
RITCHEY
BICYCLE COMPONENTS
Ritchey Carbo
Ritchey Carbon
WCS
2004
Ritchey
Bicycle
Components

RITCHEY 30
30 Years of Innovation



Tom on the ?????? Date, 2003

Hi, I'm Tom Ritchey. I am very proud to publish our '04 product catalog because it represents 30 years of designing and refining bikes and components.

Designing products for thirty years gives me pause to take a retrospective on my journey as a designer. I started with a unique, common sense approach to building the best road and mountain components available. I looked around and saw two conditions in my early days. First, the parts that did exist needed substantial refining to make them work optimally. Secondly, very few companies were addressing the needs of elite level racers by pushing the envelope on weight without compromising durability. Those philosophies shaped my thinking and are the cornerstone of Ritchey Bicycle Components today.

As I introduced my concepts and products to the US market, I quickly found that cyclists around the world embraced my thinking and beat a path to our door to buy Ritchey products. Europeans have such an amazing passion for the sport and truly appreciate thoughtful design.

This lead us to establish Ritchey International in Lugano, Switzerland and more importantly, it lead me to realize we had become a global company serving cyclists in every major market on the planet.

I began my bike industry career through racing, so it was only natural to utilize world-class racers to test and refine our products. We have sponsored more teams than I can count, and everyone has contributed insight to us for refining our products to meet the most demanding use. The 2003 European racing season confirmed that Ritchey has cracked open the door of traditional thinking within the ranks of the Pro peleton and established us as a trusted source for the very best components available today.

It has been a great thirty years and I'm looking forward to the future.

Thank you for your support,

Tom

The Component Levels

Ritchey components are divided into four tiers to meet the specific needs of different riders. **WCS** is the top of the line, using the highest quality materials to create the lightest, strongest and very best parts available. The **Pro** line shares much of the state-of-the-art design, engineering and materials as WCS at a lower price - perfect for hard-core riders and racers who want world class performance for less cost. In the **Comp** line, Ritchey's passion for creating lighter, stronger parts is brought down to a bargain price point for weekend warriors and new riders. Ritchey's **Severe Condition** group is beefed up to endure the bike-mangling abuse of downhill and free-riding. SC components and tires are designed with strength and durability in mind while employing the same premium materials, proprietary manufacturing techniques and innovative design features as Ritchey's other groups. SC - overbuilt, not overweight.

WCS is Ritchey's premium product line and the vanguard of functional, lightweight component design. The WCS range is inspired by the success of Ritchey components in world championship and world cup competition and suits the needs of both champion racers and core enthusiasts. Many WCS features find their way to the Pro and Comp levels.

Pro components are the heart of Ritchey's product range and designed to function flawlessly in the most demanding conditions. Racers and dedicated enthusiasts will appreciate the performance of Pro parts that incorporate many WCS design features at Ritchey's middle price point.

Comp components are designed for enthusiasts seeking the best bang for their buck. Ritchey performance, reliability, and design sophistication are hallmarks of the Comp range, which incorporates many WCS and Pro design features at a value point. Ritchey components are original equipment on many other bike brands, adding value and key selling .

Severe Condition (SC)™ products are designed for aggressive downhill, dual slalom and freeride oriented applications. SC, Ritchey's most substantial components, employ construction methods and design integrity used in Pro and WCS products, but maximized for ultimate strength and durability. SC is Ritchey's answer for off road riders looking to push the envelope of riding skill. These components are designed to offer maximum performance to riders valuing superior strength over light weight.

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Ritchey Carbon WCS™



Ritchey Carbon WCS™

Ritchey Carbon – a new category of top-tier components at Ritchey makes its debut in 2004. We showed some carbon designs in 2003 and quickly found out that not all carbon is made the same. There are lots of bargain priced carbon products on the market, which are not only a bad value, but can be outright dangerous. Knowing this, we took a scientific approach to our designs and carefully researched material stress points, then reinforced those areas to insure maximum durability.

We designed a custom testing machine (M.O.A.B.d : Mechanical - Objective - Analysis - Breakage - device), to confirm Ritchey carbon products were not only lightweight, but also capable of meeting the most rigorous testing standards. Initially, it caused us to scrap a few designs and start over, but we'd rather spend the time to bring only fully approved products to market.

Why use carbon fiber when forged alloy works just fine?

Carbon fiber offers the designer the unique opportunity to specify the carbon sheet bias orientation, thereby controlling the strength factor of each contour of the component. The resin agent dampens high frequency vibration so the rider enjoys a plusher ride with enhanced "road feel." Comfort, weight savings, and lightening quick response are just a few of the reasons to buy Ritchey carbon.

Ritchey Carbon:

Handlebars - 6 & 7

Post - 11

Forks - 16

Wheels - 17



HANDLEBARS



WCS™ Carbon Road Bar

- Manufactured in a leading edge facility of aerospace grade materials
- Oversize 31.8mm center section increases strength and rigidity
- Carbon wrap is tuned to provide torsional strength and vibration damping

	material	width Center to Center	drop/reach	weight	finish	clamp dia
WCS	Carbon	40/42/44	144	205g	Carbon	31.8



Road Bar

- WCS level TRX50 seamless, triple butted alloy
- Anatomical and classic bends
- Deep groove hides cables
- R50 bend for more hand room (see chart below)

	material	butting	width Center to Center	drop/reach	weight	finish	clamp dia
WCS	TRX50	Triple	40, 42, 44	144/82mm	210g	Black	25.8
WCS 31.8	TRX50	Triple	40, 42, 44	144/82mm	225 g	Black	31.8
WCS "Classic" Bar	TRX50	Triple	40, 42, 44	135/82mm	210g	Black	25.8
WCS 31.8 "Classic" Bar	TRX50	Triple	40, 42, 44	144/82mm	250g	Black	31.8
PRO	7075 T-6	Double	40,42,44,46	144/82mm	235g	Black	25.8
PRO 31.8	7075 T-6	Double	40,42,44	144/82mm	250g	Black	31.8
Comp	6061 T-6	Single	40,42,44	144/82mm	290g	BB Silver	25.8
Comp 31.8	6061 T-6	Single	40,42,44	144/82mm	305g	BB Silver	31.8



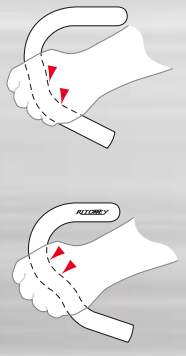
BioMax™

- The most anatomically advanced bar available
- 6 degree swept-back tops and 3 degree flared, short-reach ergonomic drops
- Improved larger "ergo bump" for more comfortable drop riding
- R50 bend for more hand room (see chart below)
- Grooved to hide cables
- 144mm drop version available only from Ritchey USA

	material	butting	width Center to Center	drop/sweep	flare	weight	finish
PRO	7075 T-6	Triple	38,40,42,44	130/75mm	3°	235g	BB Black
PRO	7075 T-6	Triple	42, 44, 46	144/82mm	0°	240g	BB Black

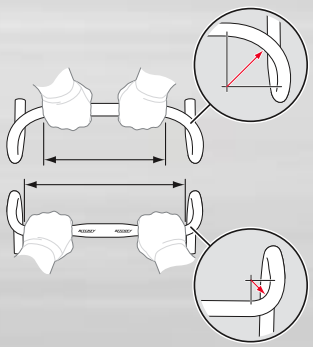
Ergo Drops

Standard Ergo bars have a simple flat spot to fit your hand. Except your hand isn't exactly flat. Ritchey's BioMax Ergo drops have a specially-shaped bump to fit the shape of your hand, so you have a comfortable pistol grip feel when riding on the drops. This drop also allows the hand to better grip and squeeze the brake levers.



R-50 Radius Bend

Road bars are all about multiple hand positions, and Ritchey's R50 bend bars offer a greater number of comfortable, usable hand positions than most. By tightening the angle of the bar where it bends down to the drops, we've provided 30% more space on the tops for climbing, which allows a wider hand position for better breathing.



Blue - US Only Red- Europe Only Black - Both

HANDLEBARS

Carbon Rizer™ & Flat Bar O/S

- Manufactured in a leading edge facility of aerospace grade materials
- Textured stem clamp area reduces risk of bar slippage
- Carbon wrap is tuned to provide torsional strength and vibration damping
- Intended for XC use



	material	butting	width	diameter	bend/rise/sweep	weight	finish
WCS Rizer	Carbon	N/A	660	31.8mm	9˚, 32mm rise, 3˚	160g	Carbon
WCS Flat	Carbon	N/A	580	31.8mm	5˚	135g	Carbon

Rizer™ Mountain Bar

- Available in ideal bends and weights for cross-country, freeride, and downhill
- Proprietary Ritchey TRX50 seamless, triple butted alloy is more fatigue resistant than standard 6000 and 7000 series aluminum (WCS only)
- Bead blasted black anodized finish
- Available 31.8mm version increases strength and rigidity



	material	butting	width	diameter	bend/rise/sweep	weight	finish
WCS 31.8	TRX50	Triple	660mm	31.8mm	9˚, 35/30mm rise, 3˚	235g	BB Black
WCS	TRX50	Triple	660mm	25.4mm	9˚, 35/20mm rise, 3˚	225g	BB Black
PRO	2014 T-6	Triple	670mm	25.4mm	10˚, 38mm rise, 3˚	290g	BB Black
PRO 31.8	2014 T-6	Triple	670mm	31.8mm	9˚, 35mm rise, 3˚	300g	BB Black
Comp	6061 T-6	Triple	670mm	25.4mm	9˚, 38mm rise, 3˚	365g	BB Black
Comp 31.8	6061 T-6	Triple	670mm	31.8	9˚, 38mm rise, 3˚	375g	BB Black
CS	6061 T-6	Single	670mm	25.4mm	10˚, 45mm rise, 3˚	465g	BB Black

