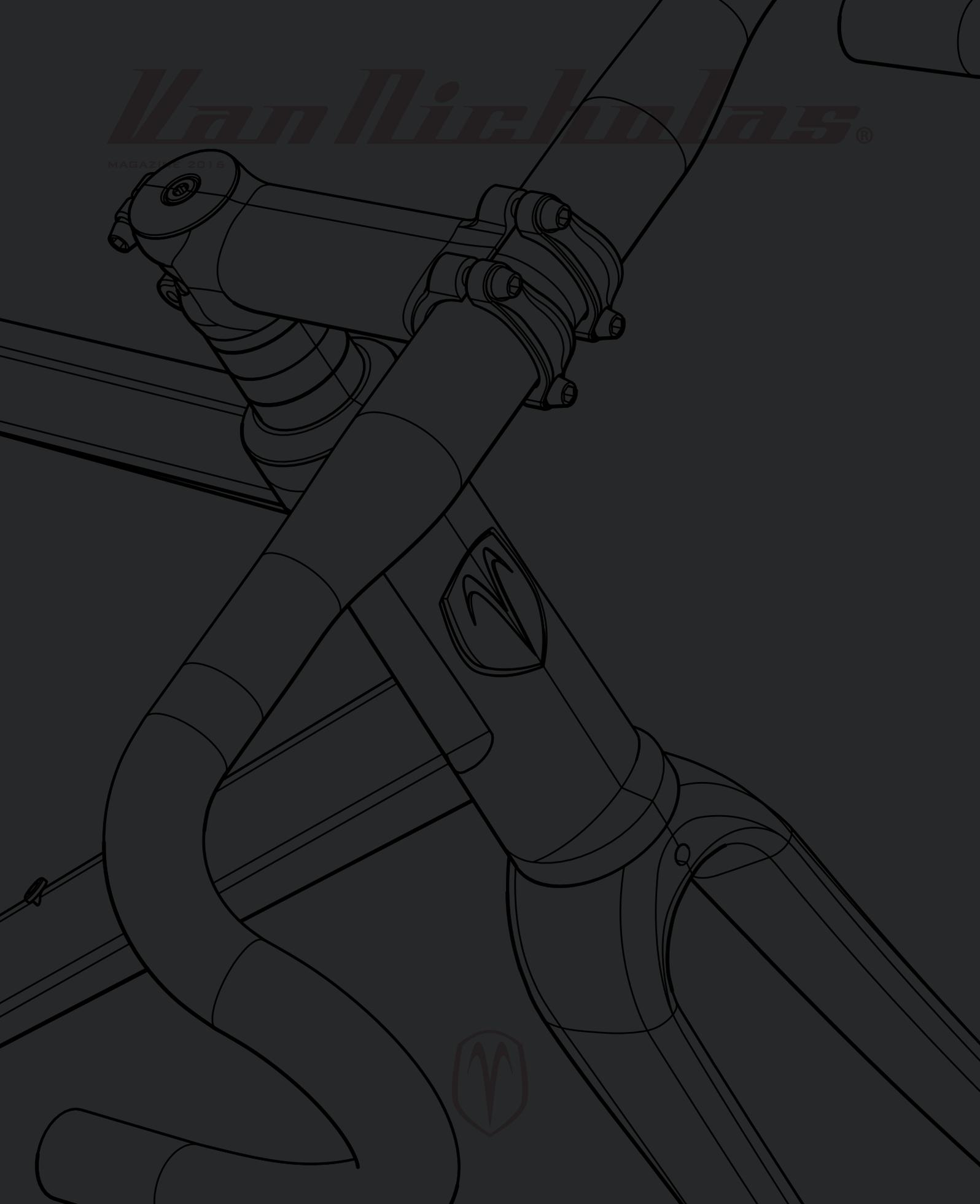


*Van Nieuwlas*®

MARAZZI 2016







## C O N T E N T S

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5

Van Nicholas is part of  
Accell Nederland BV.  
Koga is brand owner  
of Van Nicholas.

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The pursuit of perfection involves pushing yourself to the extreme limits of your abilities. This single-mindedness lies at the heart of the Van Nicholas philosophy. Our 2016 magazine focuses on a selection of people and companies who share this philosophy, and their extraordinary achievements.

We meet three courageous Van Nicholas riders tackling mind-boggling feats of physical endurance, pushing themselves, and our bikes, to the limits in extreme races and long-haul treks across some of the world's most challenging terrain. We take a look, too, at one example of the extremes Titanium can reach, with the fascinating story of the Lockheed SR-71 'Blackbird', the world's fastest plane that went on to rule the skies for three decades.

We discuss design perfection with fi'zi:k, the Italian brand whose saddles and components have been the choice of champions for almost twenty years; find out what it takes to fuel the MTN-Qhubeka pro-cycling team to Grand Tour success; and offer up a selection of our favourite cycling, leisure and lifestyle finds for your consideration, along with our own quest for perfection: our entire range of beautiful Titanium bikes and accessories.

Good luck with your own pursuits of perfection,  
and enjoy this year's magazine.

Happy riding.

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### Ti Spy

The story behind the world's fastest Titanium.



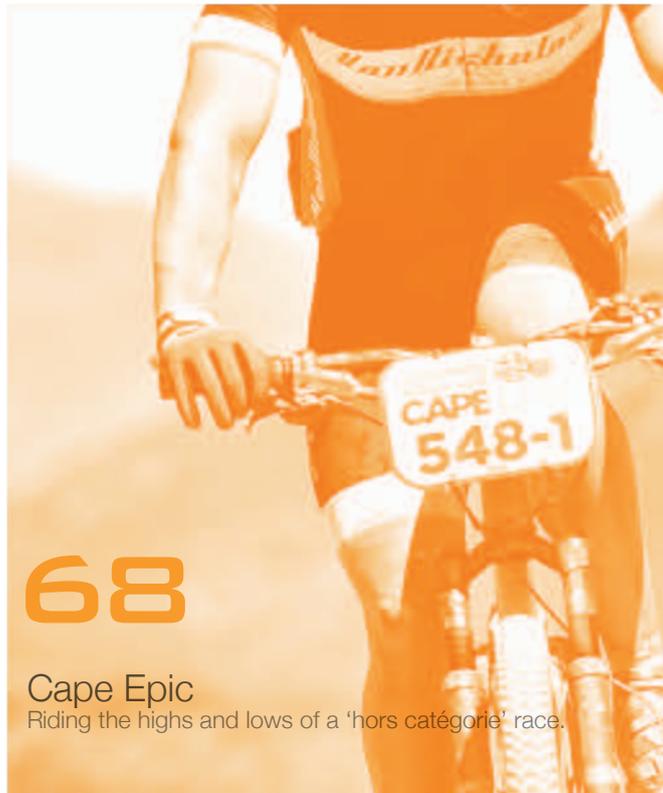
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### The Cyclist



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Riding the highs and lows of a 'hors catégorie' race.

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The driving force of a professional cycling team.



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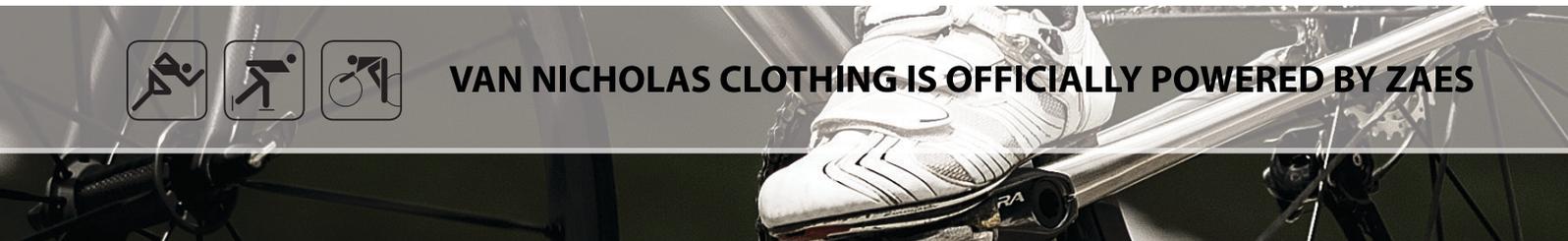
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**ZÆS**  
THE NEXT LEVEL IN TEAMWEAR

*Create your own  
design*



**VAN NICHOLAS CLOTHING IS OFFICIALLY POWERED BY ZAES**



column  
**the cyclist**

When I drive somewhere in a car, I imagine what it would feel like to ride my bicycle there instead. Driving along in a metal box hides the effort it takes to move quickly along a road; every undulation is felt in the Cyclist's legs, as gravity tugs at us to slow down, or pushes on us to speed up. In the car, it all goes unnoticed.

Driving into the wind feels like cheating; the car has no problem whatsoever to maintain its speed while the rider suffers the cruel punishment of pushing hard on the pedals without the usual reward in speed. This is among the worst punishment a Cyclist can endure.

Mountain roads tempt me terribly with their gradients and luscious twists, curves, and bends. Driving uphill, I can almost feel the burning in my lungs and legs. Descending in a car is a claustrophobic experience; I can never drive the beautiful line that I would be taking if I was on my bike. And I certainly would not be pushing on the brakes in respect of a speed limit.

I was in a small plane recently, flying low over the mountains near my house. So many small, twisting roads that are difficult to find, but lie there, patiently waiting for a Cyclist to discover them. Last year, I flew from Johannesburg to Cape Town in South Africa; there were few roads in the landscape between the two cities, so rather than dreaming of riding on sinuous mountain roads, I dreamt instead of taking a mountain bike and making my own roads. You can do that on a mountain bike.

When I'm off my bike, I am constantly inspecting my body for signs of my condition. I catch myself rubbing my legs, feeling my muscles and gauging whether they are growing stronger or weaker. I tap lightly on my sternum to feel whether I'm skinny enough. I think my work colleagues find me strange because of this; I often notice them staring at me askance when I do these things that are, for me, very normal.

A Cyclist is detached from their legs, as if they somehow do not belong to them. The legs, never my legs. "We'll see how the legs go today," as if we pull ourselves into the garage in the morning, crawl to the space where we store our many pairs of legs, choose a set for the day, and hope they are Good Legs.

We are obsessive over our weight, like teenagers or models. Kate Moss, that skinny model who probably never said anything sensible in her life, said that nothing tastes as good as skinny feels. Well that's one sensible thing she's said, then.

Even when we look supermodel thin, we still hope to be thinner, and muscles anywhere but in our legs is just as bad as fat. I stopped carrying heavy bags of groceries into the house because I became convinced this practice was causing my upper body to grow too strong, thus slowing me down on the climbs. It is insane to believe this, but I believe it because it helps my morale.

The morale of the Cyclist is the most important element of the organism; more so than the legs, the heart, or the lungs. The morale can make the strong Cyclist weak and the weak Cyclist strong, depending on whether it is Good Morale or Bad Morale. It is known that during the Tour de France, a rider may ask the mechanic to apply fresh handlebar tape to his bicycle. This isn't because fresh handlebar tape will make the bicycle faster or lighter; it is because fresh handlebar tape will instantly bring good morale to the broken rider.

A bicyclist rides bikes, maybe they even love bikes. A Cyclist harbors an obsession; we are either riding, or thinking about riding. There are no other avenues for thought.

We are Cyclists. The rest of the world merely rides a bike.

**Frank Strack**  
*(pronounced as the Dutch Frahnk,  
 not the American Fraynk)*

*Founder of velominati.com  
 Editor of the book 'The Rules' (in Dutch: 'De Regels')  
 A devoted cycling aesthete  
 Breathes 'La Vie Velominatus'*

# TITANIUM

THE CONSIDERED CHOICE

At Van Nicholas we stand by our mantra that Nothing Looks, Rides or Lasts like Titanium. We truly believe it is the ideal material for bicycle frames. And we are not alone in recognising Titanium's unparalleled qualities. From aircraft frames to car engine components, propeller shafts to oceanographic equipment, surgical implants to wheelchairs, jewellery to sports equipment, desalination plants to nuclear waste storage, Titanium is the material of choice. But what is this magical material exactly and why are its properties unrivalled?

*Titanium was discovered by William Gregor in 1791. The name refers to the immortal Titans of the Greek mythology: descendants of Uranus (Sky) and Gaia (Earth), who symbolise incredible strength.*

Titanium extraction steps based on the Kroll Process, to create a Titanium sponge, which is then crushed, melted and alloyed to create the Grade 9 Titanium that we use in all Van Nicholas products.



