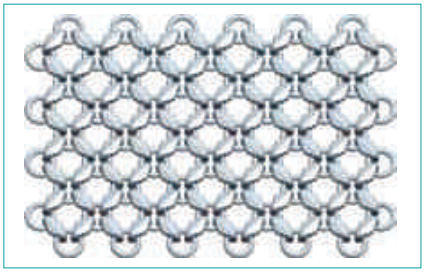
WHAT IS A TYRE PROTECTION CHAIN?

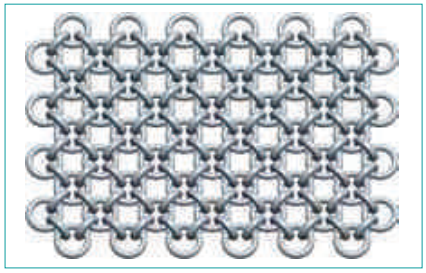
A Tyre Protection Chain is a close mesh of high-alloy, drop-forged, steel, wear links which wraps around the tyre to protect the tread and sidewalls.
The flexible nature of the mesh enables the chain to adjust to the tyre as it deforms during the loading or hauling operation.
The chain's highly-efficient, self-cleaning properties prevents the mesh from becoming filled and clogged thus achieving the best possible traction and increasing the loader´s productivity.
Through 70 years of development in co-operation with owners and operators of wheeled loaders and dump trucks, together with on-going investment in state-of the-art production facilities and quality control labs in Europe and South America, ERLAU has achieved pre-eminence in the tyre protection chain market with a wide range of chains designed to match the challenges of a multiplicity of site conditions.
By protecting tyres from excessive abrasion, punctures and sidewall damage, ERLAU Tyre Protection Chains saves thousands of dollars in tyre replacement costs and assures full loader productivity.
For your confidence, ERLAU experts will be on hand from your initial enquiry, through delivery and installation, routine check-ups and on-call 24/7 for the life of your tyre protection chain.

ERLAU SOLUTIONS SAVING TYRES, SAVING TIME, SAVING MONEY



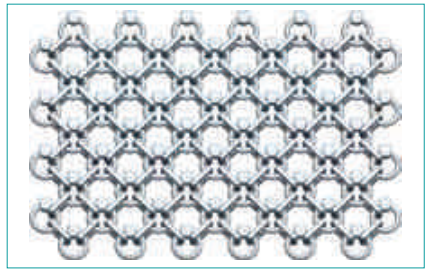
RING-LINK SYSTEM

Drop forged wear links
Tried and tested technology
A wide range of wear links
The right link for your application



RING-RING SYSTEM

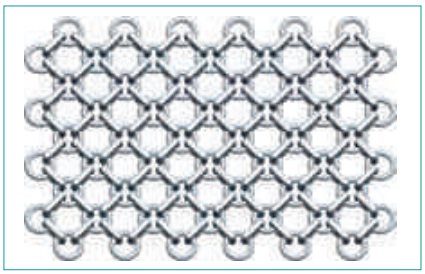
Drop forged wear rings
Perfect tyre protection giving excellent chain life on very abrasive materials.



RING-LOCKING SYSTEM

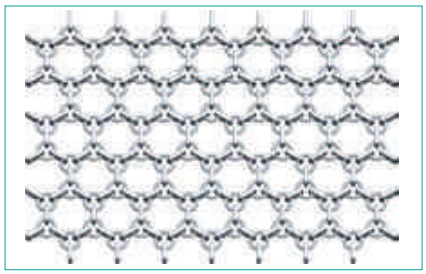
The tyre protection chain specifically designed for use on hot slag.
Simply unbeatable

3 DIFFERENT CHAIN MESH CONFIGURATIONS PROVIDE PROTECTION – PROTECTION + TRACTION – TRACTION



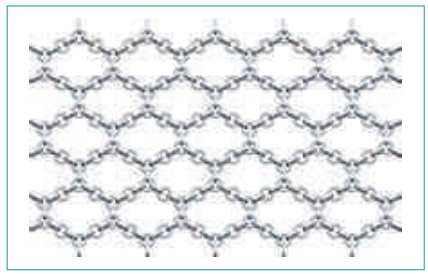
FELS

All-round tyre protection for mining, quarrying, slag and recycling operations.



