



PRESS RELEASE

NEW FEATURES FOR 2004 GROUPSETS

Xenon, three new rear derailleurs for optimum results.

The Mirage groupset has a new black finish.

The Veloce groupset becomes 10-speed but is still also available in the appreciated 9-speed version.

The Centaur groupset comes with a new optional Century Grey finish and dedicated seatpost and headset.

The Chorus groupset makes great use of composite materials technology: crankset, Ergopower, rear derailleur and seatpost.

The Record groupset outclasses itself with a new carbon-fiber crankset and new components that are decidedly "Ultra".

Vicenza, July 30 2003 – Campagnolo has a lot of new features lined up for the 2004 season, with a precise philosophy in mind: enhancing each groupset. The Xenon and Mirage groupsets share geometry and parts of the hi-end range. Mirage in particular uses new extremely 'racing' colors and the Veloce groupset's 10-speed version and technical solutions based on the Centaur 2003 make it even more hi-end. The Centaur groupset uses increasingly sophisticated materials and state-of-the art machining techniques like forging for the bodies and the plate of the rear derailleurs. The Chorus groupset displays, this year more than ever before, enviable excellence that makes it the natural point of reference for those who seek to emulate Campagnolo. The Record groupset is confirmed as the groupset for the most technologically advanced racing bicycles and comes with new decidedly "Ultra" components.

➤ **XENON.** The **Xenon groupset** is a perfect example of Campagnolo's design philosophy, which is based on reliability, long-term performance and shared technology. The concept of **sharing hi-end technology** has this year been extended to the Xenon groupset. Like the entire Campagnolo 2004 range, it is available **in three rear-derailleur versions to obtain optimum functional efficiency:**

- Rear derailleur with short cage for double crankset and sprocket set up to 13-26
- Rear derailleur with medium cage for combinations of double crankset and sprocket set up to 13-28 and triple crankset and sprocket set up to 13-26.
- Rear derailleur with long cage for combination of triple crankset and sprocket set up to 13-28.

➤ **MIRAGE. black finish.** The Mirage groupset will certainly not go unnoticed. It has always been one of Campagnolo's biggest winners. This year it comes in a completely new guise: **aggressive and irresistible**. Lovers of thrills will find their wishes granted. It is available with double and triple drivetrain and boasts many hi-end features such as the geometry and the use of composite materials. The **three available rear derailleurs**: with short, medium and long cages **make it possible to opt for the solution that will work most effectively** with the chosen combination of crankset and sprocket set. There have also been radical changes inside the **hubs**. Movement is now provided by **hi-precision industrial bearings** that assure greater smoothness and durability. In order to provide the user with an even more customized color scheme, a crankset with an anodized aluminum finish and black chainrings will be available as an additional option.

➤ **VELOCE.** The Veloce groupset has become 10-speed but will still be available in the appreciated 9s version. The **10s drivetrain** was developed with the Record groupset and was an immediate winner that put the rider at an advantage. The close-ratio sprockets and the new geometry of the rear derailleur, front derailleur, chain and crankset make for **faster, more precise and silent shifting**. The 10s drivetrain gives a wider choice, so there's no more need to go to the trouble of changing the sprocket set just for that one race and you have that extra gear for when the going gets tough.

The Veloce 10s crankset shares the **geometry and innovative technical features** of its chainrings **with hi-end** groupsets. In three sections of the chainring, six pins and relative grooves facilitate the shift of the chain up onto the larger chainring. Similarly, at two set points specially designed chainring teeth make it easier for the chain to shift down to the smaller chainring.

The rear derailleur of the Veloce groupset, like all the other Campagnolo rear derailleurs, will be **available in three versions**: with short, medium and long cages. This enables the user to choose the rear derailleur that will work most effectively with the chosen combination of crankset and sprocket set. The rear derailleur with a short cage is designed for the combination of a double crankset with a sprocket set up to 13-26. The rear derailleur with a medium cage is designed for the combination of a double crankset with a 13-29 sprocket set or a triple crankset with a sprocket set up to 13-26. The rear derailleur with a long cage is recommended for use with a triple crankset with a sprocket set up to 13-29.

The front derailleur is based on the Centaur 2003 with a lightened cage and technopolymer insert to reduce weight and make shifting smoother and quieter. **The chain is the Record C10**. It is made from **the best materials, using the best treatments, featuring the best tolerances** and outer link resistance is incredible. The Ultra-Drive geometry and floating link action and its chrome-nickel-PTFE surface treatment increase durability and performance. The other facts and figures also speak for themselves: just 6-mm wide and weighing a mere 279 g. The chain is closed by the Campagnolo HD-Link system.

The Veloce 10s sprocket set consists of sprockets in **steel with a nickel chrome finish** that is **more hard-wearing** and Ultra-Drive (UD) geometry that makes for silent, swift and precise chain shifting. A **new combination** of Veloce sprocket sets has been introduced: the new **14-23** sets for younger riders and for people who want a one-ratio sprocket set.

