

ORBEA

**BLUE
PAPERS**

AVANT H
TECHNICAL MANUAL

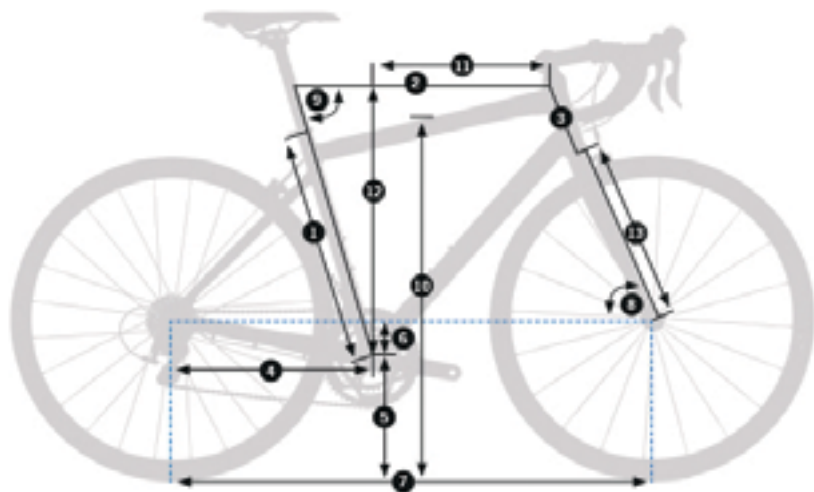
CONTENT

GEOMETRY	3
ERGONOMY	4
FEATURES	5
OPTIONS	6
FRAME AND MATERIAL	9
PARTS & HARDWARE	10
CABLE ROUTING	11

AVANT H

ORBEA

GEOMETRY



SIZES	47	49	51	53	55	57	60
1 - Seat tube	410	440	470	490	510	530	560
2 - Top tube (EFF)	516,2	527,3	536,5	549,1	563,9	579,6	594,4
3 - Head tube	113	131,7	150,1	165	188	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	257,5	257,5	257,5	257,5	257,5	257,5	257,5
7 - Wheel base	978	986,5	992,8	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 - Offset	53	53	53	43	43	43	43
11 - Standover height	721,9	730,3	754,2	774,5	798,5	820,5	847,9
12 - Reach	363	367,1	370,9	378,4	383,4	391,7	400,2
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

ERGONOMY



SIZE	CRANK	HANDLEBAR	STEM
47	170	90	400
49	170	100	400
51	170	100	420
53	170	110	420
55	172,5	110	420
57	172,5	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	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.

FEATURES

DIRECTION	1" 1/8 SEMIINTEGRATED (Ø44)
BB	STANDARD (68X1,37"X24H BSC)
FRONT DERAILLEUR	Ø31,8
FRONT DERAILLEUR TP/DP	DP
FD ANGLE	63,4°
SEAT POST DIAMETER	Ø27.2
SEAT CLAMP	Ø31,8
DROPOUT	TIPO AQUA
CHAINSTAY PROTECTOR	YES
OTHER PROTECTORS	NO
CABLE TYPE	STANDARD
REAR HUB LENGHT	130 MM.

OPTIONS

BRAKE	V-BRAKE	NO
	DISC BRAKE	NO
	REAR BRAKE IS/PM+DIAMETER DISC	NO
	CALIPER BRAKE	YES
LUGGAGE	BAG OPTION IN TOP TUBE	NO
	BOTTLE CAGE	YES
	OPTION AERO AND STANDARD BOTTLE	NO
	REAR LUGGAGE OPTION	NO
	MUDGUARD OPTION	YES
	KICKSTAND	NO
	LIGHTS	NO
	LOCK	NO
GEARS	BASKET	NO
	SIMPLE CRANK	NO
	DOUBLE CRANK	YES (53X39T)
	COMPACT CRANK (34X50T) (ROAD)	YES
	TRIPLE CRANK	YES (50X39X30T)
OXYMETRIC	NO	

OPTIONS

Groupset

ROAD		
SHIMANO		
DURA-ACE DI2 [9070] (11 SPEED ELECTRONIC)		NO
DURA-ACE DI2 [7900] (10 SPEED ELECTRONIC)		NO
DURA-ACE [9000] (11 SPEED)		YES
DURA-ACE [7900] (10 SPEED)		YES
ULTEGRA DI2 [6870] (11 SPEED ELECTRONIC)		NO
ULTEGRA DI2 [6770] (10 SPEED ELECTRONIC)		NO
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)		NO
RECORD EPS (11 SPEED ELECTRONIC)		NO
ATHENA EPS (11 SPEED ELECTRONIC)		NO
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	700
	TYRES	700X28C (MICHELIN DYNAMIC SPORT)
CABLE ROUTING	MECHANICAL SYSTEM (W/INTERNAL CABLE ROUTING)	INSIDE DT AND EXTERNAL CHAIN STAY
	ELECTRONIC DI2 SYSTEM (W/INTERNAL CABLE ROUTING)	IT IS NOT COMPATIBLE WITH EPS OR DI2
	EXTERNAL SHIMANO BATTERY (IN LEFT CHAINSTAY)	NO
	CAMPAGNOLO EPS	NO
POWER METERS	SRM	NO
	POWER2MAX	NO
	STAGES	YES
	PIONEER	NO
	ROTOR POWER	NO
	QUARQ	NO
	GARMIN VECTOR	YES
	LOOK AND POLAR	NO
POWERTAP	YES	
OTHERS	U.C.I. LEGAL	NO

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.

