



Snow Chains

Company Profile



ZINTAS is an international chain processing company which founded at the end of 1970's with the vision of becoming a global brand based on the belief in the power of high technology and continuous improvement

ZINTAS manufactures industrial chains that are used worldwide for mining and conveying, high-alloyed G100 chains for moving and lifting, hoisting and stud and studless chains for marine industry, high alloyed calibrated chains for agriculture industry, high wear and temperature resistant specially designed chains for cement industry, specially designed chains for forestry, snow chains, transmission chains and chain accessories exporting to more than 30 countries today. The ZINTAS factory ground covers a total area of 25.000 square meters of which approximately 10.000 square meters are built on and consists of technologically advanced 125 machines The customer satisfaction is the result of our appropriate pricing policy and high quality standards.

ZINTAS Co. was the first organization in Turkey that has certified its chain manufacturing according to the international standard ISO 9001 Quality Management System Certification in 1996.

ZINTAS Co. guarantees high quality products and services with over 35 years' experience, reliability, versatility and developing production technology.

ZINTAS Co. acts with the consciousness of the quality target based on the principle of customer satisfaction, environmentally friendly production processes and recyclable raw materials and products. Over 35 years ZINTAS Company has served its customers with its successful, dynamic, flexible employees. As a reflection of our corporate culture, all of our employees behave and think as a part of chain link, and always challenge to be the most powerful chain link of the whole system and aware of the priority of their responsibilities.

"The chain is only as strong as its weakest link."



Quality

"The chain is only as strong as its weakest link."

Our goal is to improve and perfect each process step starting from supply of raw materials until placing on the market. To provide this, every process and product is subjected to accurate and comprehensive control process and test according to our quality management system and international standards.

The quality management system is our guiding principle for the reliability of our products. Certificates that we received from both regional and international institutions are the basis of our quality system approach.

Customer Relations & Reliability

A continuous interest in our customer needs, demonstrated amongst others by the development and production of several "tailor made" special chains.

We are an independent family business since 1979 and a reliable business partner. We cooperate with our customers and suppliers in a true in a true collaboration and pursuance of mutual success. Our Customer Relationship Management is an essential, extensive and sensitive to maintain our customer relationship permanently. Our customer-oriented strategy is based on customer satisfaction with our high quality products and services.

Kastamonu'nun ombudsmanı

Sadece Kastamonu'dakiler değil, Ankara ve İstanbul'daki hemşerileri de ona akıl danışıyor. Zincirci Zintaş'ın patronu Hüseyin Üster'in şu sıralar en büyük hayali, Kastamonu'yu bir alternatif turizm merkezi yapmak... ÖZBEY MEN / omen@paradergi.com.tr

PARA | BAŞARI ÖYKÜSÜ

Panama Kanalı'nda Zintaş tarafından özel olarak üretilen zincirler kullanılıyor



Kastamonu'nun ombudsmanı

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KASTAMONU bir sarmaşık, bir de değişik güzellikleriyle... Kastamonu'nun bu özelliklerini tanıtmak ve gösteren alan... Zintaş Zincir Sanayi ve Ticaret, Türkiye Zincir Yönetim Kurulu Başkanı Hüseyin Üster...



ding'in ortağı İshak Alaton da var... Üster'in görevi sadece Kastamonu'nun tanıtılması değil, Ankara ve İstanbul'daki hemşerileri de ona akıl danışıyor. Zincirci Zintaş'ın patronu Hüseyin Üster'in şu sıralar en büyük hayali, Kastamonu'yu bir alternatif turizm merkezi yapmak... ÖZBEY MEN / omen@paradergi.com.tr

"YOLDAN ÇIKTI, ZİNCİRCİ OLDU"

Hüseyin Üster, ahşap birer kapak taşıyıcı. Ancak o baharın 1954'te kurulduğu Zintaş, bugün dünya çapında üretilen zincirlerin en büyük üreticilerinden biri. Üster'in şirketi, Türkiye'nin en büyük zincir üreticilerinden biri. Üster'in şirketi, Türkiye'nin en büyük zincir üreticilerinden biri. Üster'in şirketi, Türkiye'nin en büyük zincir üreticilerinden biri.



