

E-118+ TRI

LEAN AND MEAN



ARGON 18



TRI AND TT MACHINE

**THE BEST OF
BOTH WORLDS**



ARGON 18



WE KNOW A THING OR TWO ABOUT PERFORMANCE

For the last twenty years, we have been collaborating closely with top athletes at the highest levels of road cycling, triathlon and track. Athletes riding our bikes succeed in all of these disciplines because we work tirelessly to provide them with state-of-the-art products designed for their specific needs.



16 MEDALS

MOST DECORATED CYCLING BRAND
AT THE 2019 TRACK WORLD
CHAMPIONSHIP

3:48.012

TEAM PURSUIT WORLD RECORD
CYCLING AUSTRALIA ON
THE ELECTRON PRO



2 GRAND TOUR PODIUM

GIRO AND VUELTA 2018 FOR MIGUEL ANGEL LOPEZ
OF ASTANA PRO TEAM ON THE GALLIUM PRO



1:56:32

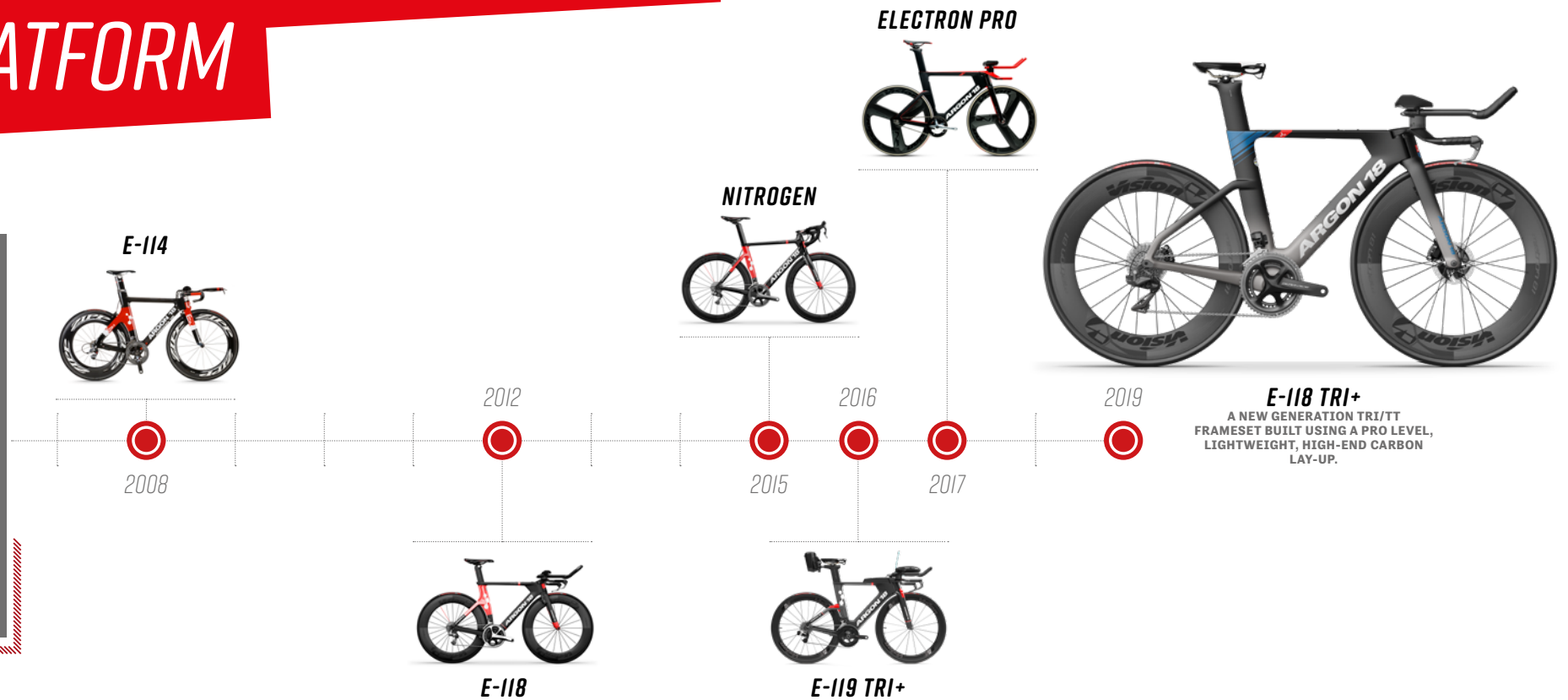
70.3 WORLD RECORD BIKE SPLIT
(BAHRAIN 2018) FOR CASPER STORNES
ON THE E-119 TRI+

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YEARS OF ACCUMULATED KNOWLEDGE WERE USED TO CREATE OUR NEW TRI/TT PLATFORM

In our many years of working with great athletes and teams, we have been able to collect invaluable data and information that has helped us build a unique expertise in carbon lay-ups and aerodynamics. Through the combined use of this expertise and proprietary technologies, we are now ready to roll out an all new generation of the E-118 Tri/TT platform.



