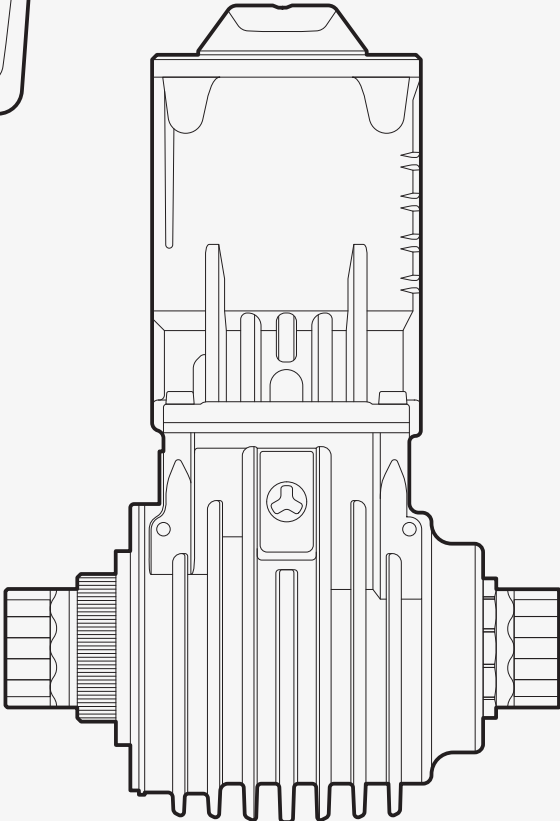
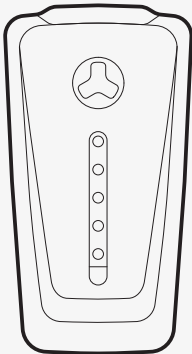
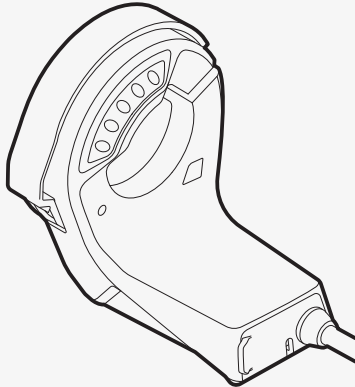
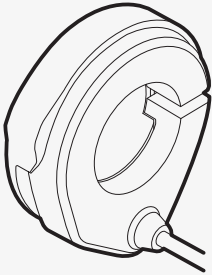
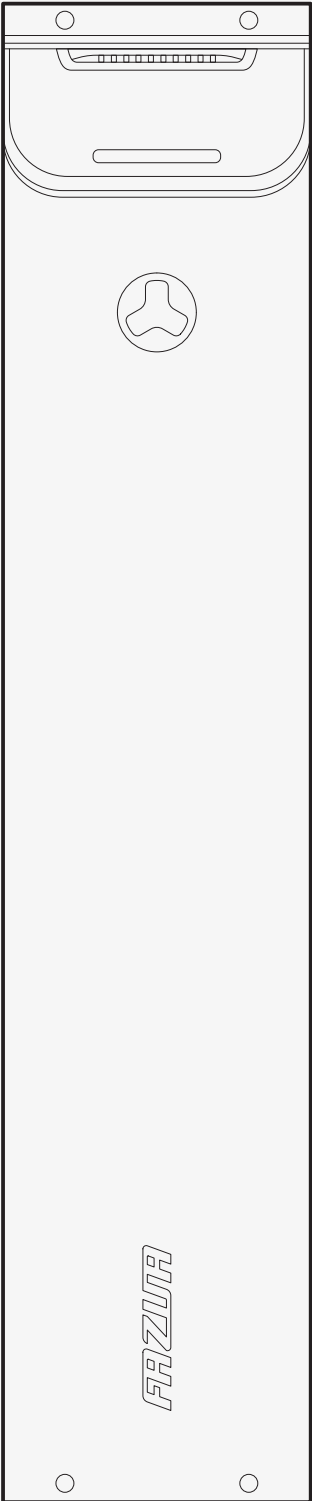




FAZUA RIDE 60 DRIVE SYSTEM



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1 ABOUT THESE INSTALLATION INSTRUCTIONS

These installation instructions are part of the FAZUA RIDE 60 drive system and are intended specifically for FAZUA dealers, as well as trained technical and service personnel. These installation instructions describe all necessary steps for installing the components of the drive system in the e-bike or for removing the mounted components from the e-bike.

IMPORTANT: The installation instructions are expressly not designed for use by laypersons or as an alternative / supplement to the original instructions.

To highlight risks and important additional information, these assembly instructions use the following markings:

WARNING

Risks that could result in death or serious injury are marked with the signal word "WARNING".

NOTE

Risks relating to assembly errors or damage to the product are marked with the signal word "NOTE".



Useful additional information is marked with this information symbol.



Information on the specific torques for bolted connections is marked with the torque wrench symbol.

2 GENERAL SAFETY INSTRUCTIONS

WARNING

Risk of accidents and injuries if the safety information is not observed!

If you do not observe the general safety information listed here, you may be injured and the drive system or individual components may be damaged. Improperly installed or damaged components pose significant risks of accidents and injuries to the user of the e-bike.

- ▶ Never open the components of the drive system. Only Porsche eBike Performance GmbH employees are permitted to open the components of the FAZUA RIDE 60 drive system. Unauthorized opening will invalidate the warranty claim and there is a risk of irreparable damage to the drive system.
- ▶ Do not carry out any work on the drive system or the e-bike while the battery is being charged via the charging port on the e-bike to avoid injury. Generally speaking: The e-bike must never be connected to the mains via the charging connection during service work.
- ▶ **ATTENTION!** When the drive system is fully assembled, the cables for the rear brake and the rear derailleur (and other cables if necessary) must always be routed first. The installation of the drive system can be started subsequently. Keep to the following sequence when installing the components:
 1. Control element (Ring Control, Road Control or Control Hub),
 2. Display (LED Hub; not applicable when using Control Hub),
 3. Charge port,
 4. Permanently installed battery (only when using ENERGY 430 fix; not applicable when using ENERGY 430),
 5. Drive unit,
 6. Rack (only when using ENERGY 430; not applicable when using ENERGY 430 fix),
 7. Removable battery (only when using ENERGY 430; not applicable when using ENERGY 430 fix).
- ▶ When replacing components mounted on the drive unit and all other components of the e-bike (e.g. chainring, pedals), only identical components or components approved by the bike manufacturer may be mounted.
- ▶ Clean and degrease all threads before screwing.
- ▶ Allow the threadlocker to harden for at least 6 hours after installation.
- ▶ When using threadlockers, we recommend the use of Loctite 243.
- ▶ Observe the instructions for the individual steps precisely to avoid assembly errors and damage to the components.

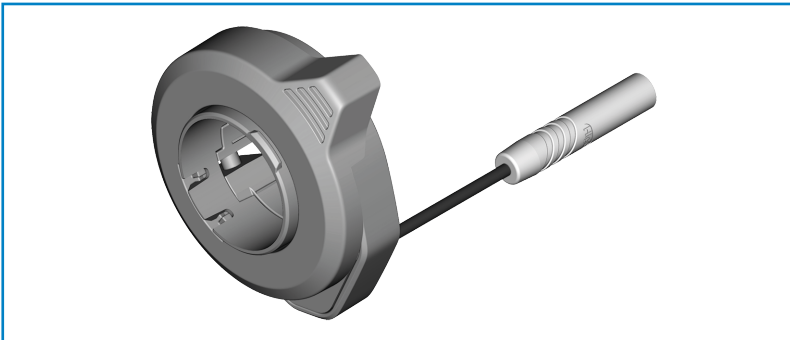
3 CONTROL ELEMENT AND DISPLAY



Depending on the individual configuration of the drive system / the composition of the drive components, operating elements and display are either:

- Two separate components (operating parts: Ring Control or Road Control, display: LED Hub).
- Or
- A combined component (Control Hub).

3.1 Ring Control



Component parts:

- Ring Control with cable

Connecting elements supplied:

- 1 M3×10 screw

Tools needed:

- T10 Torx screwdriver

3.1.1 Mounting Ring Control

NOTE

- ▶ Make sure that the cable is not kinked or under tension.
- ▶ Make sure that the cable is not damaged at sharp-edged frame openings / bushings.
- ▶ Make sure that the cable is laid according to the manufacturer's specifications (cable routing, etc.).



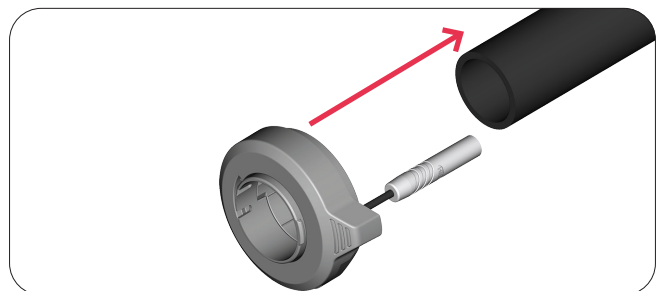
Depending on the bike in which the drive system is installed, different cable guides are provided (standard cable guide, integrated cable guide, etc.).

The following installation description shows the standard cable routing, where the cable is routed from the handlebar through a side opening into the bike frame. With a (fully) integrated cable routing you lay the cables if necessary, if stem and handlebars are not yet mounted. In this case, perform Step 2 "Laying cable" first and then step 1.

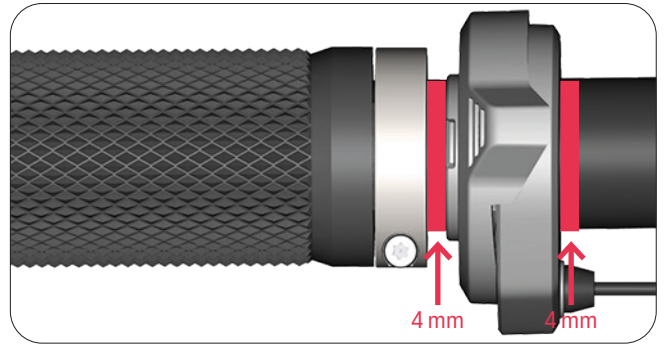
Contact the bike manufacturer if you have any questions about the intended cable routing.

Step 1: Attaching Ring Control to the handlebars

→ Slide Ring Control onto the handlebars from the outside (preferably on the left side of the handlebar).



→ When positioning Ring Control, make sure that there is a distance of at least 4 mm to all other components on the handlebar (including the handlebar grip, brake lever).

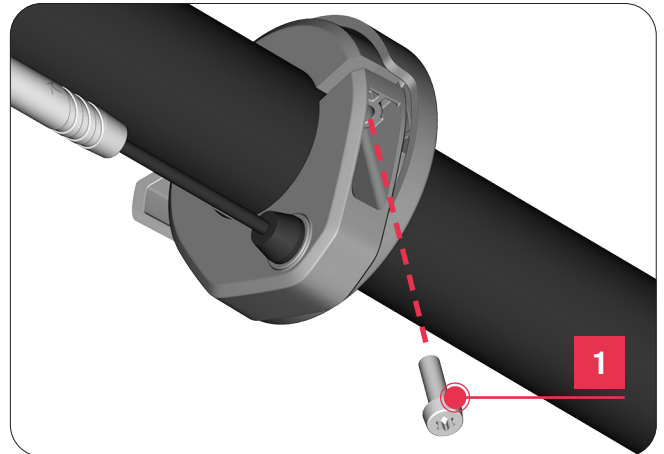


→ Fix the ring control in the correct position on the handlebars.

To do so, tighten the screw **(1)** on the clamp with the T10 Torx screwdriver.

	0.5 Nm
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IMPORTANT: Tighten the screw **(1)** only so far that the ring control no longer twists during operation. The torque achieved may then be below the maximum permissible torque.

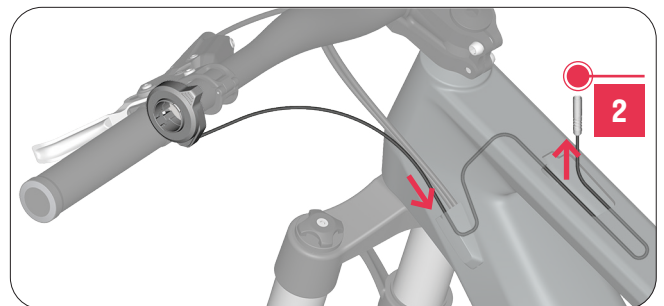


Step 2: Laying cable

→ Guide the cable of Ring Control from the outside through the corresponding opening in the e-bike frame.

Lead the cable end with the socket **(2)** out to the opening for LED Hub in the top tube.

IMPORTANT: The openings in the frame are sometimes very sharp-edged and can permanently damage the cable.



→ Continue with the connection of Ring Control to LED Hub and the assembly of LED Hub (see chapter 3.3.1 "Mounting LED Hub").

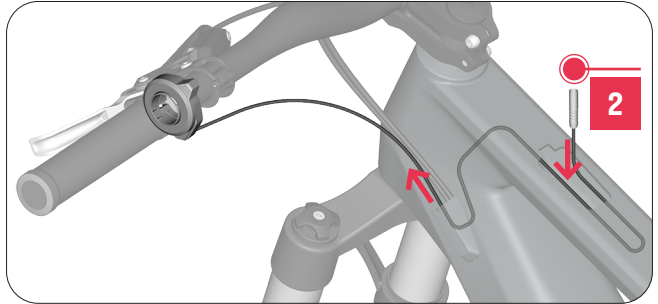
3.1.2 Disassembling Ring Control

IMPORTANT: To disassemble the ring control, you must first disassemble LED Hub and disconnect the ring control from LED Hub (see chapter 3.3.2 "Dismantling LED Hub").

Step 1: Pulling the cable out of the e-bike frame

→ Pull the cable of the ring control out of the e-bike frame.