A **new front Veloce hub** makes its debut. Unlike the hub of the 2003 range, this hub has **sealed industrial bearings** that improve smoothness and reduce maintenance.

The **Veloce groupset** will nevertheless still be available in both the double and triple **9s version**. The reason for this is the **high quality** of the nine-speed drivetrain and its **extremely competitive price**.

➤ **CENTAUR.** The Centaur groupset is available in two colors: the new Century Grey and the classic anodized aluminum.

A new Hiddenset headset and an aluminum seatpost have been added to enhance the groupset.

The Centaur groupset introduces the hi-end of the Campagnolo range and is available this year in **two different color versions**:

- the **new Century Grey** finish is a homage to the 1990 Record Century groupset and has a sober and elegant appearance.
- the **anodized aluminum finish** is for lovers of the classic style.

This new version reflects Campagnolo's desire to provide our users with a wider color scheme to enable them to find the perfect esthetic match for their frames.

The Centaur 2004 range offers a **new headset**, the **Centaur Hiddenset** that is built into the frame's head tube. The **upper cup is in composite material** for extreme toughness at a greatly reduced weight. **The bearings are Record class**, that's top level in terms of materials, quality and tolerances. It has an extremely elegant appearance thanks to the harmonious matching of the fork and frame and the frame and stem.

The Centaur Hiddenset is available only in the 1-1/8" diameter version.

This year, the **Centaur seatpost** has a **new aluminum stem that is even lighter**. The choice of materials provides extra lightness by saving about 10 g. so that it weighs just 220 g. The Centaur seatpost is available only in the 27.2-mm diameter version.

The rear derailleur has also been improved. Although it is not visible, the change is substantial: the bodies of the rear derailleur are in fact now in forged aluminum, just as for Record and Chorus.

These improvements are further proof of the strong hi-end identity of the Centaur groupset.

➤ **CHORUS.** The Chorus groupset makes great use of composite materials technology: crankset, Ergopower, rear derailleur and seatpost.

Composite materials provide a better weight/resistance ratio than aluminum and titanium. That means that a product in composite material weighs less but is just as tough, which is no small advantage.

The already high performance provided by the Chorus groupset is further improved. Crankset, rear derailleur, Ergopower and seatpost now share with the Record groupset the technology of composite materials. The result: a groupset for competition that fears no comparisons, except with the Record groupset.

The **Chorus crankset** is this year available in the carbon-fiber version that applies the **same constructional technology as that used for the new Record crankset**. This **multidirectional carbon fiber technology** is a new composite materials technology recently introduced in the aerospace industry. This new technology **distributes the carbon fiber in all directions** to produce mechanical resistance in all directions. Layers of Unidirectional

Carbon Fiber are then judiciously positioned to further enhance the already outstanding mechanical performance of the Chorus crankset
The results are amazing:

- weighs just 515 g
- greater resistance to static load
- greater resistance to fatigue
- greater resistance to torsion

The innovative factor is that this technology has transformed a traditionally manual process like the construction of carbon-fiber cranksets into an industrial process. In this way, all the differences in terms of result and performance that are typical of the traditional manual processes have been eliminated.

This new technology also ensures **uniform product quality**.

Another important aspect of this new carbon-fiber crankset that should be emphasized is the Q factor: it is the same as for the aluminum version.

The **Ergopower Chorus** controls are now available in the **carbon-fiber** version. In view of their many advantages, Campagnolo has decided to extend this constructional technology to the Chorus groupset.

At **just 365 g**, the weight is extremely low and the appearance breathes class: pure understatement, despite the strong racing spirit that sets it apart.

The ergonomics is the same as for all Campagnolo Ergopower controls: studied right down to the smallest detail and really comfortable.

The new **Chorus rear derailleur** clearly shows the strong input of composite materials. The **carbon plate at the front** that is so fascinating in the Record groupset is now also found in the Chorus rear derailleur. A **new generation of derailleur pulleys** has also been used. The pulleys have been created from a special material that makes **the drivetrain incredibly silent**.

Like all Campagnolo rear derailleurs, the Chorus rear derailleur is available in versions with short, medium or long cages.

The **Chorus seatpost** has abandoned the titanium stem for the more technological and high performance **carbon**. The head is still in light alloy but has an important new feature: **new grooves**. The distance between one groove and the next is halved, which **doubles angular adjustment scope**. There are no more obstacles to obtaining ideal adjustment.

The **Chorus front derailleur** has a **new aluminum cage**. In addition to the weight reduction, the greater stiffness of the aluminum makes **shifting quicker and more precise**. The special treatment of the inside of the cage that reduces attrition with the chain and protects the aluminum from abrasion is also worthy of note.

Available in the clip-on and braze-on versions for double cranksets.

The **aluminum crankset** of the Chorus groupset is changing faces. The 2004 version is the **four-arm version** that has been made famous by the Record groupset. Lightness and stiffness are its distinguishing features.

It is available in the versions for double and triple cranksets.

