

ORBEA

**BLUE
PAPERS**

ORCA AERO
TECHNICAL MANUAL

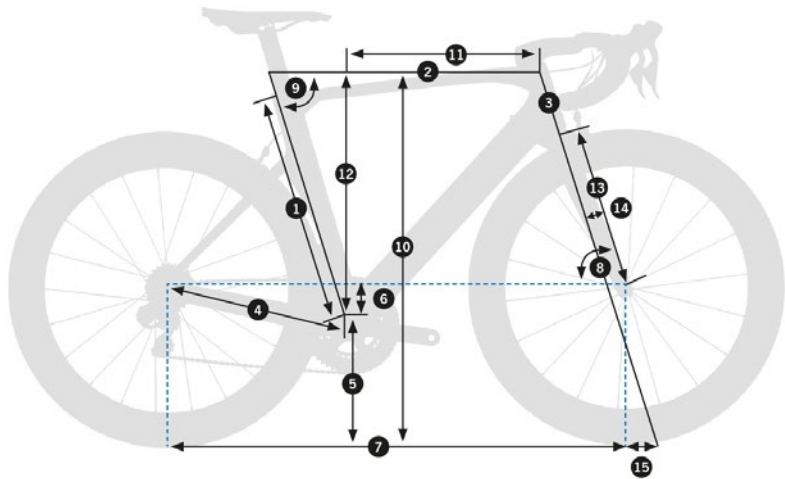
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ORCA AERO

ORBEA

GEOMETRY



SIZES	47	49	51	53	55	57	60
1 - SEAT TUBE (C-C)	450	465	490	515	535	555	580
2 - TOP TUBE (EFF)	509	521	534	547	559	575	588
3 - HEAD TUBE	100	108	124	144	163	181	208
4 - CHAIN STAY	408	408	408	408	408	408	408
5 - BB HEIGHT	269,5	269,5	269,5	271,5	271,5	271,5	271,5
6 - BB DROP	72	72	72	70	70	70	70
7 - WHEELBASE	970	974	978	980	991	1000	1014
8 - HEAD ANGLE	71	71,5	72,2	72,8	73	73,2	73,2
9 - SEAT ANGLE	74,5	74	73,7	73,5	73,5	73,2	73,2
10 - STANDOVER	464,9	478,5	499,2	516,1	540	558,2	582,6
11 - REACH	370	375	380	385	391	398	404
12 - STACK	501	510	528	548	567	585	611
13 - FORK LENGTH	370	370	370	370	370	370	370
14 - RAKE	48MM	48MM	48MM	43MM	43MM	43MM	43MM
15 - TRAIL	66,82	63,65	59,23	60,7	59,44	58,19	58,19
Wheel (700x28C)	683	683	683	683	683	683	683
BB To front axle	573	578	581	582	592	602	616
Seatpost length	320	320	320	380	380	380	380

ERGONOMY



SIZE	CRANK	HANDLEBAR	STEM
47	170	400	90
49	170	400	100
51	170	420	100
53	172.5	420	110
55	172.5	420	110
57	172.5	440	110
60	175	440	120

* The handlebar size is centre-centre.

HEIGHT (cm)	HEIGHT (in)	SIZE
155-160	5'1"-5'3"	47
160-166	5'3"-5'5.5"	49
167-172	5'5.7"- 5'7.5"	51
173-179	5'8" - 5'10.5"	53
180-185	5'11"-6'1"	55
186-191	6'1"- 6'3"	57
192-207	6'3.5"- 6'9.5"	60

* Estimated measurements.

SPECIFICACIONES

HEADSET TYPE	1" 1/8 - 1" 1/2
BB	BB386EVO DIAMETER 46MM
FRONT DERAILLEUR	IDEM ORCA 2017 (46-54T FOGRE) – CNC 50-56T
FRONT DERAILLEUR TP/DP	FRONT DERAILLEUR DP TYPE
FD ANGLE	63°
SEAT POST DIAMETER	AERO SHAPE MYMETRICAL
SEAT CLAMP	SEMI INTEGRATED
DROPOUT	STANDARD (130MM X 9MM)
CHAINSTAY PROTECTOR	SAME ORCA 2017 PLASTIC PROTECTOR
OTHER PROTECTORS	DOESN'T NEED
CABLE TYPE	W/JAGWIRE
REAR HUB LENGHT	130MM
CHAINGUIDE MOUNT	PROPRIETARY CHAIN WATCHER FOR DOUBLE CHAINRING SETUPS, POWERMETER COMPATIBLE