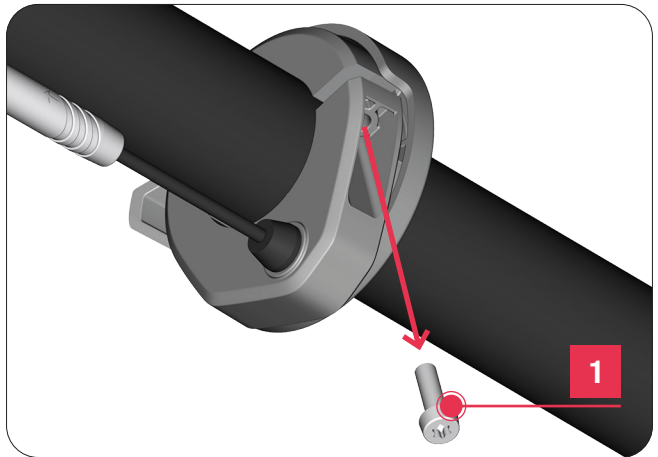
IMPORTANT: Be careful to pull out the cable carefully so that the cable and the socket **(2)** are not damaged.



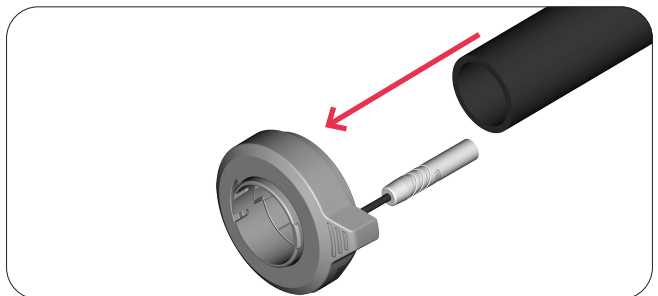
Step 2: Removing Ring Control from handlebar

→ Loosen the fixation of Ring Control on the handlebars.

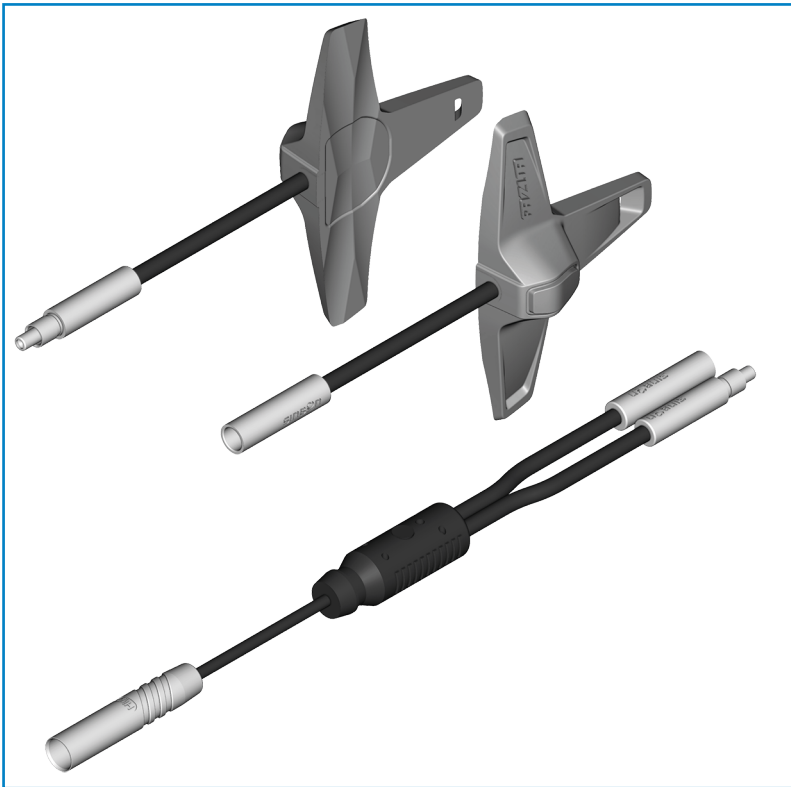
To do so, loosen the screw **(1)** on the clamp by a few turns using the T10 Torx screwdriver.



→ Remove Ring Control outward from the handlebars.



3.2 Road Control



Component parts:

- Road Control with cable for mounting on right (RoC R)
- Road Control with cable for mounting on left (RoC L)
- RoC splitter



Road Control consists of two switches: RoC R and RoC L. The two switches have different functions and bear markings indicating on which side of the handlebar it should be mounted with priority.

Side-inverted mounting of the two switches should only be carried out at the explicit request of the customer.

3.2.1 Mounting Road Control

NOTE

- ▶ Make sure that the cables are not bent or installed under tension.
- ▶ Make sure that the two switches (RoC R and RoC L) are mounted on the correct side.
- ▶ Make sure that the cables are not damaged at sharp-edged frame openings / bushings.
- ▶ Make sure that the cables are laid according to the manufacturer's specifications (cable routing, etc.).



Depending on the bike in which the drive system is installed, different cable guides are provided (standard cable guide, integrated cable guide, etc.).

The following installation description shows the standard cable routing, where the cables are routed from the handlebars through a side opening into the bike frame. With a (fully) integrated cable routing you lay the cables if necessary, if stem and handlebars are not yet mounted. In this case, perform Step 2 "Laying cable" first and then step 1.

Contact the bike manufacturer if you have any questions about the intended cable routing.

Step 1: Mounting Road Control on the handlebars

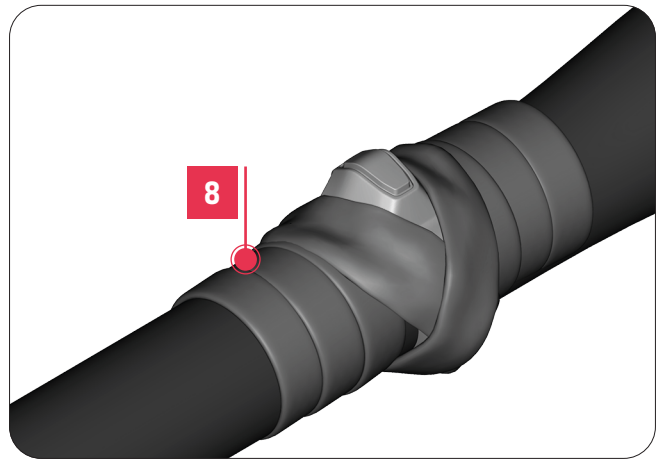
→ If necessary, mount the stem and handlebars on the e-bike.

→ Mount the two switches (RoC R and RoC L) on the handlebars.

To do so, first stick the respective switch to the desired position on the handlebars with adhesive tape.

Then wrap the switch with grip tape **[8]** as shown to additionally fix it.

IMPORTANT: For both switches, make sure to mount them on the correct side (see markings on the cables). RoC R must be mounted on the right handlebar side, RoC L on the left handlebar side.

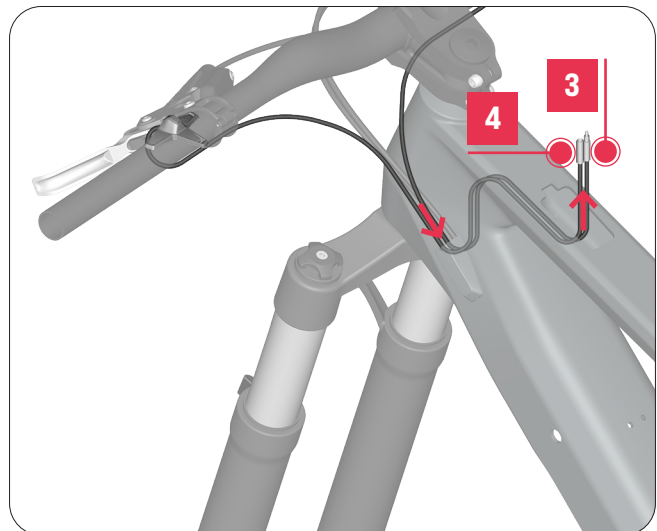


Step 2: Laying cable

→ Guide the cables of the two switches (RoC R and RoC L) from the outside through the corresponding opening in the e-bike frame.

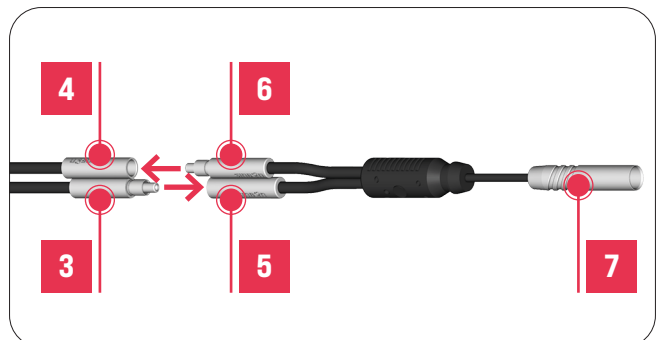
Lead the cable ends with the plug **[3]** or the socket **[4]** out to the opening for LED Hub in the top tube.

IMPORTANT: The openings in the frame are sometimes very sharp-edged and can permanently damage the cables.



→ Connect the two cables (RoC R and RoC L) to the RoC splitter.

To do so, plug the connector **[3]** on the cable of the right switch (RoC R) into the socket **[5]** on the cable of the RoC splitter and the connector **[6]** on the cable of the RoC splitter into the socket **[4]** on the cable of the left switch (RoC L). The free socket **[7]** is later used to connect to the LED hub.



→ Lay the excess of the two cables (RoC R and RoC L) to a loop.

Depending on the mounting position, the required cable length will vary.

→ Continue with the connection of Road Control to LED Hub and the assembly of LED Hub (see chapter 3.3.1 "Mounting LED Hub").

3.2.2 Disassembling Road Control

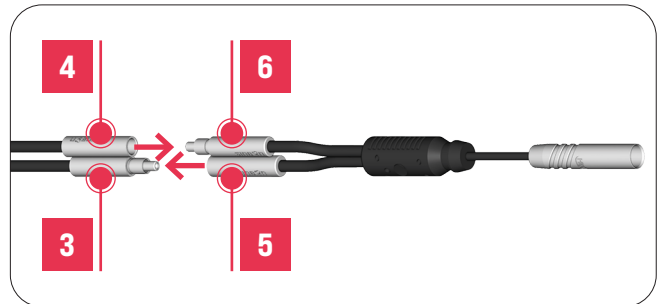
IMPORTANT: To disassemble Road Control, you must first disassemble LED Hub and disconnect Road Control from LED Hub (see chapter 3.3.2 "Dismantling LED Hub").

Step 1: Pulling the cable out of the e-bike frame

→ If necessary, remove the stem and handlebars from the e-bike to be able to pull the cables out of the e-bike frame (integrated cable routing).

→ Disconnect Road Control (RoC R and RoC L) from the RoC splitter.

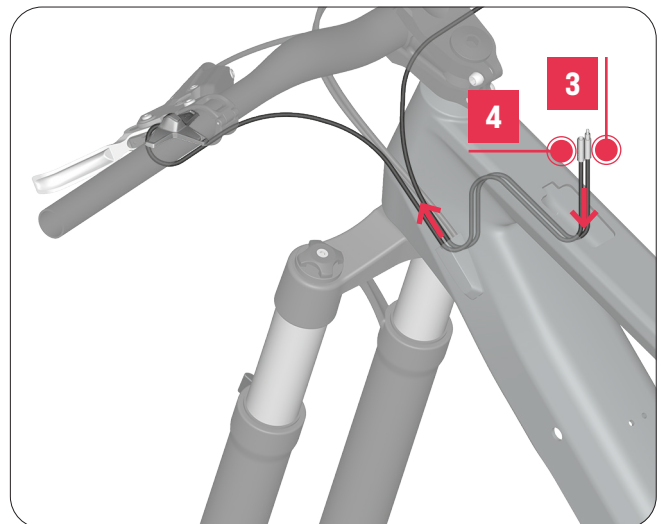
To do so, pull the plug **[3]** on the cable of the right switch (RoC R) out of the socket **[5]** on the cable of the RoC splitter and the plug **[6]** on the cable of the RoC splitter out of the socket **[4]** on the cable of the left switch (RoC L).



IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.

→ Pull the cables of the two switches (RoC R and RoC L) out of the e-bike frame.

IMPORTANT: Take care to pull out the cables carefully so that the cables and the plug **[3]** or socket **[4]** are not damaged.

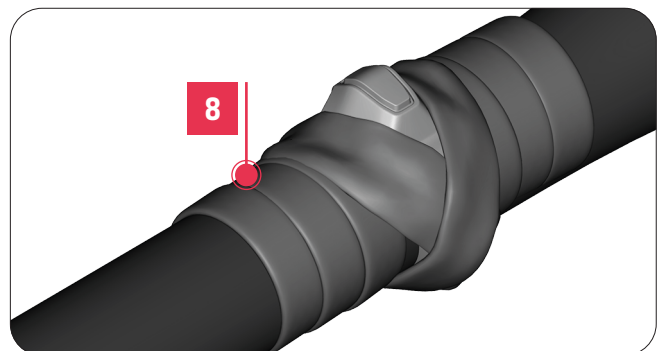


Step 2: Removing Road Control from the handlebars

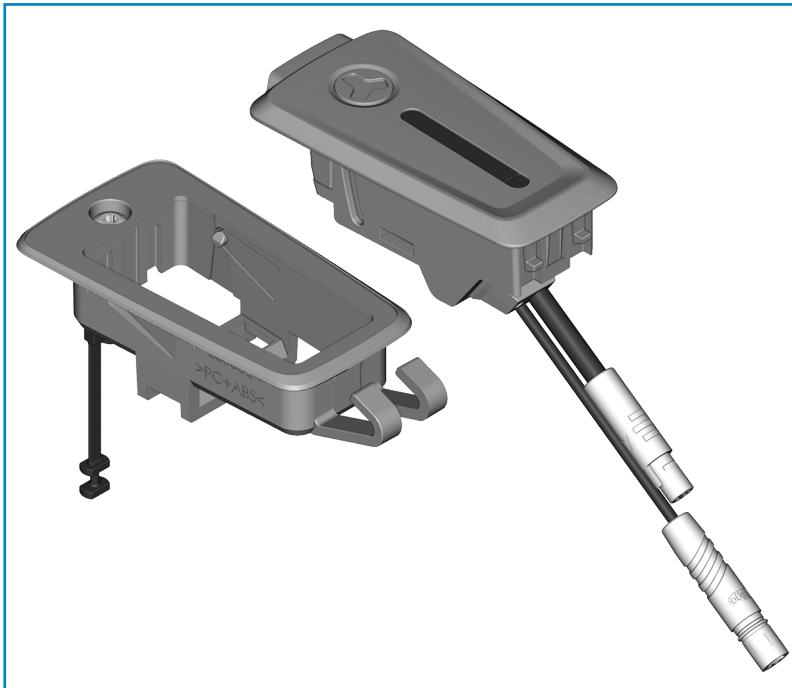
→ Detach the two switches (RoC R and RoC L) from the handlebars.

