



COMPETITION 2001

**ZIPP**  
SPEED WEAPONRY



## ICT – Inversion Composite Technology

In early 1999 the Zipp design team formulated an entirely new ideology which would drive all of our future product line. The design parameters were clear: an all carbon structure, use of various new material technologies, drastic weight reduction, and of course: the best durability of any wheel on the market. 18 months of research into new materials and construction methods, many long days, and over 200 prototype wheels ridden tens of thousands of abusive test miles by Zipp pros and test riders, have allowed us to finally achieve: ICT. The result is the lightest and strongest series of rims and wheels ever produced. Period.



The basic construction of Zipp 2001 rims relies on the world's first and only continuous banding of unbroken radial fibers, and only Zipp has figured out how to do it. This radial monocoque forms the structural "core" of the wheel, and is responsible for not only an increase in stiffness, but also affords a significant increase in strength over any wheel we have ever tested. These purely radial fibers form the basis for our highly directional fiber system, which orients fibers in key directions relative to the radial layer of fiber. In fact, the fiber orientation is so specific, that woven fabric is used exclusively in areas subject to bearing loads such as the spoke nipple seat. This woven fiber combats high stress due to rim drilling and significantly increases toughness and durability with no weight penalty. What this means to you is precise fiber orientation: exactly how it needs to be exactly where it needs to be. So exact in fact, that no less than five different materials are employed to pinpoint specific structural needs throughout a single rim.

**The NEW 303 Mid-v Composite tubular** This is the wheelset you have been waiting for. Lightning fast acceleration with the lightest production mid-v rim on the planet, our exclusive ICT process makes it possible. Of course, lightweight is nothing without strength, so the rim is more than double the lateral and vertical stiffness of rims weighing over 50% more. It also features our new Silica-Ceramic braking surface for superior dry and wet weather performance.

The 303 wheelset is designed for maximal aerodynamic performance in a mid-v rim while reducing the effects of crosswinds. The stainless steel, drawn oval spokes used in all ZIPP wheels are the best shape for all wind angles. They provide great aerodynamics, stiffness and strength. And because true aerodynamic performance isn't always about going in a straight line the wheel attacks corners with razor edge precision thanks to the unique shape. We do this by minimizing the pressure differential from one side of the rim to the other. The 303 can heel over into and out of the corners like no other aerodynamic wheelset. The 303 is fast, light, stiff, handles great and accelerates like a rocket. It is ideal for road racing and criteriums.

Multisport athletes looking for a great wheel for draft legal or technical courses under exceptionally windy or hilly conditions will love the performance of the 303. Mix with a model 404 rear if you like. The 26" size is ideal for riders of smaller stature and weight who find deeper rims difficult to control under exceptionally windy conditions.

The 303's feature our light and dependable 282 rear and 102 front hubs with the highest quality European bearings. The only slow thing about the 303 is the way we build them, one at a time, individually crafted by hand just for you.



- Total average wheelset weight: 1066g 26" / 1209g 700c
- Average rim weight: 280g 700c / 245g 26"
- ICT Carbon/graphite composite rim construction with Silica Ceramic braking surface
- Spoke Count: 20 frt./28rear 700c / 16 frt./20 rear 26" 38mm deep
- Stainless Steel drawn ovalized spokes w/ anodized alloy nipples
- ZIPP 282 rear hub/256g and ZIPP 102 frt. hub/102g
- Available in Shimano 8/9 and Campagnolo 9/10 compatibility



Aluminum valve extensions are available for both depths of Zipp rims.





**303 clincher** Aluminum wheels from ZIPP? Yes, the 303 clincher wheels feature a light, strong, 30mm deep aluminum rim. And because it's from ZIPP, you know we have done something a little special. The rim is heat-treated, hard anodized, and has a precision machined braking surface. It is also 40g lighter than almost any other 30mm deep alloy rim available. We then hand build this rim into a great wheel set using our proprietary 282 rear and 102 front hubs with ovalized stainless steel spokes and alloy nipples. Perfect for a strong everyday training wheelset or for the rider who wants to race and train on the same wheel. The 303 alloy clincher excels as a training, century or road racing wheel set. Enjoy.

