PURE
CYCLING

CANYON

SPEEDMAX WHR

THE #PERFECTHOUR

SPEEDMAX WHR. MADE FOR THE TRACK.


PERFECTION – A STATE ACHIEVED ONCE MAXIMUM POTENTIAL HAS BEEN FULFILLED. MAN AND MACHINE IN HARMONY. LOCKED IN POSITION TO MINIMISE THE AIR'S RESISTANCE. FIXED ON THE BLACK LINE. 60 MINUTES TO MAKE HISTORY. A BATTLE AGAINST THE CLOCK. TACTICS AND TEAM-MATES PLAY NO ROLE HERE. THIS IS PERFORMANCE IN ITS PUREST FORM. PURE CYCLING. #PERFECTHOUR

"ATTEMPTING TO BREAK THE HOUR RECORD IS A JOURNEY INTO THE UNKNOWN. FOR THE FIRST 30 MINUTES WE HAVE A GOOD IDEA HOW THINGS WILL PAN OUT. THE 15 MINUTES AFTER THAT WE CAN MAKE A SOLID GUESS. IT'S IN THAT FINAL QUARTER WHERE WE REALLY HAVE NO IDEA WHAT WILL HAPPEN. THERE'S NO ROUTINE OR EXPERIENCE WE CAN DRAW UPON FOR THAT KIND OF SCENARIO, IT'S UNLIKE ANYTHING ELSE. THAT FOR ME IS WHAT MAKES THE HOUR RECORD SO FASCINATING."

Andreas Walzer, Canyon Team Liaison Manager, former Team Pursuit Olympic and World Champion.

Alex Dowsett, triple British National Time Trial Champion and Movistar Team Rouleur

52.491 KM - the current Hour Record held by Australian rider, Rohan Dennis. That is the mark Alex Dowsett, triple British National Time Trial Champion and Movistar Team Rouleur, will attempt to beat at the National Cycling Centre in Manchester on the 2nd of May.

The Hour Record is one of the most demanding tests in cycling. It not only takes the rider to the edge of their physical limits, but also requires flawless equipment and setup if they are to even stand a chance. Everything must be perfect, right down to the most minute of details. One single watt is all it takes to make the difference between raising the bar with a new world record and tragically falling short by a matter of meters.

SPEEDMAX WHR
EVERY WATT COUNTS

Maintaining a speed above 52 km/h for one hour requires an average power output of approximately 400 watts. Around 90% of that total (360 watts) is needed to overcome the air's resistance acting against the rider. Setting a new Hour Record is above all else a fight against aerodynamic drag. The aerodynamic performance of the entire system, rider and machine, plays a crucial role. Every watt counts.

FOCUSSING ON THE ESSENTIALS Tackling the Hour Record calls for a bike that produces minimal aerodynamic drag. Working closely with Movistar Team's technical partners has resulted in the creation of a track-specific version of the highly successful Speedmax CF time trial bike: the Speedmax WHR. With its low frontal surface area and tube profiles optimised to reduce air turbulence, a geometry that encourages stable handling at speed, as well as a vast range of position adjustability, the Speedmax CF provides the ideal base for an Hour Record setup. Stripped back to the basics for absolute aerodynamic performance, in final form the Speedmax WHR weighs just 7.3 kg (incl. pedals).

SPEEDMAX WHR
FRAME & FEATURES

The Speedmax WHR frameset borrows a similar blueprint to the Speedmax CF. Its on-road performance with drag-reducing tube profiles and aggressive TT geometry can be ideally transferred for use on the track. UCI regulations prohibit the use of multiple gears, brakes and water bottles in all track disciplines meaning fundamental modifications had to be carried out in order to create a frameset ready for the Hour Record. The Speedmax WHR consequently has a much smoother surface with the number of components exposed to the wind drastically reduced. The result is a trimmed down and focussed design that leaves no doubts as to this bike's purpose.