OPTIONS

BRAKE	V-BRAKE	NO
	DISC BRAKE	NO
	FLAT MOUNT - CENTER LOCK	NO
	CALIPER BRAKE	SI-DIRECT MOUNT (BR-R9110-RS/BR-9010-RS/BR-6810-RS/BR-5810-RS)
LUGGAGE	BAG OPTION IN TOP TUBE	NO
	BOTTLE CAGE	MMS SYSTEM 3 RIVETS IN DOWNTUBE
	OPTION AERO AND STANDARD BOTTLE	YES
	REAR CARRIER OPTION	NO
	MUDGUARD OPTION	NO
	KICKSTAND	NO
GEARS 1X	11 SPEED	YES
	DOUBLE CRANK	YES
	COMPACT CRANK 50X34T Y 52X36T	YES
	TRIPLE CRANK	NO
	OVAL CHAINRING COMPATIBLE	YES

OPTIONS

Groupsets

COMPATIBLE INTERNAL



NO COMPATIBLE EXTERNO



ROAD

SHIMANO

DURA-ACE Di2 [9150] (11 SPEED ELECTRONIC)	YES
DURA-ACE Di2 [9100] (11 SPEED)	YES
DURA-ACE Di2 [9070] (11 SPEED ELECTRONIC)	YES
DURA-ACE Di2 [7900] (10 SPEED ELECTRONIC)	YES
DURA-ACE [9000] (11 SPEED)	YES
DURA-ACE [7900] (10 SPEED)	YES
ULTEGRA Di2 [6870] (11 SPEED ELECTRONIC)	YES
ULTEGRA Di2 [6770] (10 SPEED ELECTRONIC)	YES
ULTEGRA [6800] (11 SPEED)	YES
ULTEGRA [6700] (10 SPEED)	YES
105 [5700] (11 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