WORLD TOUR PERFORMANCE GAINS MADE AVAILABLE

Astana Pro Team, with whom we have been working for two years, has had a long history of successes including victories in all of the Grand Tours and, therefore, never settles for second best when it comes to equipment. Because every possible performance gain will make a difference in the toughest races, we made it our top priority from the very start of our collaboration to supply them with faster, more aero and reactive bikes. Bikes that provide better stability, corner better, and display superior braking abilities in all conditions.

Our new E-118 platform is the result of long discussions with the team regarding their specific Time Trial needs. They wanted a lighter, faster bike with a more aggressive positioning range.

In the design phase, we used CFD to benchmark ideas, define a new pro level carbon lay-up, and help us integrate disc brakes without penalizing aero performance.

Once we settled on a final design and carbon lay-up, we supplied Astana with prototypes to be tested by team members in the velodrome and on the road to validate the concept (see Real Life Testing section) and corroborate gains that we were seeing in simulations.

The TT version of the platform is now ready to race, and the Triathlon version of the very same bike, the E-118Tri+, will soon become available for purchase.



E-118⁺ TRI

**MUCH MORE THAN JUST
ANOTHER AERO TRI BIKE**

The E-118Tri+ is the Triathlon version of the E-118Pro, our no-compromise Time trial bike developed with and for Astana Pro Team. As such, it is built using the same breakthrough Pro level carbon lay-up.

The E-118Tri+ is as light as its time trial counterpart. Its superior handling and exceptional responsiveness, trademark characteristics of Argon 18 bikes, are rather uncommon in the triathlon world.

All of this makes the E-118Tri+ faster on technical courses. It corners better and climbs like no other bike in its category.



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WHY DISC BRAKES?

IT IS GENERALLY BELIEVED THAT BIKES EQUIPPED WITH DISC BRAKES ARE HEAVIER AND LESS AERO. THIS DOESN'T APPLY TO THE E-118TRI+. NO BIKE CONCEPT COMES OUT OF ARGON 18 IF IT DOESN'T BRING SOMETHING NEW AND DISTINCTIVE TO THE PARTY AND THE E-118TRI+ IS NO EXCEPTION TO THAT RULE. WE MADE SURE IT WOULD MEET ALL OUR STANDARDS AND THEN SOME. THE E-118TRI+ IS TRULY A NO COMPROMISE BIKE.

EASIER MAINTENANCE

Once properly installed and set up, disc brakes require far less maintenance than regular rim brakes. They also make wheel swaps easier since there is no need to change brake pads when switching from alloy to carbon wheels. These are real benefits for serious triathletes, amateur or pro.

BETTER BRAKING

It has now become common knowledge that disc brakes offer better braking performance and adjustability than traditional rim brakes regardless of weather conditions. Their performance when cornering also add to their advantage.

MORE CLEARANCE

Another advantage of the E-118Tri+ over its predecessor is better tire clearance. Once again, this is due to the disc brakes. Riders can now choose tires right up to 28C, a major improvement over the 23mm tire clearance of the E-118Next.

250G WEIGHT SAVING COMPARED TO E-118 NEXT (SAME BUILD)

Usually, incorporating disc brakes to a bike design will add about 400g to the total weight of the bike. Therefore, to launch a new Triathlon bike that is lighter than its predecessor while equipped with disc brakes is no mean feat.



TRIATHLETES, WE GOT YOU COVERED!

We wanted the E-118Tri+ to be as adaptive as possible so that it could be used either for triathlon or time trialling. In this perspective, we did away with all proprietary hydration systems as they tend to be heavier and may not answer the needs of all triathletes.

STANDARD RITCHEY SADDLE CLAMP

Compatible with all 10mm seatpost inserted hydration systems and repair kit holders from major brands.

