



Fulcrum® Teams 2006

Wheels are a crucial and essential component in the performance of a racing bike. An excellent frame is nothing unless it is coupled with a pair of wheels at the same level. Wheels are critical for the transmission of the athlete's power, for the ability to steer the bike, and for the aerodynamic coefficient of the man/machine combination.

This is the reason Fulcrum® decided to start business with cycling's most difficult challenge: build the best wheels. Wheels which transmit the energy of the pedal stroke without losses. Thanks to the Two-to-One™

Spoke Ratio, Fulcrum wheels accelerate quickly and are precise in turns. They are nevertheless comfortable over long distances because of the special rim design and, thanks to Dynamic Balancing™, are perfectly Balanced.

This is especially important at high speed. Victories are achieved by paying attention to every detail.

Fulcrum® did this and the victories achieved by Quick-Step-Innergetic, Saunier Duval-Prodir, Lampre-Fondital and Panaria Navigare in 2006 prove it.

They chose to win.

They chose Fulcrum®.

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Quick Step - Innergetic

Saunier Duval - Prodir

Panaria - Navigare

Lampre - Fondital

FULCRUM® TECHNOLOGIES

The technical solutions you find in our wheels

are the result of very precise technical goals.

Their aim is to improve your performance

and safety.

2:1 Two-to-One™ -Spoke Ratio

doubling of the spokes on the freewheel side

2:1 Two-to-One™ Spoke Ratio

When you push on the pedals, the rotational force on the sprocket induces a slackening of the freewheel spokes with a consequent loss of rim tension. This results in undesirable flex of the whole wheel and an unavoidable loss of energy. Fulcrum® has solved this classic cycling problem with its 2:1 Two-to-One™ Spoke Ratio patent, by doubling the spokes in the critical zones. As a result there are two spokes which carry out the function of one, slackening and torsion are limited and the transfer of the athlete's power is much more effective. Also, thanks to this system, spoke tensions are balanced more evenly between drive and non-drive sides and the fatigue life of the rim, hub and spokes is lengthened.