GARANT

Greater traction and safety on gradients and wet or slippery surfaces.



GARANT 10

Greater traction and safety on snow, ice and slimy surfaces.

IN OPEN PIT OR UNDERGROUND MINES, SHARP-EDGED STONES AND ABRASIVE SURFACES CAN DESTROY TYRES WITHIN A VERY SHORT PERIOD OF TIME.

When it came to laying down the planet's mineral resources Mother Nature could have been a lot more considerate.

Diamonds in a freezing Artic lake, copper and gold high in the South American Andes, iron ore in the Australian desert, coal seams deep underground and complex deposits are just some of the challenges confronting companies engaged in winning the materials – common and rare – essential to today's living.

In modern mining and quarrying, the man with pick, shovel and pan has been superseded by sophisticated machines that, daily, take giant bites out of the ground and haul them away for crushing and refining. Given the multi-million investments in these machines, optimum productivity is the core requirement and any unscheduled downtime is an unwanted, costly inconvenience.

In open-pit, where wheeled machines are used for stripping, loading, hauling and stockpiling, ultimately, the operation's profitability will depend upon the tyres without which the ma chine becomes just an immobile complex arrangement of metal components.
Operating in artificially lit galleries, underground mining, tun nelling and caving are among the most demanding and ha zardous of activities. Here, tyre protection chains not only save tyres but also provide operator safety.

For mobile, surface operations, miners can select from wide range of ERLAU chains to ensure the right tyre protection and traction safety for their site.

IN QUARRIES, ABRASIVE SURFACES AND SHARP EDGED STONES ARE A GREAT HAZARD FOR TYRES.

Quartz, silica, dolomite, basalt, granite are just some of the causes of excessive tyre wear. Flint, slate and shale-like rocks, or demolition debris can cause punctures and deep sidewall cuts.

“One-minute your loader crowds into the rock fall, the next moment it is slumped, immobile and you are on the phone looking for a temporary fix or a replacement tyre.”

“If yours is a small operation, this could put your entire production on costly standby. “

In these instances, in the cause of operating efficiency, a tyre protection chain, such as ERLAU’s RING-LINK or RING-RING system, is required to create a barrier between your tyres and the ground.

The density of the mesh will depend on the exact nature of the work site but it should be self-cleaning and the links specially hardened to resist wear at the points where they interact with the connecting rings.

“ERLAU has the world‘s widest product range and can supply the ideal tyre protection chain for all types of machine and applications.“

WORKING WITH SMOULDERING HOT SLAG CAN SCORCH TYRES, CAN LEAD TO LOST EQUIPMENT AND RISKS HUMAN LIFE

Steelmaking is one of the toughest environments for men and machines. Pot carriers are used to carry 40 cu m ladles of molten slag to the dumping pit where wheeled loaders transfer the still fiery slag to the recycling point which recovers residual steel for re-smelting and limestone cinder for block-making. Whether liquid or cooling, slag is an unforgiving material subjecting tyres to heavy abrasion from the cinder.

RECYCLING SCRAP METAL AND DEMOLISHED BUILDINGS PLACES ENORMOUS DEMANDS ON LOADER TYRES

Anyone who has visited a demolition site, or a scrap metal re-processor will be acutely aware of the hidden hazards faced daily by the tyres of wheeled loaders.

In demolition, for versatility, a wheeled loader is used to feed the crusher hopper and load the tipper trucks. Every time the loader crowds into the demolition heap there is a risk that a tyre will be pierced by a concealed length of rebar. Similar damage can occur when loading flattened cars into the baler or lifting tangled pieces of scrap metal for smelting.

In each instance a burst tyre can bring production to a standstill while a replacement is found. To avoid unscheduled breaks, it is advisable to invest in a tyre protection chain such as Erlau's RING-RING system which encases the vulnerable tread and sidewall of the tyre with a close impenetrable mesh.