The Chorus **triple drivetrain** has two important new features this year: a **new crankset and a new front derailleur**. The **crankset** is **four-arm** and is based on the Record crankset. This special design not only reduces weight but also makes the crank and the chainrings one, thereby making the whole assembly stiffer.

The **front derailleur** is also based on the Record design and has a new **lightened cage**.

The assembly is completed by the 111-mm asymmetrical bottom bracket and the two rear derailleurs that are available with medium or long cages.

➤ **RECORD.** The carbon-fiber Record crankset outclasses itself with a new carbon-fiber crankset with decidedly 'Ultra' components.

The Record groupset is incomparable and a glance will tell you why. But the Record groupset does not just have outstanding esthetic appeal. It contains an unprecedented concentration of technology.

The use of the **technology of composite materials** enables **components with reduced weight and greater mechanical resistance** to be obtained. Not to mention the flexible design and solutions reached that would be absolutely unthinkable with aluminum.

The materials have been chosen and specially made for each single component.

The geometry and winning technical solutions are the fruit of the combination of great experience in the world of racing and the *know-how* of our Research & Development Department.

Nothing that you can see and certainly nothing that you can't see has been left to chance.

Don't be deceived by the excellent visual appearance: underneath there's much more.

The new **carbon-fiber Record crankset** uses an **innovative technology** of composite materials that was recently introduced in the aerospace industry: **Multidirectional Carbon Fiber**. This new technology **distributes the carbon fiber in all directions**, to produce mechanical resistance in all directions. And as if this weren't enough, layers of Unidirectional Carbon Fiber are then judiciously positioned to further enhance the already outstanding mechanical performance of the Record crankset

The results are amazing. If the Record crankset put competitors in the shade last year, this new crankset outclasses itself:

- weighs 500 g
- greater resistance to static load
- greater resistance to fatigue
- greater resistance to torsion

The absolutely innovative result is that this new technology enables an industrial process to be created that eliminates the erratic results and performance of manual process. Arranging the carbon fiber in the cranksets was until now an exclusively craft activity and because of this results and performance within the same component could differ widely. Industrializing the process has at last enabled **components** to be obtained that **all have the same very high standard of quality**.

The **chainrings** with their ultra-drive geometry have been given a **special new treatment** that reduces attrition with the chain and improves resistance to wear.

Last but not least, another important aspect of this new carbon-fiber crankset that should be emphasized is the Q factor, which is the same as for the aluminum version.

Ergopower Record controls have been further improved by concentrating on gear shifting and on reducing the weight of the internal components.

New surface treatments have been applied to the internal mechanisms to make **shifting considerably smoother**. The use of new materials has further reduced the weight of internal components.

Excellence weighs **just 324 g**.

The **new Record rear derailleur** has a **new carbon-fiber cage** crossed at 90° that complements the existing front plate to further reduce weight and increase visual appeal.

From the technical point of view, it is interesting to note that we have used this type of arrangement of the carbon fibers for the short cage but for the **medium and long cages** we have used the **latest aerospace technology: multidirectional carbon fiber**. The different mechanical needs arising from the greater length of the cage could be met only by carbon fiber distributed multidirectionally along the entire length of the component.

The **pulleys** are also **new** and the quality of the special material from which they are made means that they **increase the quietness** of the entire drivetrain.

The threaded titanium parts complete the assembly's excellence.

The **new Record front derailleur** has a **carbon-fiber external cage** and an **aluminum internal cage**. This saves a great deal of weight, the braze-on version weighing **just 71 g**. **Shifting both up and down is quicker** thanks to the combination of these two materials that make the cage of the front derailleur considerably stiffer.

The aluminum cage lifts the chain up and has a **special coating** that **increases resistance to wear** and reduces attrition with the chain.

The new Record front derailleur is available in the braze-on and clip-on versions for the double drivetrain. On the other hand, the front derailleur for the triple drivetrain still has a steel cage, which is nevertheless improved by the special treatment.

The 2004 version of the aluminum Record crankset has new chainrings. The **Ultra-Drive Record chainrings** have been given **a special new treatment** that increases resistance to wear and decreases attrition with the chain.

The **new Record C10 Ultra chain** is incredibly light. The new **lighter links** connected to the **hollow pins** have produced an amazing result. It **weighs 19 g less** than the already light Record C10.

All this increases outer link resistance whilst **maintaining the resistance values** and the type of surface treatment that ensures long-term shift precision.

The **new Record seatpost** has a **carbon-fiber top head clamp** and a **new groove** for the head. The groove in the head has been halved in size compared with the 2003 version, which **doubles the angles at which the seat can be tilted**.

Available in the 250 and 350-mm versions with a 27.2-mm diameter and in the 250-mm version with diameters of 31.6 and 32.4 mm.

The **differentiated Record brakes** are now available in **two different color schemes**: the classic **anodized aluminum** finish and the aggressive new **shiny black** finish. Both versions are enhanced by the titanium parts.

For information
Media & Trade Dept. – Campagnolo srl
Tel. +39-0444-225525
zenere@campagnolo.com