2009 CATALOG

cervélo

WELCOME TO CERVÉLO 2009

Cervélo Cycles Inc co-founders Gerard Vroomen and Phil White

We know it is standard practice to exclaim that the past year was the best year ever, but in this case, what else can we say?

Maybe most visible were the successes in racing. From the Yellow in Paris to the Gold in Beijing, from the ten Ironman victories to the 1-2 finish in La Grande Boucle, it's been wonderful to work with some of the best athletes in cycling and triathlon. In return, it has been rewarding to see how much they also view Cervélo as an integral part of their success.

Right after the Tour victory, Carlos Sastre came over to us to say that "together we have won the Tour de France". We'll be the first to admit that it was his talent and determination that got him to the top, but it is nice to be able to give them a little advantage along the way. Maybe Jens Voigt said it best when he noted that "every time I get to the starting line, I laugh. I look around me and I think, we're already leading before the race has even started".

In other, less visible, areas it has also been a good year. The engineering group that develops all Cervélo models and ensures they meet all production standards have been hard at work to develop even better bikes, not an easy task given our 2008 line-up. But they succeeded and we are proud to introduce the S3, which in its first race captured a Bronze medal in Beijing.

They also made a breakthrough in product testing. The bike parts that we spec on our bikes have to pass all relevant industry tests, but that is not always enough as sometimes a part still develops a problem in real conditions out on the road. Such was the case with the Wolf SL fork, maufactured and designed by True Temper Sports. When True Temper could not find the cause of the problem, the engineers at vroomen.white.design went to work. Not only did they find the cause, they also developed a lab test that mimicked the failure mode exactly. The result is that we now submit all forks we spec to this additional test, and we are replacing all True Temper Wolf SL forks that do not pass this test with forks that do. For more information, please visit www.cervelo.com/TTW .

Vroomen.white.design also added a production technology and materials lab to its structure, which means that it now has aerodynamic, structural and production technology testing at its finger tips. The only element missing would be a structured road testing set-up.

Enter our brand new pro cycling team. Cycling teams fundamentally focus on one thing: racing. While this is great for brand exposure, it's not ideal for a company like Cervélo that really wants to use a team extensively for product testing. Together with likeminded equipment manufacturers Zipp, Speedplay, 3T and Vittoria, Cervélo has decided to start a pro cycling team focused equally on product development and racing. For more information on the team and how you can be a part of it, please visit www.cervelo.com/team.

Given all the projects that have been in development this year, we are confident that next year will be even more exciting than 2008. Thanks for coming along for the ride with us.

Phil White, co-founder

Gerard Vroomen, co-founder

DESIGN, ENGINEERING AND TESTING

Prepping Carlos for time trial success

24,700 man-hours of engineering, 6,000 man-hours of lay-up analysis, 1,200 hours of CFD analysis, 2,000 hours of aerodynamic design, 3,400 man-hours of lab testing, 4,400 man-hours of CAD design, 2,500 man-hours of FEA runs, 2,000 man-hours in quality control system development, 1,800 hours in production technology development, 1,120 man-hours of windtunnel testing and 280 man-hours of coffee drinking. That's what goes into Cervélo designs each year.

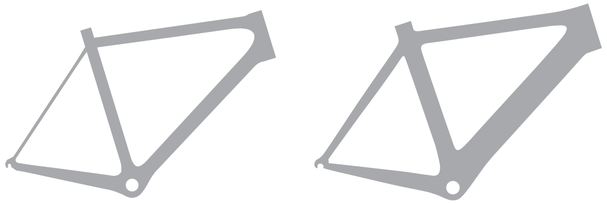
Cervélo prides itself in being one of the few bike companies with a comprehensive design, engineering & testing set-up. Twelve engineers work non-stop to find ways to improve current designs and develop completely new concepts.

From the most advanced Finite Element Analysis and Computational Fluid Dynamics software to the most extensive windtunnel testing in the industry. From programs written by the engineering team if commercially available software is not sufficient to our in-house carbon lay-up and manufacturing know-how. Cervélo has taken bike design to the next level and will continue to push the boundaries, because it is in our DNA. No wonder we can offer the lightest, the strongest and the most aerodynamic frames in the world today. Don't take our word for it, independent tests confirm it.