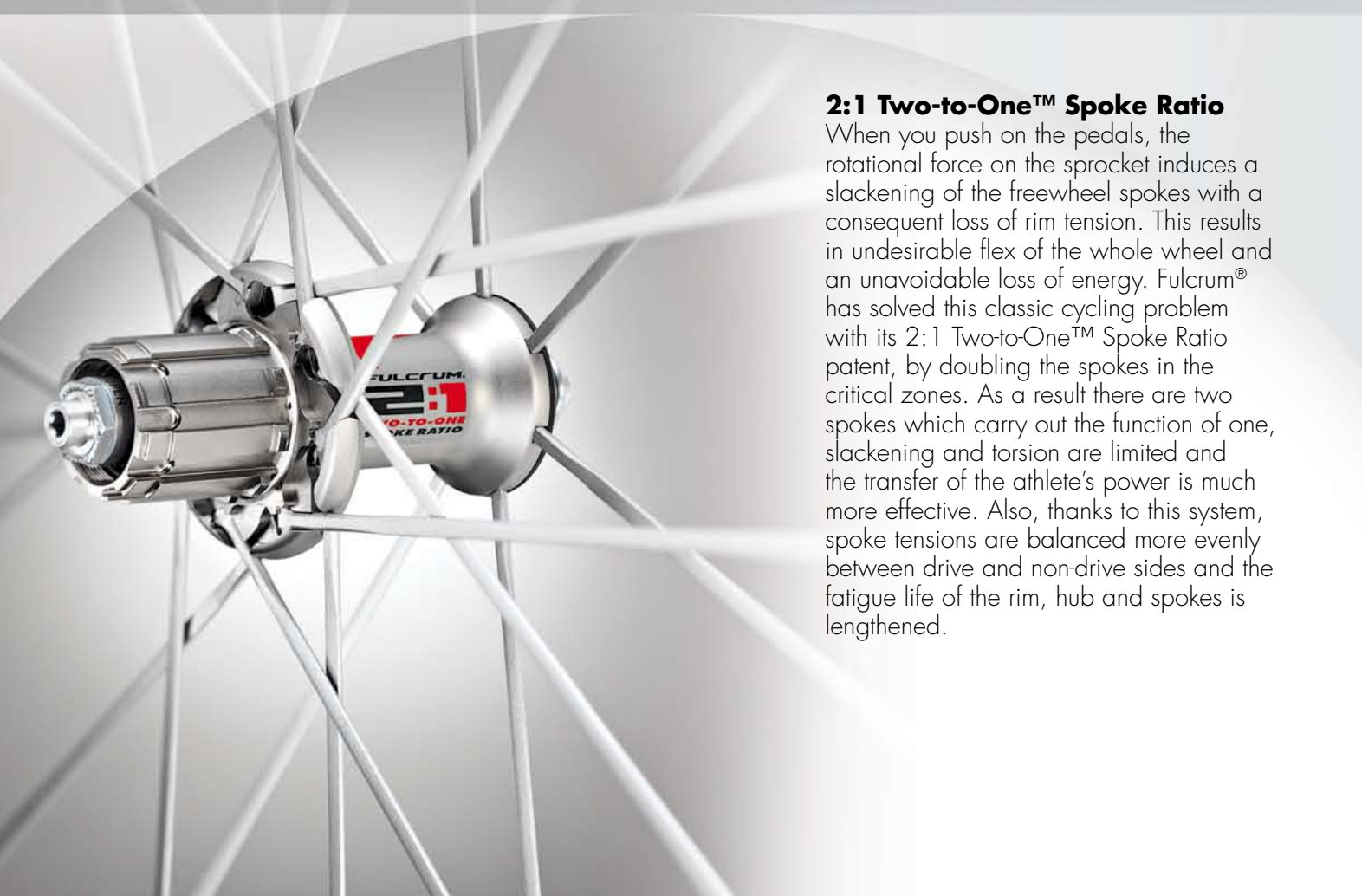
Dynamic Balance™

wheel perfectly balanced during the rotation dynamics

1.

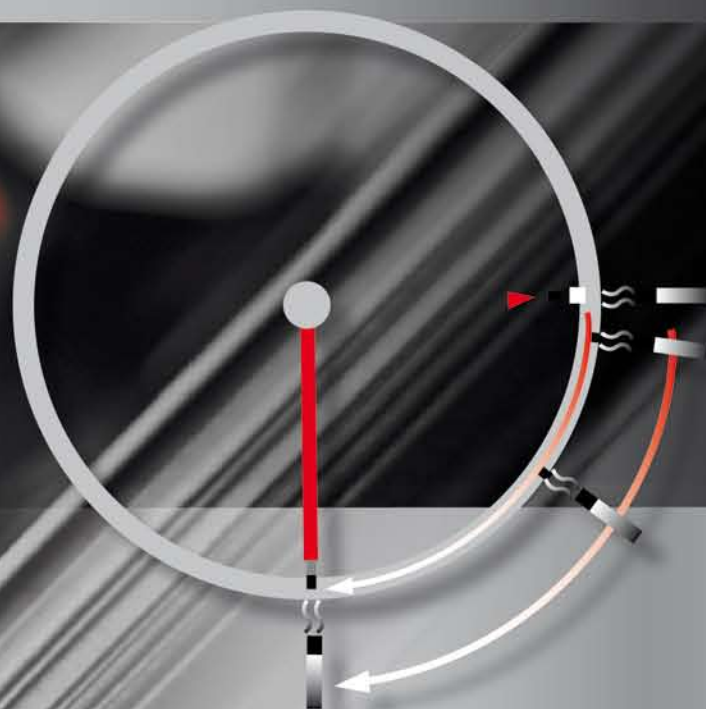
Dynamic Balance™ Unlike carbon rims, all the aluminium rims are joined. The joint, though indispensable, entails a concentration of material in a single point and creates an annoying "jump" effect at speed. Fulcrum® has eliminated this annoying problem with the Dynamic Balance™ patent. The concept is simple and elegant: balance the mass of the joint with a mass of the same weight. For top models, this is obtained by a special operation on the section of the rim opposite the rim joint. For entry-level models, Dynamic Balance™ is obtained by using two oversized spokes in the section opposite the joint. The result is a wheel with perfectly balanced rotational dynamics.

2.



MoMag™

Makes it possible to have a top bridge without holes for greater torsional rigidity



MoMag™ Though they have no holes in the rim bed, Racing3, Racing1 and RacingZero rims have spokes tensioned by traditional nipples. This makes tensioning and changing the spokes extraordinarily easy, and does away with questionable anchoring systems on the rim.

This solution was made possible thanks to the Fulcrum® MoMag™ patent which exploits magnetic power and a good dose of ingenuity to guide the nipples to the correct rim holes.



Campagnolo®
aluminium freewheel
body

Maximum Compatibility

Maximum compatibility All Fulcrum® wheels are compatible with Campagnolo®, Shimano® and Sram® drivetrains. Please consult the technical specifications on the last page for more detail.



