

English



The Chain Guide

X Super Light / X High Performance / BMX / Anti-Rust / Single Speed / Connecting Links / Maintenance / Chain Wear



Currently KMC is sponsoring several pro- & semi pro racing / MTB teams, local events and clubs. In 2004 we entered the professional racing scene after Team Liberty Seguros asked us to become their chain sponsor. With a tremendous success, resulting in Heras winning the Vuelta 2004 on our X10 Ti-N Gold!

For more details have a look at our website:

www.kmcchain.com



Tough Chains for Tough Riders



The People

Back in 1977 Charles Wu, the founder of KMC, started to make his first chains. Today, nearly 30 years later, KMC is the leading chain maker in the world. Employing more than 4.500 people, owning 7 factories and 4 sales offices all over the world KMC produces famous brand name chains. Considerable R&D effort goes into creating better, stronger and lighter chains.

How do we know what you expect of our products? Easy, we are one of you!

Our philosophy is: if it isn't good enough for us, then it is certainly not good enough for you! Besides our test riders, you can be sure we also test them ourselves!

KMC is always your right choice!

Because we only make chains, we can completely focus our R&D on this product, making KMC the best chain you can get! Service, top quality and reliability are always our top priority.

KMC's mission is to be the number one quality chain maker in the world!

Famous bicycle brands all over the world are using KMC chains for assembly on their bikes and all of them perfectly satisfied with our quality and service.



Road & Off Road



9 Speed
10 Speed

X10SL Ti-N Gold

Ti-N
Titanium Nitride Coated

High-End steel alloy material
Pins and plates, made from a special steel alloy composition, reduces chain stretching and thus prolongs chain life.

KMC Titanium Nitride coating
Less friction, less maintenance and high reliability

X-SP treatment
KMC's eXtreme Stretch Proof treatment of pins and plates makes this chain less susceptible to wear caused by sand or dirt entering the chain bearings. This chain lasts!

FLAT-STEP RIVETING

Lean construction
Weight & Chainsuck reduction

X-Bridge
The X-Bridge outer plate has been configured with precisely articulated angles for quicker, smoother gear shifting and quieter riding

X10SL CP Silver

The Light Weight Champion!

A couple of years ago we decided to make the lightest 10-speed chain in the world. Well, it took us 3 years of developing, testing, re-tooling and re-thinking production methods. We targeted a super light weight chain, but not only for road use, also for all other types of cycling. This is the reason why it has been tested extensively by many different disciplines, from Road to MTB and Downhill, from X-country to super intensive Marathon tandem use.

We are grateful to our MTB and Racing test teams and riders who helped us to successfully realise this project. Without their help we could not have achieved this new level in the Evolution of chain manufacture! We are now able to proudly present our latest creation: X-Super Light.

True racing chain

The X-SL series are the lightest chains in their class, furthermore, because of the weight reduction the chain has many important benefits such as super fast shifting, smoother action and even a significant reduction of 'Chain-Suck'. This we discovered during our field tests, since the open inner plate construction facilitates the removal of dirt from within the drive train.

The hollow pin is riveted according to our new 'FLAT STEP' process, sealing the outerplate with an impressive 350 kilo's of pinpower, making it the strongest chain connection in the industry today.

Our test riders loved this chain from the outset. Riding X-SL they discovered the 'true racing chain'.



Including: re-usable MissingLink



XSL: THE LIGHTEST TRUE RACING CHAIN

SPECIFICATIONS

Super Light	: 228 gr./110 links (X10SL) 242 gr./110 links (X9SL)
Application	: for all 9- and 10-speed systems road + off road
Lean construction	: less chain suck
X-Bridge outer plate	: super fast and smooth shifting
X-SP heat treatment	: extremely durable
Ti-N Gold versions	: less friction, low maintenance
Flat Step Rivetting	: the strongest connection

X Super Light

X High Performance



Ti-N
Titanium Nitride Coated



X10 Gold

eXtra Stretch Proof

LongLife

Regular

CHAIN LIFE

Our X-SP and LongLife treatments effectively enhance durability. Result: longer chain life!

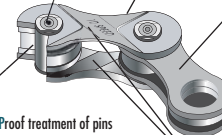


X8, X9, X10

'Bull's-eye' pin
The unique KMC 'Bull's-eye' pin riveting provides unsurpassed side plate retention

KMC Titanium Nitride coating
Less friction, less maintenance and high reliability

High-End steel alloy material
Pins and plates, made from a special steel alloy composition, reduces chain stretching and thus prolongs chain life.



