

ORBEA

**BLUE
PAPERS**

**AVANT OME
TECHNICAL MANUAL**

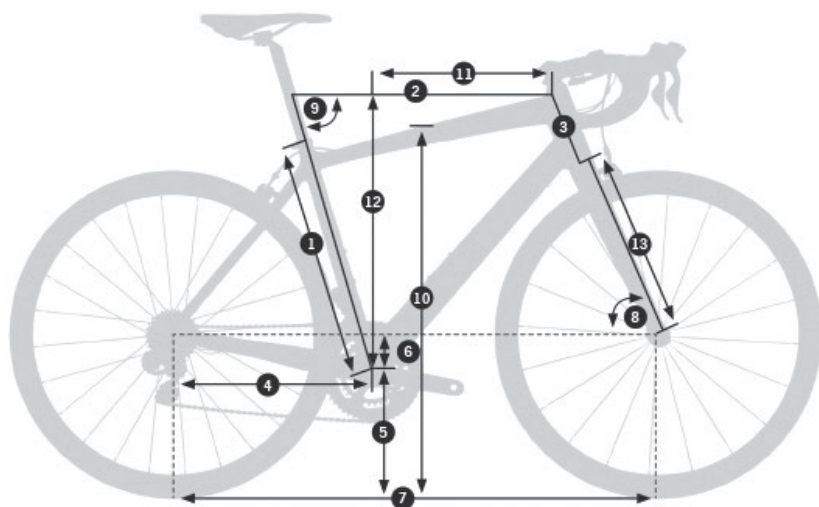
CONTENT

GEOMETRY	3
ERGONOMY	4
SPECIFICATIONS	5
CHARACTERISTICS	6
OPTIONS	7
FRAME AND MATERIAL	11
PARTS & HARDWARE	12
CABLE ROUTING	22

AVANT OME

ORBEA

GEOMETRY



SIZES	47	49	51	53	55	57	60
1 - Seat tube (C-T)	410	440	470	490	510	530	560
2 - Top tube (EFF)	516,2	525,8	535,2	548,1	563,4	579,6	594,8
3 - Head tube	113	132	150,1	165	187,6	205	226
4 - Chain stay	414	414	414	414	418	418	418
5 - BB drop	72,5	72,5	72,5	72,5	72,5	72,5	72,5
6 - BB height	269	269	269	269	269	269	269
7 - Wheel base	978	986,6	992,9	993,7	1005,3	1014	1023,8
8 - Head angle	71,2°	71,4°	71,8°	72°	72,5°	73°	73,5°
9 - Seat angle	73,5°	73,5°	73,5°	73,5°	73,2°	73°	73°
10 - Fork offset – Rake	53	53	53	43	43	43	43
11 - Standover height	708,5	720,5	754	774,5	797	817,5	841,5
12 - Reach	363	367,1	371	378,4	383,4	391,7	400
13 - Stack	517,4	535,8	554,8	572,8	596,1	614,6	636,5
14 - Fork length	375	375	375	375	375	375	375
15 - BB-Front Wheel	575	583,4	589,7	590,6	598	606,7	616,4
16 -Rear detailleur angle	63,4°	63,4°	63,4°	63,4°	63,2°	63°	63°

ERGONOMY



SIZE	CRANK	HANDLEBAR	STEM
47	170	90	400
49	170	100	400
51	170	100	420
53	170	110	420
55	172	110	420
57	172	110	440
60	175	120	440

* The handlebar size is centre-centre.

HEIGHT (cm)	HEIGHT (in)	SIZE
155-160	5'1"-5'3"	47
160-166	47	49
67-172	5'3"-5'5.5"	51
173-179	49	53
180-185	5'5.7"- 5'7.5"	55
186-191	51	57
192-207	5'8" - 5'10.5"	60

* Estimated measurements.

CHARACTERISTICS

DIRECTION	1" 1/8 – 1" 1/2
BB	PRESS FIT 86,5 MM. INTERNAL DIAMETRE 41MM
FRONT DERAILLEUR	W/FD HANGER
FRONT DERAILLEUR TP/DP	FRONT DERAILLEUR DP TYPE
FD ANGLE	63° AND 63,5°
SEAT POST DIAMETER	DIAM 27, 2 MM
SEAT CLAMP	INTERNAL DIAM 31,8 MM
DROPOUT	SAME AS CURRENT ORCA BRONCE (15430040)
CHAINSTAY PROTECTOR	11160033
OTHER PROTECTORS	NO
CABLE TYPE	NOT JAGWIRE – STANDAR HOISING
REAR HUB LENGHT	130 MM.

OPTIONS

BRAKE	V-BRAKE	NO
	DISC BRAKE	NO
	REAR BRAKE IS/PM+DIAMETER DISC	NO
	CALIPER BRAKE	YES- NEW STANDAR CALIPERS (RANGE BETWEEN 41-51)
LUGGAGE	BAG OPTION IN TOP TUBE	NO
	BOTTLE CAGE	DT AND ST [SIZE 47, ONLY DT)
	OPTION AERO AND STANDARD BOTTLE	NO
	REAR LUGGAGE OPTION	YES
	MUDGUARD OPTION	YES
	KICKSTAND	NO
GEARS	11 SPEED	
	DOUBLE CRANK	YES
	COMPACT CRANK (34X50T) (ROAD)	YES
	TRIPLE CRANK	YES
	OXYMETRIC	YES

