MAVIC®



2000

GB

SUM







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Road wheels	Pages 10 / 13	Road teams / Triathlon teams
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We have always believed in innovation and high technology and we will continue to do so.

Of course, for the 2000 range, we want these innovations to be synonymous with even better performance and more sensations.

KSYRIUM SSC GROUP

The new Mavic group, structured around the Mektronic system and the new Ksyrium SSC wheels, presents a homogeneous set of high performance-components :
efficiency, lightweight, and high quality bearings.

Page 6.

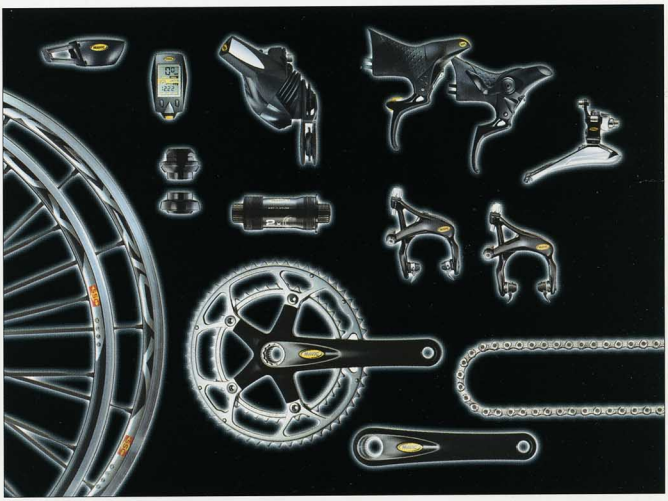
KSYRIUM SSC WHEEL

Integrated in the complete group or available separately.

The Ksyrium SSC wheels use new technologies to combine all the qualities of a high performance wheel in a wide range of conditions.

An aerodynamic, lightweight and high efficiency wheel.

Page 10.



WHAT'S

M A R Y







Tubeless UST	Page 16	Mountain bike Assistance
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CROSSMAX

Packed full of technology, Zicral spokes and Fore concept allows for manufacturing a strong, lightweight, high-performance tubeless wheel.

The tubeless UST concept has been designed in cooperation with the Hutchinson and Michelin tire brands. We believe in the advantages of the tubeless UST, its performance and reduced number of punctures will make this wheel the standard in the future.

Page 17.



CROSSRIDE

A new wheel for Mountain bikes.

At a really great price, the Crossride offers the same great technical features as all Mavic models : lightweight, strong, and high quality bearings.

Page 17.



COSMIC SSC

At the request of professional racers, the spoke count has been increased on the rear wheel and with an all new rim the efficiency of the Cosmic Carbone has been greatly improved.

Page 10.



RIMS

Road

MA2

Mountain bike

X519 X221

Touring

T519



New rims will allow each individual to ride according to his/her own needs. A Mavic quality rim for everyone.

Recommendations : see page 23

N E W ?

TUBELESS UST

Concept :

Tire and wheel design that eliminates the use of rim tape and tube.

Benefits :

- No flat tires due to pinched tubes, torn valve stems or rim tape problems.
- Very slow deflation rate if punctured.
- Greater efficiency due to absence of heat and friction between tube / rim tape / tire.
- Optimized grip and efficiency by regulating the tire pressure according to the type of terrain, with less risk of flats even at low tire pressure.

Mavic recommends tubeless UST Hutchinson and Michelin tires.

FORE

Concept :

New technology that consists of "piercing" only one rim wall with no loss of material and then tapping the resultant alloy tunnel .

Benefits :

- Strength and stiffness : no holes in the rim's upper bridge.
- Less weight: fewer spokes, no rim tape, no eyelets.

ISOPULSE

Concept :

New spoke design where the spokes are radially mounted on the free wheel side and crossed on the opposite side.
The hub is specifically designed to transmit the effort onto the non drive side.
The radially laced spokes are also positioned closer together in 2 by 2 at the hub.

Benefits :

- More stability and efficiency due to a reduction in the difference in tension between each side of the wheel.
- Better transmission of effort.
- The work of each spoke is optimized.

ZICRAL

Concept :

Aluminum alloy offers very high mechanical features and is perfectly adapted to making spokes.
Therefore, at equal weight, a Zicral spoke is 10 % stronger statically than a stainless steel spoke.

Benefits :

- Spokes that are very strong and more lightweight.

Zicral is a Péchiney Rhenalu registered trademark.

CERAMIC 2

Concept :

Mavic has optimized the Ceramic procedure to offer more efficient braking and greater resistance to shocks and chipping.
A plasma beam torch spreads titanium and aluminum oxide powders on the sidewalls of the rim.
This coating creates a thermal insulator and gives exceptional hardness to the sidewalls of the rim (30 times greater than aluminum).

Benefits :

- Reduces braking distances by 20 % in dry weather and 50 % when raining.
- Reduces heat on the rim.
- Superior resistance to wear.
- Increased shock resistance.



R3

Concept :

Leaf spring with kinematics with no friction on the caliper.

Benefits :

- Efficient braking.
- Smooth action.

C3

Concept :

A splined, hollow oversize axle.

Benefits :

- Lightweight rigidity.
- Better transmission of effort.

WIN

Concept :

Wireless transmission control system.

Benefits :

- Lightweight : elimination of connecting cables shifter buttons / derailleur / speed sensor.
- Performance : transmission by radio waves, digitally coded with no interference.

SUP

Concept :

After bending, the rim joint is arc welded.
The welded seam is then milled by digitally controlled machines.

Benefits :

- On a SUP rim, the resistance of the joint can increase to 90 %. On ordinary sleeve-joint rims, resistance at the joint is 40 % to 60 % lower than on the rest of the rim
- No visible joints that could cause shuddering during braking.
- The "monobloc" geometry makes wheel building and balancing easier.