Without significant industry standards for testing, Cervélo has even taken it upon itself to develop newer and tougher standards for internal use. These tests are usually a multitude tougher than the industry standards; for example the internal frontal impact test at Cervélo equals more than double the official DIN (German Institute for Standards) standard.

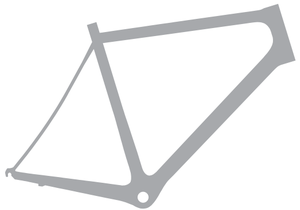
For fatigue testing, Cervélo also pushes for higher and higher performance, despite the frames becoming lighter. We have started testing at over 1 million fatigue cycles, while the industry standard is only at 100,000 cycles. Cervélo is determined to continue to lead the industry in this field.

GEOMETRY TABLES



S1 - S2 - S3 - R3 - R3 SL

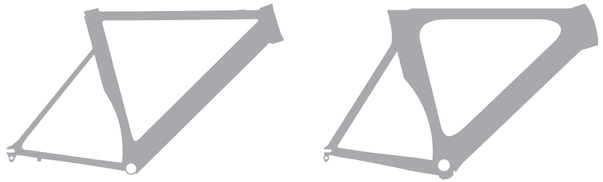
Size	48	51	54	56	58	61
Head Angle	72.5°	73°	73°	73°	73°	73°
B.B. Drop	68	68	68	68	68	68
Effective Toptube @ 73° seattube	515	530	545	565	580	592
Same at @ 76° (Soloists only)	488	502	516	535	549	560
Head Tube	100	120	140	160	180	200
Front Centre	547	558	573	593	608	620
Rear Centre	400	400	400	400	400	400
Standover Height	709	729	746	764	781	800
Stack	502	522	541	560	580	599
Reach	361	370	380	394	403	409



RS

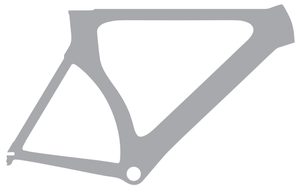
Size	XS	51	54	56	58	61 (9°TT)
Wheelsize	650c	700c	700c	700c	700c	700c
Head Angle	72°	71°	72°	73°	73°	73°
B.B. Drop	40	68	68	68	68	68
Effective Toptube @ 73° seattube	515	532	546	565	580	592
Head Tube	175*	140	160	180	200	220
Front Centre	555	588	589	593	608	620
Rear Centre	410	410	410	410	410	410
Standover Height	732	742	764	787	805	816
Stack	520	531	555	579	599	618
Reach	355	369	376	388	397	403
Toe Clearance	107	110	108	111	124	136

* with 650c wheels, equals 120mm headtube on 700c frame



P1 - P2

Size	48	51	54	56	58	61
Wheelsize	650c	700c	700c	700c	700c	700c
Head Angle	72°	72.5°	72.5°	72.5°	72.5°	72.5°
B.B. Drop	43	60	60	60	60	60
Effective Toptube @ 75° seattube	514	535	557	573	589	604
Effective Toptube @ 78° seattube	490	510	530	545	560	574
Head Tube	111	90	121	141	161	190
Front Centre	568	586	609	628	643	659
Rear Centre	368	380	380	380	380	380
Standover Height	716	746	776	795	815	840
Stack	461	482	512	531	550	577
Reach	389	405	418	429	440	448