Flat Mountain Bar

- Seamless TRX50, triple butted construction (WCS only)
- Bead-blasted and anodized finish improves fatigue strength
- More World Cup XC wins than any other bar



	material	butting	width	diameter	bend	weight	finish
WCS 31.8	TRX50	Triple Seamless	580mm	31.8mm	5 degree	135g	BB Black
WCS	TRX50	Triple Seamless	550mm	25.4mm	5 degree	125g	BB Black
PRO	2014 T-6	Double	560mm	25.4mm	5 degree	140g	BB Black
PRO 31.8	2014 T-6	Double	570mm	31.8mm	5 degree	145g	BB Black
Comp	6061 T-6	Double	580mm	25.4mm	5 degree	170g	BB Black
Comp 31.8	6061 T-6	Double	580mm	31.8mm	5 degree	175g	BB Black

Bar Ends

- Angled clamp slot reduces stress on lightweight bars
- 3D-Net shaped cold forged one-piece design (WCS only)
- Black or silver



	material	weight	construction	length	finish
WCS	6061	90g	3-axis Cold Forged	Short/Med	BB Black, Polish Silver
Comp	6061	160g	2 piece bonded	Short/Med	BB Silver, BB Black

Blue - US Only Red- Europe Only Black - Both

STEMS



WCS™ Stem

- 3D-Net Forged, polished 4-bolt faceplate wraps 180 degrees around the bar to reduce stress
- New alloy (TRX78) makes ones one of the world's lightest stems even lighter
- Angled clamp helps prevent damage to lightweight aluminum and carbon steerer tubes
- Available 31.8mm clamp diameter increases strength and rigidity
- Interchangeable angle with flip-flop logo
- 1" sizing sleeve included with road stems

	stem mat.	stem const.	cap width	cap bolts	steerer	bar	angle	lengths mm	weight	finish
WCS	TRX78	3D Forged	40	4	1 1/8"	25.4/25.8mm	84/73°	see chart	100g	BB Black
WCS 31.8	TRX78	3D Forged	40	4	1 1/8"	31.8mm	84°	see chart	110g	BB Black



Pro™ Stem

- 3D-Net Forged, 4-bolt faceplate wraps 180 degrees around the bar to reduce stress
- Angled clamp helps prevent damage to lightweight aluminum and carbon steerer tubes
- Interchangeable angle with flip-flop logo
- Available 31.8mm clamp diameter increases strength and rigidity
- 1" sizing sleeve included with road stems

	stem mat.	stem const.	cap width	cap bolts	steerer	bar	angle	lengths mm	weight	finish
PRO	6061 T-6	3D Forged	40	4	1 1/8"	25.4/25.8mm	84/73°	see chart	145g	BB Black
PRO 31.8	6061 T-6	3D Forged	40	4	1 1/8"	31.8mm	84°	see chart	160g	BB Black



Comp™ Stem

- 3D-Net Forged 6061-T6 alloy construction
- Recessed stem bolts
- Interchangeable angle with flip-flop logo
- 1" sizing sleeve included with road stems

	stem mat.	stem const.	cap width	cap bolts	steerer	bar	angle	lengths mm	weight	finish
Comp	6061 T-6	3D Forged	42	4	1 1/8"	25.4/25.8mm	84	See Chart	160g	BB Black
Comp	6061 T-6	3D Forged	42	4	1 1/8"	31.8mm	84°	See Chart	175g	BB Black



Severe Condition™ Widemouth™ Stem

- New design suitable for aggressive and abusive riders
- 50mm wide 4-bolt faceplate for solid clamping and lateral rigidity

	stem mat.	stem const.	cap width	cap bolts	steerer	bar	angle	lengths mm	weight	finish
SC	6061 T-6	3D Forged	50mm	4	1 1/8"	31.8mm	15	see chart	175g	BB Black

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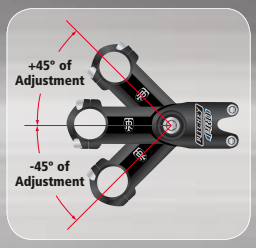
STEMS

Pro™ Adjustable Stem

- Angle adjustability without the sacrifice of performance
- All the quality and features of Ritchey's popular, proven, Pro stem with angle adjustability
- Over 45° of adjustment in either steer mount position
- Precision 3-D net shaped forged shaft interconnects with a precision broached clamp to create the strongest, lightest, most secure adjustable stem available



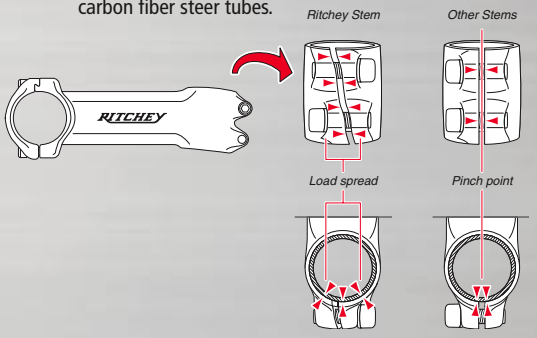




	stem mat.	stem const.	cap width	cap bolts	steerer	bar	angle	lengths mm	weight	finish
PRO	6061 T-6	3D Forged	40mm	4	1 1/8"	25.4/25.8mm	45° range	80, 100, 120	219g	BB Black

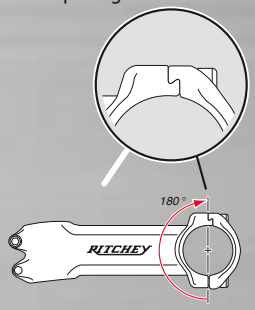
Bias Clamp & Opposing Bolts

Most stem clamps focus a tremendous amount of stress on the steer tube and bolt threads. By cutting the stem clamp at an angle and using opposing bolts, stress is dissipated evenly across the clamp zone, resulting in a stronger, more secure clamp with less torque. That's why Ritchey stems are among the few recommended for use with lightweight carbon fiber steer tubes.



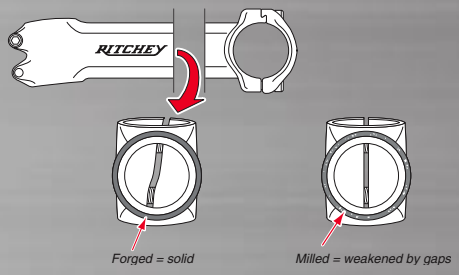
WCS™ Stem Z-Clamp

The Z-Clamp provides a mechanical lock between the stem and one edge of the faceplate to combine the convenience of a removable faceplate stem with the superior stress distribution and secure grip of a traditional stem clamp design.



3D-Net Shaped Stem Forging™

The extreme durability and lightweight of our WCS, Pro and Comp stems is achieved through an advanced form of cold forging called 3D Net-Shaped Forging. This sophisticated process allows us to create the shape of the stem in a single step while carefully controlling the inner wall shape and thickness. Cold forging allows Ritchey to compress, refine and align the grain structure of the aluminum and remove any internal imperfections. As a result, less material can be used without compromising strength or reliability.



Stem Dimensions: All 28.6 Steer Tube Diameter

Stem Dimensions (All 28.6 Steer Tube Diameter)

MODEL	DEGREE	60	70	80	90	100	110	120	130	140
WCS O/S	84/6				x	x	x	x	x	x
WCS Rd	84/6				x	x	x	x	x	x
WCS Mtn	84/6				x	x	x	x	x	
WCS Rd	73/17			x	x	x	x	x		
Pro O/S Stem	84/6				x	x	x	x	x	
Pro Mtn	84/6			x	x	x	x	x	x	
Pro Mtn	73/17				x	x	x	x	x	
Pro Rd	84/6			x	x	x	x	x	x	
Pro Rd	73/17			x	x	x	x	x	x	
Pro Adjustable				x		x		x		
COMP O/S	84/6				x	x	x	x	x	
Comp Rd	84/6				x	x	x	x	x	
Comp Mtn	84/6					x	x	x	x	
Comp Mtn	5d	x	(75mm)		x					
Comp Mtn	40d			x						
Widemouth SC O/S	15	x	x	x	x					

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HEADSETS

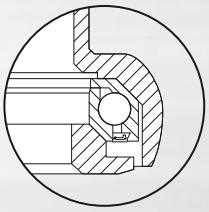


WCS™ Logic® Headset

- Lightweight, precision-machined aluminum cups
- Small upper angular cartridge bearing saves weight, larger lower angular cartridge bearing boosts strength and durability
- Uses Ritchey grease and sealed design for years of trouble-free performance

	height	upper cone	upper cup	lower cup	crown race	upper bearing	lower bearing	grams
WCS 1"	28mm	7075	7075	7075	7075	Micro ACB	ACB	93g
1-1/8"	28mm	7075	7075	7075	7075	Micro ACB	ACB	97g
1" Threaded	28mm	7075	7075	7075	7075	Micro ACB	ACB	103g

** ACB = Angular Contact Bearing*



WCS Bearing

Headset Bearing Features
Angular contact races better support bearings to provide maximum bearing life and smoothness - with none of the slop that plagues less sophisticated designs. Ritchey uses smaller bearings to save weight in the low-stress upper race, and larger bearings down below, where loads are the highest. All this makes our headsets lighter than the competition.