CD

Concept :

This type of adonization process reinforces the oxide layer that forms on the aluminum profile surface.
On the surface of the rim, a greater micro-hardness is obtained.

Benefits :

- Greater resistance to wear (150 - 400 times higher than any other type of adonization).
- Greater resistance to corrosion.
- Easier to build and balance the wheel.

UB CONTROL

Concept :

After adonization, the sidewalls of the rim are milled on digital controlled machines.
The coefficient of friction between the rim and brake pad is therefore increased.

Benefits :

- Efficient braking : higher coefficient.
- Smooth joint to prevent shuddering when braking.

MAXTAL

Concept :

A specific Mavic 6000 series aluminum alloy, designed in cooperation with Péchiney, that offers optimum features for manufacturing rims. The Maxtal alloy is 30 % stronger than the 6106.

Benefits :

- At equal weight, a Maxtal rim is 30 % stronger than a 6106.
  And at equal strength, a Maxtal rim is lighter than a 6106 rim.

FTS

Concept :

The contact area between the pawl and hub body is reinforced by two stainless steel inserts, which distributes the applied loads and allows for manufacturing an all aluminum hub body.

Benefits :

- Resistance : steel inserts and forged hub body.
- Lightweight : all aluminum hub body.

QRM

Concept :

All Mavic hubs are designed on the following technical principles :

- sealed cartridge bearings.
- adjustable bearings.
- removable bearings.
- low rolling resistance.

Benefits :

- Performance : quality bearings.
- Easy maintenance.

Using the latest computerized techniques, ideas are transformed into reality. Then prototypes are created. After being subjected to the most arduous tests in the field and in test benches, a product is born.



SSC GROUPS



Mavic introduces a new group of high performance components, available in road or triathlon version, with (or without) the new Ksyrium SSC or Cosmic Carbone SSC wheels.

BENEFITS :

FAST PRECISION GEAR SHIFTS :
Mektronic Set.

LIGHTWEIGHT :
WIN wireless transmission design, CAD optimized components, Fore concept, Zicral spokes.

SMOOTH EFFECTIVE BRAKING:
Optimized brake calipers to reduce the internal friction, C3 leaf spring design, Permaglide bearing.

PERFECT TRANSMISSION OF EFFORT :
Maximum stiffness of the whole crank set/BB due to the C3 hollow splined axle concept and CAD optimized cranks and calculated structure.

ERGONOMICS :
Multi-position ergonomic brake lever, effortless gear shift.

RANGE :

Ksyrium SSC Road group.

Ksyrium SSC Triathlon group.

Cosmic Carbone SSC Road group.

Cosmic Carbone SSC Triathlon group.

SSC Road group.

SSC Triathlon group.

SSC : the SSC name (Special Service Course) was born in the seventies with the "Blue SSC" rim, which was reserved for the pro teams at first. Then came the All Mavic "1000 SSC" group. The Ksyrium SSC group is the worthy descendant of the pro racing Mavic groups.
In 1989, a Mavic SSC group and a great champion won the Tour de France. Remember, he had an 8 second lead !"

MEKTRONIC : 775g.

BENEFITS :

ERGONOMICS :
Ergonomic brake levers provide an additional aerodynamic position and new braking positions.
Multiple shifter buttons.
Large LCD screen.

EFFICIENCY :
- Fast precision gear shift.
- Adjustment stability in time due to the wireless transmission.
- Pawl visualization.

LIGHTWEIGHT :
- Wireless transmission: - more lightweight cable + tube.

ELECTRONIC DERAILLEUR :

Wireless electronic derailleur with digitally coded radio waves.
Total capacity : 30 teeth.
Maximum capacity : 28 teeth.
Compatible 9 speed.
Battery length :
2 years or 30 000 km.
Weight : 235g.



ERGONOMIC BRAKE LEVER ASSEMBLIES:

Ergonomic brake levers with integrated gear shift :
Retro-friction shift system on the left lever assembly.
System with touch sensitive buttons on the right lever assembly.
Integrated brake caliper release on the lever assembly.

Two versions :
1/ Multi-position ergonomic brake levers offering :
- an additional aerodynamic position.
- two shifter buttons.

For use in time trials, triathlon.

Weight : 385g.



2/ "Racing" ergonomic brake lever assemblies :
- one shifter button.
- compatible with the UCI regulation.

Weight : 385g.



COMPUTER BOARD AND SPEED SENSOR :

- Multi-purpose computer board with LCD display.
- One shifter button.

Functions :
- instantaneous speed.
- maximum speed.
- average speed.
- time.
- time passed while riding.
- distance ridden.
- total accumulated distance.
- engaged gear.
- surveillance and diagnosis of the Mektronic system batteries.

Battery length : 3 years or 45 000 km.
Weight : 60g with support.
Wireless speed sensor by radio waves digitally coded.
Weight : 30g.





MEKTRONIC RANGE

- Derailleur Kit:
  multi-position brake lever assemblies: rear electronic derailleur - multi-position ergonomic brake lever assemblies - computer board - speed sensor - magnet - brake cables and front derailleur - downtube cover - front derailleur cable adjustment.
- Derailleur Kit:
  "racing" brake lever assemblies : rear electronic derailleur - racing ergonomic brake lever assemblies - computer board - speed sensor - magnet - brake cables and front derailleur - downtube cover - front derailleur cable adjustment.
- Derailleur Kit :
  triathlon brake lever assemblies : rear electronic derailleur - multi-position ergonomic brake lever assemblies with shifter button extension for triathlon handlebars - computer board mounting bracket with shifter buttons - speed sensor - magnet - brake and front derailleur cables - downtube cover - front derailleur cable adjustment.
- Derailleur Kit:
  rear electronic derailleur - computer board with shifter button extension to be placed under the brake lever - speed sensor - magnet - downtube cover - front derailleur cable adjustment.
- Triathlon option :
  computer mounting bracket with shifter buttons and two shifter button extensions to be placed under the brake lever and on a triathlon handlebar.