With deadlines to meet, the loader operator can be assured that, having fitted ERLAU TPCs, any delay will not be due to his tyres.

SAFE TRACTION FOR YOUR PRODUCTIVITY

At some sites, where the terrain is slippery because of mud or where trucks have to contend with icy haul roads, poor traction can be a major problem.

Wrestling to control a loaded truck with a mind of its own is exhausting for the operator, can reduce concentration and risks 'losing' the truck with all the collateral damage that may involve.

Where the tyre tread, alone, cannot provide an adequate grip, ERLAU TERRA PLUS traction chains in protection + traction, GARANT mode or full-traction GARANT 10 configuration are essential for the safe operation of the equipment.

Available with link sizes from 11mm to 23mm, TERRA PLUS is suitable for a wide range of applications, including: motor graders, scrapers, mining dump trucks, wheeled loaders, snow ploughs and logging vehicles.

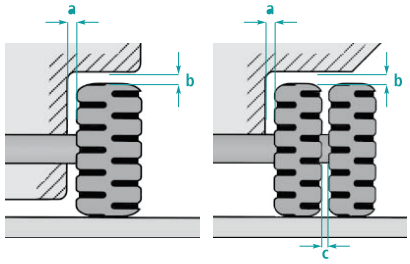
Already in use in 28 countries, the TERRA PLUS 'Z' shaped, self-cleaning, toothed 'terrier' link offers optimum traction and excellent wear characteristics.

WHICH ERLAU TYRE PROTECTION CHAIN IS BEST FOR YOU

Available with connecting ring diameters from 8 mm to 25 mm, ERLAU offers the widest range of tyre protection chains.
Whatever your application, ERLAU offers the best configuration of links and rings for your project.

Ring Diameter	Chain Type		Link Width Link Height	Fels	Mesh Opening	Minimum Clearance	Tyre Size
11 mm		SUPER X11	20 mm 35 mm		54 mm	50 70 85	from 8.25 – 15 to 26.5 – 25
14 mm		DURO X14	22 mm 51 mm		63 mm	60 85 95	from 15.5-25 to 35/65-33
16 mm		ROYAL X16	26 mm 56,5 mm		69 mm	75 100 95	from 20.5-25 to 40/65-39
16 mm		JUMBO PLUS X16	46 mm 56 mm		64 mm	75 100 95	from 20.5-25 to 40/65-39
19 mm		TORO X19	44 mm 60 mm		63 mm	75 100 95	from 12.00-24 to 45/65-45
19 mm		IMPERIAL X19	30 mm 66,5 mm		76 mm	85 120 115	from 23.5-25 to 45/65-45
19 mm		GIGANT PLUS X19	54 mm 68 mm		73 mm	85 120 115	from 23.5-25 to 45/65-45
19 mm		GUARD PLUS X19	35 mm 64 mm		76 mm	85 120 115	from 23.5-25 to 45/65-45
22 mm		CROWN X22	36 mm 76 mm		93 mm	110 150 115	from 45/65-45 and bigger
23 mm		GRANIT PLUS X23	54 mm 80 mm		91 mm	110 150 115	from 45/65-45 and bigger

b (Tread)
a (Inside sidewall)
These are the minimum clearances required to fit Tyre Protection Chains. (centrifugal forces and possible dirt build-up are taken into consideration).
For closer clearances please contact us for guidance.