Scuzzy Logic® Headset

- Lightweight, durable cartridge headset at a great price
- Smooth, maintenance-free sealed cartridge bearings

	height	upper cone	upper cup	lower cup	crown race	upper bearing	lower bearing	grams
PRO 1"/1-1/8"	28mm	Alloy	Alloy	Alloy	Steel	Cartridge	Cartridge	110g
Compy 1-1/8"	28mm	Plastic	Steel	Steel	Steel	Cartridge	Cartridge	147g
Compy 1"	28mm	Plastic	Steel	Steel	Steel	Cartridge	Cartridge	142g



Logic® Headset

- Designed for affordable, long-lasting performance
- Strong 3/16" lower bearing design, lightweight 5/32" top bearing
- Threaded version available

	stack height	upper cone	upper cup	lower cup	crown race	upper bearing	lower bearing	grams
Compy 1/1-1/8"	27mm	Plastic/Alloy	Steel	Steel	Steel	5/32" Ball	3/16" Ball	117g



Logic® Zero™ Integrated "Press Fit"

- Full complement angular contact cartridge bearings packed with Ritchey hi-webbing grease
- Cromo and 2014 cup option
- Available conical spacers give a smooth clean look

Press Fit	stack height	cup material	headtube ID/depth	bearings	grams
WCS	13mm	Alloy	44mm/9mm	Sealed Cartridge Stainless	110g
PRO	11mm	CroMo	44mm/9mm	Sealed Cartridge	125g
Compy	15mm	CroMo	44mm/9mm	Semi Cartridge	135g





Logic® Zero™ Integrated "Drop In"

- Full complement angular contact cartridge bearings packed with Ritchey hi-webbing grease
- Compatible with Campy style headtubes
- Adjustable stack height using available spacers

Drop In	stack height	component material	headtube ID/depth	bearings	grams
PRO	7mm	Alloy	42mm/6.9mm	Sealed Cartridge	70g
Compy	10mm	Steel	42mm/6.9mm	Sealed Cartridge	90g

Blue - US Only **Red- Europe Only** **Black - Both**

SEATPOSTS

WCS™ Ritchey Carbon Post

- Manufactured in a leading edge facility of aerospace grade materials
- Carbon wrap is tuned to provide torsional strength and vibration damping
- Low profile clamp reduces stress on lightweight saddle rails
- Fore / Aft bolt positions allow for precise angle adjustment

UNDER DEVELOPMENT 04 RELEASE DATE TBD



	material	cradle	diameter	length	weight	finish
WCS	Carbon	43x38	27.2/31.6	330mm	195g	Carbon

WCS™ Post

- Two-bolt design for easy to adjust, vise-like grip
- Low profile clamp reduces stress on light rails and won't bottom out
- Bolts oriented to the axis of the rails for greatest contact area with the saddle
- Forged 2014 aluminum head mated to machined 7075 aluminum shaft



	material	construction	cradle	diameter	length	weight	finish
Mountain WCS	7075/2014	Forged	43x38	27.0-31.6	350/400mm	220g	BB Black/ Silver Top
Road WCS	7075/2014	Forged	43x38	27.0-27.2	280/300mm	190g	BB Black/ Silver Top

Pro™ Post

- Two-bolt design for easy to adjust, vise-like grip
- Low profile clamp reduces stress on light rails and won't bottom out
- Strong and light 3-D forged one-piece construction
- Wide saddle cradle support system



	material	construction	cradle	diameter	length	weight	finish
Mountain PRO	2014	3D Forged	43x38	26.8-27.31.6	350/400mm	255g	BB Black
Road PRO	2014	3D Forged	43x38	27.0-27.2	280/300mm	225g	BB Black

Comp™ Post

- Two-bolt design for easy to adjust, vise-like grip
- Low profile clamp reduces stress on light rails and won't bottom out
- Strong and light 3-D forged one-piece construction
- Wide saddle cradle support system



	material	construction	cradle	diameter	length	weight	finish
Mountain Comp	6061	3D Forged	43x38	27.0-31.6	400mm	250g	Black
Road Comp	6061	3D Forged	43x38	26.8/27.2	300mm	240g	Black
Logic - Single Bolt	6061	Forged	43x38	25.0-31.8	300/400mm	320g	Silver/Black

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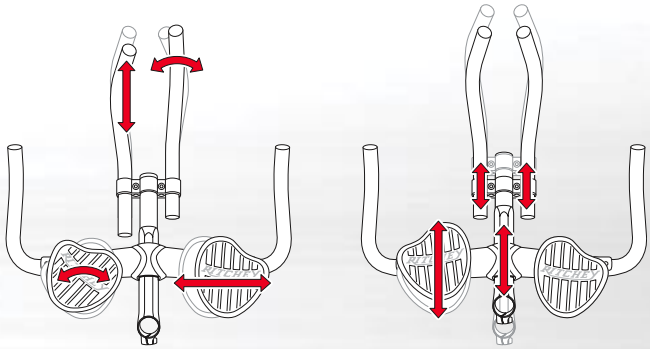
TIME TRIAL

Probiscus™ Aero Bar



- Stiff robust design intended for aggressive time trailists
- Wide range of adjustment including base bar position, pad width, extension angle and grip position
- Integrated stem features angled clamp and opposing bolts designed to safely and securely clamp lightweight steerers

	material	width	drop/reach	weight	finish
PRO Clip On	Forged 6061	40/42	Adjustable	900g	BB Black



Wide range of adjustment including base bar position, pad width, extension angle and grip position

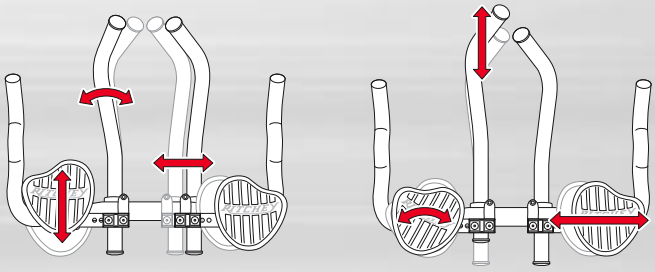
Prologue™ Clip-On Bar





- Seamless, bead-blasted 6061 aluminum
- Bolt-on Time Trial Bars
- Wide range of adjustments for reach, angle and armrest width
- 626 grams (clip-on only)
- Base bar sold separately

	material	width	drop/reach	weight	finish	clamp dia
PRO Clip On	Forged 6061	Adjustable	Adjustable	626g	BB Black	25.8/26.0



Wide range of adjustment including reach, angle and armrest width

Prologue™ Base Bar



- Seamless, double butted and bead-blasted 2014 aluminum
- Grooved to hide cables
- 40 and 42mm widths
- Straight and ergo versions available

	material	width	drop/reach	weight	finish	clamp dia	bend
PRO Base Bar	2014	40,42	50mm	210g	BB Black	25.8/26.0	Straight
PRO Base Bar	2014	40,42	50mm	210g	BB Black	25.8/26.0	Ergo

Blue - US Only Red- Europe Only Black - Both

TRIATHLON

Time Trial & Triathlon Equipment

Ritchey TT bars made their debut in 2003 in some of the most important time trials in professional road racing - from the Time Trial World Championships, to the Tour de France.

Where time trials are just a part of road racing, they are however, everything in a triathlon. Pro triathletes spend all of their time in the time trial position, and with many body styles to accommodate; the equipment must be as strong and adjustable, as it is lightweight and aerodynamic. Ritchey now has two styles of time trial bars available, the "Prologue" clip on and the "Probiscus".

We also offer deep-dish carbon wheels as well as our complete component line to compliment every level of triathlete. Well known in the triathlon world, Cervelo bikes come equipped with Ritchey components. Pro triathletes Kathy Winkler and Michaeli Jones have been racing Ritchey gear for two years now. When speed and aerodynamics are the name of the game, Ritchey is at the top of the game!



BREAKAWAY

Break-Away®

- 100% full size bicycle can be split apart mid-frame & packed into a 9"x26"x29" case
- Patent-pending locking and cromoly compression coupling system
- Adds only 100 grams to a complete frame
- Uses proven Ritchey geometry and design
- Utilizes custom butted heat treated Ritchey steel tubing







Easy assembly in minutes.



Patented locking system joins seat tube and top tube.



Cromoly compression coupling joins front and rear triangles near bottom bracket shell.



Quick Disconnect cables make for easy assembly/disassembly.

Frame Size (cm.)	48	50	52	54	56	58	60
Top Tube	52	53	54	55	56	57.5	59
Seat Tube center to top	48	48	48	48	54	54	54
Head Tube	94	94	94	112	131	152	172
Seat Tube angle	75°	75°	75°	73.5°	73.5°	73.5°	73.5°
Haed Tube angle	72°	72.5°	73°	73.5°	73.5°	73.5°	73.5°
Bottom Bracket Drop	72	72	72	70	70	70	70
Chainstay	41	41	41	41.5	41.5	41.5	41.5
Wheelbase	96.5	97	98	98.5	99.5	101	102
Fork Rake	44	44	44	44	44	44	44
Seat Post Diameter	27.2	27.2	27.2	27.2	27.2	27.2	27.2
Stand Over Height	73.9	73.9	73.9	79	79	79	79

The Break-Away® is a conventional size and style, steel road bike that disassembles in minutes and fits neatly inside a 23 x 66 x 73.5cm (9 x 26 x 29"), travel bag. Ritchey's exclusive, investment cast lugs and patent-pending, cromoly compression coupling are the keys to this new design. The lugs securely grip the seatpost in two places and join the upper portion of main triangle to the rear. On the downtube, nearly at the bottom bracket shell, the compression coupling forms the lower connection for the front and rear triangles. The coupler clamps unobtrusively around small flanges on the downtube. This system adds less than 100 grams to the bike.

Break-Away frames are built with custom heat treated Ritchey tubing. Complete bikes are being offered with a combination of Ritchey Pro / Shimano Ultegra® components.

You can purchase a Break-Away bike by going to your favorite shop. If they don't stock the Ritchey Break-Away, you can either have them contact us to special order, or you can visit our website at www.ritcheylogic.com. All online bike orders will be routed through a local bike shop. This ensures professional assembly, customer education, and final customer approval after delivery.

