

ORBEA

BLUE PAPERS

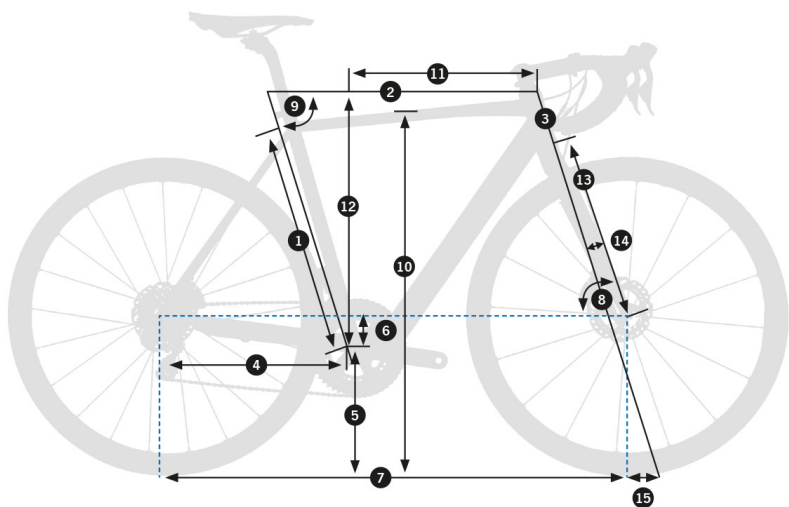
GAIN

TECHNICAL MANUAL

CONTENT

GEOMETRY	3
ERGONOMY	4
CHARACTERISTICS	5
OPTIONS	6
PARTS & HARDWARE	8
CABLE ROUTING	11
INSTRUCTIONS	17
IWOK ONE	21
IWOK TRIO	24
PROTOCOL	27
SOFTWARE EBIKEMOTION	29
MANTEINANCE	30
FRAME & MATERIAL	31
WARRANTY	32
ADDITIONAL INFORMATION	33

GEOMETRY



SIZE	XS	S	M	L	XL
1 - SEAT TUBE (C-T)	460	510	555	585	610
2 - TOP TUBE (EFF)	522	546	560	574	595
3 - HEAD TUBE	109	127	150	176	203
4 - CHAINSTAY	430	430	430	430	430
5 - BB HEIGHT	281	281	283	283	285
6 - BB DROP	70	70	68	68	66
7 - WHEELBASE	1016	1022	1037	1051	1067
8 - HEAD ANGLE	71	72	72	72	72,3
9 - SEAT ANGLE	75	74	74	74	73,5
10 - STANDOVER	754	782	815	829	876
11 - REACH	378	387	395	402	410
12 - STACK	535	555	575	600	625
13 - FORK LENGTH	400	400	400	400	400
RAKE	51	51	51	51	51
WHEEL SIZE	683	683	683	683	683

ERGONOMY



Photo for reference purposes only. Individual components may not correspond with the final assembly

SIZE	CRANK	STEM	HANDLEBAR
XS	170	90	400
S	170	100	420
M	170	100	420
L	172	110	440
XL	175	120	440

* The handlebar size is centre-centre.

HEIGHT (cm)	HEIGHT (in)	SIZE
<160		XS
160-170		S
170-180		M
180-190		L
>190		XL

* Estimated measurements.

CHARACTERISTICS

DIRECTION	1" 1/8 SEMI-INTEGRATED
BB	BB68 THREADED
FRONT DERAILLEUR	C/CLAMP Ø31,8
FRONT DERAILLEUR TP/DP	DP
FD ANGLE	63°- 66°
SEAT POST DIAMETER	DIAM 27, 2 MM
SEAT CLAMP	INTERNAL DIAM 31,8 MM
DROPOUT	ALL ROAD E-BIKE
CHAINSTAY PROTECTOR	11160033
OTHER PROTECTORS	NO
CABLE TYPE	ESTANDAR/EBIKEMOTION
REAR HUB LENGHT	135 MM.

OPTIONS

BRAKE	V-BRAKE	NO
	DISC BRAKE	YES
	REAR BRAKE IS/PM+DIAMETER DISC	FLAT MOUNT 140/160 DEL/TRAS (POST MOUNT C/ADAPTADOR)
	CALIPER BRAKE	NO
LUGGAGE	BAG OPTION IN TOP TUBE	NO
	BOTTLE CAGE	DT AND ST [ALL SIZES]
	OPTION AERO AND STANDARD BOTTLE	NO
	REAR LUGGAGE OPTION	YES
	MUDGUARD OPTION	YES
	KICKSTAND	NO
GEARS	11 SPEED	YES
	DOUBLE CRANK	SI (MAXIMUN BIG CHAINRING 53, MAXIMUM SMALL RING 46)
	COMPACT CRANK (34X50T) (ROAD)	YES
	TRIPLE CRANK	NO
WHEELS	MAXIMUM SIZE	700
TYRES	MAXIMUM SIZE	700X40C
CABLE ROUTING	MECHANICAL SYSTEM (W/INTERNAL CABLE ROUTING)	CABLEADO INTERNO EN TI
	ELECTRONIC DI2 SYSTEM (W/INTERNAL CABLE ROUTING)	NO
	EXTERNAL SHIMANO BATTERY (IN LEFT CHAINSTAY)	NO
	CAMPAGNOLO EPS	NO
POWER METERS	SRAM QUARK	NO
OTHERS	UCI	NO

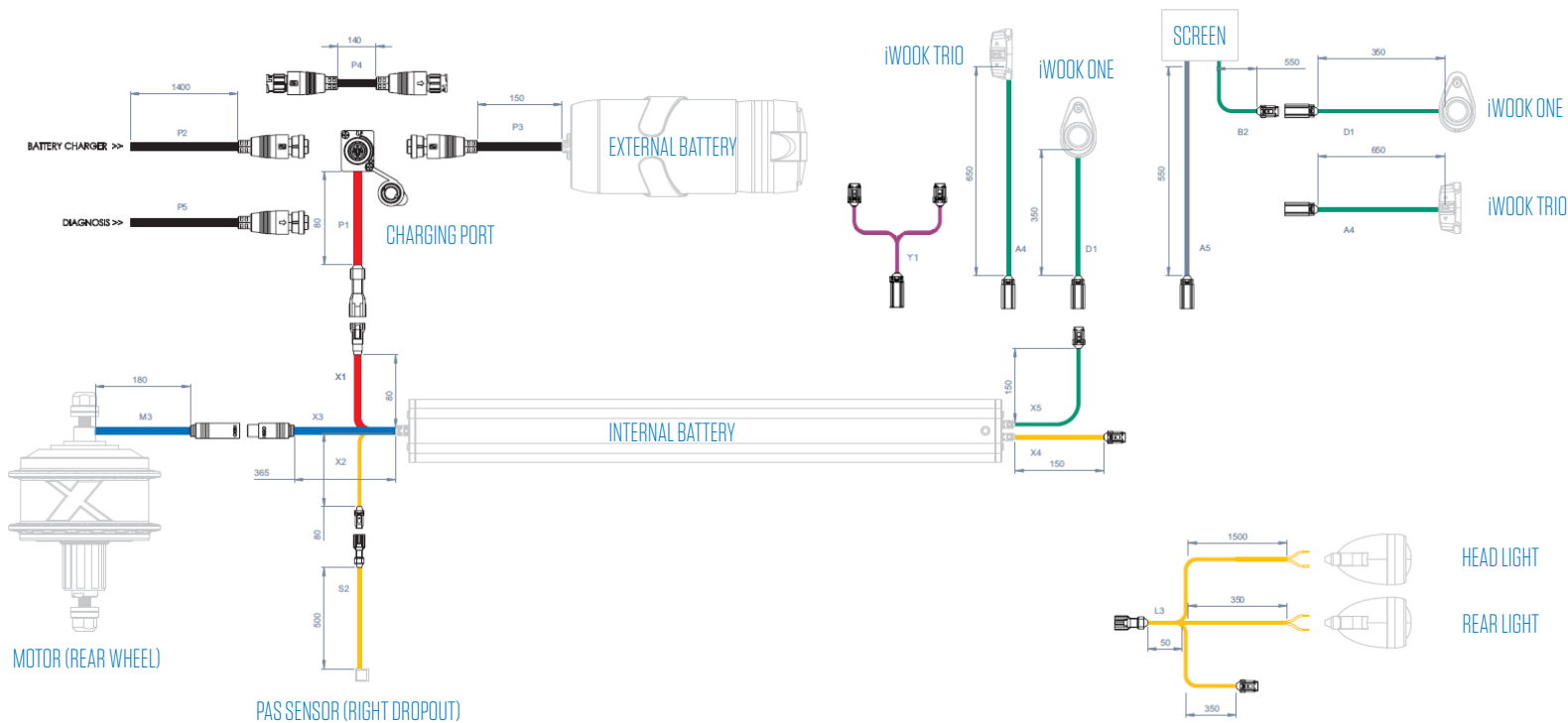
OPTIONS

Groupsets

ROAD	
SHIMANO	
SHIMANO DI2	NO
SHIMANO DI2 DISC	NO
SRAM	
SRAM DISC	YES (WITH DROPOUTS MODIFIED IN 57°)