Shimano® HG 8/9
freewheel body



Shimano® HG 10
freewheel body

Two-to-One™ Spoke Ratio



2:1 Two-to-One™
for Racing7 too



Rim with turned
braking surfaces
and wear
indicator



24 mm
aluminium
rim with
double rim
chamber



Racing7 The Fulcrum® range takes on a red tinge with the introduction of the new Racing7 entry-level wheelset - high-quality wheels at an affordable price. With Racing 7, Fulcrum® offers light, high-performance wheels which are reliable over time. Racing7 wheels have an aluminium rim with a height of 24 mm and aerodynamic profile and machined braking surfaces with wear indicator. Hubs are oversize, flanged, and turning on sealed cylindrical bearings. Twenty 2 mm spokes are radially laced on the front wheel to improve the bike's aerodynamics. The rear wheel, on the other hand, has 24 spokes laced according to Fulcrum's renowned 2:1 Two-to-One™ geometry to improve transmission of the athlete's power.



Racing 7 wheels are available in black or red colour versions and are compatible with Campagnolo®, Shimano® and Sram® drivetrains.



Two-to-One™ Spoke Ratio



2:1 Two-to-One™
for Racing7 too



Fulcrum®
quick release
for Racing7

Aluminium wheel
with aerodynamic
profile





24 mm
aluminium
rim with
double rim
chamber



Racing5 Evolution wheels have taken such a leap forward that if it were not for the name Racing5, which links them to their predecessors, it would be hard to think of it as a simple evolution of the same model. Let's begin from the most significant parameters for products belonging to this bracket: weight and price. The scale now shows 1,755 grams - 90 grams less than the 2006 version. And, despite the numerous improvements, price remains the same.

The hubs are completely new: oversized and provided with flanges for blade hammer-head spokes. Smoothness is ensured by sealed high-quality bearings and they have a new single-piece body which incorporates the freewheel body and pawl carrier in a single component with a considerable reduction of weight.

Hammer-head
spokes of the
Aero type, with
differentiated
thickness

Oversize spokes for
a perfect Dynamic
Balance™

There is a lower number of spokes, and they now have blade hammer-heads of the Aero type and differentiated thickness, 2-1,5-2. Instead of 24 in the front wheel and 27 in the rear wheel in the old Racing5, there are now only 20 spokes in the Racing5 Evolution front wheel and 24 in the rear. There is radial spoking for the front wheel and the patented Fulcrum® 2:1 Two-to-One™ Spoke Ratio for the rear wheel. Also unchanged is the presence of Dynamic Balance™ which, thanks to two oversized spokes, balances the concentration of the rim joint material during wheel rotation.

Two-to-One™ & Dynamic Balance™

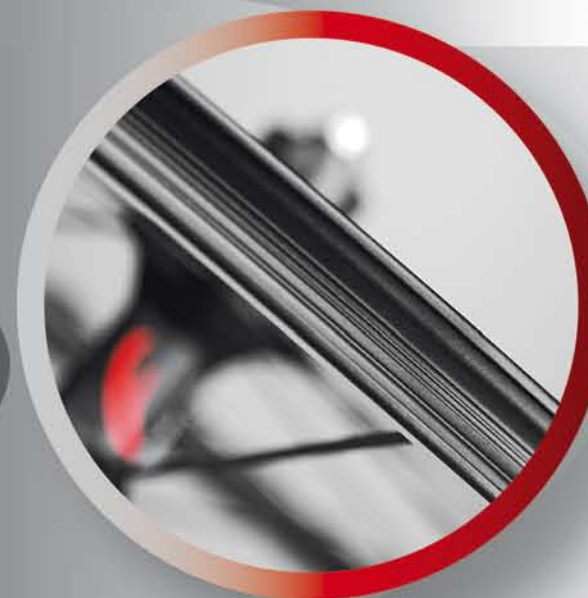


The rim is a medium-sectioned one with a height of 24 mm with reinforcing eyelets for the spokes and turned braking surfaces. Racing5 Evolution wheels are available in two black and silver colour versions and are compatible with Campagnolo®, Shimano® and Sram® drivetrains.



Fulcrum®
quick release
for Racing5

MoMag™ & Dynamic Balance™



Top bridge without
holes for greater
torsional stiffness



Fulcrum® quick
release with two
pivots for easier
and more secure
clamping



26 mm
aluminium
rim with
double rim
chamber



Racing3 wheels are ideal for both racing and for everyday training. Aesthetically aggressive, Racing3 wheels offer the same technical advantages as the more titled Racing1 and RacingZero wheels, but at a lower price.

The aluminium rim, with a height of 26 mm, features special milling for lightness, an exclusive Fulcrum® patent. The rim bed is not drilled. Therefore, in addition to the weight advantage provided by the elimination of the need for rim tape, the undrilled rim bed also features a mechanical advantage: greater torsional rigidity and greater vertical elasticity for the wheel.

