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ZIPP
SPEED WEAPONRY
2010
WHEELS BARS STEMS CRANKS
QUICK STEP
MILKAM
ZIPP 2010
WHEELS BARS STEMS CRANKS

GARMIN

LCL
BANQUE
MONACO

kiwami

Škoda
SAXO
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play
itas

ZIPP'S STORY IS NOT ABOUT WHEELS, STEMS, BARS, AND CRANKS. It's about people. From Tour de France winners and Ironman® champions to engineers and composite technicians, the collaborative spirit of a diverse group of individuals is the foundation of everything we do. | Engineers develop concepts and use the wind tunnel and our in-house test lab to refine prototypes built by our fabricators. Pro athletes and team mechanics provide feedback on real-world performance, in and out of competition. Technicians in Speedway, Indiana, lay sheets of carbon fiber by hand and examine every millimeter of our finished products for even the tiniest flaw. Our in-house builders lace, tension and true every wheel that we ship. | The creativity, dedication, experience, and hard work of this community form a process unlike any other. At each step along the way, there's just one goal – to create the world's fastest wheels and components.

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ALWAYS IN FRONT. Flip through our old catalogs and you'll find breakthroughs that have since become standards – like the first carbon disc and deep section rim, the original carbon crankset, the earliest hubs with ceramic bearings, and aero frames with concealed brakes and cable routing. A closer look through our history reveals major race results dating back to our first win at Ironman Hawaii in 1990. We're proud of our heritage, but we don't wish to be defined by it. | We judge ourselves by the standards of today against a field of competitors who are stronger than they've ever been. But even as they improve, Zipp stays ahead of the curve. | With our first Tour de France win, yet another victory in Kona, and four gold medals in Beijing, 2008 was the most successful racing season in our history. 2009 is looking every bit as good. Meanwhile, our products are evolving on a similar trajectory. For 2010, the redesigned 303 is perhaps the most versatile wheelset we've ever produced, while the Super-9 disc and 101 wheelset bring new elements of speed to our lineup. | In 1988, Zipp began when a racecar engineer saw a rudimentary aluminum disc wheel and knew that he could make a better one from carbon fiber. From that day on, we've been driven by an internal motivation to take whatever's out there and make it faster. Sometimes the advances are great leaps forward, like the Sub-9 disc, the first wheel to generate forward lift. Sometimes they come in smaller increments, like a redesign that might save 2 watts compared to its predecessor. But to us, every improvement matters. It's a feeling without logical explanation. If you feel it too, then you'll understand where Zipp has come from and where we're going.

SAXO
BANK
SPECIALIZED
Vittel
33
S-WORKS
tarmac
404

WELCOME TO SPEEDWAY. About halfway between Kona and l'Alpe d'Huez sits a flat little town with a world-famous auto race. Admittedly, Speedway, Indiana, is far removed from the annals of cycling and triathlon lore. But for over 20 years, our hometown has been a hotbed of the motorsports composites industry and continues to attract advanced technologies and talented engineers. It's no accident that Zipp was born and raised here, or that every Zipp wheel is still made by individually trained Zipp employees in our facility in Speedway. | So, when we talk about where Zipp products come from, it's not about politics. It's about the advantages of integrating manufacturing with design, engineering, and testing. Doing everything in-house gives us flexibility to develop new products efficiently and release them with shorter lead times. It allows us to keep a close eye on quality control and provide superior customer service. Ultimately, having all these functions under one roof enables Zipp to make the world's fastest wheels and components.

ZIPP
404

ZIPP
404

ROCK SHOX
SOLAN

ZIPP

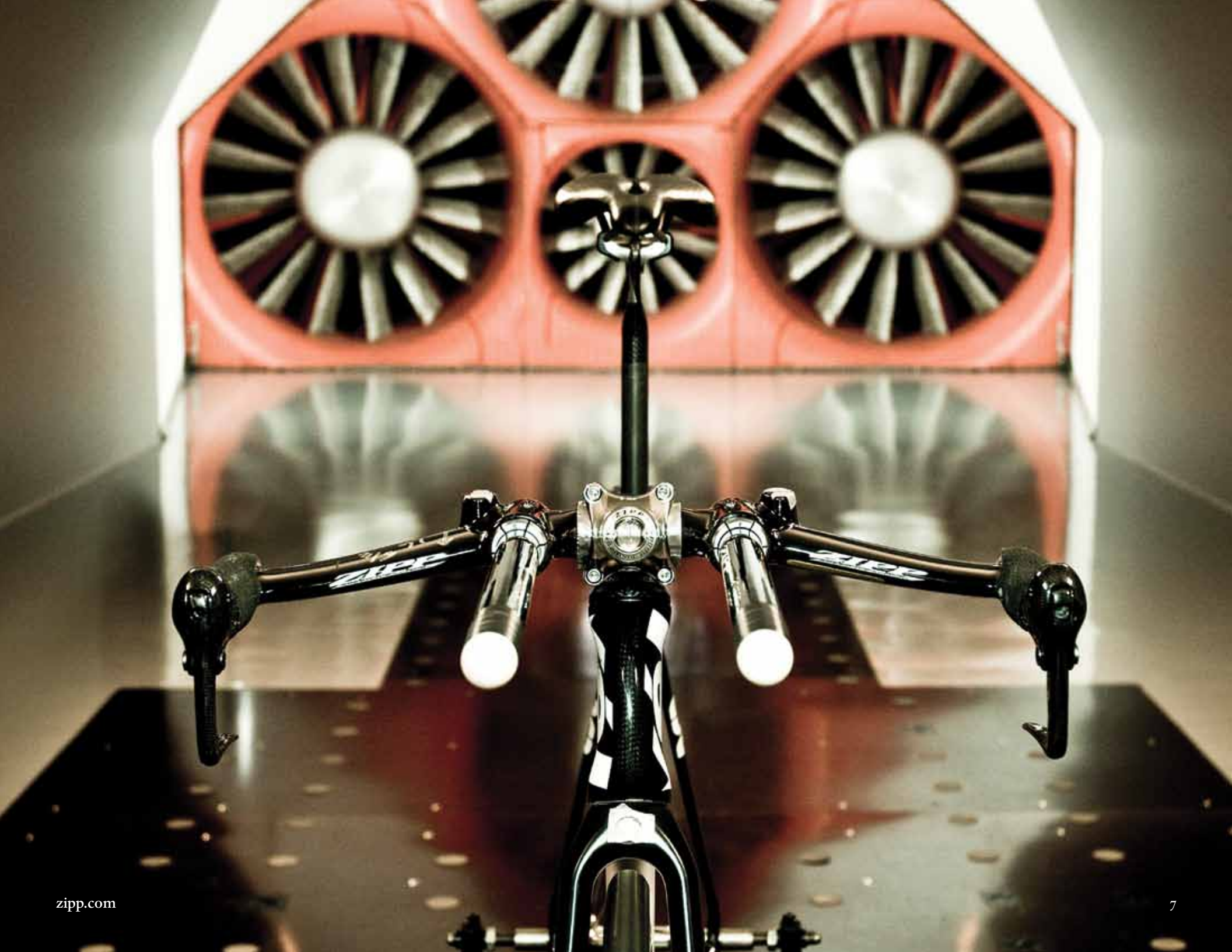
ZIPP

WE TAME THE WIND. An omnipresent force shaping the outcome of every race, the wind is an enemy to most of the field. But to those who can harness the power of aerodynamics, the wind is an advantage. Every Zipp product reflects this attitude. | In practice, it means that our engineers test hundreds of concepts through computational fluid dynamics before spending days on end in the wind tunnel with dozens of samples, including non-structural models that can be reshaped on the spot. A single trip can involve more than 40 wheels and more than 100 tests at every wind angle a rider is likely to encounter. | When the turbines stop spinning, we'll have a detailed view of each test subject's performance. Some will return as final prototypes to confirm our original findings before going to production. The rest will go to the scrap pile, having done their part to develop the next generation of Zipp wheels, bars, and cranks.

Matching the width of the rim to the width of the tire is essential to smoothing airflow around the wheel. But standard V-shaped rims can be matched only to ultra-narrow tires that are uncomfortable, flat-prone, and difficult to handle. This concept of tire sensitivity is the reason why Zipp rims are wider in the middle than at the brake track. With a 21mm tire as shown, a 58mm-deep Zipp 404 with our toroidal bulge causes less turbulence around the rim and in its wake than a 66mm V-shaped rim. With a 23mm tire, the difference is even more dramatic. | To further reduce turbulence, each of Zipp's carbon rim and disc wheel models features a tailored pattern of our patented ABLC™ dimpled surface. The combination of the dimples and toroidal shape allows a Zipp rim to offer the same aero performance as a much deeper standard V while remaining lighter and easier to handle in crosswinds.

