws - in this **example**, the *cylinder head screws* M5 x 25 [J1] - up to in front of the *distance sleeves* [L].

In the case of washers with a half-shell shape, pay attention to the alignment of the washers noted in step 1.

3.4.13 Step 13

**DANGER**

Serious and possibly fatal injuries!

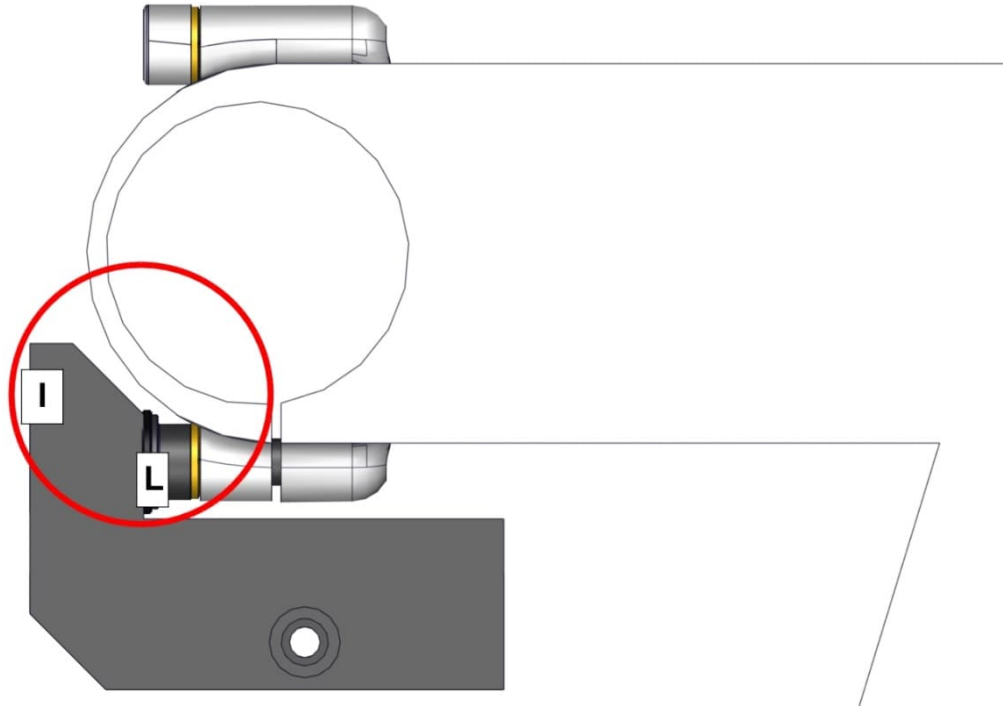
If brake and shift cables are damaged during assembly!

Damage to the brake and shift cables during assembly can lead to failure of the brake and shift function while riding. Serious falls may be the consequence.

During assembly, make sure that brake and shift cables are neither kinked nor pinched or damaged in any other way! Check their functionality after completing the assembly!

Place the *stem adapter* [I] with the *cylinder head screws* [J] in front of the threaded holes in the stem and tighten the cylinder head screws loosely.

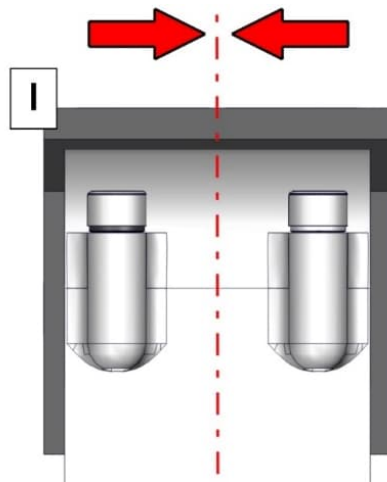
3.4.14 Step 14



Check that neither the *stem adapter* [I] nor the *distance sleeves* [L] touch the stem.