FRAMES

Niti™

- Perfect for committed enthusiasts
- Proven World Cup winning geometry
- Custom butted Nitanium tubing
- The ride of a custom hand-made steel hardtail at a reasonable cost
- Available only from Ritchey USA



Frame Size (in.)	14	15	16	17	18	19	20	21	22
Top Tube	20.25	20.3	20.5	21	21.5	22	22.75	23	23.3
Seat Tube	14	15	16	17	18	19	20	21	23
Head Tube	3.5	3.5	3.5	3.5	3.5	3.5	4	4.9	5.9
Seat Tube angle	75	75	74	74	74	74	74	74	74
Haed Tube angle	70.5	70.5	71.5	71.5	71.5	71.5	71.5	71.5	71.5
Bottom Bracket Drop	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Bottom Bracket width	68	68	68	68	68	68	68	68	68
Chainstay	16.8	16.8	16.8	16.9	16.9	16.9	16.9	16.9	16.9
Wheelbase	40.3	40.5	41	41.5	42	42.5	43.25	43.5	43.5
Seat Post Diameter	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2
Stand Over Height	27	27.5	28	28.5	29	29.5	30.5	31.5	32.5

Road Logic™

- The Road Logic is a fast, stable ride in the classic road tradition
- Constructed with Ritchey Nitanium™ tubing
- Available with a carbon fork option
- Available in TIG welded or fillet brazed version



"The ride. It is, simply put, dialed!"
4 sprocket rating. Bicycling Magazine, July 2000

Frame Size (cm.)	48	50	52	54	56	58	60	62
Top Tube	52	53	54	55	56	57.5	59	60
Seat Tube c to top	48	50	52	54	56	58	60	62
Head Tube	9.5	9.5	9.5	11.5	13.9	15.9	17.5	19.5
Seat Tube angle	75	74.5	73.5	73.5	73.5	73.5	73.5	73.5
Head Tube angle	72	72.5	73.5	73.5	73.5	73.5	74	74
Bottom Bracket drop	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Chainstay	41	41	41.5	41.5	41.5	41.5	41.5	41.5
Wheelbase	96.5	97	98	98.5	99.5	101	102	103
Fork Rake	44	44	44	44	44	44	44	44
Seat Post diameter	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2
Stand Over Height	73.9	75.2	77	79	80.8	82.8	84.6	86.6

Swiss Cross™

- World champion medal winning cyclo-cross frame inspired by Thomas Frischknecht
- Logic WCS steel tubing and swept seatstays take the edge off the most challenging courses
- The benchmark cyclo-cross frame



Frame Size (cm.)	50	52	54	56	58
Top Tube	52.5	53	53.5	55	56.5
Seat Tube center to top	50	52	54	56	58
Head Tube	9.0	9.0	10.8	12.8	14.8
Seat Tube angle	74	74	73.5	73.5	73.5
Head Tube angle	71.5	71.5	72	72	72
Bottom Bracket Drop	6.5	6.5	6.5	6.5	6.5
Chainstay	42.5	42.5	42.5	42.5	42.5
Wheelbase	99.5	100	101	102	103
Fork Rake	44	44	44	44	44
Seat Post Diameter	27.0	27.0	27.0	27.0	27.0
Stand Over Height	73.7	75.4	77.7	79.5	81.3

CARBON FORKS

Ritchey Carbon WCS™

UNDER DEVELOPMENT 04 RELEASE DATE TBD

WCS™ Carbon Forks

- Race tested design
- Full carbon construction
- Unique drop out design allows for secure wheel clamping at a reduced weight
- Entire fork designed to dissipate loads throughout the fork, reducing stress on the critical crown area.
- Designed for use with integrated headsets
- 325g

Pro™ Carbon Forks

- Race tested design
- Full carbon/glass fiber construction
- Unique drop out design allows for secure wheel clamping at a reduced weight
- Entire fork designed to dissipate loads throughout the fork, reducing stress on the critical crown area.
- Designed for use with integrated headsets
- 415g

	Blade	Crown	Steerer	Rake	Weight	Headset
WCS Integrated Headset	Carbon	Carbon	Carbon	43	440g	1 1/8"
WCS Standard Headset	Carbon	Carbon	Carbon	43	400g	1 1/8"
WCS	Carbon	Carbon	Carbon	43	390g	1"
PRO	Carbon/Glass	Carbon/Glass	Carbon/Glass	43	440g	1"

WCS™ Carbon with Integrated Headset



Blue - US Only Red- Europe Only Black - Both

WHEELS

WCS™ Carbon Wheels

- Race proven US made carbon rim
- Very aerodynamic, featuring 16 spokes front, 20 rear
- Forged and CNC'd WCS hubs featuring titanium skewers
- Alloy Shimano or Campy freehubs
- Serialized with a full warranty



WCS	rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
Tubular front	Carbon	WCS Road	16xBladed 2.0 Black	Alloy 2.0	16xRadial	578g	Carbon	—
Tubular rear	Carbon	WCS Zero System Road	20xBladed 2.0 Black	Alloy 2.0	20x2X	704g	Carbon	Alloy
Campy Tubular rear	Carbon	WCS Zero System Road	20xBladed 2.0 Black	Alloy 2.0	20x2X	745g	Carbon	Alloy
Clincher front	Carbon	WCS Road	16xBladed 2.0 Black	Alloy 2.0	16xRadial	799g	Carbon	—
Clincher rear	Carbon	WCS Zero System Road	20xBladed 2.0 Black	Alloy 2.0	20x2X	925g	Carbon	Alloy
Campy Clincher rear	Carbon	WCS Zero System Road	20xBladed 2.0 Black	Alloy 2.0	20x2X	966g	Carbon	Alloy

Clincher Version



Tubular Version



WCS™ Protocol Wheels

- New ultra lightweight, durable alloy rims
- Rims manufactured with a new destressing process which makes the wheel truer, rounder, and stronger
- Forged and CNC'd WCS hubs featuring titanium skewers
- OCR rim and Zero System hub eliminates dish (see diagram on page 22)
- Aerodynamic, featuring 16 spokes front, 24 rear
- Alloy Shimano freehub
- Serialized with a full warranty

UNDER DEVELOPMENT
04
RELEASE DATE TBD



Protocol	rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
WCS front	WCS Protocol	WCS Road	16xBladed 2.0 Black	Alloy 2.0	16xRadial	606g	Black	—
rear	WCS Protocol OCR	WCS Zero System Road	24xBladed 2.0 Black	Alloy 2.0	24x2X	745g	Black	Alloy
Campy rear	WCS Protocol OCR	WCS Zero System Road	24xBladed 2.0 Black	Alloy 2.0	24x2X	780g	Black	Alloy

Blue - US Only Red- Europe Only Black - Both

WHEELS



Pro™ Z Deep Section Wheels

- OCR rim and Zero System hub eliminates dish (see diagram on page 22)
- Aerodynamic 27mm front/28mm rear profile and 20-spoke radial front/24-hole 2-cross rear
- Bladed, stainless steel spokes
- Cold forged and machined Pro hubs
- Smooth, low maintenance custom cartridge bearings packed with Ritchey grease
- High Tolerance machined sidewalls straight to .03mm
- Serialized with a full warranty

Deep Section		rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
PRO	front	Pro DS-27	Pro Road	20xBladed 2.0 Black	Brass	20xRadial	685g	Black	—
	rear	Pro OCR DS-28	Pro Zero System Road	24xBladed 2.0 Black	Brass	24x2X	980g	Black	Cromo



WCS™ and Pro Z Aero Road Wheels

- OCR rim and Zero System hub eliminates dish (see diagram on page 22)
- Bladed, stainless steel spokes with aluminum nipples
- Cold forged and machined WCS/Pro hubs with titanium skewers (WCS only)
- Smooth, low maintenance custom cartridge bearings packed with Ritchey grease
- High Tolerance machined sidewalls straight to .03mm
- WCS alloy freehub body
- 650c Pro version available only from Ritchey USA
- Serialized with a full warranty

		rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
WCS Aero 700c	front	WCS Aero	WCS Road	24xBladed 2.0	Alloy 2.0	24xRadial	715g	Black	—
	rear	WCS Aero OCR	WCS Zero System Road	28xBladed 2.0	Alloy 2.0	28x3X	890g	Black	Alloy
PRO Aero 700c	front	Pro Aero	Pro Road	24xBladed 2.0 Black	Brass 2.0	24xRadial	750g	Black	—
	rear	Pro Aero OCR	Pro Zero System Road	28xBladed 2.0 Black	Brass 2.0	28x3X	950g	Black	Cromo



Comp™ Z Road and Mountain Wheels

- OCR rim and Zero System hub eliminates dish (see diagram on page 22)
- Basic replacement road and mountain wheels
- Double sealed bearings and stainless steel spokes

		rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
Comp	front	Comp	Comp	32x2.0 Silver	Brass 2.0	32x3X	835g	Silver	—
	rear	Comp	Comp Zero	32x2.0 Silver	Brass 2.0	32x3X	1017g	Silver	Cromo

Blue - US Only Red- Europe Only Black - Both

WHEELS

Disc OCR Pro™ and Comp™ Wheels

- Bomber, forged and CNC-machined hubs to handle higher stress of disc brakes
- Custom cartridge bearings packed with Ritchey grease
- Double-wall Disc OCR 32-hole rims with reinforced eyelets
- Anti-pinch rim lip and butted spokes
- 14mm Ritchey Skraxle CrMo QR/axle
- Comp and 20mm thru axle models available only from Ritchey USA
- Serialized with a full warranty (Pro only)



Also available with 20mm thru axle



		rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
PRO	front	Pro Disc OCR	Pro Skraxle Disc brake	Pro 2.0/1.6 Black	Brass 2.0	32x3X	860g	Black	—
	rear	Pro Disc OCR	Pro Disc brake	Pro 2.0/1.6 Black	Brass 2.0	32x3X	1075g	Black	Cromo
	20mm O/S front	Pro Disc OCR	Pro 20mm O/S Disc brake	Pro 2.0/1.6 Black	Brass 2.0	32x3X	855g	Black	—
Comp	front	Comp Disc OCR	Comp Disc brake	2.0	Brass 2.0	32x3X	960g	Silver	—
	rear	Comp Disc OCR	Comp Disc brake	2.0	Brass 2.0	32x3X	1275g	Silver	Cromo