PARTS & HARDWARE

X35 of eBIKEMOTION



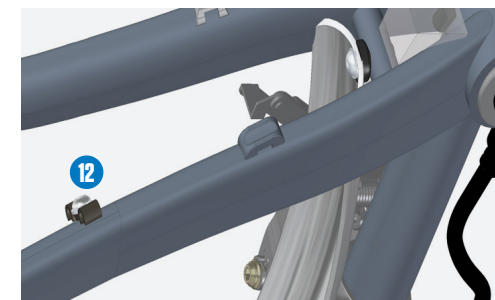
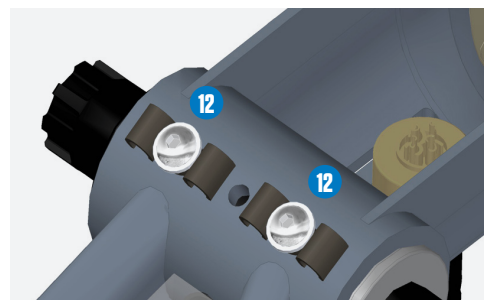
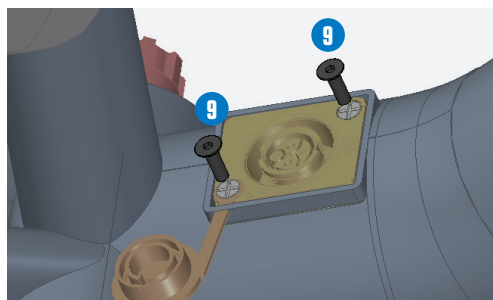
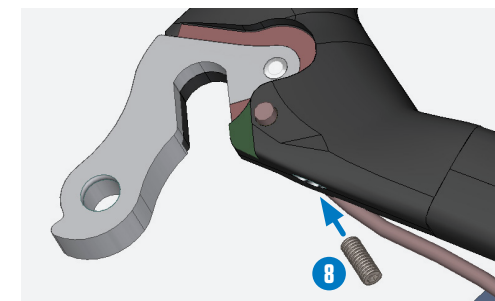
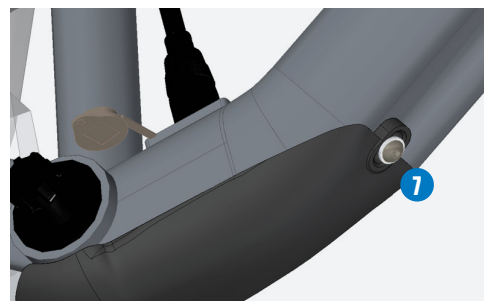
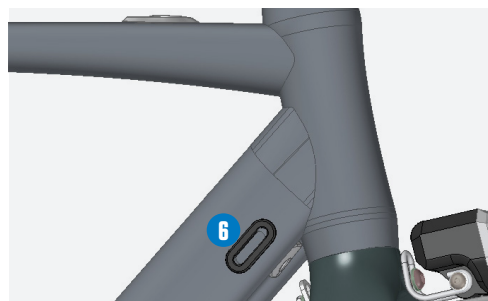
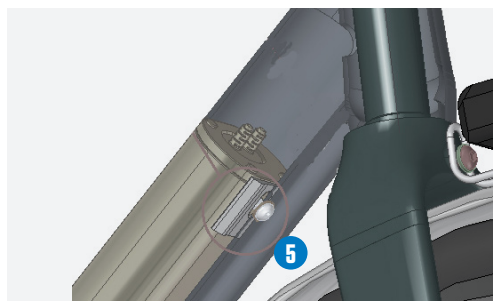
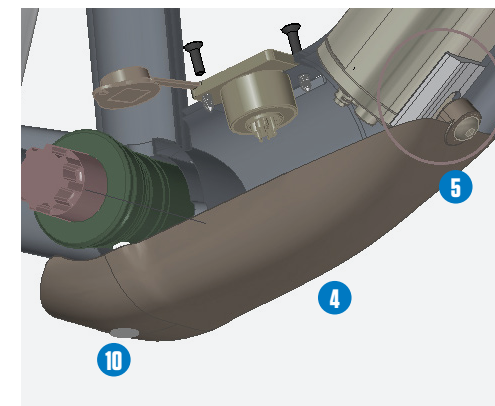
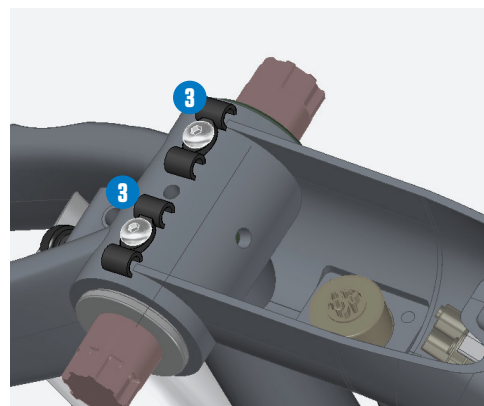
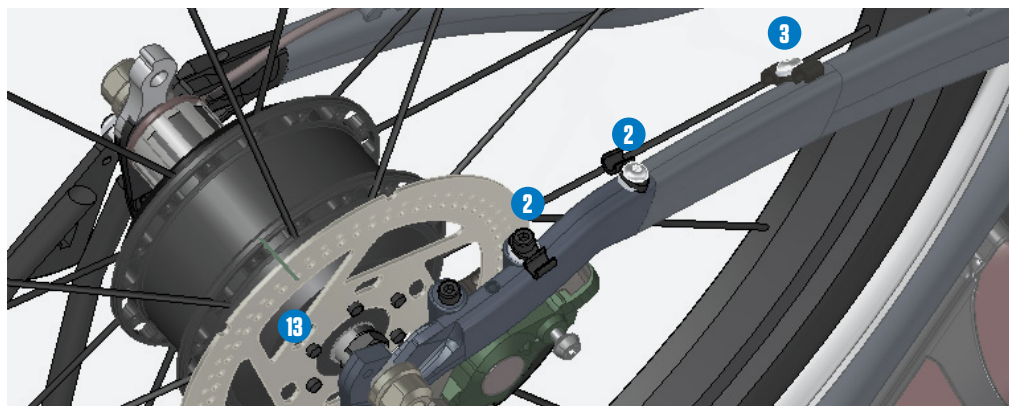
PART NUMBER	ORBEA DESCRIPTION
	X35 BATTERY
● P1	CHARGING PORT AND CONNECTION
● X1	CHARGING PORT TO BATTERY CONNECTION
● P2	BATTERY CHARGING CABLE
● P5	DIAGNOSIS CABLE
● P4	X35 EX WIRE

PART NUMBER	ORBEA DESCRIPTION
● P3	EXTERNAL BATTERY
● X3	BATTERY TO MOTOR CONNECTION
● M3	BATTERY CONNECTION CABLE AND MOTOR
● X2	BATTERY CONNECTION CABLE TO SENSOR
● S2	SPEED SENSOR CONNECTION

PART NUMBER	ORBEA DESCRIPTION
● D1	IWOK ONE START BUTTON AND CABLE
● X5	IWOK ONE START BUTTON TO BATTERY CABLE
● A4	IWOK TRIO START BUTTON AND CABLE
● A5	SCREEN CABLE
● Y1	"Y" CONNECTION FOR IWOK TRIO AND IWOK ONE

PARTS & HARDWARE

VARIOUS & CAPS



PARTS & HARDWARE

VARIOUS & CAPS



PART NUMBER	REFERENCE	ORBEA DESCRIPTION
1	15430168	DROPOUT GAIN 2018
2	11001181	CABLE CLIP 5,5 FOR 1 CABLE
3	11001182	CABLE CLIP 5,5 FOR 2 CABLES
4	11000405	BOTTOM COVER GAIN
5	11200460	GUIDE FOR BATTERY GAIN
6	11001161	RUBBER CAP 3 MM KEYHOLE 30X10
7	12300019	SCREW M5X20 ISO 7380 INOX
8	12301058	SETSCREW M4X10 DIN 916 INOX
9	12309075	SCREW INOX M3X12 DIN 7911 BLACK
10	12300018	COUNTERSINK SCREW M5X25 DIN 7991 INOX
11	12306022	SCREW M5X10 ISO 7380 INOX
12	12301078	SCREW M5X8 ISO 7380 INOX
13	12301087	SCREW M5X6 TORX
14	12321020	WASER M5 DIN 125 INOX

CABLE ROUTING

MECHANICAL

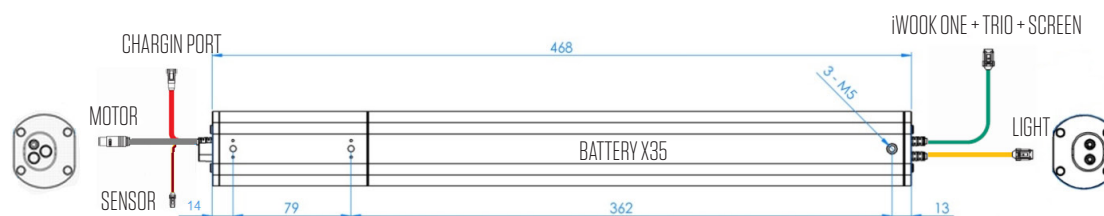
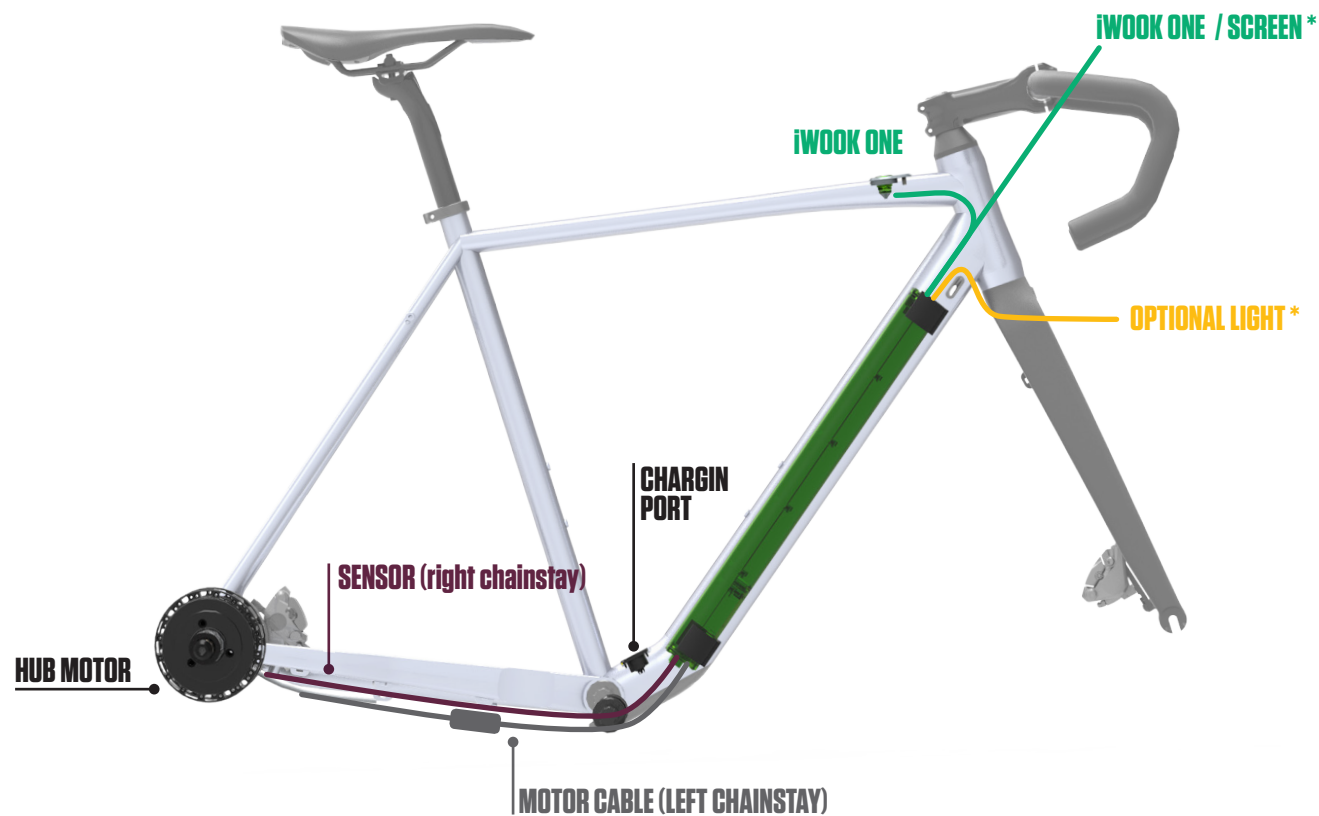


1/ Insertion of the front and rear derailleur.