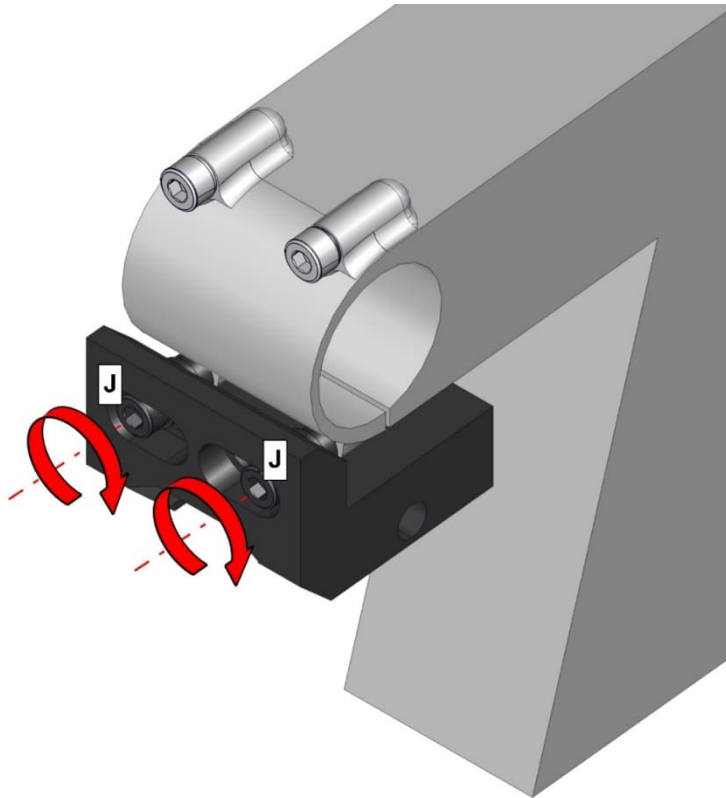
Otherwise, abort the assembly! No secure friction-locked connection can be made between the stem adapter and the stem. Contact us at info@4-frames.de to discuss the further procedure.

3.4.15 Step 15



Align the *stem adapter* [I] centrally on the stem.

3.4.16 Step 16

**DANGER**

Most severe and possibly fatal injuries!

If the *cylinder head screws* [J] on the stem are NOT tightened to the specified tightening torque!

If the tightening torque (torque) is too low, the handlebar can suddenly twist or swing around in the stem while riding and under load. A severe fall can be the result.

Always tighten the *cylinder head screws* [J] on the stem to the prescribed tightening torque (torque) of the wheel/stem manufacturer. Observe the corresponding specifications of the wheel/stem manufacturer!

Always check the tightening torque before starting to ride!

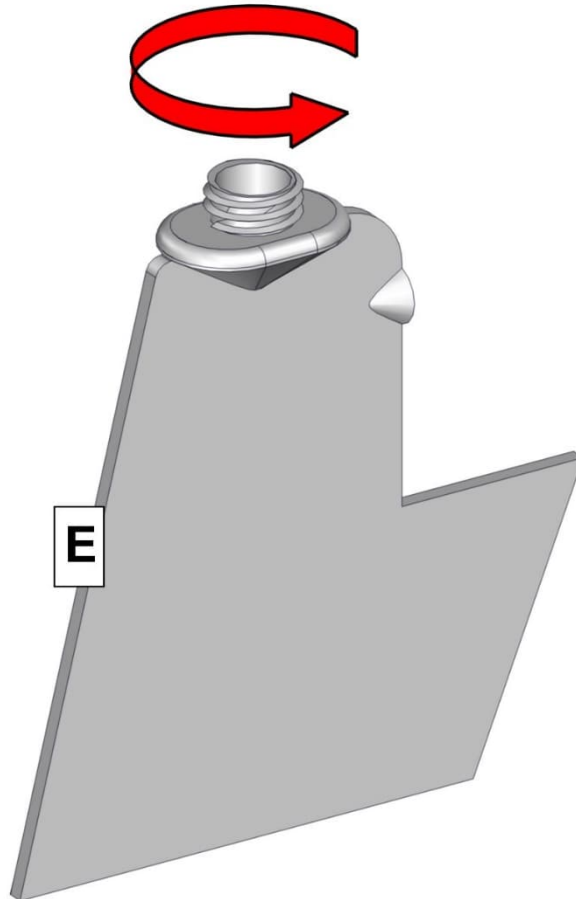
Restore the position (inclination) of the handlebars in the stem as noted/marked in section 3.3.4.