WCS™ and Pro™ Girder XC Mountain Wheels

- Zero hub and OCR rim for a dishless (see diagram on page 22)
- Cold forged and machined WCS hubs are strong enough for radial lacing
- Smooth, custom cartridge bearings packed with Ritchey grease
- Aluminum rear axle saves weight without sacrificing strength (WCS)
- 14mm Skraxle QR/axle in one boosts front end stiffness
- Butted spokes laced radial front, 2 cross rear (WCS), 3 cross rear (Pro)
- Serialized with a full warranty



		rims	hubs	spokes	nipples	build	weight w/o QR	finish	freehub
WCS	front	WCS Girder	WCS MTN Skraxle	WCS 2.0/1.6 Silver	Alloy 2.0	28xRadial	725g	Black	—
	rear	WCS OCR	WCS MTN Zero System	WCS 2.0/1.6 Silver	Alloy 2.0	28x2X	810g	Black	Alloy
PRO	front	Pro Girder	Pro MTN Skraxle	Pro 2.0/1.6 Black	Brass 2.0	32xRadial	848g	Black	—
	rear	Pro OCR	Pro MTN Zero System	Pro 2.0/1.6 Black	Brass 2.0	32x3X	919g	Black	Cromo

Girder™ SC Wheels

- Oversized front Skraxle axle/QR system
- Oversized left rear bearing to absorb higher braking torque
- Girder SC OCR rims front and rear minimize dish (see diagram on page 22)
- Serialized with a full warranty

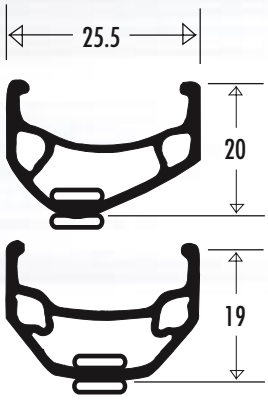


Also available with 20mm thru axle



		rims	hubs	braking	spokes	nipples	build	weight w/o QR	finish	freehub
SC	front	Girder SC OCR	Pro Skraxle Disc brake	Rim or Disc	2.0 Black	Brass	32x3X	995g	Black	—
	rear	Girder SC OCR	Pro Disc brake	Rim or Disc	2.0 Black	Brass	32x3X	1225g	Black	Cromo
	20mm O/S front	Girder SC OCR	Pro 20mm O/S Disc brake	Rim or Disc	2.0 Black	Brass	32x3X	1005g	Black	—

Blue - US Only Red- Europe Only Black - Both

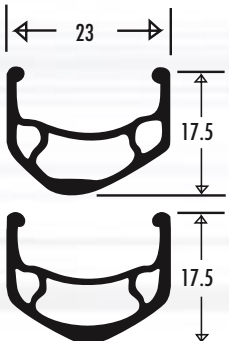


Girder™ SC Mountain Rims

- SC rim - 6061 with machined sidewalls and spoke eyelets
- Makes a great heavy duty, freeride, dual slalom or downhill rim
- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels (see diagram on page 22)
- Triple box construction

	ETRTO	ext/int width mm	alloy	use	brake surface	brake height	†E.R.D.	eyelets	holes	weight	finish
Girder	599-23	28x25.5	6061	Front/Rear	Machined*	10mm	538	28x23	32	530	Black
Girder OCR	599-22	28x25.5	6061	Rear	Machined*	10mm	536	28x23	32	530	Black

** High Tolerance Machined (+0.03mm)* *† E.R.D. - Effective Rim Diameter*

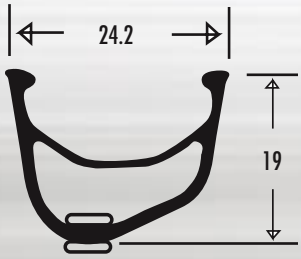


Girder™ XC Mountain Rims

- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels (see diagram on page 22)
- Triple box construction

	ETRTO	ext/int width mm	alloy	use	brake surface	brake height	†E.R.D.	eyelets	holes	weight	finish
WCS Girder XC	559-18	22.5x18	6061	Front/Rear	*HTM	10.5mm	536	Yes	28	375g	Polish Black
Girder XC OCR	559-18	22.5x18	6061	Rear	*HTM	10.5mm	534	Yes	28	395g	Polish Black
PRO Girder XC	559-18	23x18	6061	Front/Rear	Machined	10.5mm	536	Yes	32	430g	Black
Girder XC OCR	559-18	23x18	6061	Rear	Machined	10.5mm	534	Yes	32	435g	Black
Comp Girder	559-18	23.5x18	6061	Front/Rear	Machined	10.5mm	536	No	32	430g	Silver/Black
Girder OCR	559-18	23.5x18	6061	Rear	Machined	10.5mm	534	No	32	435g	Silver/Black

** High Tolerance Machined (+0.03mm)* *† E.R.D. - Effective Rim Diameter*



Pro™ Disc-OCR Rims

- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels by compensating for spoke inset due to brake rotor (see diagram on page 22)
- Features anti-pinch flat designed edges
- Strengthened spoke eyelets

	ETRTO	ext/int width mm	alloy	use	†E.R.D.	eyelets	holes	weight	finish
PRO	559-18	24.2x17.6mm	6061	Front/Rear	538mm	Yes	32	440g	Black

† E.R.D. - Effective Rim Diameter



Ritchey Snap On Rim Strip

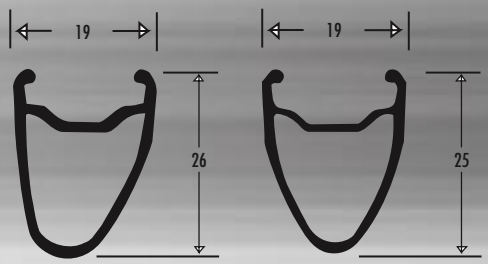
- New design offers secure, snug fit to rim
- New coating resists "creeping" on the rim - perfect for OCR rims
- Will not dimple into spoke holes — even at high performance road tire pressures
- Available in (700c/17mm) - (26"/20mm) - (650c/17mm)

Blue - US Only **Red- Europe Only** **Black - Both**

RIMS

WCS™ Protocol Rims

- New ultra lightweight, durable alloy rims
- Rims manufactured with a new destressing process which makes the wheel truer, rounder, and stronger
- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels (see diagram on page 22)
- CNC'd sidewalls

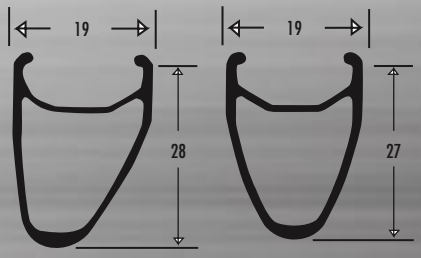


	ETRTO	ext/int width mm	alloy	use	brake surface	brake height	†E.R.D.	eyelets	holes	weight	finish
WCS Protocol	622-14	19x13.9	6061	Front/Rear	Machined	8mm	587	No	16	425	Polished Black
Protocol OCR	622-14	19x13.9	6061	Rear	Machined	8mm	585	No	24	435	Polished Black

** High Tolerance Machined (+0.03mm)* *† E.R.D. - Effective Rim Diameter*

Pro™ DS-27 & DS-28 OCR Rims

- 27mm frt rim , 28mm OCR rear rim
- Strikes a balance between heavy deep section rims and lighter classic road designs
- CNC'd sidewalls
- Sleeved and bonded
- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels (see diagram on page 22)

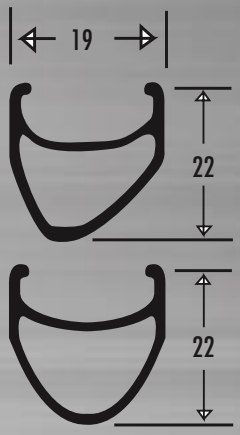


	ETRTO	ext/inter width mm	alloy	use	brake surface	brake height	eyelets	†E.R.D.	holes	weight	finish
PRO DS 27	622-14	19x13.9	6061	Front	HTM	7.6mm	No	584	20	460g	Matte Black
DS 28 OCR	622-14	19x13.9	6061	Rear	HTM	8mm	No	582	24	470g	Matte Black

** High Tolerance Machined (+0.03mm)* *† E.R.D. - Effective Rim Diameter*

Road Aero Rims

- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels (see diagram on page 22)
- Light and aerodynamic
- Features machined sidewalls

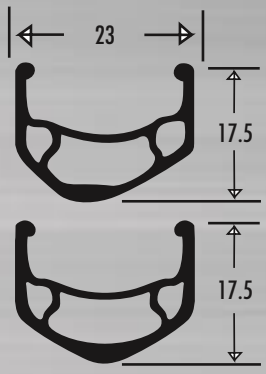


	ETRTO	ext/inter width mm	alloy	use	brake surface	brake height	eyelets	†E.R.D.	holes	weight	finish
WCS Aero	622-14	19x13.9	6061	Front/Rear	*HTM	8.5mm	No	599	24	395g	Polish Black
Aero OCR	622-14	19x13.9	6061	Rear	*HTM	8.5mm	No	599	28	415g	Polish Black
PRO Aero	622-14	19x13.9	6061	Frnt/Rear	*HTM	8.5mm	No	599	24/32	395g	Black
Aero OCR	622-14	19x13.9	6061	Rear	*HTM	8.5mm	No	599	28/32	415g	Black
Comp Aero	622-14	19x13.9	6061	Frnt/Rear	Sanded	8.5mm	No	599	32	395g	Silver
Aero OCR	622-14	19x13.9	6061	Rear	Sanded	8.5mm	No	599	32	415g	Silver

** High Tolerance Machined (+0.03mm)* *† E.R.D. - Effective Rim Diameter*

700c Trekking Rims

- OCR (Off Center Rim) technology makes for stronger, more durable, easier to build rear wheels (see diagram on page 22)
- Heavy-duty rim for cyclo-cross or touring
- Triple box construction



	ETRTO	ext/int. width mm	alloy	use	brake surface	brake height	†E.R.D.	eyelets	holes	weight	finish
PRO Trekking 700	622-17	23x17.2	6061	Front/Rear	Machined	10.5mm	596	Yes	32	470g	Silver
Trekking OCR 700	622-17	23x17.2	6061	Rear	Machined	10.5mm	594	Yes	32	480g	Silver
Comp Trekking 700	622-17	23x17.2	6061	Front/Rear	Machined	10.5mm	596	No	32	470g	Silver
Trekking OCR 700	622-17	23x17.2	6061	Rear	Machined	10.5mm	594	No	32	480g	Silver