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SABAH
KASTAMONU
493 YILLIK GELENEK
TOSYADA 1514 yıl önce bu yarı yarıya yapılan bir...
SAĞLIK EKONOMİ DERGİSİ 27 MAYIS - 2 HAZİRAN 2007

Panama Kanalı'nı Türk zincirleri trafiğe açıyor

Kastamonu'daki Zintaş şirketinin ürettiği zincirler, Türk ve Fransız ordularından Atlantik Okyanusu ile Pasifik Okyanusu'nu birbirine bağlayan Panama Kanalı'na kadar pek çok yerde kullanılıyor



Kastamonu'dan aktarıcaz 2 başan hikayesi, yoktan var etmeyi anlatıyor. Bu girişimde de işbirliği en iyiler. Kaba...
TIFIL DELİKANLIDAN MARKA ŞİRKET
Hüseyin Anı Üster ise, okuyup inşaat yüksek mühendisi olmuştur. 1972 yılında Yol Su Elektrik'te (YSSE) yol işleri şefi olarak görev yapmıştır. Ancak en...
KİLOSU 7 DOLARDAN 20 TON ZİNCİR
Zincirlerinin safari araçlarında da Panama Kanalı'nda da kullanıldığını anlatan Üster, en büyük verdir: "Panama Kanalı'nın kapakları zincirlerdir. Çelik halatın yerine meydana geldiği için zincir kullanılır. Bu tip zincirlerin üreticileri belli. Kendini ispatlama firmaları var. Bize bir sipariş yetki ama 100 ton test yolduna sahip zincir yapıp geçen yıl Panama'ya gönderdik. Sırası gelince, şu anda zincirlerimiz Panama Kanalı'nda çalışıyor. Kilosu 7 dolardan 14 milyon dolar tutarında 20 ton zincir yapıldı. Fransız Savunma Bakanlığı'nın 640 tüklem ağır taşıyıcıları ile ilgili açtığı ihalede, Fransız ordusuna 1,7 milyon dolarlık zincir verildi. Kar zincirleri, Panamalıların kanal kapaklarını açıp kapatmak için ihale ediyorlar. Zintaş Zincir Yönetim Kurulu Başkanı Hüseyin Üster, geçen yıl 1 milyon 120 bin dolar olan ihracatlarının bu yıl 2 milyon dolara yaklaşıcağını belirtiyor.



Ihracat

Botsvanalılar safari araçlarında, Panamalılar ise dünyaca ünlü kanalın açılıp kapanmasında Zintaş'ın Kastamonu'da ürettiği zincirleri kullanıyor.

Safaricilerin zinciri Türkiye'den

Zintaş Zincir Sanayi ve Ticaret, Türkiye'de zincir üreten birkaç firmadan biri... Kastamonu'da üretim yapan firmamızın ürünleri, iş makinelerinden gemilere, maden ocaklarından su kanallarına kadar çok farklı alanlarda kullanılıyor. Bugün dünyanın birçok bölgesinde Zintaş'ın ürettiği zincirler kullanılıyor. Bu ülkeler arasında Güney Afrika Cumhuriyeti'nin ortasında yer alan Botswana ile kanallarla meşhur Panama da var... Afrika'nun en büyük safari alanlarına sahip olan Botswana, Zintaş'ın zincirlerini safariye çıkan turistler için ihale ediyor. Panama Kanalı'nın zinciri Safari araçlarının çamura saplanması önlemek için patinaj zinciri kullanan Botswanalılar, Zintaş'ın en önemli müşterileri arasında. Zintaş'ın ürettiği zincirleri kullanan bir başka ülke de kanallarla meşhur Panama. Biri safarileriyle diğeri kanallarıyla tanınan bu iki ülke, Zintaş'ın ürettiği zinciri ünlü oldukları işlerde kullanıyorlar. Yani Botswanalıların safari araçlarını çamura saplanmaktan korumak için satın aldıkları zincirleri, Panamalıların kanal kapaklarını açıp kapatmak için ihale ediyorlar. Zintaş Zincir Yönetim Kurulu Başkanı Hüseyin Üster, geçen yıl 1 milyon 120 bin dolar olan ihracatlarının bu yıl 2 milyon dolara yaklaşıcağını belirtiyor.