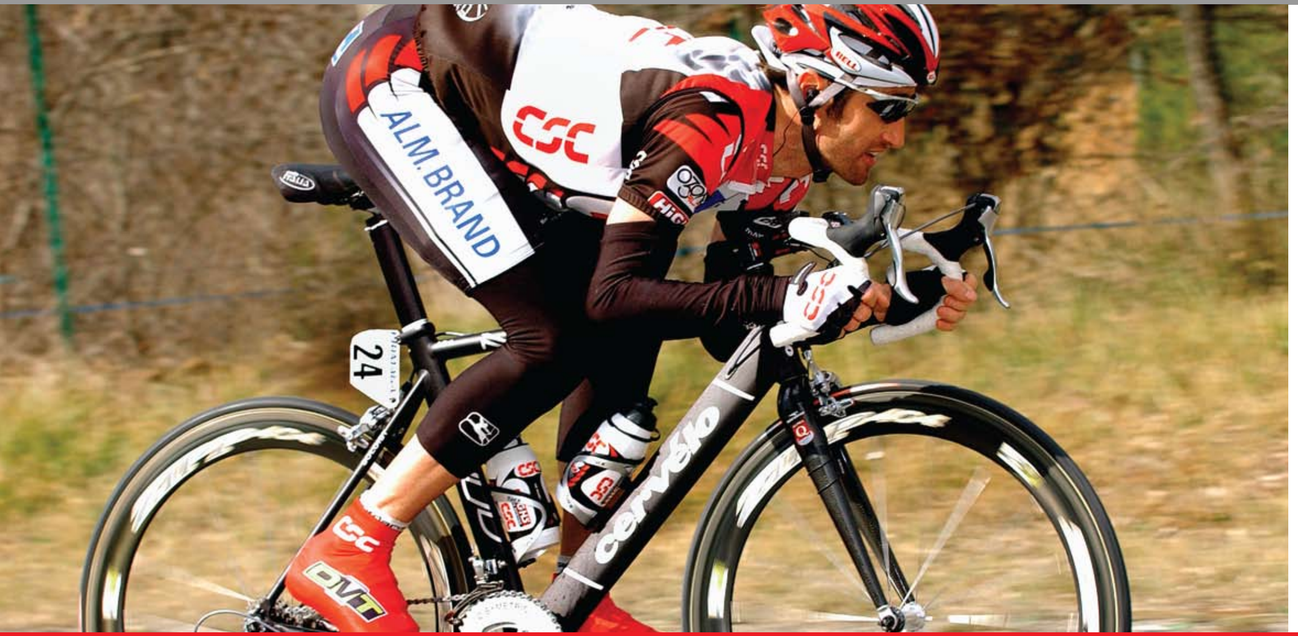
P3

Size	48	51	54	56	58	61
Wheelsize	650c	700c	700c	700c	700c	700c
Head Angle	72°	72.5°	72.5°	72.5°	72.5°	72.5°
B.B. Drop	43	60	60	60	60	60
Effective Toptube @ 75° seattube	514	535	557	573	589	604
Effective Toptube @ 78° seattube	490	510	530	545	560	574
Head Tube	110	90	105	125	145	175
Front Centre	568	586	609	626	643	659
Rear Centre	368	380	380	380	380	380
Standover Height	716	746	762	780	799	828
Stack	461	482	498	516	535	564
Reach	389	405	419	433	445	454

For more information, please visit www.cervelo.com & www.cervelo.tv

S1

www.cervelo.com/S1



S1 winning Paris-Nice

"It explodes off your pedal strokes with that instantaneous acceleration, but it also keeps on rocketing ahead after your booster phase, as if a free tailwind was thrown in with your purchase" - Bicycling Magazine

Formerly known as the Soloist Team, the S1 offers the least expensive way to ride a real ProTour frame. But don't let that fool you; it is also one of the most successful bikes in the peloton, with victories in Paris-Nice, Critérium International, Liège-Bastogne-Liège, Tour de l'Avénir and many other races. Boasting a TrueAero profile, Smartwall tubeset, and a stiff yet comfortable ride, the S1 outperforms many of the other ProTour frames around it, even carbon ones. It's no surprise that many pro riders also use the S1 as their training bike. To top it off, the Soloist's reversible seatpost and adjustable geometry easily convert it into a high performance TT machine.

- Versatile and affordable - This bike can climb, descend, sprint, and of course is ideal for break-aways. On top of that it morphs into a part-time TT/Tri bike and it's the most affordable way to truly ride what the pros ride.
- Aerodynamic without compromising other features - Combines aerodynamics with light weight, great power transmission, and an excellent ride.
- ICS (Internal Cable Stops) - The best internal cable stop system available. Easy to install, easy to service, easy to keep clean and improving aerodynamics.
- Anodized finish - Light and durable, the stealth finish of the S1 is extremely scratch resistant and stands up to even the worst pro-team abuse, including constant travel.
- Adjustable geometry - Cervélo adjustable aero seatpost allows for a switch in seattube angle from a 73 to anywhere up to 76 degrees for occasional time trials and/or multisport events.
- Winning pedigree - Ridden to victory in Liege-Bastogne-Liege, Paris-Nice, Tour de l'Avénir, Critérium International and many other races.