Turbulence Diagram

Left: 58mm ZIPP 404 with 21mm tire
Right: 66mm V-shaped rim with 21mm tire
Iteration = 73


zipp
zipp

WHEELS

Equipment evolves, training methods improve, and tactics are refined. Each passing year offers new opportunities to improve measurable performance. Yet research and technology will never replace heart and instinct. The immeasurable ability to endure remains as significant today as it has always been and will always be. While there's no question that the world's fastest wheels can be the difference between winning and losing, not all races are defined by victory and defeat. Sometimes, the best you can hope for is that your competitors are suffering just a little bit more than you are.

Cervélo TestTeam endures the spring classics aboard the all-new Zipp 303.

31
zipvil
ervé
zipp
ROTOR
castelli
31

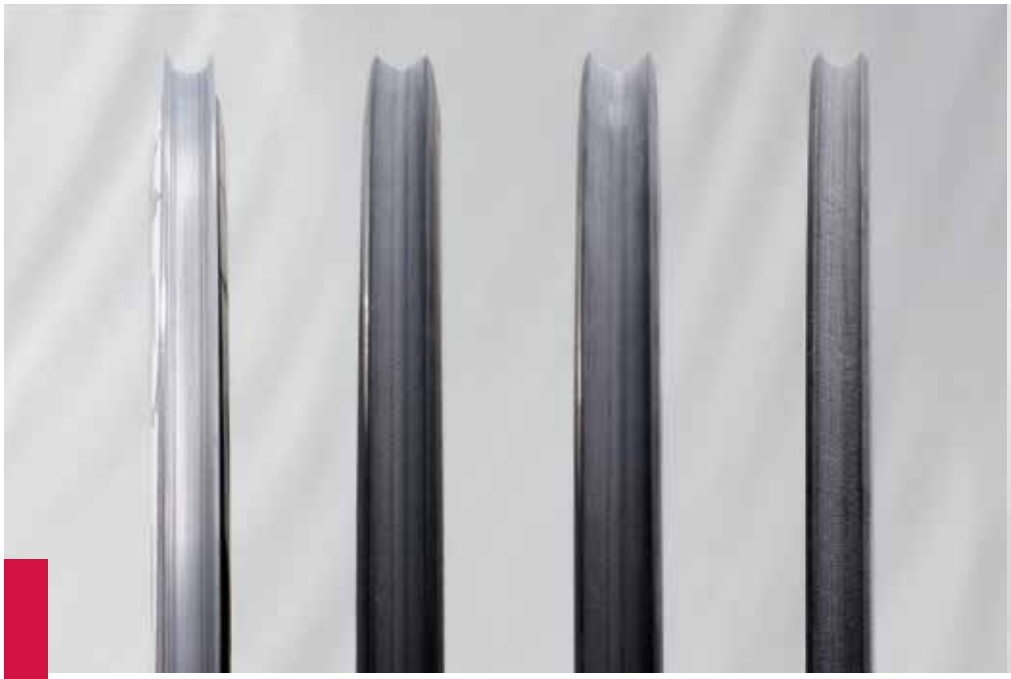
THE SHORT-RANGE ROCKET. Zipp's new Super-9 disc excels in races won on full-throttle power. Intended for time trials, track racing, and the occasional Tour de France prologue, the Super-9 is 40% stiffer than our 900 disc and matches the Sub-9's remarkable ability to generate forward lift when paired with our Tangente tire. | To slot cleanly into the tightest of chainstays, the Super-9 tapers in width from 27.5mm at the hub to 23mm at the perimeter. With a slightly wider tire bed than our other discs, the Super-9 exhibits superb aerodynamics with tire widths from 21-23mm. The Super-9's hub features the same 17mm axles as the 188 road hub, along with adjustable bearing preload with the industry's only aero preload nut. The standard version of the Super-9 weighs less than 1,000 grams and is convertible between road and track setups.

Available in Tubular, PowerTap, ZEDTECH, Track (2010).

Specs	*Tubular*
Aero Rim Width	*27.5mm*
Weight	*995g*

Aerodynamics – time and watt savings over 40K for 808 front and Super-9 rear: 104 seconds / 34 watts.

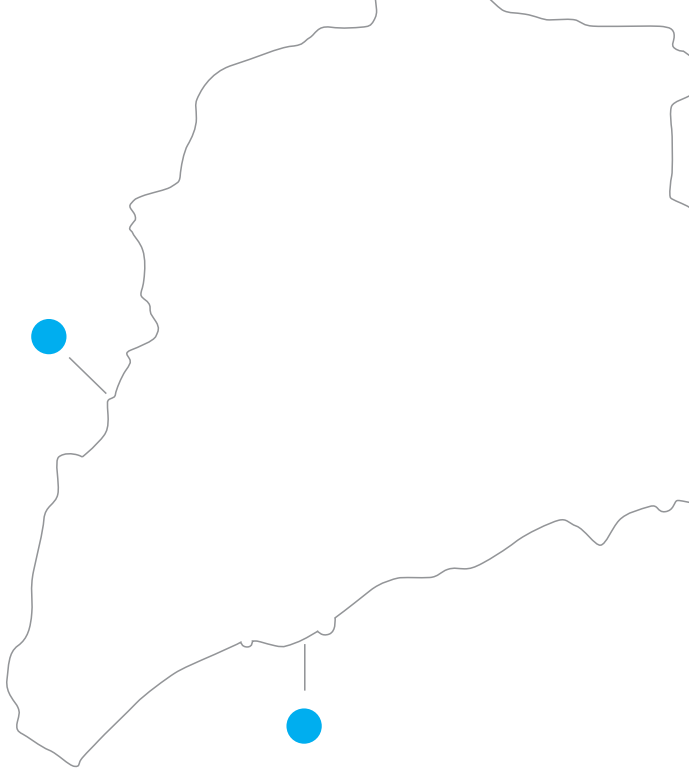
Left to right: 900 Clincher, Sub-9, Super-9, 900 Tubular



SUPER-9

AERODYNAMIC ALCHEMY. The Sub-9's highlights so far include Ironman 70.3 World Championships for Andy Potts and Terenzo Bozzone, and a yellow jersey for Fabian Cancellara. We expected nothing less from the ultimate aerodynamic breakthrough. | In the center of the aero "sweet spot" – a wind angle of 12 to 18 degrees – the Zipp Sub-9 was the first wheel ever to produce forward lift when paired with our 21mm Tangente tire. To achieve this feat, we added a toroidal bulge similar to our 1080 and 808 spoked wheels around the edge of the disc. In addition to improving aero performance, the bulge's vertical compliance keeps the Sub-9 glued to the road when cornering and yields a comfortable ride. This makes it the ideal choice for long-course triathletes to bounce out of T2 with fresh legs after a blistering bike split. | For decades, an obsession with aerodynamics has influenced everything from wheels to water bottles. But with the Sub-9 disc, we moved from minimizing drag to maximizing propulsion.

Available in Tubular, PowerTap, ZEDTECH.



Specs	*Tubular*
Aero Rim Width	*28mm*
Weight	*998g*

Aerodynamics – time and watt savings over 40K for 808 front and Sub-9 rear: 104 seconds / 34 watts.

SUB-9

ZIPP
SPEED WEAPONRY
ZIPP
SPEED WEAPONRY
ZIPP
SPEED WEAPONRY

CHOICE IS GOOD. Although it doesn't quite match the aero performance of the Super-9 and Sub-9, the Zipp 900 disc was still fast enough to be the choice of Cervélo TestTeam for the 2009 Tour de France and for Kristin Armstrong's victory in the 2008 Olympic time trial. The 900 is also the lightest disc in our line, weighing just 936 grams for a 700c tubular version. | The 900 has also made its mark with pro triathletes looking for all-out aerodynamics with the convenience of clinchers. Using the PowerTap version of the 900 clincher, Jordan Rapp posted the fastest bike split at Wildflower in 2009 and the bike course record at Ironman Arizona in 2008. | Beyond its performance, the 900 offers more configurations than any other disc available. They all benefit from everything Zipp has learned since we created the world's first carbon disc over 20 years ago.

Available in Tubular, Clincher, Track, PowerTap, 650c, Wheelchair, Handcycle, ZEDTECH.

Specs	*Clincher*	*Tubular*
Aero Rim Width	*25mm*	*23mm*
Weight	*1219g*	*936g*

Aerodynamics – time and watt savings over 40K for 808 front and 900 rear: 88 seconds / 29 watts.