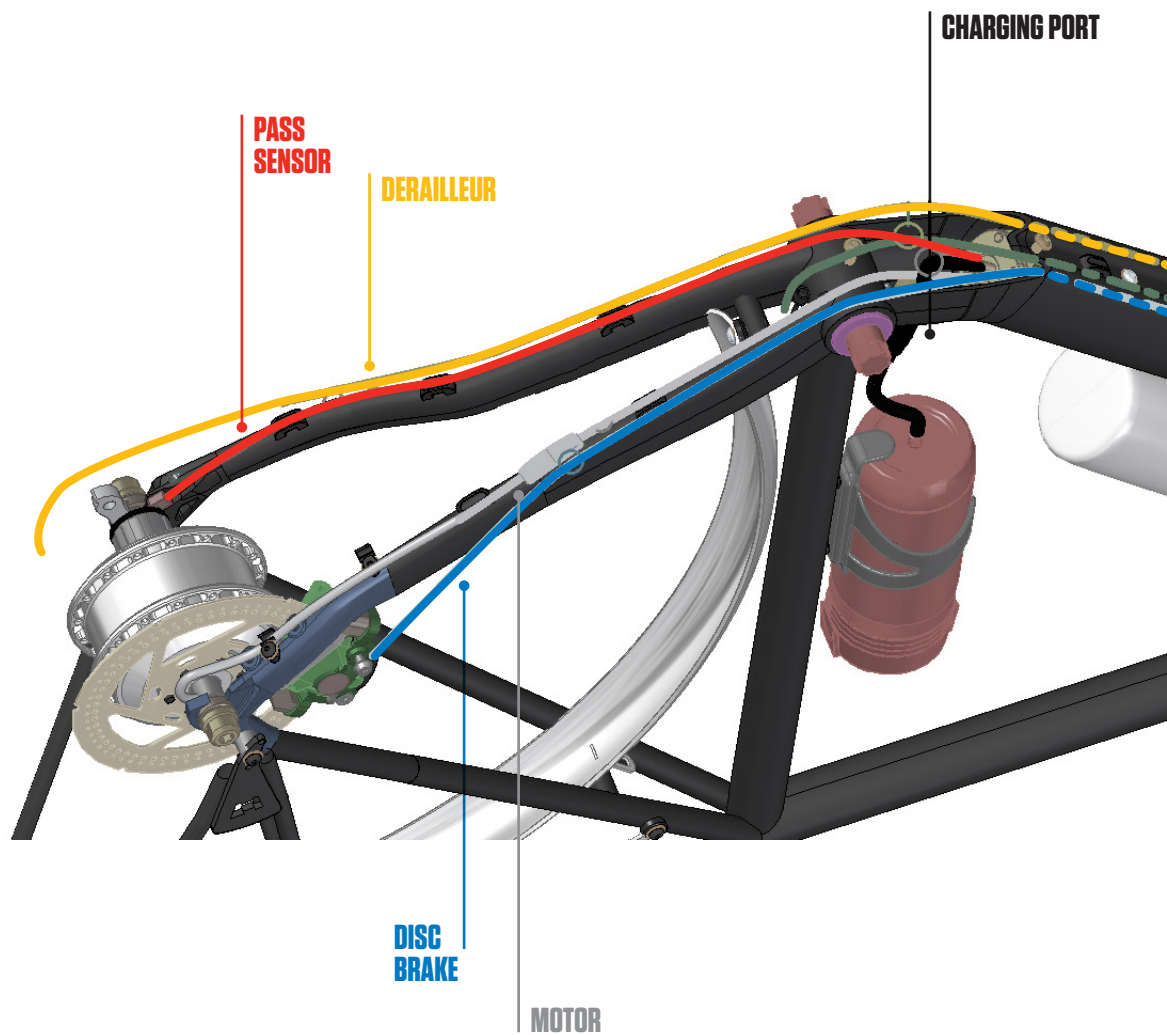
CABLE ROUTING

X35 SYSTEM



CABLE ROUTING

X35 BATTERY

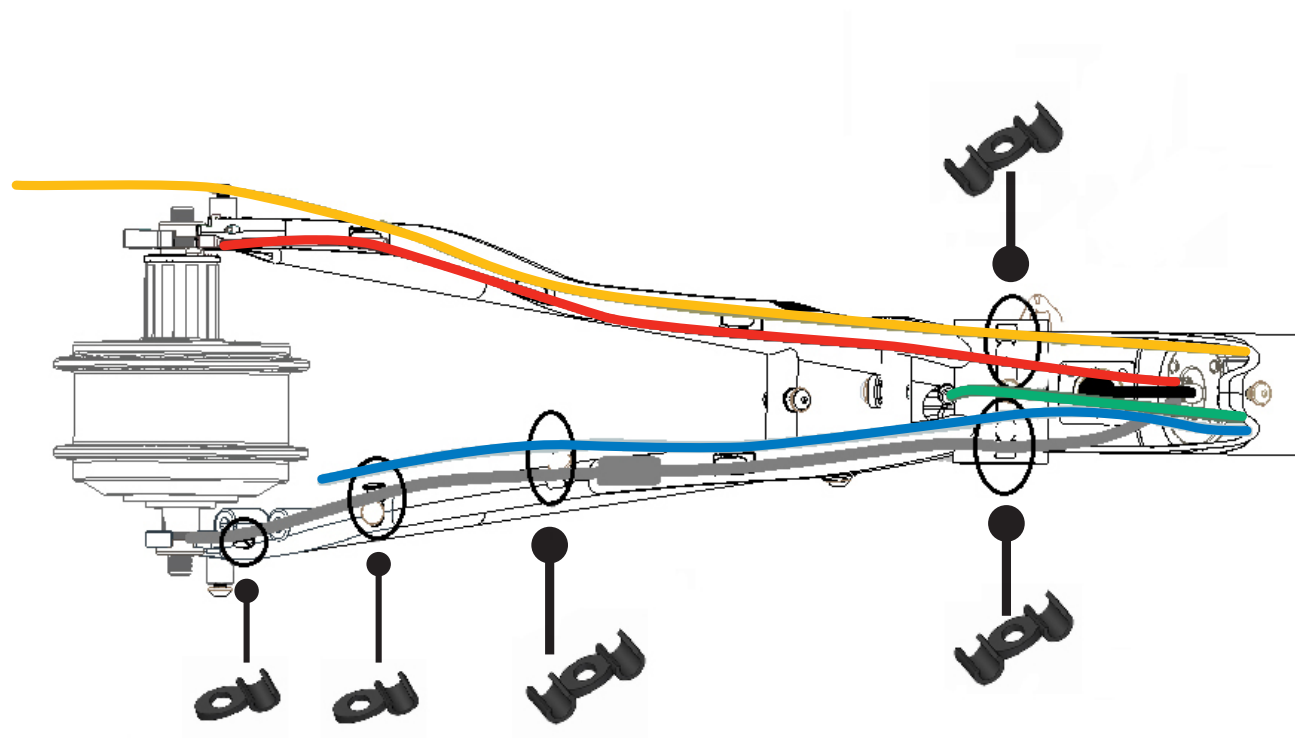


*

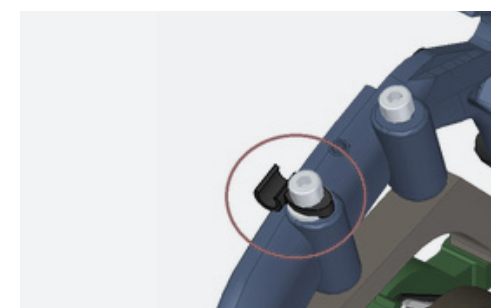
The X35 battery has 2 cables in one end (that will stay in the top part of the frame) and 3 in the opposed end.