CRANKS / BB / CHAIN RINGS

CRANKS / BOTTOM BRACKET / CHAIN RINGS :

BENEFITS :

STIFFNESS :
20 mm oversize hollow splined axle. C3 concept.
CAD designed crank profile with computer calculated stiffness.

PERFORMANCE :
Mavic bearing quality.
Splined joint for more support, better transmission of effort and greater strength.
Adjustable bearings.
Inertia optimized with the use of very light components.

BOTTOM BRACKET :

Splined, hollow steel axle.

20 mm oversize, C3 concept.

Adjustable sealed cartridge bearings.

Compatible with Mavic cranks only.

Version : BSC 68 mm - 1.37 x 24 TPI
Italian 70 mm -36 x 24 F.

Weight : 180g (BSC 68).





CRANKS :

Forged aluminum cranks.

Bottom bracket mounted with tightening nut.

Version : 170 mm.
172,5 mm.
175 mm.
177,5 mm.
180 mm.

CHAIN RINGS :

Zicral rings.

Optimized teeth shape for easy shifting.

Version : 39 x 52
39 x 53
42 x 52

Rings / crank set weight : 625g (39 x 52, 175 mm).





ROAD ASSISTANCE

The neutral assistance of the racers was an original idea by Mavic. The famous yellow cars are present in the biggest races all over the world.

BRAKE CALIPERS :

BENEFITS :

EFFICIENCY :
Double pivot.
Optimization to reduce friction.
R3 concept : leaf spring with kinematics with no friction on the caliper.
Permaglide, anti-friction material helps to reduce the effort needed on the brake lever.
Brake pads optimized for Mavic rims and tires.

STIFFNESS :
Triangular designed caliper shape and computer calculated for maximum stiffness.

LIGHTWEIGHT :
CAD optimized weight.

Weight : 298g.



HEADSET :

Headset with removable, sealed cartridge bearings.

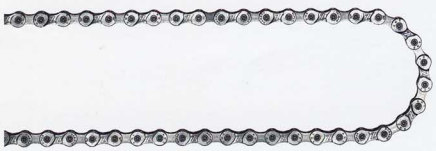
Weight : 112g.



CHAIN :

HG 9 speed compatible.

Weight : 302g.



FRONT DERAILLEUR :

Brazed front derailleur.

Double plate compatible.

Weight : 95g.



Permaglide is a Kolbenschmidt A.G. registered trademark.

When a breakaway lasts longer than 30 seconds, the yellow car takes its place just behind the racers, ready to intervene any time in case of technical problems.



ROAD WHEELS



KSYRIUM SSC

USE :
Touring, road and triathlon racers looking for a comfortable, lightweight, aerodynamic, ultra high performance wheel for racing on all types of courses. Triathlon.

BENEFITS :
LIGHTWEIGHT.
Zicral spokes.
FTS hub.
No rim tape.

EFFICIENCY :
Better transmission of effort and better stability due to the Isopulse lacing concept.
Lateral rim stiffness due to the Fore concept.
Mavic quality bearings.

AERODYNAMICS :
Semi-profiled rim.
Ultra profiled spokes. Fewer spokes.

TECHNICAL FEATURES :
Weight :
Ø 700 front tire 700g / rear 900g.
Ø 700 front tubular tire 700g / rear 900g.

Black anodized, Maxtal SUP welded rim.

Fore drilling technologies - UB Control brake sidewalls.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings. QRM.

M9 compatible free wheel.

Aerodynamic Zicral straight pull spokes with integrated aluminum nipples and anti-rotation system.

18 front spokes, 20 rear spokes.

Radial front spokes, Isopulse rear concept.

Delivered with the Mavic composite quick release with high ratio

closure, adjustment tool, spoke wrench and Chain Disc.

For 19 - 23 mm tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.





COSMIC CARBONE SSC

USE :
Triathlon riders and road racers looking for an aerodynamic wheel for riding in all types of courses.

BENEFITS :
AERODYNAMICS :
50 mm profiled rim.
Integrated nipples.
Flat spokes. Fewer spokes.

STIFFNESS :
20 rear spokes.
Unidirectional carbon.
Smoothness in front : comfort.

TECHNICAL FEATURES :
Weight :
Ø 700 front tire 880g / rear 1090g.
Ø 700 front tubular tire 880g / rear 1090g.
Ø 650 front tubular tire 730g / rear 995g.

SUP aluminum alloy rim and unidirectional carbon segments.

Double eyelets.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings. QRM.

M9 compatible free wheel.

Stainless steel flat spokes, brass nipples, 16 front spokes, 20 integrated rear spokes.

Radial front spokes, crossed 2 rear, on the free wheel side, radial on the opposite side.

Delivered with the Mavic composite quick release with high ratio closure, adjustment tool and rim tape.

For 19 - 23 m tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.



Recommendations : see page 23

M9 COMPATIBILITY

In 1999, Mavic sold 2 types of wheels : Shimano compatible HG wheels and Campagnolo compatible CC9 version wheels.

FOR THE 2000 RANGE, MAVIC INTRODUCES AN "M9" UNIVERSAL WHEEL.

Mavic Mektronic or Shimano compatibility.

Leave the positioning shim delivered with the wheel on the free wheel body and mount :

- Mavic M9 cassettes with grey spacers. / • or Shimano HG 9 speed cassettes.



HELIUM

USE :
Touring, triathlon riders or road racers who are looking for a light wheel for courses where sudden acceleration is important, criteriums or in mountain routes.