The oversize hubs, with an aluminium body and axle, feature adjustable high-precision bearings to achieve the best performance every time.



Dynamic Balance™
thanks to a special
machining operation
on the rim section
opposite the joint



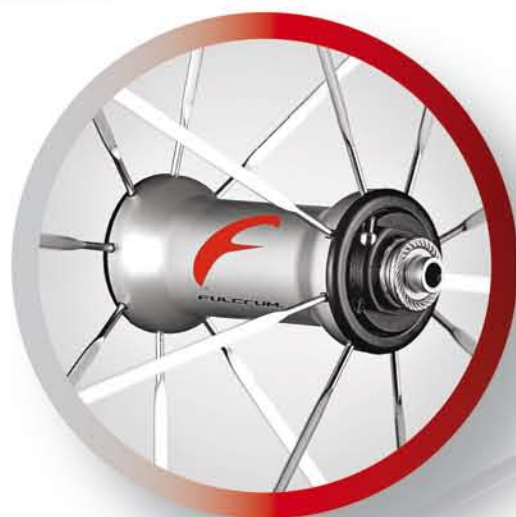
MoMag™ & Dynamic Balance™



Top bridge without
holes for greater
torsional stiffness



The 2 mm steel spokes have an aerodynamic profile which enhances aerodynamic penetration and reduces the formation of vortices. There are 16 spokes for the front and 21 for the rear wheel. The spoking is of the radial type for the front wheel and of the crossed type with doubling of the right-hand spokes for the rear. Racing3 wheels incorporate an exclusive Fulcrum® feature: Dynamic Balance™. The wheel is balanced during rotation thanks to a special rim design that counterbalances the joint section. Racing3 wheels are available in two black and silver colour versions and are compatible with Campagnolo®, Shimano® and Sram® drivetrains.



Lightening of the
rim to reduce the
peripheral mass



Aero spokes
for enhanced
aerodynamic
penetration



Oversize flange for the maximum torsional strength



Variable-section aluminium spokes for the maximum aerodynamics



26 mm aluminium rim with double chamber



Racing 1 wheels crown the Fulcrum range of aluminium wheels. They are wheels conceived for competition, but also ideal for everyday use. They feature an aggressive look, high technology, and light weight. Racing 1 wheels have a lively temperament for instant response in every competitive environment. Their aluminium rims, with a height of 26 mm, are lightened by the exclusive Fulcrum® triple milling system. There are no holes in the rim bed; this means that there is no need for rim tape and that the wheels are more torsionally rigid and vertically more elastic. The spokes – 16 on the front wheel and 21 on the rear – are forged in aluminium with a variable section and have a special aerodynamic design which broadens the spoke the nearer it is to the rim.



Double fulcrum Fulcrum® clamping

Triple patented milling to reduce the peripheral mass

Dynamic Balance™ thanks to a special machining operation on the rim section opposite the joint

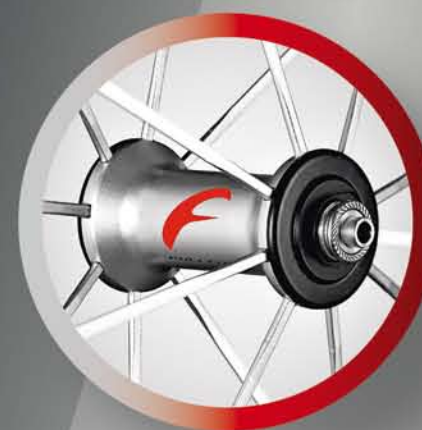
The result is improved aerodynamic penetration and a reduction in the formation of dangerous vortices.

The drive side of the rear wheel features Fulcrum's patented Two-to-One spoke lacing system. This means that the stresses are reduced while maintaining the same rear wheel rigidity and the life of the components increases. Hubs are oversized with aluminium body and axle and with adjustable high-precision bearings. Racing 1 wheels feature perfectly balanced rotational dynamic thanks to the exclusive Fulcrum® Dynamic Balance™ technology. Racing 1 wheels are compatible with Campagnolo®, Shimano® and Sram® drivetrains.

MoMag™ & Dynamic Balance™



Oversize aluminium
hub with adjustable
bearings for the
maximum smoothness



Racing 1 wheels are also available in an attractive Silver finish. The rim, hub and spokes are satin silver anodized. Racing 1 Silver wheels will not go unnoticed.



Top bridge without
holes thanks to the
patented MoMag™
assembly system



RACING 1 TUBULAR

Racing 1 wheels were conceived for racing so, naturally, Fulcrum® designing a version for tubular tyres specifically for professional riders. The tubular version is the best solution for professionals in terms of comfort, performance and road-holding. With Racing 1 Tubular Fulcrum® provides professional cyclists with a new way to dominate the most prestigious races.