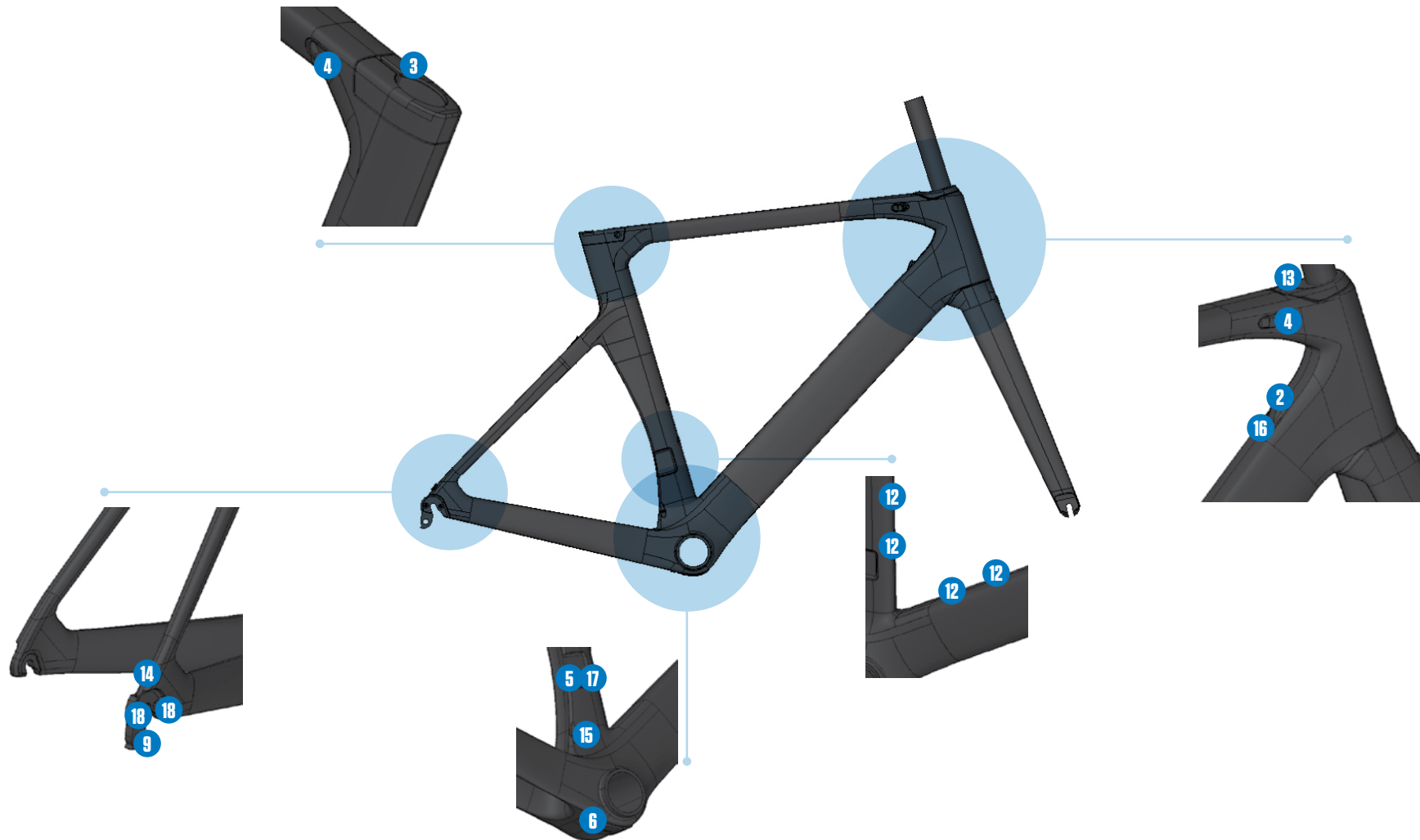
SUPER RECORD EPS (11 SPEED ELECTRONIC)	YES -> BACK SIDE BB, IDEM ORDU 2016?
RECORD EPS (11 SPEED ELECTRONIC)	YES
ATHENA EPS (11 SPEED ELECTRONIC)	YES
SUPER RECORD (11 SPEED)	YES
RECORD (11 SPEED)	YES
CHORUS (11 SPEED)	YES
ATHENA (11 SPEED)	YES
CENTAUR (10 SPEED)	YES
VELOCE (10 SPEED)	YES