OPTIONS

Groupsets

ROAD	
SHIMANO	
DURA-ACE DI2 [9070] (11 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS
DURA-ACE DI2 [7900] (10 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS
DURA-ACE [9000] (11 SPEED)	YES
DURA-ACE [7900] (10 SPEED)	YES
ULTEGRA DI2 [6870] (11 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS
ULTEGRA DI2 [6770] (10 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS
ULTEGRA [6800] (11 SPEED)	YES
ULTEGRA [6700] (10 SPEED)	YES
105 [5700] (10 SPEED)	YES
TIAGRA [4600] (10 SPEED, 9 SPEED ON OLDER MODELS)	YES
SORA [3500] (9 SPEED, 8 SPEED ON OLDER MODELS)	YES
CLARIS [2400] (8 SPEED)	YES
CAMPAGNOLO	
SUPER RECORD EPS (11 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS (NOT BATTERY IN DT BOTTLE RIVET)
RECORD EPS (11 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS (NOT BATTERY IN DT BOTTLE RIVET)
ATHENA EPS (11 SPEED ELECTRONIC)	YES -INTERNAL ST AND EXTERNAL BATTERY LEFT CS (NOT BATTERY IN DT BOTTLE RIVET)
SUPER RECORD (11 SPEED)	YES
RECORD (11 SPEED)	YES
CHORUS (11 SPEED)	YES
ATHENA (11 SPEED)	YES
CENTAUR (10 SPEED)	YES
VELOCE (10 SPEED)	YES
SRAM	
SRAM RED22	YES
SRAM RED 2012	YES
SRAM BLACK RED (INTRODUCED 2011)	YES
SRAM FORCE22	YES
SRAM FORCE	YES
SRAM RIVAL	YES
SRAM APEX (INTRODUCED FOR 2010)	YES

OPTIONS

WHEELS	MAXIMUM SIZE	ØEXTERNAL MAXIMUM 690 MM (TYRE CONTINENTAL 28")
	TYRES	MAXIMUM SIZE 700X28C
CABLE ROUTING	MECHANICAL SYSTEM (W/INTERNAL CABLE ROUTING)	EXTERNAL CABLE ROUTING IN DT AND RIGHT CS
	ELECTRONIC DI2 SYSTEM (W/INTERNAL CABLE ROUTING)	INTERNAL WITH OPTION TO INSTALL THE BATTERY IN SEATPOST OR LEFT CS
	EXTERNAL SHIMANO BATTERY (IN LEFT CHAINSTAY)	YES
	CAMPAGNOLO EPS	COMPATIBLE, ONLY INTERNAL BATTERY CAMPAGNOLO [V2]
POWER METERS	SRM	YES
	POWER2MAX	YES
	STAGES	YES
	PIONEER	YES
	ROTOR POWER	YES
	QUARQ	YES
	GARMIN VECTOR	YES
	LOOK AND POLAR	YES
OTHERS	POWERTAP	YES
	U.C.I. LEGAL	YES

FRAME AND MATERIAL

Orbea frames are carefully designed to be durable, efficient, and easy to maintain. Avant tubes are stiff and light, giving excellent steering precision and pedaling efficiency. Avant 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 Avant in top condition.

1) Keep your Avant 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 Avant 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 Avant 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 Avant, 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.

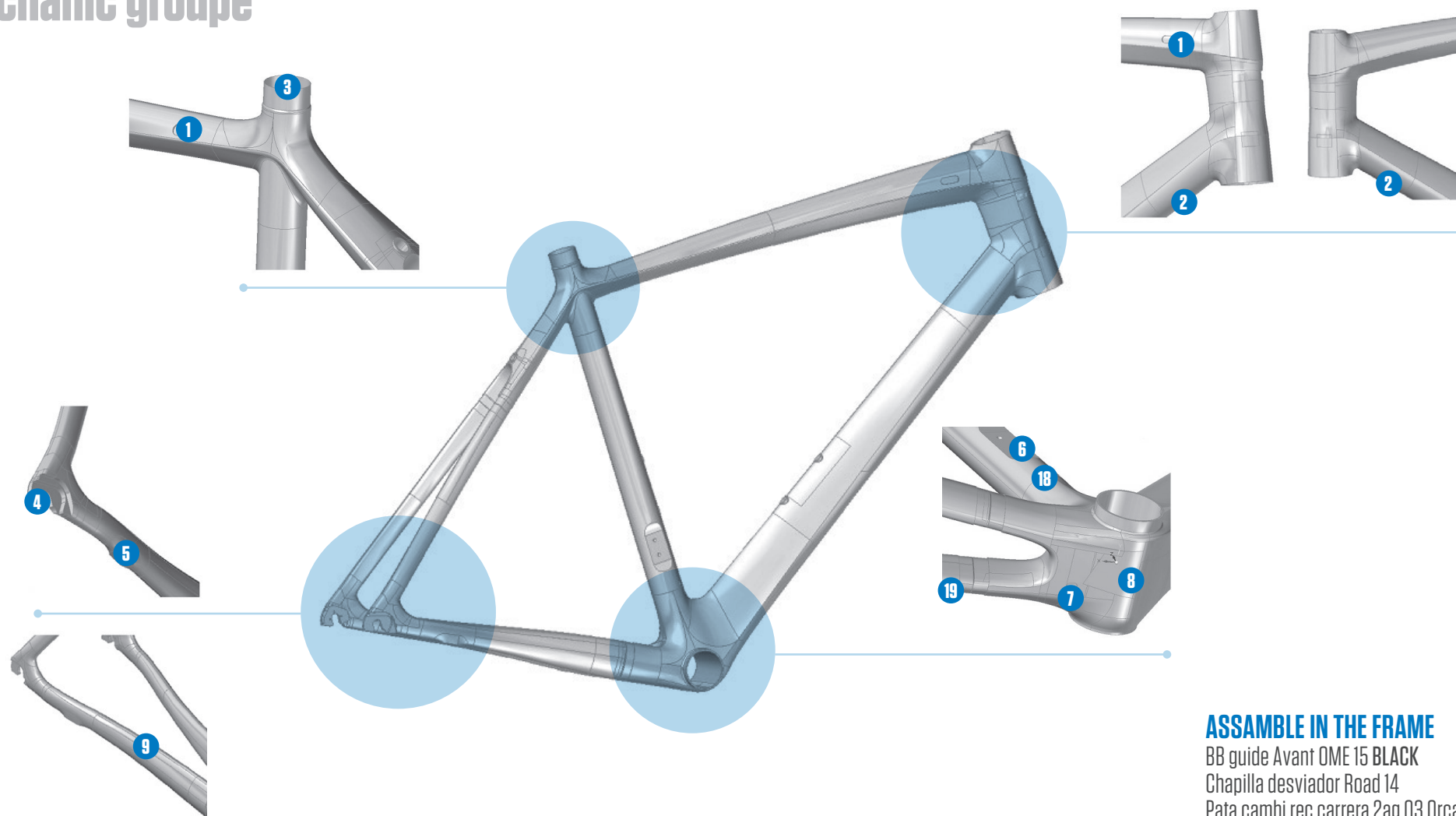
Even if you don't find any damage, pay careful attention to the sound of your bike when you continue riding. Unusual noises can be caused by cracks or other problems. A well-maintained bike will be quiet and free of creaks or squeaks. Investigate and locate the source of any new noises.