MoMag™ & Dynamic Balance™



26 mm
aluminium
rim with
double rim
chamber



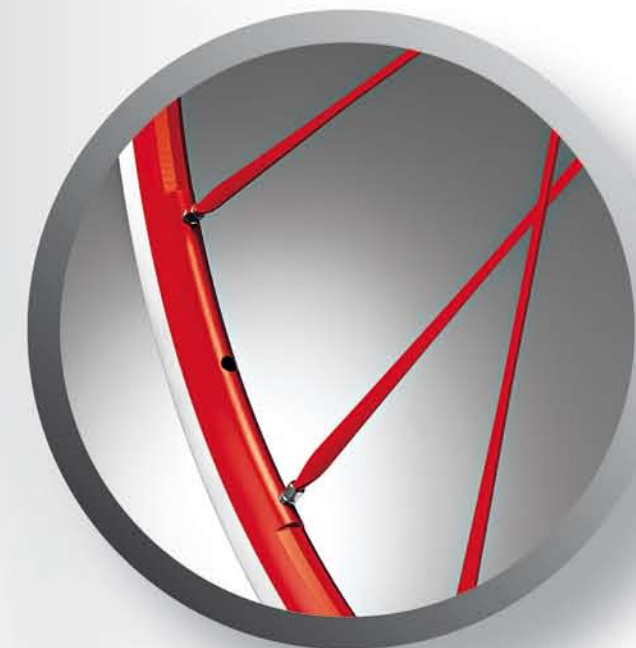
Racing Zero wheels are made to be stars - the revolutionary anodized red colour immediately confirms it. Impossible not to note them in the group. RacingZero wheels stand out but do so with style. RacingZero wheels are positioned at the top of the Fulcrum® aluminium range. The rims with a height of 26 mm are made by a special extrusion process which considerably thins the walls, giving a notable reduction of the overall weight, but without compromising strength. Further lightening has been carried out between the spoke anchoring points – where there are no stresses – thanks to the exclusive Fulcrum® triple milling system. The rim bed has no holes, and this translates into higher torsional rigidity and vertical elasticity for the wheel.



Oversize aluminium hub with
adjustable bearings for the
maximum smoothness

Top bridge without
holes thanks to the
patented MoMag™
assembly system

Triple milling and
Dynamic Balance™



RACINGZERO TUBULAR

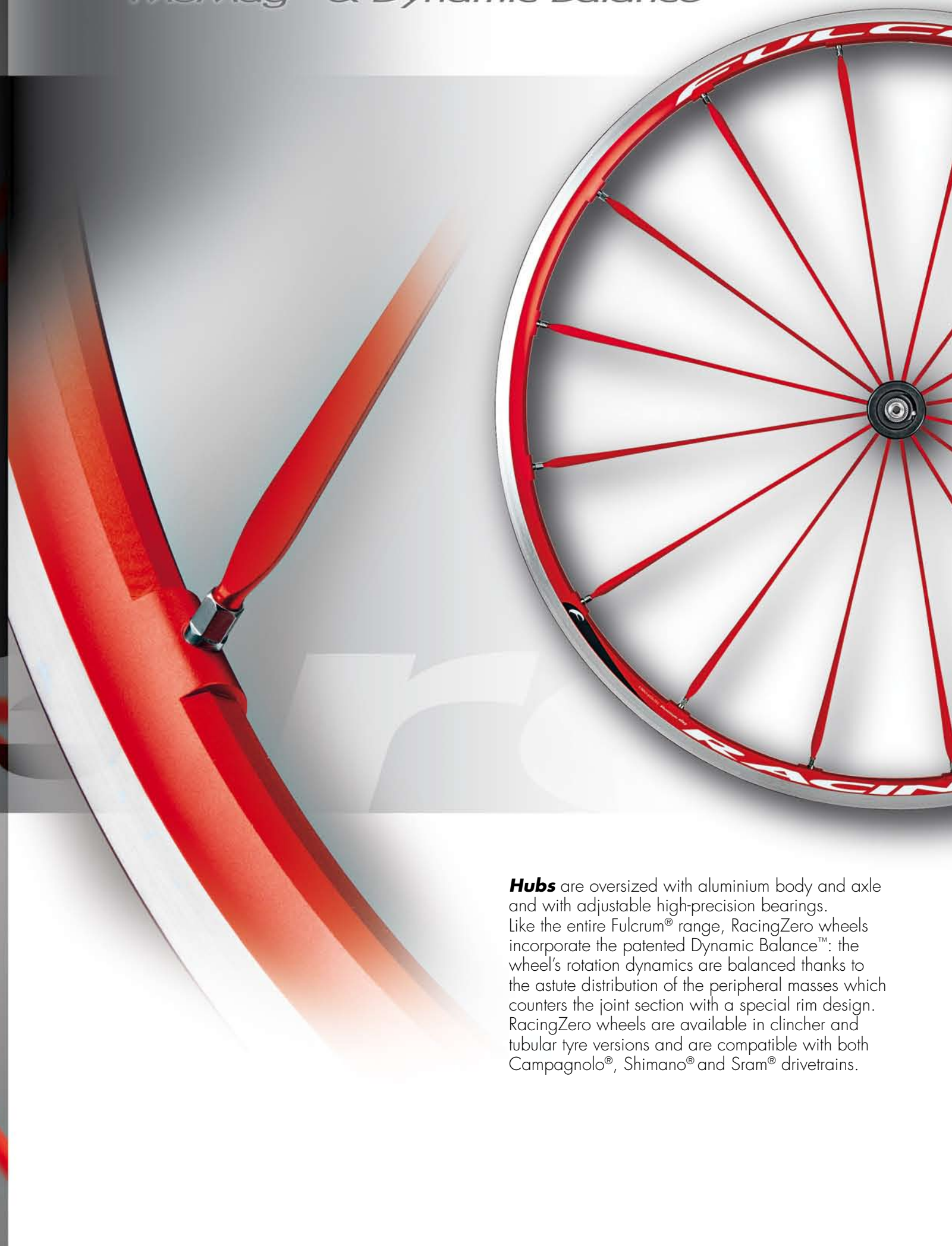
The variable-
section aero
spokes are
tensioned by
special Ergal
nipples.