TOP TUBE MOUNTS

The E-118Tri+ is equipped with threaded inserts on the top tube for easy installation of any aero bento box.

BOTTLE BETWEEN AEROBAR READY

With regular bottle cages mounts, the E-118Tri+ provides fast and easy hydration system set up in the cockpit area.



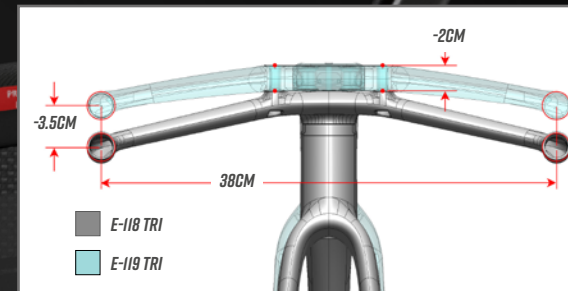
TWO POSITIONS FOR BOTTLE ON DOWNTUBE

The lowest position is designed for a more aero set-up while the higher position is meant for long training rides bottle set-up.

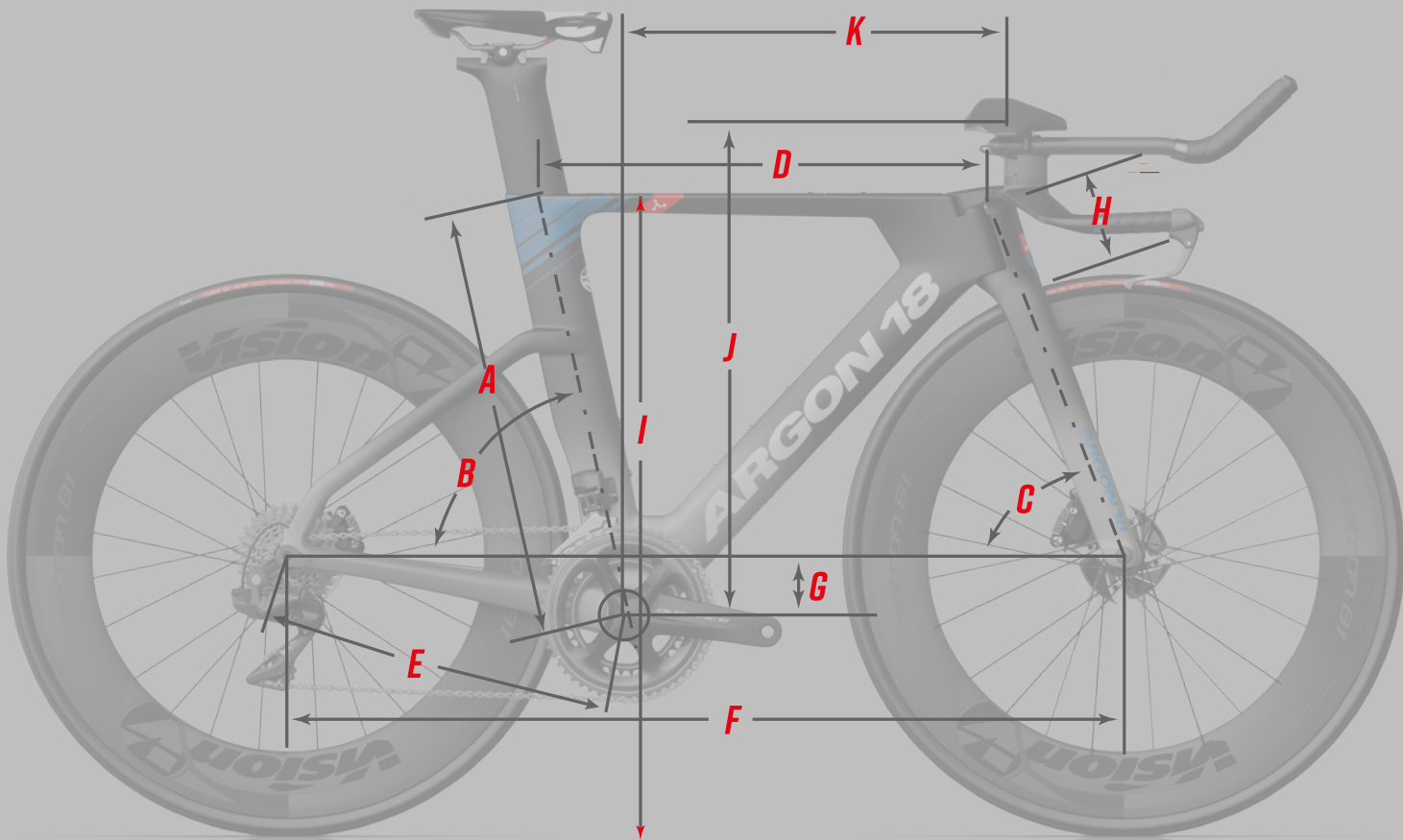
NEW GENERATION ONENESS SYSTEM

With the E-118Tri+, we introduce a new version of our full carbon super light handlebar/stem combo. While maintaining the system's stiffness, it allows a lower fit window.