X-SP treatment
KMC's eXtreme Stretch Proof treatment of pins and plates makes this chain less susceptible to wear caused by sand or dirt entering the chain bearings. This chain lasts!

X-Bridge
The X-Bridge outer plate has been configured with precisely articulated angles for quicker, smoother gear shifting and quieter riding

Symbolic for Speed

Race proven, both on the road (Liberty Seguros-Würth team) and Off Road (K2, Rothaus Cube, Trek USA MTB-team Benelux) we are pretty confident that our X-series can even satisfy the most critical rider.

Our double X-bridge® outer plate ensures maximum shifting performance, while our X-SP® treatment in combination with precision tolerances prolongs the chain's life to the maximum.

The X-series are available for 7-, 8-, 9- and 10-speed cassettes, and compatible with all major systems.

Titanium Nitride Coating



Introducing our latest coating technology on X10SL Gold, X9SL Gold, X10 Gold and X9 Gold Titanium Nitride coating in gold colour. This surface is very hard and super smooth, not only will your chain remain a GOLDEN chain, it is also less susceptible to dirt, easier to clean and therefore retain its function much longer than regular chains. Don't worry, if you ride an 8-speed drive-train you can also use our X9 Ti-N Gold.

In fact, we are so convinced of the quality of our Ti-N coated chains that we guarantee your satisfaction!

You will find a warranty certificate with every Ti-N coated X10SL, X9SL, X10 or X9 chain.



Including: re-usable MissingLink



X: THE RACE PROVEN CHAIN

SPECIFICATIONS

Application	: for all 7-, 8-, 9- and 10-speed systems road + off road
X-Bridge outer plate	: super fast and smooth shifting
X-SP heat treatment	: extremely durable
Ti-N Gold coating	: less friction, low maintenance
Bulls Eye Rivetting	: high pin power for extreme shifting

X High Performance

The Kool Jumping Chain



K710SL/K710SL Ti-N Gold



K910/K710



Z510HX

Kool
HX
Standard

TENSILE STRENGTH
KMC Heavy Duty and Kool Chains are at least 30% stronger.
Result: Extreme Reliability.



BMX is Back!

In the early 80's it was booming, slowing down a little until the end of the 90's, since which time it has become increasingly popular. There are BMX races all over the world and BMX parks are being built everywhere. BMX is back in town.

We always have been a major player in the BMX world and our chains can be found on most bikes. This means that riders and manufacturers trust our quality.

Kool series development is on going - the latest is the K710SL Superlight BMX racing chain.

K710 Kool Chain For the 'Kool' guys KMC makes this chain with an impressive tensile strength of 1300 Kg. It fits most sprockets/ freewheels/cogs and is smooth on the outside so it doesn't get stuck on a handrail or coping. It is also available in the **K710SL** (Super Light) version, which is nearly 20% lighter than the K710!

K910 Kool Chain The K910 is a bigger version of the K710 Kool chain with a tensile strength of a whopping 1500 Kg. BMX Freestyle has lots of street riders who cannot use a normal chain, simply because the chains are not strong enough for their type of riding. KMC makes this Fat Kool Chain for those whose main concern is chain strength rather than weight.

Z510HX & Z610HX This is a perfect chain for racing and Heavy Duty BMX use, the tensile strength is a good 1200 Kg. It can be used on almost every front sprocket and rear free-wheel/Cog. Light but strong, this chain is a bestseller in the BMX Freestyle world, but it is also becoming very popular in the mid-high end range internal gear hub equipped bikes, because of it's long life and high reliability.



KMC: THE BMX CHAIN

SPECIFICATIONS

	size	breakload(min)	finish	pin power
K910	1/2"x3/16"	1500 Kg	silver	350 Kg
K710SL	1/2"x1/8"	950 Kg	gold & silver	250 Kg
K710	1/2"x1/8"	1300 Kg	silver	250 Kg
K810	1/2"x3/32"	1300 Kg	silver	250 Kg
Z510HX	1/2"x1/8"	1200 Kg	silver	250 Kg
Z610HX	1/2"x3/32"	1200 Kg	silver	200 Kg

The Kool Jumping Chain

Internal Gear Chain



Our current single speed line offers features like:

- Stainless steel materials Our Inox chain mixes stainless steel parts with Long-Life technology and Anti-Drop Chamfered innerplates
- Anti-Drop inner plates Because of the special shape of the inner plate, the chain will not drop, even after it has stretched a lot
- Long Life treatment We are the only chain maker offering this feature for Single speed chains. The Long Life treatment will enhance chain life considerably
- Heavy-Duty (HX) Reinforced chains, which offer 30% greater strength, for the toughest environments and strongest riders
- Inner plate Chamfering For silent and smooth running

Longlife

Single
Speed

eXtra Stretch Proof

LongLife

Standard

CHAINLIFE

Our X-SP and LongLife treatments effectively enhance durability.
Result: longer chain life!