CABLE ROUTING

CABLE ROUTING ON THE BASE

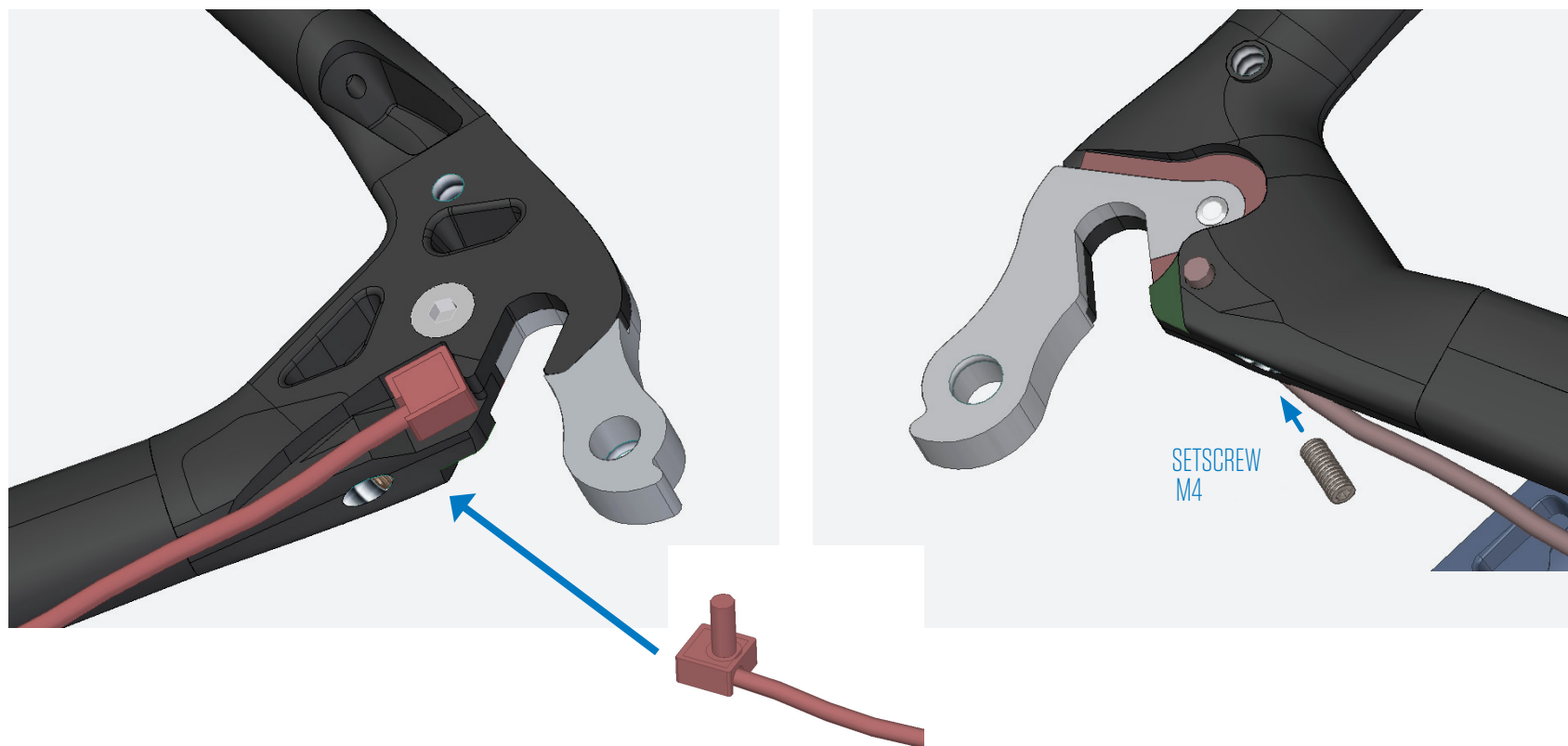


1/ cable clip 5,5 for 2 cables
2-3/ cable clip 5,5 for 1 cable



CABLE ROUTING

P.A.S SENSOR PLACEMENT

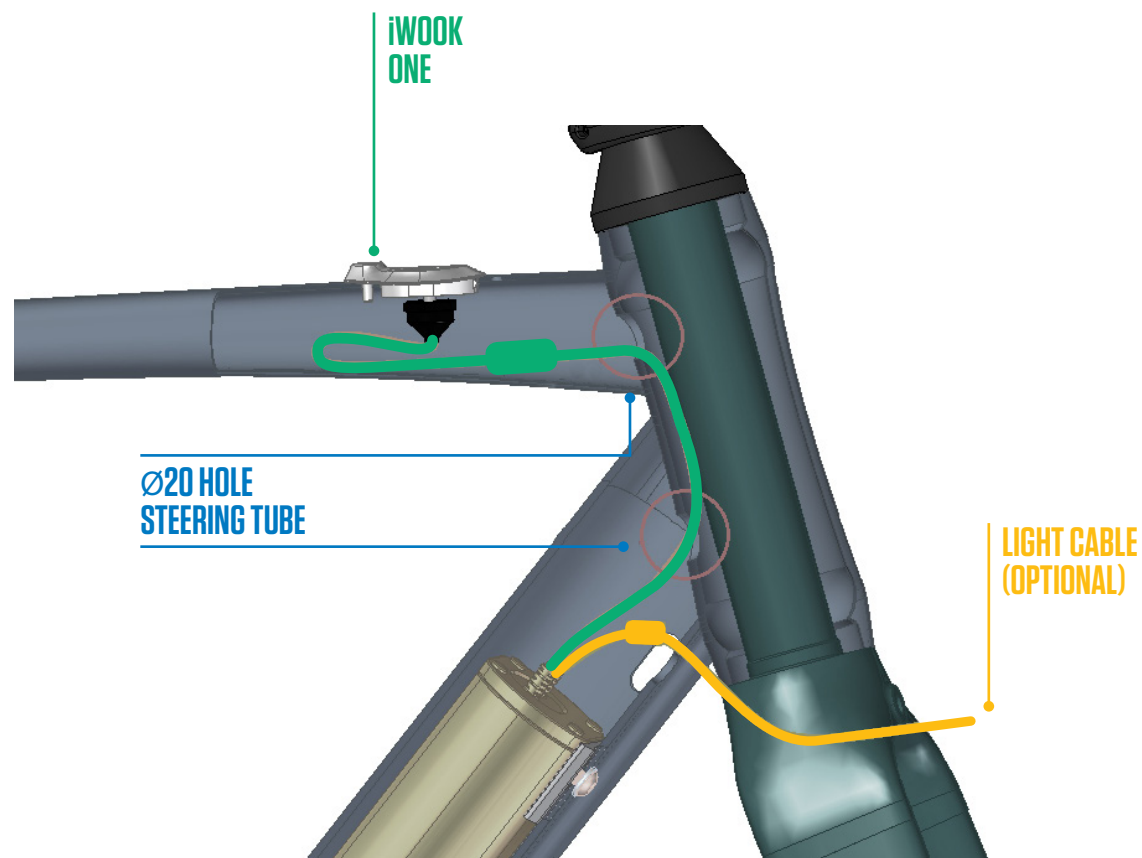


1- Place de sensor in the specific whole in the inner side of the drop-out, inserting the pivot it's housing.

2- Then, fix it with the setscrew (M4x10)

CABLE ROUTING

IWOC ONE CABLE ROUTING

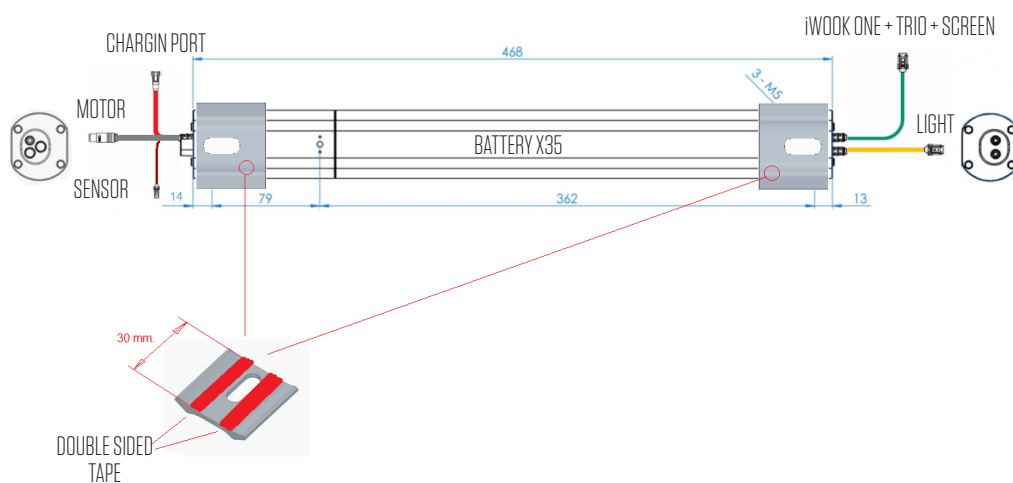


*

The cable routing for the start button IWOC ONE will be done through the steering tube.

INSTRUCTIONS

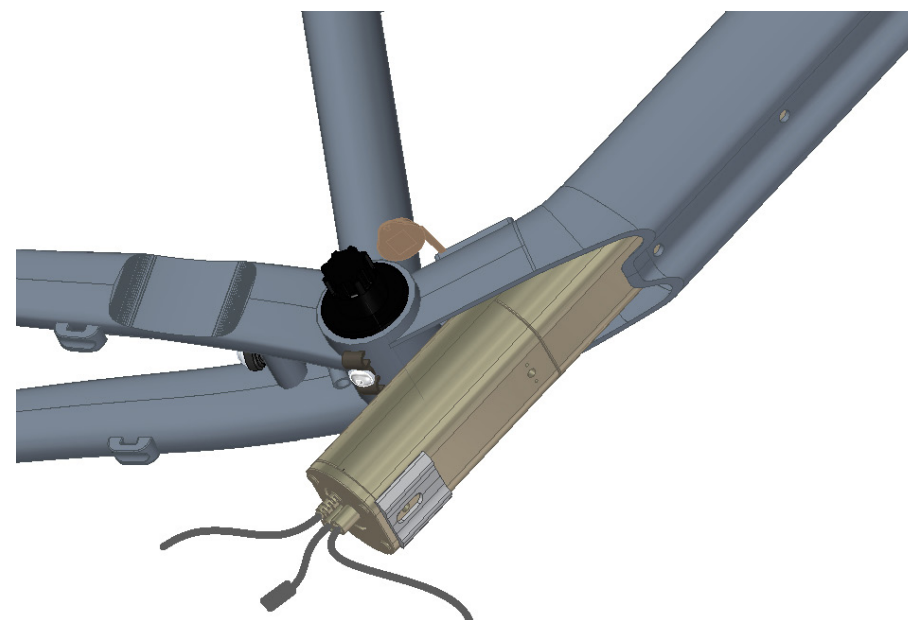
GUIDE PLACEMENT IN THE BATTERY



*
First, attach the guides in both ends of the battery with the double sided Scotch tape before attaching it to the frame.

INSTRUCTIONS

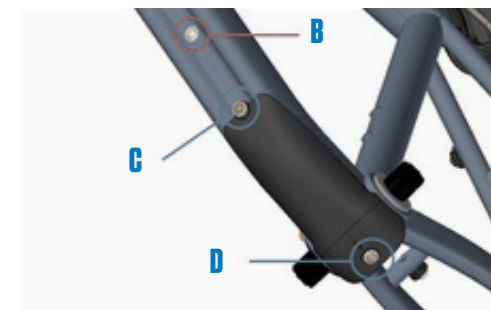
BATTERY PLACEMENT IN THE FRAME



*
Once the guides are attached in the battery, insert it into the frame with 2 cables in one end and 3 in the other (as shown in picture above) until matching the 3 frame holes with the 3 in the battery.

INSTRUCTIONS

BATTERY PLACEMENT AND COVER

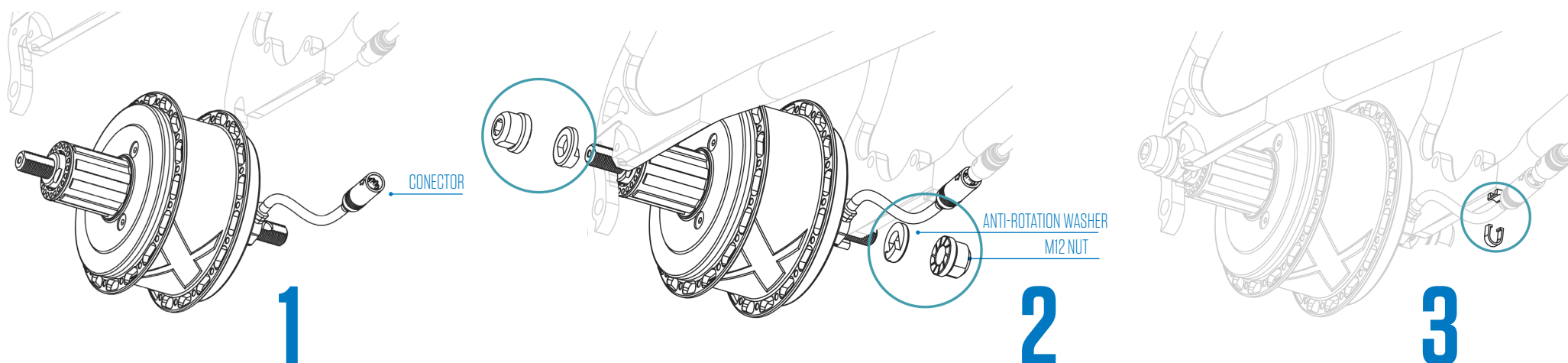


1/ Secure the battery to the frame by the points A and B with the M5x10 DIN 7380 screws and rout the pertinent cables (dérailleurs and disc brake).