When compared to the E118 Next's version of the Oneness system, this new generation system's armrests stack is 2cm lower and the grip position is 4cm lower, making it easier to fit smaller people on the bike.



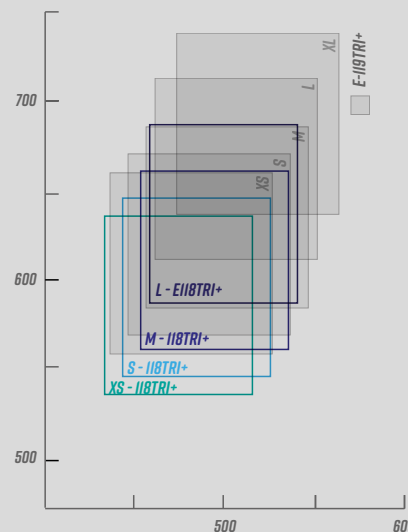
GEOMETRY CHART



E-I18 TRI+ GEOMETRY

			X-SMALL	SMALL	MEDIUM	LARGE
A	SEAT TUBE HEIGHT	CM	46	50	52	55
B	SEAT TUBE ANGLE	DEG.	78	78	78	78
C	HEAD TUBE ANGLE	DEG.	72	72	72	72
D	TOP TUBE LENGTH	CM	49	50	52	53
E	CHAINSTAY LENGTH	CM	41	41	41	41
F	WHEELBASE	CM	98	99	101	102
G	BB DROP	CM	7	7	7	7
H	HEAD TUBE LENGTH	CM	5	6	8	10
I**	STANDOVER HEIGHT	CM	72	75	77	80
J	STACK MIN *	CM	54	55	56	59
J	STACK MAX *	CM	64	65	66	69
K	REACH MIN *	CM	43	44	45	46
K	REACH MAX *	CM	52	53	54	54
L	SADDLE HEIGHT MIN / MAX	CM	57.6/78.1	61.5/83.6	63.1/83.6	66.1/86.6

* Stack and reach measured at center of elbow pad.
** Measured with 700x25c tires.



E-I19 TRI

MIN STACK	MIN REACH	MAX STACK	MAX REACH
560	436	660	526
570	446	670	536
585	456	685	546
612	461	712	551
637	473	737	563

E-I18 TRI+

MIN STACK	MIN REACH	MAX STACK	MAX REACH
537	433	636	515
547	443	647	533
562	453	662	543
588	458	688	548



IT'S ALL ABOUT THE DETAILS

It's our attention to the smallest details that often sets our bikes apart from the rest and, in that regard, the E-118Tri+ is no exception. We went to great lengths to make it exceptional from its new cockpit right down to the Di2 junction box integration.



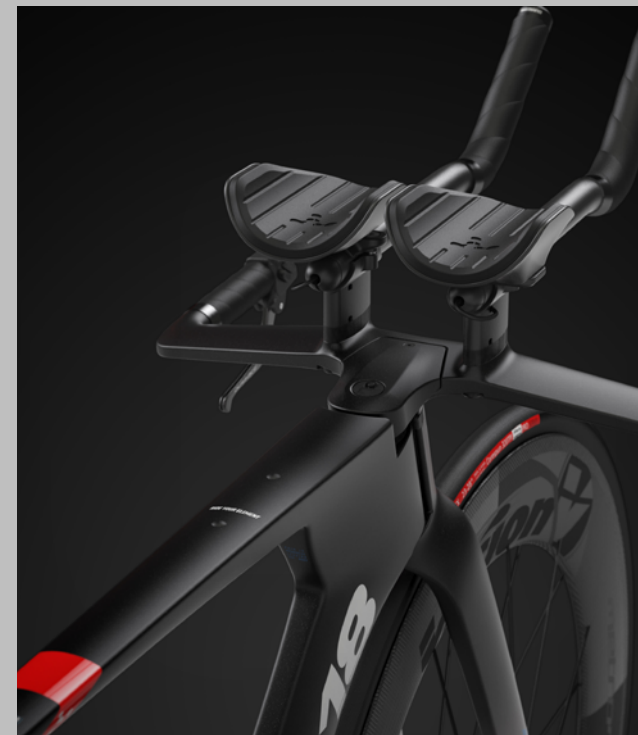
NEW ARMREST CUPS

Locking down the forearms at the extension bars for better front-end control



DI2 JUNCTION BOX INTEGRATION

Easy access to check battery charge level and recharge.