BENEFITS :
LIGHTWEIGHT :
Fewer spokes.
FTS hub.
Radial spokes.

COMFORT :
Flat profile rim.
Fewer spokes.

STRENGTH :
Straight spokes.
Maxtal SUP welded rim, double eyelets.

TECHNICAL FEATURES :
Weight :
Ø 700 front tire 750g / rear 900g.
Ø 700 front tubular tire 650g / rear 850g.
Ø 650 front tire 675g / rear 875g.

Maxtal SUP welded rim, red anodized double eyelets.

UB Control brake sidewalls.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings. QRM.

M9 compatible free wheel.

Stainless steel straight-pull spokes, brass nipples.

Front 26 radial straight spokes.

Rear 28 straight spokes crossed 3 on the free wheel side, radial on the opposite side.

Delivered with the Mavic composite quick release with high ratio closure, adjustment tool and rim tape.

For 19 - 23 mm tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.





CLASSICS PRO

USE :
Touring riders and road racers looking for a strong, comfortable wheel for training, all round riding, racing on all types of courses and the "classics".

BENEFITS :
STIFFNESS :
Maxtal SUP rims, double eyelets.
Black CD finish.
32 straight spokes.

COMFORT :
Flat profile rim.
3 cross pattern.

TECHNICAL FEATURES :
Weight :
Ø 700 front tire 820g / rear 1030g.
Ø 700 front tubular tire 770g / rear 980g.

Anodized Maxtal SUP welded rim, hard black finish.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings. QRM.

M9 compatible free wheel.

Black stainless steel straight pull spokes, brass nipples.

32 front and rear spokes.

Front and rear crossed 3 spokes.

Delivered with the Mavic composite quick release with high ratio closure, adjustment tool and rim tape.

For 19 - 23 mm tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.



Campagnolo compatibility.

Remove the positioning shim delivered with the wheel and mount:

- Mavic M9 cassettes with yellow spacers.
- or Shimano 9 speed cassettes by replacing the spacers by the HG/CC9 kit.



ROAD WHEELS



COSMIC elite™

USE :
Road, touring riders looking for an aerodynamic wheel for fast rolling roads.

BENEFITS :
AERODYNAMICS :
30 mm profiled rims.
Flat spokes.
20 spokes.

STIFFNESS :
Aluminum high profile rim.

TECHNICAL FEATURES :
Weight :
Ø 700 front tire 850g / rear 1095g.

Black anodized aluminum alloy SUP welded rim - profiled eyelet.

UB Control brake sidewalls.

Integrated free wheel hub.

Adjustable, removable, sealed cartridge bearings. QRM.

M9 compatible free wheel.

Stainless steel flat spokes, brass nipples.

20 front and rear straight spokes.

Front radial spokes, rear crossed 2 on the free wheel side, radial on the opposite side.

Delivered with the composite quick release with high ratio closure, adjustment tool, and rim tape.

For 19 - 23 mm tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.



CLASSICS ELITE

USE :
Road, touring riders looking for a strong, comfortable wheel for all types of roads.

BENEFITS :
EFFICIENCY :
Maxtal SUP rim, double eyelets.
32 straight spokes.

COMFORT :
Flat profile rim.
3 cross pattern.

TECHNICAL FEATURES :
Weight :
Ø 700 front wheel 835g / rear 1065g.

Black anodized Maxtal SUP welded rim.

UB Control brake sidewalls.

Integrated free wheel hub.

Adjustable, removable, sealed cartridge bearings. QRM.

M9 compatible free wheel.

Stainless steel straight pull spokes.

32 front and rear spokes.

3 cross pattern front and rear.

Delivered with composite quick release, adjustment tool and rim tape.

For 19 - 23 mm tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.



THE ROAD TEAMS

In 1999, Mavic was partner with the following teams and federations : Crédit Agricole, Saeco Cannondale, Post Swiss Team, Cantina Tollo, Saturn, Home Jack & Jones, Beyond Level Four, Deportpublic, Euskaltel, Mroz, Tavira, French Federation, Ukrainian Federation, Irish Federation.



COMETE™

USE :
Road, Triathlon racers looking for a very aerodynamic rear wheel for time-trials or triathlons (road version) and track racers (track version).

BENEFITS :
AERODYNAMICS :
Disc wheel with lenticular shape.

STIFFNESS :
Aluminum rim and carbon walls laid up in asymmetrical segments.

EFFICIENCY :
Mavic quality bearings.
UB Control brake sidewalls (on road version).

TECHNICAL FEATURES :
Weight :
Road : Ø 700 rear tire 1300g.
Rear tubular tire 1300g.
Track : Ø 700 rear tubular tire 980g.

6106 aluminum alloy SUP carbon walls laid up in asymmetrical segments lenticular shape.

UB Control brake sidewalls (road version).

Adjustable, removable, sealed cartridge bearings. QRM.

Integrated free wheel hub with FTS system.

Screw on free wheel (track version).

Delivered with the Mavic composite quick release with high ratio closure (road version and the adjustment tool).

For 19 - 23 m tires.

Tire pressure from 7 to 9.5 bars/100 to 140 PSI.



™

USE :
Track racers looking for an aerodynamic wheel that offers exceptional performance.

BENEFITS :
AERODYNAMICS :
Profiled spoke wheel.
Very low drag factor.

STIFFNESS :
Internal unidirectional carbon structure.

EFFICIENCY :
Mavic quality bearings.

TECHNICAL FEATURES :
Weight :
Ø 700 front tubular tire 750g.
Ø 650 front tire 700g.

Wheel made of an internal unidirectional carbon fiber structure for maximum stiffness and external woven carbon fiber form. Hub with adjustable, removable, sealed cartridge bearings. QRM.