The spokes – 16 on the front wheel and 21 on the rear – are in aluminium with a variable-section aerodynamic profile and tensioned by special Ergal nipples. Rear spoking are laced by doubling the spokes on the drive side, in accordance with the Fulcrum® 2:1 Two-to-One™ spoking system. This allows a more effective transmission of the drive torque and a more appropriate distribution of the wheel stresses. The front wheel spoking, on the other hand, is radial to obtain better aerodynamics.



Oversize flange for
the maximum torsional
strength

MoMag™ & Dynamic Balance™



Hubs are oversized with aluminium body and axle and with adjustable high-precision bearings. Like the entire Fulcrum® range, RacingZero wheels incorporate the patented Dynamic Balance™: the wheel's rotation dynamics are balanced thanks to the astute distribution of the peripheral masses which counters the joint section with a special rim design. RacingZero wheels are available in clincher and tubular tyre versions and are compatible with both Campagnolo®, Shimano® and Sram® drivetrains.

Two-to-One™ & Dynamic Balance™



Oversize aluminium hubs
with adjustable bearings for
maximum smoothness



RACINGLIGHT TUBULAR
NEW!

Racing Light™ is the perfect wheel for climbs. It is extremely light and reactive thanks to the Fulcrum® 2:1 Two to One™ Spoke Ratio design concept. The low profile rim for clincher tyres is made entirely of carbon fibre for the maximum lightness and strength. The hubs are in aluminium and the right flange of the rear wheel is oversized. The bearings are adjustable to obtain the maximum smoothness at all times. The spokes are of the differentiated-thickness aero type. Racing Light™ wheels were conceived for racing so, of course, Fulcrum® designed a version for tubular tyres dedicated to professional riders. Both the clincher and tubular versions are compatible with Campagnolo®, Shimano® and Sram® drivetrains.

Full-carbon rim for
clincher tyre.



