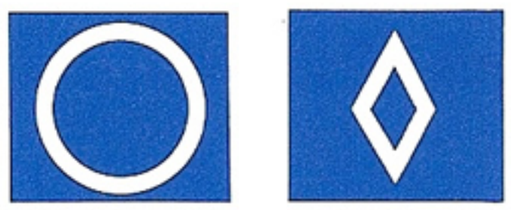
Campagnolo®

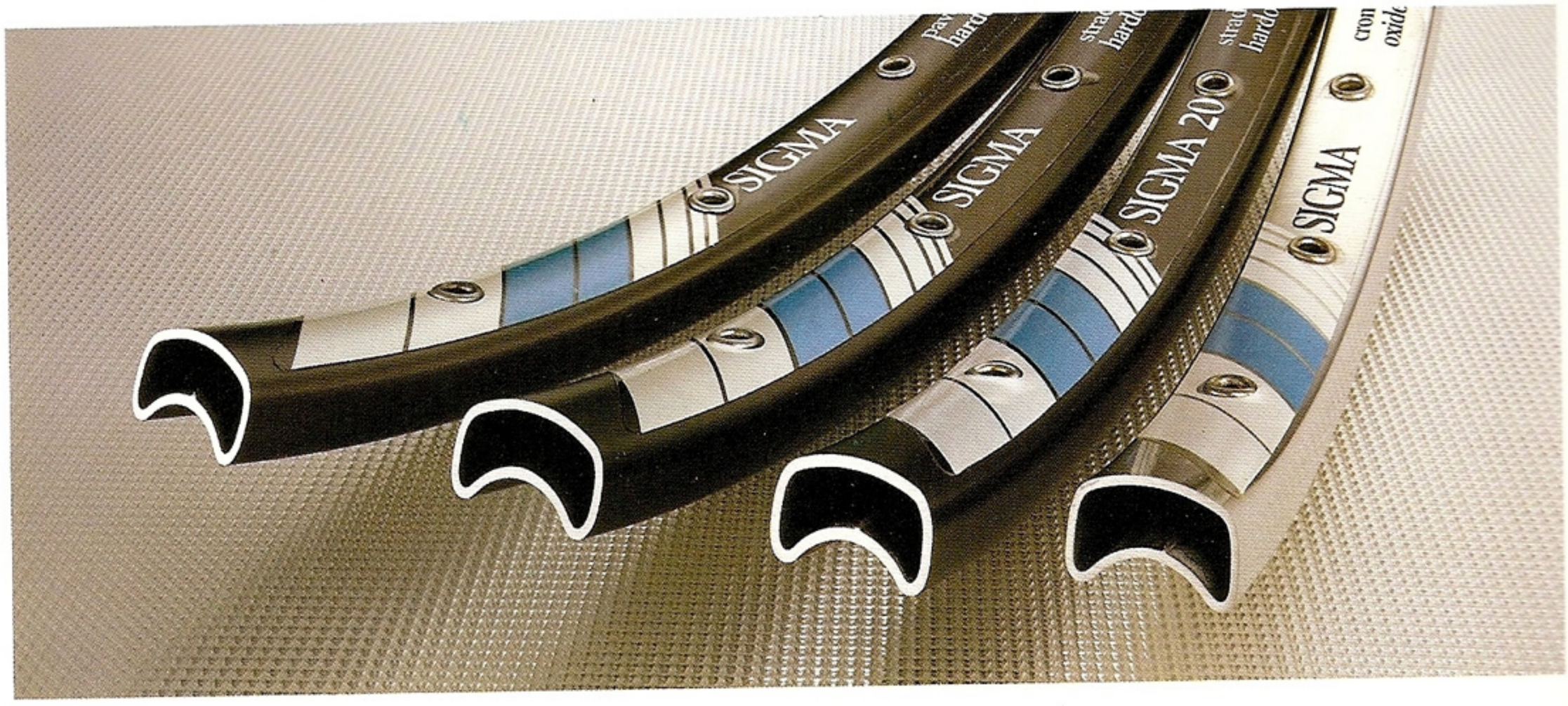
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TUBOLAR RIMS



Each series of rims, from SIGMA to CONTAX, even if designed to meet a particular need; has been developed using the same quality, the same engineering, the same production methods and has undergone the same rigorous quality control tests.

This industrial policy called for a long, careful examination of compatibility and optimization not only of the materials used but also of the production processes and design.

Today, thanks to our intensive research, the most technologically advanced, highest quality rims are available for all cyclists-Campagnolo Rims.

Campagnolo SIGMA rims have been created by the experience achieved through years of races on every road and track in the world, and meet all competitive requirements.

The SIGMA series of rims is designed for victory. State of the art technological processes and sophisticated research are combined to give the cyclist a measure of quality and safety never before offered in a rim.

In project design, the highest consideration was given to the rigidity/elasticity combination in order to ensure the trueness of the rim and its ability to withstand deformation under stress, including absorption of impacts.

Thanks to the technology and choice of the material Campagnolo SIGMA rims can easily be trued, this saves mechanics hours of wheel adjustment after a race.

Patented eyelets, positioned according to the camber and the crossing, are safer with regards to the duration of spokes, remarkably reducing the possibilities of breakage in the most critical zones.

TUBULAR PROFILE	CAT. NO.	TYPE	FINISH	DRILLING	WEIGHT ~ gr.	EYELET	TIRE
	P0071 P0091	SIGMA PAVÈ SIGMA STRADA	HARDOX HARDOX	32-36 32-36	365 335	double patented positioned eyelet	tubolar
	P0111 P0121	SIGMA 20 STRADA SIGMA CRONO	HARDOX OXIDE	32-36 32-36	345 285	double patented positioned eyelet	tubolar

The weights are for rims without eyelets. Weight of one eyelet: 1,52 gr.