900

PROGRESS YIELDS PERFORMANCE. The sight of a lone rider hunched over the aero bars may lack the spectacle of a field sprint or the epic scenery of a mountain stage. But if you've ever poured yourself into a time trial or a bike leg, then you've shared an experience with rising triathlon star Linsey Corbin and Olympic time-trial champion Fabian Cancellara. | On their bikes, you'll find the 108mm-deep Zipp 1080, the world's fastest non-disc wheel. To improve upon the previous holder of that title, our 82mm-deep 808, we tested and retested a range of prototypes for the 1080 before settling on fully toroidal shape that blends 5 distinct curves to smooth airflow. | This new profile, which we've since applied to the 808 and other wheels in our line, makes the 1080 nearly 30 seconds faster over 40km than a three-spoke wheel. Yet despite its depth, the 1080 was light enough for Fabian to dominate Beijing's hilly time trial course and so stable in crosswinds that a smaller rider like Linsey could use it in Kona. When seconds count – which they always do – the 1080 is perhaps the ultimate piece of speed weaponry.

Available in Tubular, Clincher, ZEDTECH.

Specs	*Clincher*	*Tubular*
Aero Rim Width	*24.2mm*	*27.5mm*
Rim Depth	*108mm*	*108mm*
Weight	*2377g*	*1699g*

Aerodynamics – time and watt savings over 40K for 1080 Wheelset: 90 seconds / 30 watts.

1080

GAME ON. Ironically, the fastest finishers in the peloton were among the last to take advantage of the world's fastest wheels. But the sprinters eventually realized that deep-profile models like the Zipp 808 could help them conserve energy while sitting in the field and increase their top speed in the final meters without sacrificing rapid acceleration and precise handling. | Today, the 808 wheelset adorns the bikes of sprinters like Tyler Farrar, who used it to outkick all comers in Stage 3 of Tirreno-Adriatico. The 808 earned a slew of stage wins at the 2009 Tour de France and was spotted on Thor Hushovd's bike while he worked on his sprinting position in the wind tunnel. | Still, the 808 remains our aero workhorse for time trials and triathlons. All three of our 2009 Tour teams ran the 808 in the team time-trial, as did Normann Stadler, Andy Potts, Torbjørn Sindballe, and Ironman World Champion Craig Alexander at Kona in 2008.

Available in Tubular, Clincher, Track, MAX, PowerTap, ZEDTECH.

Specs	Clincher	Tubular
Aero Rim Width	24mm	26.54mm
Rim Depth	81.25mm	81mm
Weight	1921g	1499g

Aerodynamics – time and watt savings over 40K for 808 Wheelset: 81 seconds / 27 watts.

808

VERSATILITY ENDURES. Back in the early '90s, Zipp used to make three-spoke carbon wheels. But through wind tunnel testing, we learned that this design created unnecessary drag every time a spoke passed between the fork blades. That discovery led us to design a wheel with traditional spokes and a 58mm rim depth that has been the core of our wheel lineup ever since. | Today's 404 incorporates all the advances we've made in recent years, like fully toroidal rim profiles, the third generation of our ABLC dimples, and the 88/188 hubset. Our perennial best seller, the 404 continues to rack up impressive results, like stage wins from sprinter Thor Hushovd and rouleur Nicki Sørensen at the 2009 Tour de France, and Craig Alexander's 2008 victory in Kona. From your local criterium to l'Alpe d'Huez, the 404 is a threat to win any race on any terrain.

Available in Tubular, Clincher, Track, Cyclocross, MAX, PowerTap, 650c, ZEDTECH.

Specs	Clincher	Tubular
Aero Rim Width	22.5mm	24mm
Rim Depth	58mm	58mm
Weight	1658g	1278g

Aerodynamics – time and watt savings over 40K for 404 Wheelset: 71 seconds / 23 watts.

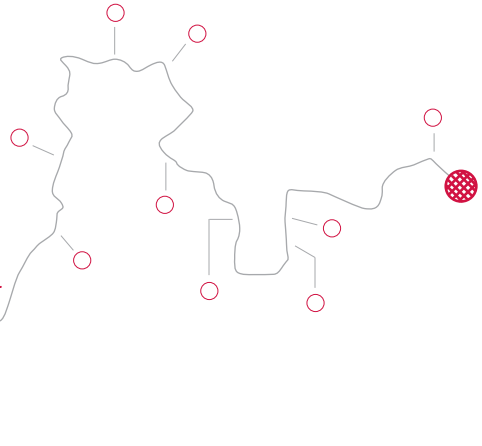
404

READY FOR ANYTHING. The newest version of the Zipp 303 tubular wheelset was engineered for the rough roads and rugged weather of the spring classics, but it's lighter than many pure climbing wheelsets. So we weren't surprised that Cervélo TestTeam's Heinrich Haussler picked 303s for the cobbles of Paris-Roubaix and then rode them to win a Tour de France mountain stage by more than 4 minutes. | Introduced in April 2009, the new 303 tubular is significantly wider and slightly deeper than its predecessor and now has the most aggressive toroidal shape in the Zipp lineup. These changes improve comfort, lateral stiffness, and durability. Making the 303 even tougher is the Carbon Bridge, technology used in all our tubular rims to disperse shock throughout the carbon laminate. Now, using a fully toroidal profile with angled brake tracks, the new 303 is 12 seconds faster over 40km. | Especially for smaller riders like Olympic champion Emma Snowsill, the 303's stability in crosswinds – combined with its lightness and aero advantages – makes it an ideal choice for draft-legal triathlons on the ITU circuit. It's equally at home on the muddiest, most rutted of cyclocross courses.

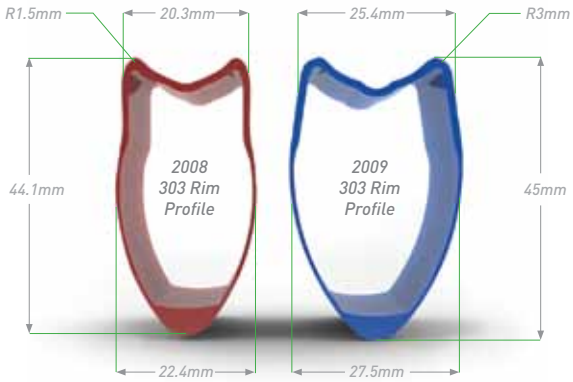
Available in Tubular, Clincher, Cyclocross, PowerTap, ZEDTECH.

Specs	Clincher	Tubular
Aero Rim Width	21.5mm	27.5mm
Rim Depth	44.15mm	45mm
Weight	1623g	1171g

Aerodynamics – time and watt savings over 40K for 303 Wheelset: 60 seconds / 20 watts.



ROUBAIX



303

A WELL-ROUNDED SPECIALIST. Frank and Andy Schleck's 1-3 finish at Le Grand-Bornand was a confirmation of their extraordinary climbing abilities. But that result was also the product of smart riding over the first 16 stages of the 2009 Tour de France. Like Frank and Andy, the 202 is more than a climber. Despite weighing only 1,095 grams, the 202 is a versatile racing wheelset that just happens to climb like a mountain goat. | To get to the base of the climb, the 202's 32mm toroidal profile rolls on the flats as efficiently as many 45-50mm rims. After the summit, the 202's high lateral stiffness delivers precise handling on tricky descents and crisp accelerations to finish off the competition. | Away from the high mountains, Zipp triathlete Jan Frodeno won an Olympic gold medal on the 202. Proving its durability, the 202 became the first carbon wheel to finish Paris-Roubaix when Garmin-Slipstream's Martin Maaskant rode it to a 4th place finish in 2008. Then again, the 202 also helped Carlos Sastre's attack on l'Alpe d'Huez win the 2008 Tour. It is, after all, a climbing wheelset.

Available in Tubular, PowerTap, ZEDTECH.

Specs	Tubular
Aero Rim Width	23mm
Rim Depth	32mm
Weight	1095g

Aerodynamics – time and watt savings over 40K for 202 Wheelset: 42 seconds / 14 watts.

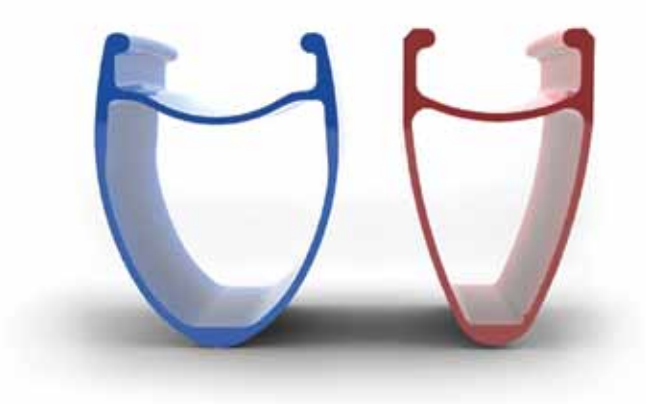
202

A LEAP FORWARD IN ALUMINUM. Incorporating all that we've learned in 21 years of working with carbon fiber, the 101 is the first aluminum wheelset to utilize Zipp's cutting-edge aero technologies. Featuring the world's only fully toroidal aluminum rim in a 6000-series high-strength alloy, the 101 actually has more in common with Zipp's carbon wheels than it does with any other aluminum wheel that's ever been made. | Like our carbon wheels, the 101 is a product of Zipp's rigorous wind tunnel development process. Like our carbon wheels, it outperforms even deeper-section models from the competition. Like our carbon wheels, the 101 is hand-built at our facility in Speedway, Indiana. | Designed for racing and everyday training, the 101 balances performance and reliability. Its 30mm profile is deep enough to take advantage of Zipp's aero technologies while holding the complete wheelset's weight to just 1,484 grams. Because its 24.5mm-wide toroidal shape is narrower at the brake track than in the middle of the rim, the 101 can be used safely with 21mm and 23mm race tires – unlike non-toroidal rims of similar widths. The wide stance also resists pinch flatting, improves lateral stiffness, and provides a stable platform for precise handling on rough surfaces. | The 101 features Zipp's 88 front and 188 rear hubs with an 18/20 spoke count.