## FACTS

2<sup>x</sup>

STRONGER THAN ALUMINIUM

45%

LIGHTER THAN STEEL

600°C

HIGH TOLERANCE

∞

ENDLESS DURABILITY

## USAGE



AEROSPACE

Withstands extreme conditions



MARINE

High corrosion-resistance



MEDICAL

Biocompatible and durable



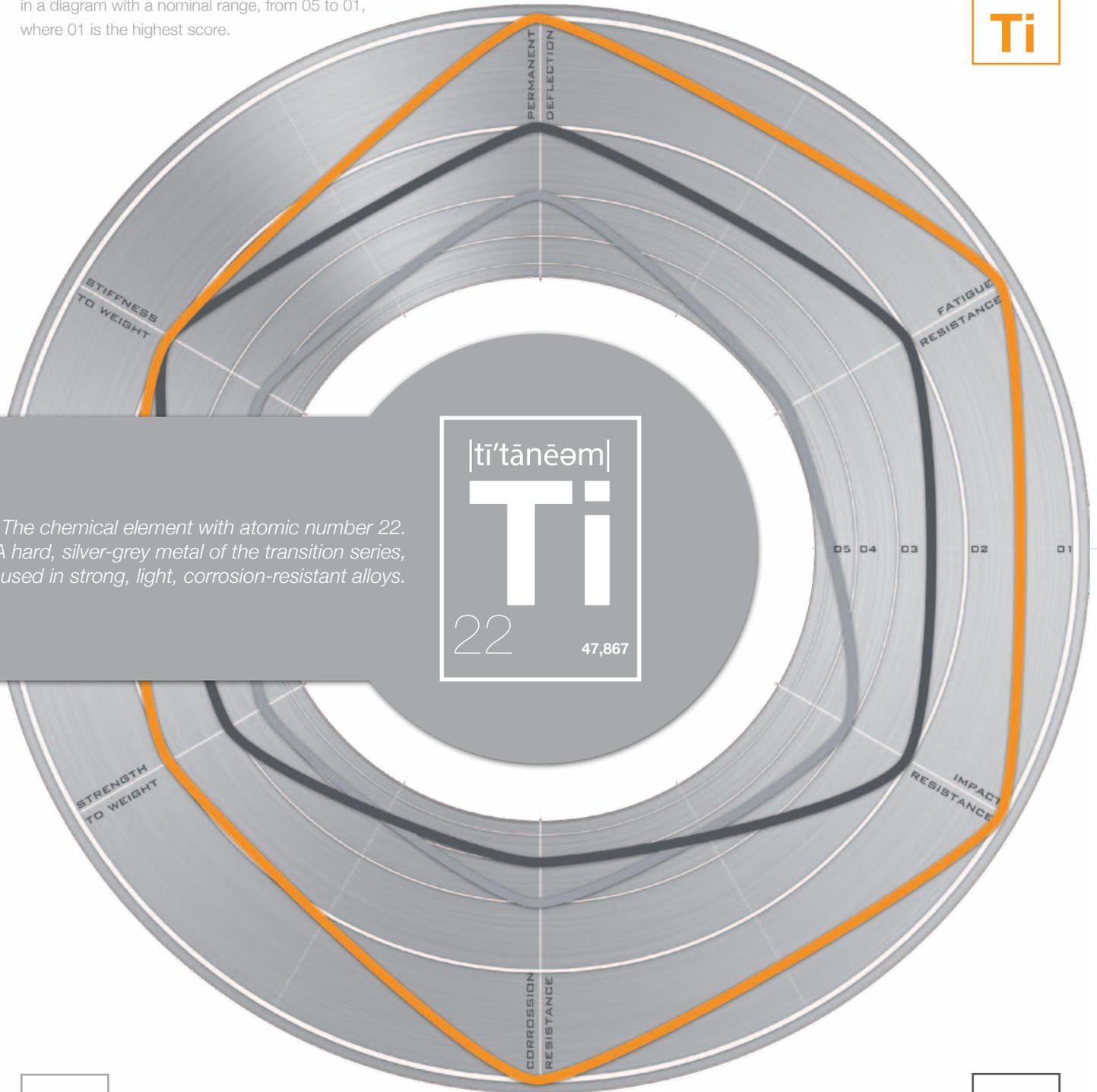
CONSUMER GOODS

Lightweight, high strength

## COMPARISON

The comparison between the three metals are displayed in a diagram with a nominal range, from 05 to 01, where 01 is the highest score.

TITANIUM



The chemical element with atomic number 22. A hard, silver-grey metal of the transition series, used in strong, light, corrosion-resistant alloys.



ALUMINIUM



STEEL

NOTHING LOOKS LIKE TITANIUM

Simply Beautiful. The timeless allure of its natural lustre, naked purity in the perfect form.  
The elegant lines of our frames accentuate the rare beauty of Titanium. Irresistibly.



# DESIGN

## CREATING A VAN NICHOLAS

12  
13

Designing a Van Nicholas is an evolving process. The journey from idea conception to finished product is never linear, with one step following the other until the desired outcome is achieved. Instead, a more circular route is taken, with many feedback loops. It is always a search for perfection driven by constant analysis: what is its purpose? Can it be different? Is this the optimum solution?

And the further the project progresses, the better our understanding of the actual problem or challenge gets, and sometimes leads to radical changes and about turns: we must remain critical at all times and continuously reflect.

Imagine an upside-down pyramid. All the ideas, possibilities and solutions mill around in the broad opening and are gradually distilled and discarded with each downward step taken, until finally, at the fine point of the pyramid, we are left with the best possible outcome for the original, half-formed nucleus of an idea.

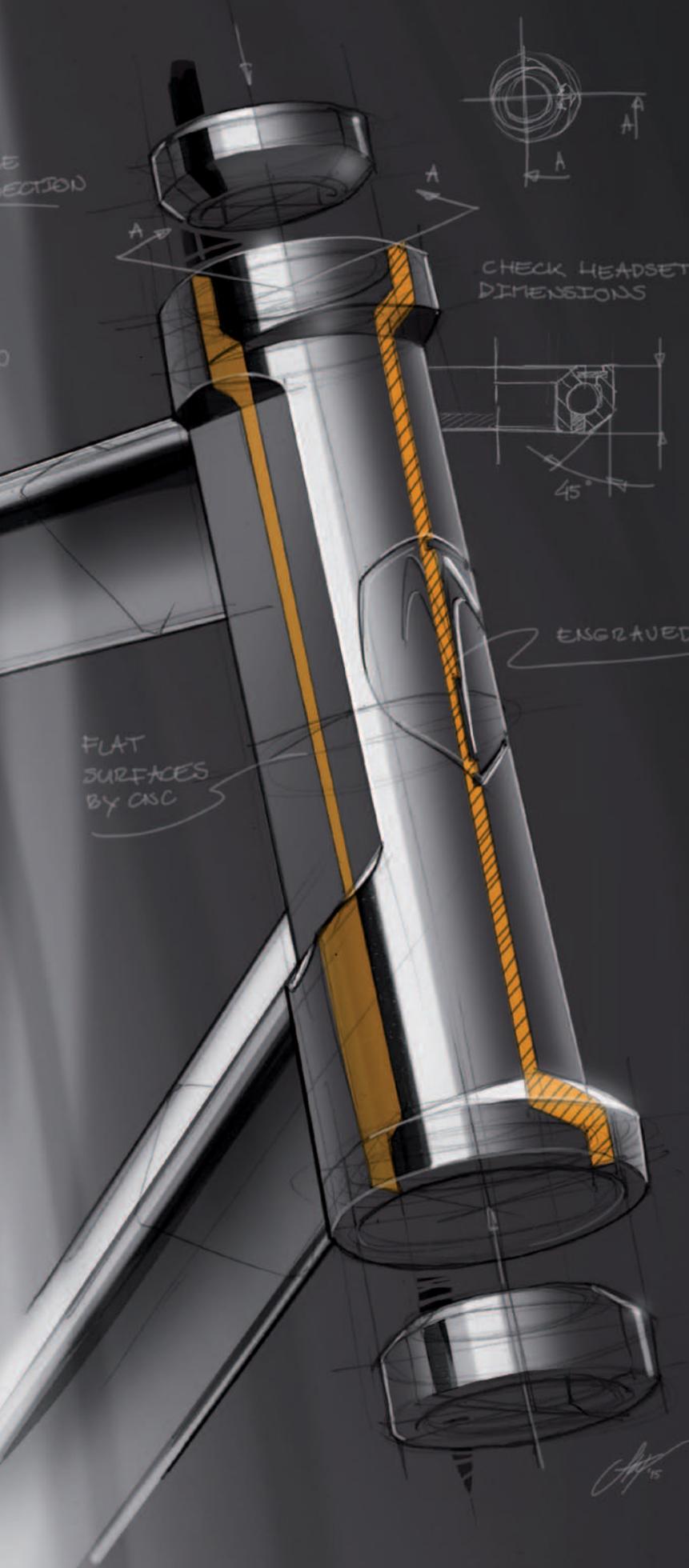
### STEP 01 - IMAGINING THE POSSIBILITIES

Ideas for a new product originate from multiple sources, but can broadly be categorised into two groups: internal and external influences. Internal influences generally mean feedback on

existing products from customers, dealers, press and industry critics, and our own staff. To us, a design is never truly finished, rather we are in status quo, waiting to see if the bike can tell us more about how it can be improved. This approach is essential for realising a product's maximum potential, but it doesn't tell us if the product is right for the marketplace. This leads us to the second source of ideas for new products: external influences. Here, we draw our inspiration from the possibilities of new and emerging technologies in design, engineering and production. Also, we analyse industry trends, the work of our competitors and our suppliers, and we monitor large scale influences, such as environmental regulations and socio-economic conditions.

### STEP 02 - PUTTING PEN TO PAPER

Van Nicholas is a brand with a recognisable aesthetic, a distinctive DNA, so the first step we take is to convert that great idea into the Van Nicholas design language. We make countless sketches and 3D mock ups in paper, plastic or foam. We look at every tiny detail, working closely with our trusted suppliers and manufacturing engineers, to ensure we remain as close to the original concept as possible. We refine and perfect to help us better understand the design in terms of performance, aesthetics and manufacturing feasibility. Only when we are completely happy do we move on to the next stage. >



## TECHNOLOGIES



**POLISHED FINISH**  
High lustre



**BRUSHED FINISH**  
Natural brightness



**ENGRAVED HEAD TUBE**  
Original Van Nicholas



**HYDROFORMED TUBING**  
Liquid versus Titanium



**OPTIFORMED TUBING**  
Any size fit



**COLD WORKED TUBING**  
Structurally strengthened



**3D SCULPTED DROPOUT**  
Maximum efficiency



**3D FORGED DROPOUT**  
Precision castings



**CNC MACHINED DROPOUT**  
High stress performance



**SLIDING DROPOUT**  
Belt or chain tensioning



**PRESS FIT BB**  
Stiffer, lighter



**ECCENTRIC BB**  
Tension adjustment



**TAPERED HEADSET**  
Increased rigidity



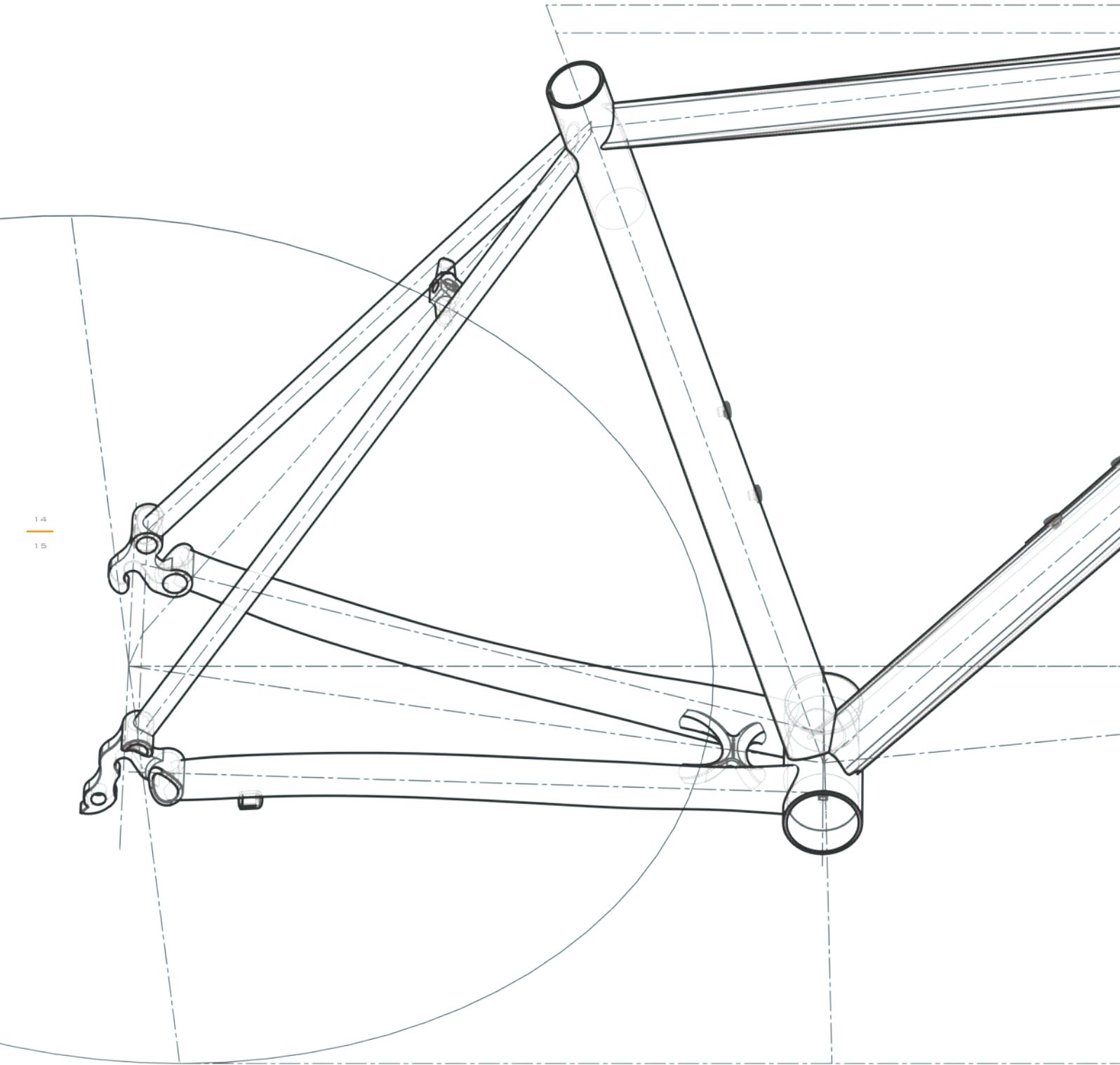
**INTEGRATED HEADSET**  
Lighter, stiffer