2/ Later, fix the bottom cover by the points C and D, using the provided M5x20 INOX (DIN 7380) and M5x25 INOX (DIN 7991) respectively.

INSTRUCTIONS

REAR WHEEL ASSEMBLY / DISMANTLING

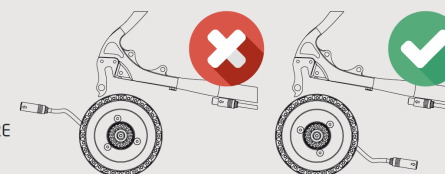


1/ Place the wheel in the frame, making sure the power cable stays between the chainstay and seat stay (fig.1) for a easy connection later on.

2/ Place the anti-rotation washers in both axle ends and tighten the M2 nuts with an 8 Allen key at the right torque (Min. 18Nm/ max. 25Nm.)



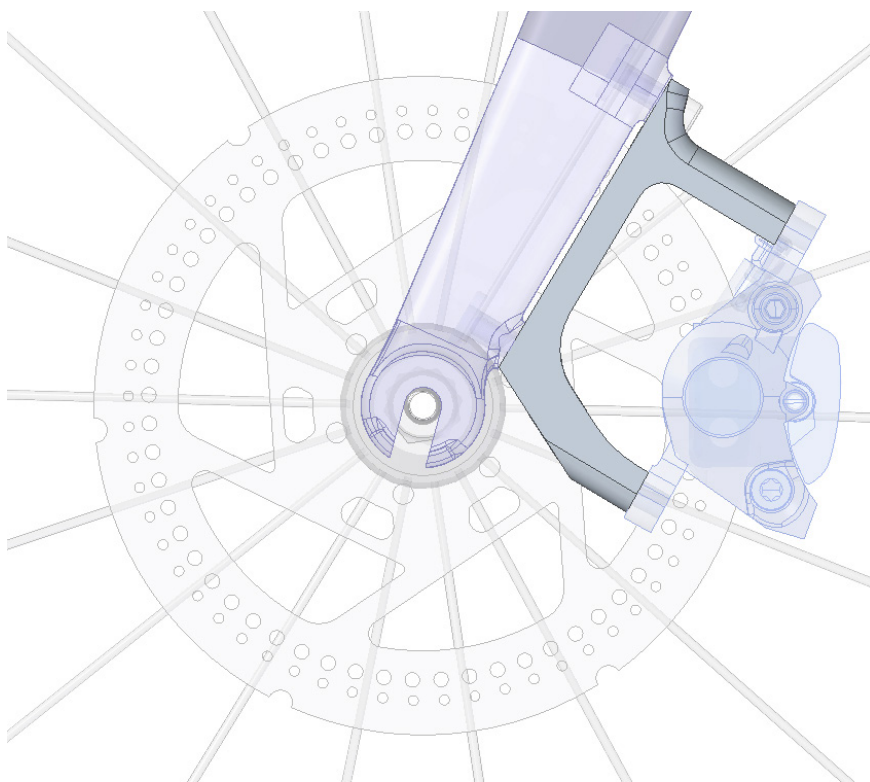
- THE MOTOR CABLE MUST FACE FORWARD
- EL CABLE DEL MOTOR DEBE ESTAR ORIENTADO HACIA ADELANTE
- DAS MOTORKABEL MUSS NACH VORNE ZEIGEN
- LE CABLE DU MOTEUR DOIT ETRE ORIENTÉ VERS L'AVANT
- IL CAVO DEL MOTORE DEVE ESSERE ORIENTATO VERSO LA PARTE ANTERIORE
- O CABO DO MOTOR DEVE ESTAR ORIENTADO PARA A FRENTE



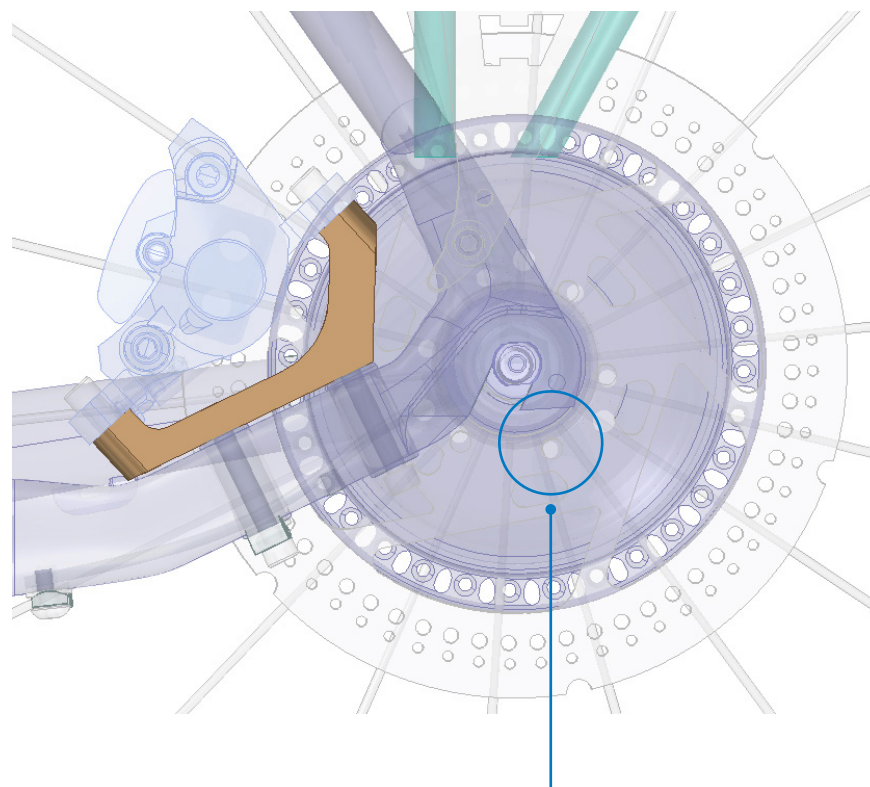
INSTRUCTIONS

FLAT MOUNT-POST MOUNT / REAR DISC INSTALLATION

FRONT



REAR



1/ The rear disc brake must be installed with specific M5x6 TORX screws. (ref. 12301087)

IWOK ONE BUTTON

OPERATING INSTRUCTIONS

1 TURNING ON AND OFF THE BICYCLE'S ELECTRICAL SYSTEM



2 CHANGING THE LEVEL OF ASSISTANCE

Short press the button and the RGB LED will blink, indicating the current assistance mode. If you short press it again while the LED is blinking, you will change the assistance level cyclically.

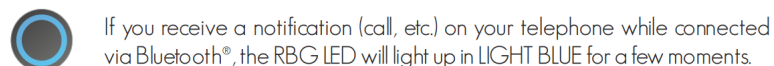
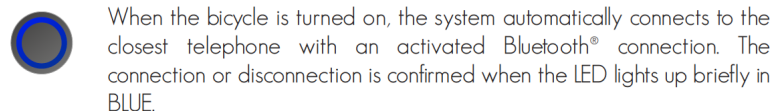


3 TURNING ON/OFF THE LIGHTS

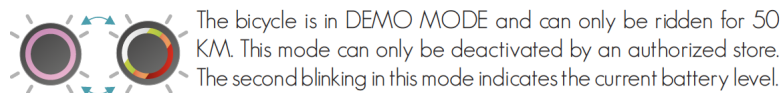
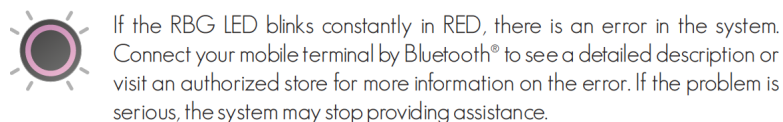
Short press the button and while the LED is blinking, long press the button. The LED will light up in YELLOW to confirm you want to turn on/off the lights.