- Total average wheel set weight: 1534g 26" / 1693g 700c
- Average rim weight: 525g 700c / 479g 26"
- All alloy heat treated, hard anodized rim w/ machined braking surface
- Spoke Count: 20 frt./28 rear 700c / 20 frt./24 rear 26" 30mm deep
- Stainless Steel drawn ovalized spokes w/ anodized alloy nipples
- ZIPP 282 rear hub/256g and ZIPP 102 frt. hub/102g
- Available in Shimano 8/9 and Campagnolo 9/10 compatibility



### Rims are available individually so that you can build your own custom wheelset.

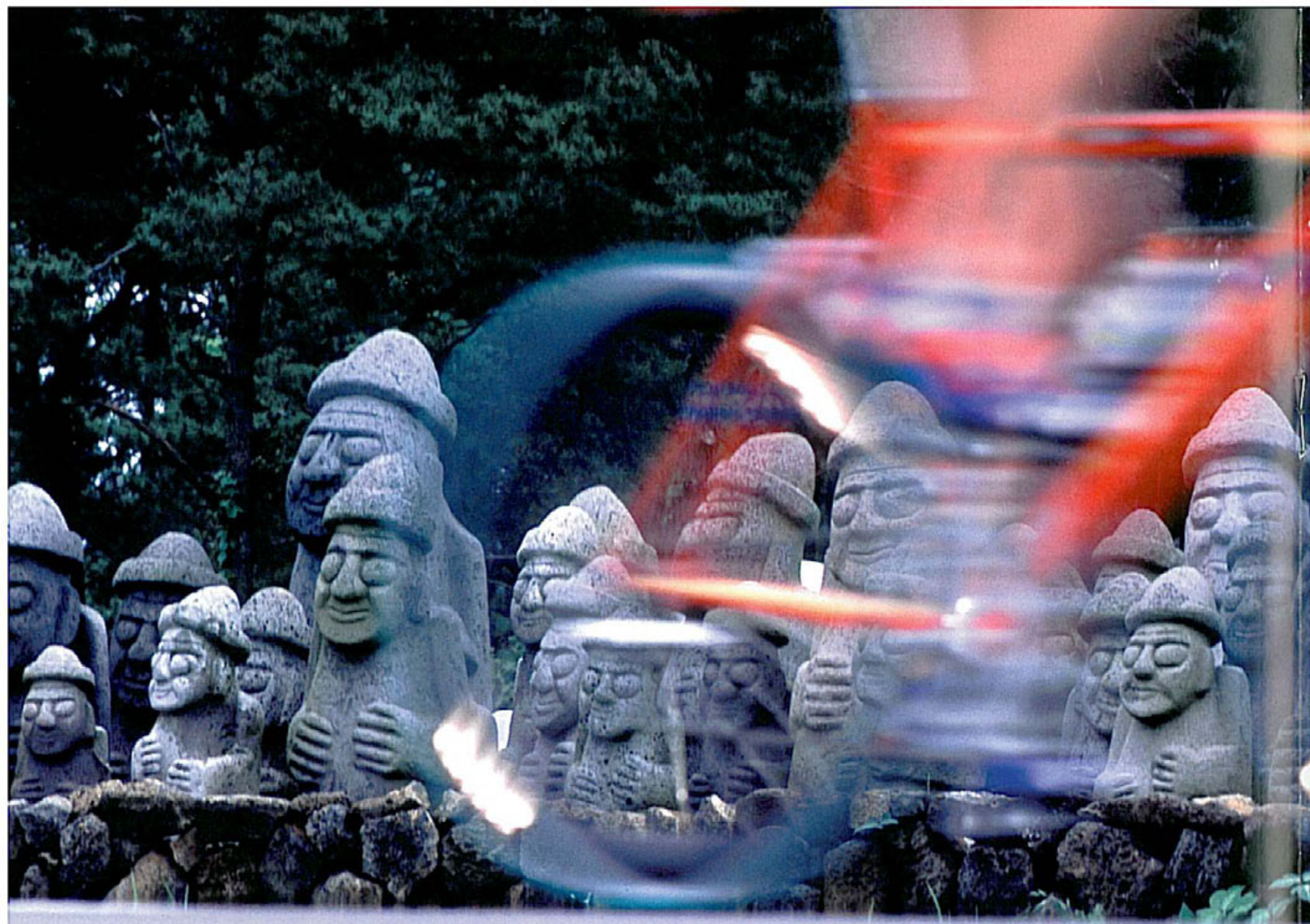
**Zipp 245 and 280 rims** These 38mm deep carbon tubular rims are the lightest rims that Zipp manufactures and truly maximize the ICT technology, affording you the opportunity to have a custom wheelset built incorporating some of the lightest carbon rims available. These are all round performers and are built to deliver high speed predictable handling no matter which road you select to ride on.