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.

PARTS & HARDWARE

Mechanic groupe

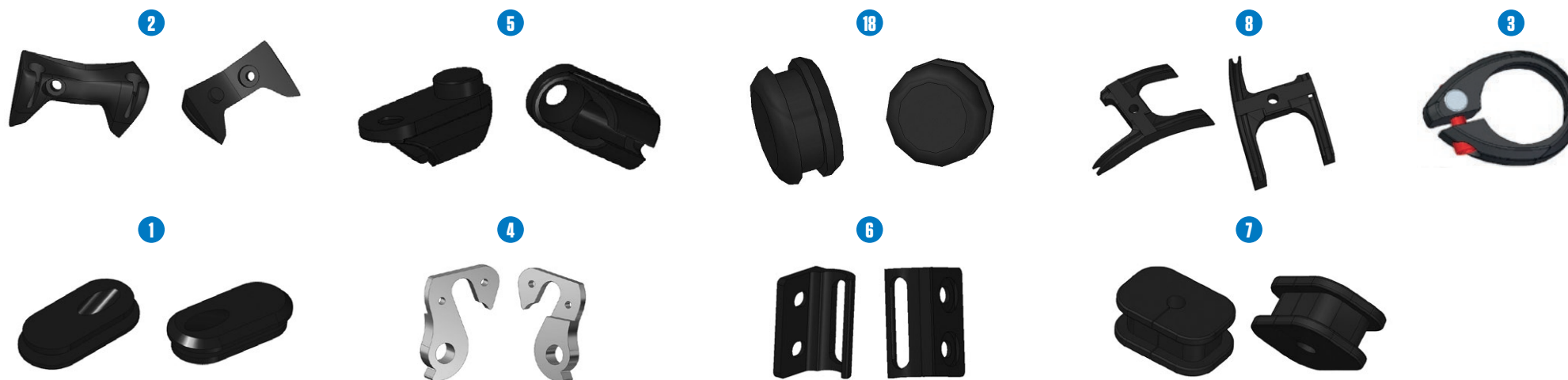


ASSAMBLE IN THE FRAME

- BB guide Avant OME 15 BLACK
- Chapilla desviador Road 14
- Pata cambi rec carrera 2ag O3 Orca 15 Negro
- Tope DT Cam/Desv Avant OME 15 Negro
- Tope de funda CS derecho Avant OME 15 Negro