To do so, unwind the grip tape **[8]** at the respective switch.

→ Then remove the two switches (RoC R and RoC L) from the handlebars.



3.3 LED Hub



Component parts:

- LED Hub with two cables
- Frame unit of LED Hub

Connecting elements supplied:

- 1 M3×22 screw (frame unit)

Tools needed:

- T10 Torx screwdriver

3.3.1 Mounting LED Hub

NOTE

- ▶ Make sure that the cable is not kinked or under tension.
- ▶ Make sure that the cable is not damaged at sharp-edged frame openings / bushings.
- ▶ Make sure that the cable is laid according to the manufacturer's specifications (cable routing, etc.).

Step 1: Connecting the control element to LED Hub

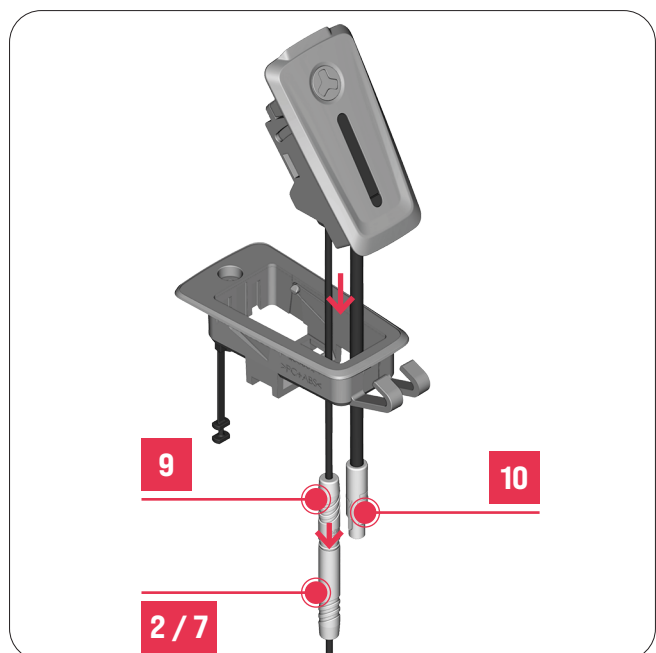
→ Guide the two cables of LED Hub with the connectors **(9)** and **(10)** from above through the frame unit of LED Hub.

IMPORTANT: Do **not** insert LED Hub into its frame unit **yet!**

→ Connect the control element (Ring Control / Road Control) to LED Hub.

To do so, plug the connector **(9)** on the cable of LED Hub into the socket **(2)** or **(7)** on the cable of Ring Control / the RoC splitter. The free plug **(10)** is later used for connection to the drive unit.

IMPORTANT: Make sure that the plug **(9)** is inserted correctly. The yellow marking on the plug **(9)** must disappear completely into the socket.



Step 2: Laying cable

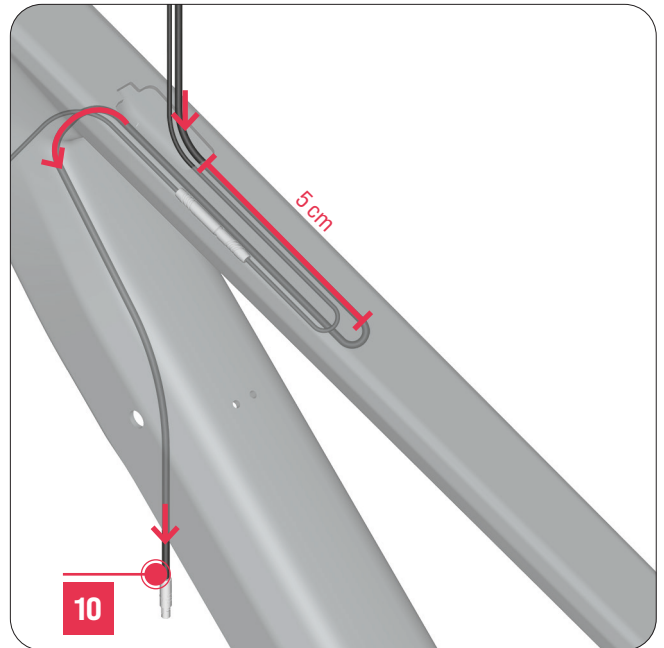
→ Guide the cable of LED Hub through the opening for LED Hub and inside the e-bike frame to the down tube.

The cable end with the plug **[10]** hangs freely in the opening for the ENERGY in the down tube.

→ Put the cable surplus of LED Hub and the connected control element (Ring Control / Road Control + RoC splitter) together to a loop.

→ Push the loop through the opening for LED Hub into the top tube so that the cables are not bent and do not hinder the insertion / removal of LED Hub.

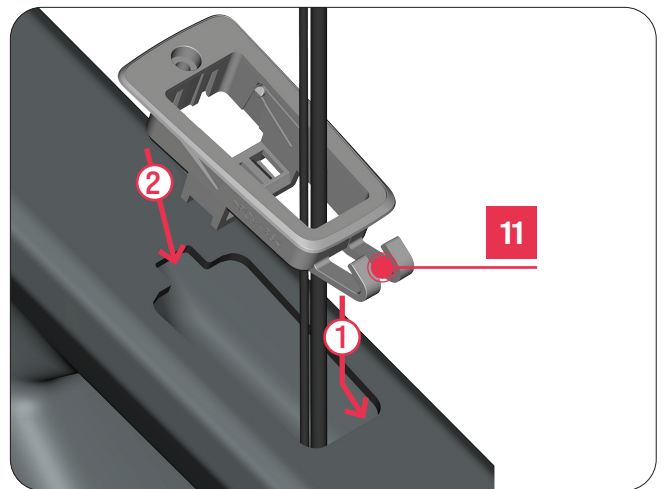
IMPORTANT: For pressure relief from below, the loop in the top tube must run at least 5 cm behind the opening for LED Hub.



Step 3: Attaching the frame unit to the e-bike

→ Insert the frame unit of LED Hub into the opening provided in the top tube.

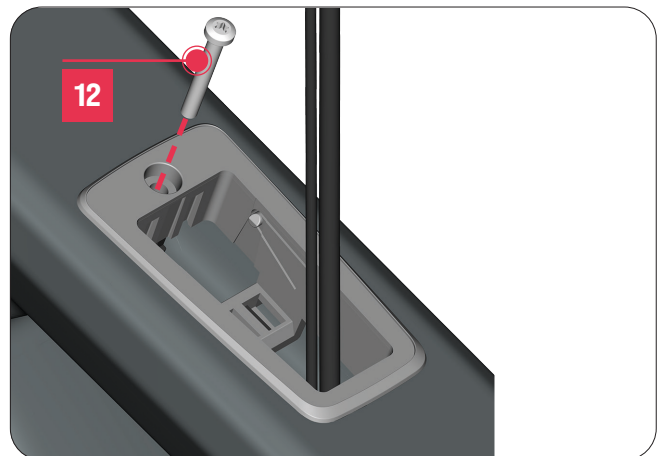
To do so, first hook the hooks **[11]** at the lower end of the frame unit and then press the upper part of the frame unit into the opening.



→ Fix the frame unit to the top tube.

To do so, screw the screw **[12]** into the attachment point of the frame unit using the T10 Torx screwdriver.

IMPORTANT: Make sure that frame unit is seated in the opening without play.



	<p>0.5 Nm</p>
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Step 4: Inserting LED Hub into the frame unit

→ Insert LED Hub into its frame unit.

To do so, first push the rear end of LED Hub into the frame unit and then push the front end of LED Hub down (into the frame unit).

The correctly inserted LED Hub engages in the frame unit with an audible click.



3.3.2 Dismantling LED Hub

IMPORTANT: In order to completely disassemble LED Hub, you must first disconnect LED Hub from the drive unit (see Step 1 "Disconnecting components from the drive unit" in chapter 5.2 "Removing the drive unit").

Step 1: Removing LED Hub from the frame unit

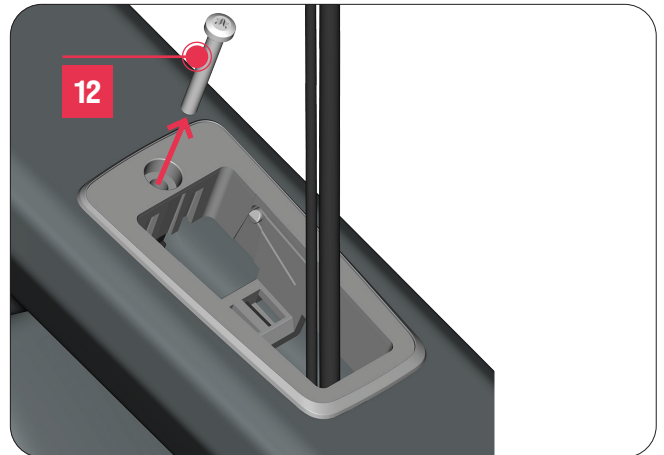
→ Click LED Hub out of its frame unit.

To do so, lift LED Hub at the front end to the maximum and then carefully push LED Hub forwards / upwards out of the frame unit.

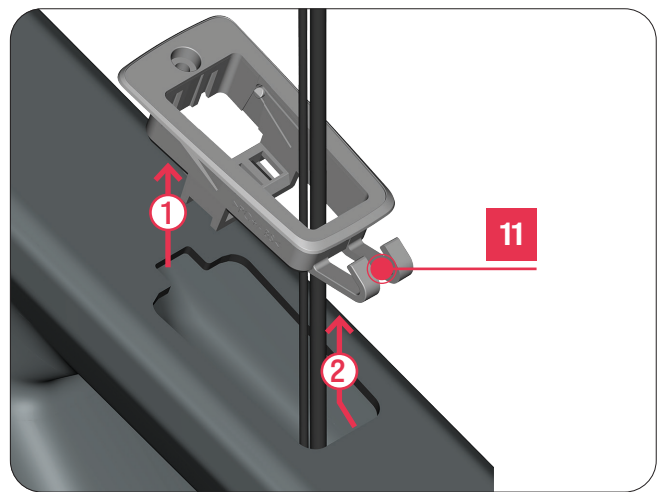


Step 2: Removing the frame unit from the e-bike frame

→ Loosen the screw connection of the frame unit.
To do so, unscrew the screw [12] from the frame unit using the T10 Torx screwdriver.

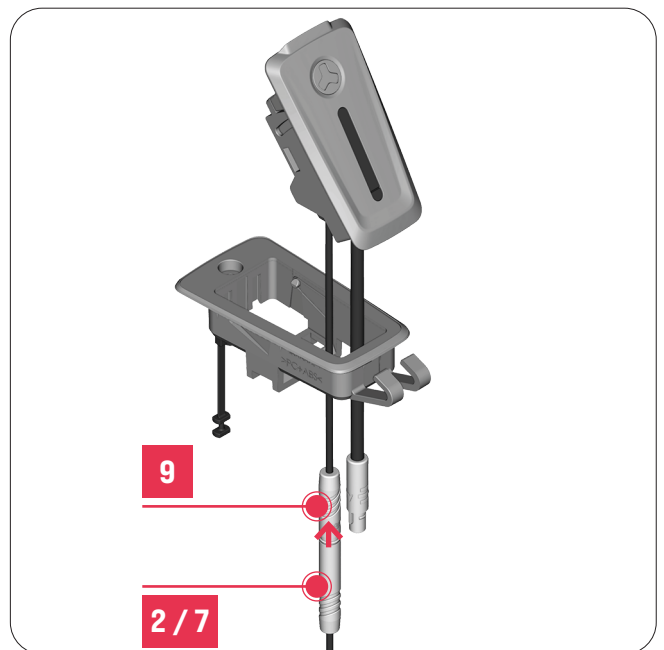


→ Remove the frame unit of the LED Hub from the opening in the top tube.
To do so, first lift the upper end of the frame unit and then loosen the hooks [11] on the lower part of the frame unit.



Step 3: Disconnecting the control unit from LED Hub

→ Disconnect the connected control unit from LED Hub.
To do so, pull the plug [9] on the cable of LED Hub out of the socket [2] or [7] on the cable of Ring Control / the RoC splitter.
IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.



3.4 Control Hub



Component parts:

- Control Hub with cable

Connecting elements supplied:

- 1 M3×10 screw

Tools needed:

- T10 Torx screwdriver

NOTE

- ▶ Make sure that the cable is not kinked or under tension.
- ▶ Make sure that the cable is not damaged at sharp-edged frame openings / bushings.
- ▶ Make sure that the cable is laid according to the manufacturer's specifications (cable routing, etc.).



Depending on the bike in which the drive system is installed, different cable guides are provided (standard cable guide, integrated cable guide, etc.).

The following installation description shows the standard cable routing, where the cable is routed from the handlebar through a side opening into the bike frame. With a (fully) integrated cable routing you lay the cables if necessary, if stem and handlebars are not yet mounted. In this case, perform Step 2 "Laying cable" first and then step 1.

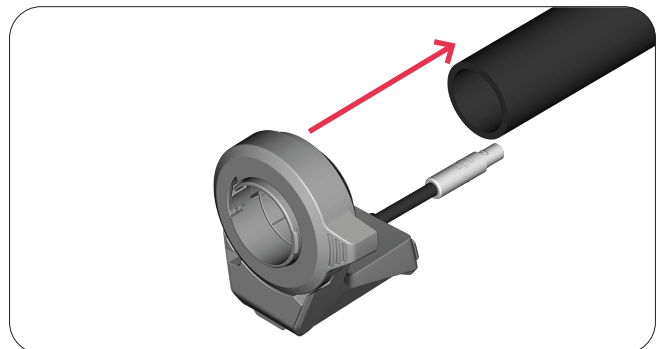
Contact the bike manufacturer if you have any questions about the intended cable routing.