4 BLUETOOTH PAIRING AND NOTIFICATIONS

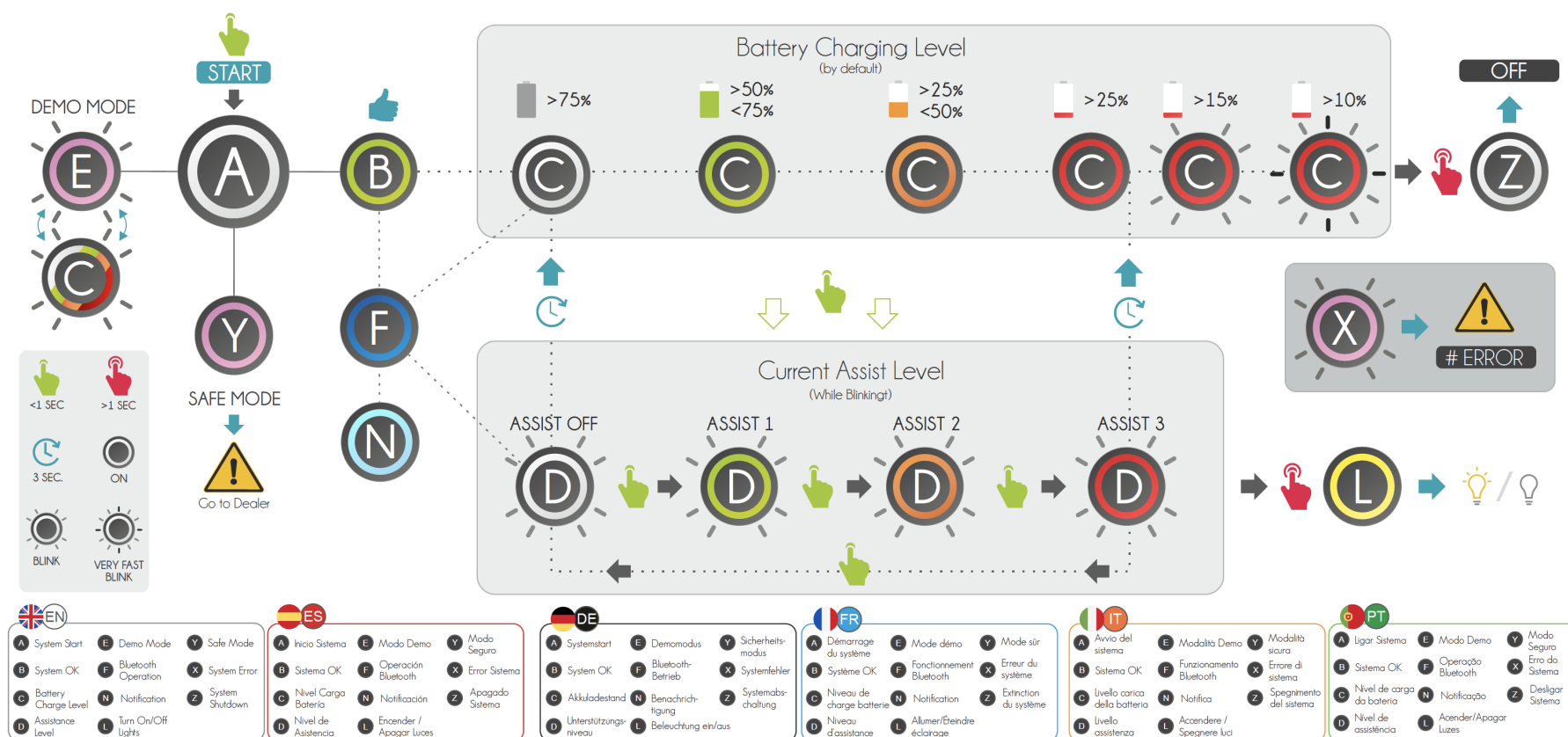


5 SYSTEM ERROR AND SPECIAL MODES



IWOK ONE BUTTON

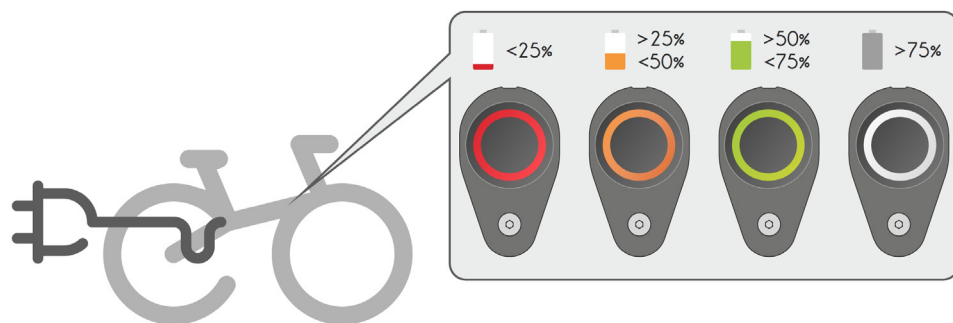
GENERAL LIGHT SCHEME AND MEANING



IWOK ONE BUTTON

LIGHT SCHEME WHEN CHARGING

Connect the charger first to a power outlet and then to the charging port on the bicycle. The light on the iWoc® ONE will turn on automatically. While charging, the intensity of the LED will vary cyclically, indicating by color the current level of battery charge. The battery will be charged (>98%) when the LED remains lit in white.



IWOK TRIO BUTTON

OPERATING INSTRUCTIONS

1 TURNING ON AND OFF THE BICYCLE'S ELECTRICAL SYSTEM



2 CHANGING THE LEVEL OF ASSISTANCE

Short press the button and the RGB LED will blink, indicating the current assistance mode. If you short press it again while the LED is blinking, you will change the assistance level cyclically.



3 TURNING ON/OFF THE LIGHTS

Short press the button and while the LED is blinking, long press the button. The LED will light up in YELLOW to confirm you want to turn on/off the lights.

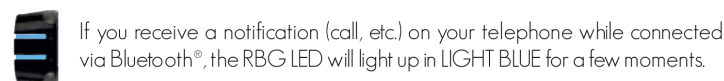
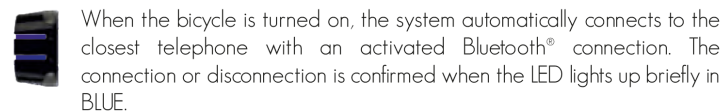


4 WALK MODE

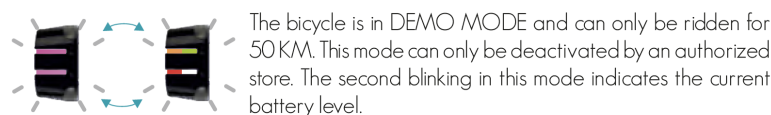
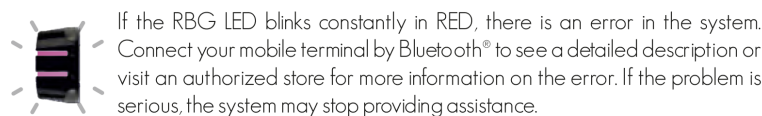
By pressing and holding down the B button, the LED will flash WHITE, and the bicycle will advance at a constant speed of 5km/h, as long as the button remains depressed.



5 BLUETOOTH PAIRING AND NOTIFICATIONS

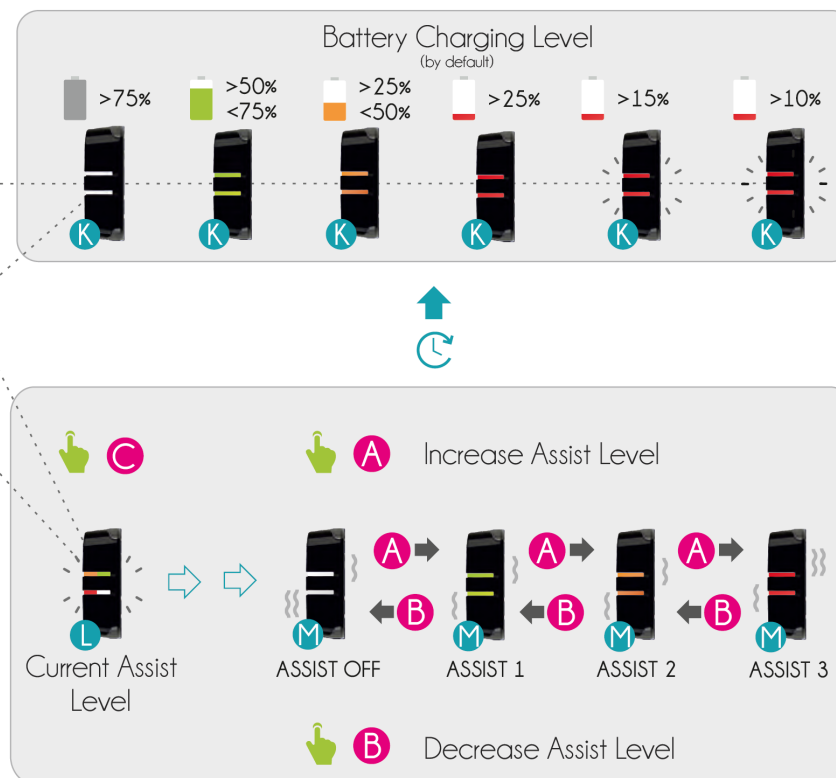
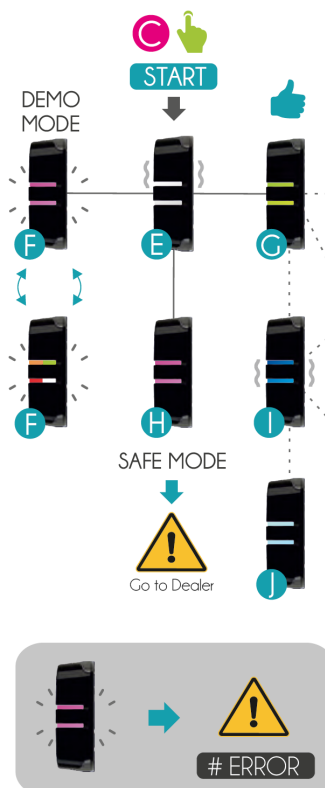
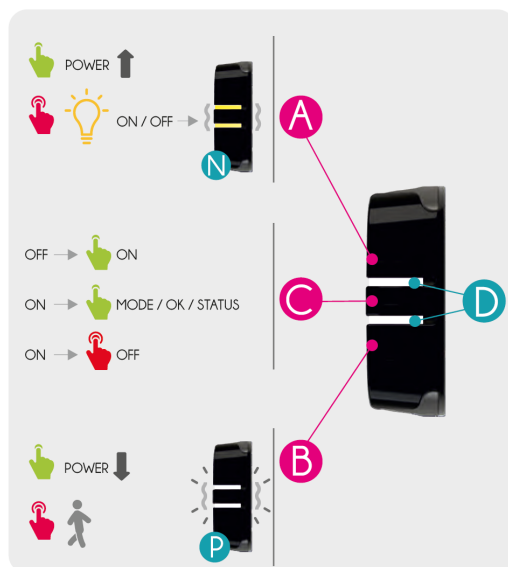
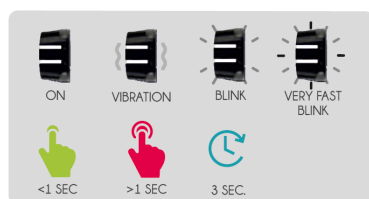


6 SYSTEM ERROR AND SPECIAL MODES



IWOK TRIO BUTTON

GENERAL LIGHT SCHEME AND MEANING



- | | |
|-----------------|------------------------|
| A Top Button | I Bluetooth Operation |
| B Bottom Button | J Notification |
| C Middle Button | K Battery Charge Level |
| D Led RGB | L Assistance Level |
| E System Start | M Assistance Levels |
| F Demo Mode | N Turn On/Off Lights |
| G System OK | P Walk Mode |
| H Safe Mode | |



- | | |
|------------------|---------------------------|
| A Botón Superior | I Operación Bluetooth |
| B Botón Inferior | J Notificación |
| C Botón Central | K Nivel Carga Batería |
| D Led RGB | L Nivel Asistencia Actual |
| E Inicio Sistema | M Niveles de Asistencia |
| F Modo Demo | N Encender / Apagar Luces |
| G Sistema OK | P Modo Walk |
| H Modo Seguro | |



- | | |
|--------------------|-------------------------|
| A Schalter oben | I Bluetooth-Betrieb |
| B Schalter unten | J Benachrichtigung |
| C Schalter mittig | K Akkustand |
| D Led RGB | L Unterstützungsniveau |
| E Systemstart | M Niveaus de Asistencia |
| F Demomodus | N Beleuchtung ein/aus |
| G System OK | P Schiebemodus |
| H Sicherheitsmodus | |