- Zipp 280, 700c rims weigh 285g, available in 16, 18, 20, 24, 28, and 32 holes
- Zipp 245, 26" rims weigh 245g, available in 16, 18, 20, 24, and 28 holes

**Zipp 310 and 340 rims** These are black anodized, 30mm deep aluminum rims with a machined braking surface and build up into a great all round wheelset. • Zipp 340, 700c rims weigh 525g, available in 20 and 28 holes

- Zipp 310, 26" rims weigh 479g, available in 20 and 24 holes.





**The New 404 Deep composite tubular** The NEW 404 composite tubular updates the classic ZIPP wheel ridden to hundreds of World and National championships, dozens of Olympic medals and thousands of individual victories large and small. Riders have depended on predecessors of this wheel for superb aerodynamics, great handling and durability. Now it's been made even better for 2001 through our exclusive ICT manufacturing process. Long a favorite with discerning amateurs and professional riders, including the Belgium based, UCI ranked squad of Team Lotto, the 404 and it's predecessors have been ridden to hundreds of Professional, Amateur and Masters victories world wide.

TT and road specialists will appreciate the superb performance of the 404. This is our most aerodynamic road racing wheelset. It is ideal for time trials; long solo breaks or any application where quickness and ultimate sustainable top end speed are paramount.

The New 404 tubular wheelset is roughly a half-pound lighter than last season. This dramatic reduction in weight comes from where it counts...the rims. We have not cut corners on any of the components. Amazingly, the rims average 7% stiffer than last season (more than double the lateral stiffness of a conventional rim) while weight at the outer edge is up to 75% less than that of traditional rims. This combination of low edge mass and high stiffness results in a ride quality and quickness that has to be experienced. It's quick. It's fast at speed and handles like a dream through the corners. You have to slow down sometime, so the 404 features our new Silica-Ceramic braking surface for responsive deceleration wet or dry.

Light weight alone does not make a fast wheel. The key to total performance lies in a keen understanding and application of aerodynamics. Thousands of hours of research coupled with thousands of road miles and a fanatic attention to detail have gone into today's 404. You don't ride in a wind tunnel (unless you are really strange) so our wheels are designed for the real world.



- Total average wheel set weight: 1225g 26" / 1348g 700c
- Average rim weight: 370g 700c / 340g 26"
- ICT Carbon/graphite composite rim construction w/ Silica Ceramic braking surface
- Spoke Count: 18 ft./24 rear 700c / 16 ft. 20 rear 26"
- 58mm deep
- Stainless Steel drawn ovalized spokes w/ anodized alloy nipples
- ZIPP 282 rear hub/256g and ZIPP 102 ft. hub/102g
- Available in Shimano 8/9 and Campagnolo 9/10 compatibility

## All New 404 Track Specific wheelset

We understand the subtle and important nuances of track competition and have developed a rim with a very specific laminate ONLY for track and velodrome competition. Track competitors are looking for lateral stiffness and wheels with a predictable, quick reaction. To accomplish this we have re-invented our laminate structure to create the personality a track rider needs in a wheel. Laced into straight pull custom built Zipp track hubs with sealed bearings and threaded axles, this wheelset rocks!



**ZIPP ICT INVERSION COMPOSITE TECHNOLOGY**

**404 Composite-Alloy Clincher** You have to love the convenience of today's clincher technology. Now, with Zipp's NEW 404 clinchers, you can love the performance even more. The NEW 404 clincher is great for those looking for the highest aerodynamic performance in a clincher race wheel, who want to train and race on the same wheel, for high-end fitness riders, Roadies and Triathletes alike.