SRAM

SRAM RED E-TAP	YES
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

PARTS & HARDWARE

SHIMANO/CAMPAGNOLO/SRAM Mechanical groupsets



PARTS & HARDWARE

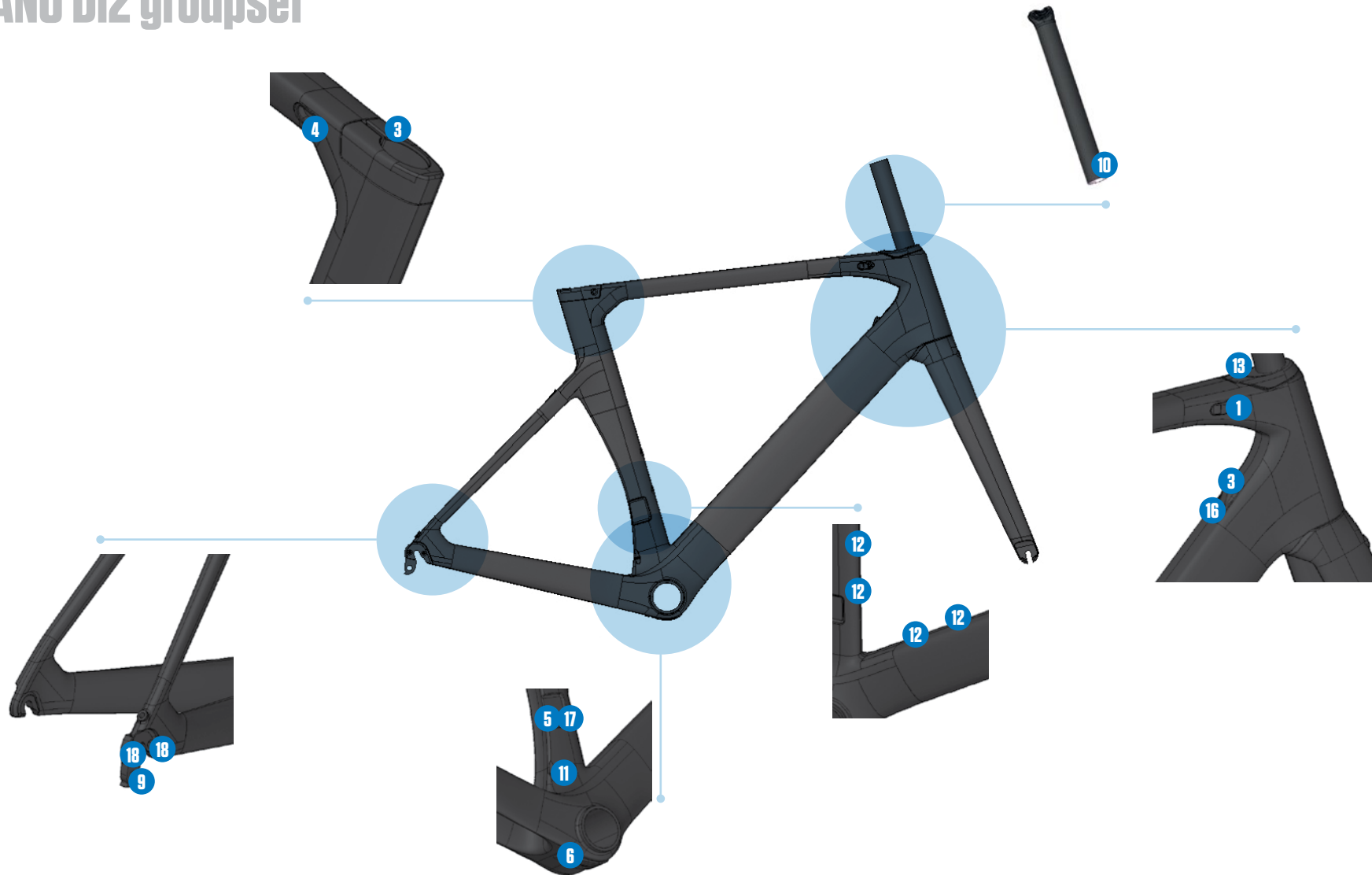
SHIMANO/CAMPAGNOLO/SRAM Mechanical groupsets



PART NUMBER	REFERENCE	ORBEA DESCRIPTION
2	11000452	TOPE TD AERO 18 MECANICO
4	11000432	TOPE PLASTICO TUBO DIAGONAL MECANICO "CLIP"
5	11200700	CHAPILLA DESVIADOR ROAD 17
6	11200701	GUIA BB MECANICO-DI2-17
7	11160790	ABRAZ SILLIN ORBEA AERO 18 NEG
9	15430089	PATA DE CAMBIO ORCA 16 REF15-26MM
	15430205	PATA CAMBIO ORCA17 QR (7075)15-26 L&K DM
12	12300027	TORNILLO ALU M5X15 NEG P.BIDON
13	11000455	TAPA DIR FSA 18 ORBEA AERO
14	16100119	TOPE TIRANTE ORCA 15 NEG
15	16100113	TAPON DESV D8 ORCA 14
16	12301069	TORNILLO M3X12 AVELLANADO
17	12300059	TORNILLO M4X8 DIN7991 INOX
18	12300051	TORNILLO M5X16 DIN7991 CHA.DESV