PARTS & HARDWARE

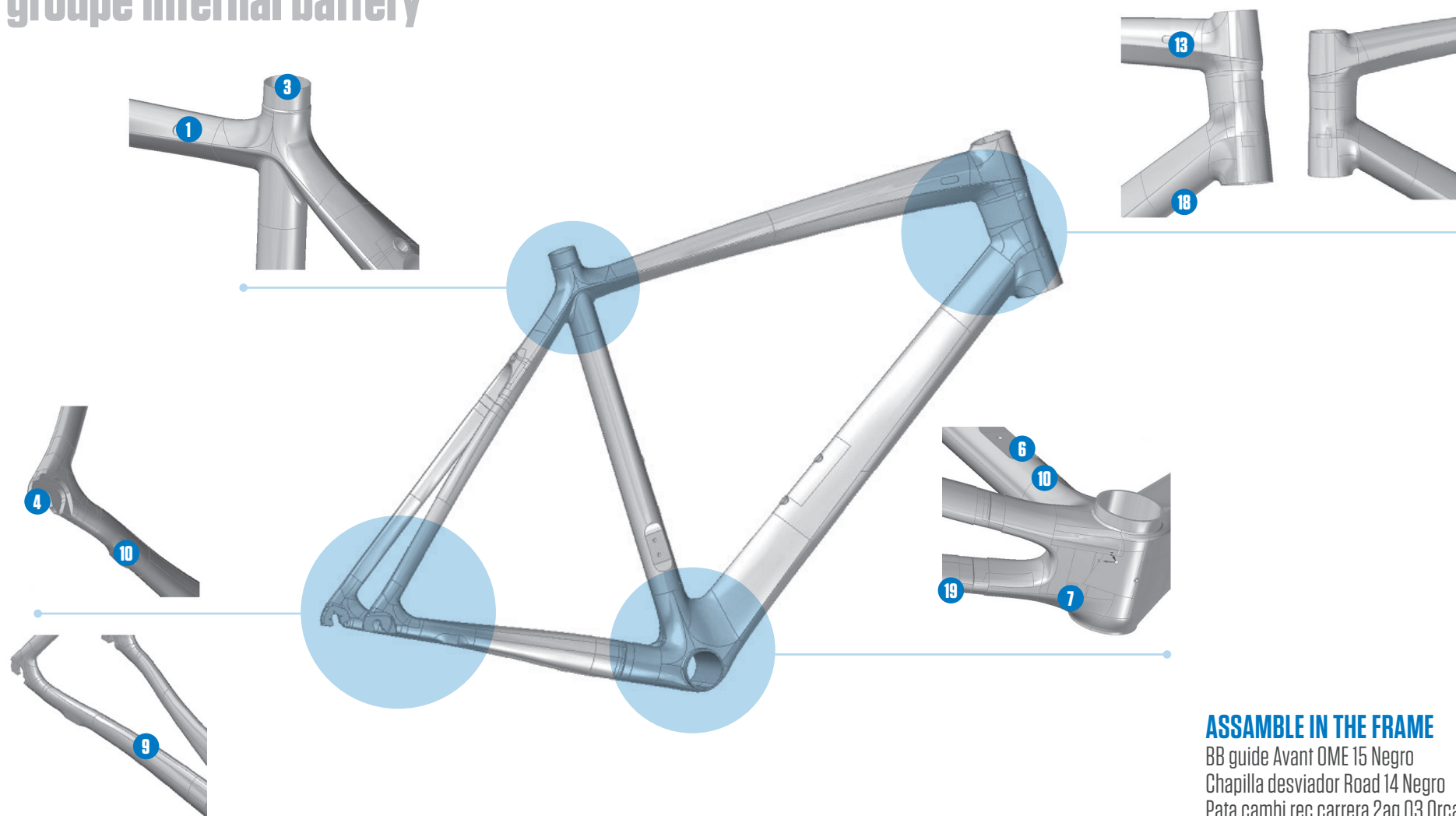
Mechanic groupe



PART NUMBER	REFERENCE	ORBEA REFERENCE	ORBEA DESCRIPTION
1	AP21-62	11001170	TAPON GOMA 5MM AGUJERO 22X8
2	MW25-PART-1	16100134	TOPE DT CAM/DESV AVANT OME 15 NEGRO
3	AKSC08	11160786	ABR SIL AVANT OMP 31.8 ALU NEGRO
4	REAR HANGER ONI	15430040	PATA CAMBI REC CARRERA 2AG 03 ORCA 15 NEGRO
5	611-012-175Y (W/ 2 PCS M3 BOLTS AND 1 PC ID21N-PART-2)	16100133	TOPE DE FUNDA CS DERECHO AVANT OME 15 NEGRO
6		11202190	CHAP DESV ROAD CARB 13-14-15
7	MW25-PART-5	16100136	TAPON PEDALIER 12X7 MEC
8	MW25 BB GUIDE	16100132	BB GUIDE AVANT OME 15 NEGRO
9	ALETA TIBURON TRANSP PRO P/MAT	11160033	ALETA TIBURON TRANSP PRO P/MAT
18	MW20N FD CAP Ø8	16100113	TOPE DE PLASTICO OPTURADO D7,25
19		12301051	TORNILLO HEX M4X16 ISO 7380

PARTS & HARDWARE

Di2 groupe internal battery



ASSAMBLE IN THE FRAME

- BB guide Avant OME 15 Negro
- Chapilla desviador Road 14 Negro
- Pata cambi rec carrera 2ag O3 Orca 15 Negro
- Tope DT Cam/Desv Avant OME 15 Negro
- Tope de funda CS derecho Avant OME 15 Negro