S2 winning Milan-San Remo

"This year Team CSC have benefitted from arguably the most sophisticated bike in the pro peloton" - CycleSport

The S2 is the next generation of the Soloist Carbon, which already had the reputation for being the ultimate pro bike: not surprising, given its long list of victories. But it is maybe even more useful at the other end of the spectrum, giving an "unfair" advantage to those who just need a little bit more to hang on to their weekend rides. We know, because both Phil and Gerard are squarely in that category, and both own S2s. While most of the aerodynamic drag is caused by the rider, around 25% is the bike. What is great about bike aerodynamics is that it is "always on", no matter your riding position or fatigue level. And thanks to the latest Cervélo lay-up schedules, there is no weight or efficiency penalty for all this aero advantage.

- No compromise - Extremely aerodynamic yet among the lightest frames in the pro peloton and with excellent stiffness & compliance properties.
- New profile downtube - Our work into improving the downtube and headtube on the TT bikes has directly benefited the S2.
- Horizontal teardrop-shaped sloping toptube - Since the toptube has a slope to it, the aerodynamics can be improved by giving it the proper airfoil cross section in the direction of the airflow.
- Stealth aero headtube – While the headtube may look round at the front, this is an optical illusion. The headtube is ultra thin and only 1mm wider than the P3 headtube. Although the leading edge is kept straight, the sides neck down in the center section, resulting in a very good airfoil shape around the headtube in combination with a classic side profile.
- Oversized bottom bracket area – The increased volume of the bottom bracket area provides even greater BB stiffness, and the smooth contours of the BB volume help both for this BB stiffness and also for its strength as the fibers have a much more continuous path to transfer the loads better.

S3 takes Bronze in Beijing in first race

Team CSC has long used Cervélo's slippery frames for road stages with well-known success and other companies have more recently gotten into the game. – cyclingnews.com

Cervélo invented the aero road frame, and continues to lead simply because we know what works. No aero-looking features, but real benefits. Aero road frames are the most difficult to design, as they have to excel at everything: aero, light, stiff, comfortable. The SLC-SL is close to perfection already; to improve on it was not easy. The engineers at vroomen. white.design used the R3 seatstay technology, rotated the stays 90o and gave them a proper Cervélo aero shape. This reduces the weight, increases the vertical compliance and improves the aerodynamics. Sounds simple, but the structural design is extremely complex, which is why only Cervélo has such stays. The chainstays were also redesigned to optimize aerodynamics. Finally, the cable routing system (ICS2) is the first to have cable entries through the top of the toptube without sacrificing shifting performance.

- Outstanding aerodynamics – Like the S2, the S3 uses the best airfoil shapes specifically designed by Cervélo for bicycle speeds. Additionally, the S3 has a new aerodynamic seatstay and chainstay design.
- Light, but efficient – It is easy to make a light frame, just use less material. But the S3 is light by using material in the right places, rendering stiffness properties in the BB and in torsion that are even 5-10% higher than the already leading-edge S2.
- Vertical compliance – Cervélo invented the minimalist seatstays with the R3, and although the thin looks have been copied, nobody can match the low weight and high compliance of Cervélo's design. Now Cervélo has done it again, using the same technology to design extremely thin & compliant yet also aero seatstays.

Developing the RS

"Best Plush Bike" Bicycling Awards
"True performance for riders with limited flexibility" Bicycling Australia

We are not all created equal. Some of us are flexible, others are not. For those who are not, the bike industry designs frames with longer headtubes. Unfortunately, these types of frames are also designed with sluggish handling and without pro-level features, as if having your handlebars 3cm higher would exclude the possibility that you are a serious rider. To Cervélo, this makes no sense. And so we build the RS, for people who want a pro-level bike but prefer a higher handlebar position. Why is Cervélo the first to do this? We have no idea, but given the response from our customers, this is yet another area where others will likely follow us soon.

- Incorporates the Squoval, Smartwall for Carbon and lay-up technology of the R-series.
- New seatstay design with built-in deflection mode for optimal vertical compliance.
- Same handling philosophy as our other road bikes, but with longer headtube for those who prefer a higher handlebar position. And slightly longer chainstays to ensure that the weight distribution remains optimal with the rider's shifted center of gravity.
- Special XS size – On a smaller frame, the front wheel moves closer to the rider, causing toe-overlap. This only happens at low speeds, because at normal speeds the steering angles become very small. We can prevent toe overlap by not moving the front wheel back, but that affects weight distribution & handling. Or use 650c wheels, but that means no neutral support in races. Since we build performance bikes and won't compromise handling, we accept toe-overlap for the R3 and S-ranges, while offering the 650c wheel solution for the smallest RS.