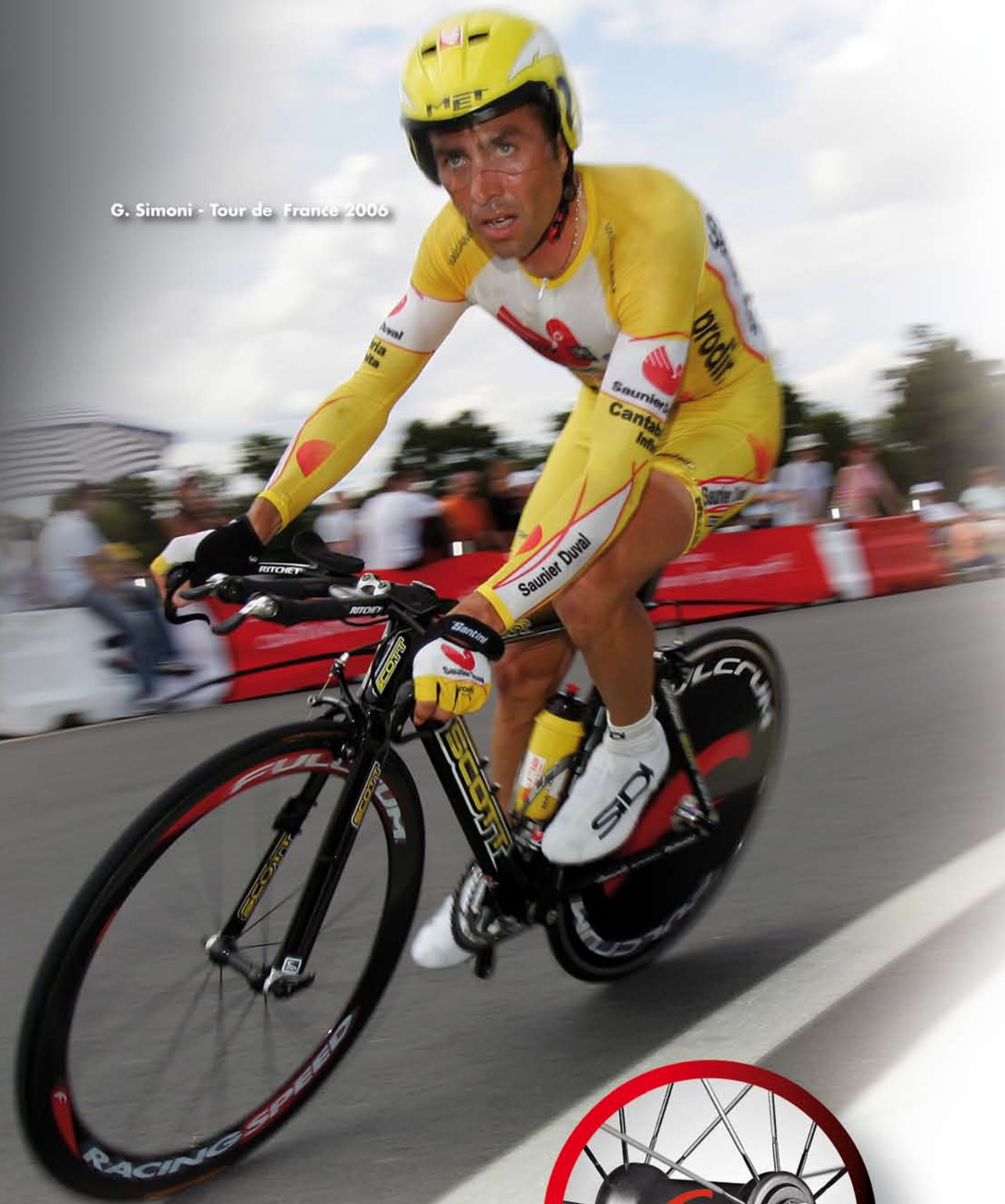
Oversize flange
for the maximum
torsional resistance

Two-to-One™ & Dynamic Balance™



Racing Speed™ wheels are the professionals' favourites: extremely light, aerodynamic and with excellent resistance to torsion. Only 1,300 grams which take off at the first hint of a spurt on the pedals, thanks to the Fulcrum's 2:1 Two to One™ Spoke Ratio concept. Full-carbon 50 mm rim and aluminium hubs with adjustable bearings and aero spokes with differentiated thickness make them an irreplaceable tool in the toughest competitions. Compatible with Campagnolo®, Shimano® and Sram® drivetrains. Racing Light™ and Racing Speed™ wheels require the use of special pads.

Oversize flange
for the maximum
torsional resistance



G. Simoni - Tour de France 2006

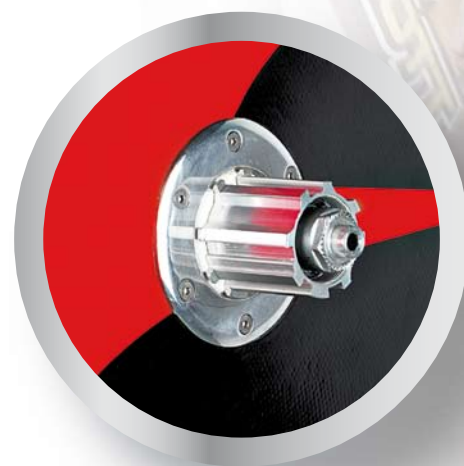
Oversize aluminium hubs
with adjustable bearings for
maximum smoothness





Special oversize hub,
designed exclusively
for disc wheels

Racing Chrono™ is the wheel dedicated to time trials when hundredths of a second make the difference between victory and defeat. Totally built with a Polyaramide tensile-structure, Racing Chrono™ offers the maximum aerodynamic penetration, lightness and rigidity. Compatible with Campagnolo® drivetrains.