The Special Internal Gear Chain

You may wonder: "What is so special about the chain on my internal gear bike?"
Indeed, most chain manufacturers may agree with you, so they only offer you one model.

Different use, different product

We think differently. A chain for a Rohloff 14-speed internal gear equipped bike has other quality requirements compared with a chain fitted to a children's bike. That is why we have put a lot of effort into the development of non-derailleur chains, which were solely developed for single speed or internal gear bikes. Why? Because people who ride internal geared bikes are all different; some ride once a month, some over 100 kilometres each day. So, different uses require different products.

You do not expect the chain on your expensive bike to be worn down after only 2000 kilometres.

KMC's philosophy also applies here. We want to make products suitable for every kind of cycling requirement; from basic economy to heavy duty long life chains.



THE INTERNAL GEAR CHAIN

SPECIFICATIONS

Sizes	: 1/2" x 1/8" (wide) 1/2" x 3/32" (narrow)
Application	: any internal gearhub drive train without a derailleur
LongLife	: all 'X' models
Stainless steel	: only Inox chain
Anti-Rust	: all 'RB' models
No-Drop	: all models, except Z410
HeavyDuty	: all 'HX' models

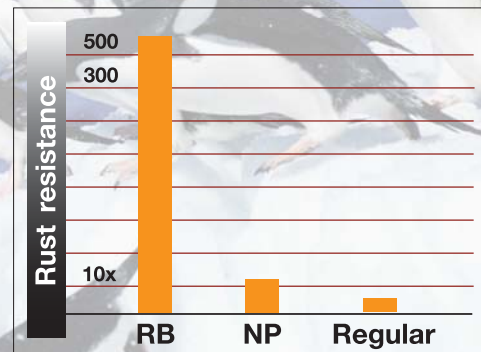
Internal Gear Chain

The Rust Buster Chain



The advantages:

- Conservation of chain function
- Less maintenance
- High reliability
- Longer life



Our RB models are treated in order to make them almost rust proof. The exclusive KMC process treats the chain to withstand the rigors of a 500 hours salt spray test without rusting.

Anti-Rust. The Comfortable Way

Comfort, that is the first consideration when we introduce our RB series to you.

Has it ever happened to you? It's the week-end, the weather is good, and so let's go for a ride! But because you forgot to maintain it, your chain is so rusted that it's spoils all the fun!

Protecting against rust

Our RB (Rust Buster) treatment is a coating of zinc and chrome, protecting your chain against rust, in fact it makes your chain resist rust 500 times longer than a regular chain. Our RB coating meets with the highest international standards on rust resistance.

Furthermore, all models, except the Z51RB, have received a special thermal Long Life treatment to ensure maximum chain life.

So, the next time you forget to dry your chain after the rain: don't worry... KMC RB chains can take it!

Rust. It is the chain's main enemy, it

- reduces chain life;
- reduces optimum chain function;
- increases the chance of breakage.

In short: It reduces your riding fun!



ANTI-RUST: THE COMFORTABLE WAY

SPECIFICATIONS

Application	: Single Speed	: Z1XRB - Z610XRB
	: 7-speed derailleur	: Z51RB
	: 7+8-speed derailleur	: Z92RB
	: 9-speed derailleur	: Z99RB
Long Life	: all, except Z51RB	
RB treatment	: maximum anti-rust protection	

The Rust Buster Chain

Maintenance



Use a piece of dry cloth



Lubricate into the chain's bearing



Clean inner bearing ends

When to maintain your chain?

Maintenance depends very much on the conditions you ride in, obviously wet and muddy conditions prompt a more intensive schedule than dry and asphalt conditions.

Indicators to watch out for:

- reduction of shifting function;
- chain-Suck (chain sticking to your front chain wheel);
- squeaking noises from the drive-train;
- in a tunnel or passing an object reflecting sound, you can hear your chain rattle (it's too dry).

At all events, for road use: inspect your chain at least once every month or every 250 kilometres (150 miles) for off road use: at least once every 100 kilometres (60 miles).

Cleaning

- Clean your chain after each trip, especially after riding in the wet.
- Always use a piece of dry cloth to clean the chain and it's component parts.
- If necessary, use an old toothbrush to clean between the plates.
- Do not forget the sprockets, front changer and derailleur pulleys.
- To remove mud or sand, use a bristle brush, if necessary with light soapy warm water .
- Never use acidic or alkali based detergents (such as rust cleaners), these agents can damage the chain and may cause breakage.
- NEVER EVER use a so-called 'chain washing machine' in combination with solvent. This is the one and only sure way to instantly ruin your chain.
- Avoid the use of solvents, not only are these bad for the environment, they remove lubricant from the chain's bearing.