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28.8.2005 / 3.9.2005

Steels For Chains

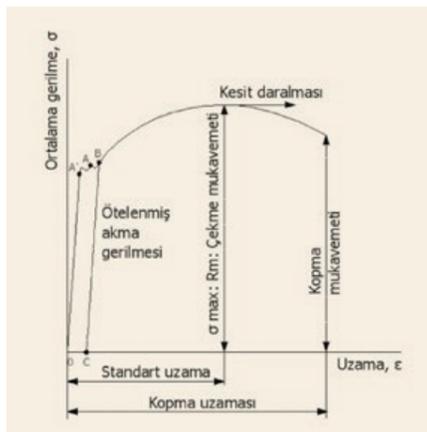
Industrial steels for chains are chosen specifically for applications of mining, conveying, moving, lifting, hoisting and marine, agriculture industry, forestry and snow chains.

Round steel link chains are used for the moving, conveying and securing of large loads. They can be found in extraction plants in mining, as lifting appliances for cranes, during the conveyance of bulk materials, as anchor chains in shipbuilding and for securing of cargo. Round steel link chains include the corresponding chain components such as chain connectors, etc. Non-alloyed, alloyed steels, low carbon, and special types of modern steels are base materials for the manufacture of round steel link chains and chain components up to Grade 100. They are specified as technical delivery conditions in DIN 17115/2012-07 (TS 2835/1977) standard, namely with regard to the manufacture, delivery condition, chemical composition and their mechanical characteristics and technological features.

The constitution and structure of all steels and iron starts with iron-carbon equilibrium diagram lightens the principle of heat treatment of the chains. There are important temperatures or critical points in the diagram.

- A1: Temperature at which the eutectic reaction occurs (723 °C)
- A3: Temperature when α -iron transforms to γ -iron (for pure iron 910 °C, but the transformation temperature is progressively lowered by addition of carbon)
- A4: Temperature at which γ -iron transforms to δ -iron (for pure iron 1390 °C, but the transformation temperature is raised by addition of carbon)
- A2: Curie point when iron changes from the ferro- to paramagnetic condition

(769 °C for pure iron, but no change in crystal structure is involved)



The diagram is based on the transformation that occurs as a result of slow heating. However the fast heating and cooling rates encountered in welding will have a significant influence on these temperatures, making the accurate prediction of weld metallurgy using this diagram is difficult.

Heat treatment process after welding requires a professional infrastructure and specialized systems. ZINTAS Co. performs chain quenching & tempering and case hardening processes that require different techniques

for different applications in-plant. Thus, while maintaining the toughness and ductility of the core, the mechanical properties are brought to the optimum level.

The Effects Of Alloying Elements On Steel Welds

Alloying elements are added to reinforce the mechanical properties of steels used in chain production. Low-alloyed, alloyed, low carbon and special modern steels are used in chain production due to different types of chain applications and load conditions.

Appropriate and correct raw material selection is crucial in the beginning of chain production process. The process fails unless the election is not done professionally. The material selection belongs to the properties of chains such as high strength for lifting, conveying and moving applications, wear-resistant applications for mining and agriculture industry, high corrosion resistance applications for marine industry, capability of heat treatment and case hardening, etc. Manufacturing of chains requires advanced technology to produce chains of high properties. For the raw material supply, ZINTAS Co. cooperates and works with well-known and professional companies in Turkey, which also provides products abroad.

Stress Strain Curve

Chain links can be deformed by subjecting external loads. The recovery of the original dimensions of deformed body when the load is removed is known as elastic behavior. The limiting load beyond which the material no longer behaves elastically is the elastic limit. If the elastic limit is exceeded, the body will experience a permanent set or deformation when the load is removed off the chain links is said to have plastic deformation. As long as the load does not exceed the elastic limit, the deformation is proportional to the load, that states stress is proportional to strain.