3.4.1 Mounting Control Hub

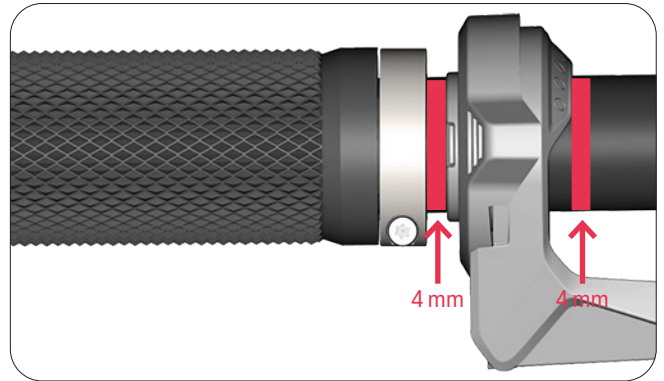
Step 1: Attaching Control Hub to the handlebars

→ Slide Control Hub onto the handlebars from the outside (preferably on the left side of the handlebars).

Make sure that Control Hub has a minimum distance of 4 mm to other components or controls on the handlebars.



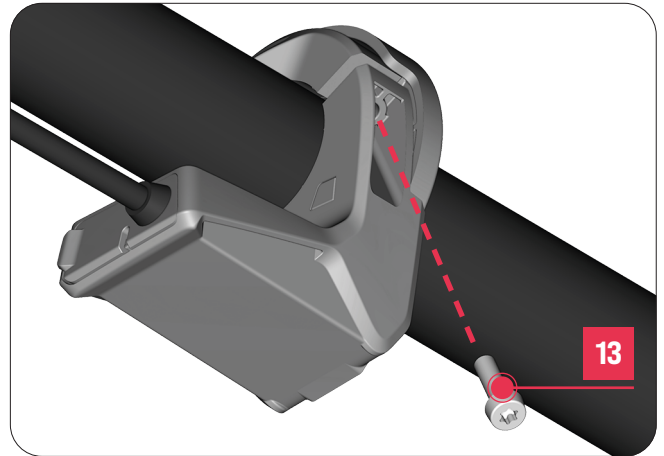
→ When positioning Control Hub, make sure that there is a distance of at least 4 mm to all other components on the handlebars (including the handlebar grip, brake lever).



→ Fix Control Hub in the correct position on the handlebars.
To do so, tighten the screw [13] on the clamp with the T10 Torx screwdriver.



IMPORTANT: Tighten the screw [13] only so far that Control Hub no longer twists during operation. The torque achieved may then be below the maximum permissible torque.

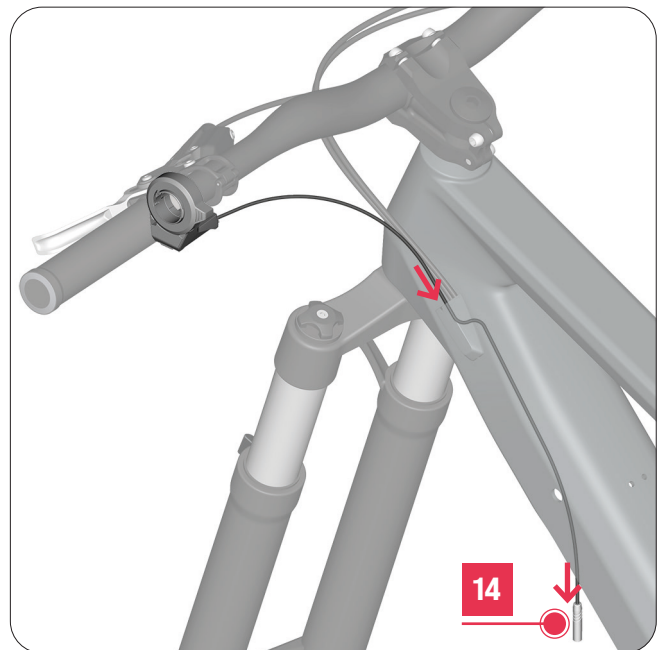


Step 2: Laying cable

→ Guide Control Hub cable through the e-bike frame to the down tube.

The cable end with the plug [14] hangs freely in the opening for the ENERGY in the down tube.

IMPORTANT: The openings in the frame are sometimes very sharp-edged and can permanently damage the cable.



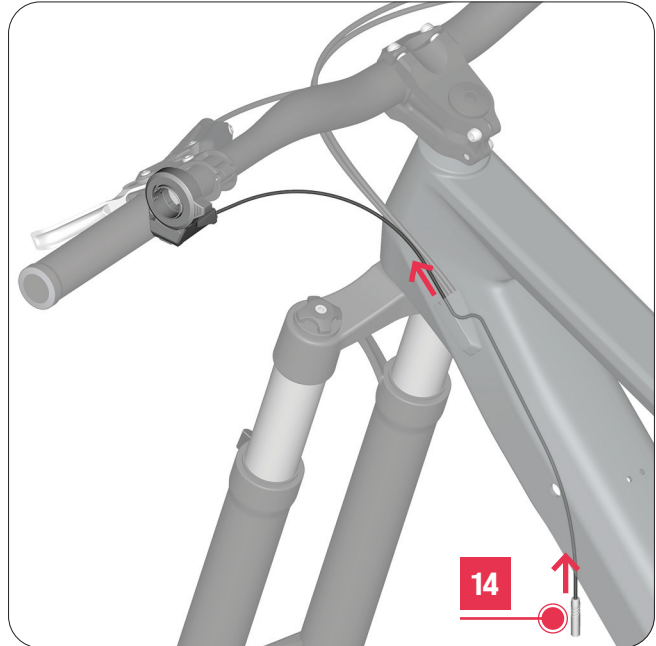
3.4.2 Disassembling Control Hub

IMPORTANT: To be able to completely disassemble Control Hub, you must first disconnect Control Hub from the drive unit (see Step 1 "Disconnecting components from the drive unit" in chapter 5.2 "Removing the drive unit").

Step 1: Pulling the cable out of the e-bike frame

→ Pull the cable of Control Hub out of the e-bike frame.

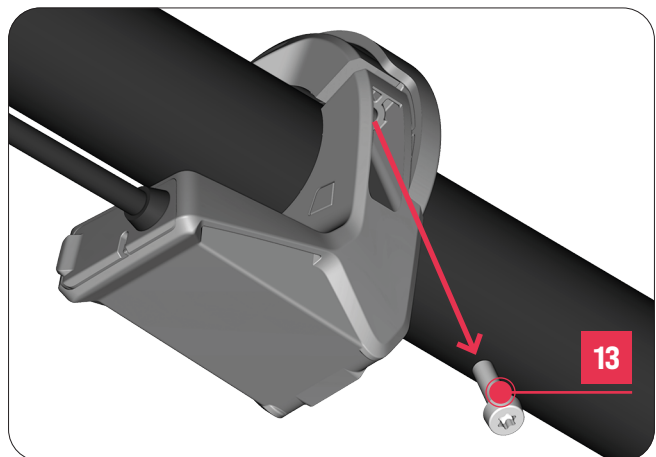
IMPORTANT: Be careful to pull out the cable carefully so that the cable and the socket **(14)** are not damaged.



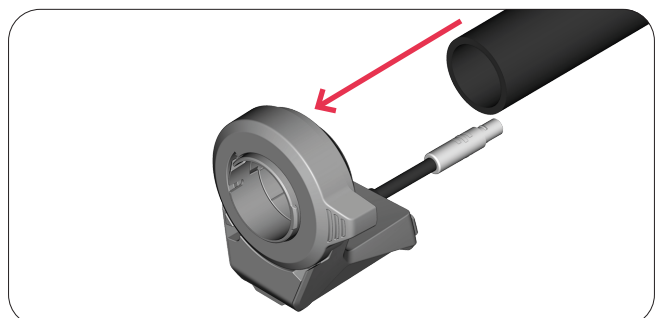
Step 2: Removing Control Hub from the handlebars

→ Release the fixation of Control Hub on the handlebars.

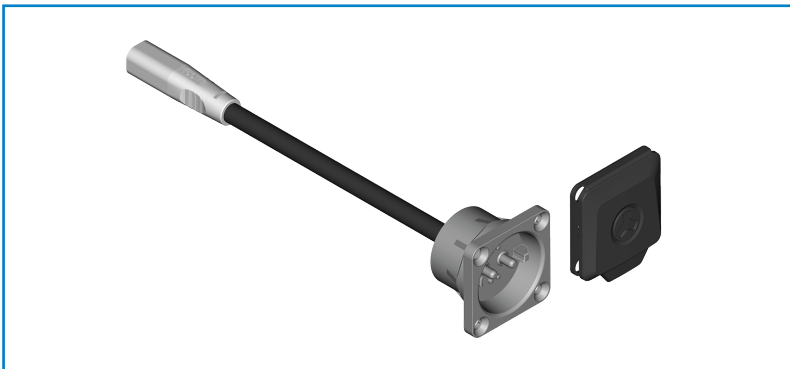
To do so, loosen the screw **(13)** on the clamp by a few turns using the T10 Torx screwdriver.



→ Remove Control Hub from the handlebars towards the outside.



4 CHARGE PORT



Component parts:

- Charge port with cable
- Charge cap

Connecting elements supplied:

- 4 screws*

Tools needed:

- Screwdriver*

* Screw type and size depend on the bike manufacturer.



The illustrations shown here for mounting / dismantling the charge port are exemplary, the mounting position of the charge port depends on the bike manufacturer.

4.1 Mounting the charge port

NOTE

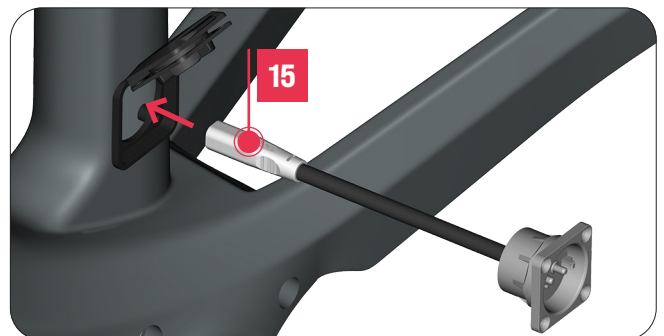
- ▶ Make sure that the cable is not kinked or under tension.
- ▶ Make sure that the cable is not damaged at sharp-edged frame openings / bushings.
- ▶ Make sure that the cable is laid according to the manufacturer's specifications (cable routing, etc.).

Step 1: Inserting the charge port

→ First insert the charge cap into the opening provided on the e-bike.

Make sure that the attachment points in the charge cap and in the e-bike frame are on top of each other.

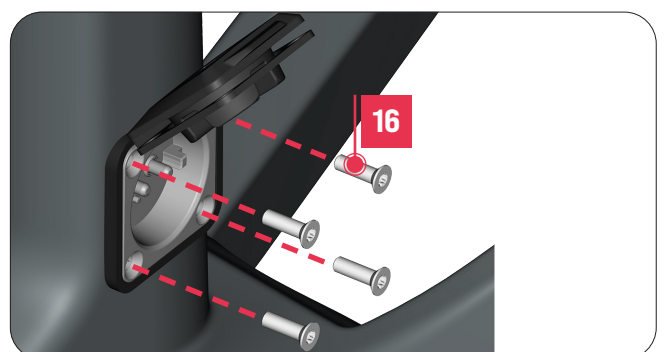
→ Then insert the charge port into the open charge cap with the socket **(15)** on the cable first.



Step 2: Fixing the charge port into place

→ Fix the charge port and charge cap to the e-bike frame.

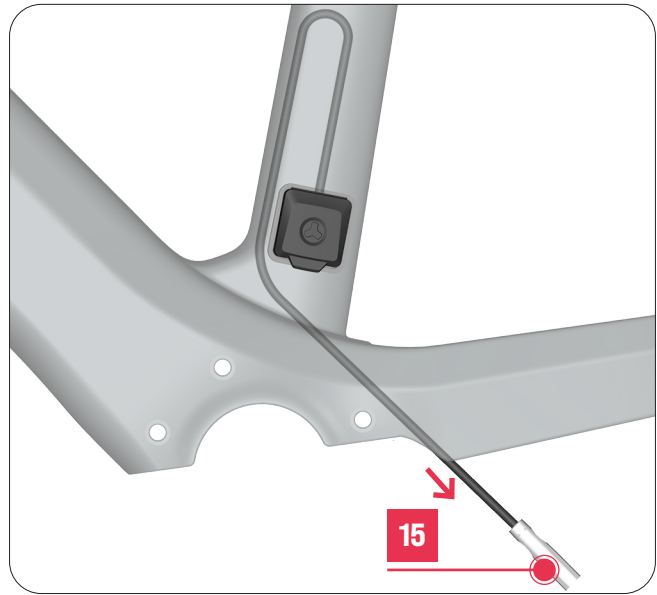
To do so, screw the screws **(16)** into the fastening points with the screwdriver.



Step 3: Laying cable

→ Guide the cable of the charge port inside the e-bike frame in the direction of the holder for the drive unit.

The cable end with the socket **[15]** hangs freely in the holder for the drive unit.

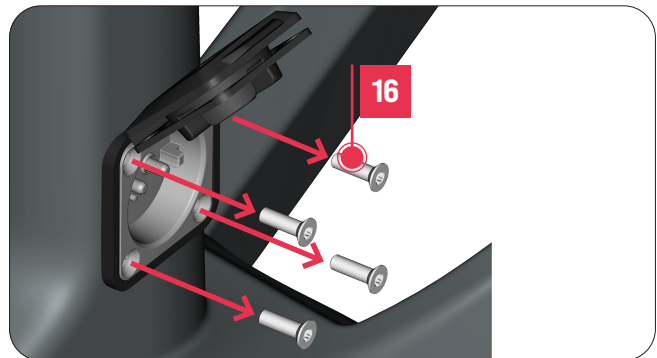


4.2 Disassembling the charge port

IMPORTANT: To completely disassemble the charge port, you must first disconnect the charge port from the drive unit. To do so, you must remove the drive unit from the e-bike (see chapter 5.2 "Removing the drive unit").