The biggest modification when creating the Speedmax WHR was made to the rear triangle. The dropouts are positioned horizontally in order to always achieve the optimum chain tension and accommodate a range of gear ratios. With no derailleur hanger necessary the dropouts are entirely symmetrical. To further increase their strength and improve stiffness they are finished in aircraft grade 7075 aluminium. The carbon layup of the entire rear triangle has also been revised to achieve the desired track-specific axle width of 120 mm instead of 130 mm.

Handling stability at high speed is a key factor on track when it comes to holding the shortest line on every lap. The Speedmax WHR employs the same geometry that has proven so effective in road time trials. A flat 73.25˚ steering angle combined with our adjustable Rake Shift feature in the front dropout for a relatively low 39 mm of fork rake results in better tracking and stable handling. This is helped by the long wheelbase and chainstays, which mean the centre of gravity is extended horizontally for better balance. In addition, a low bottom bracket serves to bring the centre of gravity further down for more neutral handling while at the same time improving airflow.

The fact that brakes are not necessary on track opens up the potential to further optimise airflow and reduce turbulence on the Speedmax WHR. Gaps caused by the braking hardware on the Speedmax CF are no longer present to achieve the smoothest finish possible around the forks and beneath the bottom bracket.

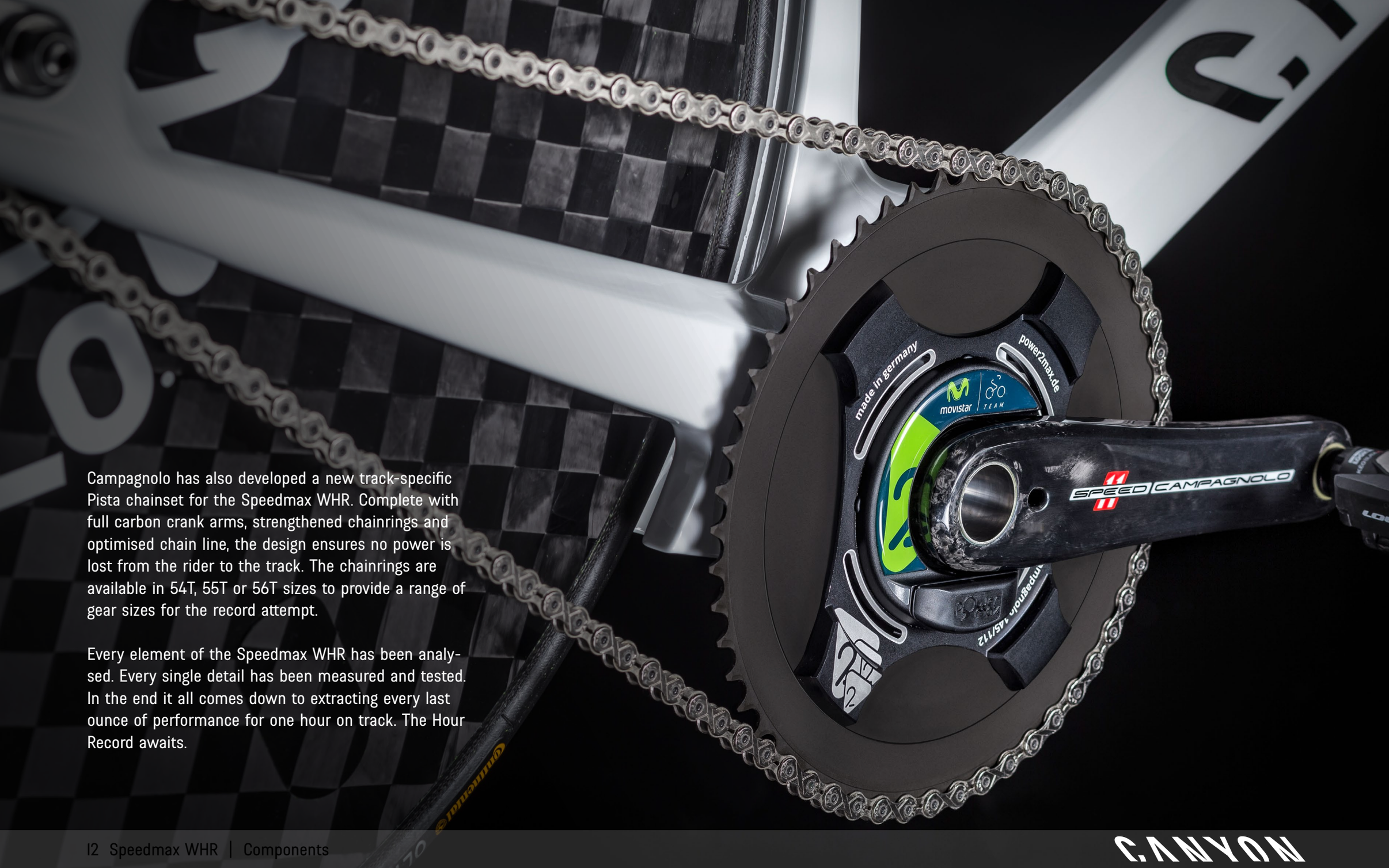
Every single element exposed to the air has been shaped for aerodynamic performance. As shifters and brake levers are also not needed, these parts are replaced by aero bar ends to further reduce drag around the cockpit in favour of leaving blunt surfaces exposed to the wind.