- OA : Elastic region within which Hooke's law is obeyed.
- A : Elastic limit, defined as the greatest stress that the metal can withstand without experiencing a permanent strain when the load is removed.
- A' : The determination of the elastic limit is dependent on the sensitivity of the strain measuring instrument and replaced by the proportional limit. The proportional limit is the stress at which the stress-strain curve deviates from linearity. The slope of the stress-strain curve is the modulus of elasticity.
- B : For engineering purposes the limit of usable elastic behavior is the yield strength which is defined as the stress which will produce a small amount of permanent deformation, generally equal to a strain of 0.002.
- OC : Permanent strain (offset). Plastic deformation begins when the elastic limit is exceeded. As the plastic deformation increases with further straining, the chain metal becomes stronger (strain hardening) so that the load required to extend the metal with further straining.
- Rm : Ultimate tensile strength. For the chain links the diameter of the link begins to decrease rapidly beyond maximum load, so that the load required to continue deformation until the link fractures.



Stress Strain Curve

For chain production process, as a result of tensile tests according to TS 138 EN 10002-1 : 2004, the behavior of chain links as ductile or brittle is crucial depending upon whether or not the material the material exhibits the ability to undergo plastic deformation. The process after welding operation and/or heat treatment or case hardening, for our both press butt welding type of machines and flash butt welding type of machines is determining the behavior of fracture by tensile test. It's also critical determining if the fracture behaves to be ductile or brittle after suitable heat treatment.

The quality control calibration and tensile tests applied to chain for the purpose of verifying material and weld quality. To optimize the quality control processes, in addition to tensile tests the Rockwell Hardness tests and metallographic examinations are performed in our laboratory with devices certified and calibrated by independent organizations.

Selection Criteria

While selection of chains multiple criteria such as dimensions, workload, fatigue, operating temperature, intended use , impact effects, factors such as friction and wear effects in the working environment is considered. Before placing order, consultation is hold with customers on the application and the most suitable raw materials and chains are selected.

The value of stress for a particular material is considered to be safe is working stress σ_w . Values of working stress is established by local agencies and by technical organizations such as the American Society of Mechanical Engineers (ASME), International Standard Organization (ISO). Chain applications are combined static and dynamic applications so that the working stress is considered as the tensile strength (ultimate strength) divided by factor of safety.

$$\sigma_w = \sigma_u / N_u$$

σ_w : Working stress

σ_u : Tensile (ultimate) strength

N_u : Factor of safety based on tensile strength

Working load limits for Grade 80 and Grade 100 lifting and mining chains are based on a 4 to 1 design factor from ISO.

$$WL : PL : BL = 1 : 2.5 : 4$$

WL (Working Load - [kg]) limit is the maximum combined static and dynamic load in kilograms that shall be applied in direct tension to an undamaged straight length of chain.

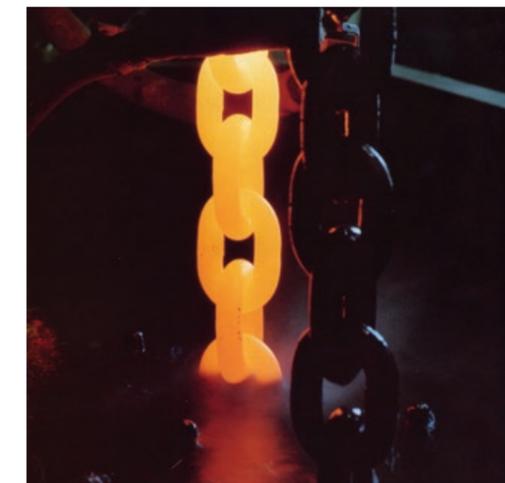
PL (Proof Load=Test Load - [N]) is the minimum force in newtons when the chain has withstood at the time it left our company, under a test in which a constantly increasing force has been applied in direct tension to a straight length of chain. Proof test loads are a manufacturing accuracy test and shall not be used as criteria for design and service.