PARTS & HARDWARE

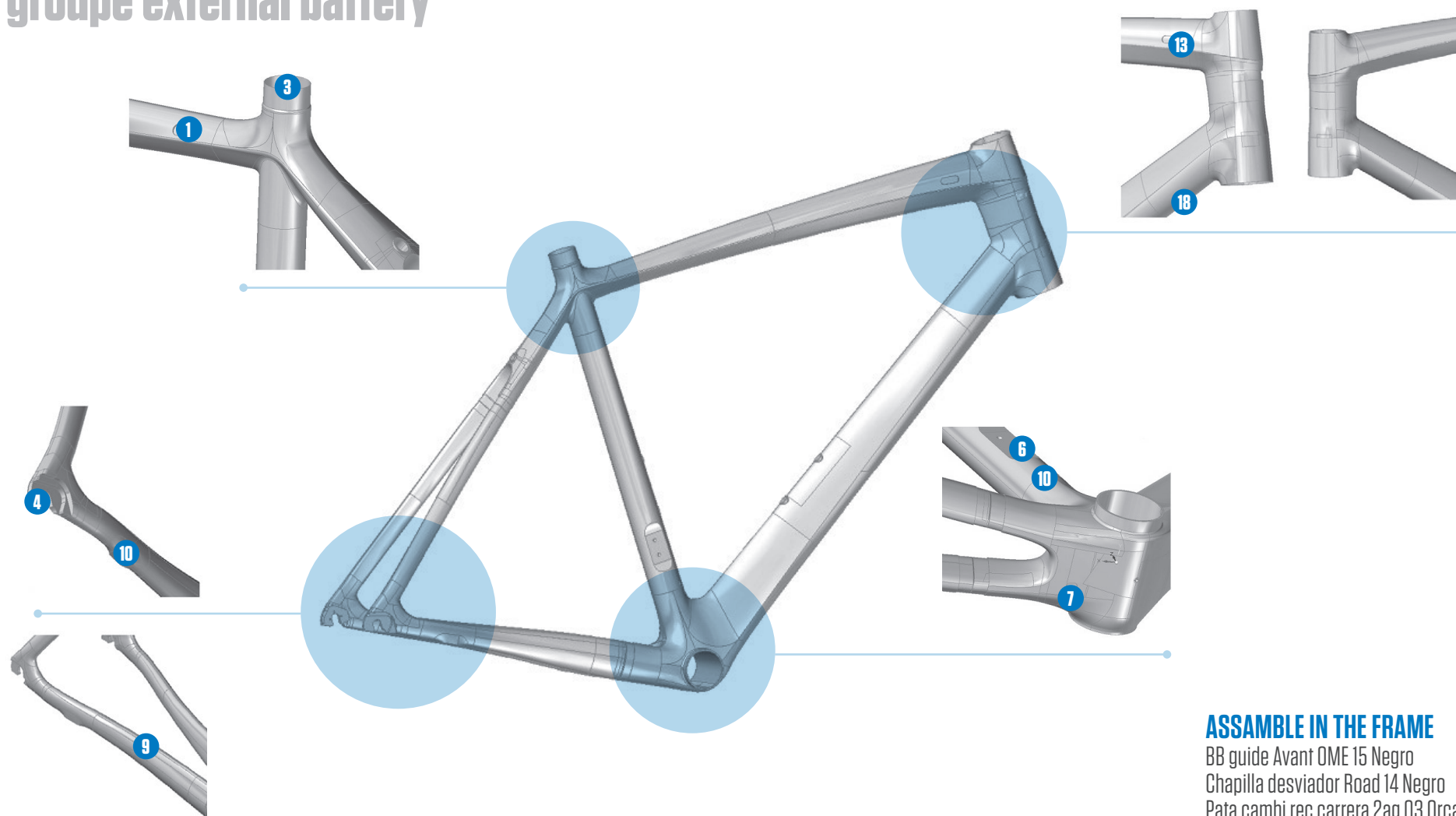
Di2 groupe internal battery



PART NUMBER	REFERENCE	ORBEA REFERENCE	ORBEA DESCRIPTION
1	AP21-62	11001170	TAPON GOMA 5MM AGUJERO 22X8
10	KSM-GM02	11001122	TAPON SHIMANO DI2 D8 NEGRO
3	AKSC08	11160786	ABR SIL AVANT OMP 31.8 ALU NEGRO
4	REAR HANGER ONI	15430040	PATA CAMBI REC CARRERA 2AG 03 ORCA 15 NEGRO
6		11202190	CHAP DESV ROAD CARB 13-14-15
7	MW25-PART-5	16100136	TAPON PEDALIER 12X7
9	ALETA TIBURON TRANSP PRO P/MAT	11160033	ALETA TIBURON TRANSP PRO P/MAT
19		12301051	TORNILLO HEX M4X16 ISO 7380
13	ORFM04 PLUG (WITH HOLE)	16100125	TAPON C/AGUJERO 22X8
14	CCG060BJ-DI2 WIRE HOLDER	11207536	GUIA CABLE ELECTRONICO EN FRENO
18	MW20N FD CAP Ø8	16100113	TOPE DE PLASTICO OPTURADO D7,25

PARTS & HARDWARE

Di2 groupe external battery



ASSAMBLE IN THE FRAME

- BB guide Avant OME 15 Negro
- Chapilla desviador Road 14 Negro
- Pata cambi rec carrera 2ag O3 Orca 15 Negro
- Tope DT Cam/Desv Avant OME 15 Negro
- Tope de funda CS derecho Avant OME 15 Negro