Chain Type	Inside sidewall a	Tread b	Distance between c
X11	50 mm	70 mm	85 mm
X14	60 mm	85 mm	95 mm
X16	75 mm	100 mm	95 mm
X19	85 mm	120 mm	115 mm
X22	100 mm	150 mm	115 mm
R69+R69S	75 mm	90 mm	
R71+R71S	85 mm	100 mm	
R75	110 mm	130 mm	

Ring Diameter	Chain Type		Ring Width Ring Height	Spezial	Mesh Opening	Minimum Clearance	Tyre Size
13,2 mm		R69 S	18 mm 56 mm		33 mm	75 90	from 12.00-24 to 35/65-33
14 x 18 mm		R71 S	20 mm 67 mm		41 mm	85 100	from 23.5-25 to 45/65-45
17,5 x 21,5 mm		R75 S	25 mm 82 mm		48 mm	110 130	from 45/65-45 and bigger
20 x 25 mm		R75 S PLUS	28 mm 96 mm		57 mm	130 150	from 45/65-45 and bigger
14 x 18 mm		R71	20 mm 67 mm		83 mm	85 100	from 26.5-25 to 45/65-45

Ring Diameter	Chain Type		Link Width Link Height	GARANT	Mesh Opening	GARANT 10	Mesh Opening	Minimum Clearance	Tyre Size
11 mm		TERRA PLUS X11	20 mm 45 mm		114 mm		176 mm	50 70 85	from 8.25-15 to 26.5-25
14 mm		TERRA PLUS X14	25 mm 49 mm		128 mm		198 mm	60 85 95	from 15.5-25 to 35/65-33
16 mm		TERRA PLUS X16	28 mm 54 mm		133 mm		211 mm	75 100 95	from 20.5-25 to 40/65-39
19 mm		TERRA PLUS X19	30 mm 65 mm		150 mm		239 mm	85 120 115	from 35/65-33 to 40.00-57
22 mm		TERRA PLUS X22	39 mm 76 mm		181 mm		287 mm	100 150 115	from 45/65-45 and bigger

ERLAU INNOVATIONS SAVING TIME AND MONEY

EASYLOCK

Installation of a tyre protection chain requires a set of special Omega rings to 'stitch' the two ends together. Closing these rings involves pins and hammers and the risk of flying metal fragments, squashed thumbs and bad language.

If the pins become corroded, removing the rings requires flame-cutting – a dangerous operation next to tyres.

To save time and money and increase safety, ERLAU, the world-leading Tyre Protection Chain manufacturer, has introduced EASYLOCK – a connecting ring that can be fitted and removed quickly and easily.

EASYLOCK is comprised of an open 'Omega' ring and a locking hasp. Once the ring is passed through the wear links, the hasp is pushed over the two prongs and secured by a 90 Degree turn of the integral locking device with an allen key.

EASYLOCK then remains in place until removed in the same simple procedure.

Either delivered with a new set of ERLAU tyre protection chains or available separately, EASYLOCK can be retro-fitted to any 19 mm or 23 mm TPC.

A product is only as good as its support.

CMS CHAIN MONITORING SYSTEM

It is not by chance that ERLAU TPC has come to dominate the world market for Tyre Protection Chains (TPC).

Modern, state of the art production facilities ensure consistent weld integrity and sophisticated alloys create durable, longer-lasting, lighter, energy-saving links.

Expert installation and life-of-chain support optimizes operational chain life delivering TPCs that mine and quarry owners, demolition and recycling concerns, steel makers and foresters have come to rely upon.

Affirming confidence in its technology, ERLAU TPC now offers CMS – the first tyre chain monitoring system.

An embedded RFID device, CMS records the pro ductive history of the TPC including: batch number, test results, installation, maintenance, incidents, operating hours and much more.

A hand-held SMART READER collects the data from several sets of chains for download and interpretation by the plant manager.

SIDEFLEX®
WE WILL HAVE A POTENTIALLY SERIOUS SITUATION OF SHORTAGE OF OTR TIRES

The demand for tires has grown 30 to 40 % in the last year. Cost raises reach 15%.
An evident fact in the mining industry today is that companies are accelerating their development and expansion plans to take advantage of growing commodities prices. Along with that, another fact is clear: the boom of projects could become a threat to industry. The high demand for key equipment, spare parts and supplies is creating a worldwide shortage of these inputs.

The companies are already noticing an increase in costs from this effect and warn that the scenario can impact business growth.

"We're seeing a fairly significant increase in demand for services and mining equipment that are relevant to the activity. Manufacturing time of various products is increasing and there will be problems in the supply chain", said Miguel Angel Duran, President of the Chilean Mining Council.

