OFFROAD 2011

www.fulcrumwheels.com

ENG

FULCRUM™

Fulcrum: the law of reactivity

When Fulcrum® was born we took on the challenge of building the most durable and reactive wheels in the market. Mission completed!

Now our commitment is to spread the technology of Fulcrum® wheels to every off-road World. The 2010 Fulcrum® Off-Road range has been designed for that: a perfect wheel for every terrain.

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WOODS

FREERIDE

ENDURO

4X

ALL MOUNTAIN

DOWNHILL

MARATHON

X-COUNTRY

red metal zero II

riders

Team Toro DH

Ready2Ride

Team Kenda Playbiker

Damien Huszcz

Team ODI / X Fusion / Intense

Joanna Petterson

Team Massi

Team Olympia

Team Full-Dynamix

WRS

What is the ideal wheel?
This is the question that every rider asks before buying a wheel – and Fulcrum® wants to help you find an answer!
This is why, in collaboration with professional riders and cycling enthusiasts, we have defined the 3 most important parameters that will enable you to choose the best wheel for your riding style and needs.

What does W.R.S. mean?

Weight: There is little need to describe it. The weight of the wheel is the first question that all riders ask themselves when they buy a wheel.
The weight parameter is extremely important, more than any other bike component.
Indeed the wheel is a rotating mass and as such it follows the laws of physics that determine its acceleration and inertia. Fulcrum® has always designed its wheels with this aim in mind and, at the same time, combining and adapting it to wheel performance in terms of the stiffness, reactivity and reliability.

Reactivity: How "ready" and fast does the wheel feel every time you change gear? The level of reactivity refers precisely to this concept.
Reactivity depends on the weight of the rim and of the wheel as a whole, on torsional rigidity (i.e. how much the wheel flexes around the hub when the rider pushes on the pedals), on flexional rigidity (i.e. how much the wheel maintains its shape if, because of pedalling, it moves away from its vertical axis) and on inertia.

Smoothness: This will help you understand and compare various wheels degree of smoothness, thanks to, the use of high-performance CULT™ ball bearings or USB™ ball bearings or to other technological solutions applied on the wheel, such as 2-Way Fit™.

Fulcrum® gives you all the technical information, now it's up to you to choose the perfect wheel for your needs! Your passion, your way of riding the bike and your feel of the bike will help you to make the best choice.

OFFROAD TECHNOLOGY

ULTRA-FIT™ TUBELESS

Imagine the rim and tyre as a single unit composed of two materials. This is what we wanted to achieve conceptually with Ultra-Fit™ Tubeless technology. The rim was developed during the design stage to obtain perfect adherence with the tyre. The consequent elimination of friction makes it possible to improve performance considerably.

Energy dispersion is drastically reduced by the tubeless tyre.
The advantages are indisputable even in terms of practicality. Fitting the tyre is facilitated by the form of the rim while two tracks in the rim groove help keep the type perfectly positioned at all times. Ultra-Fit™ Tubeless technology is used in Red Carbon™, Red Fire™, Red Zone™ XLR and Red Zone™ wheels.

MOMAG™ NO HOLE RIM BED

MoMag™ technology is integrated in wheels which do not have drilling of the top bridge of the rim. The nipples in these wheels are guided to their seat by employing a little magnet. Their accessibility from the outside makes it possible to carry out all the spoke tensioning and replacement operations conveniently. The absence of holes on the rim bed permits all the original strength to be maintained as well as the use of tubeless tyres. The hermetically sealed valve ensures that the tubeless tyre is kept under pressure.

OFFROAD TECHNOLOGY

2:1 TWO-TO-ONE™ SPOKE RATIO

The 2:1 Two-to-One™ system has been used for all the rear wheels and for the first time Fulcrum® has also extended their advantages to all the front wheels fitted with disc brakes. The doubling of the spokes on the critical side makes it possible to reduce the unit load borne by each spoke as the spokes themselves are no longer subject to the mechanical stress resulting from the different disc.
Overcoming this drawback the spokes will be able to transfer the forces exerted at the rear by the pedalling traction and at the front by the torsion torque of braking, and give the front wheel previously unknown stability.