PARTS & HARDWARE

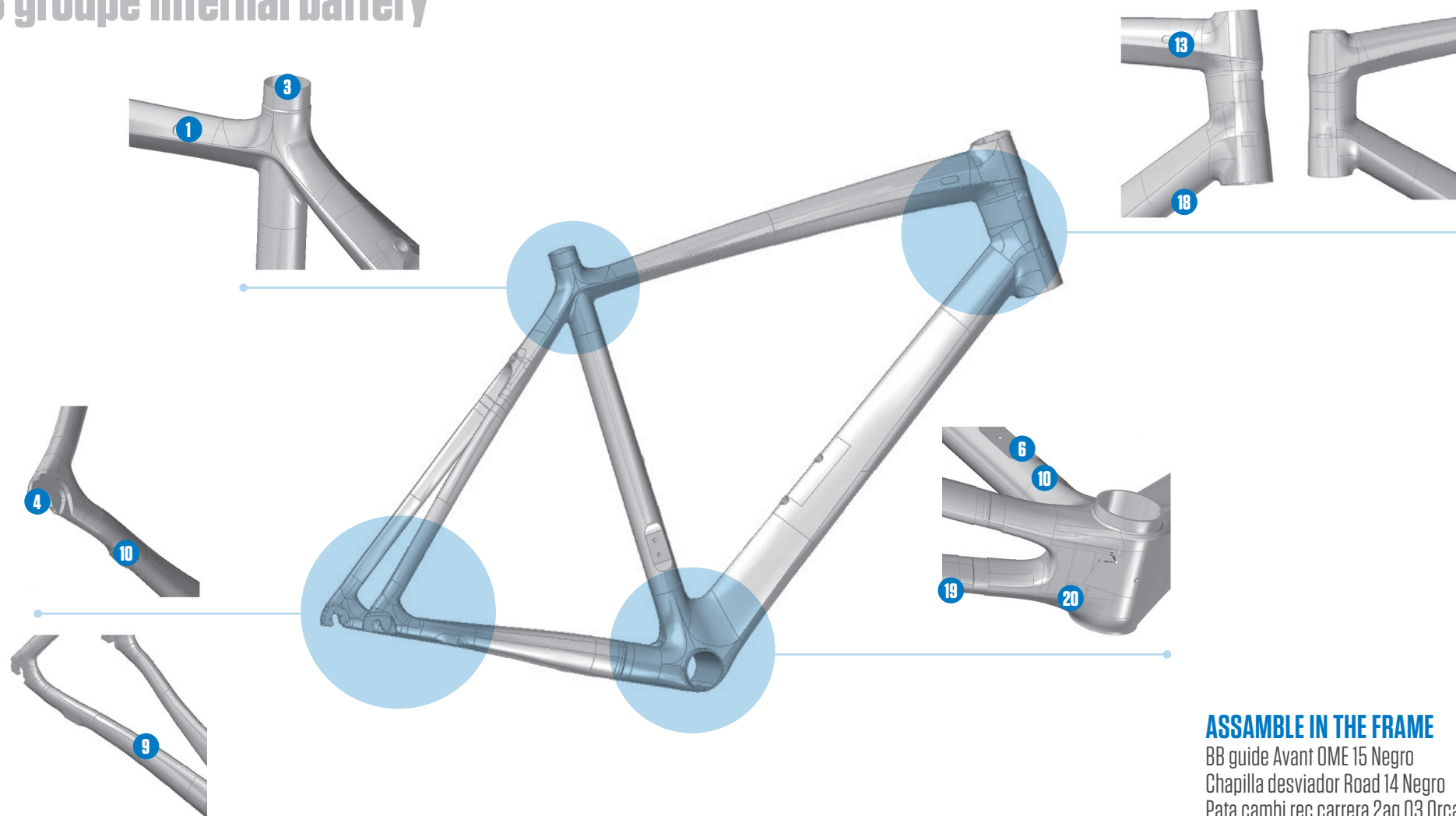
Di2 groupe external battery



PART NUMBER	REFERENCE	ORBEA REFERENCE	ORBEA DESCRIPTION
1	AP21-62	11001170	TAPON GOMA 5MM AGUJERO 22X8
10	KSM-GM02	11001122	TAPON SHIMANO DI2 (7X8) NEGRO
3	AKSC08	11160786	ABR SIL AVANT OMP 31.8 ALU NEGRO
4	REAR HANGER ONI	15430040	PATA CAMBI REC CARRERA 2AG 03 ORCA 15 NEGRO
6		11202190	CHAP DESV ROAD CARB 13-14-15
7	MW25-PART-5	16100136	TAPON PEDALIER 12X7
9	ALETA TIBURON TRANSP PRO P/MAT	11160033	ALETA TIBURON TRANSP PRO P/MAT
13	ORFM04 PLUG (WITH HOLE)	16100125	TAPON C/AGUJERO 22X8
18	MW20N FD CAP Ø8	16100113	TOPE DE PLASTICO OPTURADO D7,25
19		12301051	TORNILLO HEX M4X16 ISO 7380
14	CCG060BJ-DI2 WIRE HOLDER	11207536	GUIA CABLE ELECTRONICO EN FRENO

PARTS & HARDWARE

EPS groupe internal battery



ASSAMBLE IN THE FRAME

- BB guide Avant OME 15 Negro
- Chapilla desviador Road 14 Negro
- Pata cambi rec carrera 2ag O3 Orca 15 Negro
- Tope DT Cam/Desv Avant OME 15 Negro
- Tope de funda CS derecho Avant OME 15 Negro