The shortage could be similar to the one experienced in 2007 and 2008, when heavy machinery manufacturers were surprised to face double demand, which raised costs for certain types of products and delayed production. "We are returning to the peaks of high demand, when there were shortages and rising costs. Therefore, we are carefully observing looking the evolution of this scenario", says the executive.
The issue has been addressed repeatedly in the Supplies Committee of the Mining Council. "There are U.S. $ 55 billion in the pipeline to develop in the coming years and hopefully this will not put the investment in check," he adds.
Two key pieces in mining operations are: trucks and tires. Both products now have an overdemand.

The number of projects that have been activated since the last quarter, warned us. Until October 2010 there were no problems to meet the requirements, because with the financial international crisis, demand fell in 2009 inventories were stocked for eight to 12 months.
With the higher price of copper and other commodities, mining companies began to plan new purchases and factories cannot increase production in equal measure.

Mining companies that have supply contracts may have their consumption secured, but the others will have difficulties to find suppliers.

SIDEFLEX®
TO SAVE TIRES IN OPEN-PIT OPERATIONS

The SIDEFLEX® is a retrofit device for construction and mining equipment, especially for earthmoving machines. The device is mounted to the wheel hub of utility vehicles as dumb-trucks or wheel-loaders.

While RUD and Erlau chains have been protecting loader tires for 65 years, until now, truck tires have remained vulnerable to sidewall damage from haul road rock debris and accidental impact. Since comprehensive tire protection would slow the trucks and raise fuel consumption to un-acceptable levels, damage limitation. Even so, every day, blowouts continue to destroy expensive tires and delay production. To overcome these problems and to give truck tires the same protection as loader tires, RUD and Erlau designers got together with the operators and, drawing on their many years of experience developing chain-based products, created the SIDEFLEX ®.

The SIDEFLEX® is an ingenious device. Easy to fit, SIDEFLEX® provides a robust but lightweight shield which deflects rock debris from the tire wall. Field-trialed, tested and, now, patented, the SIDEFLEX® appearance is novel. Protective arms radiate from a central retaining ring and form a shield covering the sidewall.The entire assembly fits firmly within the wheel hub and almost brushes the ground preventing sharp rocks from penetrating the tire-wall.

Definitely distinctive, the lightweight SIDEFLEX® is simple, effective and, most importantly, saves tires and improves productivity. The SIDEFLEX® is yet another RUD and Erlau innovation set to contribute significantly to the bottom line.

SIDEFLEX® components are quick and easy to install onto the wheel assembly.

TIRE SAVER SHIELD™
TO SAVE TIRES IN UNDERGROUND OPERATIONS

Tire Saver Shield ™

The Hutchinson Tire Saver Shield ™ consists of a heavy duty reinforced elastomeric product. The composition of the Tire Saver Shield ™ material guarantees the absolute tearing and puncture resistance especially in a terrain with sharp-edged rocks, etc.
The life cycle of the tire is greatly extended by reducing tire sidewall damage.

The Hutchinson Tire Saver Shield™ provides a very efficient protection to the highly stressed tire side walls of construction machines.

Mobility for every condition

The Hutchinson Tire Saver Shield™ guarantees the mobility of vehicles in the most difficult terrains under very tough mission requirements for the wheel. This device can often prevent the tire from running flat (in case of tire damages caused by difficult terrain).

The shape of the Tire Saver Shield ™ integrates the milling and vulnerable tire side wall.

The mission can be continued. A change of wheels or tires is therefore not immediately necessary.

Protection against sidewall cuts

The materials were carefully selected to be extremely resistant to tearing and perforation. The Tire Saver Shield™ creates a barrier between the tire side wall and damaging terrain such as rocks and debris, preventing sharp elements from destroying the tire.

Benefits:

- Puncture resistant
- Protects tire walls from cuts and tears damage
- Will not increase operational temperature of side wall
- Easy to install and service
- Adapted on tire geometry
- Assembly possible on any wheel