PARTS & HARDWARE

SHIMANO Di2 groupset



PARTS & HARDWARE

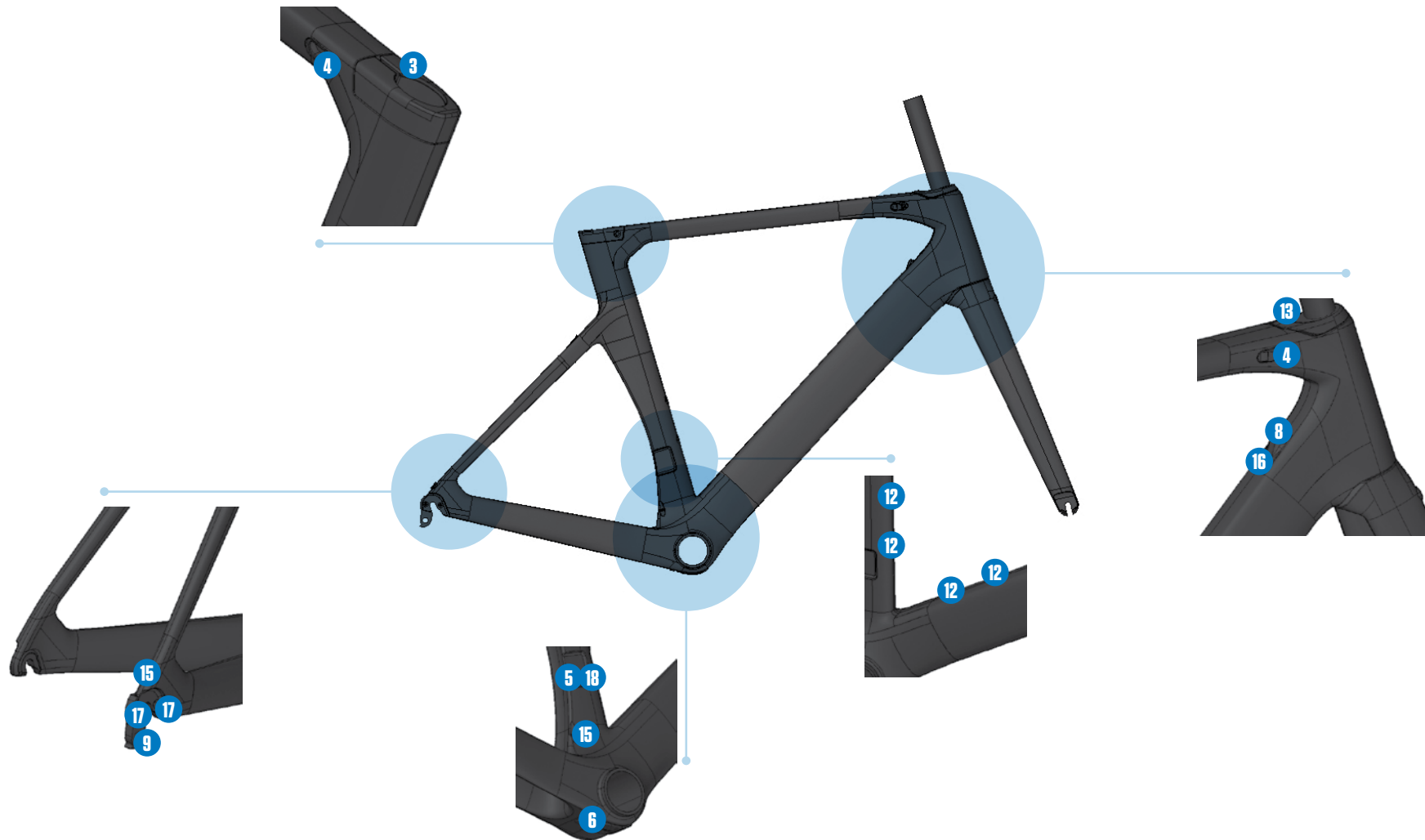
SHIMANO Di2 groupset



PART NUMBER	REFERENCE	ORBEA DESCRIPTION
1	11000434	TOPE PLASTICO TUBO HORIZONTAL "CLIP"- DI2+CALIP
3		
4	11000432	TOPE PLASTICO TUBO DIAGONAL MECANICO "CLIP"
5	11200700	CHAPILLA DESVIADOR ROAD 17
6	11200701	GUIA BB MECANICO-DI2-17
7	11160790	ABRAZ SILLIN ORBEA AERO 18 NEG
9	15430089	PATA DE CAMBIO ORCA 16 REF15-26MM
	15430205	PATA CAMBIO ORCA17 QR (7075)15-26 L&K DM
10	11000456	SOPORTE BATERIA DI2 TIJA AERO
11	11001122	TAPON SHIM DI2 (7X8) NEG 12"
12	12300027	TORNILLO ALU M5X15 NEG P.BIDON
13	11000455	TAPA DIR FSA 18 ORBEA AERO
16	12301069	TORNILLO M3X12 AVELLANADO
17	12300059	TORNILLO M4X8 DIN7991 INOX
18	12300051	TORNILLO M5X16 DIN7991 CHA.DESV