First-First-Second in three years of R3 at Paris-Roubaix

"Best bike we've ever ridden" – 220 Magazine

In three years, the R3 has scored two wins and a second place at Paris-Roubaix - unparalleled in professional racing. But to the pro team mechanics, more incredible than the victories is the fact there has never been any mechanical issue with an R3, even though it is the lightest frame to be used in that race. In a race where every manufacturer lies awake worrying the night before, that's simply unheard of. But the R3 is much more than just a Paris-Roubaix frame. Carlos Sastre (not exactly your prototypical Paris-Roubaix rider) uses it for most of the season as well. There is perhaps no better proof of the R3's extraordinary performance than the speed with which several other bike companies try to copy its looks. But of course, the R3's performance is more than paint-deep, and its superiority is safely stowed away in all its small details and proprietary lay-up designs.

- The downtube and chainstays have Cervélo's ingenious Squoval shape to optimize their stiffness-to-weight ratio.
- The toptube's cross section changes shape along its axis to perfectly match the complex load case it experiences, hence it is Squoval near the headtube and seattube and oval in the center section.
- The increased volume of the oversized bottom bracket area provides a great STW. The smooth contours of the BB volume help both for this BB stiffness and also for its strength as the fibers have a much more continuous path to transfer the loads better.
- High-Modulus plies are added to the sides of the tubes where they have the greatest effect in bending. They are feathered to tranfer the loads into the structure. High-strength plies on the bottom of the down-, head- and toptube distribute the loads from a potential headtube impact. Kevlar plies in that same area are to prevent rupture.
- The R3's seatstays are quite simply the most amazing stays on any bike – super light & compliant yet very strong. A true testament to the skills of our engineering team.

R3 SL

www.cervelo.com/R3SL

R3 SL winning Alpe d'Huez and the Tour

"Best carbon frame" Tour Magazine Germany
The Cervélo R3 SL is quite possibly the fastest bike that we have ever tested" - Cycling Plus

It would be easy to exclaim "Tour-winning bike" here (and I guess we just did), but that's not so relevant. What is relevant is that the rider, Carlos Sastre, can't imagine riding anything else. With Tour Magazine's laboratory tests clearly showing the R3 SL the best combination of stiffness, low weight and comfort, it's easy to see why. Add to that the impact strength and incredible fatigue life (both at our internal levels, which is several times higher than the industry levels) and it is clear why the R3 SL is a favorite among consumers and reviewers alike.

- With eight engineers working on carbon fiber projects, Cervélo can call on a wealth of knowledge about how to increase the performance of carbon frames. The R3 SL is the latest iteration of our lay-up optimization, allowing us to further increase the stiffness-to-weight ratio and the vertical compliance.
- R3 Seatstays – Through testing and analysis (in particular with our custom developed software tools), every last gram was squeezed out of the R3 seatstays without any sacrifice. It passes the highest impact, fatigue and road vibration test levels in the industry as well as the "Paris-Roubaix victory-test" on the cobblestones.
- Front boomerang construction – Monocoque frames typically have a weight penalty, while frames with lugs can have lower impact strength, as each lug joint is a potential separation point. Cervélo's patent pending boomerang design of the R3 series allows continuous fibers to run from toptube to headtube to downtube, thereby greatly enhancing the frontal impact strength without encountering the lay-up control problems of a full monocoque design.

P1

www.cervelo.com/P1

P1 winning World Espoir TT Championships

"For those who are anchored in the mid $2000s and need to buy a podium-worthy bike, stop shopping, you've found it" - Dan Empfield, founder QR and editor slowtwitch.com

Actually, for that price you can include carbon race wheels. With the P1, Cervélo offers pro level performance at an affordable price. By using many design features that made previous P2 designs so successful, such as narrow and aero tubes, internal cables, and a functional rearwheel cutout, the 2009 P1 is truly in a class of its own. The use of Smartwall tubing, rearward facing dropouts and adjustable geometry make this a competition level bicycle for time trials and triathlons. With so many features at such a low price, it's no surprise the P1 has been the most popular TT/Triathlon bike of the past few years.