Step 1: Loosening the screw connection

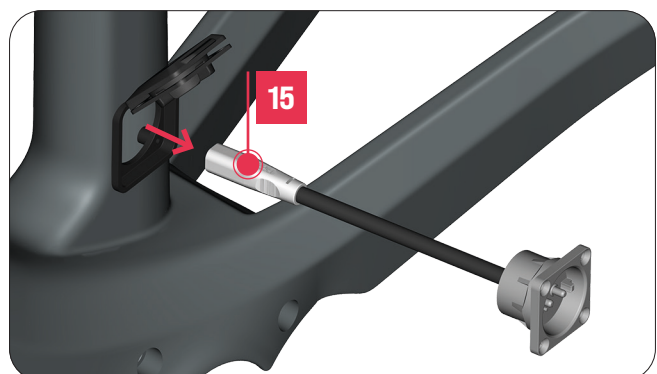
→ Loosen the screw connection of the charge port. To do so, unscrew the screws **[16]** completely from the attachment points using the screwdriver and remove them.



Step 2: Removing the charge port

→ Remove the charge port and the charge cap from the opening on the e-bike.

IMPORTANT: Be careful to pull out the cable carefully so that the cable and the socket **[15]** are not damaged.



5 DRIVE UNIT



Component parts:

- Drive unit with four connections (see below for assignment)
- Cover

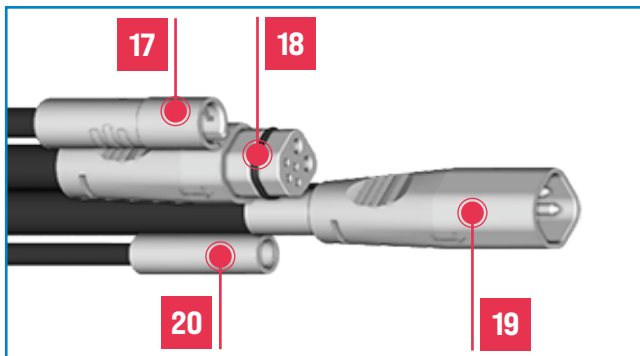
Connecting elements supplied:

- 6 screws (drive unit) (M6×18 Torx screws with threadlocker)
- 3 screws* (cover)

Tools needed:

- Hexagon socket screwdriver 5 mm
- Torque wrench
- T18 Torx screwdriver
- Screwdriver*

* Screw type and size depend on the bike manufacturer.



Drive unit connections

The drive unit has four connections.

Plugs and sockets of these four connectors are assigned as follows:

- **(17)** for the display (LED Hub / Control Hub).
- **(18)** for the external charging connection (charge port),
- **(19)** for the battery (ENERGY 430 / ENERGY 430 fix),
- **(20)** for the speed sensor.

5.1 Installing the drive unit

NOTE

- ▶ Only use brand-new screws with threadlocker to mount the drive unit. These screws are supplied with each drive unit. If you need more screws, you can order them from our online store.
- ▶ When installing the drive unit, take care not to crush or bend any cables.
- ▶ Make sure that the cables are not damaged at sharp-edged frame openings/passages.
- ▶ Make sure that the cable is laid according to the manufacturer's specifications (cable routing, etc.).
- ▶ Do not use force when inserting the drive unit, e.g. by driving the drive unit into its holder on the e-bike with a hammer or similar tool.
- ▶ After any work on the drive unit, the torque sensor must be calibrated via the FAZUA Toolbox software! The advanced version of the FAZUA Toolbox software is required for calibration. If calibration is not performed, optimum support of the drive system cannot be guaranteed!
- ▶ Before installing a new drive unit after a service case, it is absolutely necessary to transfer all configuration data about the defective drive unit to the new component. To do so, use the "Data transfer" function in the dealer service menu. The configuration of the defective drive unit is exported via "Data export" and transferred to the new component via "Data import".



The order in which the drive unit and battery are installed depends on the individual configuration of the drive system / the combination of drive components:

- For models with the (removable) **ENERGY 430** battery, first mount the drive unit as described here and then insert ENERGY 430.
- For models with the (permanently installed) **ENERGY 430 fix** battery, ENERGY 430 fix must be installed first (see chapter 7.2.1 "Installing ENERGY 430 fix") and only then can the drive unit be installed as described here.



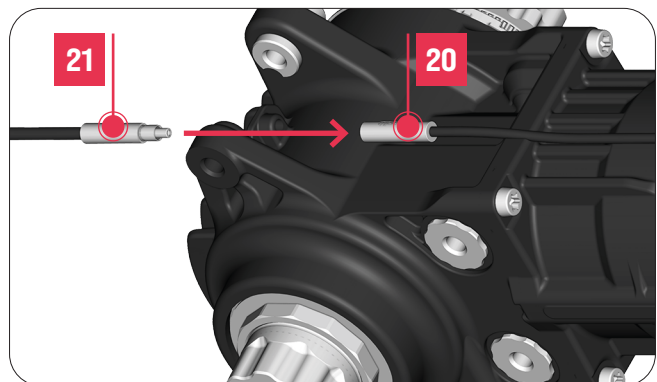
Observe the following when handling the speed sensor: The drive unit must be removed before any work is carried out on the speed sensor. To assemble / disassemble the speed sensor, we recommend blocking or disassembling the rear wheel for better handling and ergonomics during rework.

Step 1: Preparing the drive unit for installation

- Before installing the drive unit, clean the threads and make sure that there is no residual lubricant or dirt in the threads.
- Arrange the cables so that they run straight and separately. The individual cables must not be twisted or knotted in themselves or in each other.
- Push the threaded sleeve (bushing) completely inwards. This facilitates the installation of the drive unit. The final position of the bushing is then determined during the screwing process.

Step 2: Connecting the speed sensor

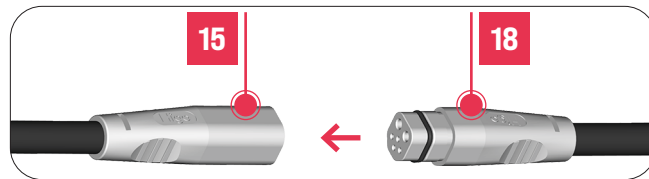
- Connect the speed sensor to the drive unit.
To do so, plug the connector **[21]** on the speed sensor cable into the socket **[20]** on the drive unit cable.
IMPORTANT: Make sure you have a very straight motion when you put them together. This avoids damage to the seal in the connector and facilitates mating.



- Lay the connected cable of the speed sensor along the top of the drive unit to the rear. The cable of the speed sensor must run on the drive unit towards its rear end.

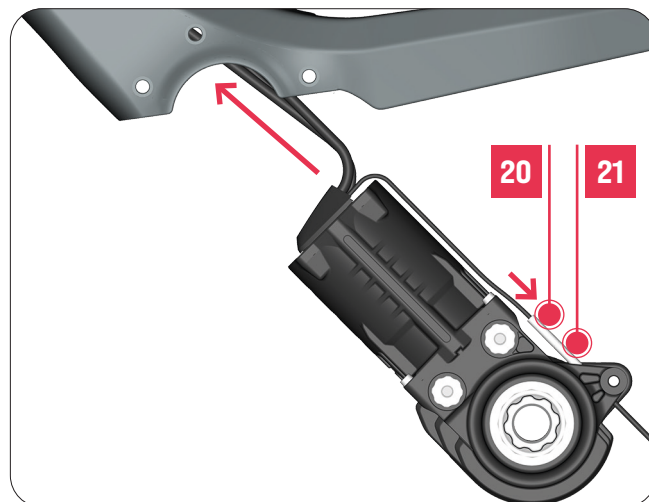
Step 3: Connecting the charge port to the drive unit

→ Connect the charge port to the drive unit.
 To do so, plug the connector [18] on the drive unit cable into the socket [15] on the charge port cable.



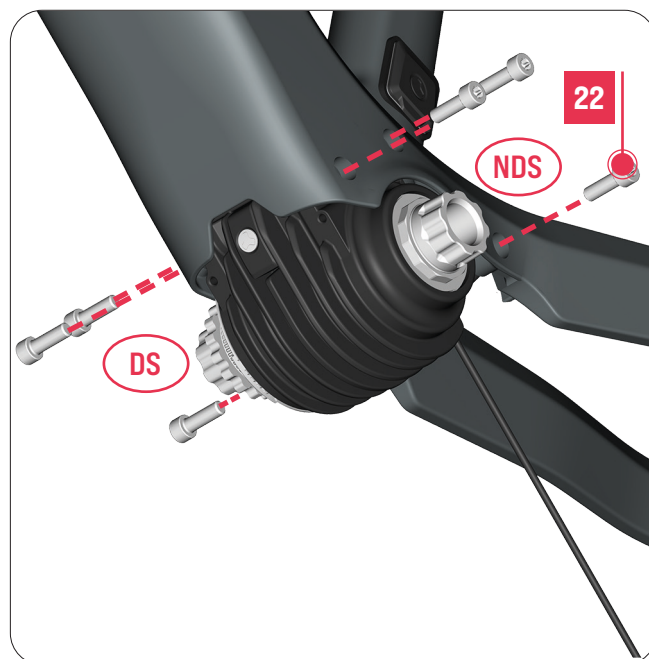
Step 4: Inserting the drive unit into the frame

→ Hold the cable of the speed sensor in its position and insert the drive unit with the other connections/ cables first into its holder on the down tube.
 The drive unit must be easy to insert and fit tension-free in the holder.
IMPORTANT: Take care not to crush or bend any cables when inserting the BOTTOM BRACKET.



Step 5: Fastening the drive unit

→ Align the drive unit so that the six attachment points in the drive unit and in the e-bike frame are on top of each other.
 → First screw the three screws [22] on the non-drive side (NDS) hand-tight into the fastening points.
 → Then screw the three screws [22] on the drive side (DS) hand-tight into the fastening points.
 → Then tighten all six screws [22] with the 5 mm Allen screwdriver.
 Make sure that the sliding bushings are properly tightened.



	14 Nm
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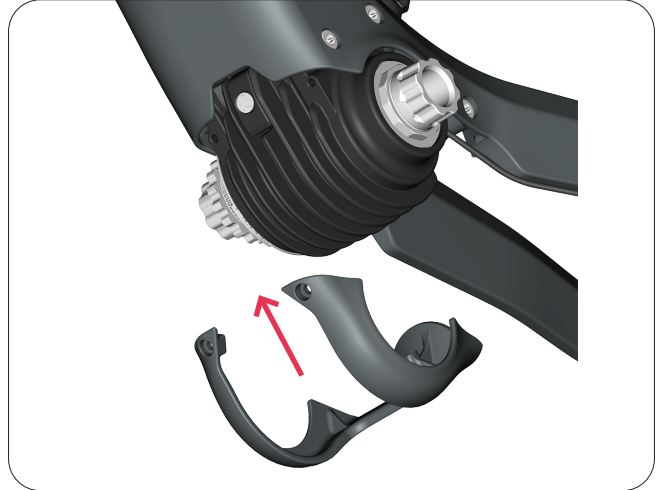
i The screws [22] supplied are provided with a threadlocker which must dry for at least 6 hours.

Step 6: Mounting the cover of the drive unit

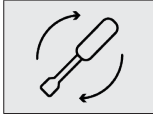


The cover illustration is exemplary and depends on the bike manufacturer.

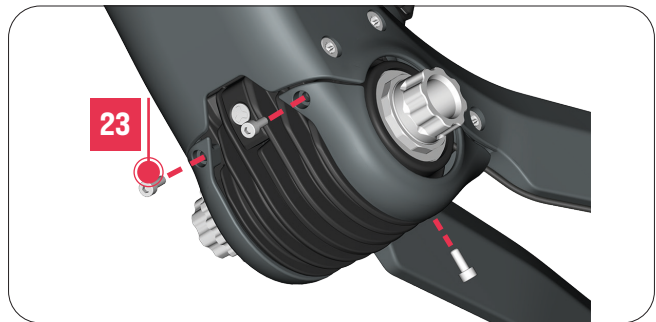
- Place the cover of the drive unit on the drive unit from below.
- Align the cover so that the three attachment points in the cover and in the drive unit are on top of each other.



- Fix the cover into place.
To do so, screw the screws **(23)** into the fastening points with the screwdriver.



Observe manufacturer's specifications (OEM) (max. 2.5 Nm)



5.2 Removing the drive unit

NOTE

- ▶ Always remove ENERGY from the e-bike before removing the drive unit.
- ▶ Make sure that the cables are not damaged at sharp-edged frame openings/passages.



The order in which the drive unit and battery are removed depends on the individual configuration of the drive system / the combination of drive components:

- For models with the [removable] **ENERGY 430** battery, the regular procedure is to first remove ENERGY 430 as described here, then disconnect the cable connections, and then remove the drive unit.
- For models with the [permanently installed] **ENERGY 430 fix** battery, the drive unit must first be removed, then ENERGY 430 fix must be removed, and only then can the cable connections be disconnected as described here.

In this case, start with Step 2 "Removing the cover of the drive unit" and then follow the sequence described here. Perform the initially omitted Step 1 "Disconnecting compofnents from the drive unit" after Step 4 "Disconnecting the drive unit from charge port and removing it from the frame" (step 5 remains the last step).

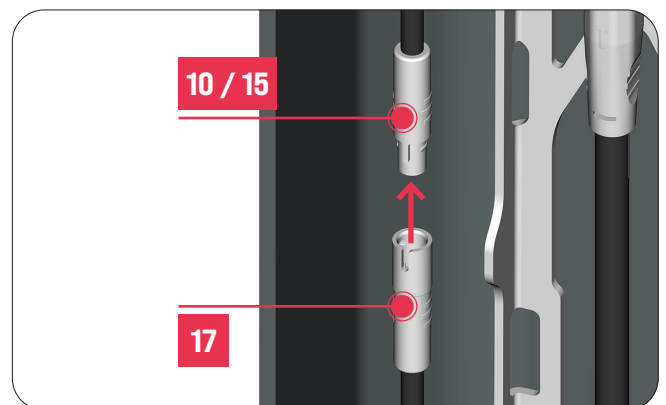
IMPORTANT: Before you can remove the drive unit, you must disassemble the chainring and cranks.