OVERSIZE AXLE

The hubs designed for Fulcrum® wheels employ a generously dimensioned design for both the central body and for the rotation axis. The diameter of the latter, 20 mm for all the models with disc brakes, guarantees high resistance to transverse and torsional stresses. A contribution is also made to this result by the mechanical architecture of the hub which, in the AFS™ version, is provided with bearings with a double ball-bearing race positioned outside the flange, so that it is aligned with the disc on the respective side. The Red Metal™ Zero and Red Metal™ 1XL models are fitted with precision bearings with cones and cups which make fine adjustment possible and with a double gasket to provide a barrier against the infiltration of dust and mud.

AFS™ AXIAL FIXING SYSTEM

The Axial Fixing System™ is the solution developed by Fulcrum® to fix the disc brake to the hub. The constraint granted by the butt area of the release mechanism, greater than in familiar standard ones, makes it possible to obtain greater structural rigidity and therefore more precise and powerful braking. The availability of the International Standard option ensures full compatibility of Fulcrum® wheels even with the most widespread braking systems that use this assembly plan.

QUICK RELEASE

Quick-releases for Off-Road wheels. The quick-releases make use of the new patented Fulcrum® mechanism: a locking lever centred on the axis of the axle. This lever engages both ends of the axle fitted with a cam that exerts the closing traction on the axis, by means of a fork coupling. The synchrony with which the lever fork exerts the torsion on the ends of the eccentric axle makes the operation for locking and releasing the component more fluid, smooth and secure.

FULCRUM 2:1 TWO-TO-ONE SPOKE RATIO

20 MM OVERSIZE AXLE

AFS™

OFFROAD TECHNOLOGY

QR-15mm THRU-AXLE ADAPTER SYSTEM

Quick release

Thru-Axle 15mm

The world of "fat wheels" is continually evolving. Mountain bikers are renowned for being keen on trying and experimenting new technical solutions – adapting a bike to the route and to their riding style is normal for off road lovers.
And Fulcrum® does not fall behind. On the contrary, it pushes ahead and offers new solutions that don't force you to make a definitive choice, but leave you the option to change your mind.
The Fulcrum® 2011 range includes the standard modification kit with quick release and 15mm thru axle for the front wheel of Red Metal™ Zero, Red Metal™ 1, Red Metal™ 3 wheels and the 2 versions of Red Zone™.
A clever solution that will allow you to use the Fulcrum wheels on bikes with front forks with traditional release or thru axle.

SYNTACE X-12 ADAPTER SYSTEM

The Syntace X-12 standard, with a 142mm rear O.L.D. and an innovative way of adjusting the wheel to the stay, is the new feature on many branded frames.
Fulcrum, which has always kept a close eye on the needs and demands of the market, has found a solution for this: for its 2011 range Fulcrum®'s R&D department has designed and developed a special kit that changes 12/135mm thru axle wheels into 12/142mm thru axle wheels thanks to a simple kit included with the wheels.
This solution will make your Red Metal™ 1XL, Red Metal™ 3 wheels, along with the basic and XLR version of the Red Zone™ wheels, 100% compatible with the German company's new standard.
It is extremely easy to assemble, with no need for any special tools.
Just a click and you are ready for a new challenge!

xc marathon all mountain

worlds

RED CARBON™ XRP

weight 1347g

tech: MoMag™ · 2:1 Two-to-One™ · Titanium Free Hub Body · Carbon Rim & Hub

XC · Marathon

tubeless

WRS

Weight	10
Reactivity	9.5
Smoothness	9.5

0 2 4 6 8 10

Red Carbon™ XRP
Fulcrum® is, and has always been, a symbol of high performance having reaction as its wheels' main features.
Red Carbon™ is a top-of-the-range model, the lightest and best performing wheel, Fulcrum®'s master piece.

Rear hub with titanium body

For 2011 models, Fulcrum® challenged itself and decided to reduce weight whilst improving function and reaction: this is how the new Red Carbon™ XRP 2011 (Extreme Racing Performance) was born.

The new Red Carbon™ XRP 2011 is almost entirely made of carbon: with **carbon hub and rim**, and stainless steel spokes.

The all new carbon hub reduces weight and increases wheel reaction.
The new titanium free-wheel body increases wheel performance, and reduces weight considerably.