Tighten the *cylinder head screws* [J] to the torque specified by the wheel/stem manufacturer.

The assembly of the stem adapter is completed.

3.5 Assembly of the drinking vessel

3.5.1 Step 1



Unscrew the protective cover (not shown) from the *hydration bladder* [E].



CAUTION

Damage to the hydration bladder possible!

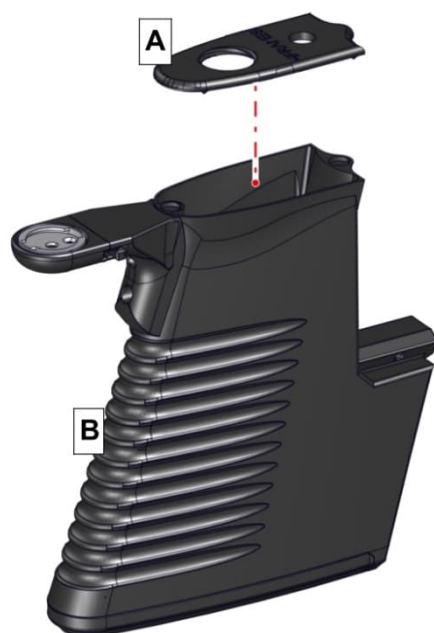
If the hydration bladder is improperly cleaned!

The hydration bladder is NOT suitable for the dishwasher! No harsh cleaning agents may be used!

The hydration bladder may only be rinsed with water and a little detergent!

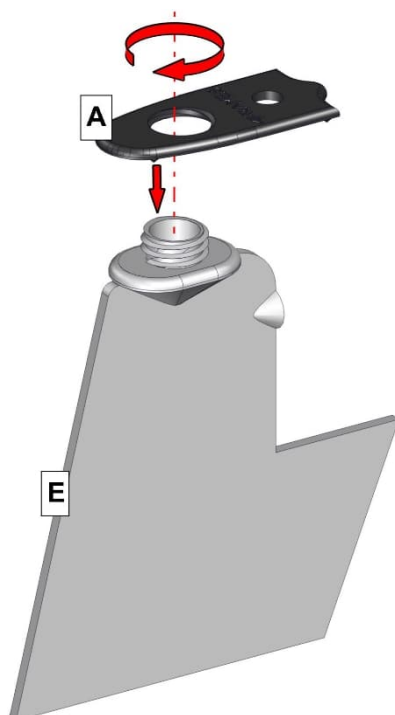
Rinse the *hydration bladder* [E] thoroughly with (warm) water and a little washing-up liquid before using it for the first time.

3.5.2 Step 2



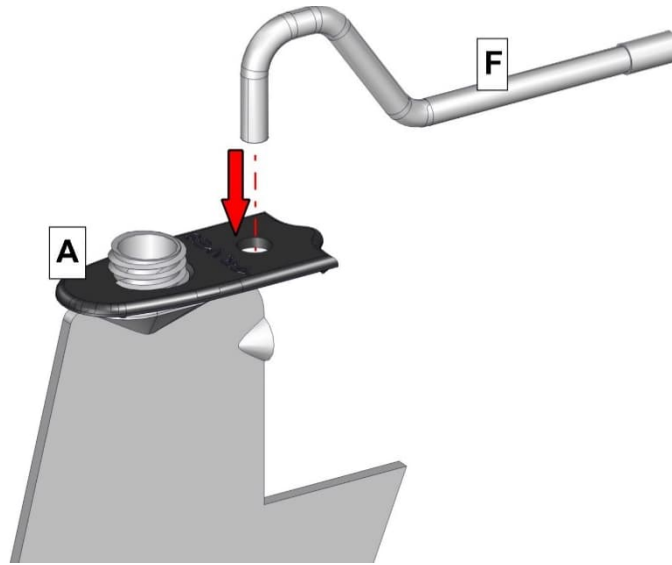
Remove the *AH Lid* [**A**] from the *AH Case* [**B**]. This is held by two small magnets.