- | | |
|------------------------|------------------------------|
| A Bouton supérieur | I Fonctionnement Bluetooth |
| B Bouton inférieur | J Notification |
| C Bouton central | K Niveau de charge batterie |
| D Led RGB | L Niveau d'assistance |
| E Démarrage du système | M Niveaux d'assistance |
| F /Mode demo | N Allumer/Éteindre éclairage |
| G Système OK | P Activation Mode Marche |
| H /Mode sûr | |



- | | |
|---------------------|---------------------------------|
| A Tasto superiore | I Funzionamento Bluetooth |
| B Tasto inferiore | J Notifica |
| C Tasto centrale | K Livello carica della batteria |
| D Led RGB | L Livello assistenza |
| E Avvio del sistema | M Livello di assistenza |
| F Modalità Demo | N Accendere / Spegnere luci |
| G Sistema OK | P Modalità passeggiata |
| H Modalità sicura | |

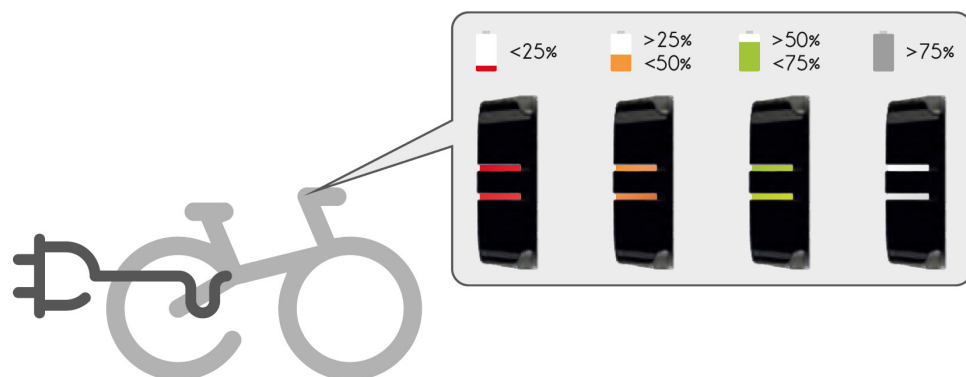


- | | |
|------------------|-----------------------------|
| A Botão Superior | I Operação Bluetooth |
| B Botão Inferior | J Notificação |
| C Botão Central | K Nivel de carga da bateria |
| D Led RGB | L Nivel de assistência |
| E Ligar Sistema | M Nivel de assistência |
| F Modo Demo | N Acender / Apagar Luzes |
| G Sistema OK | P Modo Walk |
| H Modo Seguro | |

IWOK TRIO BUTTON

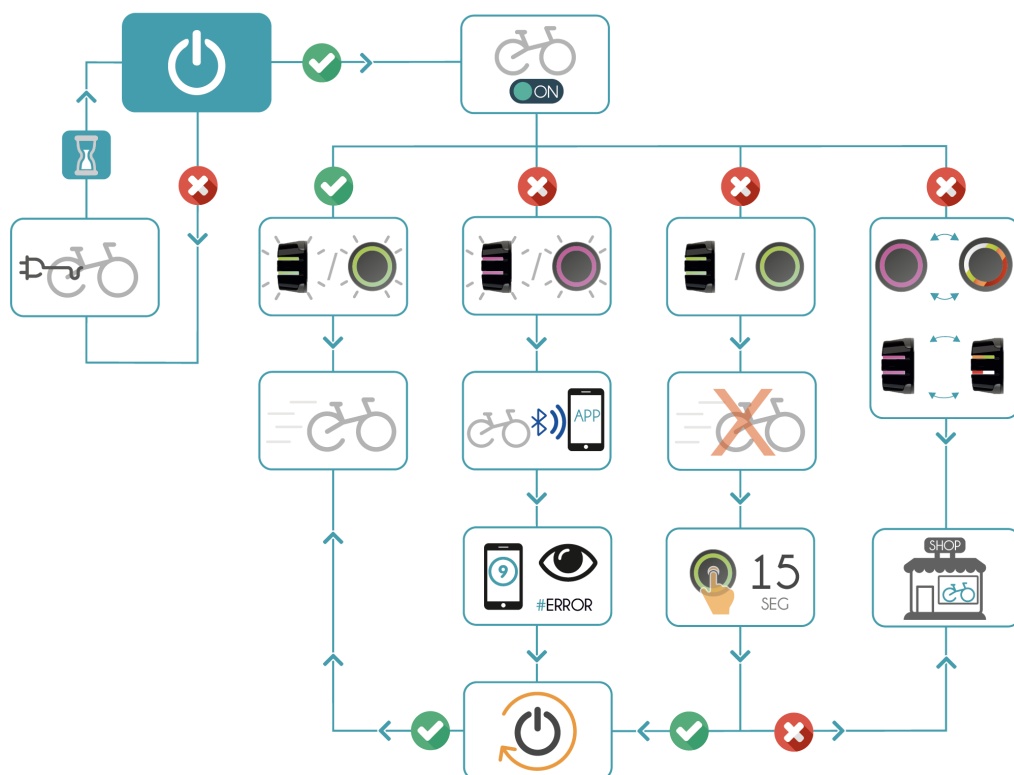
LIGHT SCHEME WHEN CHARGING

Connect the charger first to a power outlet and then to the charging port on the bicycle. The light on the iWoc® TRIO will turn on automatically. While charging, the intensity of the LED will vary cyclically, indicating by color the current level of battery charge. The battery will be charged (>98%) when the LED remains lit in white.

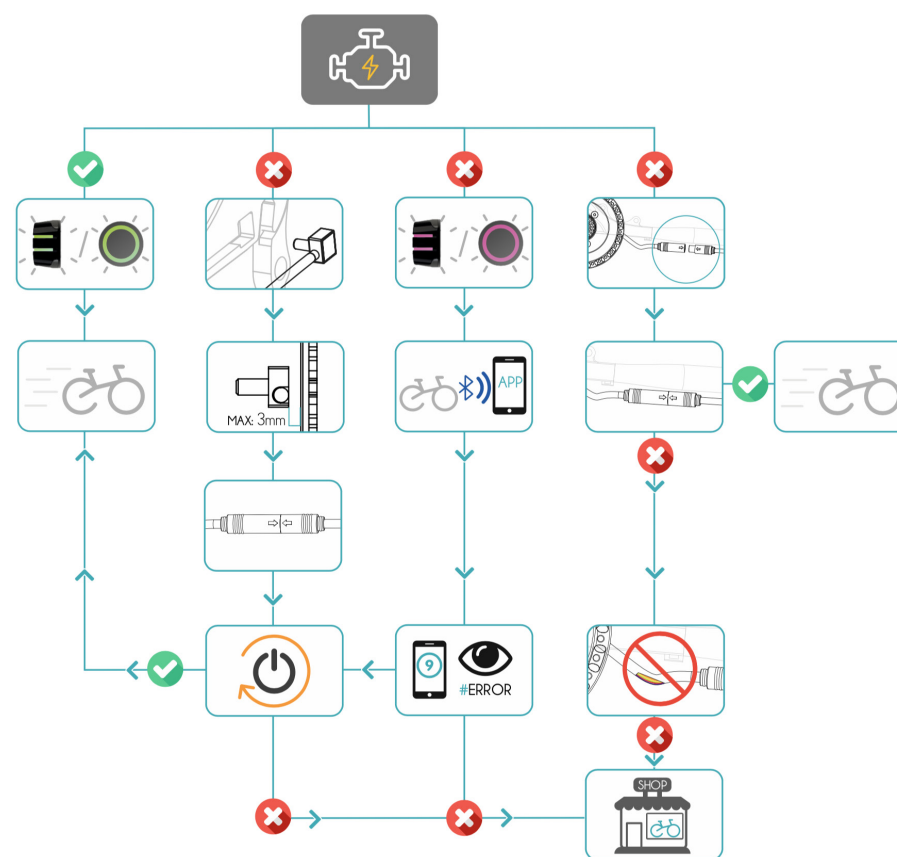


PROTOCOL

1/ START PROTOCOL

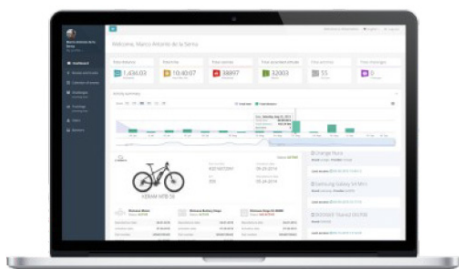


2/ MOTOR PROTOCOL



SOFTWARE

APP FOR YOUR GAIN (find the manuals in www.ebikemotion.com)



ebikemotion® User Web Dashboard

Login to www.ebikemotion.com to view information on your activities and your bike. You must use the same account created on the ebikemotion® APP on your smartphone. You can see the status of your e-bike, activities, reports, location, report a theft, change owners and consult online manuals.