The stainless steel **spokes** are straight pull with a round variable section profile (∅ 2.2/2/1.6/2). The front wheel has 20 spokes (10 left cross and 10 right radial spokes) and the rear wheel has 20 (10 left cross and 10 right cross spokes).

1347g is the surprising weight of the new Red Carbon™ XRP 2011: 123g lighter than the already super light Red Carbon™.

The new Red Carbon™ XRP is available in QR Standard versions, compatible with Tubeless UST tyres and with all ISO six-bolt brake systems.

front hub

RED METAL™ ZERO XRP

weight 1470g

tech: **MoMag™ · 2:1 Two-to-One™ · Titanium Free Hub Body · Carbon Hub**

XC · Marathon

Red & Black front

Red Metal™ Zero XRP

Red Metal™ Zero XRP (eXtreme Racing Performance) is the evolution of the species. Conceived and developed in close contact with MTB Pro's, Red Metal™ Zero was known right from the start as an extremely reactive, versatile, and sturdy competition wheel.
And for 2011, Red Metal™ Zero XRP features new cutting-edge technical content.

new adapter kit QR/ Thru-Axle 15mm (included)

rear hub with titanium body

The brand new Red Metal™ Zero XRP has a host of new features and cutting-edge technology. The **carbon fibre hub**, extremely light, boosts the wheel's reactivity. The **freehub body in titanium** drastically reduces the weight of the wheel and increases its performance.

The **spokes** are brand new: the front wheel has 14 crossed straight-head aluminium aero spokes on the left side and 7 radially laced straight-head aluminium aero spokes on the right side. The rear wheel has 8 crossed straight-head aluminium aero spokes on the left side and 16 radially laced straight-head aluminium aero spokes on the right side.

The new Red Metal™ Zero XRP is incredibly light: the hard work of the Fulcrum engineers made it possible to achieve a weight of just 1470 g, a full 130 g less than the Red Metal™ Zero 2010, making the XRP the lightest tubeless XC wheel in aluminium on the market.

The new Red Metal™ Zero XRP is available in the QR Standard version with 15mm THRU-AXLE kit (included) for the front wheel and in the QR standard version for the rear.

Red Metal™ Zero XRP is compatible with UST tubeless tyres and with all ISO 6-bolt and AFS™ braking systems.

QR front hub
Black version

Thru-Axle 15mm front hub
Black version

RED METAL™ 1 XL

weight 1650g

tech: MoMag™ · 2:1 Two-to-One™ · Oversize Axle · Thru-Axle option

XC · Marathon · All Mountain

tubeless

WRS

Red Metal™ 1 XL
The secret of Red Metal™ 1 XL's success is to be found in a perfect mix of performance, lightness and looks.
Since it was first created, Red Metal™ 1 XL has proven to be a successful wheel and plans to be so for many years to come!

new adapter kit QR/ Thru-Axle 15mm (included)

rear wheel 12mm Thru-Axle version (Kit Syntace X-12 included)

This is why this year, Red Metal™ 1 XL comes with an additional feature that makes it compatible with front-wheel 15mm through-bolt suspensions and the new standard rear O.L.D of 142mm. These two pieces of kit will enable you to customize your Red Metal™ 1 XL to suit your bike's features.

The aluminium **spokes** designed by Fulcrum® number 24 for both the front and rear wheels. In both cases we employed our 2:1 technology to improve torque transmission on the rear wheel and braking and directionality on the front.

The aluminium **hubs** have 20 mm axles that notably increase the stiffness of the wheel, which improves manoeuvring precision and eliminates the annoying phenomenon of pad-disc brake contact. The smoothness of the Red Metal™ 1 XL is guaranteed by industrial bearings with double seal. The maximum smoothness, virtually maintenance-free.

Red Metal™ 1 XL wheels are compatible with UST tubeless tires and with all ISO six-bolt and AFS™ braking systems.

QR front hub — Thru-axle 15mm front hub

RED METAL™ 3

weight 1685g

tech: **MoMag™ · 2:1 Two-to-One™ · Oversize Axle · Thru-Axle option**

XC · Marathon · All Mountain

tubeless

Red Metal™ 3

Versatile, sturdy, responsive: Red Metal™ 3 is a well-balanced wheel for all types of terrain.
Lighter rim and spokes, an oversized hub and an aggressive and attractive design make this wheel the ideal choice for everyday rides.

rear wheel 12mm Thru-Axle version (Kit Syntace X-12 included)

They employ variable-section stainless steel **spokes** in the 2:1 Two-to-One™ assembly configuration on both wheels, with 16 elements on the sprocket set side of the rear wheel and on the disc side of the front, and 8 on the opposite side.