Our exclusive ICT manufacturing process ensures a light, fully structural carbon composite element that is both incredibly stiff laterally, yet compliant and comfortable vertically. The aerospace spec. carbon fiber rim is individually hand crafted; there are no shortcuts in this time consuming, exacting process. What you get is the result of hours of meticulous hand labor. The alloy braking element holds the clincher securely and is less than half the outer rim mass of conventional rims. Now you can have the aerodynamic benefits of Zipp's multi-patented wind cheating technology with the convenience of a clincher. All this at a weight that rivals or beats the best of the small section conventional alloy wheels available. Weight distribution of the 404 clincher is biased inward, as a result this wheel accelerates and climbs great!



- Total average wheel set weight: 1465g 26" / 1609g 700c
- Average rim weight: 505g 700c / 460g 650c
- ICT Carbon/graphite composite rim w/ heat treated alloy braking surface
- Spoke Count: 18 frt./24 rear 700c / 16 frt. 20 rear 26"
- 58mm deep
- Stainless Steel drawn ovalized spokes w/ anodized alloy nipples
- ZIPP 282 rear hub/256g and ZIPP 102 frt. hub/102g
- Available in Shimano 8/9 and Campagnolo 9/10 compatibility

## Rims are available individually so that you can build your own custom wheelset.



**Zipp 460 and 505 rims** Adding the convenience of a clincher to the aero performance of a 58mm deep lightweight rim has resulted in these brand new Zipp models. The carbon rim section utilizes the proprietary ICT molding expertise and the custom aluminum extrusion is rolled, cut, processed and applied in house at Zipp. Braking surface is a heat-treated aluminum.

- Zipp 505, 700c rim weighs 505g and is available in 16, 18, 20, 24, 28 and 32 holes.
- Zipp 460, 26" rim weighs 460g and is available in 16, 18, 20, 24 and 28 holes.

**Zipp 330 and 360 rims** These 58mm deep tubular carbon fiber rims are rapidly becoming the #1 choice for athletes at every level. With a multi patented shape, their extreme lightweight and a micro-porous silica ceramic matrix braking surface these rims find themselves in competition all over the world. Equally at home on the Kona highway as they are tearing up the Tour de France stages, these rims are built for performance.

- Zipp 360, 700c rims weigh 370g and are available in 16, 18, 20, 24, 28 and 32 holes.
- Zipp 330, 26" rims weigh 340g and are available in 16, 18, 20, 24 and 28 holes.



**909 Disc and Deep Wheelset** For time trial and multisport competition, nothing is faster than a disc on the rear and a deep section wheel on the front.