Step 1: Disconnecting components from the drive unit

- Remove the battery (ENERGY 430 / ENERGY 430 fix) from the e-bike to be able to disconnect the connected components from the drive unit (see chapter 7.1.2 "Removing ENERGY 430" or chapter 7.2.2 "Disassembling ENERGY 430 fix").
- Disconnect the connected display (LED Hub / Control Hub) from the drive unit.

To do so, pull the plug **[10]** or **[15]** on the display cable out of the socket **[17]** on the drive unit cable.

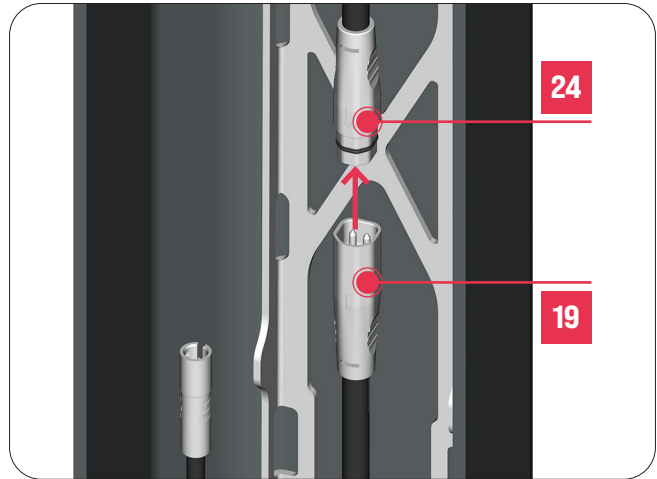
IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.



→ Disconnect the energy cable from the drive unit (applies only to models with ENERGY 430, not to models with ENERGY 430 fix).

To do so, pull the plug **(24)** on the energy cable out of the socket **(19)** on the drive unit cable.

IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.



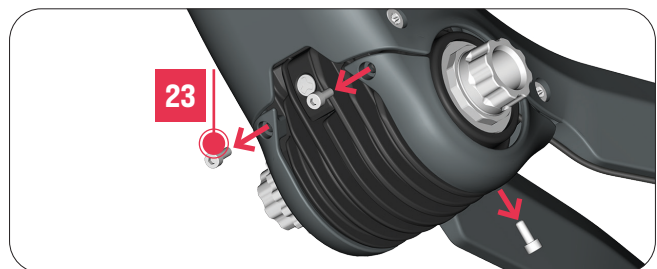
Step 2: Removing the cover of the drive unit



The cover illustration is exemplary and depends on the bike manufacturer.

→ Loosen the screw connection of the cover.

To do so, unscrew the screws **(23)** completely from the attachment points using the screwdriver and remove them.



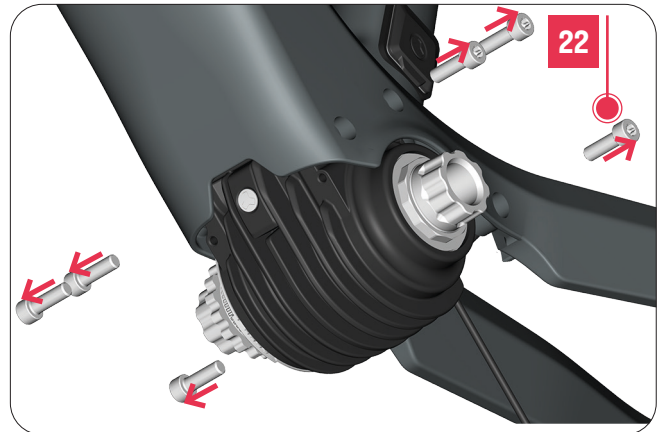
→ Remove the cover of the drive unit downwards from the drive unit.



Step 3: Loosen the screw connection of the drive unit

→ Loosen the screw connection of the drive unit on the e-bike.

To do so, unscrew all six screws **(22)** completely from the attachment points using the 5 mm Allen screwdriver and remove them.



Step 4: Disconnecting the drive unit from charge port and removing it from the frame

→ Release the drive unit manually from its holder on the frame.

Take care not to crush or bend any cables.

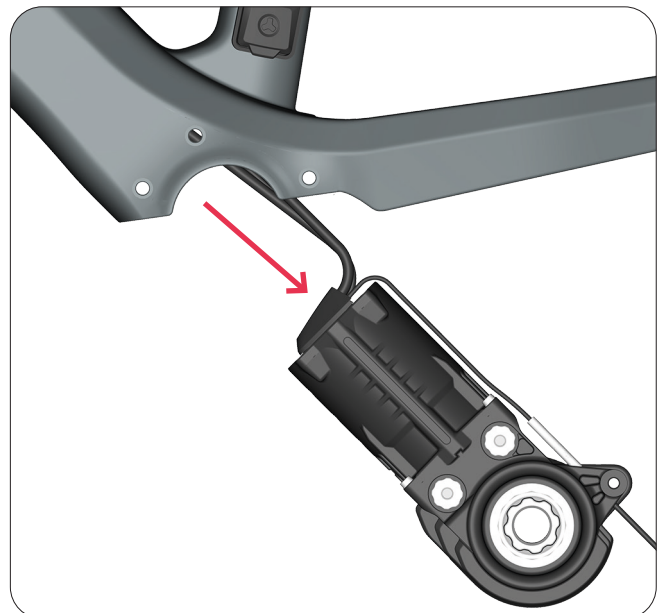
IMPORTANT: First remove the drive unit only so far that you can disconnect the connection to the charge port!

→ Disconnect the charge port from the drive unit.

To do so, pull the plug **(18)** on the drive unit cable out of the socket **(15)** on the charge port cable.

IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.

→ Then remove the drive unit completely.

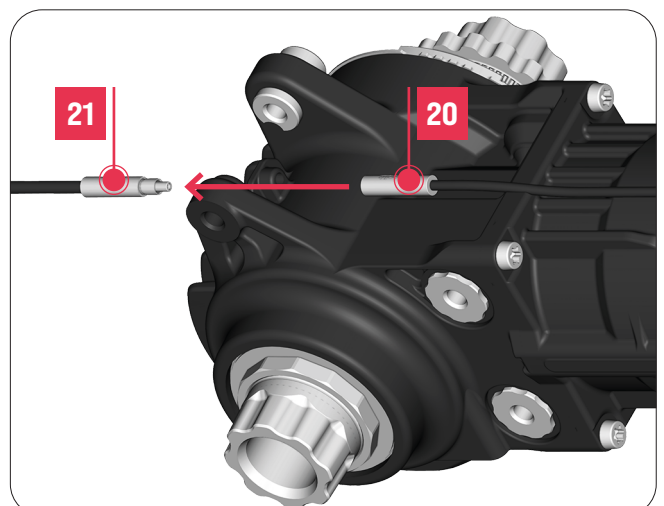


Step 5: Disconnecting speed sensor from the drive unit

→ Disconnect the speed sensor from the drive unit.

To do so, pull the plug **(21)** of the speed sensor out of the socket **(20)** on the cable of the drive unit.

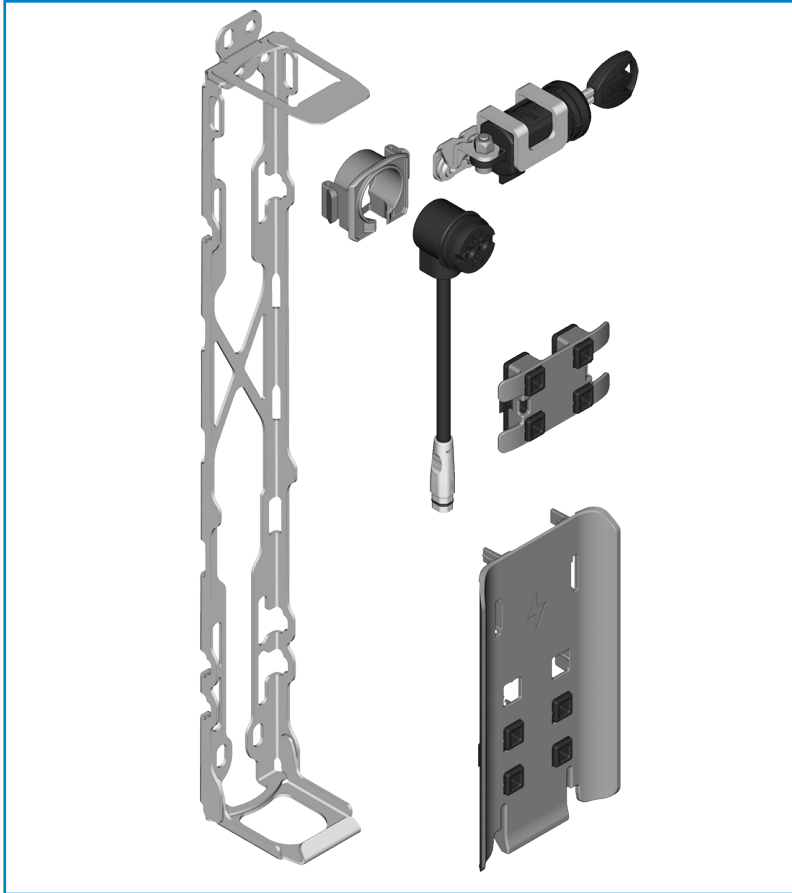
IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.



6 RACK 430



The rack is the mount for the (removable) ENERGY 430 and is only used for models with ENERGY 430. For models with a (fixed) ENERGY 430 fix, no rack is installed.



Component parts:

- Rack 430
- Rack cover
- Rack guide
- Energy cable (magnetic plug with cable)
- Mount (RoPD mount)
- Lock holder+ lock** (battery lock with key)

Connecting elements supplied:

- 4 cable ties (2.5×200 mm)
- 1 rack nut
- 2 nuts
- 4 screws*

Tools needed:

- Needle-nosed pliers
- Side cutter
- Screwdriver*
- Torque wrench*

* Screw type and size depend on the bike manufacturer.

** The equipment with lock holder + lock depends on the bike manufacturer. Depending on the model, no lock holder + lock are installed.

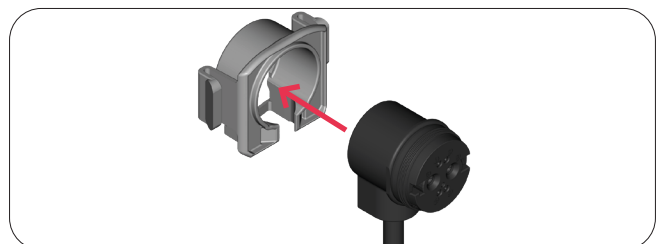
6.1 Installing the rack

NOTE

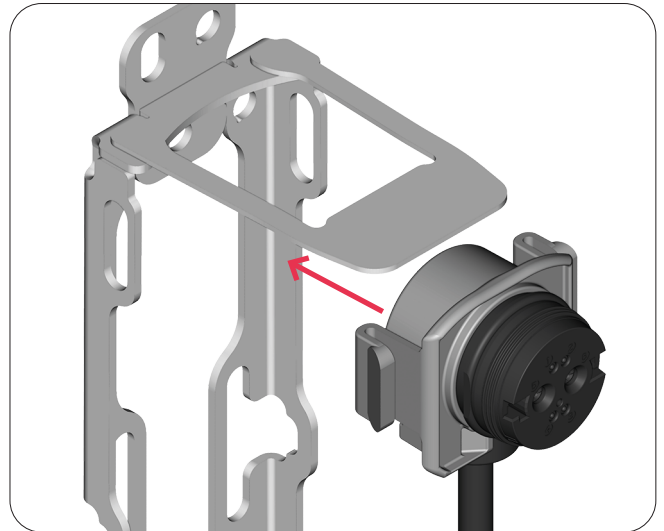
- ▶ Make sure that the cable is not kinked or under tension.
- ▶ Make sure that the cables are not damaged at sharp-edged frame openings/passages.
- ▶ Make sure that the cable is laid according to the manufacturer's specifications (cable routing, etc.).

Step 1: Preparing the rack

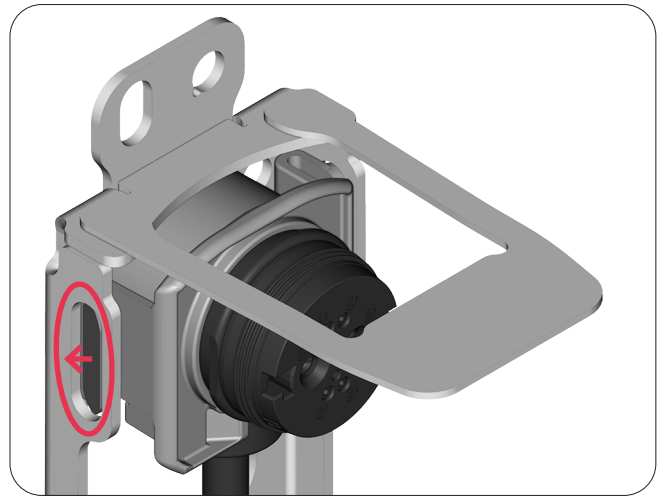
→ Insert the magnetic plug on the energy cable (= interface for ENERGY 430 in the e-bike) into the mount.



- Attach the energy cable to the rack.
To do so, insert the energy cable in its mount at the designated positions at the top of the rack.
The energy cable hangs down freely.



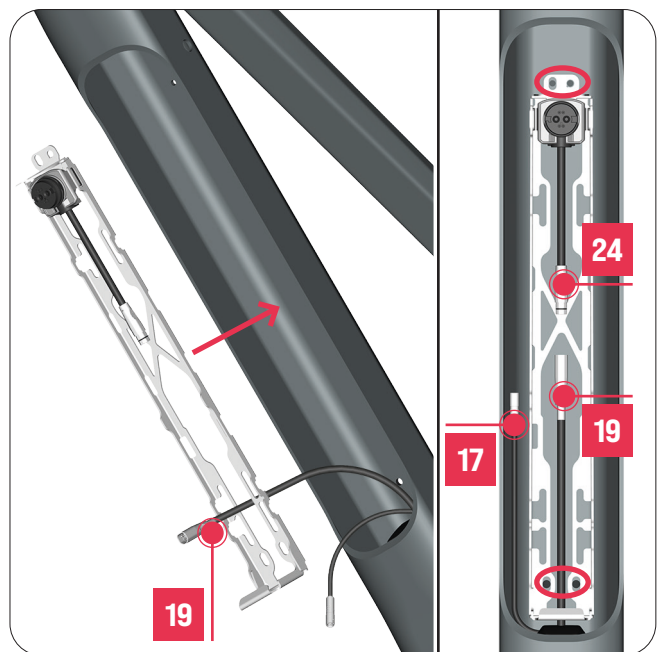
- Be sure to insert the mount properly into the rack.
The mount must snap securely into the rack, and the two edges of the mount on the left and right must sit in the openings provided in the rack.