The **hubs** fitted are of the aluminium oversize type fitted with a 20 mm axle front and rear.

These wheels are compatible with Tubeless UST tyres whose availability in International Standard and AFS™ versions means that they can be combined with the main disc braking systems on the market.

Red Metal™ 3 includes the 15mm THRU AXLE ADAPTER KIT and the 142mm SYNTACE X-12 ADAPTER KIT (only suitable for 12mm through-bolt version).

new adapter kit QR/Thru-Axle 15mm (included)

QR front hub

Thru-axle 15mm front hub

RED METAL™ 5

weight 1805g

tech: 2:1 Two-to-One™ · Oversize Axle

XC · Marathon · All Mountain

clincher

WRS

Le Red Metal™ 5 wheels allow all enthusiasts to enter the Fulcrum® Off-Road universe. Red Metal™ 5 are wheels at a nice price but with high quality: Fulcrum® is aiming at these two features, to offer you high-performance wheels and long-term reliability.

Their **rim** has a specific profile for disc brakes with a height of 19 mm, a bonded joint and black anodized finish. This is the same finish that distinguishes the **spokes** mounted in a 2:1 Two-to-One™ configuration with 16 elements on the sprocket set and disc side and eight elements on the other.

The axles, with a 20 mm diameter both front and rear, run on sealed bearings. The freewheel, with a steel body, turns on sealed bearings.

The total weight is 1805 g, compatibility is guaranteed with standard tyres with rim tape, and the disc assembly option is envisaged in the International Standard and with AFS™, and therefore with the most common braking system.

the double fulcrum of the quick-release guarantees easy locking and more secure fastening

front hub

RED METAL™ 10

weight 1959g

tech: 2:1 Two-to-One™ · Oversize Axle

XC · Marathon · All Mountain

clincher

Red Metal™ 10
Solid and strong with high impact graphics, these wheels are ideal for everyday use or for training. The rims are black anodised aluminium and are compatible only with disc brakes.

The 2 mm stainless steel **spokes** feature the characteristic Fulcrum® 2:1 Two-to-One™ spoke ratio, which ensures optimal torque transmission, better distribution of the spoke tension, and an excellent response to disc braking.

The oversize **hubs** in aluminium are equipped with double seal industrial bearings to ensure long-lasting performance and minimal maintenance.

Braking is provided by a disc brake system, and any product compatible with the ISO six-bolt system can be used.

front hub

RED METAL™ 29XL

tech: MoMag™ · 2:1 Two-to-One™ · Oversize Axle · Thru-Axle option

weight 1750g

XC · Marathon · All Mountain

tubeless

front wheel

Red Metal™ 29 XL

XL is the abbreviation of Extra Light and expresses the work carried out by the Fulcrum® engineers to lower the weight of the already high-performing Red Metal™ 29″ 2010. The new wheel weighs 1750 g, almost 100 grams less than the previous version.

Fulcrum® believes in the 29″ wheel and demonstrates it by creating a new wheel that significantly improves performance with respect to the previous version.

new adapter kit QR/ Thru-Axle 15mm (included)

rear hub

The **rim** is new, more rigid thanks to the new design of the profile, and lightened as the result of a special single milling.

The new circular section aluminium straight-head **spokes** enable greater and more durable tensions, increasing the wheel's performance and keeping it consistent over time.

The spoking system is hybrid: for the front, 14 crossed spokes on the left and 7 radial spokes on the right; for the rear, 8 crossed spokes on the left and 16 crossed spokes on the right.

Hubs: the new Red Metal™ 29″ XL is available in the QR Standard version with 15mm THRU-AXLE kit (included) for the front wheel, and in the QR standard version only for the rear.

The new Red Metal™ 29″ XL weighs only 1750 g, almost 100 grams less than the previous version. – this is repeated from the beginning of Red Metal™ 29 XL.