QRM SUP FTS UB CONTROL

QRM

Recommendations : see page 23

THE TRIATHLON TEAMS
In 1999, Mavic was partner of the following teams and racers :
Assystem, Poissy, Triathl'aix, Thomas Hellriegel,
Matthias Klumpp, Isabelle and Béatrice Mouthon, David Haines.



ROAD RIMS



CXP33

USE :
Road racing and training (in line race, criterium, triathlon, touring...).

BENEFITS :
Aerodynamics : 23,5 mm profiled rims.
Lightweight.
Strength : Maxtal SUP rims, profiled eyelet.
A perfect balance between weight / aerodynamics / comfort.

TECHNICAL features :
Weight : Ø 700 : 470g.
Ø 650 : 430g.
For 19 to 23 mm tires.
Tire pressure from 7 to 9.5 bars/100 to 140 PSI.
Drilling : 28, 32, 36.

COLORS :
Silver.
Black Mavic.
Red Helium.





OPEN PRO

USE :
A great high performance all rounder : road racing and training, criteriums and triathlons, or even touring...

BENEFITS :
Strong and lightweight due to Maxtal, SUP and double eyelets. Efficient braking : UB Control or Ceram.

TECHNICAL features :
Ø : 700 or 650.
Weight : Ø 700 : 425g / Ø 650 : 390g.
For 19 - 23 mm tires.
Tire pressure from 7 to 9.5 bars/100 to 140 PSI.
Drilling : 28, 32, 36.

COLORS :
Silver.
Black Mavic.
Blue France.
CD.
Ceramic.





MA3

USE :
All types of road riding.

BENEFITS :
Solid, quality braking: rim with double sidewalls, eyeleted, UB Control.

TECHNICAL features :
Weight : 490g.
For 19 - 23 mm tires.
Tire pressure from 7 to 9.5 bars/100 to 140 PSI.
Drilling : 32,36.

COLORS :
Silver.
Red Helium.
CD.



Recommendations : see page 23



QUALITY
The Mavic products are made to ride - and ride for a long time.
Quality control, product tests in test benches,



REFLEX

USE :
Road racing and training (in criteriums or even for touring...).

BENEFITS :
Strong and lightweight due to Maxtal, SUP and double eyelets. Efficient braking : UB Control or Ceramic.

TECHNICAL features :
Ø : 700.
Weight : 375g.
For tubular tire.
Drilling : 28, 32, 36.

COLORS :
Silver.
Bleu France.
CD.
Ceramic.



SUP MAXTAL UB CONTROL CERAMIC CD



T509

USE :
All type of riding : touring, trekking, VTC.

BENEFITS :
Strength :
SUP welded rims, double eyelets.
Braking efficiency : UB Control or Ceramic.

TECHNICAL features :
Weight : 560g.
For 28 - 37 mm tires.
Maxi tire pressure between 7 bars / 100 PSI (28 mm) and 6 bars / 90 PSI (37 mm).
Drilling : 36, 40.

COLORS :
Silver.
Ceramic.



SUP UB CONTROL CERAMIC CD



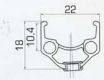
T 221

USE :
Touring, VTC. trekking.

BENEFITS :
Rim with double sidewalls, eyeleted, UB Control braking sidewalls.

TECHNICAL features :
Weight : 490g.
For 28 à 37 mm tires.
Maxi tire pressure between 7 bars / 100 PSI (28 mm) and 6 bars / 90 PSI (37 mm).
Drilling : 36.

COLORS :
Silver.



UB CONTROL



T 223

USE :
For trekking, VTC bikes equipped with integrated hub brakes.

BENEFITS :
Strength, double eyelet rim specifically designed to withstand the stress caused to the rim by hub brakes.
Reinforced profile on the upper bridge, no braking surface.

TECHNICAL features :
Weight : 500 g.
For 28 - 37 mm tires.
Maxi tire pressure between 7 bars / 100 PSI (28 mm) and 6 bars / 90 PSI (37 mm).
Drilling : 36.

COLORS :
Silver.



everything is done to make sure that each product meets the predetermined specifications.



CROSSMAX UST

Mavic innovates again in wheels by introducing the new Crossmax UST.

The best of the Mavic technology has been used to create this new wheel in order to offer you more performance and new sensations.

By combining lightweight efficiency with the advantages of the tubeless UST concept, the Crossmax UST wheel offers exceptional performance :

LIGHTWEIGHT
The weight of a Crossmax UST wheel and a tubeless UST tire is less than a traditional wheel + rim tape + tube + tire.

FEWER FLAT TIRES
The risk of flat tires, especially those caused by snake bites, is eliminated by the absence of tube and rim tape.

EFFICIENCY
With a Crossmax UST wheel, there is no friction or overheating between the tire, rim tape and tube. Therefore, the efficiency of the wheel is increased. It is also possible to optimize the efficiency and motivity by regulating the tire pressure to the type of terrain, with no excessive risk of flat tires even at low pressure.

ZICRAL SPOKE

To reduce the weight, the spokes of the Crossmax UST wheel are made of Zicral, aluminum alloy with high mechanical features.

CERAMIC 2

The new mix and process offers even more efficient braking and a coating that is more resistant to shocks and chipping. Mavic has optimized the Ceramic procedure.

New ceramic powders made of titanium oxide and alumine are spread on the sidewalls of the rim with a plasma beam torch.

ISOPULSE

The new Isopulse spoke lacing concept increases the stability and efficiency of the wheel by reducing the difference in tension between each side of the wheel. Contrary to the norm, the spokes are radially laced on the free wheel side and crossed on the opposite side. The hub is however, specifically designed to permit transmission of effort with this type of spoke lacing to the non drive side of the wheel. On the Crossmax UST wheel, the spokes are positioned closer together, 2 by 2, on the freewheel side of the hub which changes the angle of the spokes from completely radial. This in order to optimize how each spoke works and to allow some transmission of effort on this side too.