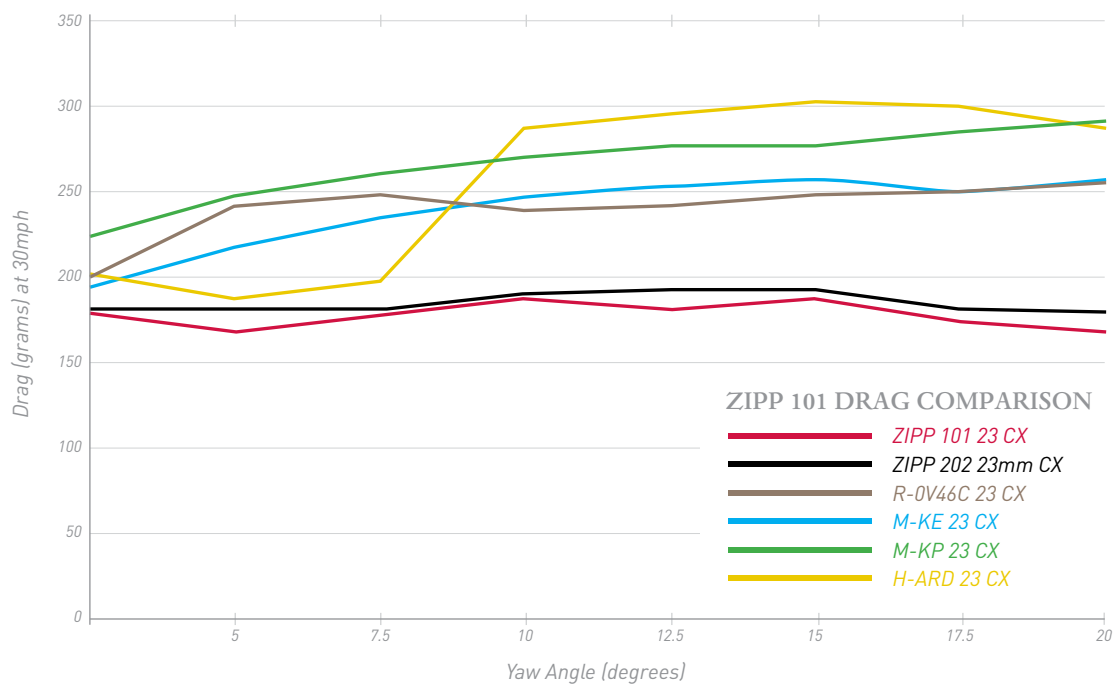
Available in Clincher, PowerTap (2010).

Specs	*Clincher*
Aero Rim Width	*24.5mm*
Rim Depth	*30mm*
Weight	*1484g*

Aerodynamics – time and watt savings over 40K for 101 Wheelset: 42 Seconds / 14 watts.



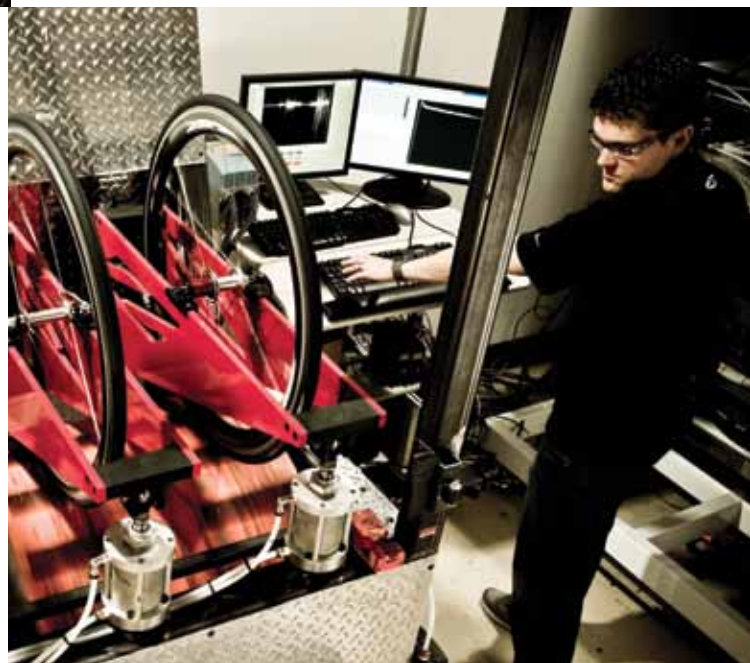
ZIPP 101 rim *Standard 30mm rim*



ZIPP
SUPERBOWFRONT

OUR GOAL IS FAILURE. In the Zipp test lab, everything breaks. If we run the machines long enough, every product will eventually fail. That's when things start to get interesting. | For us, the goal of testing is not simply to confirm that our products pass government and UCI regulations, or even our own, tougher internal standards. The more important purpose is to make stronger, more durable products by learning when, how and why failures occur. To do so, we employ an array of custom devices to deliver abuse that far exceeds normal usage. Once a test reaches the product's breaking point – usually after several days of nonstop torture – our engineers can address the problem and improve the design. | The key to this feedback loop is that Zipp's design, manufacturing, and testing all happen under one roof in Speedway, Indiana. If our engineers want to tweak a carbon layup or try a new material, we can have a prototype up and running in the test rig within hours. This ability to iterate more quickly and with more flexibility than other companies allows Zipp to try a greater number of potential designs before a final version gets the green light.

Before we deemed it ready for the Spring Classics, the new 303 wheelset had to survive a simulation in the test lab of a 300-lb rider slamming across the cobbled sections of more than 30 Paris-Roubaixs.



ZIPP
SPEED WEAPONRY
ZIPP

ZEDTECH

Riders who devote themselves to the bike want their equipment to reflect that commitment. That's why custom colors and graphics – like Fabian Cancellara's yellow jersey machine on page 3 – have become so popular in the peloton. But dedication to the sport is not exclusive to the pros, and neither is self-expression. With this in mind, Zipp's elite ZEDTECH program gives you 5 color options for spoke nipples, 6 each for hub end covers and nuts, and an unlimited range of Pantone® colors for your decals. | But ZEDTECH isn't just about looking fast. Our exclusive dimpled aero hubs and grade 2 silicon nitride ceramic bearings come standard with all ZEDTECH wheels and save 3 watts over Zipp's already impressive standard hubs and steel bearings. The optional SL carbon laminate sheds a few grams for the climbers, while the SS option gives the sprinters an extra bit of stiffness. In both aesthetics and performance, ZEDTECH is the ultimate personalization of the ultimate wheelset. Create yours at zipp.com/ZEDTECH.