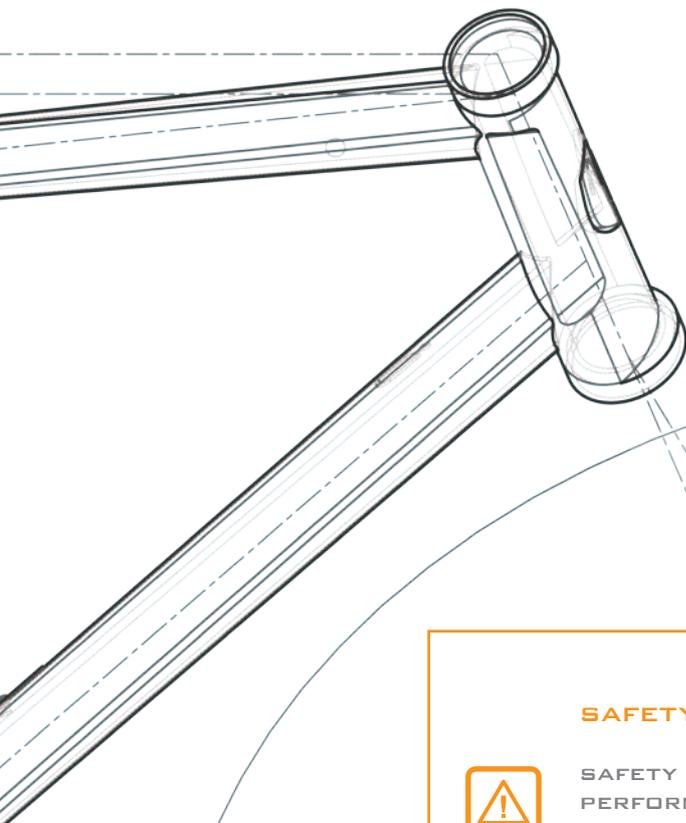
**INTERNAL HEADSET**  
Reduced maintenance



**INTERNAL CABLE ROUTING**  
Clean aesthetics



14  
15



### STEP 03 - FROM FANTASY, TO REALITY

It takes a lot of work before an idea makes it into production, but even more work is required before the first prototype completes its journey to the marketplace. Once the initial idea is sketched out and most details have been considered, the design is translated into 3D form, usually with a 3D Computer Aided Design (CAD) software package. In this stage of the process, it rapidly becomes clear whether the design matches the expectations in terms of styling, component fitting, weight and also performance. In this phase the designers need to work closely with the engineers and, possibly, the suppliers.

The most important aspects on which we focus are product performance and feasibility. Do the hand-calculated expectations live up to their promise in real-life? And more importantly, is it possible in the real world to make the tubing as thin as 0.7mm, for example? Through the use of computer simulations, like Finite Element Analysis (FEA) where stresses on each tiny part of a design are mapped, we are able to predict tolerances to within a couple of percent and so

#### SAFETY AND RELIABILITY TESTS



**SAFETY**  
**PERFORMANCE**  
**RELIABILITY**  
**ASSEMBLY**

safety markings, over-tensioning bolts and impact test.  
torsion and bracket stiffness.  
riding, out-of-saddle simulation and saddle-load simulation.  
component fitting, assembly instructions, road testing.

minimise the risk that the product will fail. A great starting point, but all the data projections will need to be validated by our rigorous testing program once the first prototypes are ready.

### STEP 04 - FINDING THE LIMITS

Our tests fall into four broad categories: safety, performance, reliability and assembly. They are based on the ISO4210 standard, but most are adapted to be more demanding.

Safety is our primary concern, so this series of tests looks at how our frames perform under a variety of high stress situations, such as impacts, over/under tensioning of bolts and component failure. We also ensure the weight and dimensions are as anticipated, because these play a large part in the product conforming to expectations and help us to gauge manufacturing accuracy and consistency.

We have an idea of how the product should perform from the computer simulations, but our performance tests attempt to verify our calculations in the real world. Torsion stiffness is >

TECHNOLOGIES

**ELECTRONIC SHIFTING**  
Precise, instant control



**H-BRIDGE**  
Increased stiffness



**VENTUS FRONT FORK**  
Rigid Aero-Integration



**RACK MOUNTS**  
Load-carrying capabilities



**FENDER MOUNTS**  
All-weather riding



**3RD WATER BOTTLE**  
Long-haul hydration



**PINION GEARBOX**  
Integrated maintenance-free transmission



**ROHLOFF GEARING SYSTEM**  
Low maintenance reliability



**BELT DRIVE READY**  
No lube transmission



**VNT DIVISIBLE HANDLEBAR**  
Perfect fit with Rohloff grip shifter



**27.5" WHEELS**  
Speed and agility



**27.5+ WHEELS**  
Increased grip and durability



**29.0" WHEELS**  
Unstoppable rollers



**THRU-AXLE**  
High performance rigidity



**110-148 MM HUBS**  
Stiffer wheels



**80-100 MM**  
Corrected suspension



tested to indicate the level of stability and comfort; bracket stiffness is tested to provide insight into how much applied energy is directly transferred to the rear wheel; and for those bikes with a belt drive we have developed a special test to measure axial and radial frame deflection which can affect the life of the belt.

With our reliability, or endurance, tests we simulate the entire life-cycle of the frame in a short period of time. There are specific tests for specific frames (ie. luggage carrying, disc brakes, kickstands) but in general all our frames will be subjected to head tube, pedalling and load-bearing stress tests that simulate riding in the toughest conditions, continuously, for over 100,000 cycles. We also subject them to simulated environmental challenges with salt spray and UV-degradation tests.

The assembly tests involve building a complete market-ready bike to ensure all components fit and assembly instructions are correct. Sometimes with special projects, a final road test

**SAFETY IS OUR PRIMARY CONCERN, SO THIS SERIES OF TESTS LOOKS AT HOW OUR FRAMES PERFORM UNDER A VARIETY OF HIGH STRESS SITUATIONS**

might be needed. This can be a test where we check the riding stability on different road surfaces with the maximum amount of luggage, or a bike we cover with sensors to gather more data on the material stresses.

And once all of these tests have been carried out, the prototypes have been refined and we're happy with the final design, we begin production.

**STEP 05 - THE JOURNEY BEGINS**

After many steps, a lot of feedback, refining and perfecting, our new Van Nicholas is ready for you, the dedicated cyclist. But as we said, this is simply another part of the continuous cycle of development. As the product appears on the marketplace, we begin to glean valuable insights from consumers, dealers and critics, input vital for the first phase of new development. With every pedal stroke we move forward, closer to our ultimate dream of the perfect Titanium bicycle.

The Schwalbe logo, consisting of the word "SCHWALBE" in a bold, sans-serif font, enclosed within a white swoosh that curves around the letters. The logo is set against a solid blue rectangular background.

SCHWALBE

TAKE THE *Long way* HOME.  
THE NEW DURANO.



**DURANO**

**DURANO DD**

**DURANO PLUS**

You are looking for extreme high mileage, grippy compound and reliable puncture protection? Say it in one word: **Durano**. Available in black, white or with coloured stripes. The **Durano DD** comes with additional SnakeSkin sidewall and is all around protected. The **Durano Plus** is the most puncture proof road racing tire you can get!



18  
19

+

*One of the Blackbird pilots,  
like an astronaut in his spaceship.*

# Ti Spy

At Van Nicholas, we have always believed Titanium is the best material for making bicycles. But we've long known that its magical properties make it perfect for a host of other uses as well – like making the fastest plane in the world.

## The world's fastest Titanium

Titanium is used extensively by the aeronautical industry whenever they require a lightweight, non-corrosive material able to withstand very high temperatures. You'll find Titanium in the exhaust fairings and leading wing edges of most commercial jets, for example. But the high production costs generally limit its use in the commercial sector to

“Oh Lord,  
there's a spaceship.”

—Rick McRary

only the most essential components. When it comes to secret military projects, however, no such limitations apply.

When renowned American aerospace engineer Clarence 'Kelly' Johnson was tasked with designing a long-range, high-speed strategic reconnaissance aircraft for the United States Air Force, Titanium was the obvious choice.

As Director of Lockheed's Advanced Development Programs, also known as 'Skunk Works', he created the SR-71 'Blackbird', the most advanced airplane of its time, and still holder of the world record for the fastest air-breathing manned aircraft with a speed of 2,193.2mph – a record it has held since 1976. This high speed was the plane's primary defence – if its impressively small radar cross-section failed to evade detection, it could out-run surface to air missiles. At such a high velocity, the temperatures generated by atmospheric friction would have melted a conventional airframe, so Johnson turned to Titanium – it would make up 85% of the finished aircraft.

It was not without problems, though. The brittle alloy they used shattered if mishandled, which proved impossible to avoid on the assembly line. It was discovered that conventional cadmium-plated steel tools were the cause of this sensitivity, as they compromised the integrity of the Titanium upon contact, so new tools were designed and fabricated from Titanium and the Lockheed machinists underwent rigorous training to ensure the material was tooled in the correct manner. To control costs, they used a Titanium alloy that softened at a slightly lower temperature, and developed fabrication methods that have gone on to be used in the manufacture of countless other aircraft. Johnson even boasted that he'd been able to reduce the cost of one particular Titanium extrusion down from \$119 per foot to only \$11, and the cost of a specific Titanium bolt from \$15 down to 11 cents. >

## Designed for extremes

The abnormally high temperatures generated in flight required some ingenious innovations. Large sections of the aircraft's skin were corrugated, not smooth like a conventional aircraft. A smooth skin would have split or curled under intense heat, but the corrugations increased longitudinal strength and allowed the skin to expand vertically and horizontally. A cooling system dissipated heat by cycling fuel beneath the Titanium surfaces on its way to ignition in the engines, and the dark blue, almost black, paint that helped to camouflage the plane against the night sky also increased the emission of heat – and earned the SR-71 its *'Blackbird'* moniker. The windscreen was made from quartz and ultrasonically fused to the Titanium frame to ensure the temperature (clocked at 316 °C) didn't cause a disastrous mid-air separation. This was in contrast to the fuselage panels, which were designed to fit loosely on the ground and only aligned correctly once the airframe heated up in flight and expanded by several inches. This quirk of design, along with the lack of a sealed fuel system capable of withstanding the aircraft's expansion, meant the SR-71 leaked fuel before take-off – possibly not the most reassuring sight for the elite pilots about to take the plane to Mach 3!

## One of a kind

As former pilot Rick McRary points out, everything was different about the SR-71. *"In the first six months of training, they had to break all your habits you had from your first ten years of flying. It's just different, and you can't react to things that would normally happen the way you would in other planes. It was a vector, not a line."* After his pilot training and five years as a pilot instructor, McRary received a phone call asking him to be a SR-71 pilot. He recalls his first glimpse of the *'Blackbird'*: *"Only the planes stationed at the base could fly there, so I drove up to the Air Force Base to meet everyone. The airplanes were in small hangars, all closed. We unlocked the back doors, turned on the lights, and I thought 'Oh Lord, there's a spaceship.' It was*

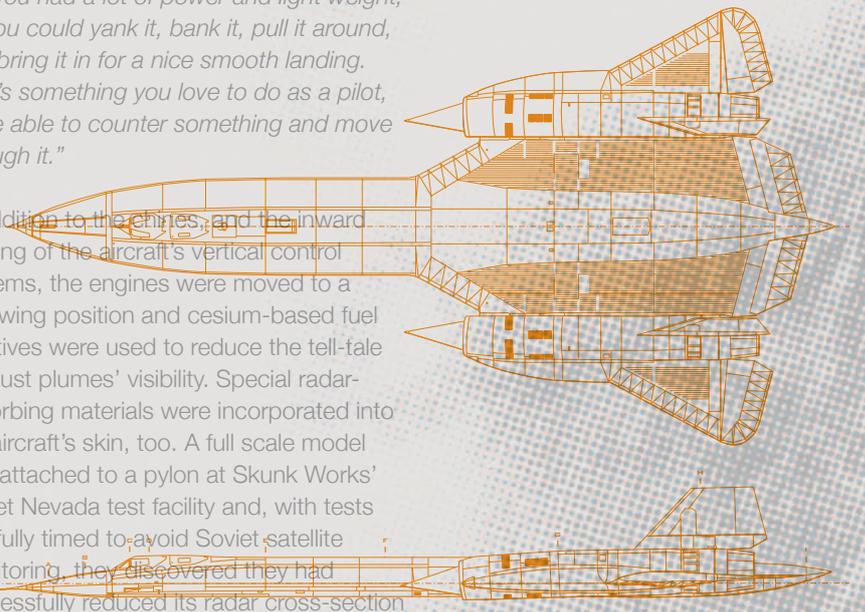
*just awe-inspiring. The shapes are very different depending on what perspective you have walking around the aircraft. But nowhere did it look like anything flying to this day. I was hooked at that point."*

This unique profile had been developed not only to assist with cooling, but also to minimize the SR-71's radar cross-section, an early attempt at stealth design.