Step 2: Inserting the rack into the down tube

- Insert the rack into the down tube of the e-bike.
- Guide the cable (coming from the drive unit) with the socket [19] at the bottom centered through the rack.
- Lay the cable (coming from the drive unit) with the socket [17] along the left side of the rack.
- Align the rack so that the four mounting points in the rack and e-bike frame are on top of each other.

IMPORTANT: When inserting and aligning the rack, take care not to crush or kink any cables.

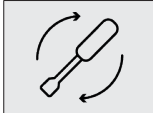


Step 3: Fixing the rack in the down tube



Always fix the rack in the down tube first at the top and then at the bottom.

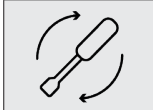
- Insert the lock holder **[25]** (with the lock inserted) between the rack and the rack nut **[26]**.
- Insert two screws **[27]** from the outside through the upper fastening points.
- Hold the rack nut **[26]** in position from the inside using the needle-nose pliers.
- Screw the two screws **[27]** into the rack nut **[26]** from the outside with the screwdriver.



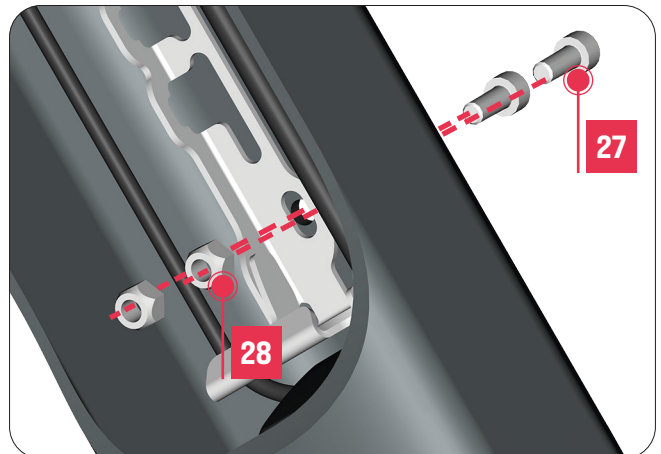
5 Nm



- Insert two screws **[27]** from the outside through the lower fastening points.
- Place a nut **[28]** on each of the two screws from the inside.
- Keep the nuts **[28]** fixed with the torque wrench and screw the two screws **[27]** into the nuts **[28]** from the outside with the screwdriver.

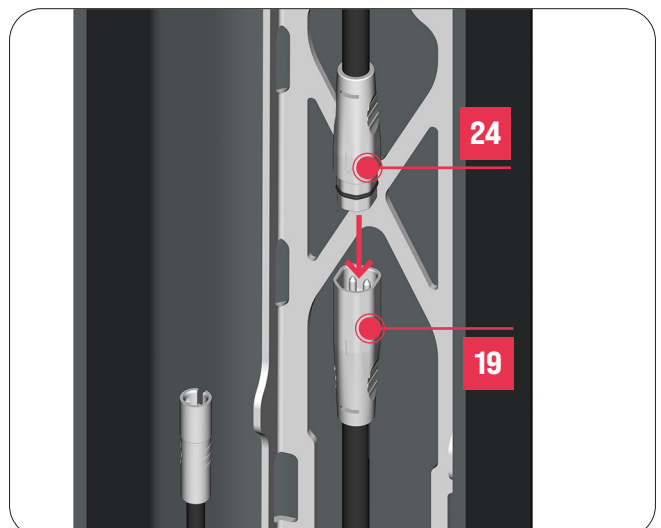


5 Nm



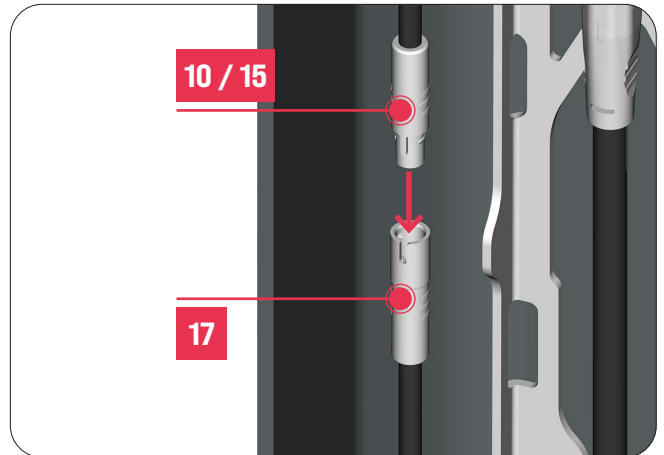
Step 4: Connecting the energy cable to the drive unit

- Connect the energy cable to the drive unit.
To do so, plug the connector **[24]** on the energy cable into the socket **[19]** on the drive unit cable.
- Check the cable length.
Place the excess cable in a loop directly above the drive unit so that the cables are not kinked and do not interfere with the insertion of ENERGY 430.



Step 5: Connecting the display to the drive unit

- Connect the display (LED Hub / Control Hub) to the drive unit.
To do so, plug the connector **(10)** or **(15)** on the cable of the display (LED Hub / Control Hub) into the socket **(17)** on the cable of the drive unit.
- Check the cable length.
Place the excess cable in a loop directly above the drive unit so that the cables are not kinked and do not interfere with the insertion of ENERGY 430.



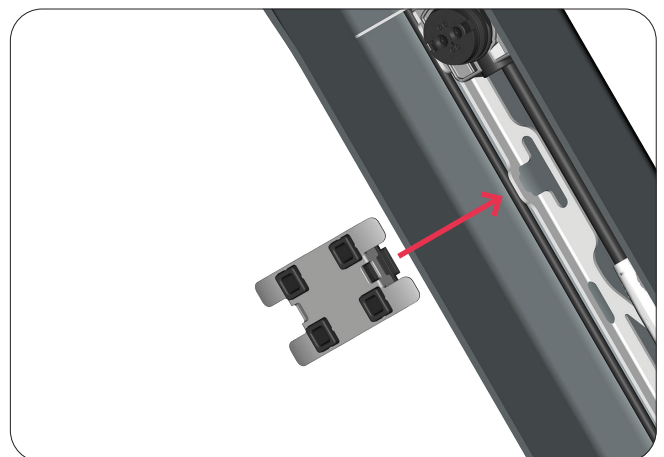
Step 6: Mounting the rack guide

- Sort all the cables that run through the down tube, right and left of the rack energy cable.
The cables must be straight and separate from each other, they must not be kinked and not twisted in themselves or with each other.
- Click the rack guide into its holder at the bottom of the rack.
To do so, push the rack guide firmly against the bottom end of the rack from above and then swing the top end in so that the two clips audibly snap into place in the rack.
If you twist the rack guide a bit and click the clips into the rack one after the other, this will make the assembly easier.
IMPORTANT: Be careful not to crush or damage the cables when inserting the rack guide.



Step 7: Inserting the rack cover and fixing it into place

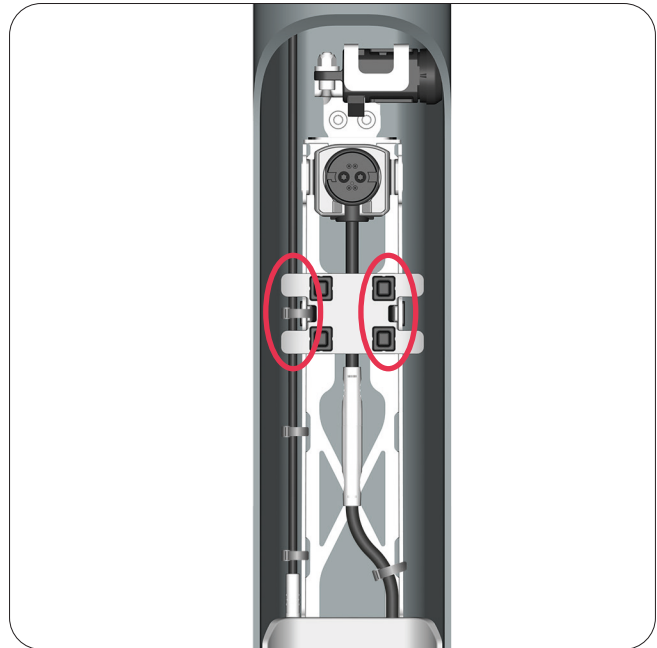
- Insert the rack cover at the top of the rack.



- Fix the rack cover and the left and right cables (together) to the rack with cable ties.
- Shorten the free ends of the cable ties with the side cutters.



If necessary, you can use the additional openings in the rack to fix the cables to the rack with additional cable ties.



6.2 Removing the rack

IMPORTANT: To remove the rack, you must first remove ENERGY 430 (see chapter 7.1.2 "Removing ENERGY 430").

Step 1: Removing the cable tie

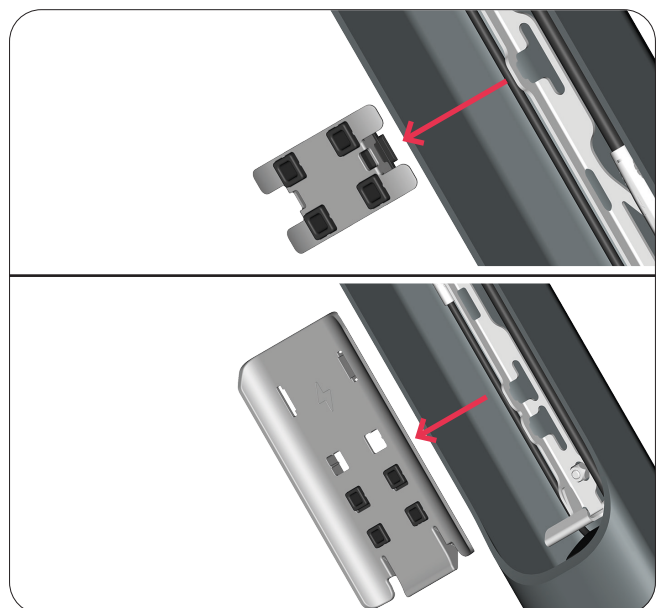
- Carefully cut the cable ties securing the rack cover and cables with the side cutters.

IMPORTANT: Be careful not to damage the cables when cutting the cable ties.

Step 2: Removing the rack cover and rack guide

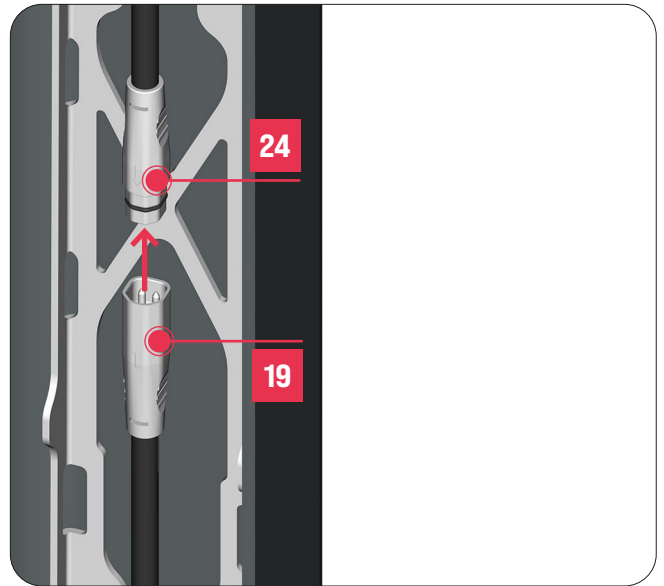
- Remove the rack cover (top) and rack guide (bottom) from the rack.

If you bend the clips of the rack guide slightly inwards with a flathead screwdriver, this will make removal easier.



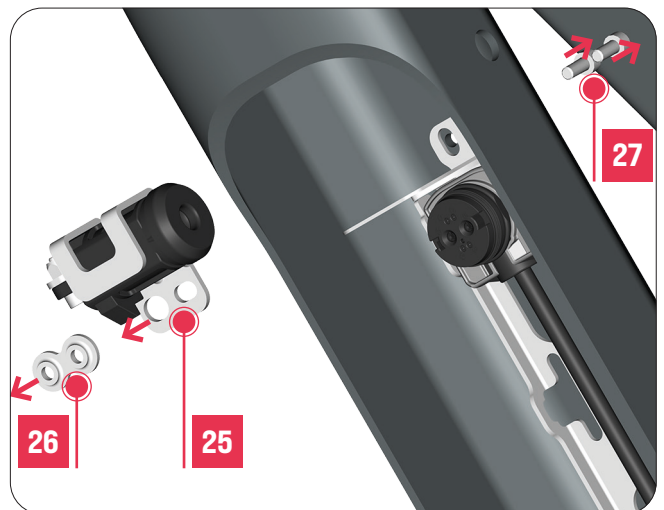
Step 3: Disconnecting the energy cable from the drive unit

- Disconnect the energy cable from the drive unit.
To do so, pull the plug [24] on the energy cable out of the socket [19] on the drive unit cable.
- IMPORTANT:** Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.

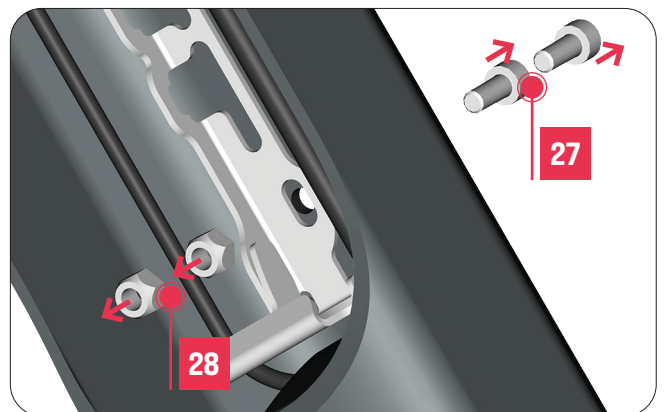


Step 4: Loosening the screw connection of the rack

- Loosen the upper screw connection of the rack.
To do so, hold the rack nut [26] with the needle-nose pliers and unscrew the screws [27] completely from the outside.
- Remove the screws [27], the rack nut [26] and the lock holder [25].



