



## WHITE PAPER 1.0



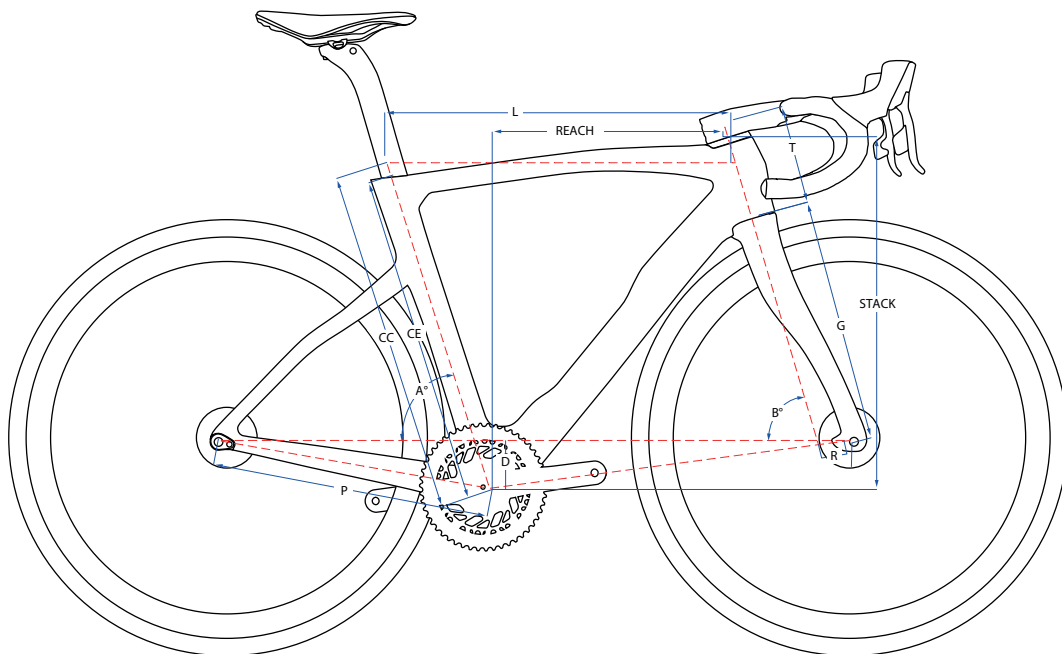


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# 1. DEDICATED COMPETITION GEOMETRY

When fun counts more than victory, our new geometry will guarantee you the optimal position. For the Pinarello X, we focused on creating the ideal geometry for a relaxed position in the saddle. And the new rear triangle is designed specifically to dissipate vibrations, which means less strain on the rider's back, and more long-distance comfort. Alongside our partners at Toray, we've developed the perfect carbon layup for endurance and comfort, with significantly reduced vertical stiffness when compared to our top race model. And with 9 sizes, it will be possible for every cyclist to find their perfect partner.



| CE  | CC  | L   | A [°] | B [°] | P   | T   | D  | R  | G   | REACH | STACK |
|-----|-----|-----|-------|-------|-----|-----|----|----|-----|-------|-------|
| 425 | 430 | 492 | 75,25 | 70    | 415 | 125 | 67 | 52 | 373 | 341,9 | 527,5 |
| 450 | 460 | 509 | 74,5  | 70,5  | 415 | 130 | 72 | 52 | 373 | 352,1 | 539,2 |
| 470 | 490 | 525 | 74    | 71    | 415 | 142 | 72 | 52 | 373 | 361,9 | 552,4 |
| 495 | 515 | 536 | 73,75 | 71,5  | 415 | 151 | 72 | 47 | 373 | 368,5 | 564,4 |
| 510 | 530 | 545 | 73,5  | 72    | 415 | 161 | 72 | 47 | 373 | 372,5 | 575,8 |
| 525 | 545 | 555 | 73,25 | 72,25 | 415 | 173 | 72 | 47 | 373 | 376,7 | 588,2 |
| 540 | 560 | 565 | 73    | 72,5  | 415 | 187 | 72 | 47 | 373 | 380,2 | 602,4 |
| 560 | 580 | 577 | 72,75 | 72,5  | 415 | 211 | 67 | 47 | 373 | 384,1 | 620,3 |
| 590 | 600 | 590 | 72,5  | 72,5  | 415 | 232 | 67 | 47 | 373 | 388,1 | 640,4 |