3.5.3 Step 3



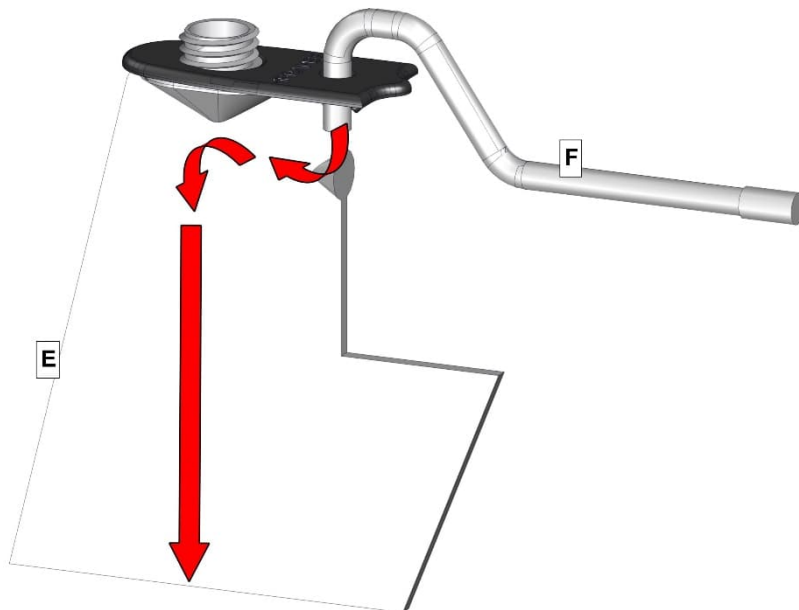
Carefully screw the *AH Lid* [**A**] onto the thread of the *hydration bladder* [**E**] with little force.

3.5.4 Step 4



Push the *drinking straw* [F] from above through the hole in the *AH Lid* [A].

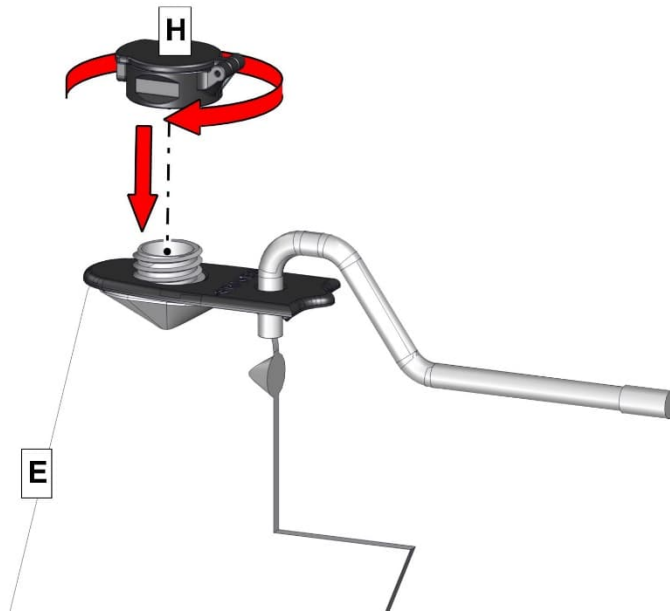
3.5.5 Step 5



Insert the *drinking straw* [F] through the valve into the *hydration bladder* [E] and push the *drinking straw* [F] to the bottom of the *hydration bladder* [E].