FORE

Fore technology improves the wheel performance by increasing the rim strength and stiffness.
It also lightens the wheel by allowing a reduced number of spokes to be used and eliminating the need for rim tape.

With Fore technology, there are no holes on the internal bridge of the rim and is therefore airtight. This revolution paved the way for the development of the tubeless UST concept.

Coming from the aeronautical industry, Fore technology consists of "piercing" only one wall of the rim with no waste of the rim material.

The process creates an alloy "tunnel" on the inside of the rim which is then tapped and ready to receive the specific threaded nipple.

TUBELESS UST

With the tubeless UST concept, Mavic is highly innovative in offering an easy and efficient tubeless system that reduces the risk of flats, decreasing the wheel weight, and providing greater efficiency.

The tubeless UST concept is based on the following principle : the rim profile has a deep central groove where the tire beads are placed when mounting the tire.

When beginning to inflate, the beads are pressed against the groove, creating an initial airtight seal. When the tire continues to be inflated, the beads climb up and along the rim wall and lock into place on the sidewall behind the raised ridges.

The Tubeless UST concept is airtight and offers exceptional grip on the tire thus also avoiding the problems of tire creep.





MOUNTAIN BIKE ASSISTANCE

Mavic colors can be seen at the biggest Mountain bike races and most important courses all over the world. Whether in a World Cup or festival, a fixed point of Mavic assistance...



CROSSMAX TUBELESS®

USE :
Cross Country racers looking for a wheel that offers maximum efficiency, performance and sensations and a reduced risk of flats.

BENEFITS :
TUBELESS :
- fewer flats.
- greater comfort.
- the tire pressure can be adapted to the terrain.
- more efficient.

LIGHTWEIGHT :
- Crossmax UST wheel weight + tubeless UST tire identical to the Crossmax set + rim tapes + tube + tire.
- Zicral spokes.
- FTS hub.

EFFICIENCY :
- better transmission of effort and more stability due to the Isopulse lacing concept.
- rim stiffness due to the Fore concept.
- Mavic quality bearings.
- Ceramic 2 braking sidewalls.

TECHNICAL FEATURES :
Weight : Front : 690g / rear : 890g.
Black anodized Maxtal SUP welded rim.
Fore drilling technology. Ceramic 2 sidewalls.
Integrated free wheel hub with FTS system.
Adjustable, removable, sealed cartridge bearings. QRM.
HG compatible free wheel.
Zicral straight pull spokes with integrated aluminum nipples.
Anti-rotation system
18 front spokes, 20 rear spokes.
Front radial spokes, rear Isopulse concept.
Delivered with the Mavic composite quick release with high ratio closure, adjustment tool, spoke wrench, Chain Disc, UST valve compatible with both Ø 8,5/ 6,5.
Mavic recommends tubeless UST Hutchinson and Michelin tires.
For tubeless UST tires only.
Tire pressure 2 - 4 bars / 30 to 60 PSI.

QRM SUP FORE ISO 3D ZICRAL MAXTAL FTS CERAMIC 2



CROSS RIDE®

USE :
Mountain bikers who want a strong, high performance wheel for Cross Country at a great price.

BENEFITS :
STRENGTH :
SUP double sided rim, eyeleted.
24/28 straight pull spokes.

PERFORMANCE :
Mavic quality bearings.
Front radial lacing.
Rear crossed lacing.
UB Control braking sidewalls.

TECHNICAL FEATURES :
Weight :
Front : 730g / rear : 1020g.

Black anodized 6106 aluminum alloy Sup welded rim.

UB Control braking sidewalls.

Integrated free wheel hub.

Adjustable, removable, sealed cartridge bearings. QRM.

HG compatible free wheel.

Stainless steel straight pull spokes. Anti rotation system on front wheel - brass nipples.

24 front spokes, 28 rear spokes.

Front radial spokes, rear crossed 3 on the free wheel side, radial on the opposite side.

Delivered with the composite quick release, adjustment tool, rim tape And Chain Disc.

For 1.5" - 1.95" tires.

Maxi tire pressure between 6 bars /90 PSI (1.5") and 4.5 bars / 65 PSI (1.95").

QRM SUP UB CONTROL

Recommendations : see page 23

makes sure that all the racers are prepared as best as possible.
Wheel truing, tension of spokes, perfect bearings and rim controls are all mandatory for an efficient wheel - ready to win !



MOUNTAIN BIKE WHEELS



CROSS MAX™

USE :
Cross Country racers who want an ultra high performance, lightweight wheel.

BENEFITS :
LIGHTWEIGHT :
thin walled oversize profile rim.
FTS hub.
aluminum nipple.

EFFICIENCY :
Maxtal SUP rim, double eyelets.
Ceramic braking sidewalls.
Mavic quality bearings.
Low inertia.

TECHNICAL FEATURES :
Weight :
Front : 650g / rear : 850g.

Maxtal SUP welded rim, thin walled oversize profile, black hard anodized finish.

Ceramic braking sidewalls.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings.

HG compatible free wheel.

Stainless steel straight pull spokes - aluminum nipples

26 front spokes - 28 rear spokes.

Front radial spokes, rear crossed 3 on the free wheel side, radial on the opposite side.

Delivered with the Mavic composite quick release with high ratio closure, adjustment tool, rim tape and Chain Disc.

For 1.5" - 1.95" tires.

Maxi tire pressure between 6 bars /90 PSI (1.5") and 4.5 bars / 65 PSI (1.95").



CROSS MAX™ DISC

USE :
Cross Country racers who want an ultra high performance wheel for disc brakes.

BENEFITS :
LIGHTWEIGHT :
- FTS hub.

STRENGTH :
- Maxtal SUP rim reinforced on the upper bridge to withstand the specific stress caused by disc braking.