The Campagnolo OMEGA rims were designed to satisfy the needs of the most advanced cycling amateurs and are available in models for both clincher and tubular tires.

TUBULAR RIMS: in this case, Campagnolo has applied the technology developed for its competition rims, thus giving OMEGA the sporting characteristic loved by bicycle fans.

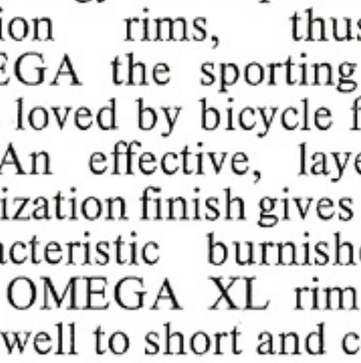
An effective, layered hard anodization finish gives the rim its characteristic burnished color. The OMEGA XL rim responds very well to short and continuous stress typical of uphill or amateur races.

From a technological point of view, LAMBDA tubular rims are similar to those designed for all-out competitive use but without the high price normally associated with such technology.

The patented Campagnolo eyelet is mounted on the LAMBDA rims as well.

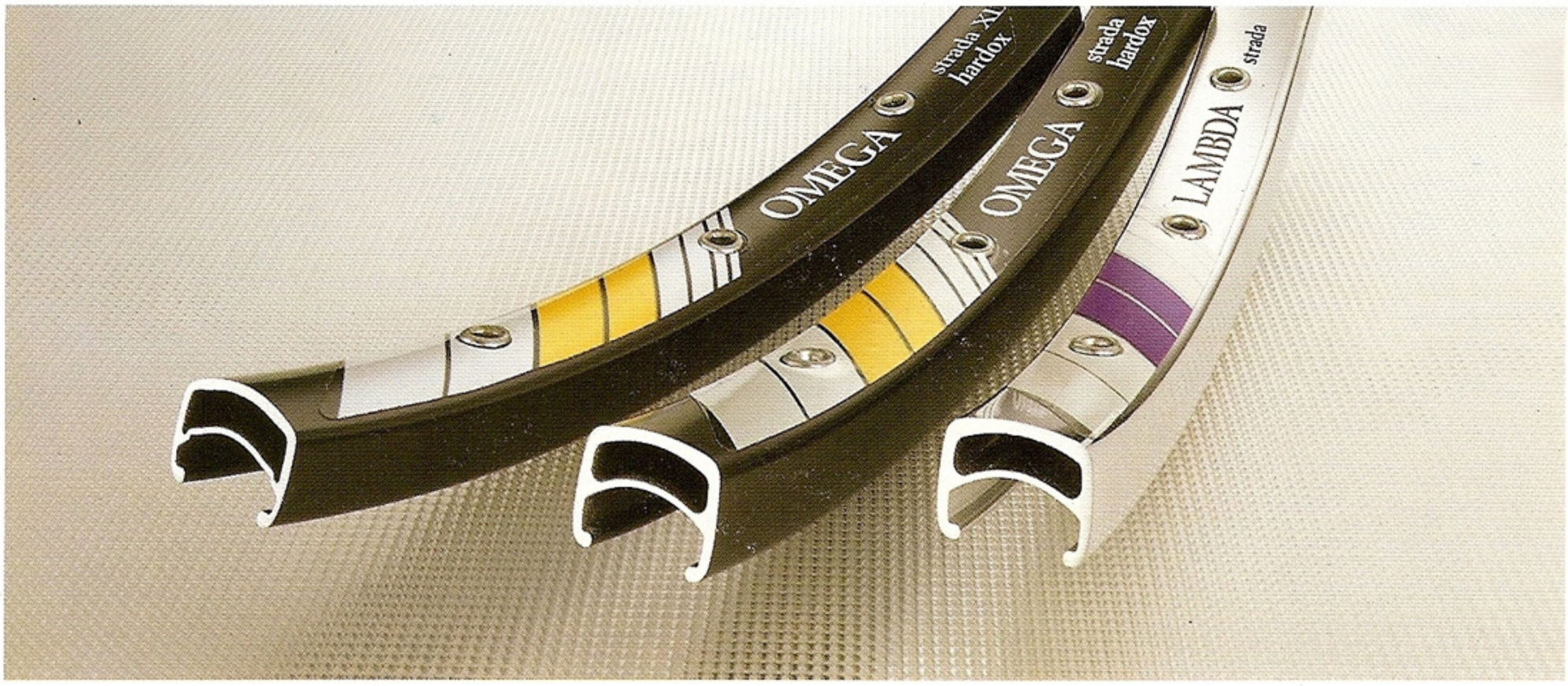
The aluminium/magnesium alloy used has an elastic module of 7100 Kg/sq mm. This allows machine centering and balancing of the wheel without problems. The mechanical characteristics of the material and the profile projected for the LAMBDA rims give these products a capacity to absorb impacts which is essential for comfort. And it does this without compromising the security of the hold and the non-deformability of the rim.

OMEGA and LAMBDA are produced using the best materials and manufacturing methods. They are excellent quality, they fully satisfy all of the requirements and are perfect for both those ride a lot and for those who only ride few kilometers a year.