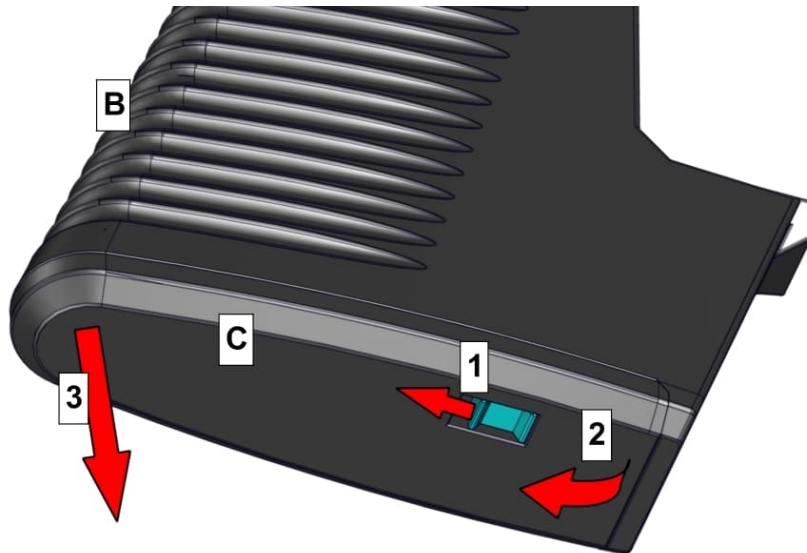
Inserting the *drinking straw* [F] through the valve is somewhat difficult as the valve is very narrow. This is intentional and necessary to ensure tightness.

3.5.6 Step 6



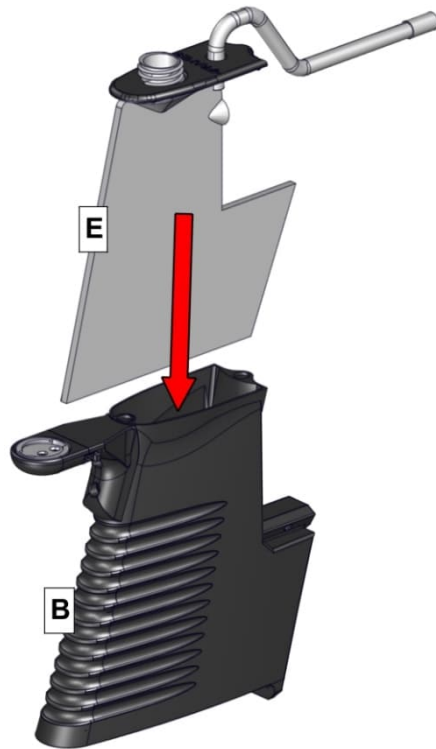
Screw the lid of the hydration bladder [H] onto the thread of the hydration bladder [E].

3.5.7 Step 7



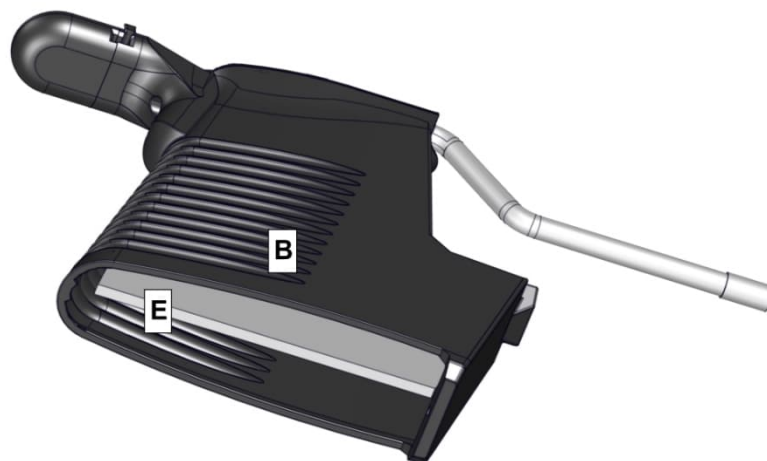
- [1] Push the latch on the *AH Bottom* [C] forward.
- [2] Swivel the *AH Bottom* [C] slightly downwards in the rear area.
- [3] Remove the *AH Bottom* [C] by pulling it diagonally backwards out of the front guide on the *AH Case* [B].