QR front hub

Thru-axle 15mm front hub

RED METAL™ 29SL

weight 2028g

tech: **2:1 Two-to-One™ · Oversize Axle**

XC · Marathon · All Mountain

clincher

front wheel

front hub

The weight of Red Metal™ 29 SL wheels is just thirty grams over two kilos. We have created a **rim** for this model with a height of 19 millimetres compatible only with tyres with tubes. The front and rear wheel are fitted with 28 aerodynamic spokes with differentiated thicknesses.

This model also exploits the strength of oversize aluminium 20 millimetre **hubs** and sealed bearings for maximum life and precision.

It can only be used with six-hole disc brakes according to the ISO standard.

Red Metal™ 29 SL

They are placed in the middle of the range, but Red Metal™ 29 SL wheels have a marked personality which leaves them still to be desired compared with their bigger sisters. The 29" standard will become increasingly successful, especially among tall cyclists, also because they make it possible to obtain a bike with better proportions.

rear hub

fulcrum

all mountain enduro freeride 4x

worlds

RED ZONE™ XLR

weight 1705g

tech: MoMag™ · 2:1 Two-to-One™ · Oversize Axle

All Mountain · Enduro · Freeride · 4X

tubeless

Red Zone™ XLR
Red Zone™ XLR is the boldest version of the Red Zone™ model. It's an absolutely multipurpose model that could be defined as Enduro-Freeride.

front wheel

rear wheel 12mm Thru-Axle version (Kit Syntace X-12 included)

The aluminium **rims** are specially milled for lightening between the anchoring points of the spokes to obtain a rim that's extremely resistant to impact yet also very light.

The aluminium **spokes** are designed and produced by Fulcrum® to ensure the maximum performance in every moment and in every situation. Both the front and rear wheels have 24 spokes, distributed according to the exclusive Fulcrum® 2:1 spoke ratio, which significantly increases your power transmission and your manoeuvring precision.

Red Zone™ XLR wheels are compatible with tubeless tires, which adhere perfectly thanks to the Ultra-Fit™ Tubeless system, eliminating energy dispersion to the advantage of speed and therefore of overall performance.

Red Zone™ XLR includes the 142mm SYNTACE X-12 ADAPTER KIT (only suitable for 12mm through-bolt version).

Red Zone™ XLR is compatible with all ISO six-bolt braking systems.

Thru-Axle 20mm front hub

RED ZONE™

weight 1750g

tech: MoMag™ · 2:1 Two-to-One™ · Oversize Axle

All Mountain · Enduro · Freeride · 4X

tubeless

Red Zone™
Red Zone™ has been created for riders who love using their mountain bike with no limits. We could define it as Enduro-Freeride, or if you prefer, a wheel that's light and reactive for climbs and strong and resistant when you decide to lift the wheels off the ground.

rear wheel 12mm Thru-Axle version (Kit Syntace X-12 included)

The **rims** are class 21 lightened between one spoke and the other, so we have a rim that is strong but at the same light.

Both the front and rear wheels have 24 stainless steel **spokes** with variable thickness 2.2/1.8/2, with reinforced head, distributed according to Fulcrum® 2:1 technology with double the number of spokes on the cassette side for the rear wheel and disc side for the front. This means getting the maximum performance both when pedalling and manoeuvring.

Red Zone™ the 142mm SYNTACE X-12 ADAPTER KIT (only suitable for 12mm through-bolt version).

Red Zone™ is compatible with UST tubeless tires and with all ISO six-bolt braking systems.

Thru-Axle 15mm front hub

dh - freeride

worlds

RED FIRE™

weight 2215g

tech: MoMag™ · 2:1 Two-to-One™ · Oversize Axle

Freeride · DH

tubeless

front wheel

Red Fire™

Fulcrum® debuted in freeride biking with a wheel conceived for the most daring, but without forgetting that the bike's lightness is important, even going downhill, hence the Red Fire™.
The anodized red **rim** made only for tubeless tyres which, thanks to the Ultra-Fit™Tubeless system, can adhere perfectly. Therefore eliminating the dispersion of energy to the complete benefit of speed and performance.