**85%** Titanium  
**3,529.6** km/h top speed  
**25,929** m cruising altitude

Early studies in radar stealth technology had indicated that shapes with flattened, tapered sides better deflected radar signals away from their point of origin, so the engineers added chines to the fuselage. These presented additional, unexpected aerodynamic performance benefits by generating powerful vortices and creating additional lift. As Rick McRary noted: *"You didn't have good visibility with a small window and big chines around the airplane that block your view of the ground. But you had a lot of power and light weight, so you could yank it, bank it, pull it around, and bring it in for a nice smooth landing. That's something you love to do as a pilot, to be able to counter something and move through it."*

In addition to the chines, and the inward canting of the aircraft's vertical control systems, the engines were moved to a mid-wing position and cesium-based fuel additives were used to reduce the tell-tale exhaust plumes' visibility. Special radar-absorbing materials were incorporated into the aircraft's skin, too. A full scale model was attached to a pylon at Skunk Works' secret Nevada test facility and, with tests carefully timed to avoid Soviet satellite monitoring, they discovered they had successfully reduced its radar cross-section



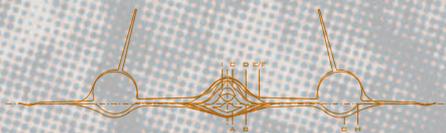


by 90%. The 32 meter long plane would appear on Soviet radar as bigger than a bird, but smaller than a man. These stealth characteristics, and the fact that the Soviet Union's principal Interceptor, the MiG-25, was unable to match its Mach 3+ sustained speed, meant that not a single SR-71 of the 32 built were ever lost during active service. The Soviet Union did eventually create the MiG-31 that, despite a lower Mach 2.8 top speed, carried a Mach 4.5 missile and was capable of intercepting the SR-71. But it never managed to knock the 'Blackbird' out of the sky!

### Aeronautical genius

Johnson and his team had been given only twenty months to create the SR-71, but they delivered a revolutionary aircraft on time and under budget that was able to fly faster and higher than anything else hitherto designed. It was the most technologically advanced plane of its era, capable of unprecedented radar evasion and a sustained top speed unequalled even in the twenty-first century. They saw active service from 1964 until the last two remaining planes were finally retired by NASA in 1999, clocking up thousands of missions in that time, and numerous speed records too, including the world record for absolute altitude - reaching 25,929m, and the fastest New York to London flight at a time of 1 hour, 54 minutes and 56.4 seconds. For comparison, the fastest Concorde flight was 2 hours 52 minutes.

Clarence 'Kelly' Johnson achieved many things in a long and glittering career and his achievements continue to influence aeronautical engineers to this day. But it is the SR-71 'Blackbird' that he is, perhaps rightly, most famous for – a plane unlike any other, the fastest plane in the world. Its legacy lives on in the next generation of stealth aircraft, in the most advanced fighter jets of the current era. It doesn't take an aeronautical genius to see that Titanium played a huge part in making the SR-71 a reality, and if he were alive today, I'm sure 'Kelly' would join us in celebrating the contribution of this very special material to the success of this very special plane.





01.



02.

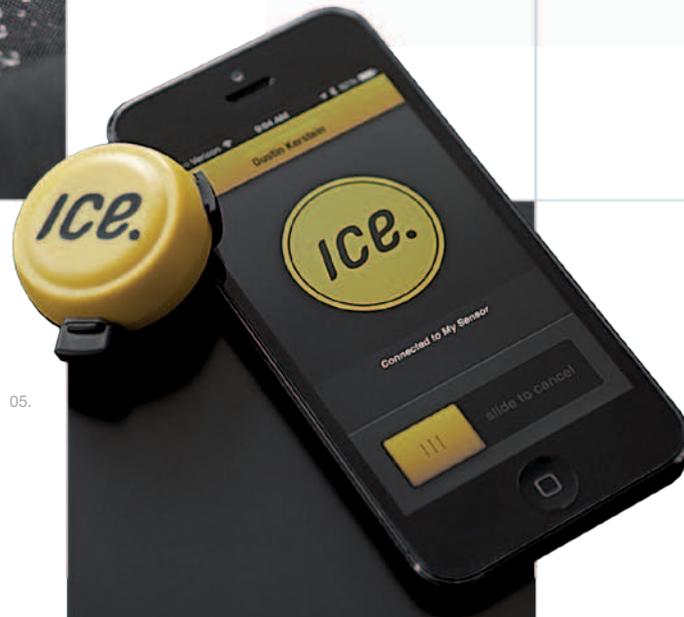
CHOICE  
CYCLING



03.



04.



05.



06.



07.



08.

**01. Skylock Bike Lock**  
The future of bike security: keyless entry, theft and crash detection and remote access via Bluetooth - skylock.cc

**02. Plume Mudguard**  
Slinky, roll away design makes this the perfect occasional mudguard to combat 'commuter's stripe' - plumemudguard.com

**03. Chrome Industries Folsom Pant**  
The ultimate urban cycling trousers: packed full of useful features, great to wear and durable, too - chromeindustries.com

**04. Sparse Fixed Light System**  
Permanently fixed to your bike, solid, sealed and incredibly bright. Fix them, then forget them - sparse.cc

**05. ICEdot Crash Sensor**  
Safety gets hi-tech: automatically alerts your preferred emergency contacts in the event of a crash - icedot.org

**06. Garmin Vector 2**  
Easy-to-fit pro-level training tool to gauge power and intensity and help you to train smarter - garmin.com

**07. Selle Italia Butcher**  
Designed for downhill, dirt and BMX riding, with a wide nose and hand-size hole for bags of control - selleitalia.com

**08. Wahoo REFLKT iPhone Powered Bike Computer**  
Control and view your favourite cycling app while riding without taking your phone out of your pocket - wahoofitness.com

**09. Uvex EDAero Helmet**  
Time-trial inspired aerodynamics and computer optimised ventilation make for one fast helmet - uvex-sports.de

**10. Crank Brothers Y16 Multi-tool**  
Workshop quality tools locked into an ergonomic, pocket-sized frame. The last multi-tool you'll buy - crankbrothers.com



09.



10.



# ROAD

The quiet whirr of the chain and the rhythmic pull on my arms as I haul myself out of the saddle and burst up the incline, then settle down into the flat, straight road stretching before me, thighs quietly aching, and the air smells clean, invigorating, as the trees zip by with flashes of green and I feel fresh and ready for another fifty, so I fill my lungs, my heartbeat is steady and the road is clear, and I realise I've never been happier, never felt more alive.



TiMania

z:k

CONTROLTECH  
titanium





## ASTRAEUS

Ride the best



### HYDROFORMED TUBING

Hydroforming allows us, by the injection of liquids under high pressure, to shape normal round Titanium tubes into any shape we want. Tube walls can be made as thin as possible at low-stress points to save weight without any compromise on rigidity, while we simultaneously tailor for optimal aerodynamic profiling.



### H-BRIDGE

The H-bridge principle works by diverting the twisting forces applied by the user away from the bottom bracket. This seemingly simple part helps increase the rigidity, and thereby power transfer, in this crucial area, but this also improves the reliability of the entire frame by deflecting peak stresses away from the point where the chainstays, down tube and seat tube are welded.

Light, stiff, aerodynamically optimised and technologically advanced, the Astraeus is the pinnacle of Titanium racing bike design. Hydroformed tubing, a tapered internal headset, press-fit bottom bracket and our proprietary H-Bridge System combine to deliver heavyweight performance in a featherweight package. The magic of Titanium made real.

sizes **500, 520, 540, 560, 580, 600 mm & tailormade**

# ZEPHYR

Serene machine



Created with one key objective: providing day-long comfort over the most challenging road surfaces. The Zephyr helps you last the distance, faster than the rest.

sizes **500, 520, 540, 560, 580, 600 mm & tailormade**



# AQUILO

All out racer



Agile, race-primed geometry and incredibly stiff, light tubing guarantee this bike delivers on speed. The ideal race-day machine to give you the edge in the sprint.

sizes **500, 520, 540, 560, 580, 600 mm & tailormade**





## BOREAS

Smooth sprinter



Featuring longer chainstays to accommodate wider tyres combined with a compact frame and custom-made fork, the new Boreas strikes the perfect balance between all-out racer and all-day comfort.

sizes **480, 510, 540, 560, 580, 600, 620 mm & tailormade**

28  
29



## CHINOOK

Timeless performance



Classic race geometry delivers exciting but predictable performance. It's the perfect lightweight ride for rapid climbing that also loves flying down the descents.

sizes **500, 520, 540, 560, 580, 600, 620 mm & tailormade**





# VENTUS

Winning bike, winning price



The Ventus shares the same race-tuned DNA as its big brothers the Astraeus and Aquilo, but at a very competitive price. Ideal for sportives, it's the perfect first Titanium road bike.

sizes **480, 500, 520, 540, 560, 580, 600 mm**



# AMAZON CROSS

Off road, race on



Oversized tubing and aggressive geometry deliver the poise and power to tackle the toughest cyclo-cross terrain, while the Titanium tubing makes short work of muck and mire.

sizes **500, 520, 540, 560, 580, 600 mm & tailormade**



# ROAD GEOMETRY

	frame size	seat tube ctt	seat tube ctc	seat tube angle	effective top tube	headtube	headtube angle	chainstay	bottom bracket	wheelbase	stack	reach
<b>ASTRAEUS &amp; AQUIL0</b>	500	470	435	75.0	520	130	72.0	405	70	971	531	377
	520	490	455	74.5	531	140	72.5	405	70	973	542	380
	540	510	475	74.0	540	155	72.5	405	70	977	556	380
	560	530	495	73.5	550	170	73.0	405	70	978	572	380
	580	550	515	73.0	566	185	73.0	405	70	988	588	387
	600	570	535	72.5	577	200	73.5	408	70	992	603	387
<b>ZEPHYR</b>	500	470	430	75.0	520	145	71.0	405	75	978	547	372
	520	490	450	74.5	531	155	71.5	410	75	985	558	375
	540	510	470	74.0	540	170	71.5	412	75	992	572	375
	560	530	490	73.5	550	180	72.0	415	75	995	583	377
	580	550	510	73.0	566	200	72.0	418	75	1009	602	382
	600	570	530	72.5	577	215	72.5	418	75	1010	618	382
<b>BOREAS</b>	480	460	425	74.5	518	115	71.5	409	71	971	519	373
	510	490	455	74.5	527	130	71.5	409	71	980	533	378
	540	520	485	73.5	543	150	72.0	409	71	983	554	378
	560	540	505	73.0	558	165	72.5	412	71	996	568	384
	580	560	525	72.5	569	180	72.5	412	71	1002	582	385
	600	580	545	72.0	582	195	73.0	412	71	1000	600	388
<b>CHINOOK</b>	620	600	565	72.0	592	210	73.0	412	71	1010	615	393
	500	500	465	74.5	525	110	72.5	405	70	965	527	378
	520	520	485	74.0	535	120	73.0	405	70	967	538	380
	540	540	505	74.0	545	135	73.0	405	70	977	552	386
	560	560	525	73.5	560	150	73.0	405	70	988	567	392
	580	580	545	73.0	575	165	73.5	405	70	993	583	397
<b>VENTUS</b>	600	600	565	72.5	590	180	73.5	408	70	1006	597	403
	620	620	585	72.0	600	195	73.5	410	70	1011	612	402
	480	450	415	75.0	500	100	71.5	405	70	954	514	361
	500	470	435	75.0	520	110	72.0	405	70	970	525	378
	520	490	455	74.5	531	120	72.5	405	70	972	536	381
	540	510	475	74.0	540	135	72.5	405	70	977	551	381
<b>AMAZON CROSS</b>	560	530	495	73.5	550	150	73.0	405	70	978	567	382
	580	550	515	73.0	566	165	73.0	405	70	989	581	389
	600	570	535	72.5	577	180	73.5	408	70	993	597	390
	500	475	435	74.0	530	125	71.5	425	60	1002	530	377
	520	495	455	73.5	535	140	71.5	425	60	1003	544	373
	540	515	475	73.5	545	160	72.0	425	60	1009	565	377
	560	535	495	73.5	560	180	72.0	425	60	1025	584	386
	580	555	515	73.0	577	195	72.0	425	60	1037	598	394
	600	575	535	73.0	590	205	72.0	425	60	1049	612	402

Dimensions are in millimeters [mm] and angles in degrees [°]

30  
31

**FFWD**  
FAST FORWARD



**F4D FCC WHITE ▲○×▽**

1560 gram | DT240 Center Lock



**ROAD**



**TRACK**



**CX**



**TRI**

FFWD Wheels offers a broad range of carbon wheels for any type of rider who pushes himself to go forward!

**FFWD.COM**



“One stage, no support, no route, live tracking. Factors of self-sufficiency, logistics, navigation and judgement will burden the racers’ minds as well their physiques. Even the best will take a beating. For those who rely on luck alone; this race will raise the stakes. Many will fail.” These are the encouraging words describing the Transcontinental Race, starting on ‘de Muur’ at Geraardsbergen (Belgium) all the way to Istanbul (Turkey), crossing the Mont Ventoux, Italy and Croatia. 210 cycling fanatics dared to challenge themselves to the extreme. Rudy Rollenberg was one of them.

### The high life

24 July 00:00, the start of the race, was definitely the first highlight. All the riders, prepared, packed, anxious, ready, gathered on de Muur as torches were lit by the iconic cobblestones in front of the Kapel and held by a small crowd of friends and well-wishers; a truly magical sight.

The Transcontinental is a hell of a ride at some points. There are days when you find yourself riding for 27 hours, with only half an hour of nap time behind a stone wall. And the weather hasn’t always been my friend: relentless wind, hours of pouring rain, temperatures reaching 42 degrees; I have seen it all. But when you find yourself pushing through, achieving your goals, that is a high point every time. And if you stand still for a while, letting it all sink in, have a good meal and enjoy the surroundings, you can’t help but think “this is a once in a life time experience”. I wanted to do something special for my 50<sup>th</sup> birthday and I don’t think I have to tell you this adventure ticks all the boxes.