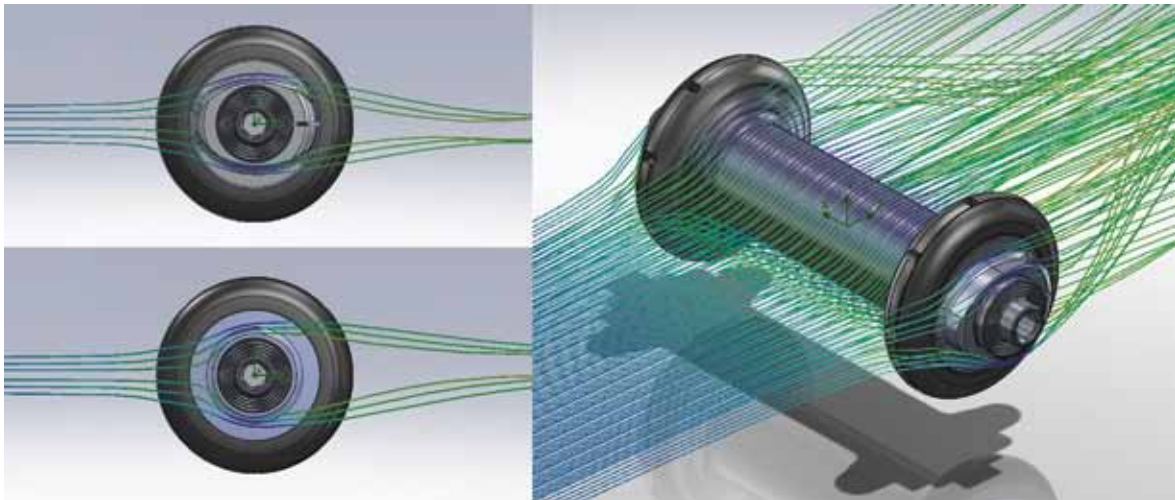
ADVANCED TECHNOLOGY GROUP

UNCOMPROMISING ACCURACY. In most applications, a tolerance of 25 millionths of an inch – standard for high-end hub bearings – is impossibly precise. But we saw it as an unnecessary source of friction that siphons power and reduces durability. Working with our Swiss supplier, we improved the tolerance of our standard steel bearings to 10 millionths of an inch, rounder than many ceramic upgrades. Meanwhile, the grade 2 silicon nitride balls specified in our ceramic bearings vary by less than 2 millionths of an inch. On an 8% grade, the reduced friction equates to removing 340 grams from your bike compared to typical bearings. | Created in partnership with a local supplier of high-precision medical devices, Zipp hubs epitomize our dedication to tight tolerances and high performance. The alloy used in the hub shell was developed exclusively for this purpose. The machining process for the hub internals is used nowhere else in cycling. The geometry of the hub flanges varies among wheelsets to match the rim depth. Spoke holes are formed by a proprietary forging process. With these features, Zipp hubs are possibly the most precise components ever produced by the bike industry.

Typical hub internals are subject to warping caused by the heat-treating process used to harden the pawls and ratchets after traditional machining. To maintain the high precision of Zipp hubs, we use Electrical Discharge Machining, a specialized process that cuts with an extremely thin high-voltage wire submerged in water. With this technique, we can machine 50% harder materials at tolerances 20 times greater than those allowed by traditional machining and heat-treating. The use of EDM means that Zipp freehubs engage more securely than any others in the industry.

Zipp has partnered with Alcoa, the world's leading aluminum supplier, to develop a proprietary alloy called Z310.9. Used exclusively in our hub shells (above), this material offers nearly twice the strength of 6061 aluminum and enables our unique Spoke Hole Impact Forming Technology. Without removing any material from the hub flange, SHIFT improves the grain structure and hardens the alloy around the spoke hole. This dramatically reduces the chance of cracking around the spoke hole, which is the most common mode of hub failure. In short, Z310.9 is the foundation of a lighter, stronger, more durable hub.

A larger-diameter axle results in a much stiffer hub but usually carries a slight aero-penalty. That's why Zipp uses an aero profiled KammNut (top) that creates significantly less drag than a round nut of the same diameter (below). The KammNut design allows Zipp 88 and 188 hubs to use a 17mm axle that's 490% stiffer than a 10mm axle but creates no additional drag.



88-188

DETAILS ARE EVERYTHING. Developing the Zipp 88 front and 188 rear hubs used on all Zipp wheels was one of the most significant undertakings in our history. The result is a set of features and a level of performance found nowhere else in the cycling industry. | Due to the force generated by modern quick-release skewers, we designed the 88 and 188 with the option to adjust bearing preload after clamping the skewer. The aero nuts used to set the preload can then be rotated for an extra bit of speed. The 88 and 188 feature contact seals that are effectively watertight when in place but can be removed to save roughly 1 watt. | Named for their weight in grams, the 88 and 188 weigh just 276g per pair. But an oversized 17mm axle provides ample stiffness, and our proprietary Z310.9 alloy makes them amazingly durable. The hubs include grade 10 Swiss steel bearings with ABEC5 races and are produced just down the road from our headquarters in Speedway, Indiana.

88 hub available in 16, 18, and 24. 188 hub available in 20 and 24.

TRACK

FUNCTION OVER FORM. Believe it or not, fixed gears aren't just for the fashionable; there are still some real track racers out there. For them, we offer what's probably the stiffest, strongest bicycle hub ever created. | Zipp track hubs feature 60mm hole circle diameters nearly 30% larger than traditional track hubs. Using the same Z310.9 alloy and SHIFT technology used in our 88 and 188 road hubs, our track hub flanges are practically impervious to cracking around the spoke holes with any spoke tension or lacing pattern. | Solid 15mm stainless steel axles are perfectly matched to tightly toleranced track nuts with floating washers for maximum grip. Zipp track hubs roll on our ultra-precise Swiss steel bearings, and we've removed the contact seals to further reduce friction. Fractions of a second count more in track racing than in any other discipline, and we've engineered hubs that can make the difference.

Track front hub available in 20 and 28. Track rear hub available in 24 and 28.

KNOWLEDGE IS PERFORMANCE. Even experienced professionals can hit out too hard on the bike leg or crack halfway up the final climb. But measuring power output is the most precise way to monitor your efforts in competition, which is why we've been sending more and more PowerTap race wheels to our top pro cyclists and triathletes. | In return, they've delivered results like Jordan Rapp's top bike split at Wildflower 2009, where he used real-time data from his Zipp 900 clincher disc with a PowerTap hub to avoid going too hard, too early. At the Tour de France, Garmin-Slipstream's ongoing analysis of PowerTap data helped the team put Bradley Wiggins and Christian Vande Velde in the Top 10. | Training with power, you improve performance while learning exactly where your limits are. Racing with power, you put that knowledge to work when it matters most.

Available in 101 (2010), 202, 303, 404, 808, 900, Sub-9, and Super-9.

POWERTAP

THE TIME HAS COME. Tire aerodynamics haven't received the attention they deserve. After all, your tires have the highest velocity of any part of your bike, and the front tire is your machine's leading edge. But Zipp has always recognized the tire's aero importance, and our Tangente tire is the first to be developed in the wind tunnel. | The 21mm version of Tangente employs our patented ABLC dimples to save up to 9 seconds over 40km compared to a traditional "file" tread pattern. No other 23mm tire can touch the Tangente at that width, even when paired with a fully toroidal Zipp rim. Created in partnership with Vittoria, the Tangente's unique rubber compound and 290tpi casing offer world-class cornering and comfort. | It's no surprise that more and more riders are seeing the benefits of aero tires. Nor is it a surprise that World Champion triathletes like Andy Potts and Michellie Jones are winning marquee races on the Zipp Tangente.

Available in 21mm and 23mm widths in both tubular and clincher versions.
Zipp Tangente tires can be purchased at your local bike shop or store.zipp.com.

TIRES

ZIPP
TANGENTE
700x23mm PRESS. 7-10 BAR
CORESPUN® 290 TPI CASING
able

BARS & STEMS

When the sun beats down and the wind kicks up, you're on your own. Hour after hour, you get out of the saddle to punch over a rise and settle back onto the aero bars as you drop down the other side. If you're out of sync with your equipment, your performance suffers. But when your bike and body work as one, you quickly find a rhythm and the miles fly by. | With this in mind, we've designed Zipp's bars and stems to deliver superior ergonomics without sacrificing weight, strength, or aerodynamics. With 32 shapes and sizes of drop bars and unrivaled adjustability in our aero bars, there's no reason to look anywhere else for the perfect fit.

Max Longree puts the VukaBull and VukaClip to work on the Queen K.

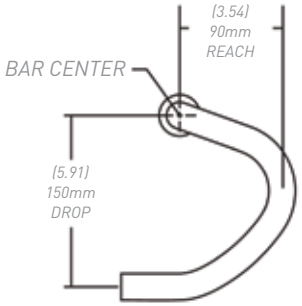
2 HANDS. 32 CHOICES. Your hands are unique, and they're constantly active when you're on the bike – shifting, braking, cornering, and sprinting. So they deserve better than a "one-shape-fits-all" bar. To match the hands of every rider, Zipp's range of drop bars includes 32 shapes and widths across three models, each designed for a different riding style.

SLC2. The stiffest and toughest bar in our line, the SLC2 is ready to withstand serious abuse. Sprinters love it; World Championships medalist Katie Compton used it throughout the 2008-09 cyclocross season; and it's approved for aero extensions like the VukaClip. Stout as it is, the SLC2 weighs less than 200 grams.

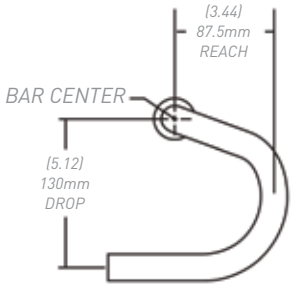
ContourSL. A departure from the classic lines of the SL and SLC2, the ContourSL offers aerodynamic design and modern ergonomics. Its airfoil top section shields cables from the wind and gives your hands a stable platform. Ovalized drops help make the 190-gram ContourSL the most comfortable bar in the Zipp range.