Lubrication

- lubricate the chain every time you clean it, scrub it, or wash it with any solvent (the usage of solvent is not recommended!);
- before lubricating, make sure the chain is dry;
- use a lubricant which initially penetrates the chain's bearing, and then turns 'sticky' or 'dry'. In this way you can reach the chain parts which are most sensitive to wear;
- make sure you are using the appropriate lubricant - you can test it by spraying some on your hand - first it feels like water (penetration), after some time it should become sticky or dry (durable lubrication);
- in order to avoid a build-up of excess grease, try to apply it on the critical places only, like the rollers. Applying grease there helps to reduce chain wear and noise;
- apply just a little grease on the rest of the chain to prevent rust;
- remove excess grease from the outside of the chain;
- in the case of derailleur bikes: do not forget to pay some attention to the derailleur pulleys, chainrings and cassette sprockets. Use the same principle as above for maintaining and lubricating them.
- after lubricating, use a dry cloth to remove excess grease from the chain's outside, this prevents attracting excessive amounts of dirt and dust.

Before re-connecting your chain, do not forget to clean the chain's ends inner bearings of chain ends, to make sure no dirt remains there. After cleaning, and before applying the connecting link, apply some grease inside and on the connector's pins.

"A chain is a chain, they're not so different"

We hope, after reading this brochure, you have become aware of many different applications, treatments and qualities in a seemingly simple product called chain.

This 'simple' chain is probably the most important part of your drive train, when it functions well, you are not aware of it's existence, but when there is something wrong, you will either be annoyed with it's noise, or even worse: standing next to your bike with a broken chain.

On these pages we would like to give you some tips for maintenance and usage, most of which we follow ourselves. We hope that by using this information you will be able to prolong the chain's life and improve it's performance.

*Liberty mechanic
Faustino:
"Good maintenance
provides the
conditions to win."*



How to minimize chain wear

There are different treatments, which affect the chain's life in different ways. In general you may expect a much better performance if you use one of our Long Life or Hi-performance (X and X-SL) products.

Frequently people ask us: "how many kilometres can I expect out of a chain?" Well, our road test results (over 350 different riders) produced a wide range of chain life which varied from 1000 km (heavy duty MTB) to 17.000 km (Road Racing). This certainly does not mean that the MTB rider was not satisfied with this result, in fact his comment was: "compared to my previous chain it lasted 200 km longer"

That is why it is very difficult to answer this question, because chain wear depends on the:

- usage (performance, shifting frequency, chain line);
- circumstances (terrain, wet, dry, mud, water, salt);
- rider's condition;
- degree of maintenance.

Prevent unnecessary chain wear

We can give you the following tips, in order to obtain the maximum mileage from your drive-train, irrespective of the type of chain:

- follow our maintenance tips;
- when shifting, try to keep the chain in as straight a line as possible between chain wheel and cassette (e.g. do not use the extreme positions like the smallest chainring and the smallest sprocket, or the largest chainring and the largest sprocket);
- when shifting, try to anticipate a situation (e.g. when going uphill, up shift early in order to prevent excess force on the chain when having to change gear);
- before stopping, shift to smaller chainring, this avoids having to shift from stand-still.

Some people use 2 or 3 chains and change them every week (or every 500-700 km). According to them this reduces wear, particularly of more expensive cassette and chainrings. It makes sense.

To check the chain's elongation

The easiest way to check if your chain has worn down is when you feel the chain has lost its smooth running and agile shifting function.

A rough way of checking:

- put the chain on the outer chainring, and lift up the chain from the middle of the ring;
- if you can lift it more than half a link, the chain or chainring are probably worn.

If this is the case, chainrings and cassette sprockets may well also be affected!

KMC has developed a special digital chain wear indicator, the 'Digital Chain Checker'. This tool allows you to exactly measure the chain's elongation, changing the chain on time (not too early and not too late) prevents excess wear on other drive-train parts, so you can prevent unnecessary high repair costs.

There are also other effective mechanical tools on the market which can help you determine whether your chain needs to be changed or not.

In general KMC recommends checks at the following intervals:

- road use and riding in the dry: every 500 kilometres (300 miles);
- off road use or more demanding environments: every 150 kilometres (100 miles).