3.5.8 Step 8



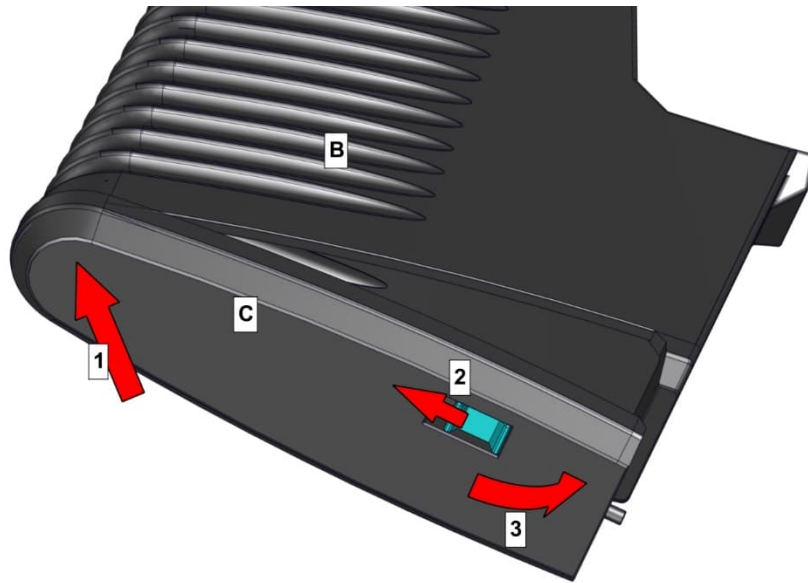
Carefully insert the completely assembled *hydration bladder* [**E**] from above into the *AH Case* [**B**].

3.5.9 Step 9



Carefully unfold the *hydration bladder* [**E**] from the bottom in the *AH Case* [**B**] and align the *hydration bladder* [**E**] in the *AH Case* [**B**].

3.5.10 Step 10

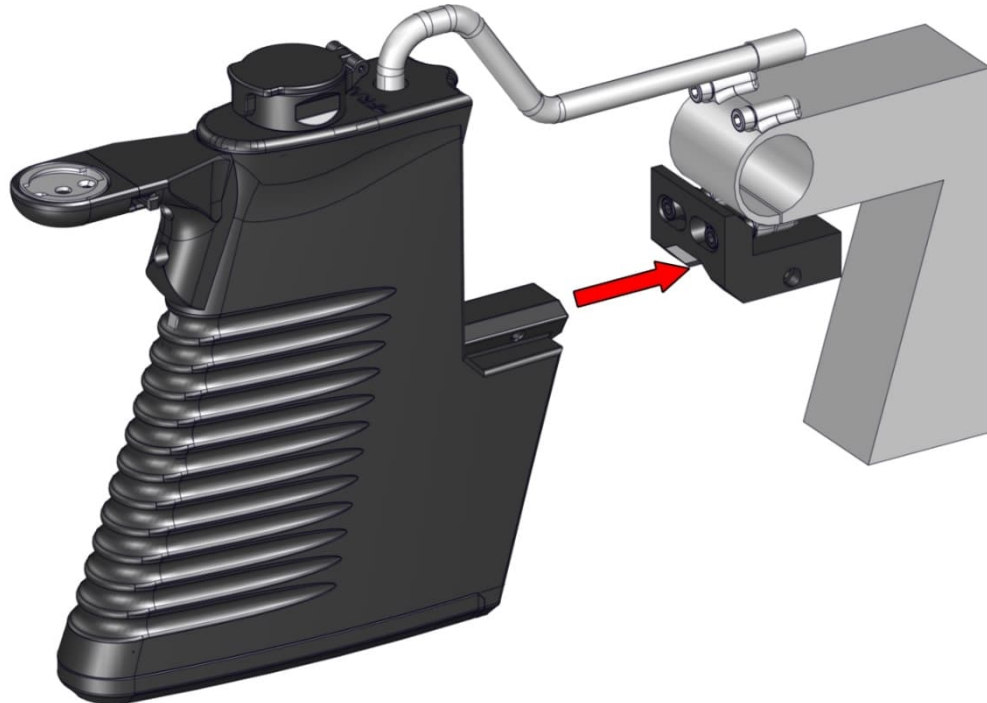


- [1] Insert the *AH Bottom* [C] at a slight angle into the front guide on the *AH Case* [B].
- [2] Push the latch on the *AH Bottom* [C] forward.
- [3] Swivel the *AH Bottom* [C] in the rear area upwards until it lies flat and release the latch.