TUBULAR PROFILE	CAT. NO.	TYPE	FINISH	DRILLING	WEIGHT ~ gr.	EYELET	TIRE
	P0451	OMEGA STRADA V PROFILE	HARDOX	28-32-36	395	without eyelets	tubolar
	P0161 P0171 P0211	OMEGA XL STRADA OMEGA STRADA LAMBDA STRADA	HARDOX HARDOX POLISHED	32-36 32-36 32-36	360 395 395	double patented positioned eyelet	tubolar

The weights are for rims without eyelets. Weight of one eyelet: 1,52 gr. - N.B. «V Profile» rims are supplied without eyelets.

CROCHET RIMS



The use of the light clinchers is increasing, favoured by the research and development of new materials and techniques.

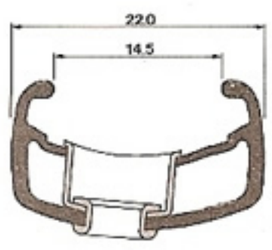
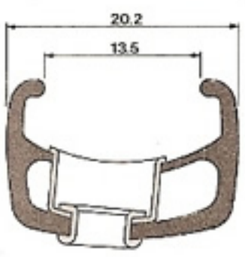
Campagnolo is present in this branch with a complete range of absolute vanguard.

The rim OMEGA XL Strada is born to win. Its lightness gives the utmost in the athletics and can satisfy, with its resilience, the most particular professionals.

The types OMEGA, LAMBDA fully meet the demands both of the cycletourism and of the athletics.

OMEGA rims for clincher tires come in two versions, normal box-section or «V Profile». They are both made of the same heat treated Mg-Si aluminium alloy so their stregth is equal but because no spoke eyelets are used for the model with «V Profile», it is a few grams lighter. The HARDOX anodization which increases the superficial hardness of the rim and the heat treatment which improves the mechanical strength of the material combine to give OMEGA clincher tire rims unparalleled reliability.

LAMBDA rims for clincher tires, just like their OMEGA counterparts, are designed in two versions: with normal and «V Profile» and these new Campagnolo rims use the same heat-treated aluminium alloy normally found in rims costing twice as much. This superior aluminium alloy combined with Campagnolo's ultra-modern manufacturing technique guarantee that wheels built with LAMBDA rims will look and perform like new for months to come.

CROCHET PROFILE	CAT. NO.	TYPE	FINISH	DRILLING	WEIGHT ~ gr.	EYELET	TIRE
	P0162	OMEGA XL STRADA	HARDOX	32-36	375	double patented positioned eyelet	clincher 19-25
	P0172 P0212	OMEGA STRADA LAMBDA STRADA	HARDOX POLISHED	32-36 32-36	430 430	double patented positioned eyelet	clincher 19-25

The weights are form rims without eyelets. The rims with Crochet (13C) can have a difference of weight by ±3,5%. Weight of one eyelet 1,14 gr.



YPSILON with its Oxide finish fulfills this requirement perfectly. It is a light weight, professional quality clincher rim made with an alloy that has superior technical features.

Both its ultimate tensile strength and plastic deformation limit are far above that of other rims in its price range. The Oxide finish amplifies its good qualities even more, giving the rim a very competitive price/quality ratio.

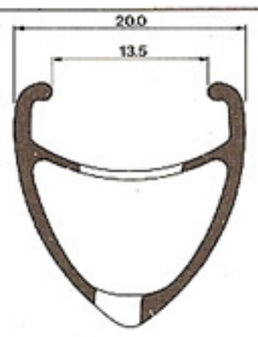
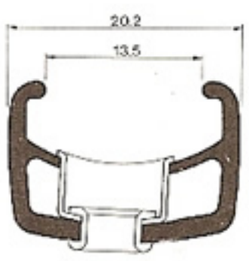
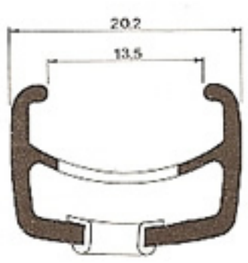
The OMICRON series has been made especially for the OEM. In fact, it has been designed for use with automated wheel building machinery.

Because it features Campagnolo's patented, double oriented spoke eyelet, it is well suited for the rigors of cycle touring.

Its heat treated aluminum alloy gives it the strength necessary for carrying extra loads. OMICRON rims are available in versions: Polished and Electrox.