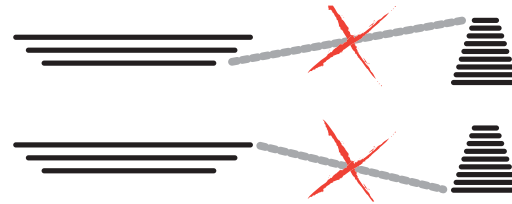
Note: The chain life varies; it depends on the product you use, the circumstances you ride under and the maintenance you adopt.



The easiest way to check



The digital way to check



Avoid extreme shifting positions!

Connecting Link Instructions

MissingLink



1. Fit chain with the correct length, clean bearing and lubricate



2. Do not forget to lubricate the pin



3. Insert both halves of the MissingLink into the chain ends



4. Press both halves of the MissingLink connector together

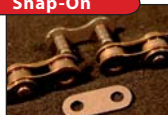


5. Lock in place by pulling the chain apart



6. Opening: press both plates together while sliding the chain ends towards each other

Snap-On



1. Fit chain with the correct length, clean and lubricate bearing and pin



2. Insert pin plate into both chain ends



3. Fit other plate over right pin



4. Bend both ends of the chain slightly towards you and click in the other end



5. Check connectors for correct assembly. Opening: bend chain slightly and pull off the plate

Spring-Clip



1. Fit chain with the correct length, clean and lubricate bearing and pin



2. Insert pin plate into both chain ends, then fit other plate over both pins



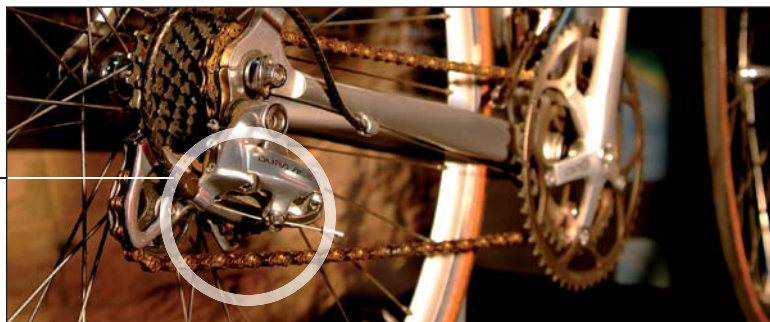
3. Place spring over both pins (note: the closed side of the spring must be in the forward pedalling direction of the chain!)



4. Use pliers to assemble spring

Correct chain length

Mount on smallest sprocket and smallest ring: the chain should to run as close as possible to, but just free of the derailleur pulley



KMC Chain Application Chart

Multiple speed (Derailleur use)	10-speed Cassette	9-speed Cassette	7 & 8-speed Cassette	5 & 6-speed Cassette
	Any system	Any system	Any system	Any system
	½"x11/128"	½"x11/128"	½"x3/32"	½"x3/32"
	X10SL Ti-N Gold	X9SL Ti-N Gold	X8-99 Silver	Z50 Brown
	X10SL Silver	X9SL Silver	X8-93 Silver/Gray	Z30 Brown
	X10 Ti-N Gold	X9 Ti-N Gold	X8-92 Silver/Black	
	X10-93 Silver/Gray	X9-99 Silver	Z92RB Anti-Rust	
		X9-93 Silver/Gray	Z51RB Anti-Rust	
		X9-92 Silver/Black	Z51S Silver/Brown	
		X9-73 Gray		
		Z99RB Anti-Rust		
Single speed and Internal gearhub use	Internal Gear & Single speed	Internal Gear & Single speed	BMX RACE	BMX RACE
	½"x1/8"	½"x3/32" (Narrow)	½"x 1/8"	½"x3/32" (Narrow)
	INOX S10 Silver	INOX S10 Silver	INOX S10 Silver	INOX S10 Silver
	Z1X LongLife	Z610X Longlife	Z510HX Heavy Duty	Z610HX Heavy Duty
	Z1XRB Anti-Rust	Z610XRB Anti-Rust		
	Z510HX Heavy Duty	Z610HX Heavy Duty		
	Z1 Brown	Z610 Brown		
	BMX Freestyle	BMX Freestyle	BMX Freestyle	Track
	½"x3/16"	½"x1/8"	½"x3/32"	½"x1/8"
	K910 Silver	K710SL Ti-N Gold	K810 Silver	Z510HX Silver
	K415H Black	K710SL Silver	Z610HX Silver	
		K710 Silver		
		Z510HX Silver		
		Z510H Brown		
	Power assist (electric)	Power assist (electric)		
	½"x1/8"	½"x3/32"		
	Z510HX Silver	Z610HX Silver		
	Z510H Brown			





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DEALER:



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