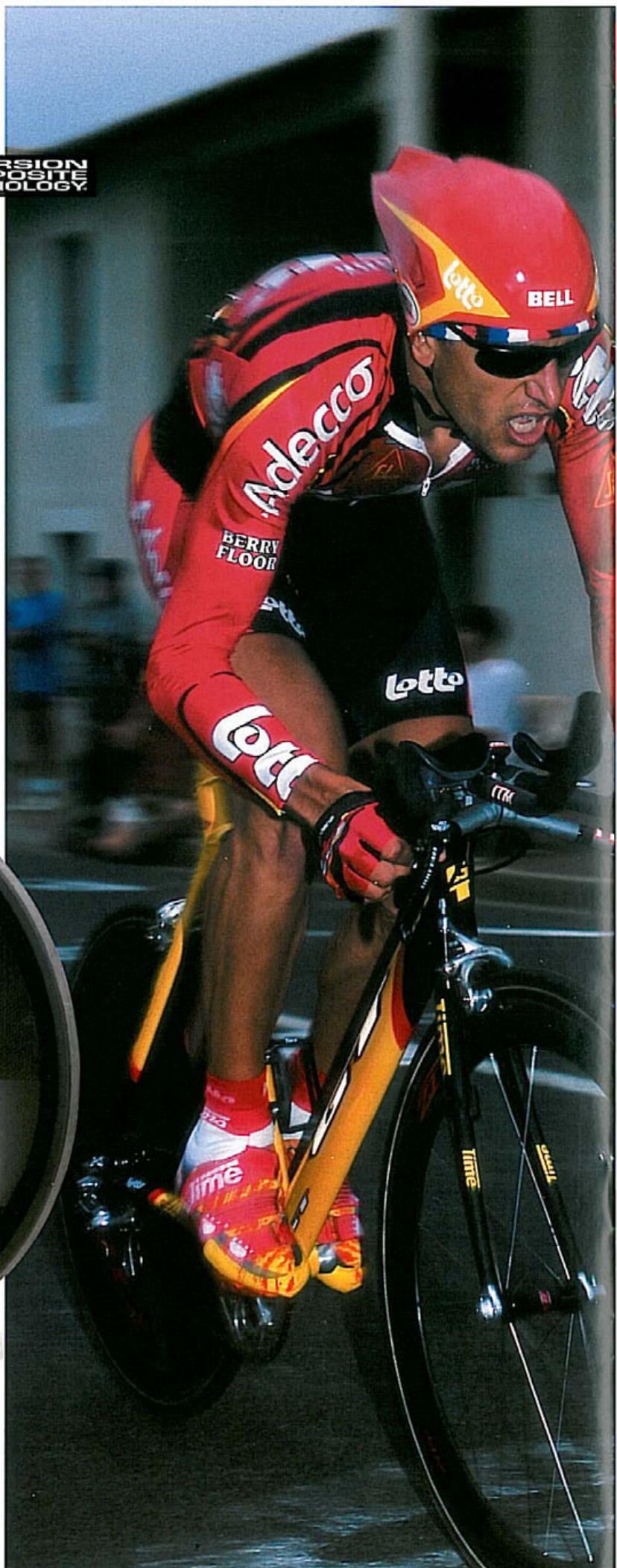
**ZIPP ICT INVERSION COMPOSITE TECHNOLOGY**

The 909 wheelset is the lightest, most aerodynamically efficient combination of its kind available. No hype, no speculation, just speed. If you are serious about going fast, this is the logical choice. Because ZIPP discs are very light, gone are the days when discs should be considered a flat course only wheel. A 650c disc weighs in at around 912g while the 700c disc weighs about 950g. In both cases nearly a third of the weight is in the hub, with the outer edge weighing less than 100g. With unsurpassed lateral stiffness, low overall weight and low outer rim area mass the ZIPP disc accelerates like no other wheel. Combine this with a total frontal area of only 19mm and you have a rear wheel built for serious performance.



The 58mm deep front wheel is the ideal depth and configuration for optimal aero performance and handling. Stainless steel drawn oval spokes provide great aerodynamics in all conditions, durability and strength. The 909 front incorporates our exclusive new ICT manufacturing process and the front wheel incorporates a Silica-Ceramic braking surface. As with all ZIPP deep section wheels, superior aerodynamics, lateral stiffness, comfort and durability are combined to provide a wheel with superb overall characteristics.

This is not a wheelset for Saturday afternoon Joe-Bobs. This is for the fighter pilot, the determined, for anyone who challenges himself or herself to be the best. Pro-triathletes and pro roadies worldwide choose this wheelset as the ultimate speed weapon of choice. Discover for yourself the exhilaration of absolute performance. And remember, at speeds of over 700mph, ZIPP strongly recommends the use of protective clothing and eye shields!





### Zipp 900 and 840 discs

Zipp discs have steadily improved over the last twelve years, always pursuing the absolute lightest and fastest construction we could develop. They are manufactured completely flat and are only 19mm in total cross section presenting an extremely small frontal area. Carbon skins are cured to a nomex honeycomb core with no raised surfaces. This allows maximum airflow over the disc surface and between the bike frame and the wheel.

Cured completely flat and utilizing aerospace composite manufacturing methodology and materials, the resultant product is unsurpassed in lateral stiffness, responsiveness and overall weight. Ridden at a blistering pace in time trials by Team Lotto, multiple World Champion triathletes and World Cup track competitors, Zipp discs continue to prove their unsurpassed speed and performance.