PARTS & HARDWARE

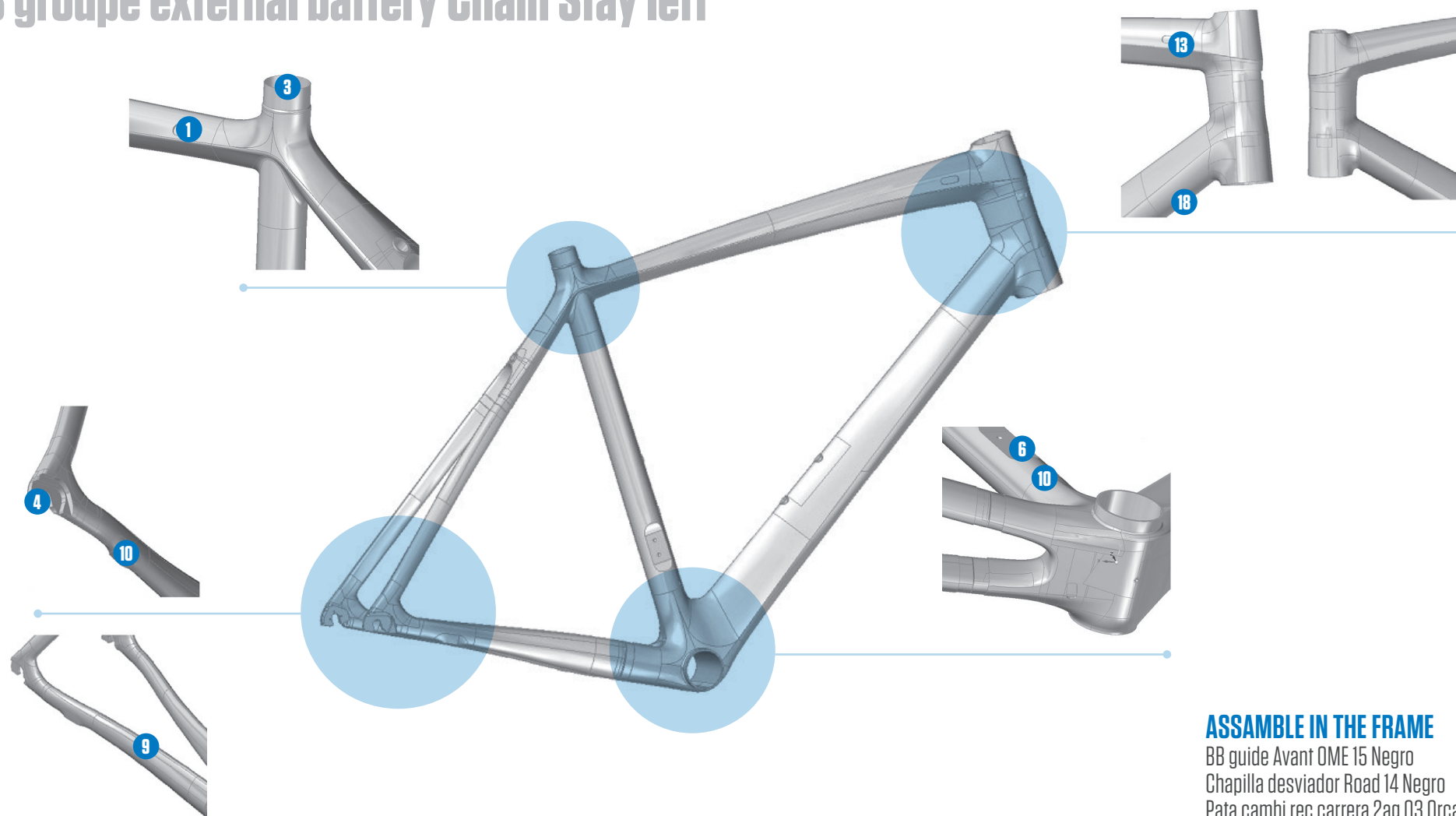
EPS groupe internal battery



PART NUMBER	REFERENCE	ORBEA REFERENCE	ORBEA DESCRIPTION
1	AP21-62	11001170	TAPON GOMA 5MM AGUJERO 22X8
10	KSM-GM02	11001122	TAPON SHIMANO DI2 (7X8) NEGRO
3	AKSC08	11160786	ABR SIL AVANT OMP 31.8 ALU NEGRO
4	REAR HANGER ONI	15430040	PATA CAMBI REC CARRERA 2AG 03 ORCA 15 NEGRO
6		11202190	CHAP DESV ROAD CARB 13-14-15
9	ALETA TIBURON TRANSP PRO P/MAT	11160033	ALETA TIBURON TRANSP PRO P/MAT
		12301051	TORNILLO HEX M4X16 ISO 7380
13	ORFM04 PLUG (WITH HOLE)	16100125	TAPON C/AGUJERO 22X8
18	MW20N FD CAP Ø8	16100113	TOPE DE PLASTICO OPTURADO D7,25
20	ARANDELA DE SEGURIDAD CON SOLAPA DIN 93 M6	12320125	ARANDELA SEGURIDAD DIN93 M6
14	CCG060BJ-DI2 WIRE HOLDER	11207536	GUIA CABLE ELECTRONICO EN FRENO

PARTS & HARDWARE

EPS groupe external battery Chain Stay left



ASSAMBLE IN THE FRAME

BB guide Avant OME 15 Negro
 Chapilla desviador Road 14 Negro
 Pata cambi rec carrera 2ag O3 Orca 15 Negro
 Tope DT Cam/Desv Avant OME 15 Negro
 Tope de funda CS derecho Avant OME 15 Negro

PARTS & HARDWARE

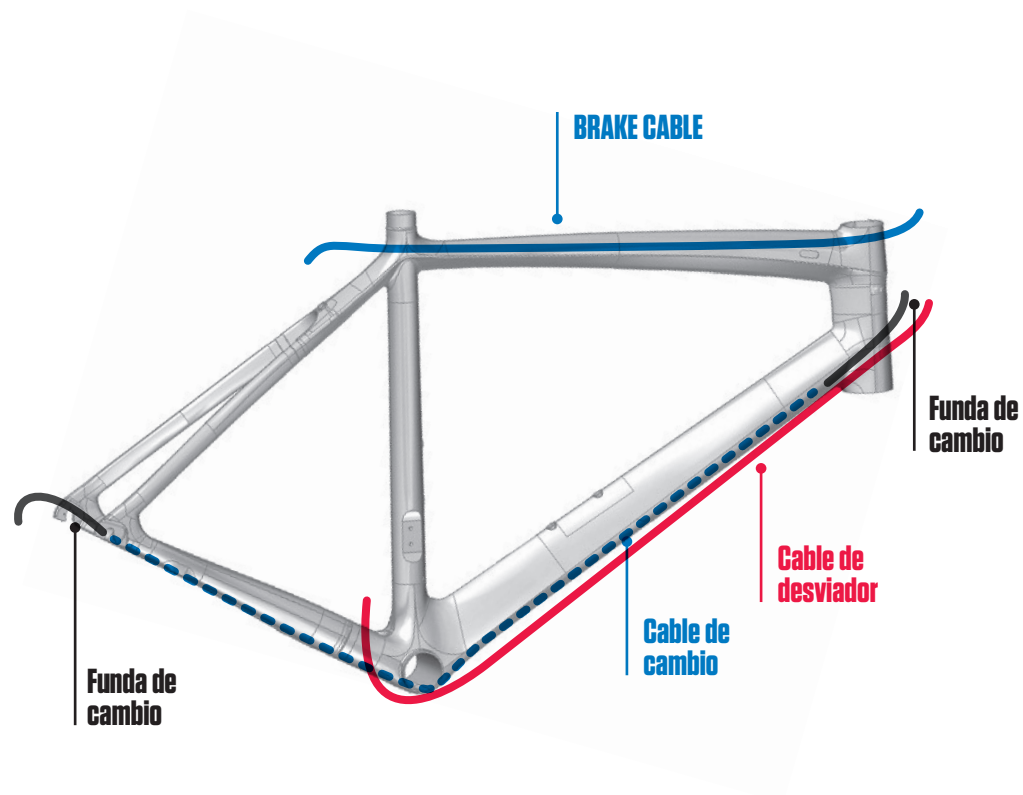
EPS groupe external battery Chain Stay left



PART NUMBER	REFERENCE	ORBEA REFERENCE	ORBEA DESCRIPTION
1	AP21-62	11001170	TAPON GOMA 5MM AGUJERO 22X8
10	KSM-GM02	11001122	TAPON SHIMANO DI2 (7X8) NEGRO
3	AKSC08	11160786	ABR SIL AVANT OMP 31.8 ALU NEGRO
4	REAR HANGER ONI	15430040	PATA CAMBI REC CARRERA 2AG 03 ORCA 15 NEGRO
6		11202190	CHAP DESV ROAD CARB 13-14-15
9	ALETA TIBURON TRANSP PRO P/MAT	11160033	ALETA TIBURON TRANSP PRO P/MAT
		12301051	TORNILLO HEX M4X16 ISO 7380
13	ORFM04 PLUG (WITH HOLE)	16100125	TAPON C/AGUJERO 22X8
14	CCG060BJ-DI2 WIRE HOLDER	11207536	GUIA CABLE ELECTRONICO EN FRENO
18	MW20N FD CAP Ø8	16100113	TOPE DE PLASTICO OPTURADO D7,25