One of my highest points of course was reaching the finish. When you receive the final stamp, a huge weight is lifted off your shoulders. My mind never gave up, but in the last days I experienced a lot of wear and tear on my body and bike parts. The only thing I could do at that point was put my favorite music on my iPod and keep on pedaling to the next checkpoint.

“There are days that you find yourself riding for 27 hours, with only half an hour of nap time behind a stone wall.”

### The low points

I experienced my lowest point before I had even started the race. Originally, I had planned to enter the race with my friend and fellow cycling enthusiast Ronny Dumonceau, but two months before the start he had surgery on a nerve in his hand, and was advised not to take part. This left me with the decision to pull out as well, or continue as a solo-rider, which meant a whole new style of preparation and riding. I decided to push through and take on the challenge on my own.

A big low point during the race was the day that I took a wrong turn which resulted in 50 km of extra climbing, on gravel roads, buffeted by strong winds. On top of that, I fell off my bike! The day ended with a scraped knee and morale below zero. So I decided to stay at a hotel instead of a quick power nap in an outside hide-out, hoping for a good night sleep and a positive energy boost. Luckily this strategy seemed to work, because the next day I felt strong and managed to keep on riding through the night. The wind kept fighting me, but at the end of the 537 km the score was Rudy: 1, The Wind: 0

# the Transcon

Rudy Rollenberg

**4,239** km  
race distance

**40,000** m  
of hill climbing

**15** days  
race duration

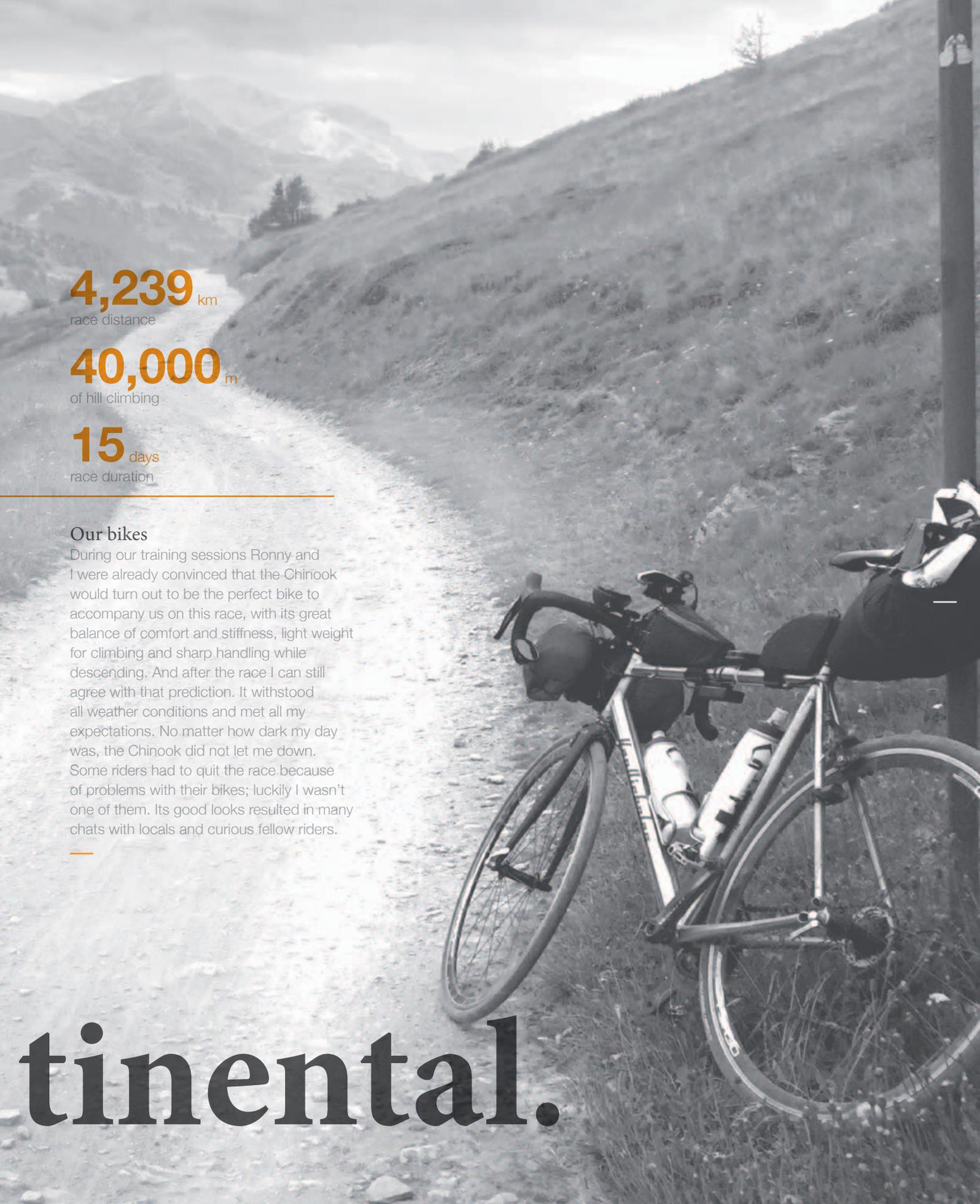
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### Our bikes

During our training sessions Ronny and I were already convinced that the Chinook would turn out to be the perfect bike to accompany us on this race, with its great balance of comfort and stiffness, light weight for climbing and sharp handling while descending. And after the race I can still agree with that prediction. It withstood all weather conditions and met all my expectations. No matter how dark my day was, the Chinook did not let me down. Some riders had to quit the race because of problems with their bikes; luckily I wasn't one of them. Its good looks resulted in many chats with locals and curious fellow riders.

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**tinental.**



No other saddle maker says luxury, comfort and innovative Italian design like the famous Selle Royal company, and their fi'zi:k saddles have been helping to create champions for the past two decades. We spoke to Marketing & Communication Manager Sarah Colpo to find out what makes them the Ferrari of saddles.

Please talk us through the history of fi'zi:k.

The Selle Royal Group's racing brand was born in 1996, when the debut fi'zi:k saddle, 'Pavè', was introduced to the market. The first professional cycling team to benefit from using it was Batik-Del Monte, the Italian team captained by Evgenij Berzin, winner of the Giro d'Italia. Since then, fi'zi:k has constantly grown, earning the trust and confidence of cycling enthusiasts worldwide. The brand is now positioned in the high-end market thanks to the quality of its products, which are entirely handmade in Italy. All fi'zi:k saddles are the result of meticulous design and innovative technological research.

Designing and producing high-performance saddles is at the core of the fi'zi:k identity but over time, the product range has been extended. In 2005 bar:tapes and other accessories were introduced and within four years they were joined by seat posts and mountain bike grips. 2010 saw the launch of the first fi'zi:k cycling shoes – and now that range is extensive, including specially designed models for every kind of cycling, with

different closure systems and specific ranges available for men and women. The fi'zi:k product range was further enriched with the introduction of handlebars in 2013.

How did you come up with the idea for the brand name? Because it is written in an intriguing, unusual way.

fi'zi:k is the phonetic spelling of the word physique, referring to the form or state of the human body. Often associated with general fitness and athletics, the word is also used in many contexts to illustrate physical strength and superb health, ie. a powerful physique, a healthy physique.

In its phonetic form, fi'zi:k inspires other associations. Visually, the symbol conveys a sense of something scientific, technological or mathematical; and audibly, something effervescent, energetic and lively.

What is the main philosophy behind designing your products?

We are built on comfort: enabling riders to train and race without the distraction of pain. We are built on technology and innovation: understanding the human body, and how it connects with the machine. We are built on creativity. We are driven by ideas and values that engage with our riders. We are focused on reaching our goals and pushing the boundaries beyond our upper limits. We craft the best, no compromise racing products, designed for performance, fit and comfort.

How does the Italian culture influence the company and its products?

Our company is deeply interlinked with Italian culture, and in particular with the principles that characterize the 'made in Italy' philosophy. High quality, technical creativity, unique design and international distinctiveness are values that permeate our products and our production processes. To reach these qualitative >

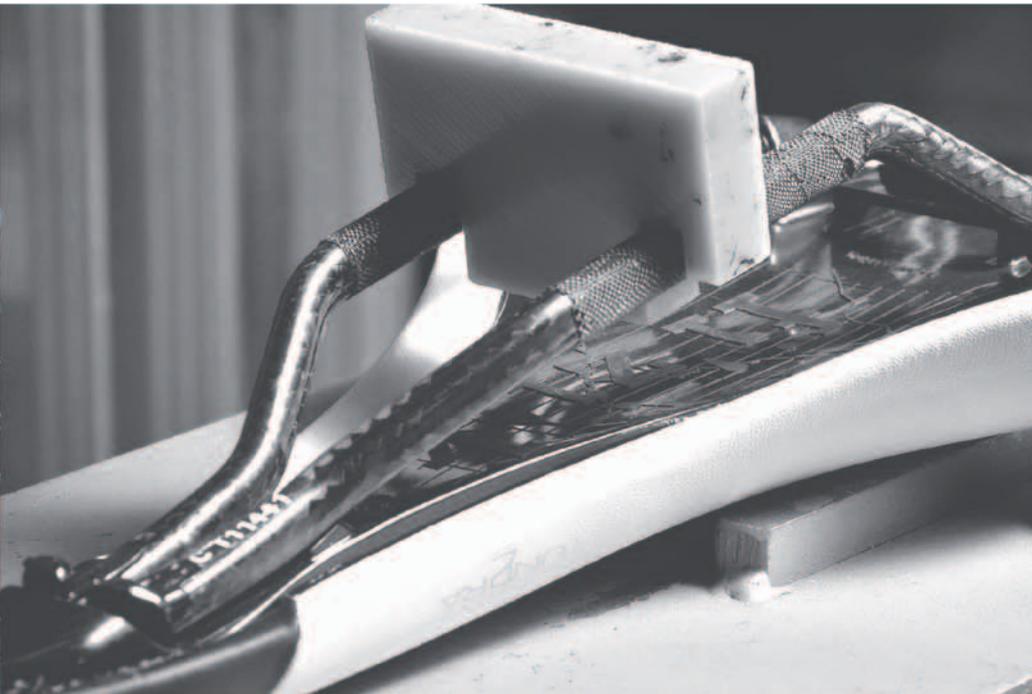


+ (above) fi'zi:k's finest racing leathers.  
(right) Saddle bodies.

# Are You Sitting Comfortably?

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36

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standards, fi'zi:k employ a production system based on strict controls of incoming materials, suppliers and finished products. In addition to that, every saddle is entirely handmade and rigorously quality controlled to guarantee the excellence and uniqueness of the finished product.

**fi'zi:k invented the Spine Concept for saddles and handlebars. Could you give us some information about the origin of this concept and how this translates to the products?**

Human flexibility affects riding behavior when cycling in a high performance position. The spine concept recognizes that cyclists have varying degrees of flexibility. Correct positioning permits cyclists to perform at maximum output and at maximum comfort for extended periods of time.

The most flexible riders can easily touch their toes when bending at the waist. They are *SNAKES*, and the suggested saddle for them is the fi'zi:k *ARIONE*.

They bend to a greater degree at the lower part of the spine, and flex easily and naturally to accommodate changing positions. Genital compression is not an issue for them as their weight is supported by the sit bones.

The medium-flexibility riders are *CHAMELEONS*. They find it difficult to reach their toes without exercising a major stress on the spine. The suggested saddle for them is the fi'zi:k *ANTARES*. For optimum comfort and performance they flex instinctively to manage the body's weight. They adjust for comfort regularly, sometimes relying on the sit bones and sometimes the genital area to manage the body's weight, or when changing hand positions on the tops, hoods, and drops.

The least-flexible riders, the *BULLS*, are able to reach only to their knees when bending over. The suggested saddle for them is the fi'zi:k *ALIANTE*. Those with less flexibility are not easily able to accomplish the high performance cycling position. To reach this position the pelvis

rotates forward dramatically forcing the hips back. In this position, the rider's weight is directed to the genital area.

Six years on and the spine concept has evolved to include our new range of components: handlebars. By drawing on the knowledge we know about spine curvature we are now able to match riders not only to the correct saddle, but also the correct handlebar; this ensures that riders gain the maximum performance and comfort from our products.

**How do you come up with an idea for a new product or technology?**

Research into new materials, production processes and market opportunities proceeds continuously, taking as a benchmark not only the cycle industry, but also other vanguard markets, such as automotive and aerospace. New products are the natural results of these studies, without forgetting that even the older products are steadily improved, from every point of view.



## Human flexibility affects riding behavior when cycling.



*(above) The making of fi'zi:k's saddles.*

### Once you have identified your new product, what comes next?

Once a new product is identified, the development process proceeds with the assessment and selection of the materials to be used in the manufacturing process. The next step is the testing phase, carried out both in laboratories and through road trials. Any feedback in this phase significantly determines the nature of the final product. However, it could be said that the development process doesn't stop here, because all our products are constantly reviewed and modernized, in a never-ending improvement cycle.

### How do you go from a design idea to a physical sample?

Before creating a physical prototype, the product is carefully planned and designed using a 3D virtual engineering process. After that, a physical model is handmade, analyzed and tested.

It depends on the product we are developing and its complexity, but it

usually takes one year to go from an idea to an actual product.

### Are there any materials you prefer to use for your products?

fi'zi:k makes no compromises on quality when selecting materials. They must have general characteristics like high durability and an optimal performance/comfort ratio. In addition to that, specific parameters are taken into account depending on the type of product. In the case of saddles, for example, abrasion and UV resistance are crucial, whereas breathability and light weight are necessary for bar tapes or shoes.