- Full aero TT/Tri frame and seatpost - Building on twelve years of experience, the this member of our TT family offers pro-level performance at an affordable price. The downtube, seattube and seatpost all feature Cervélo's proprietary TrueAero aerodynamic shapes.
- Rearwheel cutout - The seattube features a tight-fitting rearwheel cutout to further improve the aerodynamics. The frame has horizontal dropouts with set-screws to allow the rider to adjust the cutout gap depending on the size of tire used, and ensures that the airflow from the seattube to the rearwheel is as smooth as possible for tire sizes from 19-25mm.
- Cervélo Smartwall 2 tubing - Putting the material where it matters, the P1 offers great bottom bracket and torsional stiffness despite the narrow aerodynamic profile of its tubes.
- ICS Internal Cable Stops - The best internal cable stop system available. Easy to install, easy to service, easy to keep clean and improved aerodynamics.
- Adjustable geometry - The flippable seatpost allows for an adjustment in seattube angle range of anywhere between 74-79 degrees to tailor the geometry to your specific desires.

P2 winning Ironman World Championships

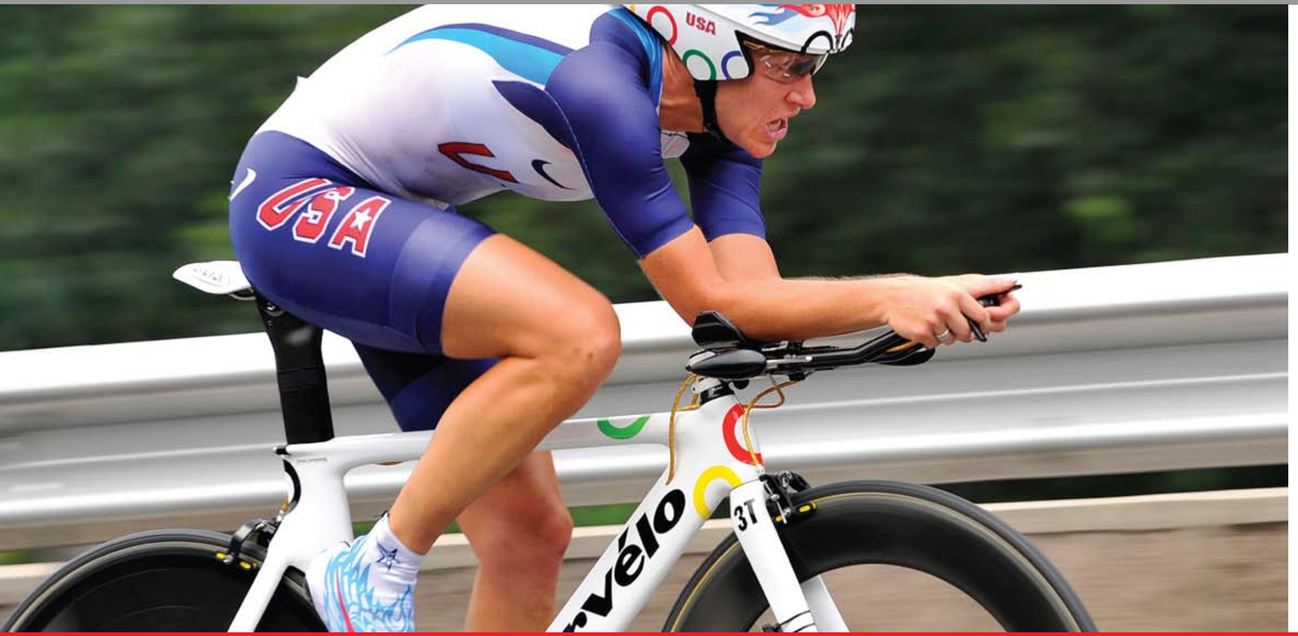
"The P2 packs a better punch than many bikes at twice the price" - Triathlete magazine
"No upgrades are required. Slap on a set of race wheels and you're ready to win Kona" - Dan Empfield, founder QR and editor Slowtwitch.com

Dan Empfield made the quote above last year, and he didn't have to wait long for confirmation – Chrissie Wellington won Ironman Hawaii on a P2 in 2007, following it in 2008 with wins at Ironman Australia and Germany. At any other bike company, the P2 would be the top-of-the-line bike. At Cervélo, it is number two behind the P3. But the P2 is not your average runner-up; no other frame in this price category offers anywhere near the same performance. No wonder that the P2 is regularly rebadged by pros with different bike brand logos, or that customers sometimes have to wait months to get their hands on one despite another tripling of our production. But afterwards, we hear the same reponse over and over again: It was more than worth the wait.