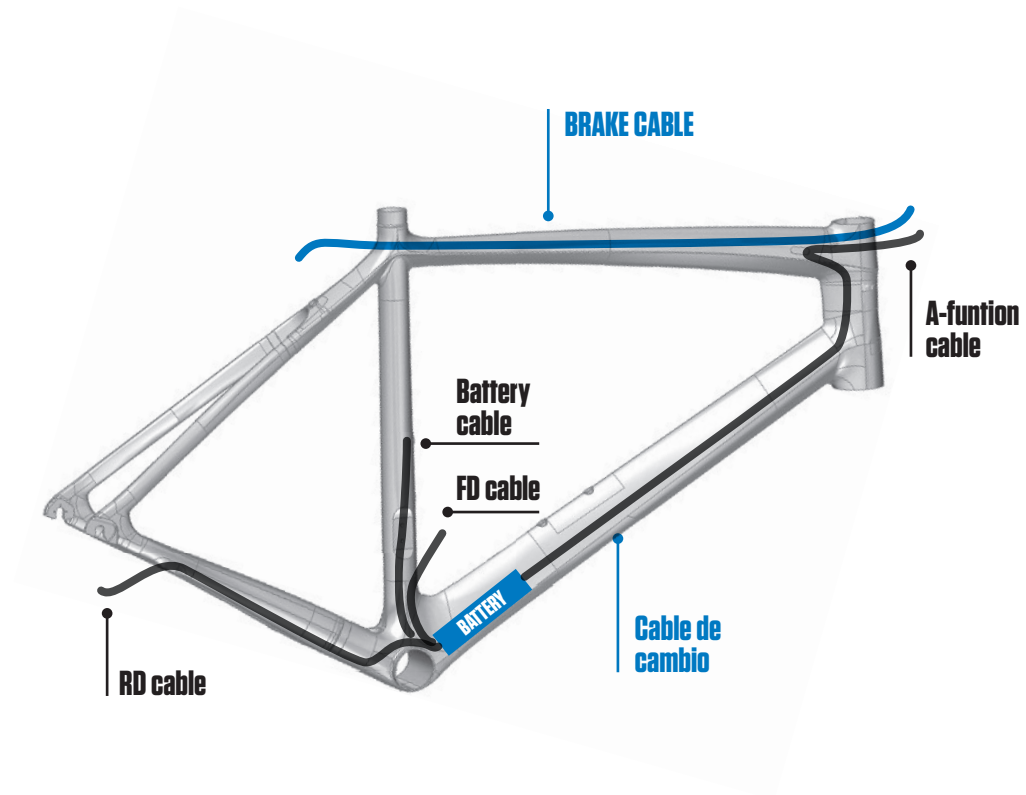
CABLE ROUTING

Mechanic



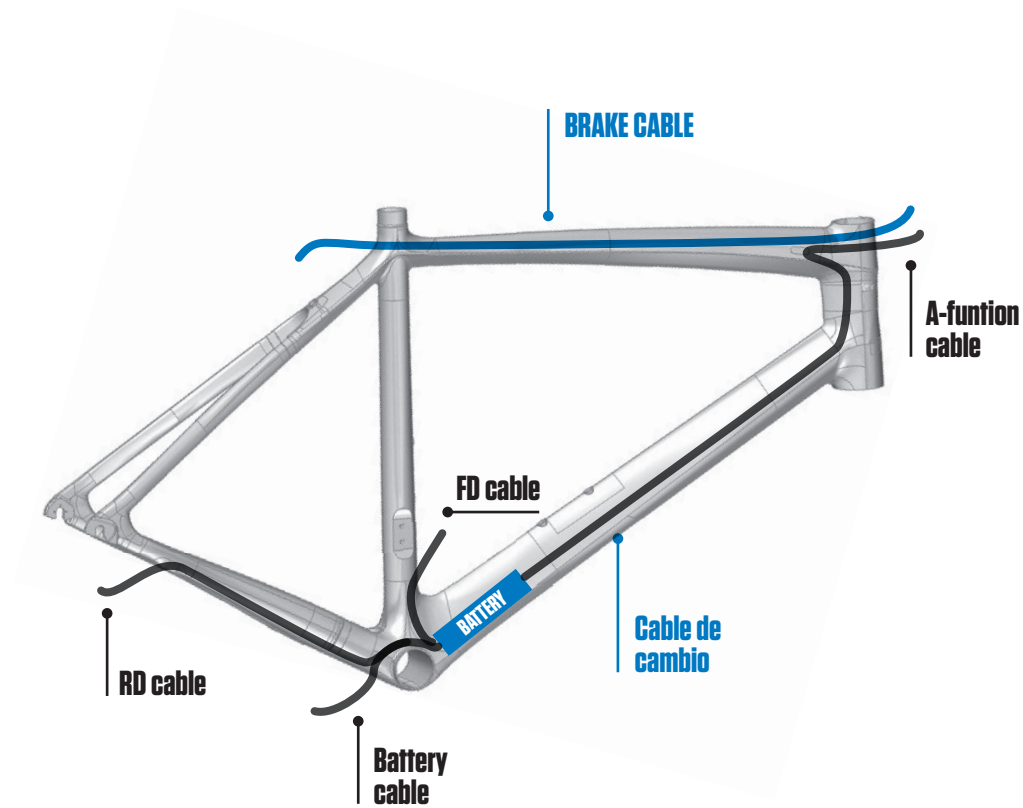
CABLE ROUTING

Electronic-Battery internal



CABLE ROUTING

Electronic-Battery external



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:

<mailto:Orbea@Orbea.com>

ORBEA