### We see fi'zi:k working closely with professional athletes. In what way do they contribute to the development of new products?

The relationship between sponsor and athlete is crucial for both parties: the professional can benefit from a shoe optimized for his needs and technical characteristics, and the company receives important feedback on the product and

its functionality in a professional context, where everything must be perfect in every detail. There are no better testers than pro-riders for pushing our products to the extreme limits, hence they often provide us with valuable assessments and useful ideas for innovation: in this sense their feedback substantially contributes to every development process.

### What differentiates fi'zi:k from the rest of the cycling component producers in your opinion? What is your greatest strength?

Quality and design are the main traits that differentiate us from our competitors. This quality is not merely a technical one, but reflects every aspect of our company: our production processes, our R&D activities, and the way we communicate. This excellence is reflected entirely in our products, which offer the highest performance levels without compromising comfort.



Fully loaded and slogging up a lung-busting, leg-shredding mountain pass, weather ominous, road surface malevolent, sharing the way with daredevil drivers in spluttering trucks and overfilled buses, stink of exhaust, mind on the gradient and turning the pedals, the gradual creep to the summit, and the pain eases, the crest surmounted, sun dazzles and the vista spreads wide to a distant horizon of welcome, green hills, the road snaking onwards into the future, and I realise I've never felt more open to possibility, more alive to the potential for adventure.

# TOUR



*Van Nicholas*

*Van Nicholas*

Made in Germany SON Edelux II  
6V-2.4W



TWENTYNINER PINION  
**DEVERON**  
 Expand horizons



**PINION GEARBOX**



The Pinion transmission is a ground-breaking new gearing technology from Germany. A virtually maintenance-free, sealed unit sits where the bottom bracket would normally be – which helps lower the bike's centre of gravity for improved handling – and can be used with either a belt or traditional chain drive. It also boasts a 630% gearing range and static shifting – perfect for any kind of expedition.

**BELT DRIVE**



Combine the Pinion gearbox with a belt drive, which requires no lubrication whatsoever, and you have a silent, fuss-free transmission that will keep you spinning long after your legs give out. The stretch-free carbon fibre Gates Center Track belt is as efficient as a traditional bike chain, but stronger and more durable.

The Deveron Pinion is a new generation of global tourer. It is our first bike to feature the virtually maintenance-free, sealed Pinion gearbox, and with belt or chain, dedicated V-brake or disc brake versions, along with a host of bosses and mounts, you are free to tailor it to your specific adventure requirements.

sizes **470, 520, 570 mm**  
**& tailormade**





TWENTYNINER ROHLOFF  
**PIONEER**  
 Brave new worlds



Our global adventurer will keep you on track, on whichever road you travel. Optimised for a Rohloff hub with belt drive or traditional chain; bosses for all the luggage, mudguards and water bottles you need; a long wheelbase for stability; internal headset, full-length cable routing, 29" wheels; the Pioneer is built to keep you going.

sizes **480, 520, 550, 580 mm & tailormade**

EXPEDITION

LIGHT TOURING

COMMUTING

SPORTIVES

DERAILLEUR  
**AMAZON**  
 Explore more



A stable, no-nonsense frame with fittings for mudguards, racks and water bottles make the Amazon our adaptable, comfortable work-horse. Tour, commute, Audax. Push it hard, or enjoy at your leisure.

sizes **500, 520, 540, 560, 580, 600 mm & tailormade**



EXPEDITION

LIGHT TOURING

COMMUTING

SPORTIVES



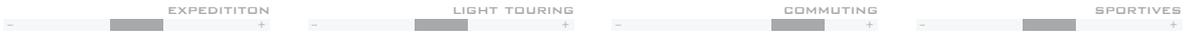
ROHLOFF & ROHLOFF MIXED  
**AMAZON**  
 Explore more



The same robust adaptability and day-long comfort as our standard Amazon, but with the added benefit of fuss-free Rohloff performance and a belt drive option to keep you spinning further than ever, and with the Rohloff Mixed, a slightly lower top tube for ease of mounting.

sizes Roloff 500, 520, 540, 560, 580, 600 mm & *tailormade*  
 sizes Roloff Mixed 480, 520, 560 & *tailormade*

42  
 43



**ROHLOFF HUB**

A 14-gear Rohloff hub with twist shifter guarantees smooth, quick gear shifting, when static or on the move, for thousands of miles. The sealed gearbox ensures reliability and durability even under the toughest conditions. The even increments of 13,6% between gears make it possible to ride continuously at peak performance.



DERAILLEUR  
**YUKON**  
 Holiday everyday



Stunning looks, sharp handling and practical design make this the ultimate commuter-meets-light touring machine. Light and fast, with Titanium's trademark comfort for long days in the saddle.

sizes **500, 520, 540, 560, 580, 600 mm & tailormade**

EXPEDITION

LIGHT TOURING

COMMUTING

SPORTIVES

ROHLOFF  
**YUKON**  
 Holiday everyday



Add the practically maintenance-free Rohloff system to the Yukon and you have an everyday machine that will devour the miles in style and comfort. Select the unique VNT divisible Rohloff specific handlebar for ultimate practicality.

sizes **500, 520, 540, 560, 580 mm & tailormade**



EXPEDITION

LIGHT TOURING

COMMUTING

SPORTIVES

# TOUR GEOMETRY

	frame size	seat tube ctt	seat tube ctc	seat tube angle	effective top tube	headtube	headtube angle	chainstay	bottom bracket	wheelbase	stack	reach
PINION DEVERON	470	470	430	73.5	580	145	70.0	457	70	1088	597	401
	520	520	490	73.0	600	170	70.0	457	70	1104	621	408
	570	570	530	72.5	620	200	70.0	457	70	1119	649	413
ROHLOFF PIONEER	480	470	405	73.0	565	150	69.0	456	64	1090	556	388
	520	510	445	73.0	585	170	69.0	456	64	1111	574	401
	550	540	475	72.5	605	195	69.0	456	64	1127	598	409
	580	570	505	72.0	625	225	69.0	456	64	1143	626	414
AMAZON	500	475	435	74.5	520	140	70.5	445	75	1030	555	364
	520	495	455	74.0	531	150	70.5	445	75	1037	565	367
	540	515	475	74.0	540	165	70.5	445	75	1047	579	372
	560	535	495	73.5	550	180	70.5	445	75	1052	593	373
	580	555	515	73.0	566	195	70.5	445	75	1064	607	379
	600	575	535	73.0	577	210	70.5	445	75	1075	621	386
ROHLOFF AMAZON	500	475	435	74.5	550	140	70.5	456	75	1061	555	394
	520	495	455	74.0	561	150	70.5	456	75	1068	565	397
	540	515	475	74.0	570	165	70.5	456	75	1078	579	402
	560	535	495	73.5	580	180	70.5	456	75	1084	593	403
	580	555	515	73.0	596	195	70.5	456	75	1095	607	409
	600	575	535	73.0	607	210	70.5	456	75	1107	621	416
ROHLOFF MIXED AMAZON	480	455	405	74.0	540	140	70.5	456	75	1047	555	377
	520	495	445	73.5	560	160	70.5	456	75	1063	573	373
	560	535	485	73.0	580	190	70.5	456	75	1079	602	377
	500	500	465	75.0	525	110	71.0	425	70	1005	520	384
YUKON	520	520	485	74.5	536	120	71.5	425	70	1008	531	387
	540	540	505	74.0	546	135	71.5	425	70	1014	545	388
	560	560	525	73.5	556	150	72.0	425	70	1015	561	389
	580	580	545	73.0	571	165	72.0	425	70	1025	576	395
	600	600	565	73.0	583	180	72.0	425	70	1038	590	401
	500	500	465	75.0	525	130	71.0	422	70	1002	528	381
	520	520	485	74.5	536	140	71.5	422	70	1005	540	385
	540	540	505	74.0	546	155	71.5	422	70	1011	554	386
ROHLOFF YUKON	560	560	525	73.5	556	170	72.0	422	70	1012	570	386
	580	580	545	73.0	571	185	72.0	422	70	1022	584	392
	600	600	565	73.0	582	200	72.0	422	70	1033	599	398

Dimensions are in millimeters [mm] and angles in degrees [°]



STRING LIGHT  
BY MICHAEL ANASTASSIADES

**2014**

FLOS.COM



# NOTHING RIDES LIKE TITANIUM

Powerfully Agile. Strength, rigidity and compliance, fused for ultimate performance. Perfectly balanced.  
This is why Titanium delivers a ride like no other. Harmoniously.



01.



02.

# CHOICE

LEISURE



48  
49

03.



04.



05.

06.



07.



**01. Pocket Shower**

A portable 8-minute warm shower heated only by the sun? Camping will be a lot cleaner in future!  
- seatosummit.com

**02. Cargo Works Utility Rucksack**

Compact pack with compartments for everything you need in military spec., weatherproof fabric  
- cargo-works.com

**03. Kor One Water Bottle**

The ultimate water bottle: BPA-free, hinged cap, ice cube friendly, threadless spout, and stylish, too  
- korwater.com

**04. nHow Rotterdam**

Urban chic luxury hotel that immerses you in the best art and architecture the city has to offer  
- nhow-rotterdam.com

**05. Moleskine Livescribe Notebook**

Make handwritten notes appear in digital form in combination with a Livescribe smartpen and app  
- moleskine.com

**06. Eva Solo To Go Grill**

Barbecue on the go! This highly portable grill has silicon handles so you can move it even when hot  
- evasolo.com

**07. Hugo Boss Cotton Hooded Bathrobe**

The finest cotton and understated elegance guarantee this bathrobe will be an everyday indulgence - hugoboss.com

**08. LaCie Fuel**

Stream movies on five devices simultaneously from this wireless, 1TB storage, sandwich-sized unit - lacie.com

**09. Uncrate Magazine**

The bible of new and cool gear, gadgets, cars, clothes and more for men of discerning taste - uncrate.com

**10. The Little Black Book Travel Guides**

Packed with insider tips and fold-out maps, these are the perfect guides to the world's great cities - peterpauper.com

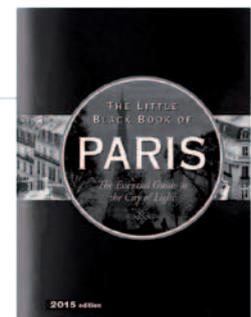
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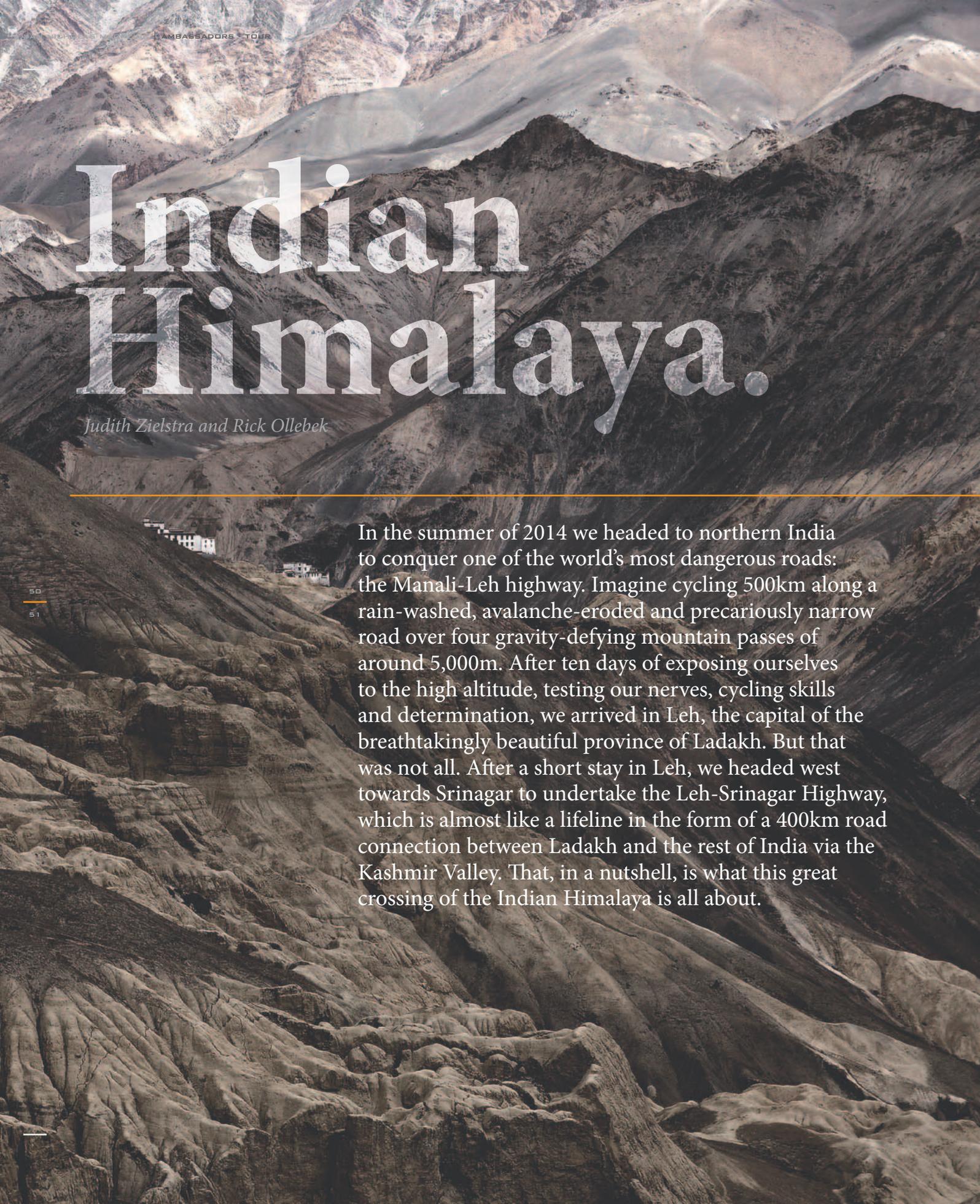


09.