- TrueAero tube shapes and minimal frontal area for optimal aerodynamics, Smartwall for Carbon lay-up to optimize the bottom bracket and torsional stiffness of the frame.
- The constant width seattube cutout closely covers the rearwheel tire. Most cutouts (with the exception of the P3) have a cutout width that varies as you move up and down the cutout, thereby hampering the proper airflow from the seattube to the rearwheel.
- The Integrated seattube collar provides you aerodynamically with an integrated seatmast, but structurally the post can still be removed with ease so you can fit the P2 into any bike case and travel without a problem. This is always an issue with frames with a structurally integrated seatmast, as we know from the original 1996 P2 which was the first bike to sport that feature. While it was the best solution we could come up with back then, the new system with the removable seatpost is superior not only for traveling but also for aerodynamics, as it allows us to use a much narrower seatpost than if it was a structural part of the frame.

P3

www.cervelo.com/P3



P3 winning Gold in Beijing

"Most successful time trial bike on the ProTour circuit"
"Most successful triathlon bike on the Ironman circuit"

Some ask us why the P3 hasn't changed in three years, or why there is no P4 yet? The simple answer is that in order for us to bring out a new model, it has to be better. And it's not easy to improve on the P3. Our competitors prove this, in the past three years many new TT bikes have come out, but none come close to the P3 in independent tests. This should come as no surprise; since Cervélo spends so much more time on aero research than the other companies, the only one who will be able to beat the P3 anytime soon will be Cervélo itself. In the meantime, by grabbing four out of six medals (against 20 other brands) in the Beijing time trial (men and women), the P3 has shown its not ready to retire yet.

- Optimized rearwheel cutout – Don't be fooled by imitations: just because a seattube is curved doesn't mean it's fast. The Cervélo P3 seattube cutout is still the only one with all the proper details that allow the air to flow from the seattube to the rear wheel with the least amount of disturbance.
- TrueAero tube shapes and minimal frontal area for optimal aerodynamics, Smartwall for Carbon lay-up to optimize the bottom bracket and torsional stiffness of the frame.
- The Integrated seattube collar provides you aerodynamically with an integrated seatmast, but structurally the post can still be removed with ease so you can fit the P3 into any bike case and travel without a problem. This is always an issue with frames with a structurally integrated seatmast, as we know from the original P2 which was the first bike to sport that feature. While it was the best solution we could come up with back in 1996, the new system with the removable seatpost is superior not only for traveling but also aerodynamically, as it allows us to use a much narrower seatpost than if it was a structural part of the frame.

P3 TRACK

www.cervelo.com/P3Track

P3 Track winning Gold in Beijing

In the Points race in Beijing, the P3 Track took five of the top-10 spots, including Gold and Silver. In the Team Pursuit, Denmark took Silver on the same bike. Where most manufacturers use different frames for their pursuit and sprint stars on the track, Cervélo uses one and the same frame because the P3 Track is a perfect combination of light weight, stiffness and aerodynamics.

This also represents a great opportunity for our customers; now you can invest in one great track bike and use it for all events, rather than having to divide your budget over two bikes.

- Unbeatable aerodynamics - All the details that make the P3 an aerodynamic stand-out are incorporated into the P3 Track.
- Superior bottom bracket stiffness - We were expecting that our test riders would ask for even more stiffness in the bottom bracket, but they all concluded that the original P3 lay-up was more than sufficient for the track. Even the most powerful sprinters agreed.
- The extremely narrow and aero headtube is short enough for pursuit events, and stiff enough to even be used with a rising stem for sprint events.
- Dual position seatpost - An extremely narrow profile seatpost with two positions, one for sprint and one for pursuit racing.

cervélo

Bikes and equipment may not be exactly as shown, specifications subject to change without notice. Cervélo uses recycled paper.