† E.R.D. - Effective Rim Diameter

Blue - US Only **Red**- Europe Only Black - Both

HUBS



WCS™ Road Hubs

- Drilled for bladed or standard spokes
- Very elegant, simple design for the classic road look
- WCS bearing system
- Rear hub:
  Zero system flange width
  Campagnolo® version available
- Forged alloy freehub body

	axle material	O.L.D. length	axle diameter	QR axle type	hole PCD	flange width	spoke holes	weight	finish
WCS front	Alloy	100mm	9mm	Ti	38mm	68mm	16/24	85g	Polish Black
rear	Alloy	130mm	14mm	Ti	45mm	50mm	24/28	216g	Polish Black
Campy rear	Alloy	130mm	14mm	Ti	45mm	50mm	20	220g	Polish Black



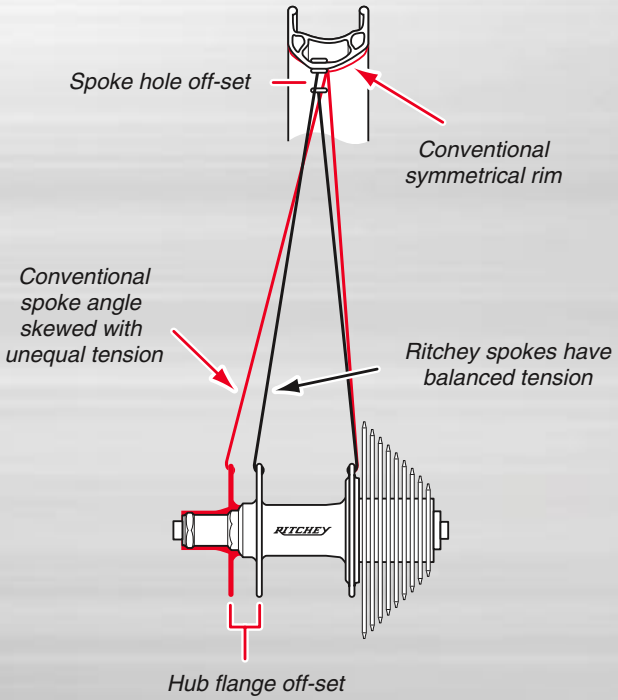
Pro™ Road Hubs

- Redesigned flanges to accommodate radial lacing
- Drilled for bladed or standard spokes
- Very elegant, simple design for the classic road look.
- 2 pc alloy endcap and dustcover
- Pro bearing and freehub system
- Rear Hub: Zero System flange width

	axle material	O.L.D. length	axle diameter	QR axle type	hole PCD	flange width	spoke holes	weight	finish
PRO front	CrMo	100mm	9mm	CrMo	38mm	68mm	24/28	131g	BB Black
rear	CrMo	130mm	10mm	CrMo	45mm	50mm	28/32	364g	BB Black

Zero OCR Technology

Rear wheels are weak because they're not balanced — the drive-side hub flange is moved 10mm inward to make room for 8, 9 and 10-speed cassettes, and this means the drive side spokes are at a nearly vertical bracing angle and tensioned 80-100 percent higher than non-drive side spokes. This means your wheel wants to bend. OCR (Off Center Rear) rims help reduce this imbalance by shifting spoke holes 3mm towards the non-drive side of the rear wheel, and the carefully positioned Zero System hub flanges remove the remaining 7mm of dish to reduce the spoke tension imbalance by more than 50 percent. The result is a rear wheel with carefully tuned spoke angles, minimal dish and almost equal spoke tension between the drive/non-drive side, so Zero OCR wheels can be built lighter, but stronger than wheels weighing more.



Blue - US Only Red- Europe Only Black - Both

HUBS

WCS™ Z-Hub Mountain

- WCS bearing (with Ritchey grease) and freehub system
- Redesigned flanges to accommodate radial lacing
- Front Hub: Skraxle System
  -7075 14mm axle skewer system
  -Creates a stronger stiffer front end and reduces fork flex
- Rear Hub: Zero System
- Forged alloy freehub body



		axle material	O.L.D. length	axle diameter	QR axle type	hole PCD	flange width	spoke holes	weight	finish
WCS	front	Skraxle Alloy	100mm	14mm	Alloy	41mm	69mm	28	177g	Black
	rear	Alloy	135mm	14mm	Ti	45mm	47mm	28	225g	Black

Pro™ Disc Hub

- Forged one piece, and CNC machined
- Oversized front and rear axle
- Pro level bearing and freehub system
- Universal disc drilling
- Front Hub: Skraxle System
  - 14mm axle skewer system
  - Creates a stronger stiffer front end and reduces fork flex
- Rear Hub:
  - Oversized axle (10mm)
  - Oversized left side bearing



		axle material	O.L.D. length	axle diameter	QR axle type	hole PCD	flange width	disc drilling	spoke holes	weight	finish
PRO	front	Skraxle CrMo	100mm	14mm	CrMo	58mm	55mm	Int'l Std	32	192g	BB Black
	rear	CrMo	135mm	12/10mm	CrMo	58mm	52mm	Int'l Std	32	405g	BB Black
20mm O/S	front	Alloy	110mm	20mm	NA	58mm	54mm	Int'l Std	32	240g	BB Black

Pro™ Z-Hub Mountain

- Pro bearing (with Ritchey grease) and freehub system
- 21mm contact area between front hub and fork
- Front Hub: Skraxle System
  - 14mm axle skewer system
  - Creates a stronger stiffer front end and reduces fork flex
- Rear Hub: Zero System



		axle material	O.L.D. length	axle diameter	QR axle type	hole PCD	flange width	spoke holes	weight	finish
PRO	front	Skraxle CrMo	100mm	14mm	CrMo	41mm	69mm	32	138g	BB Black
	rear	CrMo	135mm	10mm	CrMo	45mm	47mm	32	380g	BB Black

Blue - US Only Red- Europe Only Black - Both

CRANKS

WCS™ Mountain V Crank

- Cold forged design focuses strength at the high stress pedal and BB interfaces, while removing extra weight from the lower stress center of the arms.
- All rings are high quality 7075 alloy featuring CNC'd shifting ramps and pins
- ISIS BB interface
- WCS crank + WCS BB only weighs 753g



model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/mid ring mat.	teeth/inner ring mat.	lengths	BB type	weight
WCS Triple	TRX50	Blue	4 Bolt	104/64	44/7075	32/7075	22/7075	170/175	ISIS	585g

Pro™ Mountain V Crank

- Cold forged design focuses strength at the high stress pedal and BB interfaces, while removing extra weight from the lower stress center of the arms.
- Outer rings are high quality 7075 alloy featuring CNC'd shifting ramps and pins
- ISIS BB interface



model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/mid ring mat.	teeth/inner ring mat.	lengths	BB type	weight
PRO Triple	6066	Black	4 Bolt	104/64	44/7075	32/7075	22/Cromo	170/175	ISIS	650g

Comp™ Mountain V Crank

- Cold forged design focuses strength at the high stress pedal and BB interfaces, while removing extra weight from the lower stress center of the arms.
- Outer ring is high quality 7075 alloy
- ISIS BB interface



model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/mid ring mat.	teeth/inner ring mat.	lengths	BB type	weight
Comp Triple	6066	Black	4 Bolt	104/64	44/7075	32/Cromo	22/Cromo	170/175	ISIS	700g

Blue - US Only **Red**- Europe Only Black - Both

CRANKS

WCS™ Road V Crank

- Forged with integrated fifth arm spider
- Center channel shaves grams and concentrates material at the bottom bracket and pedal interface
- Wear-resistant hard anodized rings are pinned to improve shifting
- 170, 172.5 and 175mm lengths



	model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/inner ring mat.	lengths	BB type	weight
WCS	Double	2014 T-6	Polished Silver	5 Arm	130	53/7075-CNC	39/7075-CNC	170, 172.5 175mm	Shimano® Octalink	592g

Licensed by Shimano® and compatible with Shimano's 8-spline crank bottom bracket.

WCS™ Road V Triple Crank

- Racing/performance triple crank
- Center channel shaves grams and concentrates material at the bottom bracket and pedal interface
- Wear-resistant hard anodized rings are pinned to improve shifting
- 170, 172.5 and 175mm lengths



	model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/mid ring mat.	teeth/inner ring mat.	lengths	BB type	weight
WCS Road	Triple	2014 T-6	Polish Silver	5-Arm	130mm	52/7075-CNC	42/7075-CNC	30/7075	170, 172.5 175mm	Shimano® Octalink	680g

Licensed by Shimano® and compatible with Shimano's 8-spline crank bottom bracket.

WCS™ and Pro™ Cross V Crank

- Forged with integrated fifth arm spider
- Center channel shaves grams and concentrates material at the bottom bracket and pedal interface
- Cross-specific 38/48t wear-resistant hard anodized rings are pinned to improve shifting
- 170, 172.5 and 175mm lengths
- Black anodized finish



	model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/inner ring mat.	lengths	BB type	weight
WCS Cross	Double	2014 T-6	Polish Silver	5-Arm	130mm	48/7075-CNC	38/HA 7075-CNC	170, 172.5 175mm	Shimano® Octalink	580g
PRO Cross	Double	6066 T-6	Polish Black	5-Arm	130mm	48/5180-CNC	38/5180-CNC	170, 172.5 175mm	Shimano® Octalink	590g

Licensed by Shimano® and compatible with Shimano's 8-spline crank bottom bracket.