CE: SEAT TUBE Centre - END | CC: SEAT TUBE Centre - Centre | L: TOP TUBE Centre - Centre | A [°]: SEAT TUBE ANGLE  
 B [°]: HEADTUBE ANGLE | P: CHAINSTAY | T: HEADTUBE | D: BB DROP | R: FORK RAKE | G: FORK HEIGHT | REACH | STACK



For this project, the detailed areas of focus for the Pinarello Lab were:



- 1. CARBON LAYUP:** T600 is the carbon fiber we chose from our carbon supplier Toray, the best-in-class carbon supplier from Japan. This choice perfectly balances the idea to get a performance bike built to last hours of riding, offering comfort and performance. The right match for an endurance bike.
- 2. FORK:** 470g with 2 different rakes, in order to offer the same riding experience for every size of the frame. 47° rake from 515 to 600CC, 52° rake from 430 to size 490CC.
- 3. FRAME WEIGHT:** 1050 grams help the frame behavior to be voted to comfort and elevate the joy to spend hours on the bike, enjoying the experience of that.
- 4. SEAT POST:** a full carbon aero seatpost derived from the Dogma F12.
- 5. VERTICAL STIFFNESS:** -21.1% less stiffness than Dogma F, in order to offer comfort and shock absorption.

**X WHITE PAPER**

## **2. TYRE CLEARANCE**

The Pinarello X takes full advantage of the latest innovation in wheels and tyres, because the last two editions of Paris-Roubaix have been won on conventional road frames, with 32mm tubeless tyres. This proves definitively that when it comes to balancing speed and control on difficult terrain, tyre clearance is the answer.



# 3. FRAME DESIGN

## A. CHAIN STAY DESIGN

Asymmetry is at the centre of every Pinarello R&D concept, to guarantee lateral stiffness, reduced watt dispersion and balanced handling.

## B. SEAT STAY DESIGN

The exclusive design of the Pinarello X seat stays are slightly curved, allowing our engineers to take full advantage of the T600 carbon fibre's special lay-up to absorb vibrations on even the roughest of roads. This means serious comfort, without needing to resort to the addition of a mechanical damping system, which would increase weight and drastically reduce performance.

## C. HEAD TUBE DESIGN

Designed with aerodynamics in mind, we also increased the upper headset bearing to 1.5", to allow for internal cable routing, with a +5 watt saving.

## D. DOWNTUBE

To complete the asymmetry approach, we've also designed the downtube section with the help of hours of CFD analysis. Because endurance doesn't mean that a frame can't be fast.