The assembly of the drinking container is completed.

3.6 Mounting the drinking container on the stem adapter

3.6.1 Step 1



DANGER

Most serious and possibly fatal injuries!

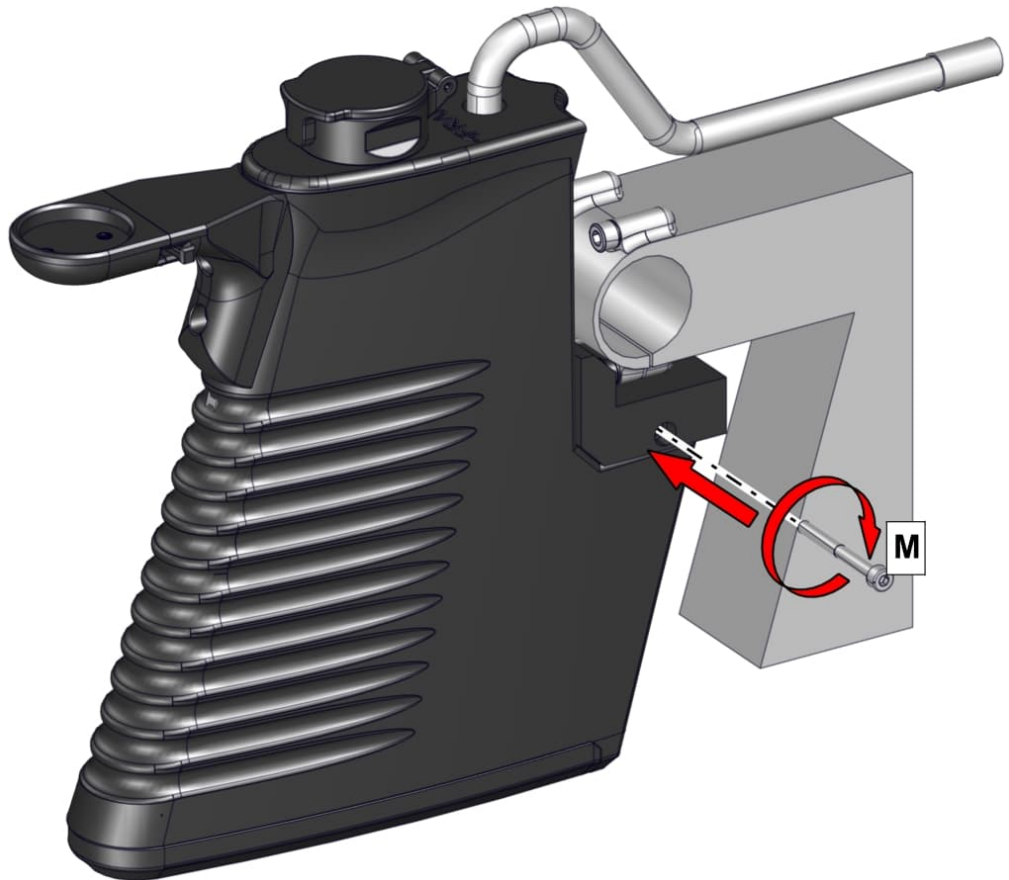
If brake and shift cables are damaged during assembly!

Damage to the brake and shift cables during assembly can lead to failure of the brake and shift function while riding. Serious falls may be the consequence.

During assembly, make sure that brake and shift cables are neither kinked nor pinched or damaged in any other way! Check their functionality after completing the assembly!

Carefully push the drinking container into the receptacle on the stem adapter.

3.6.2 Step 2

**CAUTION**

Damage to the drinking container possible!

If the drinking container is NOT mounted on the stem adapter with the *cylinder head screw* [M] with the prescribed tightening torque (torque)!