WCS™ and Pro™ 110 V Crank

UNDER DEVELOPMENT
Q4
RELEASE DATE TBD

- 110mm Bolt Circle Diameter allows a wider range of chainring selection, giving you almost the same gearing as a triple with the weight and simplicity of a double
- Forged with integrated fifth arm spider
- Center channel shaves grams and concentrates material at the bottom bracket and pedal interface
- Specially designed shift ramps and pins allow for wide gear ranges
- Favored by many cross racers
- 170, 172.5 and 175mm lengths

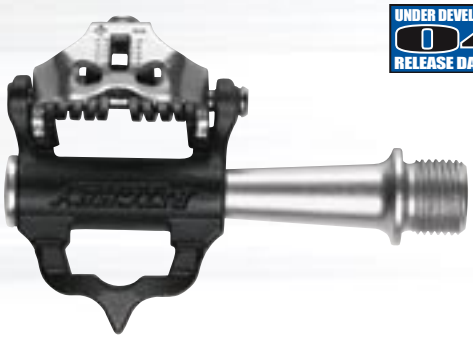


	model	arms	color	spider	BCD	teeth/outer ring mat.	teeth/inner ring mat.	lengths	BB type	weight
WCS	Double	TRX50	Black	5 Arm	110	50/7075-CNC	34/ Hardened Steel	170, 172.5 175mm	Octalink	570g
PRO	Double	6066 T-6	Black	5 Arm	110	50/7075-CNC	34/ Hardened Steel	170, 172.5 175mm	Octalink	580g

Licensed by Shimano® and compatible with Shimano's 8-spline crank bottom bracket.

Blue - US Only Red- Europe Only Black - Both

BB'S & PEDALS

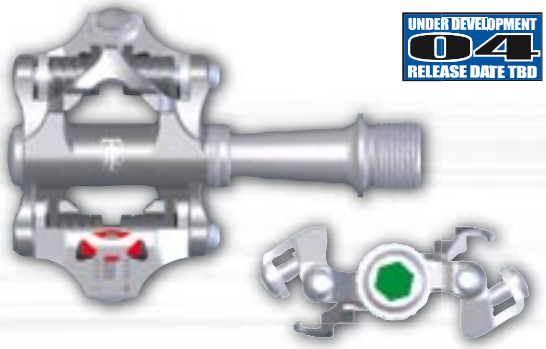


UNDER DEVELOPMENT 04 RELEASE DATE TBD

Pro™ V4™ Road Pedal

- All new dropped center design
- Features an extremely durable, hardened cromoly body that is lighter than alloy bodied pedals
- New low profile clamp and curved cleat design locates your foot nearly 1/2" closer to the pedal spindle, lowering the riding position and providing easier release
- New patent-pending direct-to-body precision file loaded bearing design
- Superb cornering clearance
- Shares the same cleat as the mountain pedal
- 200g

	body	axle material	inner bearing	outer bearing	weight	finish
PRO V.4	Cromo	Cromo	Cartridge	Cartridge	200g	Grey



UNDER DEVELOPMENT 04 RELEASE DATE TBD

Pro™ V4™ Mountain Pedal

- All new dropped center design
- Features an extremely durable, hardened cromoly body that is lighter than alloy bodied pedals
- New low profile clamp and curved cleat design locates your foot nearly 1/2" closer to the pedal spindle, lowering the riding position and providing easier release
- New patent-pending direct-to-body precision file loaded bearing design
- Superb cornering clearance
- Shares the same cleat as the road pedal
- 275g

	body	axle material	inner bearing	outer bearing	weight	finish
PRO V.4	Cromo	Cromo	Cartridge	Cartridge	275g	Black



Pro™ V3™ Road Pedal

- Forged low profile aluminum body for maximum clearance
- Custom cartridge bearing mounted close to the crank improves stiffness and bearing life
- Shimano SPD-R compatible*

	body	axle material	inner bearing	outer bearing	weight	finish
PRO V.3	Forged 6061	CrMo	Cartridge	Bushing	290g	BB Grey

SPD and SPD-R are trademarks of Shimano Corporation. Manufactured under license of Shimano



WCS™ Bottom Bracket

- New CNC machining process allows for internal relieving of extra axle material, giving the weight of Titanium with the strength of Cromoly.
- Larger bearing, featuring a 30% higher load rating than other ISIS BB's increases stiffness and bearing life
- All alloy construction
- Compatible with 68mm or 73mm BB shells
- Compatible with ISIS splined cranks

	axle	cups	body	shell	bearings	width	weight
WCS	Cromoly	Alloy	Alloy	68/73	Sealed Cartridge	104,108, 113,118	168g
PRO	Cromoly	Alloy	Steel	68/73	Sealed Cartridge	104,108, 113,118	220g
Comp	Cromoly	Steel	Steel	68/73	Sealed Cartridge	104,108, 113,118	245g

Blue - US Only **Red**- Europe Only **Black** - Both


RITCHEY
BICYCLE COMPONENTS
RITCHEY
WCS

Blue - US Only Red- Europe Only Black - Both

TIRES



MotoVader™

- Aggressive 2 stage VFA tread for traction in extreme conditions
- Plush 2.4 width for free-ride, DH and dual slalom
- Reinforced knobs
- Pro version features new extra sticky compound

26x	2.1	2.4
PRO	685g	750g
Comp	715g	800g



ExcaVader™

- Aggressive, fast-rolling 3rd generation VFA tread design
- All conditions, front or rear
- 26x1.9, 26x2.1, 700x35
- Available in UST Tubeless 26x1.9

26x	1.9	2.1	700x	35
WCS	490g	530g		-
PRO	545g	580g		310g
PRO Tubeless	595g	-		-
Comp	575g	620g		420g



700x35

UST TUBELESS

VADER TIRES RITCHEY



EleVader™

- Rear-specific VFA tread design
- Paddle knobs for ultimate climbing, braking and accelerating traction
- 26x1.9, 26x2.1

26x	1.9	2.1
WCS World Championship Series	490g	-
PRO	540g	570g
Comp	570g	600g



InnoVader™

- Fast-rolling semi-knobby VFA tread
- Great for hard-packed conditions & fire roads
- Very low rolling resistance
- New Sticky Compound
- 26x2.0, 26x2.1

26x	2.0	2.1
WCS	490g	495g
PRO	505g	-
Comp	545g	-



Z.E.D. Race

- Refined, low profile VFA knobs for minimal weight
- Ritchey's lightest mountain tire
- 26x1.7, 26x1.9, 26x2.1
- Comp version available only from European distributors

26x	1.7	1.9	2.1
WCS	420g	490g	530g
PRO	—	515g	545g
Comp	—	570g	—



Z-Max Millennium

- All-around, front or rear World Cup caliber race tire with VFA tread
- One of the lightest full knobby tires
- UST tubeless coming soon

26x	1.7	1.9	2.1	2.35
WCS	442g	495g	580g	-
PRO	-	525g	610g	720g
Comp	-	605g	680g	750g



SpeedMax

- Low Profile Z-Max VFA side-knobs
- "Original" low rolling resistance tire
- Diamond pattern centers with VFA baffles

26x	2.0
WCS	545g
PRO	585g
Comp	640g



Z.E.D 700

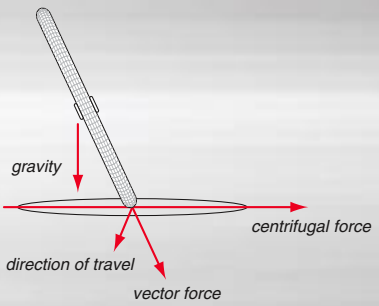
- Semi-square VFA™ tread profile for aggressive traction and cornering
- Unique center tread for low rolling resistance
- Can be used as a 29'er or as an extreme duty cyclo-cross / off road touring tire
- Suited for multi-condition, all around use
- Front or rear

700x	42
PRO	395g

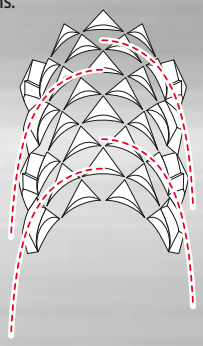
TIRES

Tire Rotation and the VFA™ Story

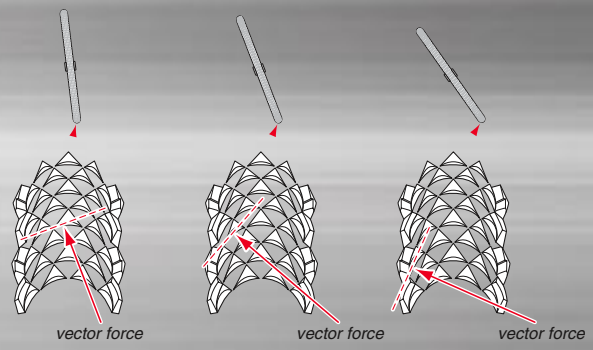
Vector Force Analysis (VFA™) analyzes the directional forces thrust upon a tire during cornering, accelerating, braking, climbing and descending. These forces vary with factors like tire pressure, rider weight, trail conditions, lean angle, etc. The combination of these and other rider inputs, plus the effects of trail friction and gravity combine to produce a single vector force effecting each tire knob. VFA™ is a method of analyzing these forces to understand which are most prevalent in specific conditions, then designing tires with the best possible combination of knob surfaces and strength, as well as mud clearing and rolling characteristics for the application. Even though Ritchey pioneered this concept over ten years ago, it is only recently that other tire manufacturers have caught on to the fact that VFA™ works and consequently more parabolic shapes are showing up on competitors tire designs.



Tires experience multiple vectors during cornering, climbing and descending. The combination of these vectors results in a single vector force.



VFA™ design tread patterns follow parabolic curve for traction at every lean angle.



The tread knobs are specifically designed with supports that counteract the vector force being applied perpendicularly to the tire.