COMPATIBILITY :
- Compatible with disc brakes with specific adapter.

TECHNICAL FEATURES :
Weight :
Front : 730g / rear : 930g.

Black anodized Maxtal SUP welded rim.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings. QRM.

HG compatible free wheel.

Stainless steel straight pull spokes, brass nipples.

28 front spokes - 28 rear spokes.

Front spokes crossed 3 on disc side, radial on the opposite side, rear crossed 3.

Delivered with the Mavic composite quick release with high ratio closure, adjustment tool, rim tape and Chain Disc.

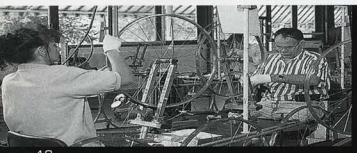
Disc brake adapters sold separately.

For 1.5" - 1.95" tires.

Maxi tire pressure between 6 bars /90 PSI (1.5") and 4.5 bars / 65 PSI (1.95").

QRM SUP MAXTAL FTS CERAMIC CD

QRM SUP MAXTAL FTS



The quality of the wheel depends on each component but also on the quality of the build. That is why Mavic wheels are built with care : automatic pre-tension of the spokes, double spoke seating, final tension adjustment by hand, and truing and roundness adjustments with very low tolerances.



CROSSLINK™ DISC

USE :
Cross Country riding for Mountain bikes equipped with disc brakes.

BENEFITS :
STRENGTH :
Maxtal SUP rim reinforced on the upper bridge to withstand the specific stress caused by disc braking.

COMPATIBILITY :
Compatible with disc brakes with specific adapters.

TECHNICAL FEATURES :
Weight :
Front 770g / rear : 995g.

Maxtal SUP welded rim.

Integrated free wheel hub.

Adjustable, removable, sealed cartridge bearings.

HG compatible free wheel.

Stainless steel straight pull spokes.

Brass nipples.

28 front spokes - 28 rear spokes.

front spokes crossed 3 on the disc side, radial on the opposite side, rear crossed 3.

Delivered with the composite quick release, rim tape and Chain Disc.

Disc brake adapters sold separately.

For 1.5" - 1.95" tires.

Maxi tire pressure between 6 bars / 90 PSI (1.5") and 4.5 bars / 65 PSI (1.95").



DEEMAX

USE :
MTB Downhill riding and racing.

BENEFITS :
STRENGTH :
Maxtal SUP rim, double eyelets 36/36 straight pull spokes

STEERING :
Wide rim allows the tire to work better for more precise steering.

COMPATIBILITY :
Compatible with disc brakes with specific adapters.

TECHNICAL FEATURES :
Weight :
Rear : 1390 g.
9 mm front rod : 1160g.
20 mm front rod : 1070g.

Maxtal SUP welded rim, yellow Mavic coating.

Integrated free wheel hub with FTS system.

Adjustable, removable, sealed cartridge bearings.

HG compatible free wheel.

Stainless steel straight spokes, brass nipples.

36 spokes crossed 4.

Delivered with adjustment tool, rim tape.

Disc brake adapters sold separately.

For 1.95" - 2.5" tires

4 bars /60 PSI (1.95") and 3 bars / 40 PSI (2.5").

Recommendations : see page 23

Disc brake adapters
Allows disc brakes to be mounted on Crossmax Disc wheels, Crosslink Disc and Deemax.
Compatibility :
AMP - CODA - FORMULA - HAYES - HOPE - MAGURA - ROCK SHOX - SACHS.



MOUNTAIN BIKE RIMS



X517

USE :
MTB Cross-Country riding and racing.

BENEFITS :
Lightweight performance due to the Maxtal SUP welded rim.

TECHNICAL FEATURES :
Weight : 395g.
Drilling : 28, 32, 36.
For 1.5" - 1.95" tires.
Maxi tire pressure between 6 bars / 690 PSI (1.5")
and 4,5 bars / 65 PSI (1.95").

COLORS :
Silver.
Red.
Black Mavic.
CD.
Ceramic.





X221

USE :
MTB Cross-Country riding.

BENEFITS :
Double sided rim, eyeleted that offers efficient braking due to the UB Control.

TECHNICAL FEATURES :
Weight : 440g.
Drilling : 32,36.
For 1.5" - 1.95" tires.
Maxi tire pressure between 6 bars/90 PSI (1.5")
and 4,5 bars / 65 PSI (1.95").

COLORS :
Silver.





X317 DISC

USE :
Cross-country riding and racing for bikes equipped with disc brakes.

BENEFITS :
Absence of braking surfaces, reinforced upper bridge.
A rim specifically designed to withstand the increased stress caused by disc braking.

TECHNICAL FEATURES :
Weight : 395g.
Drilling : 32, 36.
For 1.5" - 1.95" tires.
Maxi tire pressure between 6 bars
90 PSI (1.5")
and 4,5 bars / 65 PSI (1.95").

COLORS :
Citron.
CD.





MOUNTAIN BIKE TEAMS
Our international partners for 1999 were as follows :



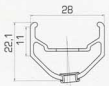
D321

USE :
Downhill racing and training.

BENEFITS :
Strength : Maxtal SUP welded rim.

TECHNICAL FEATURES :
Weight : 590g.
Drilling : 32,36,40.
For 1.9" - 2.5" tires.
Maxi tire pressure between 4 bars / 60 PSI (1.5")
and 3 bars / 40 PSI (2.5").

COLORS :
Silver.
CD.
Ceramic.





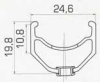
F519

USE :
Freeride, cross-country.

BENEFITS :
Strength : wide profile Maxtal rim, eyeleted.
Efficient braking due to the UB Control.