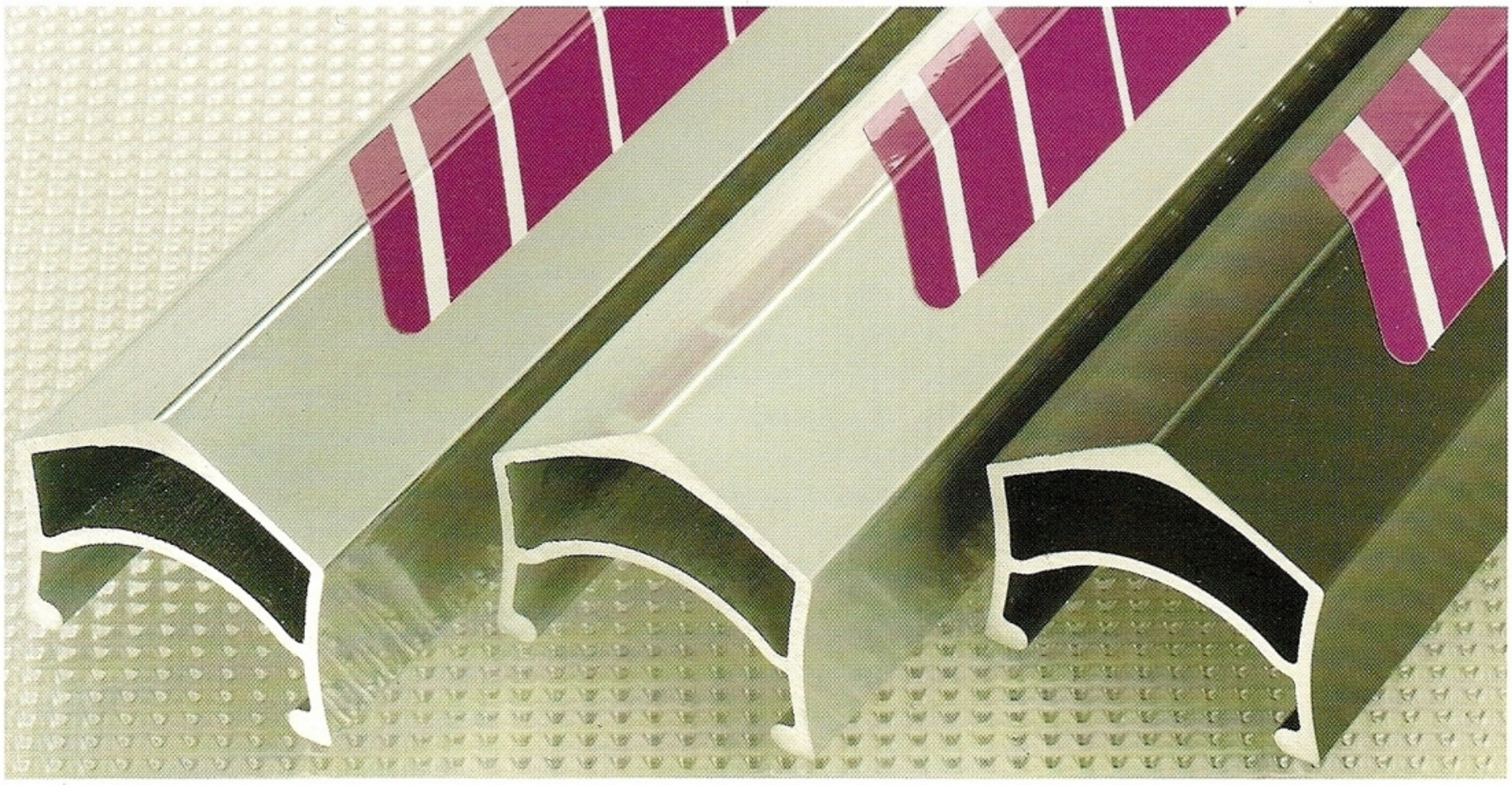
GAMMA: this is a product designed for the OEM. It is also designed for use with automated wheel building machines and offers a superior quality/ratio.

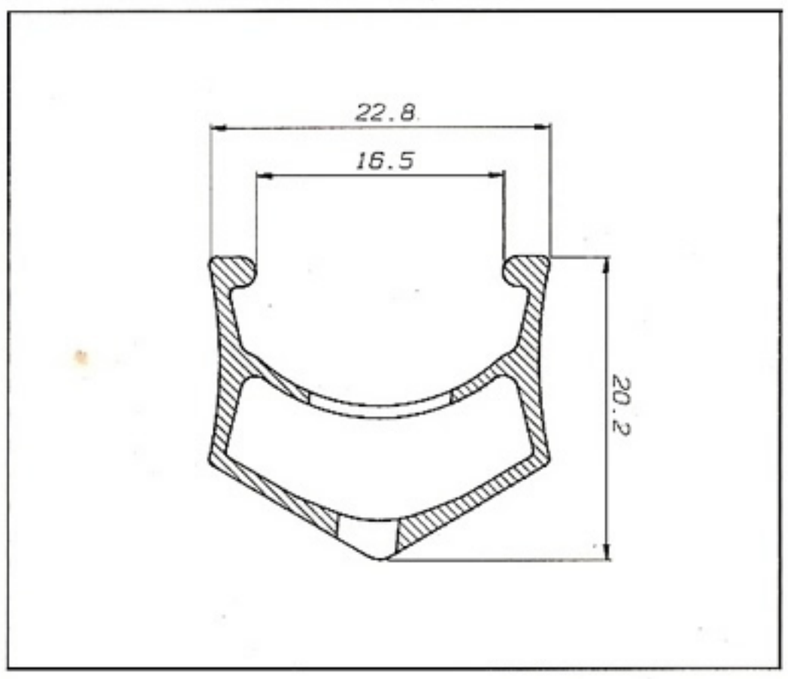
Utilizing heat treated aluminum alloy it features well balanced transverse and vertical rigidity factors, qualities necessary for good stability at the output point of automated assembly.

CROCHET PROFILE	CAT. NO.	TYPE	FINISH	DRILLING	WEIGHT ~ gr.	EYELET	TIRE
	P0222	OMEGA STRADA V PROFILE	HARDOX	28-32-36	440	without eyelets	clincher 19-25
	P0322	YPSILON STRADA V PROFILE	OXIDE	32-36	440		
	P0232	LAMBDA STRADA V PROFILE	POLISHED	32-36	440		
	P0272	OMICRON STRADA	POLISHED	32-36	480	double patented positioned eyelet	clincher 19-25
	P0352	OMICRON STRADA	ELECTROX	36	480		
	P0282	GAMMA STRADA	POLISHED	32-36	480	single eyelet	clincher 19-25
	P0332	GAMMA STRADA	ELECTROX	36	480		

The weights are for rims without eyelets. The rims with Crochet profile (13C) can have a difference of weight by ±3,5%. Weight of one eyelet: for clinchers 1,14 gr. - N.B. « V Profile » rims are supplied without eyelets. Weight of one single eyelet 0,46 gr.