SPEEDMAX WHR COMPONENTS

The overall performance of the Speedmax WHR does not come down to the frameset alone, every single component is key. Newly developed track disc wheels from Italian component specialists, Campagnolo, wrapped in Continental tubular tyres combine with a Super Record chainset including Power2Max power meter to create the fastest setup possible.

The new Campagnolo Pista wheelset's full carbon disc construction greatly reduces drag and improves stability at speed making them perfect for use on the track. Low-friction ceramic bearings help minimise mechanical resistance and save even more watts.

Continental's Tempo II tyres lead the way in track tyre technology with their BlackChilli compound guaranteeing both grip and low weight. Capable of taking up to 15 bar (approx. 220 psi), these tyres drastically reduce rolling resistance on track.



Campagnolo has also developed a new track-specific Pista chainset for the Speedmax WHR. Complete with full carbon crank arms, strengthened chainrings and optimised chain line, the design ensures no power is lost from the rider to the track. The chainrings are available in 54T, 55T or 56T sizes to provide a range of gear sizes for the record attempt.

Every element of the Speedmax WHR has been analysed. Every single detail has been measured and tested. In the end it all comes down to extracting every last ounce of performance for one hour on track. The Hour Record awaits.

SPEEDMAX WHR
TECHNICAL DATA

HEAD TUBE STIFFNESS	80 NM/°
BOTTOM BRACKET STIFFNESS	65 N/MM
WEIGHT (INCL. PEDALS)	7.3 KG
FRAMESET	SPEEDMAX WHR
HANDLEBAR	SPEEDMAX FLAT HANDLEBAR W/O HOLES
COCKPIT	SPEEDMAX L BEND EXTENSIONS
PEDALS	LOOK KEÓ BLADE AERO
SEATPOST	SPEEDMAX SEATPOST
SADDLE	FIZIK ANTARES VS
CHAIN	KMC TRACK CHAIN
WHEELS	CAMPAGNOLO PISTA DISC WHEELSET WITH CERAMIC BEARINGS
CHAINSET	CAMPAGNOLO PISTA
POWER METER	POWER2MAX
TYRES	CONTINENTAL TEMPO 2, 22 MM
BAR TAPE	LIZARD SKIN 1.8 MM

Canyon Bicycles GmbH | Karl-Tesche-Straße 12 | 56073 Koblenz | www.canyon.com

29.04.2015