TOP TUBE THREADED INSERTS AND SCREWS

For easy installation of aero bento box.



IT'S ALL ABOUT THE DETAILS



DIZ AND ETAP READY

Frame optimised for easy installation of latest generation electronic groupsets from Shimano and Sram

NEW FRONT DERAILLEUR HANGER

Compatible with chainrings from 52T, up to 58T

DIRECT MOUNT DERAILLEUR HANGER

For faster and better rear derailleur shifting

FLAT MOUNT DISC BRAKES

Simpler, taking less space and better adapted to the frameset design



COMPATIBILITY WITH TIRES UP TO 28C

For added comfort

DT SWISS TYPE 12MM THRU-AXLE

Clean, simple, light, sturdy and easy to use

ARGON 18



TRI AND TT MACHINE

THE BEST OF BOTH WORLDS

E-118⁺
TRI

TARGET USERS:

COMPETITIVE RIDERS LOOKING TO
COMPETE IN BOTH TIME TRIAL AND
TRIATHLON RACES.

SMALLER RIDERS IN NEED OF A
LOWER, MORE AGGRESSIVE FIT.

COMPETITIVE TRIATHLETES
LOOKING FOR A DISC ALTERNATIVE
TO THE E-119TRI OR E-119TRI+.

COMPETITIVE TRIATHLETES
LOOKING FOR THE LIGHTEST
FRAMESET IN ITS CATEGORY.



ARGON 18





REAL-LIFE TESTING

Although CFD and wind tunnel testing give a fairly accurate picture of how a bike will behave, nothing beats real-life tests. Through our collaboration with Astana Pro Team, we were able to take prototypes of the E-118Tri+ to the velodrome and on the road for some serious testing at the hands of uncompromising riders. Here are the results of these tests.

PERFORMANCE

GAIN VALIDATION IN THE VELODROME

IN OCTOBER 2018, HUGO HOULE OF ASTANA PRO TEAM WAS THE FIRST RIDER TO TEST THE E-118PRO PROTOTYPES IN THE VELODROME. GORKA IZAGIRRE AND PELLO BILBAO FOLLOWED IN DECEMBER 2018.

With Notio, our own device that calculates Cda in real time, installed on their bikes, it became really easy for them to compare the new bike with the previous generation E-118 Next. Both E-118Pro prototype and E-118Next were set up exactly the same way (tire model and technology, wheel profile – 3 spokes front, Disc rear). Notio was also used to validate that the rider position wasn't interfering with the results.

With gains of 8 to 10 watts depending on the rider (at 50km/h), it became clear that our new disc equipped TT bike was faster than the previous generation bike with rim brakes.

» AT A SPEED OF 50KM/H, IT REPRESENTS A TIME GAIN OF 25S ON A 40KM DISTANCE.

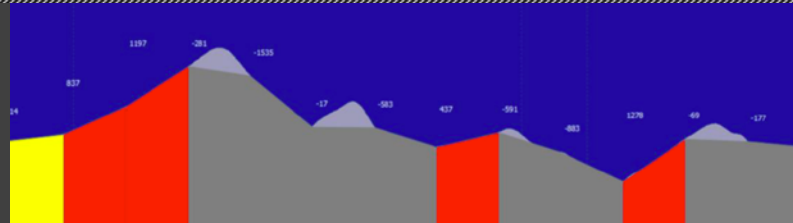
TEST PROTOCOL: STABLE AT 45KM/H – 10 LAPS. (2 LAP TO ACCELERATE TO 45KM/H)
3 RUNS WITH E-118 NEXT (FORMER BIKE – RIM BRAKES), 3 RUNS WITH E-118 PRO (NEW BIKE – DISC BRAKES).