ATB RIMS





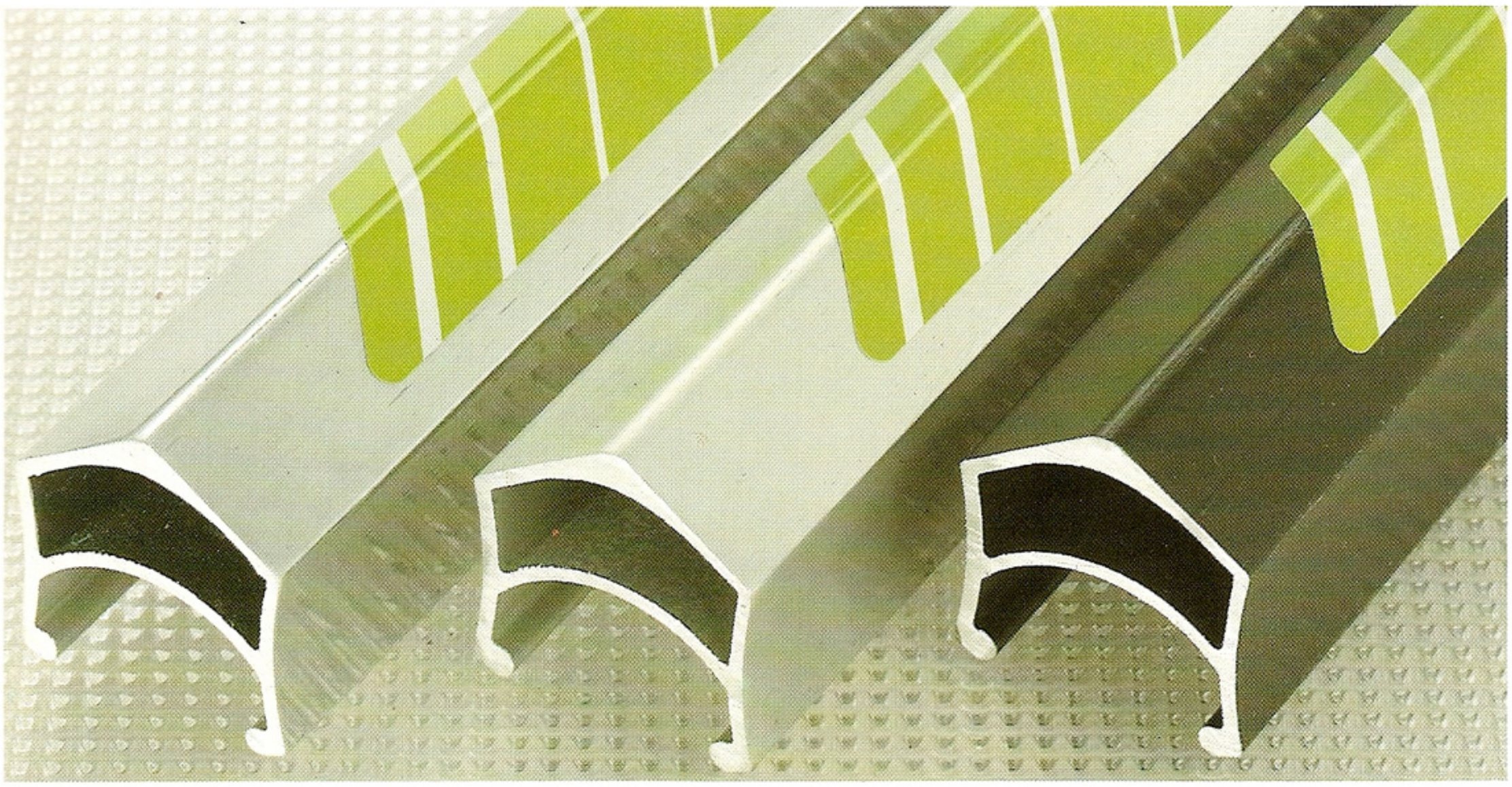
To satisfy the requests of the specialist as well as the mountain bike enthusiast, Campagnolo has introduced a new line of rims specifically divided into two types. These rims are the results of extensive field testing with many of the top professional racers in mountain biking today: the rim names are Thorr and Contax.

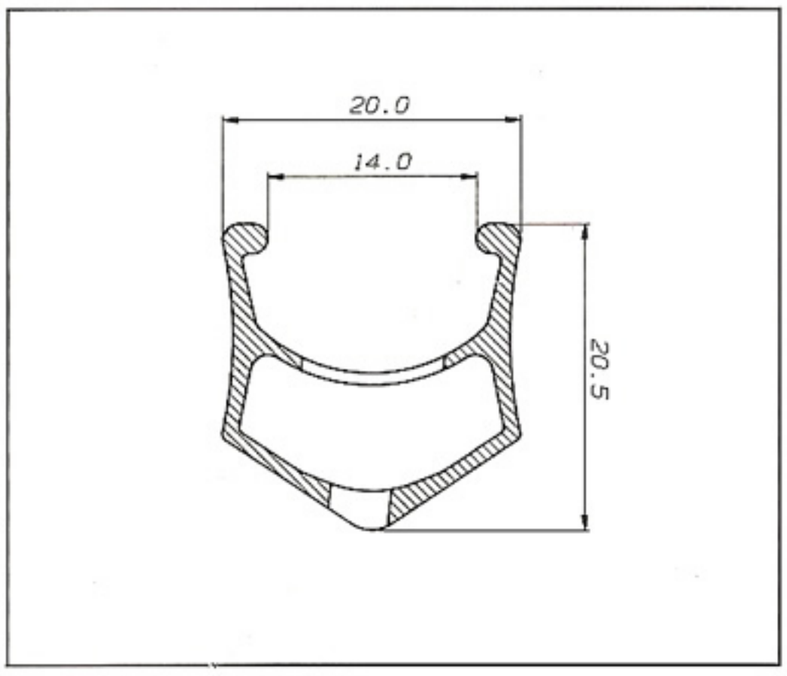
Both of these rims have a very high degree of technical innovation, reliability and resistance to extreme conditions. The use of special alloys has allowed Campagnolo to obtain an extremely light and durable rim. We have derived the shape of these rims after a long and accurate CAD study. This style of rim will make braking more efficient and positive.