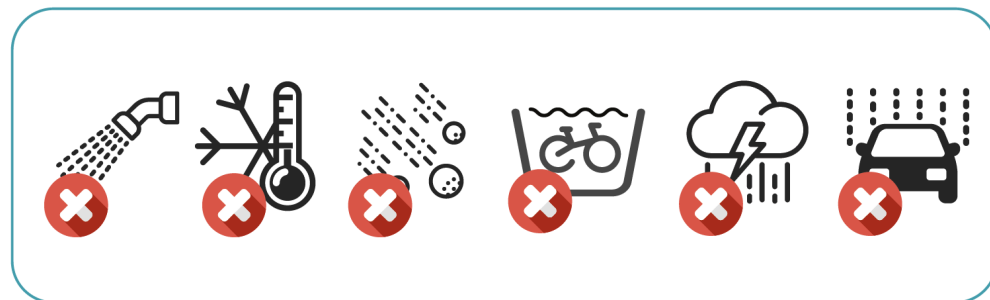
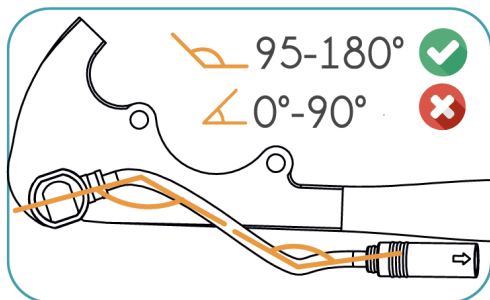
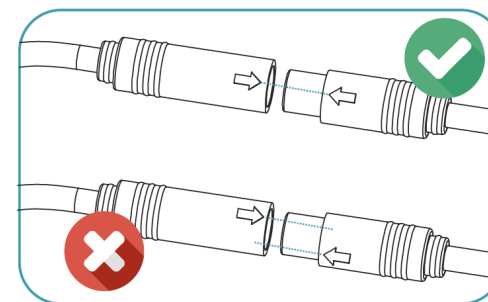
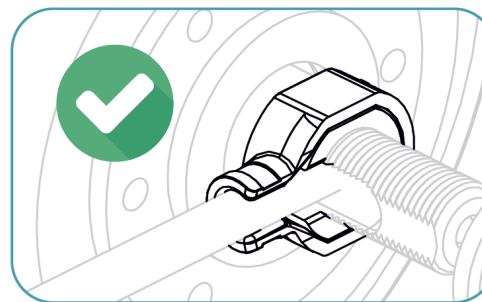
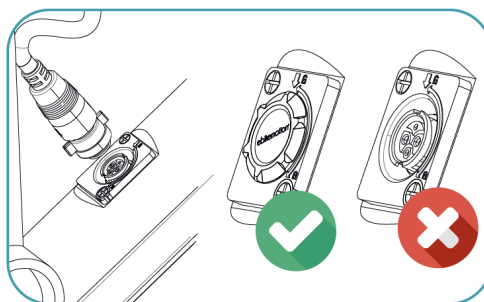
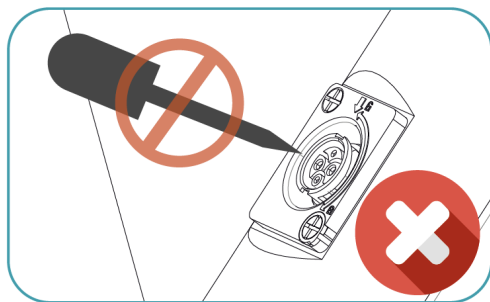
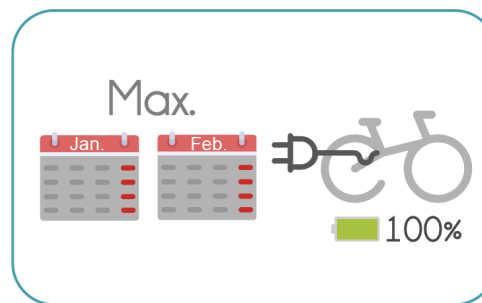
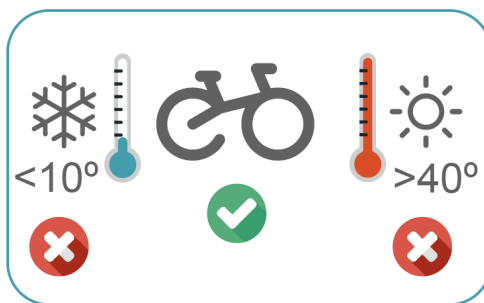
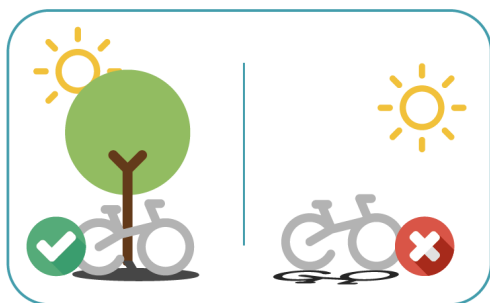


ebikemotion® App

Download the ebikemotion® APP to use your compatible smartphone as an advanced interface. Remember to download the maps from your telephone. You'll have three months to download updates after your first download (maximum of 5 maps).

X35 MAINTENANCE

BATTERY, POWER CABLE AND CHARGING



FRAME AND MATERIAL

Orbea frames are carefully designed to be durable, efficient, and easy to maintain. Gain tubes are stiff and light, giving excellent steering precision and pedaling efficiency. Gain carbon frame is extremely resistant to corrosion, making it perfect for road. With only a minimum amount of maintenance, it's easy to keep your Gain in top condition.

1) Keep your Gain clean

Washing your bike with mild soap and water will keep you looking stylish and allow you to check the condition of the frame and components. Don't use high water pressure and avoid spraying water into bearings or frame tubes. Citrus degreasers are biodegradable and do a great job of removing dirty grease from gears and chain.

2) Keep your Gain lubed

Once your bike is clean, it's a good time to put fresh lube on the chain. Use only enough to get inside the links and wipe off any excess because it will attract dirt. Headset and pivot bearings should be inspected every few months for smoothness and to ensure that the seals are intact and lube is clean.

3) Inspect your Gain before you ride

Do a quick check before every ride to make sure your bike is in excellent condition. It is very common to discover small issues at home that can become big problems on the trail. **CHAIN** Is the chain dirty, noisy or dry? Clean and lube your chain before riding. **BRAKES** Check your brakes to make sure they are working correctly. Check for missing/loose caliper and rotor bolts. **TIRES** Look for damage to the sidewalls of your tires. Check and adjust tire pressure. **WHEELS** Spin the wheels and look for wobbles, check for loose or broken spokes. Check quick release levers to make sure they are functioning properly. **FRONT END** Stand over the saddle, pull on the brakes and rock the bike back and forth. Feel for any play or knocking that might indicate a loose headset, loose brake rotors or calipers, or worn fork bushings.

TEST RIDE Take a quick ride up and down the street to make sure your bike is shifting and braking properly. Listen for unusual noises.

AFTER A CRASH OR IMPACT

Falling is part of riding and it's impossible to avoid minor accidents. If you crash your Gain, please make sure you are okay and seek medical attention if necessary. If you are not injured, you should check your bike before continuing:

1) Inspect your frame and components for damage. Do not ride your bike if any problems are detected.

WHAT TO LOOK FOR

Inspect Frame and fork for evidence of cracking or bending. If cracks are discovered, discontinue use immediately.

Check the drivetrain and spin the wheels to make sure components are operating correctly. If you discover damage to your components, discontinue use immediately.

Even if you don't find any damage, pay careful attention to the sound of your bike when you continue riding. Unusual noises can be caused by cracks or other problems. A well-maintained bike will be quiet and free of creaks or squeaks. Investigate and locate the source of any new noises.

2) Bring your bike to your Orbea dealer for professional inspection. Some damage can only be detected by disassembling the bike to check for cracks or other signs of stress.

A crash or impact can put extraordinary stress on your bike and components, causing them to fail or to fatigue prematurely. Failure can happen suddenly with no warning, causing loss of control, serious injury or death.

MAINTENANCE AND PART REPLACEMENT IN OUR eBIKES

The components of your eBike are associated with your frame number. If a component is replaced, it must be linked to your bike through a special system available at all technical service centers and shops authorized by your brand. Visit one of these points to complete the purchase and replacement operation. The components of your e-bike are designed to be used in poor weather conditions, such as rain and snow, and are protected against splashing, but not against immersion or pressurized water. It is important when transporting your eBike outside on a car or camper to properly protect the bike, or at least the most delicate electronic parts, such as the remote control, display and USB port, with a tarp. Keep the remote control free of dust and water. Never use pressurized water systems on the surface of the battery, motor, remote control, display or charging port.

ORBEA WARRANTY

HOW DO I ACTIVATE MY LIFETIME WARRANTY?

Orbea provides a lifetime warranty on all its frames. Only a brand that knows the materials, masters the technologies and has the skills can guarantee that your frame is totally invincible. Only Orbea takes you a step beyond.

Orbea's lifetime warranty is activated using the registration number you will find on all frames from the 2009 range onwards. When you have activated it at your dealer or at www.orbea.com, your bike will automatically receive its lifetime warranty. The registration number is a unique, non-transferable code that you will find on the underside of your bike's downtube. Activate your frame's warranty using this number at your dealer's or at www.orbea.com.

WHAT ARE THE ADVANTAGES?

- Lifetime guarantee of your frame against breakage.
- Two-year guarantee on all components.
- Identification of your bicycle and all its characteristics to our Technical Assistance Service so that we can provide our best response to any problems. Access to special offers, events and prize drawings.

ORBEA WARRANTY

The ongoing efforts we make at Orbea to design high-end bicycles enable us to provide customers with the following warranty:

1) We back each frame and rigid fork in our bicycles with a lifetime warranty against materials and manufacturing defects. Frames with travel longer than 170 mm are covered by a 2-year warranty. We warrant each frame and fork in our bikes against paint or varnish defects and corrosion for 3 years. This warranty covers the original purchaser only and is non-transferable. For the lifetime warranty to be valid, customers must fill in the online warranty form within one month of purchase, and proof of purchase in the form of cash register receipt or sales ticket is required.

2) Warranty claims are subject to the decision made by our technical staff about the nature of the defect after thorough inspection of the faulty part.

3) All the parts assembled in our bicycles are protected against assembly or manufacturing defects for 2 years, and repairs qualifying under this warranty will be performed by authorized dealers in each country.

4) This warranty does not cover parts that naturally wear over time, such as tires, brake pads, handlebar grips, cranksets, bearings, etc.

5) This warranty does not cover damages or defects caused by negligence, improper use, assembly of parts or accessories that are not original, or defective repair or maintenance work. Of the bicycle, nonoriginal accessories being fitted to it, or unsuitable maintenance operations or handling.

6) This warranty includes only replacement or repair coverage of the parts under it and in no case shall it cover personal damages directly or indirectly caused by the failure of said parts during use.

7) All claims must be reported to an authorized dealer. In case there is no such a dealer near the buyer's location, please contact Orbea so that we can decide how to solve the problem.

8) In case of crashes, the Orbea warranty shall be considered null and void.

ADDITIONAL INFORMATION

ORBEA participates actively on facebook and Twitter with our fantastic global community of riders. Looking to find spots to ride or plan a vacation? Someone will have the answers:

**FACEBOOK**

www.facebook.com/OrbeaBicycles

**TWITTER**

www.twitter.com/Orbea/

**YOUTUBE**

Visit our Orbea Channel on You Tube for a variety of helpful setup and tech videos:

www.youtube.com/user/OrbeaBicycles

**INSTAGRAM**

www.instagram.com/orbeabicycles

ORBEA CONTENT

View and download photos, videos and documents.

content.orbea.com/us-en/

ORBEA UNIVERSITY

www.orbea.com/es-es/university/

BLOG ORBEA

www.orbea.com/es-es/blog/

YOUR ORBEA DEALER

Our dealers are experts and should be able to assist you with setting up and maintaining your Orbea bicycle. A complete listing of Orbea dealers and distributors can be located on our website:

www.orbea.com/us-en/dealers/?country=INT

AFTER SALES SERVICE

Our service technicians are trained to handle any questions you might have about your Orbea bicycle:

orbea@orbea.com

ORBEA