- Loosen the lower screw connection of the rack.
To do so, hold the nuts [28] in place from the inside with the torque wrench and unscrew the screws [27] completely from the outside.
- Remove the screws [27] and the nuts [28].
- Carefully remove the rack from the down tube.



7 ENERGY

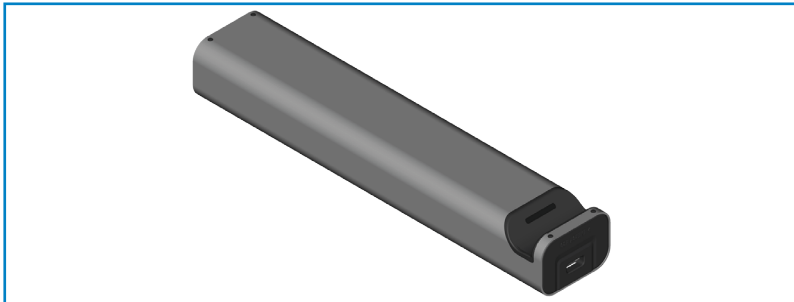


ENERGY is the battery for the drive system.

Depending on the individual configuration of the drive system / the composition of the drive components, ENERGY is either:

- a removable (by the user) battery [ENERGY 430].
- Or
- a fixed battery installed in the e-bike [ENERGY 430 fix].

7.1 ENERGY 430



Component parts:

- ENERGY 430

7.1.1 Using ENERGY 430

- First insert ENERGY 430 into the holder at the bottom of the down tube.
- Then swing the top end of ENERGY 430 into the frame.

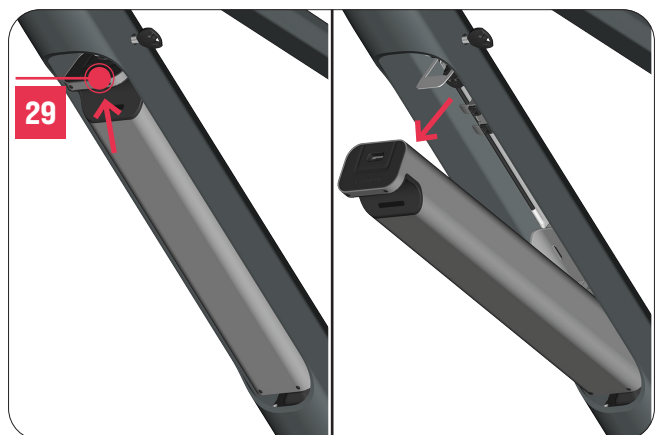
ENERGY 430 is automatically locked in place when ENERGY 430 is fully swiveled into the designated holder on the down tube and the interface on ENERGY 430 and the interface in the e-bike (= magnetic connector on the energy cable) are correctly meshed. An audible engagement sound ("click") is heard when the device engages.

IMPORTANT: The correct position of Energy 430 is only reached when there is an audible engagement sound (click).

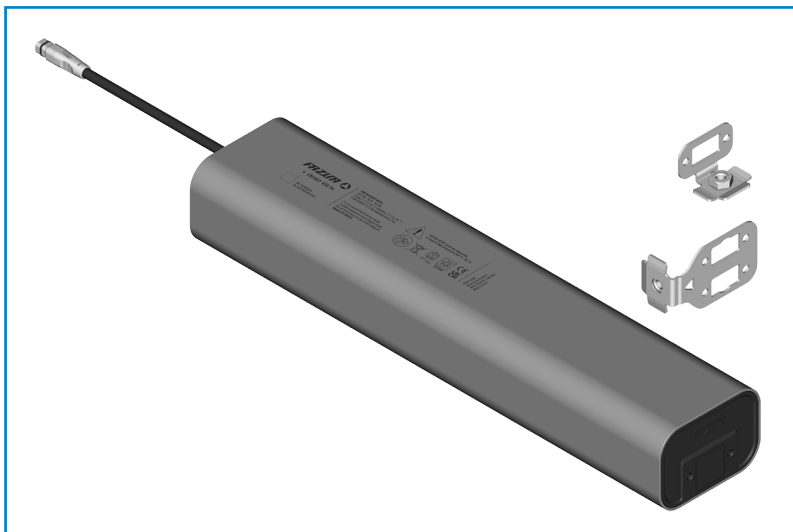


7.1.2 Removing ENERGY 430

- Secure ENERGY 430 with one hand.
- Reach into the cutout at the top of ENERGY 430 and press the elastic push button [29] in as far as it will go.
- Keep the push button pressed and swing ENERGY 430 forward out of the holder.
- Remove ENERGY 430 completely from the holder.



7.2 ENERGY 430 fix



Component parts:

- ENERGY 430 fix with cable
- Horizontal mount (mount h)
- Vertical mount (mount v)

Connecting elements supplied:

- 4 ISO 7380-1 M4×8 screws (mounts on ENERGY 430 fix)
- 2 M6 screws (mounts on e-bike)

Tools needed:

- Allen wrench 2.5 mm



ENERGY 430 fix comes with a couple of mounts (mount h or mount v). Which mount is used for mounting ENERGY 430 fix depends on the bike manufacturer.

7.2.1 Installing ENERGY 430 fix

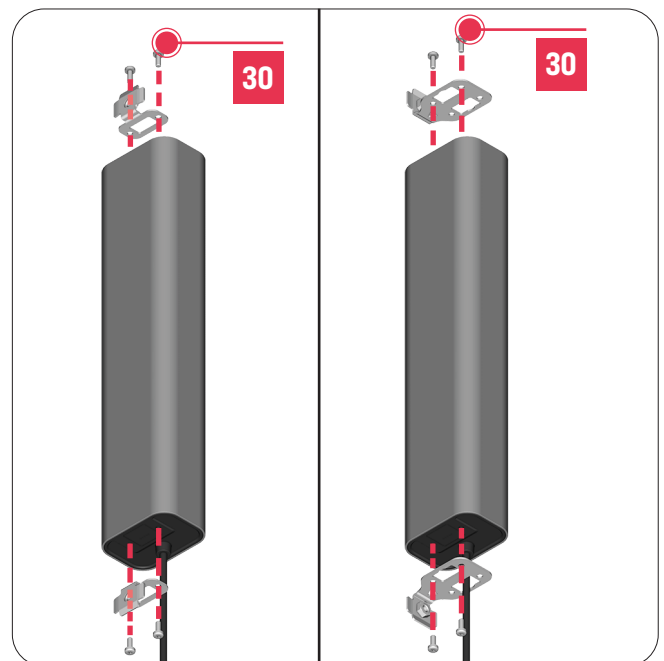
Step 1: Installing the ENERGY 430 fix mount

- Place the first mount (mount h / mount v) on the top of ENERGY 430 fix.
- Feed the cable of ENERGY 430 fix through the hole provided in the second mount (mount h / mount v) and then place the mount on the bottom of ENERGY 430 fix.
- Align the two mounts so that the mounting points of the mounts and ENERGY 430 fix are on top of each other.
- Fix the mounts to ENERGY 430 fix.

To do so, screw two screws **[30]** into the fastening points of both mounts using the 2.5 mm Allen key.

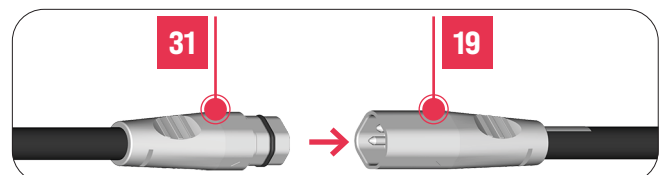


1.2 Nm [max.]



Step 2: Connecting ENERGY 430 fix to drive unit

- Connect ENERGY 430 fix to the drive unit. To do so, plug the plug **[31]** on the ENERGY 430 fix cable into the socket **[19]** on the drive unit cable.



→ Check the cable length.

Place the excess cable in a loop directly above the drive unit so that the cables are not kinked and do not interfere with the insertion of ENERGY 430.

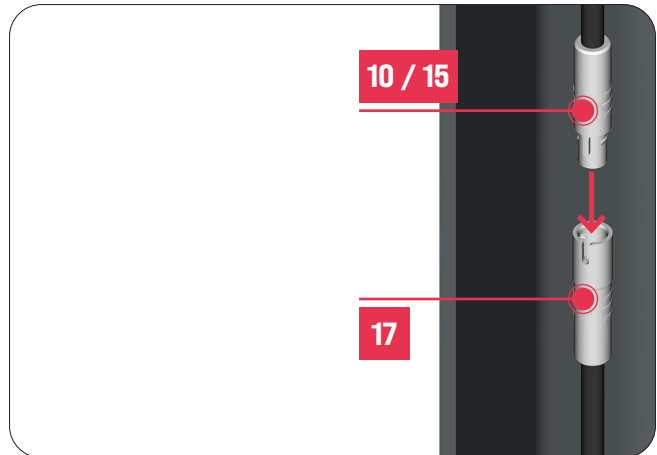
Step 3: Connecting the display to the drive unit

→ Connect the display (LED Hub / Control Hub) to the drive unit.

To do so, plug the connector **[10]** or **[15]** on the cable of the display (LED Hub / Control Hub) into the socket **[17]** on the cable of the drive unit.

→ Check the cable length.

Place the excess cable in a loop directly above the drive unit so that the cables are not kinked and do not interfere with the insertion of ENERGY 430 fix.



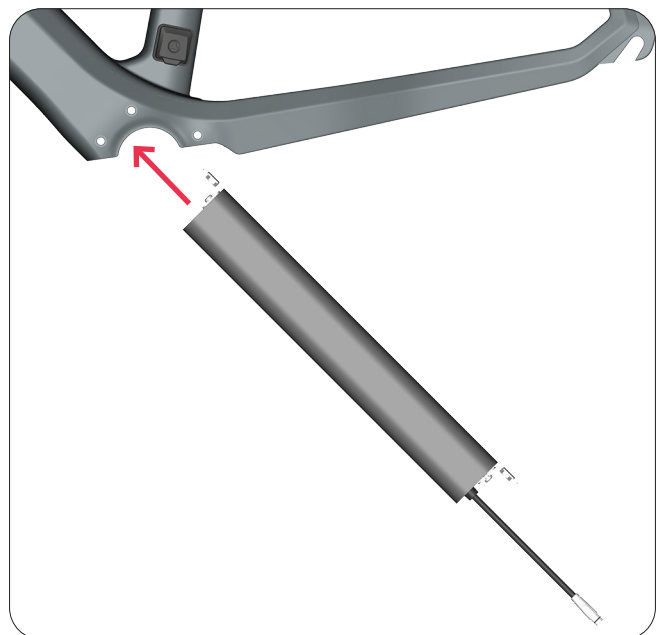
Step 4: Inserting and fixing ENERGY 430 fix into place

→ Carefully insert ENERGY 430 fix into the down tube of the e-bike.

→ Align ENERGY 430 fix so that the mounting points of the attached mounts (mount v / mount h) and the corresponding mounting points in the down tube are on top of each other.

→ Fix ENERGY 430 fix into the down tube.

To do so, screw the two screws **[32]** into the respective fastening point from the outside.

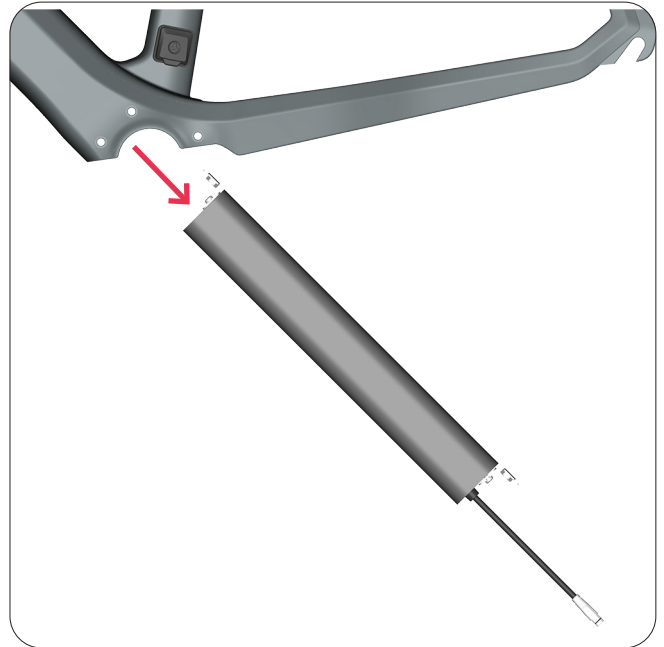


7.2.2 Disassembling ENERGY 430 fix

Step 1: Loosening the screw connection of ENERGY 430 fix in the e-bike

→ Loosen the screw connection of ENERGY 430 fix in the down tube.

To do so, unscrew the two screws [32] from the outside of the mounting points and remove them.



Step 2: Removing ENERGY 430 fix

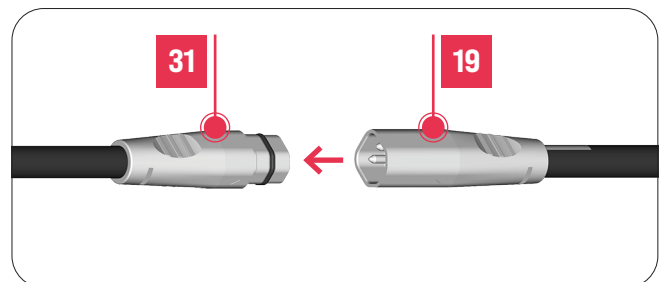
→ Carefully remove ENERGY 430 fix from the down tube.

Step 3: Disconnecting ENERGY 430 fix from the drive unit

→ Disconnect ENERGY 430 fix from the drive unit.

To do so, pull the plug [31] on the ENERGY 430 fix cable out of the socket [19] on the drive unit cable.

IMPORTANT: Do not pull on the cables, but grasp the plug and socket to avoid damaging the cables.



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