The use of traditional cantilevers as well as caliper brakes are possible with Thorr.

CAT. NO.	TYPE	FINISH	WIDTH mm	DRILLING	WEIGHT ~ gr.
P0504	THORR	HARDOX	22,8	28-32-36	421
P0514	THORR	OXIDE	22,8	28-32-36	421
P0524	THORR	POLISHED	22,8	28-32-36	421

N.B. «V Profile» rims are supplied without eyelets.





Contax has been designed for the most demanding competition. It's compact cross section design and light weight make it ideal for racing applications.

This rim has a very high resistance to deformation. The unique design of the sidewalls will provide the most efficient braking possible. Even in the worst conditions. In the event of a flat tire, especially in competition, the tire may be easily changed without the use of tools.

This is a considerable advantage in a competition where no technical assistance is allowed and only a few seconds may make the difference between winning and loosing.

CAT. NO.	TYPE	FINISH	WIDTH mm	DRILLING	WEIGHT ~ gr.
P0534	CONTAX	HARDOX	20,0	28-32-36	397
P0544	CONTAX	OXIDE	20,0	28-32-36	397
P0554	CONTAX	POLISHED	20,0	28-32-36	397

N.B. «V Profile» rims are supplied without eyelets.

FLUID-DYNAMIC WHEELS



ERGONOMICS OF THE GHIBLI M23

GHIBLI M23 FLUID-DYNAMIC wheels have been designed for highly specialized uses.

For this reason Campagnolo has designed two different models, one for track events and one for road racing, because the professional requirements of these two sectors are very different.

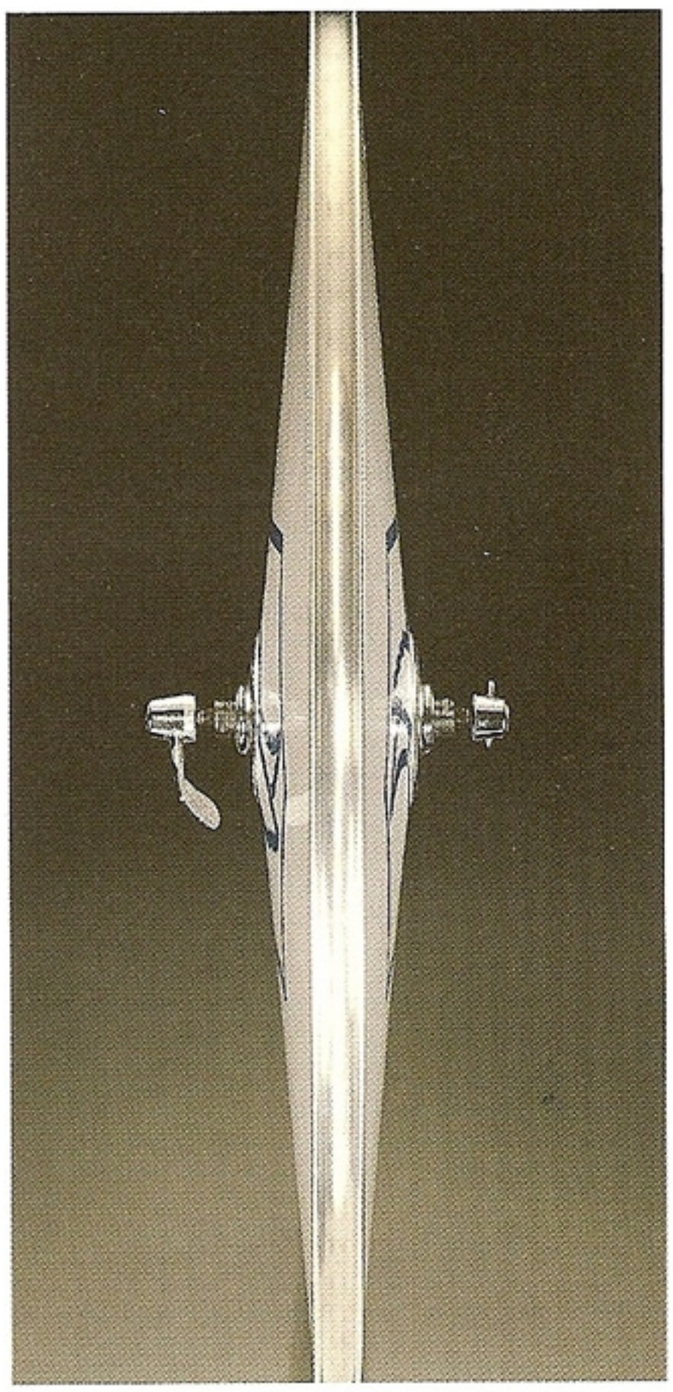
The road version of the GHIBLI M23 has a structure with a vertical elasticity almost equal to that of a spoked wheel; and definitely offers greater elasticity than any of the current disc wheels available.

At the same time the transversal rigidity is equal to even the best rims available for spoked wheels, ensuring safety with the FLUID-DYNAMIC GHIBLI M23 wheel without any reduction of comfort. (Diagram 5).