10.





# Indian Himalaya.

*Judith Zielstra and Rick Ollebek*

In the summer of 2014 we headed to northern India to conquer one of the world's most dangerous roads: the Manali-Leh highway. Imagine cycling 500km along a rain-washed, avalanche-eroded and precariously narrow road over four gravity-defying mountain passes of around 5,000m. After ten days of exposing ourselves to the high altitude, testing our nerves, cycling skills and determination, we arrived in Leh, the capital of the breathtakingly beautiful province of Ladakh. But that was not all. After a short stay in Leh, we headed west towards Srinagar to undertake the Leh-Srinagar Highway, which is almost like a lifeline in the form of a 400km road connection between Ladakh and the rest of India via the Kashmir Valley. That, in a nutshell, is what this great crossing of the Indian Himalaya is all about.

## The high life

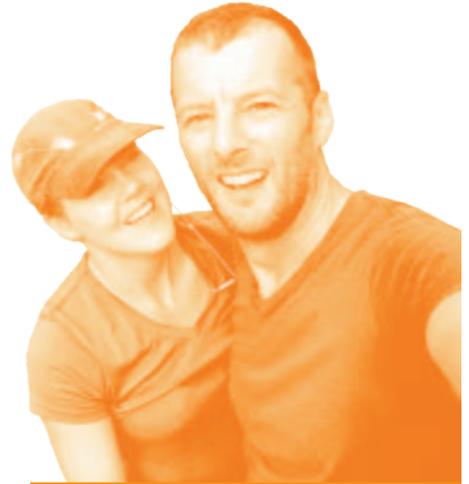
Summarizing the highs of this trip is almost impossible, because the whole journey was a chain of fantastic and literally high events. During our high altitude adventure we encountered extreme trans-Himalayan landscapes that differed every single day. The 4,000m green and rainy Rohtang pass; the desert-like rain shadow area with several unique geographical wonders, such as the infamous Gata Loops with 21 hairpin bends at 4,600m; the passes of Nakee La and Lachulung La, and the pancake flat More Plains, before the rare heights of Taglang La at 5,340m on the final approach to Leh.

What stoked us during the second part of our trip en route to Srinagar was the transition into a complete different culture. As Ladakh is the land of Buddha, decorated with colourful prayer flags, many stone walls and chortens (mostly white-painted religious monuments), Kashmir is the land of Allah, characterized by colourful mosques, veiled women and madrassas (Muslim schools). We were happy to see that these cultures do not clash and that people with different religions and ethnic backgrounds can live happily side-by-side. A good example is the Kashmir city of Kargil. Its bustling streets are full of Kashmiris, Sikhs, Baltis, Tibetans and Dards, which perfectly fits the city's history as an important hub of the ancient Silk Road. Although this area is still a warzone because of the Indian-Pakistan conflict we never felt unsafe. But large army convoys, numerous military camps, several anti-aircraft weapons along the way and gunshots at night demonstrated that the conflict remains very much alive.

## The low points

We had to take a risk when heading to Kashmir, because being a war zone travellers are advised to avoid it – which means no travel insurance! That is a real downside, because it makes people reluctant to visit the area and it prevents the very hospitable inhabitants earning an income from tourism. Fortunately, everything went well and we were lucky, but things could have been very different. During our last days in Srinagar the non-stop rain showers caused the worst flooding in half a century. Hundreds of people were killed and many more were left homeless.

Most disappointing was our (non) encounter with the Drogba people in the remote village of Dha. We badly wanted to cycle to this Indo-Arian tribe in the isolated Dha-Hanu valley, because of their unique, well preserved culture. They speak a rare language, have very striking features (red hair and light eyes) and a colourful dress code. With all the required paperwork and permits and good spirit, we made a detour through the wonderful but highly militarized valley to the correct turn off. Just after the army checkpoint, an impossible 12% steep road zigzagged to Dha village, which was out of view. With our heavily loaded bikes it was impossible to surmount and we were forced to abandon our plan. We were so close...



**“We had to take a risk when heading to Kashmir, because being a war zone travellers are advised to avoid it.”**

## Our bikes

In 2011, we got our Pioneers with Rohloff hubs and they have already survived some rough rides through Central Asia and the Himalayas. Again, they didn't let us down. Teeth rattling roads, mud puddles, steep climbs, dust and river crossings caused no harm to our holy cows. Decorated with prayer flags, our bikes got quite some attention – in particular the belt drives! >

†  
(left) *The Indian Himalayas.*  
(right) *Rick and Judith on the road.*

Fragment from Judith's latest book, available in iBookStore  
(Dutch title: 'Waar Boeddha en Allah bureen zijn')

“It is 5.30 a.m. when I crawl out of our tent. We have camped at the base of the Taglang La pass, at 4,700m. It is only two degrees Celsius. Yesterday we arrived here in T-shirt and shorts and now it is freezing cold. “*I don't want to cook*”, Rick announces. Neither do I. It is way too cold and the only thing we want is to catch the first rays of sunshine. It is about 17km to the top of the pass, at 5,340m. It is down to character now, and a breakfast of energy bars and cashews.

The road is a mix of rocks, gravel, sand and potholes. Luckily the weather is fantastic and so is our spirit. Little by little we are getting closer to the prominent rock formation of the Taglang La. We are moving very slowly because of the dreadful road surface and the thin air. The challenge lies in not getting frustrated, but in living in the moment.”

**500** km  
Manali-Leh highway

**400** km  
Leh-Sringagar highway

**5,000** m  
average height

**15** days  
travelling the Indian Himalayas



**Gates** CARBON DRIVE™

# CYCLING SIMPLIFIED



## **CLEAN, QUIET, LIGHT, STRONG.**

Buy your Van Nicholas with the Gates Carbon Drive belt system.

The no-grease, no-rust, smooth and simple solution for bicyclists.

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[gatescarbondrive.com](http://gatescarbondrive.com)



# MTD

Adrenalin coursing through my veins at the top of the course, then the mud flies and the first corner sails by and I pick the right line over slippery roots and rib-rattling rocks, hands tight on the grips, arms shaking, and my bike sits up perfectly, urging me on to ride faster and faster, pinning drops, hitting gaps, flat through the berms, the only sound my breath, the only sight my line through the trees, and I realise I've never lived more in the moment, never felt so totally focused.



CONTROLTECH

100mm

100mm

100mm





TWENTYSEVEN-AND-A-HALF-PLUS  
**REVELSTOKE**  
 Peak performer



**27.5" OR 29.0"**

We optimised each frame size for the most appropriate wheel: smaller frames are designed around the 27.5", while the larger frames are tailored to 29.0" wheels. So whichever size fits you, the handling will be nimble, the ride stable and reassuring, and about as much fun as you can have on two wheels.



Halfway between 26.0" and 29.0" wheels, 27.5" offers the speed and agility of the first and the trail blazing rollability of the latter. 27.5"+ wheels provide all the manoeuvrability of regular 27.5", but with less chance of snake bites and increased contact area for better grip and control. And if you have big obstacles to conquer? 29" wheels will keep you rolling no matter what the trail throws at you.



The Revelstoke is our all-mountain marathon machine, featuring new, wider 110mm front and 148mm rear hubs creating a larger spoke triangle base for improved wheel stiffness and exceptional handling. Whether you choose to ride extra wide 27.5"+ tyres for incredible grip or 29" tyres, it delivers stunning performance in every format.

sizes **15.0", 18.0", 21.0"**  
 & **tailormade**





TWENTYNINER  
**REVELSTOKE**  
 Peak performer



Sporting the same 110 and 148mm hubs for exceptional handling, the new Revelstoke is optimised for both 27.5"+ and the larger 29" wheel configuration so fast rolling performance over huge obstacles is guaranteed.

sizes **15.5", 18.0", 21.0"**  
 & **tailormade**

XC RACE

XC MARATHON

ALL MOUNTAIN

FREERIDE

TWENTYSEVEN-AND-A-HALF  
**TUAREG**  
 XC beast



The Tuareg boasts a handling configuration to suit the most demanding XC rider, with pinpoint steering, power-maxing rigidity and purposeful, balanced geometry. Super-fast, lightweight and supremely assured.

sizes **15.5", 17.5", 19.0"**  
 & **tailormade**



XC RACE

XC MARATHON

ALL MOUNTAIN

FREERIDE



TWENTYNINER  
**TUAREG**  
XC beast



Based on the regular Tuareg and with geometry tailored to larger 29" wheels, this beefed up version will tame the toughest terrain with balletic poise and frightening speed.

sizes **19.5", 21.0"**  
& **tailormade**

58  
59



TWENTYNINER  
**ZION**  
Keep rolling



Hit the trails, the beach, the forest; XC, Enduro; anywhere, any time, if you have fuel in your tank, the Zion keeps rolling. Meant for very long days in the saddle.

sizes **15.5", 17.5", 19.0", 21.0"** & **tailormade**





TWENTYNINER ROHLOFF  
**ZION**  
 Keep rolling



With all the speed and rollability benefits enjoyed by its stablemate, the Zion 29er Rohloff also boasts the convenience of a Rohloff hub – perfect for endurance events where reliability is key.

sizes **15.5", 17.5", 19.0", 21.0"** & *tailormade*

XC RACE

XC MARATHON

ALL MOUNTAIN

FREERIDE

TWENTYNINER  
**REDWOOD**  
 Mountain marauder



The ideal introduction to Titanium MTB. Fun, fast, forgiving: the Redwood balances comfort and performance to help you find your limits, and then push beyond them.

sizes **15.5", 17.5", 19.0", 21.0"**



XC RACE

XC MARATHON

ALL MOUNTAIN

FREERIDE

# MTB GEOMETRY

		frame size	seat tube ctt	seat tube ctc	seat tube angle	effective top tube	headtube	headtube angle	chainstay	bottom bracket	wheelbase	stack	reach
	<b>REVELSTOKE</b>	15.5	394	354	73.5	575	100	71.0	434	60	1060	597	398
		18.0	457	417	73.5	600	115	71.0	434	60	1086	611	419
	<b>TWENTY-SEVEN-AND-A-HALF TUAREG</b>	21.0	533	493	73.5	630	130	71.0	434	60	1117	625	445
60		15.5	394	329	73.5	565	105	71.0	430	40	1052	566	397
		17.5	445	380	73.5	590	115	71.0	430	40	1078	575	420
	<b>TWENTYNINER TUAREG</b>	19.0	483	418	73.0	610	125	71.0	430	40	1092	585	431
		19.5	495	430	73.0	615	105	71.5	445	64	1100	618	426
	<b>TWENTYNINER ZION</b>	21.0	533	468	73.0	640	115	71.5	445	64	1125	627	448
		15.5	394	329	73.5	570	110	71.0	445	64	1066	621	386
		17.5	445	380	73.5	590	110	71.0	445	64	1086	621	406
		19.0	483	418	73.0	615	110	71.0	445	64	1105	621	425
	<b>TWENTYNINER ROHLOFF ZION</b>	21.0	533	468	73.0	640	115	71.0	445	64	1130	625	450
		15.5	394	329	73.5	570	110	71.0	437	64	1058	621	386
		17.5	445	380	73.5	590	110	71.0	437	64	1078	621	406
		19.0	483	418	73.0	615	110	71.0	437	64	1097	621	425
	<b>TWENTYNINER REDWOOD</b>	21.0	533	468	73.0	640	115	71.0	437	64	1122	625	450
		15.5	394	329	73.5	570	95	71.0	450	64	1070	606	389
		17.5	445	380	73.5	590	105	71.5	450	64	1085	618	406
		19.0	483	418	73.0	615	105	71.5	450	64	1104	618	425
		21.0	533	468	73.0	640	115	71.5	450	64	1130	627	447



29  
TWENTYNINER

### Minimalism Maximised



The VNT Twentyniner full rigid carbon front fork delivers pin-sharp steering control in a beautifully low-key, high performance design.



62  
63

# Nutrition Mission

MTN-Qhubeka is Africa's first ever UCI registered Professional Continental cycling team. Based in South Africa, they participate in UCI Continental Circuit races, and were the first African team invited to participate in the Tour de France, where they faced their toughest challenge to date: battling the mountains of the world's most famous bicycle race. For the modern day warriors of a professional cycling team, Napoleon's aphorism "an army marches on its stomach" is apposite, so we caught up with one of the team's soigneurs, Yvonne Houweling, who talks us through a typical day of eating at Le Tour.

The working day starts at 7 a.m. with breakfast for all the support staff and after that we start preparing; cleaning the cars and filling the coolers with all the necessities, like energy bars and gels and of course lunch for the mechanics and team coaches. Meanwhile the riders have their breakfast. For the Tour we have a chef that prepares the riders' meals and makes sure they get what they need to start their day in optimal condition. This varies according to each rider's preferences, but typically includes omelets, porridge, cereals, yogurt or pancakes.

Once we arrive at the start of that day's stage, we put together the musettes for the riders while the riders have a coffee and get changed. It is essential we have enough food available to keep them going during the race, so next to the usual bars and gels we also provide the riders with snacks like the famous Dutch 'stropwafels', rice cakes and more savory options, such as sandwiches with ham, chicken and cream cheese. We also fill their water bottles with water, energy drinks, or a mix of the two depending on the wishes of the individual rider.