PARTS & HARDWARE

SRAM E-tap groupset



PARTS & HARDWARE

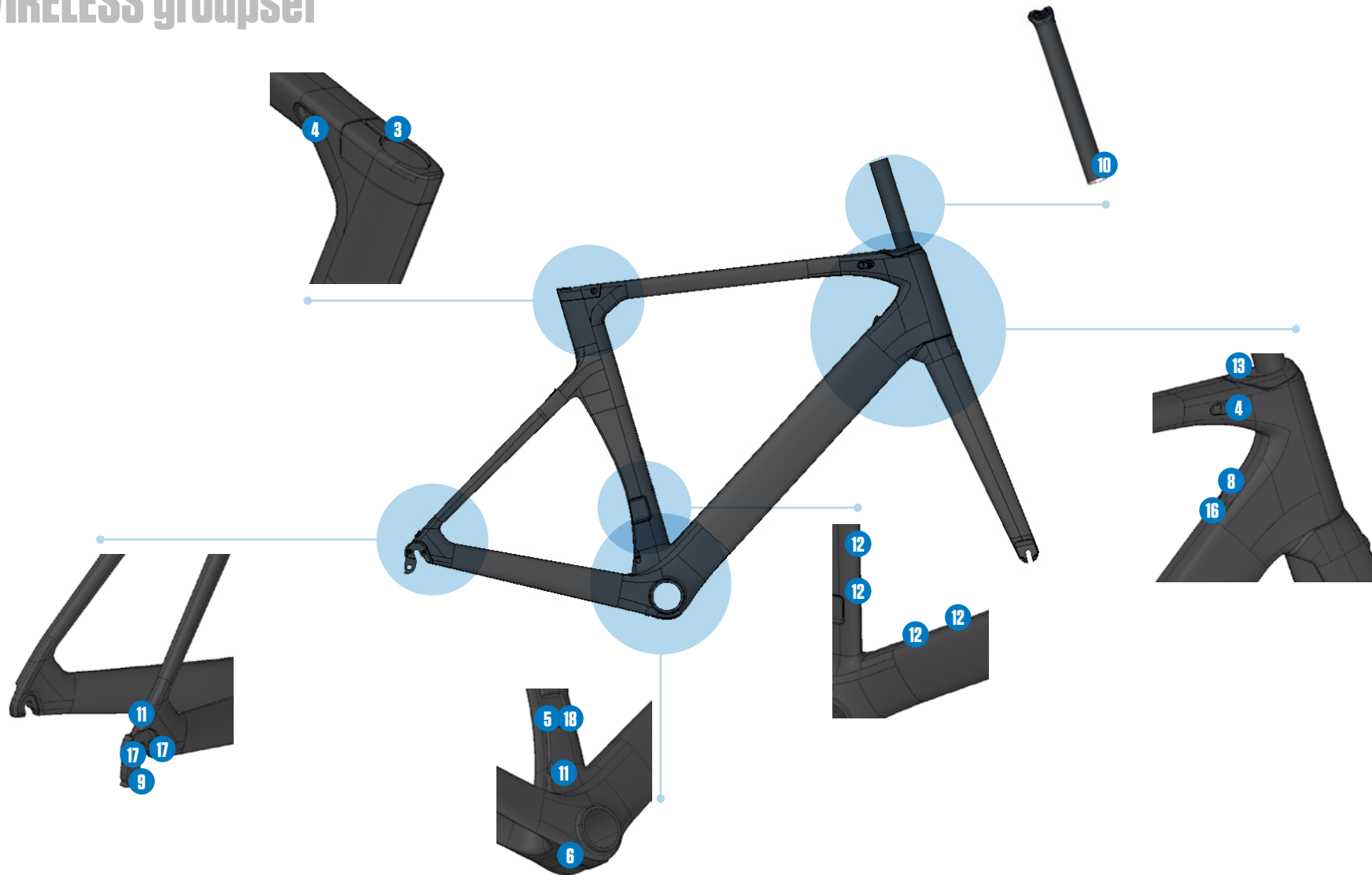
SRAM E-tap groupset



PART NUMBER	REFERENCE	ORBEA DESCRIPTION
	11000432	TOPE PLASTICO TUBO DIAGONAL MECANICO "CLIP"
5	11200700	CHAPILLA DESVIADOR ROAD 17
6	11200701	GUIA BB MECANICO-DI2-17
7	11160790	ABRAZ SILLIN ORBEA AERO 18 NEG
8	11000454	TAPA WIRELESS AERO 18
9	15430088	PATA DE CAMBIO ORCA 16 REF15-26MM
12	12300027	TORNILLO ALU M5X15 NEG P.BIDON
13	11000455	TAPA DIR FSA 18 ORBEA AERO
15	16100113	TAPON DESV D8 ORCA 14
16	12301069	TORNILLO M3 X 12 AVELLANADO
17	12300059	TORNILLO M4X8 DIN7991 INOX
18	12300051	TORNILLO M5X16 DIN7991 CHA.DESV

PARTS & HARDWARE

FSA WIRELESS groupset



PARTS & HARDWARE

FSA WIRELESS groupset



PART NUMBER	REFERENCE	ORBEA DESCRIPTION
4	11000432	TOPE PLASTICO TUBO DIAGONAL MECANICO "CLIP"
5	11200700	CHAPILLA DESVIADOR ROAD 17
6	11200701	GUIA BB MECANICO-DI2-17
7	11160790	ABRAZ SILLIN ORBEA AERO 18 NEG
8	11000454	TAPA WIRELESS AERO 18
9	15430088	PATA DE CAMBIO ORCA 16 REF15-26MM
10	11000456	SOPORTE BATERIA DI2 TIJA AERO
11	11001122	TAPON SHIM DI2 (7X8) NEG 12"
12	12300027	TORNILLO ALU M5X15 NEG P.BIDON
13	11000455	TAPA DIR FSA 18 ORBEA AERO
16	12301069	TORNILLO M3X12 AVELLANADO
17	12300059	TORNILLO M4X8 DIN7991 INOX
18	12300051	TORNILLO M5X16 DIN7991 CHA.DESV