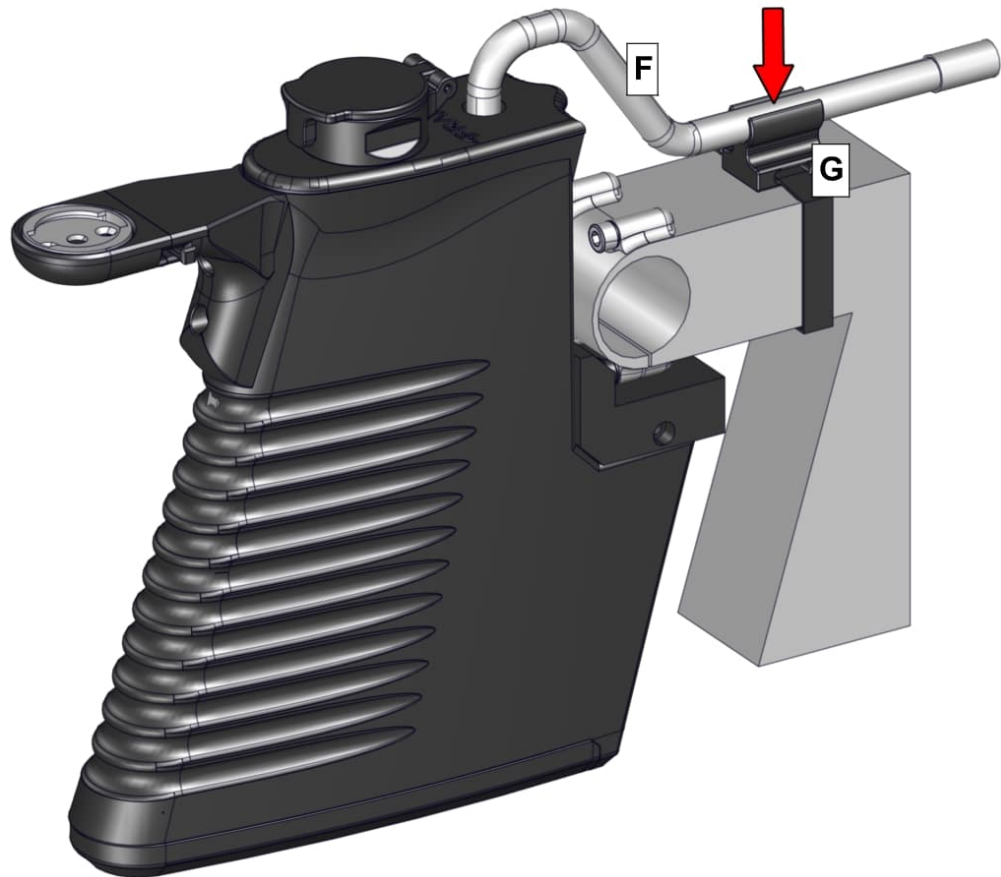
The drinking container may come loose and fall down while riding!

Always tighten the *cylinder head screw* [M] with the prescribed tightening torque (torque) of 2 - 3 Nm.

Always check the tightening torque (torque) before driving off!

Insert the *cylinder head screw* M4 x 40 [M] and tighten it with a torque of 2 - 3 Nm.

3.6.3 Step 3



Attach the *drinking straw holder with Velcro* [G] to the stem and carefully press the *drinking straw* [F] into the holder.

4 Cleaning and care



CAUTION

Damage to the hydration system *AeroEndurance* possible!

If this is improperly cleaned!

The components of the hydration system *AeroEndurance* are **NOT** suitable for the dishwasher! Do not use any aggressive cleaning agents!

The components of the hydration system *AeroEndurance* may only be rinsed with water and, if necessary, a little mild detergent! Do not use rough rinsing sponges or scouring agents!

4.1 Recommendation for the drinking container and stem adapter

Use a damp cloth for cleaning and care.

4.2 Recommendation for the drinking bladder, lid and drinking straw

Use (warm) water and a little mild detergent if necessary.

5 Contact details and notes

5.1 4FRAMES – questions, feedback, suggestions and criticism

E-Mail: info@4-frames.de

5.2 4FRAMES – direct contacts



Tim

Contact person development & implementation

Email:..... tim@4-frames.de



Alex

Contact person development & implementation

Email:..... alex@4-frames.de



Max

Contact Social Media & Cooperations

Email:..... max@4-frames.de

5.3 4FRAMES – on the internet

Website: www.4-frames.de