Once the race is underway, we travel to the feed zone, where we hand over a couple of water bottles and the pre-prepared snacks – not an easy job when you consider this all has to be done at some speed! We also follow in the support cars to hand out more snacks as and when they're required during the race. Depending on the weather we may also provide them with a sachet of ice for cooling, or a water bottle with some tea.

Then we move to the finish to welcome the riders. We also bring food for

immediately after the race. This is an important meal, because it is essential to quickly replace the lost energy and repair tired muscles, so they eat it as soon as they are showered and back in the bus. A good balance between carbohydrates and protein is needed. An example of our 'recovery food' can be rice or pasta with some chicken and sauce, a fruit salad and cottage cheese. The riders have a say in this as well; they know what works for them best, so if they feel good with just a recovery shake and some fruit, that is also fine. Communication with the riders is very important: they can only perform at their best if they are correctly nourished.

Participating in our first Tour in 2015 was a very proud moment for MTN-Qhubeka, and for Africa in general. We achieved the 'King of the Mountain' Polka Dot jersey for Eritrea's Daniel Teklehaimanot, Serge Pauwels' 13th position in the general classification and Steve Cummings' stage win at the 14th. We owe our success to the dedication and talent of our riders, but without the support of the staff and

a solid foundation of tailored, optimized nutrition, all of their hard work and sacrifice would have been wasted.

+

(left) Yvonne, armed with loaded coolers, ready for action (photography by Ilona Kamps). (right) The carefully wrapped and much needed nutritions.

Team MTN-Qhubeka is a team with a strong identity and humanitarian calling. It raises awareness and funding for the Qhubeka World Bicycle Relief's Program in South Africa. Qhubeka is a Nguni word that means 'to carry on' or 'to move forward'. The foundation is dedicated to advancing education, health and economic opportunities by providing simple, sustainable transportation. It has already delivered more than 220,000 specially designed, locally assembled bicycles to people in need. This way, children can get to their school much faster and have more time to study. More information about the project can be found at [bicycleschangelives.org](http://bicycleschangelives.org)



# ACCESSORIES

OBJECTS OF DESIRE

The ultimate Titanium frames deserve the ultimate Titanium accessories. We have developed a range of components for riders as obsessed with its magical properties as we are, for both on and off the bike.

01



02



03



04





05



06

- 01. TITANIUM SEAT POST
- 02. TITANIUM CUTLERY
- 03. TITANIUM QUICK RELEASES
- 04. TITANIUM SEAT COLLAR
- 05. TITANIUM HEADSET SPACERS
- 06. TITANIUM BELL



- 07. TITANIUM HIP FLASK
- 08. TITANIUM HANDLEBAR
- 09. TITANIUM STEM
- 10. TITANIUM BAR ENDS
- 11. TITANIUM WATER BOTTLE CAGE
- 12. TITANIUM FORK TOURING/EXPEDITION

66  
67



07

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11



12



# cape epic

*Mart Hofmans and Koen van de Watering*

## The high life

Being in the Republic of South Africa together, experiencing the moment that we have been working very hard for, was a highlight itself. We got the chance to see how our Van Nicholas Tuaregs would perform in this 'hell of a ride' – and, of course, our bodies as well.

The prologue of the race led us over the flanks of Table Mountain, which meant we enjoyed a spectacular view over Cape Town. A comfortable temperature of 20 degrees, vuvuzelas buzzing in the background, climbing with your heart thumping at 200 beats per minute in your chest, public cheering: an amazing feeling. What a beautiful country, what an experience.

Stage 1 was the highest, and the toughest, with a five out of five star challenge rating. 113km and 2,800m of elevation. Which means three times up the Alpe d'Huez, on a small, rocky path. We felt the five star rating in every part of our body. But luckily nothing that a massage wouldn't fix! 22 teams fell out of the race during this stage; we were ecstatic not to be one of them.

March 15th, 2015: after a year of preparation and training we could finally start the adventure of our dreams. We were standing at the foot of the Table Mountain in the Republic of South Africa, waiting to start our first ABSA Cape Epic. The many hours on our bikes really had to pay off, since this stage marathon race is known as one of the toughest in the world. Our main goal: finish the race. But achieving a good classification would be no bad thing.





**740**<sub>km</sub>  
race distance

**16,000**<sub>m</sub>  
of hill climbing

**8**<sub>days</sub>  
race duration

## The low points

We made it through the first three days together well, we stayed together and coached each other to the finish. Even though we had a measured pace, we managed to achieve a good classification. But on the fourth day fate hit; after 40km Koen had developed too many problems with his neck, so, reluctantly, we had to admit that it was best for him to leave the competition.

We were faced with a difficult decision. You have to finish with your complete team to remain in the running for the race, so we knew that goal couldn't be achieved, but the question was whether Mart would ride on by himself. And he did. Someone had to finish what we came for. This truly was the lowest point of our race. Leaving a team mate behind was tough for us both. But the next couple of days Koen supported Mart from the sidelines, amused himself with his newly made friends from the support crews, and welcomed his team mate at the final finish with a cold bottle of champagne.

## Our bikes

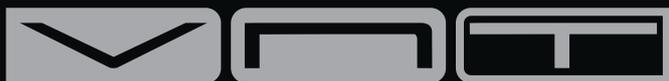
Eventually, Mart rode by himself for four and a half days in the brutal South African landscape, where moments of suffering and elation alternate constantly. One of the few constant factors was the bike: always stable and sturdy on the rough terrain that sometimes looked like it was only suitable for SUV's. They were very comfortable, which gave us the extra energy required to keep on going on the gruelling, rocky roads.

During our training sessions our Tuaregs had already attracted a lot of

attention and during the Cape Epic it was no different. They stood out amongst all the expensive bikes, and everyone (mechanics, fellow racers and supporters) wanted to take a closer look and ask us lots of questions. Our lives have been enriched by this incredible life experience, on a fantastic bike. There is no better combination.

The Cape Epic certainly left us wanting more. What will our next extreme adventure be? You can follow us at our blog [www.moakmtb.nl](http://www.moakmtb.nl) and we will keep you posted.

**“Vuvuzelas buzzing in the background, climbing with your heart thumping at 200 beats per minute in your chest, public cheering: an amazing feeling”**



## Minimalism Maximised

Using Van Nicholas design expertise, we developed a range of non-Titanium components under our VNT brand. We created high performance products, with our recognisably understated aesthetic.



01.



02.



03.



05.



01. VNT brake calipers

02. VNT alloy seat collar

03. VNT alloy stem

04. VNT alloy seat post

05. VNT alloy headset spacers

06. VNT road handlebar

07. VNT divisible Rohloff deep drop handlebar



04.



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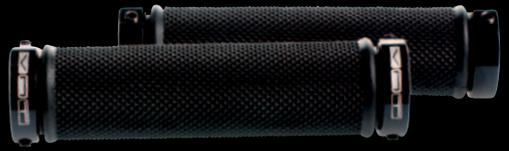
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15.



- 08. VNT MTB riser handlebar
- 09. VNT retro saddle
- 10. VNT MTB lock-on grips
- 11. VNT leather saddle
- 12. VNT brake levers
- 13. VNT SLR straight ROAD fork
- 14. VNT SLR tapered ROAD fork
- 15. VNT rigid carbon tapered twentyininer fork



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# CHOICE

L I F E S T Y L E

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00-11  
11-00



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07.

**01. Grovemade Wood Sleeves**

Protect your precious technological gadgets with sleek lambswool-lined wood veneer sleeves - grovemade.com

**02. Shwood Francis Titanium Sunglasses**

Ultra-light titanium frame with hardwood temples and Carl Zeiss lenses for stylish, comfortable protection - shwoodshop.com

**03. NOD Gesture Control Ring**

Universal controller that enables effortless, touchless interaction with all your favourite devices - hellonod.com

**04. Lytro Illum Light Field Camera**

Designed to harness the full power of the light field, this pro-grade camera is a huge step forward - lytro.com

**05. OD-11 Speaker**

Based on the iconic Carlsson original, this elegant wireless speaker links to your music via an app - teenageengineering.com

**06. Steinger Kitchen Modul**

Innovative materials and production methods meet classic design to produce one-of-a-kind kitchens - steinger-masterpieces.com

**07. Aëdle VK-1 Legacy Limited Edition**

Jaw-dropping minimalist headphones with high-definition titanium transducers and lambskin cushions - aedle.net

**08. Sense Sleep Tracker**

This clever device calculates your ideal sleeping conditions, and wakes you at the optimum time - hello.is

**09. U-Boat Classico Titanium IPB Ceramic Bezel Limited Edition**

Handcrafted by Italian master craftsmen, this stunning timepiece is a future design classic - uboatwatch.com

**10. Titanium Mouse**

Bring a touch of luxury to answering your emails with this luxurious, handcrafted, elegant mouse - intelligent-design.nl

**11. Native Union CLIC Wooden iPhone Case**

Precision engineered and unique thanks to the individual grain of the natural wood - nativeunion.com



09.



11.



10.

# NOTHING LASTS LIKE TITANIUM

Immutably Tough. A natural coating of Titanium Dioxide ensures that no matter how punishing the conditions, Titanium will never succumb to rust, decay or corrosion. Unassailably.



# APPAREL

PERFORMANCE CHIC

Designed with the same timeless, minimalist aesthetic as our bikes, and featuring the latest technical fabrics and performance sportswear ergonomics, our range of apparel make sure you look and perform as good as your Van Nicholas.



01



02

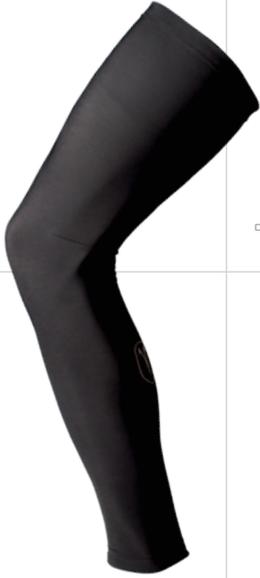
- 01. VN SHORT SLEEVE JERSEY
- 02. VN BIB SHORTS
- 03. VN WATER BOTTLE BY ELITE
- 04. VN TEAM SOCKS
- 05. VN LEG WARMERS
- 06. VN LONG SLEEVE JERSEY
- 07. VN KNEE WARMERS
- 08. VN ARM WARMERS



03



04



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08



# OBVIOUS

THE OBVIOUS CHOICE

Nothing Looks, Rides or Lasts like Titanium, so why would you choose anything else? But if you need any more reasons to purchase a Van Nicholas Titanium bicycle, we've compiled a list below.

#### TITANIUM EXPERTISE



Our knowledge and experience of working with Titanium are second to none, and our passion is unrivalled. Nobody does Titanium like Van Nicholas. That's why we are The Titanium Bike Company.

#### LIFETIME FRAME WARRANTY



Van Nicholas will replace (not repair) any Titanium frame that fails due to manufacturer defects in materials or workmanship for the lifetime of the frame.

#### MY VAN NICHOLAS DESIGNER



Build your dream bike online using our intuitive, high resolution interface, featuring a wide range of quality components and detailed information. Every selection alters the look, weight and price of the bike in real-time. Save your dream build for future reference, or continue straight to the check-out to turn your dream into reality.

#### TAILOR MADE FRAMES



We design our frames with the greatest care and attention to detail, but we are well aware that every rider is unique. To completely unify bicycle and rider, we offer the option of adjusting the frame's geometry to your liking.



WARRANTY  
RE-CERTIFICATION



CRASH REPLACEMENT  
WARRANTY



10 DAYS,  
100% MONEY BACK



PERFECT FIT  
GUARANTEE



30-DAY  
RETURN POLICY

*A full description of our policies  
can be found on our website.*





# DEALER NETWORK

## Supplying Titanium Bicycles Around the World

We have an authorized dealer network supplying Van Nicholas bicycles worldwide. For professional advice and all the help you need to purchase your dream Titanium ride, visit our website to find the closest dealer to you. If there is no dealer nearby, please contact our headquarters.

[vannicholas.com/dealerlocator.aspx](http://vannicholas.com/dealerlocator.aspx)

VAN NICHOLAS BICYCLES  
THE TITANIUM BIKE COMPANY

TINWEG 9  
8445 PD HEERENVEEN  
THE NETHERLANDS

PHONE +31 (0)513 - 435040

MAIL [INFO@VANNICHOLAS.COM](mailto:INFO@VANNICHOLAS.COM)

WEB [VANNICHOLAS.COM](http://VANNICHOLAS.COM)

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- Days and days of performance on a single charge -
- Personalise your riding style with multiple shifting positions -
- The front derailleur trims automatically and follows the chain position -
- Easy set up and fully customizable shifting -
- Accurate and precise shifting all the time -



SEE THE LATEST SHIMANO TECHNOLOGIES EXPLAINED AT: [cycle.shimano-eu.com/technology](https://cycle.shimano-eu.com/technology)

TAKE CONTROL WITH SHIMANO D12 ELECTRONIC SHIFTING. CHANGE GEAR WITH INSTANT PRECISION AT THE CLICK OF A BUTTON - EVEN UNDER HEAVY LOAD WHILE CLIMBING OR SPRINTING. IN ANY WEATHER CONDITIONS AND ON ANY TERRAIN. NO EFFORT, NO FRICTION, NO LOSS OF POWER, NO DELAY, NO ADJUSTMENT. ALL YOU HAVE TO DO IS ENJOY THE RIDE.

**Di2**  
DIGITAL INTEGRATED INTELLIGENCE