Thru-Axle front hub

Weight is saved by milling the rim. Very great attention was focussed on the wheel's dynamic behaviour: it is no coincidence that asymmetrical drilling was chosen to permit better **spoke** balancing, leaving sufficient space for the disc brake and sprocket set.

A freeride wheel like the Red Fire™ certainly cannot overlook strength. That is why we chose a sole solution: the adoption of the thru-axle for the rear wheel too.

The two axles are 20 and 12 millimetres respectively.

Thru-Axle rear hub

RED HEAT™

tech: 2:1 Two-to-One™ · Oversize Axle

weight 2202g

Freeride · DH

clincher

Red Heat™

The 2011 season will see a new addition to the DH/Freeride Fulcrum® wheel series: the Fulcrum® Red Heat™.

With this newly born wheel, Fulcrum® shows its desire to be an established player in the world of Downhill and Freeride. The red "F" company already "rules" this world with the indestructible Red Fire™.

Thru-Axle rear hub

A result of a joint collaboration between Fulcrum® engineers and the most demanding world class cyclists, the Red Heat™ is the best option to introduce yourself to the DH/FR world.

Designed to be solid and strong, the Red Heat™ is ready to avoid any obstacles and land safely after a jump. Weighing less than 2202g, it is an excellent achievement for its category. Designed for classic clincher and tube wheels, the Red Heat™ boasts a 22mm rim for a better foot print and unfaltering grip.

The graphics were specially designed to give the wheels a more aggressive look and to make bikes more attractive from the wide handlebars to over 150mm "ranges".

The **hubs** are oversize, in aluminium alloy, and adopt the Thru-Axle standards (20 mm/110mm for the front wheel and 12 mm/150mm for the rear). This increases rigidity, offers better wheel control and avoids friction between discs and pads. There are 32 plain and reinforced **spokes** both in the front and rear wheel, made of variable section stainless steel (Ø 2,2/2/1,8/2) .
Simpler maintenance is also a feature, self-locking nipples, and re-designed spoke interfaces ensure easier spoke replacement. Red Heat™ is compatible with all the 6-bolt ISO breaking systems.

Thru-Axle front hub

	RED CARBON™ XRP™		RED METAL™ ZERO XRP™		RED METAL™ 1XL				RED METAL™ 3			RED METAL™ 5		RED METAL™ 10		RED METAL™ 29XL™		RED METAL™ 29SL™	
	RED **CARBON™ XRP** *front* Disc Brake	RED **CARBON™ XRP** *rear* Disc Brake	RED METAL™ **ZERO XRP** *front* Disc Brake	RED METAL™ **ZERO XRP** *rear* Disc Brake	RED METAL™ **1 XL** *front* Disc Brake	RED METAL™ **1 XL** *front* **20 mm THRU-AXLE** Disc Brake	RED METAL™ **1 XL** *rear* Disc Brake	RED METAL™ **1 XL** *rear* **12mm THRU-AXLE** Disc brake	RED METAL™ **3** *front* Disc Brake	RED METAL™ **3** *rear* Disc Brake	RED METAL™ **3** *rear* **12mm THRU-AXLE** Disk brake	RED METAL™ **5** *front* Disc Brake	RED METAL™ **5** *rear* Disc Brake	RED METAL™ **10** *front* Disc Brake	RED METAL™ **10** *rear* Disc Brake	RED METAL™ **29 XL** *front* Disc Brake	RED METAL™ **29 XL** *rear* Disc Brake	RED METAL™ **29 SL** *front* Disc Brake	RED METAL™ **29 SL** *rear* Disc Brake
weight*	597	750	670	800	735	757	915	900	745	940	925	821	984	876	1083	780	970	931	1097
finish	carbon	carbon	black red&blk	black red&blk	black	black	black	black	black	black	black	black	black	black	black	black	black	black	black
welded rim joint	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no	no	no	yes	yes	no	no
RIM TAPE	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	yes	yes	yes	yes	not needed	not needed	yes	yes
machining	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no	no	no	yes	yes	no	no
nominal width	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
spoke material	stainless steel	stainless steel	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	aluminum	aluminum	stainless steel	stainless steel
number of spokes	10 left 10 right	10 left 10 right	14 left 7 right	8 left 16 right	16 left 8 right	16 left 8 right	8 left 16 right	8 left 16 right	16 left 8 right	8 left 16 right	8 left 16 right	16 left 8 right	8 left 16 right	16 left 8 right	8 left 16 right	14 left 7 right	8 left 16 right	14 left 14 right	14 left 14 right
type of spokes	ultra aero with variable section	ultra aero with variable section	aero with variable section	aero with variable section	oversize Ø 2,8mm	oversize Ø 2,8mm	oversize Ø 2,8mm	oversize Ø 2,8mm	aero with variable section	aero with variable section	aero with variable section	aero	aero	standard 2mm	standard 2mm	oversize Ø 2,8mm	oversize Ø 2,8mm	aero with variable section	aero with variable section
hub material (body/axle/ Fwbody)	Alu/ Carbon/-	Alu/ Carbon/ Titanium	Alu/ Carbon/-	Alu/ Carbon/ Titanium	Alu/ Alu/-	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/Steel	Alu/ Alu/Steel	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/ Steel
O.L.D.	100mm	135mm	100mm	135mm	100mm	100mm	135mm	135mm	100mm	135mm	135mm	100mm	135mm	100mm	135mm	100mm	135mm	100mm	135mm
braking system compatibility	ISO INTL 6 Bolts		ISO INTL 6 Bolts AFS™		ISO INTL 6 Bolts AFS™	ISO INTL 6 Bolts	ISO INTL 6 Bolts AFS™	ISO INTL 6 Bolts AFS™	ISO INTL 6 Bolts AFS™			ISO INTL 6 Bolts AFS™		ISO INTL 6 Bolts		ISO INTL 6 Bolts		ISO INTL 6 Bolts	