RUN	DESCRIPTION	AVG. POWER RUN	RUN AVG. SPEED (KM/H)	CDA	POWER AT 50KM/H	DELTA POWER AT 50KM/H	TIME TO 45KM TT	DELTA TIME
GORKA IZAGIRRE								
1	Argon 18 E118 Next	313w	45.24	-0.0013	421w	-2w	54m31s	-6s
2	Argon 18 E118 Next	317w	45.35	Reference	423w	-	54m37s	-
3	Argon 18 E118 Next	324w	45.77	-0.008	422w	-1w	54m34s	-3s
4	Argon 18 E118 PRO TT	312w	45.28	-0.057	415w	-8w	54m15s	-22s
5	Argon 18 E118 PRO TT	314w	45.34	-0.051	415w	-8w	54m16s	-21s
6	Argon 18 E118 PRO TT	310w	45.43	-0.046	416w	-7w	54m19s	-18s
PELLO BILBAO								
1	Argon 18 E118 Next	304w	46.41	Reference	377w	-	52m33s	-
2	Argon 18 E118 Next	302w	46.44	-0.020	374w	-3w	52m25s	-8s
3	Argon 18 E118 Next	296w	46.23	-0.032	372w	-5w	52m20s	-13s
4	Argon 18 E118 PRO TT	302w	46.68	-0.069	367w	-10w	52m05sec	-28s
5	Argon 18 E118 PRO TT	298w	46.66	-0.061	368w	-9w	52m08s	-25s
6	Argon 18 E118 PRO TT	286w	45.78	-0.055	369w	-8w	52m11s	-22s



PERFORMANCE

GAIN VALIDATION ON THE ROAD



**TEST PROTOCOL: RIDING ON A 8.55KM HILLY LOOP.
2 RUNS WITH E-118 NEXT (FORMER BIKE - RIM BRAKES), 2 RUNS
WITH E-118 PRO (NEW BIKE - DISC BRAKES).**

RUN	DESCRIPTION	CDA	LAP TIME	LAP AVG. POWER
GORKA IZAGIRRE				
1	Argon 18 E-118 Next	Reference	13m21s	311w
2	Argon 18 E-118 Next	-0.004	13m18s	312w
3	Argon 18 E-118 PRO	-0.011	13m10s	311w
4	Argon 18 E-118 PRO	-0.014	13m01s	312w
PELLO BILBAO				
1	Argon 18 E-118 Next	Reference	13m12s	276w
2	Argon 18 E-118 Next	-0.001	13m03s	285w
3	Argon 18 E-118 PRO	-0.007	13m00s	278w
4	Argon 18 E-118 PRO	-0.010	12m52s	282w

HAVING AN AERO BIKE ISN'T EVERYTHING.

A bike can be the fastest in the wind tunnel, but if it's heavy, unresponsive, difficult to handle when cornering, unbalanced to the point of making it hard to maintain an optimal aero position, its aero factor becomes a disadvantage.

To validate our choices and the E-118 Pro real-world performances, we again installed the Notio device on the bikes to measure the CdA of the riders.

On the test loop, the riders were placed in typical race conditions with some climbs and descents.

AGAIN, OUR TESTS SHOW IMPRESSIVE RESULTS. GORKA IZAGIRRE WAS 17SECONDS FASTER ON A 8.55KM LOOP WITH THE SAME POWER OUTPUT.

The gain could be even more important with the addition of technical turns. Since a rider can brake later with a disc brake equipped bike, he will reduce his time spent at lower speeds.



"Riders tested it, team tested it, Argon18 tested the bike as well and all agree that the bike is much faster than the current one, so we are really willing to have it here with us.

Even more important taking in account the importance of the material and equipment. Every watt is important nowadays. The riders gained stability, on this stability is making our riders faster (more aerodynamic)."

- Ivan Velasco

Aerodynamics/Biomechanics specialist, Astana Pro Team

One of the most interesting aspects of this road test for us was to get real feedback from the riders on different characteristics of the bike: handling, cornering, braking, acceleration, etc.

Gorka Izagirre's comments on the bike after his test rides:

- The new E-118 PRO bike is more stable than the E-118 Next.
- The new E-118 PRO feels faster than E-118 Next.
- The new E-118 PRO corners better than the E118 Next.
- The new E-118 PRO feels lighter in accelerations and sprints than the E-118 Next.
- Overall the new E-118 PRO is better in every aspect than E-118 Next.
- The new E-118 PRO feels stiffer in the bottom bracket area.



Atlanta 1996

GO FASTER!



ARGON 18