SpeedMax Cross

- Low rolling resistance
- Excellent mud clearing capability
- Diamond pattern center with VFA baffles

700x	30	32	35
PRO	310g	320g	335g
Comp	335g	-	440g



Alphabite TrailMix

- Great all-around road, cyclo-cross or hybrid tread
- VFA design for off-road traction and interlocking center strip for a smooth, fast ride on pavement

700x	35	40
Comp	440g	470g



Max Cross

- Ultra-low rolling resistance
- Low center profile
- Aggressive shoulders for cornering traction
- Great for gravel roads, and hard pack trails

700x	35	40
Comp	400g	430g



Moby Bite

- Sticky slick tire for riding on Slickrock or city streets
- Traction fins hold the trail when riding across steep inclines
- Wide tire makes a great cruiser or sand tire
- A blast to cruise on

26x	2.1
Comp	730g



CrossBite

- Inverted tread design
- Excellent commuter or bike path tire

26x	1.4
PRO	350g
Comp	400g

TIRES

Ritchey Road Rubber

Ritchey's premium road tires are handmade at one of the world's finest tire manufacturing facilities. They utilize the best materials and rubber technology. It isn't the cheapest way to do things, but it guarantees that Ritchey tires are crafted to the highest standards - something you'll appreciate on a twisty, 100kph descent.



WCS™ Race Slick Tubular

- The ultimate performance tubular
- Supple 290tpi cotton casing
- Racing compound smooth tread for maximum grip in any condition
- 180psi/12 BAR maximum pressure
- Puncture Resistant Belt (PRB)
- Handmade
- 700x23c

700x	23c
WCS	270g
Comp	300g



WCS™ Race Slick Open

- Clincher version of the WCS tubular
- Supple 290tpi cotton casing
- Racing compound smooth tread for maximum grip in any condition
- Puncture Resistant Belt (PRB)
- 160psi/10 BAR maximum pressure
- Handmade
- 700x23c
- 230 grams

700x	23c
WCS	230g



WCS™ Race Slick

- 120tpi Nylon casing resists flats
- Slick tread for cornering grip
- High density rubber
- Puncture Resistant Belt (PRB)
- 120psi/8.5 BAR maximum pressure
- 700x23c

700x	23c
WCS	230g
PRO	240g
Comp	270g



Tom Mix

- VFA tread design on the shoulders and a smooth center section for ultimate speed and cornering
- All conditions, front or rear

700x	25
PRO	235g
Comp	265g



Tom Slick

- Great all-around training tire
- VFA side grooves improve grip in all conditions
- 700x23c
- 26x1.0, 26x1.4

700x	23	26x	1.0	1.4
PRO	210g		250g	350g
PRO Fortress Casing	293g		-	-
Comp	225g		300g	400g



GRIPS

WCS™ TrueGrips
- Tough neoprene foam is superlight, plush and grippy even in wet conditions
- Slim anatomical shape
- One of the lightest grips available



TGV Grips
- Dual compound won't slip on the bar or in your hand
- Aggressive design works great even in nasty conditions
- Standard or twist shifter length



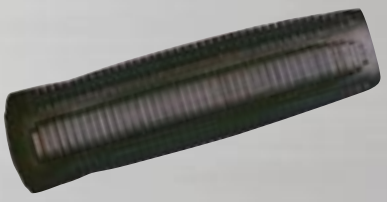
TrueGrip
- Durable, no-slip Kraton rubber
- Classic Ritchey shape reduces hand fatigue and boosts grip



TrueGrip II & III
- Durable, no-slip Kraton rubber
- Ergonomically designed
- Europe Only



TrueGrip Lite
- Durable, no-slip Kraton rubber
- Horizontal fin pattern
- Europe Only



Road Barrel Adjusters
- Allows for derailleur adjustments from the handlebars
- Works with Shimano road shifters



Boom Box Tool
- Puncture repair kit
- Europe Only



CPR 4
- For fast, reliable tire change
- Includes 5 and 6mm allen keys
- Europe Only



Vector™ Groove Saddles
- Anatomical comfort groove
- Duralogic construction
- Shaped for easy transitions on and off saddle



	rails	cover	weight
WCS	Titanium	Leather	220g
PRO	Cromoly	Embossed Vinyl	235g
Comp	Steel	Vinyl	280g

Blue - US Only Red- Europe Only Black - Both

LUBE,TUBES & PADS

Ritchey Bearing Grease



- Specially formulated for demanding bicycle applications
- Superior webbing characteristic resists shearing
- Resists breakdown from water and bearing friction
- Available only from Ritchey USA

Ritchey Chain Lube



- Cleans and lubricates in one step
- Creates a membrane around the moving parts of your chain which floats dirt to the surface where it can't harm the chain
- Seals out contaminants
- Available only from Ritchey USA

Super Light Road & Mountain Tubes

- Lighter than standard butyl tubes
- Presta valve

Lightweight Butyl Tube

- Standard butyl tubes
- Available in all popular sizes



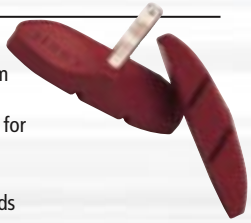
VaporLock™ Tire Sealant



- Seals tires onto UST rims
- Saves vital rotating weight over conventional UST tires or innertubes
- Tube seals one tire
- Provides self-healing flat protection
- Available only from Ritchey USA

VAPOR LOCK

Logic® Canti Pads



- Post-style pad profiled to provide maximum rim sidewall contact and tire clearance
- Angled channels shed water and dirt from rim for optimum braking
- Profiled to prevent squealing
- Black, red or blue condition-specific compounds (SEE BELOW FOR DETAILS)

Super Logic® Mountain Brake Pad



- Cartridge-style replacement pad for Shimano, Avid and other linear brakes
- Angled channels shed water and dirt from rim for optimum braking
- Profiled to prevent squealing
- Black, red or blue condition-specific compounds (SEE BELOW FOR DETAILS)

Logic® LP



- Threaded and post-style pads for non-cartridge brakes
- Angled channels shed water and dirt from rim for optimum braking
- Profiled to prevent squealing
- Black, red or blue condition-specific compounds (SEE BELOW FOR DETAILS)

Super Logic® Road Brake Pad



- Cartridge-style replacement pad for Shimano Dura-Ace and Ultegra brakes
- Angled channels shed water and dirt from rim for optimum braking
- Profiled to prevent squealing
- Black, red or blue condition-specific compounds (SEE BELOW FOR DETAILS)

Condition Specific Pads

- **Standard:** A do-it-all compound engineered for great all-around stopping power, excellent modulation and long life in normal, dry conditions.
- **Severe:** A wet condition pad that provides consistent, squeal-free braking and good wear characteristics, with moderately high performance in dry conditions. Ideal for unpredictable conditions.
- **Extreme:** World Cup proven no-compromise wet condition compound for Mother Nature's worst. Provides maximum stopping power and great modulation in extremely wet, sloppy and muddy conditions that render other wet condition pads useless. Moderate performance in dry conditions.

ACCESSORIES

Ritchey Accessories

- Styles sizes and colors vary by location and season; consult your sales agent for more informations



Ritchey Jersey's



Ritchey Hat



Ritchey T-Shirt



Ritchey Bib Shorts



Ritchey Hooded Sweatshirt

- Available only from Ritchey USA



Ritchey Computer Bag



Ritchey Messenger Bag



Ritchey Beer Glass



Ritchey Water Bottles

2004 Ritchey Bicycle Components













lampre lamiere prerivestite
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GEROLSTEINER
7UP MAXXIS

RACING & SPONSORSHIPS

It's no secret that professional athletes endorse products because they get paid to do so. In cycling however, there is the hard reality of product performance. If a rider loses a race win opportunity due to equipment failure, not only does the manufacturer hear about it, but the media and the cycling world do as well. This is life in the big leagues, but what about closer to home? Nationally ranked teams use Ritchey products because they respect our designs and rely on the confidence they feel when pushing their bikes to the limit. Take it one step further to the 95 Grassroots teams we sponsor around the US and you will find less big team money, but no less passion for the sport.

Ritchey salutes the top teams that rode our products to the podium in 2003:

Road: Credit Agricole (French), Gerolsteiner (German), Healthnet (American), Jean Delatour (French), 7-Up/ Maxxis (American), Webcore (American)

Mountain: Ritchey/K2 (American), Swisspower (Swiss)

We also salute the many athletes, too numerous to mention, who commit their valuable free time to racing and have the same ambitions to race to their best ability as the high profile guys do.

Ritchey IS Racing!



swisspower

RITCHEY TEAM RACING BIKE

STEVENS

LAPIERRE

MARIN COUNTY MARIN CALIFORNIA

2004 Ritchey Bicycle Components

Argentina:
Teniorbita

Australia :
Dirtworks Australia Pty. Ltd.

Austria:
KTM

Belgium:
Team Sporting Goods

Brazil:
Plimax

Canada:
Norco

Croatia:
Ciklo Center

Czech Republic:
Vokolek Import

Denmark:
Bike Toyz
TOKIND

Estonia:
Hawaii Express
Velo Plus

Finland:
Grahns

France:
Epsilon
Gyro
Lapierre

Germany:
Cosmic Sports
React
Wheeler

Greece:
Nikos Maniatopoulos
Kinisi Bicycles

Hungary:
Cseke. Pic
Velotrade

Israel:
Matzman Trade

Italy:
Ritchey International Ltd

Japan:
Tokyo S. E. Co

Latvia:
ZZK

Luxembourg:
Team Sporting Goods

Mexico:
Grupo Casa Felix

Netherlands:
Hunter
Innobike
Tehava

New Zealand:
W.H. Worral & Co.

Norway:
Sportpartner

Poland:
Matuszewski

Portugal:
Tn Tao Natural

Puerto Rico:
Xtri Multisports

Russia:
Sportclub Velomir Group

Slovakia:
Slovkolex

Slovenia:
Pulzar

South Africa:
Pro Bike

South Korea:
Dong Jin

Spain:
Comercial Pous

Sweden:
Grahns

Switzerland:
Good Price
Intercycle

Taiwan:
Colmax

UK:
Paligap Limited

USA:
Bicycle Technologies Intl.
Downeast Bicycle Specialists
The Hawley Company
Quality Bicycle Products
Raleigh America
Security Bicycle Components
Seattle Bike Supply

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Design by David Pasewark (www.davidpasewark.com)

RITCHEY BICYCLE COMPONENTS