TECHNICAL FEATURES :
Weight : 460g.
Drilling : 32, 36.
For 1.5" - 2.2" tires.
Maxi tire pressure between 4 bars / 60 PSI (1.9")
and 3.5 bars 50 PSI (2.2").

COLORS :
Silver.
Black Mavic.





D321 DISC

USE :
Downhill racing and training for bikes equipped with disc brakes.

BENEFITS :
Bomb proof strength with Maxtal and SUP.
Incredible steering :
with wider rim that offers excellent tire stability.

TECHNICAL FEATURES :
Weight : 675g.
Drilling : 32,36.
For 1.9" - 2.5" tires.
Maxi tire pressure between 4 bars / 60 PSI (1.9")
and 3 bars / 40 PSI (2.5").

COLORS :
CD.



Recommendations : see page 23

Volvo / Cannondale, Specialized / Mountain Dew, GT, Schwinn /
Toyota, Scott, Sunn, Fulldynamix, American Eagle / Concorde,
Lapierre, Bianchi / Martini, Orbea, Egobike.





XIXIX

USE :
BMX Race racing and training.

BENEFITS :
SOLID AND RIGID : due to the straight pull spokes, radial lacing and with the SUP rim.

TECHNICAL FEATURES :
Weight :
Front : 900 g / Rear : 930 g.

SUP rim with single eyelet, Mavic hard black finish.

Hub with adjustable, removable, sealed cartridge bearings.

Screw on free wheel.

Compatible with screw-on free wheel ISO 1,375 x 24TPI.

Black straight pull spokes - brass nipples.
32 front spokes - 36 rear spokes.
Front radial spokes, rear crossed 4.



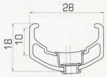
XC BMX

USE :
BMX Race racing and training.

BENEFITS :
Solid and rigid : lightweight double wall rim, SUP welded and double eyelets.
Lightweight.

TECHNICAL FEATURES :
Ø : 406 (20").
Weight : 390 g.
Drilling : 32,36.

COLORS :
Black Mavic.





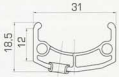
XC BMX

USE :
BMX racing and training or freestyle.

BENEFITS :
Strength : profile reinforced with a central wall.
Steering : strong, wide profile at braking level.

TECHNICAL FEATURES :
Ø : 406, 20".
Weight : 480 g / 600g.
Drilling : 32,36,48.

COLORS :
Black Mavic.



Recommendations : see page 23



MAVIC CUSTOMER SERVICE

For 2000, "SERVICE CENTERS" located all over the world have organized structures to offer you the best in assistance, back-up and partnership. Our goal : make you an essential partner in Mavic service to the consumer.

For all warranty claims or other customer services, the MAVIC SERVICE CENTER (MSC) is there to help you with the correct returns procedure, to offer you advice, carry out repairs or standard exchanges, in addition to delivery of all spare parts.

Mavic products are guaranteed for one year from the original date of purchase.

You should inform each person about the use of the warranty card (delivered with each product); this remains the property of the purchaser.

We ask you simply to contact your MSC before returning any part or product to ensure that all is in order.

We shall unfortunately be obliged to refuse all returns which do not conform to the correct procedure.

MSC FRANCE	**Tel : (33) 474559881**	**Fax : (33) 474559745**
MSC SWITZERLAND	**Tel : (41) 026 6772226**	**Fax : (41) 026 6771971**
MSC EAST CANADA	**Tel : (1) 5143321320 (1) 8003630693**	**Fax : (1) 5143351691**
MSC WEST CANADA	**Tel : (1) 6042589066 (1) 8006614944**	**Fax : (1) 6042589343**
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MSC ITALIY	**Tel : (39) 0354993911**	**Fax : (39) 0354993912**
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MSC CZECHOSLOVAKIA	**Tel : (42) 061624336**	**Fax : (42) 061626240**
MSC U.K.	**Tel : 0800893300 (International Hot Line)**	**Fax : (33) 474559745**
MSC AUSTRALIA	**Tel : (61) 398889882**	**Fax : (61) 398889902**
MSC U.S.A	**Tel : (1) 9784698400**	**Fax : (1) 9783731113**
MSC HOLLAND	**Tel : (31) 493341674**	**Fax : (31) 493342550**
MSC AUSTRIA	**Tel : (43) 8626362450 (International Hot Line)**	**Fax : (43) 8626362455**

IMPORTANT INFORMATION

For several years, Mavic has been using the most advanced technology for the creation and realisation of high performance rims and wheels.

However, whatever the brand or type, a rim will not last forever. It is a component that progressively wears depending on the conditions of use : type of riding, terrain, brakes, spoke tension, tires, tire pressure...

We suggest that the Mavic wheel and rim users abide by the following recommendations :

HOW DO YOU GET THE BEST OUT OF YOUR RIMS ? :

- Choose a rim adapted to your type of riding.
- It is mandatory to use the tire pressure and tire dimensions indicated in this catalogue.
- Use the appropriate spoke tension. Mavic recommends spoke tension between 90 and 110 kg.
  Inappropriate spoke tension can generate too much stress.
- Clean the rims on a regular basis using the Mavic soft stone (M40410).
- Remove stones and metal particles from the brake pads.
- Replace the brake pads when they are worn.
- Do not use a rim if the braking surface is worn, if eyelets are missing, or any other incident that could compromise the safety.
- Check or have your rims checked on a regular basis at least once at the beginning of each season, and if possible, after each intensive use, in case there are any doubts about the spoke tension or type of tires used.
  Check the inside and outside rim (especially under the rim tape)
  to look for signs of fatigue or wear : braking surface deterioration, cracks on the sidewalls or around the eyelets.

Following these recommendations will guarantee longer rim life, maximum performance and greater riding enjoyment.






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FUNBIKE
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Tel : 0662 636245 0 / Fax : 0662 636245 5

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