## 4. SEATPOST AREA

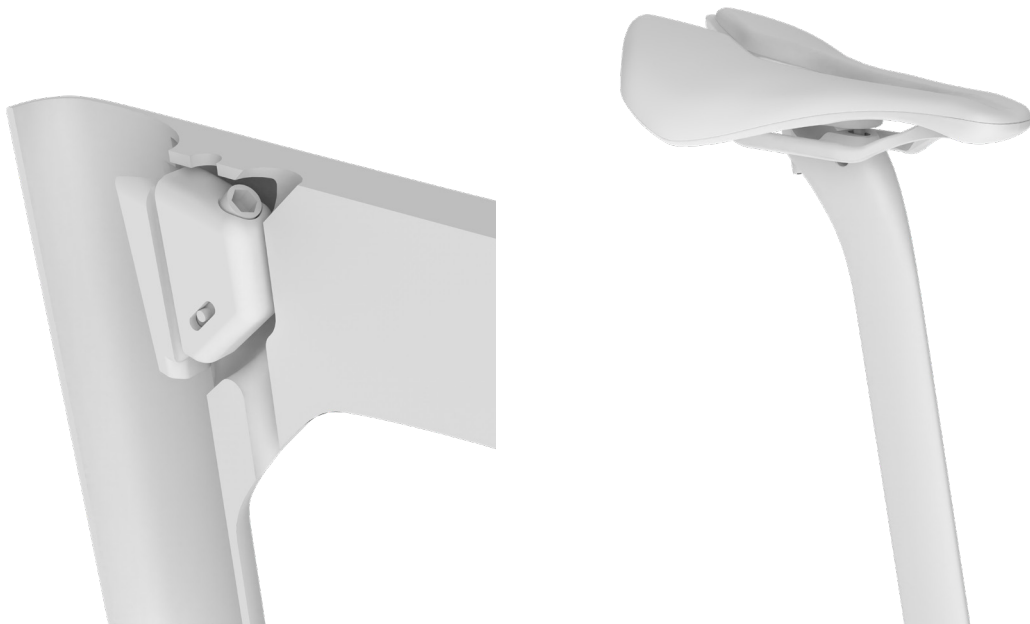
### A. SEATPOST CLAMP

For the Pinarello F, improved integration and the reduced dimensions of the seat clamp provide improved performance and a 36g weight saving compared to the previous model.

We have also reduced the thickness of the top tube and the seat post to improve aerodynamics and paired it with the seatpost from the Dogma F12 – a masterpiece of aerodynamics, weight, and stiffness.

### B. SEATPOST

The F series shares its seatpost with the Dogma F12, a guarantee of aerodynamic performance.







## 5. MATERIAL CHOICE

We have always relied on our partner Toray, the best carbon fibre producer in the world. And their T600 is the ideal carbon fibre for an Endurance frame, with a lay-up that offers the ideal mix of low weight, responsiveness, and dampening ability.

Carbon Reinforced Polymer (CFRP) is used to optimise every section of the frame to achieve the desired stiffness and lightness. For example, in areas where the stiffness is favoured, a high modulus fibre (HM) is chosen, while in areas where strength is essential, a high strength fibre (HT) is preferred. This choice contributes to increased impact strength, helping to prevent breakage.

# 6. AERODYNAMICS

Whatever your goal, with the Pinarello X, you can experience the pleasure of a frame designed and built to slice through the air and go faster for longer.

- 1. TICS** our integrated cable routing system. It's about so much more than just clean aesthetics, allowing us to save as much as 5 watts compared to a system with externally routed cables.
- 2. AERO SEATPOST** The X-series also feature an aero seat post, providing huge aero improvements in the rear triangle.
- 3. TAPERED SEAT TUBE**, to ensure every watt possible is saved and designed to embrace the flexy design of the seat stay.

## GEOMETRIES AND SIZES

Pinarello continues to offer the perfect bike for every size of rider. Our well-known "Made4you" concept was applied to the F series, resulting in 9 frame sizes and a guaranteed perfect fit.

Position is key when it comes to comfort, especially over long distances. Which is why we offer 9 sizes for the Pinarello X – more than any other endurance bike.

Why? Because we know how crucial positioning on the saddle is for a cyclist who aspires to great goals, which is why our "Endurance +" geometry was developed for the new Pinarello X in 9 sizes.

When combined with our extensive range of stem and handlebar sizes that we offer with our MOST range, it's clear that every athlete will be able to position himself almost perfectly on our new Pinarello X.



# 7. SPECIFIC PINARELLO F FEATURES

## **X SERIES**

- Carbon T600 UD finish
- Asymmetric frame
- Twin Arms
- Dedicated Onda fork
- Dedicate aero seat post
- Dedicated FSC Frontal seat clamp, integrated and aerodynamic
- Think 2, to fit electronical groupsets or mechanical Shimano groupset (no Sram and no Campagnolo mechanical groupsets)
- TiCR internal cable routing
- TiCR integrated headset ( 1.5 upper and 1.5 lower)
- Italian thread BB
- Flatback profiles
- Fork Flap
- Max Tyre: 700c x 32 mm
- RAD SYSTEM disc brakes
- Disc Flat Mount (max Ø160 mm)
- Front Axle Ø12 x 100 mm Shimano®
- Rear Axle Ø12 x 142 mm Shimano®



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