SL. The SL is a minimalist bar for climbers and smaller riders. Stripped down to just 170 grams, it floats up the climbs without sacrificing a solid feel when cornering and accelerating. Despite its featherlike qualities, the SL still passes EFBe Laboratory's toughest standards.

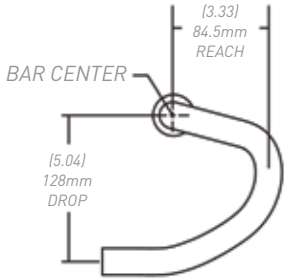
SLC2 available in 40, 42, 44, 46cm widths (outside-to-outside) in Ergo Bend, Traditional Bend, and Short & Shallow.
ContourSL available in 40, 42, 44, 46cm widths (outside-to-outside) in Traditional Bend and Short & Shallow.
SL available in 40, 42, 44, 46cm widths (outside-to-outside) in Ergo Bend, Traditional Bend, and Short & Shallow.
Quoted weights are for Short & Shallow bend in 42cm width.



Ergo Bend



Traditional Round



Short & Shallow

DROP BARS

FIND YOUR BALANCE. In the constant struggle against your physical and mental limits, you need to find the ideal setup for your most important piece of equipment: you. But the fastest position that balances aerodynamics, power output, and comfort can be elusive. That's why Zipp created the VukaAero, a full-carbon combination of speed, ergonomics, and adjustability. | To fine-tune your fit, the VukaAero is the only integrated aero bar that allows 4 axes of extension adjustment. The armrests can be spaced at 3 standard widths or a multitude of positions with the optional wings. Integrated brake levers mimic the position, shape, and even the grippy texture of standard brake hoods. | The VukaAero does away entirely with the drag-inducing clamps and bolts that protrude from other fully adjustable aero bars. Internal compression sleeves secure each extension with a single hollow bolt that's also the point of exit for the internally routed shifter cable. | With a base bar designed for out-of-the-saddle stiffness and predictable handling, the VukaAero is the first integrated aero bar to pass EFBe's toughest fatigue tests. It measures 42cm (0-0), weighs 860 grams, and includes our chicane extensions. Straight, ski-tip, and VukaShift (chicane) extensions are also available.

RZR SHIFTER. Tested in Kona and used at the Tour de France, the RZR is Zipp's first-ever shifting product. Once you position the lever at the angle most comfortable for you, the RZR's return-to-center actuation keeps every shift at your fingertips. The RZR is also the first plug-in shifter to incorporate an aerodynamic profile that saves up to 6 seconds over 40km compared to a flat lever. It is SRAM and Shimano compatible, and optimized for plug-in or VukaShift extensions. 180 grams per set.

VUKASHIFT. Instead of bolting the shifter onto an assembly that plugs into the aero extension, why not just bolt the shifter onto the extension itself? That's the simple idea behind the VukaShift. This design saves up to 80 grams by eliminating the use of expansion bolts inside the extensions. By moving the shift levers 30mm closer to your hands, the VukaShift eases wrist strain and keeps your hands in the fastest aero position as you shift into the 11. The VukaShift extensions use our chicane shape and weigh 120 grams per pair. They are compatible with SRAM, Shimano, and the new Zipp RZR shifter.

VUKAAERO

GRAB IT BY THE HORNS. An aero position puts your body farther forward than a standard road position does and can place extra stress on your base bar. We had this in mind when designing the VukaBull, a 195g (42cm o-o) base bar that outperforms all comers in stiffness and durability testing. | Like all Zipp bars, the VukaBull blends aerodynamics, adjustability, and ergonomics into one sleek package. It can be rotated as much as +/- 5 degrees without scrubbing any speed, and the contoured handgrips serve to reduce turbulence at the ends of the bar. The VukaBull also complies with the UCI 3:1 rule for aero equipment. Internal cable routing; 31.8mm clamp diameter.

VUKACLIP. Using the VukaAero's compression sleeve system without any external clamps or bolts, the VukaClip allows for nearly unlimited adjustment of the extensions and 42 positions for the EVA foam elbow rests. This aluminum clip-on with internal cable routing is designed for compatibility with the VukaBull, the Zipp SLC2 drop bar, or any other approved bar with a 31.8mm clamp diameter. It's also budget-compatible for most time trialists and triathletes. | The VukaClip is sold without aero extensions; users can choose from the chicane, straight, ski-tip, or VukaShift (chicane) models. Weight is 390g for the VukaClip and approximately 100g for extensions.

VUKABRAKE. Designed to complement the VukaBull, these plug-in brake levers feature internal cable routing and an aero profile derived from wind tunnel testing with the VukaAero. The VukaBrake also offers top-notch ergonomics with its comfortably rounded "brake hood" shape. The stout carbon lever blades include a return spring for snappy performance. 110g per pair.

VUKA EXTENSIONS. To help every rider find their fit, we've created three different all-carbon extensions for the VukaAero and VukaClip. Straight extensions will get you as low as humanly possible. Chicanes are ideal for midrange speed and share their S-bend shape with the VukaShift. Ski Tips offer long-haul comfort. All Vuka extensions allow for internal cable routing. They can be shortened by almost 100mm from their standard 335mm length. 100g per pair.

VUKABULL

SINGLE-MINDED. The SL145 was not easy to design, and it's not easy to produce. Creating the stiffest, strongest all-carbon stem available – as verified by EFBe Laboratory – requires 50 sections of hand-wrapped carbon cloth, titanium bolts sourced from Italy, and a stainless steel insert within the aluminum faceplate. | But the result is worth it, especially when your body weight is resting on the aero bars. The SL145 is a rock-solid connection from bars to bike that weighs just 135g (100mm). It's also a perfect example of the tenacity that our engineers display when faced with a challenge.

Available in 100-130mm lengths; +/- 12.5° angle; 31.8mm clamp diameter.

SL145

CRANKS

There's a defense-critical bonding technology used in our cranksets that can legally leave the U.S. only as part of a finished product and requires a security clearance just to visit our supplier. Going to such great lengths to produce our cranks, it would be hard for us to offer more than two models. Fortunately, the VumaQuad is the stiffest super-light crankset in the world, and the VumaChrono is the most aerodynamic. Take your pick.

CEECO
ZIPP
OVAL
DURA-ACE

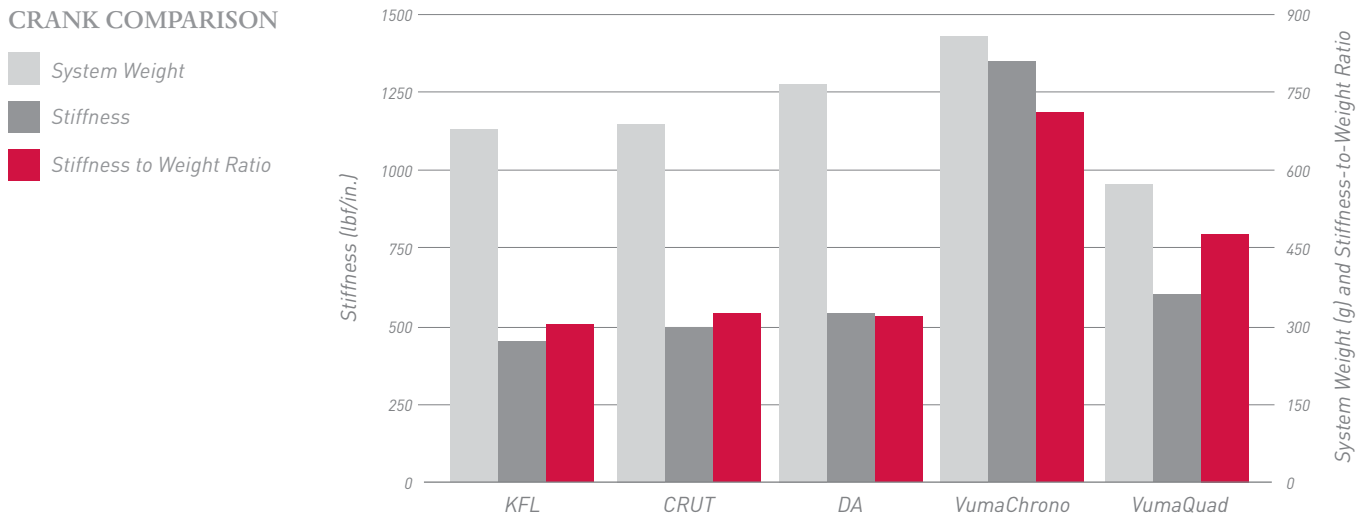
GO ALL OUT. With so much on the line at Kona, what could convince top pro triathletes to use any equipment that they haven't raced on before? For Belinda Granger, Jo Lawn, and T.J. Tollakson, the answer was 9 seconds over 40 kilometers. Zipp's VumaChrono is simply that much faster than other aero cranksets. Compared to traditional cranksets, the savings can exceed 25 seconds. | To create its distinctive monocoque dome and airfoil arms, manufacturing each VumaChrono requires over 100 steps and takes an experienced worker almost half a day. The breakthrough shape and a massive 30mm aluminum spindle make the VumaChrono the stiffest crankset we've ever tested while keeping its assembled weight to just 860g, including the bottom bracket (172.5mm, 53/39). Without the constraint of a chainring spider, this design gives riders the option of a single or double chainring setup and a choice of three interchangeable chainring combinations. | The VumaChrono has an ultra-narrow 146mm Q-factor. It includes a bottom bracket with our grade 3 ceramic bearings, along with an installation tool made by Pedro's®. A spacer kit is available for compatibility with the BB30 bottom bracket standard.