These characteristics are essential in enabling the athlete to give the best possible performance, particularly in the time trail event.

In this type of race, any reduction of fatigue (due to «road shock») can result in precious time gained over your competitor.

On the other hand, because the surface of a velodrome is smooth and events are short in duration comfort is not a factor. Furthermore, during track events the thrust of the athlete is directed onto the hubs in a sharper and more concentrated manner than in road races. What is really important for a track disc is the efficiency of the hub and its ability of transforming as much energy as possible into acceleration and movement.



The track version of the GHIBLI M23 is therefore very rigid, both vertically and transversely.

GHIBLI M23 "GYROSCOPIC" A PROFESSIONAL SYSTEM

Disc wheels are often used for highly specialist competitions such as individual or team track pursuit, 100 kilometre team time trials, stayers, etc.

Experiments have shown that in all team competitions the most crucial element is the difficulty encountered by the rider who leaves the leading position when he has to slip in behind the last team member without losing the advantage of being pulled along fluidodynamically.

During this move, which each of the 4 team members repeats as many as 500 times in a 100 kilometre competition, the athlete has to feel the front wheel in the handlebars.

Experiments have shown that if the front wheel is given an adequate gyroscopic understeering effect, this allows the athlete greater safety in achieving exactly the right final position.

For this reason the patented structure of the GHIBLI M23 «GYROSCOPIC» has been arranged in such a way that Campagnolo technicians can vary certain parameters that adapt the shoulder, the tilt, the weight and the gyroscopic effect of the fluid-dynamic wheel to suit specific requirements. Our Research and Development Department is at your disposal to solve all kinds of problems in collaboration with the user.



KHAMSIN

KHAMSIN FLUID-DYNAMIC wheels are made with a different structural principal than the GHIBLI M23. For this design Campagnolo's Research and Development department opted for model with load bearing by compression. In other words, the walls of the KHAMSIN wheel are rigid and act as support pillars for the rim.

The lightness of the KHAMSIN wheel is possible thanks to an exclusive material which reduces weight and improves the quality of air flow. This is a super-light material with a honeycomb structure, bonded by means of polymerization with resin-impregnated fibre fabrics. Air flow is also optimized due to the computer design contour of the sidewall.

KHAMSIN rear wheels use a special hub that can be transformed from road to track use and vice versa simply by changing the axle.

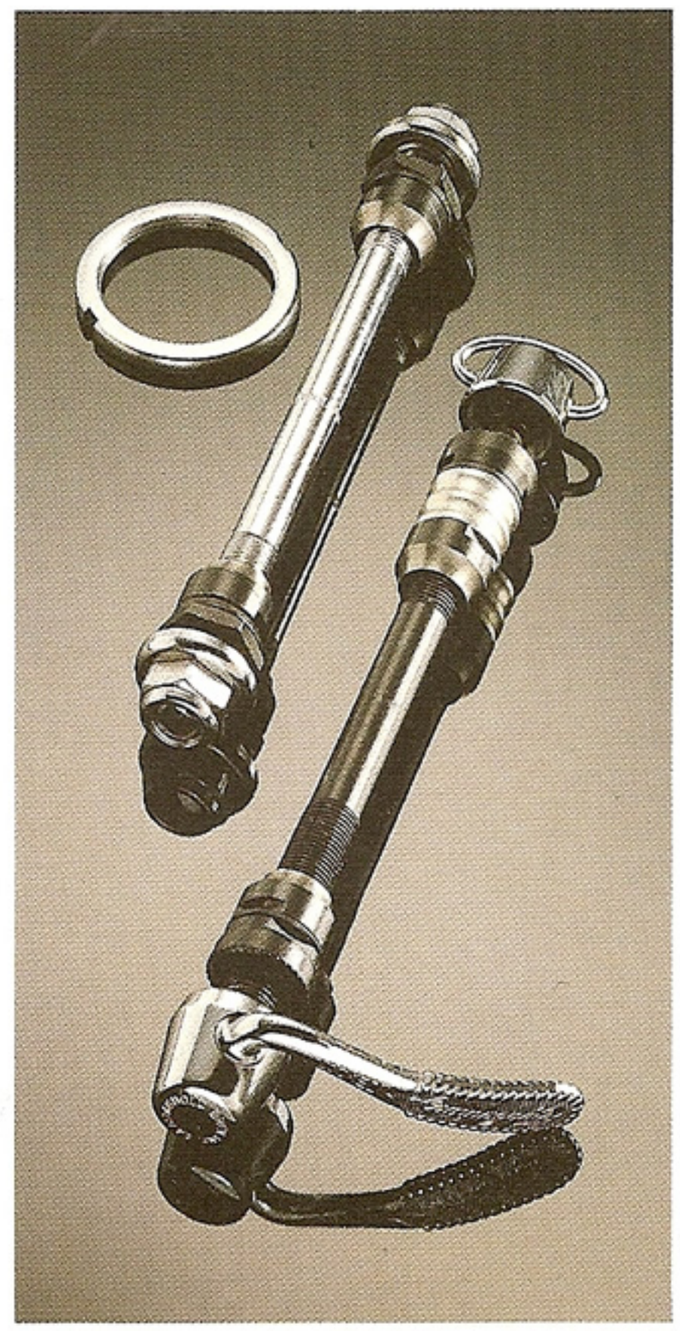
On one side of the rear wheel hub there is a thread for freewheels, while on the other side there is a thread on which the track cog with its inverse thread locknut can be fitted. A cover for the hub thread not in use is also provided.

For those who are interested in taking part in high-level competition, the KHAMSIN road model is the ideal fluid-dynamic wheel for developing and emphasizing the talents of a fast rider or a promising sprinter.