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	<div><div><div>7</div><div>new</div></div></div>			<div><div>5</div><div>new</div></div>			<div>3</div>			<div>1</div>			<div><div>Zero</div><div>new</div></div>					<div><div>Carbon</div><div>new</div></div>							<div>chrono</div>		
	RACING 7 clincher front	RACING 7 clincher rear		RACING 5ev. clincher front	RACING 5ev. clincher rear		RACING 3 clincher front	RACING 3 clincher rear		RACING 1 clincher front	RACING 1 clincher rear	RACING 1 tubular front	RACING 1 tubular rear		RACING ZERO clincher front	RACING ZERO clincher rear	RACING ZERO tubular front	RACING ZERO tubular rear		RACING LIGHT clincher front	RACING LIGHT clincher rear	RACING LIGHT tubular front	RACING LIGHT tubular rear	RACING SPEED tubular front	RACING SPEED tubular rear		RACING CHRONO tub. post.
nominal weight*	832	1026		776	980		710	895		695	855	695	855		625	800	625	800		585	785	560	720	575	750		995
welded rim joint	no	no		no	no		yes	yes		yes	yes	yes	yes		yes	yes	yes	yes		carbon	carbon	carbon	carbon	carbon	carbon		Alu/ Aramide
dynamically balanced	no	no		yes	yes		yes	yes		yes	yes	yes	yes		yes	yes	yes	yes		yes	yes	yes	yes	yes	yes		no
RIM TAPE	yes	yes		yes	yes		not needed	not needed		not needed	not needed	tubular	tubular		not needed	not needed	tubular	tubular		yes	yes	tubular	tubular	tubular	tubular		tubular
machining	no	no		no	no		1	1		3	3	3	3		3	3	3	3		no	no	no	no	no	no		no
nominal and ETRTO width	20/15	20/15		20/15	20/15		20/15	20/15		20/15	20/15	20/-	20/-		20/15	20/15	20/-	20/-		20/13	20/13	20/-	20/-	20/-	20/-		19/-
spoke material	stainless steel	stainless steel		stainless steel	stainless steel		stainless steel	stainless steel		alu	alu	alu	alu		alu	alu	alu	alu		stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel		no
number of spokes	20 radial	8 left 16 right		20 radiali	8 left 16 right		16 radial	7 left 14 right		16 radial	7 left 14 right	16 radial	7 left 14 right		16 radial	7 left 14 right	16 radial	7 left 14 right		22 radial	8 left 16 right	22 radial	8 left 16 right	18 radial	7 left 14 right		disc
type of spokes	standard 2mm	standard 2mm		aero with variable section	aero with variable section		aero	aero		aero with variable section	aero with variable section	aero with variable section.	aero with variable section		aero with variable section	aero with variable section	aero with variable section	aero with variable section		aero with variable section	aero with variable section	aero with variable section	aero with variable section	aero with variable section	aero with variable section		no
HUB material (body/axle/Fwbody)	Alu/ Alu/-	Alu/ Steel/ Alu		Alu/ Steel/-	Alu/ Steel/ Alu		Alu/ Alu/-	Alu/ Alu/ Alu		Alu/ Alu/-	Alu/ Alu/Alu	Alu/ Alu/-	Alu/ Alu/Alu		Alu/ Alu/-	Alu/ Alu/Alu	Alu/ Alu/-	Alu/ Alu/Alu		Alu/ Alu/-	Alu/ Alu/ Alu	Alu/ Alu/-	Alu/ Alu/ Alu	Alu/ Alu/-	Alu/ Alu/ Alu		Alu/ Alu/ Alu
compatibility	100mm	130mm CAMPA HG 8/9 HG 10 HG Junior		100mm	130mm CAMPA HG 8/9 HG 10 HG Junior		100mm	130mm CAMPA HG 8/9 HG 10 HG Junior		100mm	130mm CAMPA HG 8/9 HG10	100mm	130mm CAMPA HG 8/9 HG10		100mm	130mm CAMPA HG 8/9 HG10	100mm	130mm CAMPA HG 8/9 HG10		100mm	130mm CAMPA HG 8/9 HG 10	100mm	130mm CAMPA HG 8/9 HG 10	100mm	130mm CAMPA HG 8/9 HG 10		132mm CAMPA 9V
* The weight of the wheels does not include the quick release, and it refers to the lightest configuration.																											

* The weight of the wheels does not include the quick release, and it refers to the lightest configuration.

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