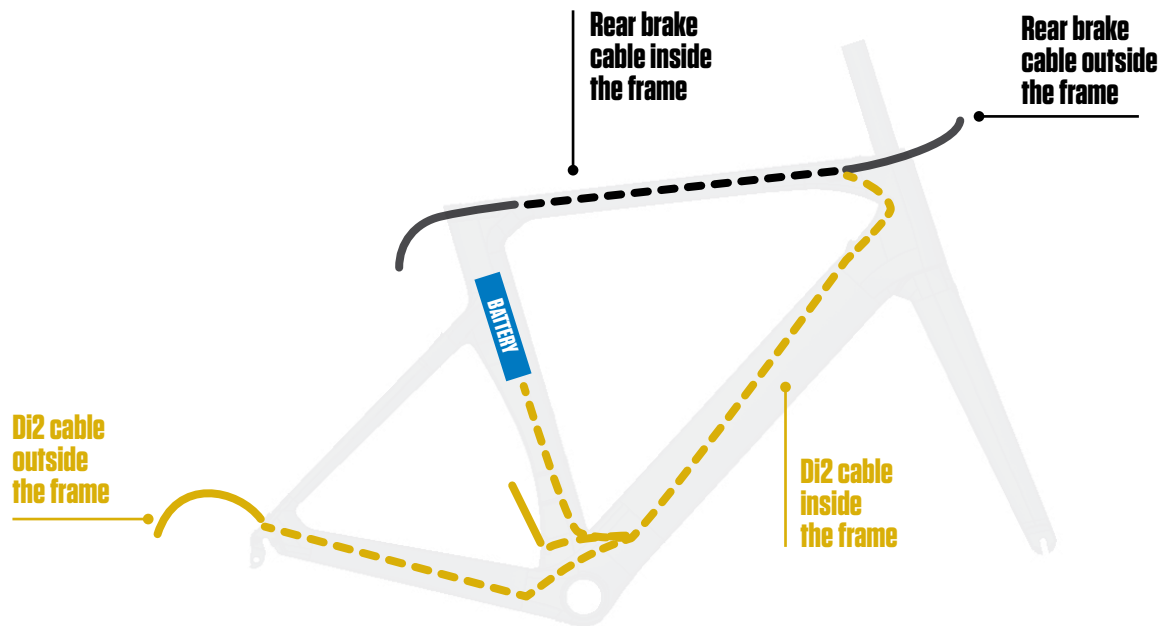
CABLE ROUTING

SHIMANO/CAMPAGNOLO/SRAM Mechanical groupset



CABLE ROUTING

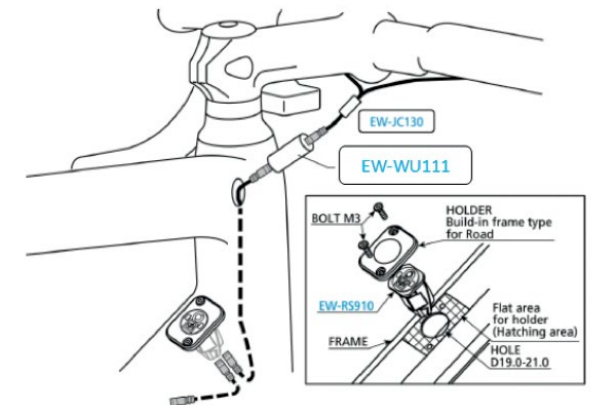
SHIMANO Di2 groupset



BUILT-IN FRAME TYPE



EW-RS910



CABLE ROUTING

SRAM E-tap groupset



CABLE ROUTING

FSA WIRELESS groupset



BAR-SPACERS

En los modelos de bici Orca Aero hasta recibir los separadores del proveedor Sunon usamos únicamente los separadores de FSA. Son los códigos:

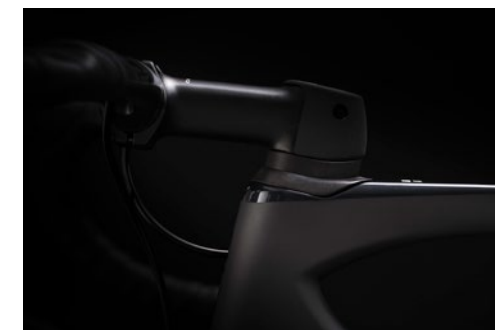
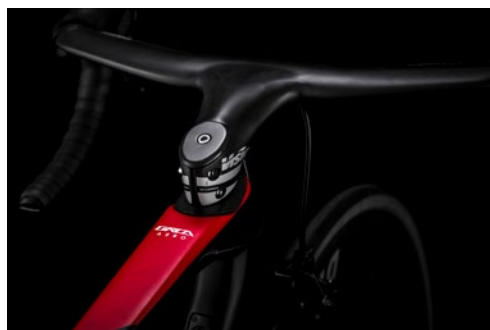
Una vez agotadas las existencias de FSA en todos los modelos de bicis Orca Aero pasaremos a utilizar los artículos siguientes:

En el caso del cuadro suelto entregaremos desde el inicio los separadores del proveedor Sunon.

REFERENCE	ORBEA DESCRIPTION
11033340	SEP.DIR AERO METRON-5D 5MM
11033341	SEP.DIR AERO METRON-5D 10MM

REFERENCE	ORBEA DESCRIPTION
11033352	SEP.DIR AERO STANDARD 5MM
11033350	SEP.DIR AERO METRON-5D 5MM
11033351	SEP.DIR AERO METRON-5D 10MM

REFERENCE	ORBEA DESCRIPTION
11033352	SEP.DIR AERO STANDARD 5MM
11033350	SEP.DIR AERO METRON-5D 5MM
11033351	SEP.DIR AERO METRON-5D 10MM



FRAME AND MATERIAL

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

1) Keep your ORCA 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 ORCA 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 ORCA 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 Orca, 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.

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