Available in six lengths from 167.5-180mm with 53/39, 54/42, or 55/42 chainrings.

VUMACHRONO

THE RUGGED LIGHTWEIGHT. Weighing as little as 580 grams, it's the lightest crankset and bottom bracket system ever to pass the rigorous CEN testing protocol for racing bikes. But the true brilliance of the VumaQuad is that Zipp's engineers were able to achieve that benchmark with a design that's also stiffer than any other crankset we've tested, except for our own VumaChrono. | The heart of the VumaQuad is its unique 4-bolt chainring system that allows you to switch between standard and compact chainrings. For stiffness and simplicity, three bolts thread directly into the small chainring, while the fourth is integrated into the crankarm. The chainrings themselves are designed to shift flawlessly without flexing, even when you're sprinting out of the saddle. The VumaQuad's 146mm Q-factor is the narrowest available and its 30mm spindle is the largest and stiffest ever used in a traditional bottom bracket. | The VumaQuad system includes our bottom bracket with impeccably smooth grade 3 silicon nitride ceramic bearings and a purpose-designed installation tool made by Pedro's.The VumaQuad is now compatible with BB30 bottom brackets when used with the optional spacer kit.

Available in four lengths from 170-180mm with 53/39 or 50/34 chainrings.



VUMAQUAD

MAKE NO COMPROMISES. Even for the little things, there's always a way to engineer improved performance. Take, for example, the new Zipp Tangente High Performance Cork Brake Pad. To outperform all other carbon-specific pads in all conditions, Zipp sourced a unique composite of cork in a synthetic polymer binder. CNC-machined from this material, the Tangente pad offers superb stopping power, durability, and heat resistance with the smooth feel of natural cork. | From small parts to disc wheels, every product that bears the Zipp name has been designed and manufactured to the most exacting standards. In addition to the products you see here, we've applied this attention to detail to our track nuts, cassette bodies, axle conversion kits, and more. All Zipp tires, accessories, and small parts are available for purchase at store.zipp.com.

Thermally conductive Carbon/Carbon Brake Blocks can be used with aluminum or carbon rims. Tangente High Performance Cork Brake Pads offer the ultimate stopping performance for carbon rims only. Available for SRAM, Shimano, and Campagnolo.

A precisely machined alloy Disc Valve Adapter is a must for hassle-free inflation of your Super-9, Sub-9, or 900 disc tires. Includes Zipp decal to cover the valve hole after airing up.

For the most secure tire-rim interface, Zipp clinchers are sized near the maximum diameter under ISO standards for 700c and 650c rims. Ultra-thin Zipp Rim Tape makes changing tight-fitting tires quicker and easier. 700c or 650c.

Zipp Handle Bar Tape uses a synthetic cork material for comfort and a secure grip. Embossed with the Zipp logo and adorned with carbon fiber end plugs. Your choice of red, white, or black.

With an oversized cam and extra-long levers, Zipp's Ti Quick Release skewer clamps with serious force, but weigh just 85g per pair with a titanium shaft. Stainless steel shaft (silver levers) also available.

The perfectly parallel edges of Zipp Carbon Headset Spacers avoid the loosening and potential component damage caused by imprecise spacers. 4, 8, 12, and 30mm lengths for 1-1/8" steerer tubes.

Achieve leak-free inflation with Zipp Valve Extensions. A 3mm hex-key opening ensures a perfect seal when tightened, and a ridged section keeps the pump head from slipping. 5 lengths to fit all Zipp rims.

Zipp's exclusive Carbon Fiber Bottle Cage lets you focus on your riding, not the security of your beverage. Sturdy design withstands years of abuse at just 21 grams. Now available in black, white, red, and silver.

LOOK GOOD. GO FAST. In both form and function, Zipp soft goods have been upgraded for 2010. You'll quickly notice that all items now reflect our stealthy black, white/silver color scheme. But the subtle changes – like expanding the gear bag's helmet pouch to fit aero lids – are no less significant. Across the entire line, we've made sure that every design and material used in our soft goods meets the same high standards that we've set for the world's fastest wheels and components. | The full range of Zipp soft goods is available at store.zipp.com and includes cycling and triathlon kits, socks, T-shirts, and more. Be sure to check out the shop apron designed by Zipp master wheel builder Nic James to benefit World Bicycle Relief.

On the run leg or the podium, proudly display your loyalty to the world's fastest wheels. Black Crew Hat and white Zipp Visor are made by Headsweats®.

The Zipp Wheel Bag uses high-density foam and a ballistic nylon cover to protect speed weaponry in transit. Holds two wheels plus accessory pockets.

It's more than a Zipp logo on someone else's design. Our unique Speed Box features internal padding, a lengthwise zipper, and reflective piping.

The Zipp Wool Sweater brings a modern look to a classic garment. Made to our specifications by Earth, Wind & Rider™ using 100% Australian merino.

Zipp's Gear Bag features specific pockets for your wetsuit, shoes, helmet, floor pump, and four bottles. Includes our ultra-absorbent Transition Towel.

The checkered flag pattern on Zipp Water Bottles is a reminder that you're here to win and we're here to help. Wide mouth with screw top. 21oz or 24oz.

WHEELS

		Rim Used	Weight Front (grams)	Weight Rear (grams)	Weight Set (grams)	Spoke Count Front	Spoke Count Rear	Spoke Pattern Front	Spoke Pattern Rear Non-Drive	Spoke Pattern Rear Drive	Spoke Length Front (mm)	Spoke Length Rear Non-Drive (mm)	Spoke Length Rear Drive (mm)	Track Adaptable	ABLC Dimples	Max Tire Pressure
101	Clincher	101	686	798	1484	18	20	Radial	Cross	Radial	Zipp.com	Zipp.com	Zipp.com	Front	No	125 psi
202	Tubular	255	484	611	1095	18	24	Radial	Cross	Radial	270	272	260	Front	Yes	
202	PowerTap	255	484	825	1309	18	24	Radial	2 Cross	2 Cross	270	274	270	Front	Yes	
303	Tubular	285v4	519	652	1171	18	24	Radial	Cross	Radial	258	260	246	Front	Yes	
303	Clincher	417	749	874	1623	18	24	Radial	Cross	Radial	260	262	248	Front	Yes	125 psi
303	PowerTap Tubular	285v4	519	862	1381	18	24	Radial	2 Cross	2 Cross	258	260	258	Front	Yes	
303	PowerTap Clincher	417	749	1085	1834	18	24	Radial	2 Cross	2 Cross	260	262	260	Front	Yes	125 psi
303	Cyclocross	285v4	554	652	1206	24	24	Radial	Cross	Radial	258	260	246	Front	Yes	
404	Tubular	360	582	696	1278	16	20	Radial	Cross	Radial	246	248	234	Front	Yes	
404	Clincher	505	772	886	1658	16	20	Radial	Cross	Radial	246	248	234	Front	Yes	125 psi
404	PowerTap Tubular	360	582	931	1513	16	20	Radial	2 Cross	2 Cross	246	256	254	Front	Yes	
404	PowerTap Clincher	505	772	1121	1893	16	20	Radial	2 Cross	2 Cross	246	256	254	Front	Yes	125 psi
404	MAX Tubular	360	618	713	1331	24	24	Radial	Cross	Radial	246	246	234	Front	Yes	
404	MAX Clincher	505	808	903	1711	24	24	Radial	Cross	Radial	246	246	234	Front	Yes	125 psi
404	Track Tubular	360 Track	828	902	1730	28	28	Radial	2 Cross	2 Cross	234	248	246	Yes	Yes	
404	650c Tubular	330	548	665	1213	16	20	Radial	Cross	Radial	222	226	210	Front	No	
404	650c Clincher	460	721	838	1559	16	20	Radial	Cross	Radial	222	226	210	Front	No	125 psi
404	Cyclocross	360	618	713	1331	24	24	Radial	Cross	Radial	246	246	234	Front	Yes	
808	Tubular	420	691	808	1499	16	20	Radial	Cross	Radial	222	226	210	Front	Yes	
808	Clincher	520	902	1019	1921	16	20	Radial	Cross	Radial	222	226	210	Front	Yes	125 psi
808	PowerTap Tubular	420	691	1052	1743	16	24	Radial	2 Cross	2 Cross	222	226	224	Front	Yes	
808	PowerTap Clincher	520	902	1277	2179	16	24	Radial	2 Cross	2 Cross	222	226	224	Front	Yes	125 psi
808	MAX Tubular	420	724	826	1550	24	24	Radial	Cross	Radial	222	226	210	Front	Yes	
808	MAX Clincher	520	934	1036	1970	24	24	Radial	Cross	Radial	222	226	210	Front	Yes	125 psi
808	Track Tubular	420	874	970	1844	20	24	Radial	2 Cross	2 Cross	212	228	226	Yes	Yes	
1080	Tubular	620	793	906	1699	16	20	Radial	Cross	Radial	196	198	184	Front	Yes	
1080	Clincher	720	1112	1225	2337	16	20	Radial	Cross	Radial	196	198	184	Front	Yes	125 psi
900 Disc	Tubular	N/A	N/A	936	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	
900 Disc	Tubular (Track)	N/A	N/A	989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	
900 Disc	Tubular PowerTap	N/A	N/A	1089	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	
900 Disc	Clincher	N/A	N/A	1219	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	125 psi
900 Disc	Clincher PowerTap	N/A	N/A	1369	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	125 psi
840 Disc	650c Tubular	N/A	N/A	890	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	
Sub-9 Disc	Tubular	N/A	N/A	998	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	
Sub-9 Disc	Sub-9 PowerTap	N/A	N/A	1152	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	
Super-9 Disc	Tubular	N/A	N/A	995	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	