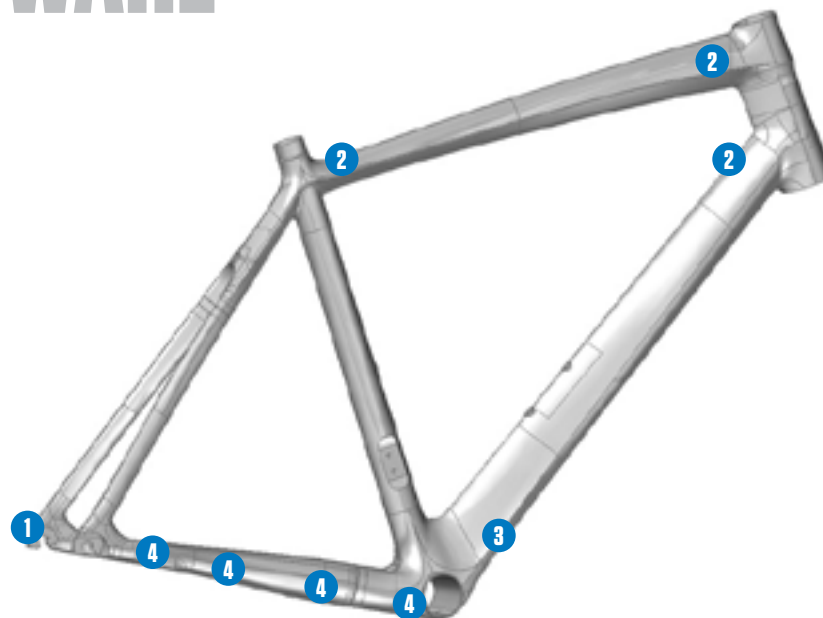
Check the drivetrain and spin the wheels to make sure components are operating correctly. If you discover damage to your components, discontinue use immediately.

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.

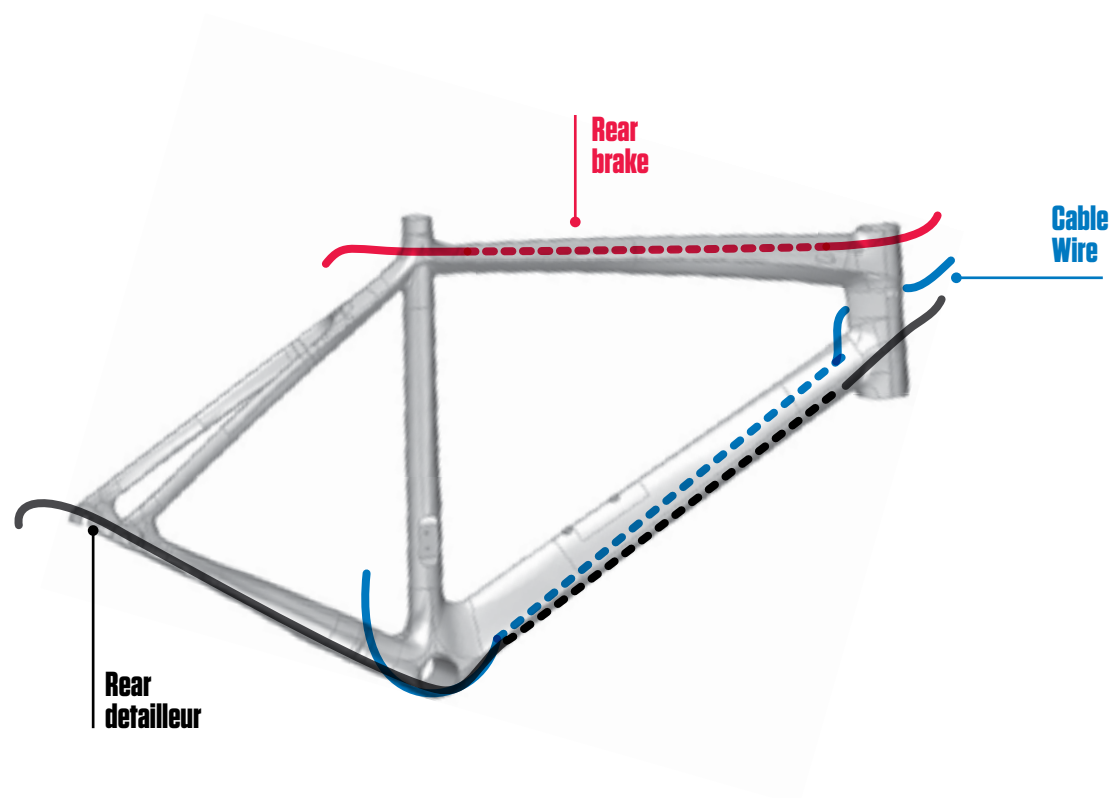
A crash or impact can put extraordinary stress on your bike and components, causing them to fail or to fatigue prematurely. Failure can happen suddenly with no warning, causing loss of control, serious injury or death.

PARTS & HARDWARE



PART NUMBER	REFERENCE	ORBEA REFERENCE
1	REAR HANGER FOR ONIX FRAME	15430040
2	RUBBER COVER 5MM 22X8	11001170
3	RUBBER COVER 5MM 30X10	11001171
4	84485072699 NR844 M5X4,5	11001175

CABLE ROUTING



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