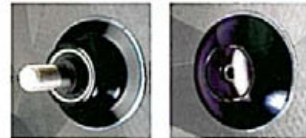
Wheelchair competitors also enjoy the performance and stiffness of Zipp discs with an in-house CNC machined 6-point handrim mounting system and co-cured mounting inserts.



Front Track



Rear Track



Wheel Chair



Cassette



Campagnolo

Shimano

- Zipp 840 is 26", the Zipp 900 is 700c, tubular only
- Available in track front disc (100mm) or rear track disc (120mm)
- Track caps and bolts are available for rear track bike installation
- Available in Shimano 8/9 speed, or Campagnolo 9/10 speed cassette compatibility (130mm)



**Zipp 420 Carbon cranks** If you have ever painfully ground your way up a steep climb putting every ounce of effort into turning the crank arms just to maintain momentum, you will have a real appreciation for a crankset that remains stiff and transfers every bit of that effort into forward motion. At Zipp we understand that even the finest and most powerful athletes are dealing with the same power to weight relationship and a human being can only generate about a 1/3 horsepower. What the Zipp 420 does for you is put more of your power into forward motion than any other crankset available today.

After installing high performance wheels, carbon cranks are the next most important upgrade you should do. Carbon fiber exhibits many properties that make it ideal for manufacturing cranks. It is strong, stiff and light, but most importantly we can maximize the material properties for best results. Additionally the hollow crank arms eliminate weight. In real life, loads exerted on the left and right crank arms are different, in carbon we can specifically orient the material for optimum effect, eliminate cross section where it is not necessary and increase material application where it is critical. The net result of all this research and development is a crank that is almost 40% stiffer in torsional load, over 30% stiffer in bending moment and at 375g, it is the lightest performance crank available today.

- Crankset weighs 375g
- Integral attachment bolts for easy installation and extraction, bolt weight 45g, weight of crankset with bolts, and 420g
- Five arm 130mm-bolt circle
- Designed to fit Shimano™ splined drive bottom bracket spindle 109.5mm
- Available in 170mm, 172.5mm, 175mm, 177.5mm and 180mm
- Bottom of crank page, small print... \*patent pending

**ZIPP Hubs** Zipp 2001 hub range is a result of a continuous commitment to R&D effort, always searching for a lighter yet equally durable product. Superior performance is achieved through carefully analyzing the forces experienced by the hub while in use. As always this is achieved through a combination of in-house testing, on the road mileage, extensive use and feedback from pro athletes around the world. Machined from aluminum billet with Swiss precision, black anodized and assembled with high accuracy steel jigs incorporating European sealed bearings, these hubs weigh in at 102g for the fronts and rear cassette hubs are 256g.

- Radial front hubs are available in 16, 18, 20 and 28 holes
- Radial/2X rear cassette hubs are available in 20, 24 and 28 holes, compatible with either Shimano 8/9 speed or Campagnolo 9/10 speed.

You pick the beverage; we've got the holder!  
**30oz Waterbottle** with screw top lid for drinking while racing.  
 After competition relax with The Zipp Athlete Rapid Transit **Coffee Mug**.

The new **ZIPP Carbon Cage** is a must have item for today's thirsty roadie or triathlete. A svelte 33 grams, the ZIPP Carbon Cage holds bottles firmly yet allows for easy release when toasting your latest victory. Recommended for Road and Tri bikes.

**Carbon Headset Spacers** built as a perfect compliment to your high tech bike. Perfectly finished off with a red Zipp logo and clear coated for durability, these are simply a "must have" for your racing machine.

- Available in 1" and 1 1/8" steerer tubes
- Available in heights of 4mm, 8mm, 12mm and 30mm

Any color as long as it's black. Cycling shorts made by Aussie, very comfortable and always in style.

100% Cotton, Select from horizontal **Pin Stripe Logo T** in mocha or black, Zipp logo's front and rear 100% Cotton-Fun, imaginative tech support **Woody T** loaded with wheels.

Black anodized and laser etched **Aluminum Flip Lever** and end cap assembled with 5mm titanium shafts and weighing in at only 85g a pair. A perfect compliment to your Zipp wheelset.



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