** average weight (tolerance +/- 5%): does not include the quick-release and it refers to the lightest configuration.*

RED ZONE™ XLR

RED ZONE™

RED FIRE™

RED HEAT™

	RED **ZONE** ™ **XLR** front **15** THRU-AXLE Disc Brake	RED **ZONE** ™ **XLR** front **20** THRU-AXLE Disc Brake	RED **ZONE** ™ **XLR** rear Disc Brake	RED **ZONE** ™ **XLR** rear **12** THRU-AXLE Disc Brake	RED **ZONE** ™ front **15** THRU-AXLE Disc Brake	RED **ZONE** ™ front **20** THRU-AXLE Disc Brake	RED **ZONE** ™ rear Disc Brake	RED **ZONE** ™ rear **12** THRU-AXLE Disc Brake	RED **FIRE** ™ front **20** THRU-AXLE Disc Brake	RED **FIRE** ™ rear **15** THRU-AXLE Disc Brake	RED **HEAT** ™ front **20** THRU-AXLE Disc Brake	RED **HEAT** ™ rear **12** THRU-AXLE Disc Brake
weight*	770	785	950	935	785	800	980	965	1016	1199	1012	1190
finish	bl/sil	bl/sil	bl/sil	bl/sil	black	black	black	black	red	red	black	black
welded rim joint	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
RIM TAPE	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	not needed	yes	yes
machining	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
nominal width	21	21	21	21	21	21	21	21	23	23	25	25
spoke material	aluminium	aluminium	aluminium	aluminium	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
number of spokes	16 left 8 right	16 left 8 right	8 left 16 right	8 left 16 right	16 left 8 right	16 left 8 right	8 left 16 right	8 left 16 right	16 left 16 right	16 left 16 right	16 left 16 right	16 left 16 right
type of spokes	oversize Ø 2,8mm	oversize Ø 2,8mm	oversize Ø 2,8mm	oversize Ø 2,8mm	aero with variable section	aero with variable section	aero with variable section	aero with variable section	variable section	variable section	variable section	variable section
hub material (body/axle/ Fwbody)	Alu/ Alu/-	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/ Steel	Alu/ Alu/-	Alu/ Alu/ Steel
O.L.D.	100mm	110mm	135mm	135mm	100mm	110mm	135mm	135mm	110mm	150mm	110mm	150mm
braking system compatibility	ISO INTL 6 Bolts		ISO INTL 6 Bolts		ISO INTL 6 Bolts		ISO INTL 6 Bolts		ISO INTL 6 Bolts		ISO INTL 6 Bolts	

** average weight (tolerance +/- 5%): does not include the quick-release and it refers to the lightest configuration.*

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