TECH / SPEC

RIMS

	Rim Type	Wheels Utilized In	Rim Weight (grams)	Effective Rim Diameter (mm)	Aero Rim Width (mm)	Rim Depth (mm)	Hole Count	MAX/Cross/Custom Hole Counts	Carbon Bridge	M2CM	Max Tire Pressure
255	Tubular	202	307	575	23.00	32.00	18/24	20,28	Yes		
285v4	Tubular	303	344	569	27.50	45.00	18/24	20,28	Yes		
330	Tubular	404 (650c)	384	484	22.50	58.00	16/20	24	Yes		
360	Tubular	404	410	525	24.00	58.00	16/20	18,24,28	Yes		
360 Track	Tubular	404 Track	428	525	24.00	58.00	28/28		Yes		
420	Tubular	808	520	483	26.54	81.00	16/20	18,24,28	Yes		
620	Tubular	1080	622	423	27.50	108.00	16/20		Yes		
417	Clincher	303	567	567	21.50	44.15	18/24	20,28		Yes	125 psi
460	Clincher	404 (650c)	557	477	22.50	58.00	16/20	24		Yes	125 psi
505	Clincher	404	599	525	22.50	58.00	16/20	18,24,28		Yes	125 psi
520	Clincher	808	730	477	24.00	81.25	16/20	18,24,28		Yes	125 psi
720	Clincher	1080	941	423	24.20	108.00	16/20			Yes	125 psi

HUBS

	Wheels Utilized In	Weight (grams)	SRAM Compatible	Shimano Compatible	Campagnolo Compatible	Hole Counts
88	101, 202, 303, 404, 808, 1080	88				16, 18, 24
188	101, 202, 303, 404, 808, 1080	188	Yes	Yes	Yes	20, 24
Track Hub Front	404 Track and 808 Track	301				20, 28
Track Hub Rear	404 Track and 808 Track	403				24, 28
PowerTap SL+	202, 303, 404, 808	412	Yes	Yes	Yes	20, 24
PowerTap SLC+	404, 808	402	Yes	Yes	Yes	20

ZEDTECH

		Rim Used	Weight Front (grams)	Weight Rear (grams)	Weight Set (grams)	Spoke Count Front	Spoke Count Rear	Spoke Pattern Front	Spoke Pattern Rear Non-Drive	Spoke Pattern Rear Drive	Spoke Length Front (mm)	Spoke Length Rear Non-Drive (mm)	Spoke Length Rear Drive (mm)	Track Adaptable	Dimpled Hub	ABLC Dimples	Ceramic Bearing	Laminate Type	Spoke Count Customization	Nipple Colors	Nut, End Cap, Ring Colors	Standard Decal Colors	Custom Decal Colors	Max Tire Pressure
ZEDTECH 2	Tubular	255	484	611	1095	18	24	Radial	Cross	Radial	270	272	260	Front	Yes	Yes	Yes			Black, Gold, Red, Silver, Smoke	Red, Gold, Silver, Smoke, Pink, Blue	Royal Blue, White, Pink, Gold, Light Blue, Silver, Red, Black Reflective	Yes	
ZEDTECH 3	Tubular	285v4	519	652	1171	18	24	Radial	Cross	Radial	258	260	246	Front	Yes	Yes	Yes	SS or SL					Yes	
ZEDTECH 3	Clincher	417	749	874	1623	18	24	Radial	Cross	Radial	260	262	248	Front	Yes	Yes	Yes						Yes	125 psi
ZEDTECH 4	Tubular	360	582	696	1278	16	20	Radial	Cross	Radial	246	248	234	Front	Yes	Yes	Yes	SS or SL	Yes				Yes	
ZEDTECH 4	Clincher	505	772	886	1658	16	20	Radial	Cross	Radial	246	248	234	Front	Yes	Yes	Yes		Yes				Yes	125 psi
ZEDTECH 8	Tubular	420	691	808	1499	16	20	Radial	Cross	Radial	222	226	210	Front	Yes	Yes	Yes	SS or SL	Yes				Yes	
ZEDTECH 8	Clincher	520	902	1019	1921	16	20	Radial	Cross	Radial	222	226	210	Front	Yes	Yes	Yes		Yes				Yes	125 psi
ZEDTECH 10	Tubular	620	793	906	1699	16	20	Radial	Cross	Radial	196	198	184	Front	Yes	Yes	Yes						Yes	
ZEDTECH 10	Clincher	720	1112	1225	2337	16	20	Radial	Cross	Radial	196	198	184	Front	Yes	Yes	Yes						Yes	125 psi
ZEDTECH 9 Disc	Tubular	N/A	N/A	936	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes	Yes						Yes	
ZEDTECH 9 Disc	Clincher	N/A	N/A	1219	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes	Yes						Yes	125 psi
ZEDTECH Sub-9 Disc	Tubular	N/A	N/A	998	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes	Yes						Yes	
ZEDTECH Super-9 Disc	Tubular	N/A	N/A	995	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes	Yes						Yes	

CRANKS

	Lengths (mm)	Assembled Weight	BB Thread	Chainrings	Bearing Type	BCD
VumaQuad	170, 172.5, 175, 180	580g (50/34)	Italian (70), English (68)	50/34, 53/39	Ceramic	110
VumaChrono	167.5, 170, 172.5, 175, 177.5, 180	860g (53/39)	Italian (70), English (68)	53/39, 54/42, 55/42	Ceramic	Custom

TECH / SPEC

BARS

	Sizes (out-out) (cm)	Weight (SS 42 cm) (grams)	Clamp Diameter (mm)	Ergo Bend	Traditonal Bend	Short & Shallow Bend	Clip Compatible
SL	40		31.8	Yes	Yes	Yes	No
	42	170	31.8	Yes	Yes	Yes	No
	44		31.8	Yes	Yes	Yes	No
	46		31.8	Yes	Yes	Yes	No
SLC2	40		31.8	Yes	Yes	Yes	Yes
	42	190	31.8	Yes	Yes	Yes	Yes
	44		31.8	Yes	Yes	Yes	Yes
	46		31.8	Yes	Yes	Yes	Yes
ContourSL	40		31.8	No	Yes	Yes	No
	42	190	31.8	No	Yes	Yes	No
	44		31.8	No	Yes	Yes	No
	46		31.8	No	Yes	Yes	No
VukaClip		390					
VukaBull	42	195	31.8				Yes
VukaAero	42	860	31.8				Integrated
RZR		180					

STEM

	Weight (100mm)	Sizes (mm)	Clamp Diameter	Angle
SL145	135g	100, 110, 120, 130	31.8	+/- 12.5°

FOR THE AERODYNAMIC INFORMATION: Time and watt savings over 40K are calculated using a top-selling aluminum race wheel as the baseline and assuming an output of 300 watts. All numbers are calculated at a 10° relative wind angle at 30 mph with Fabian Cancellara on his Cervélo P3 pedaling at 300 watts. All tests were conducted using Team CSC Vittoria tires (Zipp Tangente tires can save an additional 3-9 seconds, or 1-3 watts). Numbers are based on rider-on-bike data – not wheel-only data. Note: If you're going slower, the total savings are greater, as you'll be riding for a longer time.

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