For the Club rider or young racer this is an especially nice feature because one wheel can meet the demands of both road and track specialities.

KHAMSIN FLUID-DYNAMIC wheels are shipped with hubs already adjusted, the blocking mechanism, however, should be assembled before use.

Just like GHIBLI M23 wheels, KHAMSIN FLUID-DYNAMIC wheels individually submitted to the stringent quality tests outlined below.





SCIROCCO

The most recent patent for Campagnolo in the disc wheel field is Scirocco. It is a front wheel specifically designed to be used even in windy conditions thanks to the four openings on the walls of the disc. Campagnolo engineers have done extensive testing in developing the biconically shaped sides in order to take full advantage of the aerodynamic principles found in a winged shape.

This solution guarantees that the Scirocco disc will give the rider the safest and easiest handling possible, while still maintaining a considerable aerodynamic advantage even in unexpected gusts of wind.

THE BAGS

Both KHAMSIN, GHIBLI M23 and SCIROCCO fluid-dynamic wheels can be easily transported in the special bags provided by Campagnolo. The bags are made of scrathproof nylon, they are waterproof, washable, and are not effected by changes in temperature, thanks to the characteristics of the nylon.

The padding has been carefully chosen to ensure the best protection to weight ratio so that the wheels are protected against limited accidental knocks when transported. The bags are available in two versions: single for one wheel or double for pairs. The single version has a rigid reinforcement in the middle to protect the sidewalls against the pressure of the quick release. The double version has an inner compartment for storage of the quick releases.



GHIBLI M23

CAT. NO.	TYPE	RIM CROSS SECTION ⌀	WEIGHT ~gr.	HUB SPACING mm	THREAD	FREEWHELL OR SPROCKET SPACING mm
R0011	ROAD FRONT WHEEL 24" (600)	18	740	100	-	-
R0021	ROAD FRONT WHEEL 26" (650)	18	820	100	-	-
R0031	ROAD FRONT WHEEL 28" (700 C)	18	870	100	-	-
R0051	TRACK FRONT WHEEL 24" (600)	18	740	100	-	-
R0041	TRACK FRONT WHEEL 24" (600)	18	740	90	-	-
R0071	TRACK FRONT WHEEL 26" (650)	18	820	100	-	-
R0061	TRACK FRONT WHEEL 26" (650)	18	820	90	-	-
R0091	TRACK FRONT WHEEL 28" (700 C)	18	870	100	-	-
R0081	TRACK FRONT WHEEL 28" (700 C)	18	870	90	-	-
R0501	ROAD REAR WHEEL 28" (700 C)	18	960	126,5	36x24 IT.	36
R0511	ROAD REAR WHEEL 28" (700 C)	18	960	126,5	1,370"x24 IN.	36
R0521	ROAD REAR WHEEL 28" (700 C)	18	960	126,5	35x1 FR.	36
R0531	TRACK REAR WHEEL 28" (700 C)	18	960	120	36x24 IT.	24
R0541	TRACK REAR WHEEL 28" (700 C)	18	960	120	1,370"x24 IN.	24
R0551	TRACK REAR WHEEL 28" (700 C)	18	960	120	35x1 FR.	24

GHIBLI M23 "GYROSCOPIC"

CAT. NO.	TYPE	RIM CROSS SECTION ⌀	WEIGHT ~gr.	HUB SPACING mm
R0123	ROAD FRONT WHEEL 24" (600)	18	1040	100
R0133	ROAD FRONT WHEEL 26" (650)	18	1220	100
R0143	ROAD FRONT WHEEL 28" (700 C)	18	1310	100
R0163	TRACK FRONT WHEEL 24" (600)	18	1040	100
R0153	TRACK FRONT WHEEL 24" (600)	18	1030	90
R0183	TRACK FRONT WHEEL 26" (650)	18	1220	100
R0173	TRACK FRONT WHEEL 26" (650)	18	1210	90
R0203	TRACK FRONT WHEEL 28" (700 C)	18	1310	100
R0193	TRACK FRONT WHEEL 28" (700 C)	18	1300	90

SCIROCCO

CAT. NO.	TYPE	RIM CROSS SECTION ⌀	WEIGHT ~gr.	HUB SPACING mm
R0215	ROAD FRONT WHEEL 26" (650)	18	980	100
R0225	TRACK FRONT WHEEL 26" (650)	18	980	100

KHAMSIN

CAT. NO.	TYPE	RIM CROSS SECTION ⌀	WEIGHT ~gr.	HUB SPACING mm	THREAD	FREEWHEEL OR SPROCKET SPACING mm
R0102	ROAD FRONT WHEEL 26" (650)	18	950	100	-	-
R0112	TRACK FRONT WHEEL 26" (650)	18	950	100	-	-
R0562	ROAD REAR WHEEL 28" (700 C)	18	1090	126,5	36x24 IT.	36
R0572	ROAD REAR WHEEL 28" (700 C)	18	1090	126,5	1,370"x24 IN.	36
R0582	ROAD REAR WHEEL 28" (700 C)	18	1090	126,5	35x1 FR.	36
R0594	ROAD/TRACK REAR WHEEL 28" (700 C)	18	1110	126,5/120	36x24 IT.	36/24
R0604	ROAD/TRACK REAR WHEEL 28" (700 C)	18	1110	126,5/120	1,370"x24 IN.	36/24
R0614	ROAD/TRACK REAR WHEEL 28" (700 C)	18	1110	126,5/120	35x1 FR.	36/24

Campagnolo reserve the possibility to modify the technical specifications of the products without notice.
Campagnolo decline all responsabilities for any improper use or tampering of the products.

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