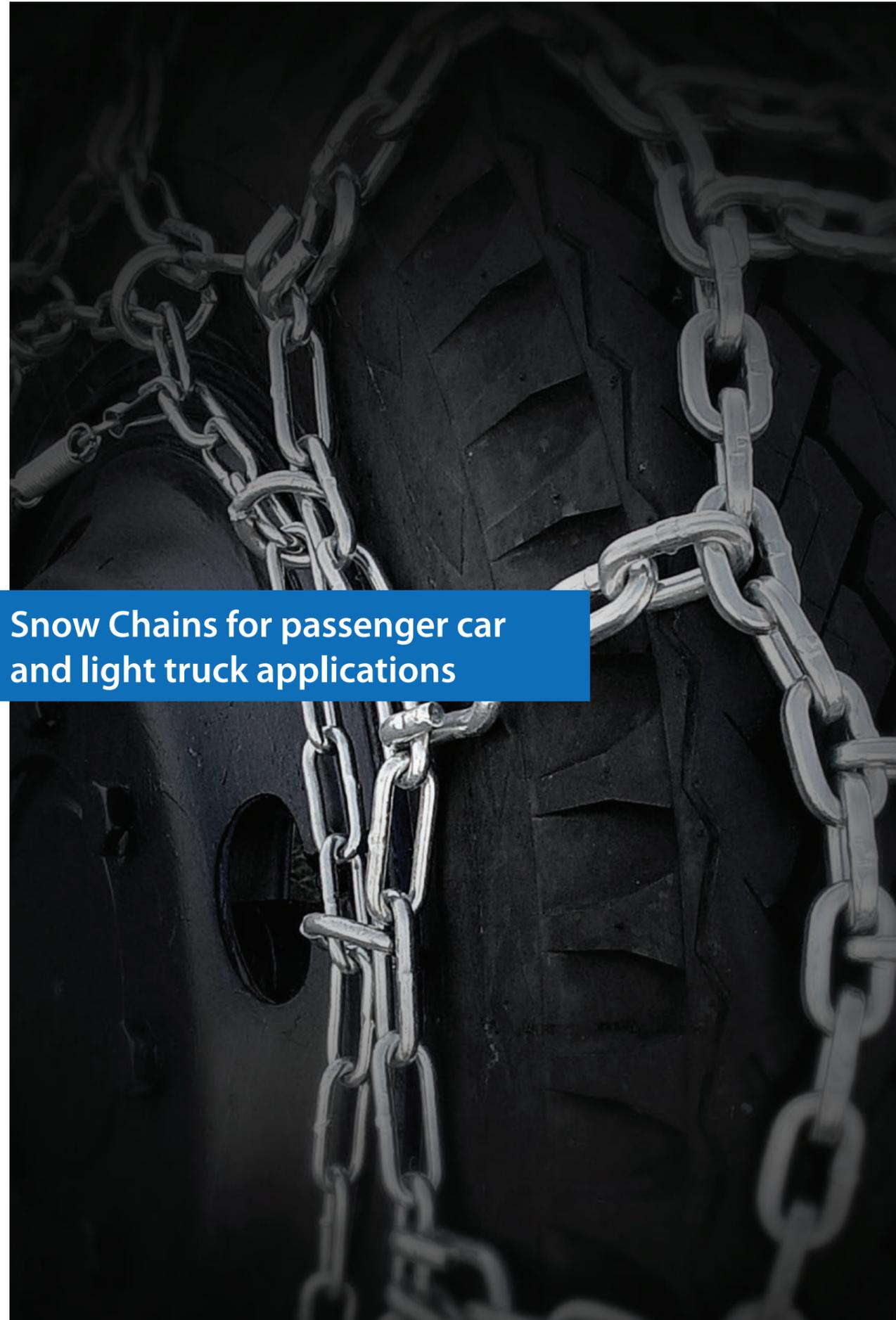
BL (Minimum Breaking Load – [N]) is the force in newtons at which the chain, in the condition it leaves ZINTAS Co. plant, has been found by representative testing to break when a constantly increasing force was applied in direct tension to a straight length of chain on the standard testing machine. Breaking force values are statistical attribute test results and not guarantee that all chain links will endure these loads.

Heat Treatment

We make heat treatment of chains in order to increase high strength and usefulness. Thus, fine grain size is often desired for high strength, large additions of solute atoms are added to increase strength and bring out new phase relationships, fine particles may be added to increase strength and phase transformations may be utilized to increase strength.

The traditional route to high strength in steels is by quenching to form martensite which is subsequently reheated or tempered at an intermediate temperature, increasing the toughness of the steel without to great loss in strength. Therefore, for the optimum development of strength, the chain steel first is converted fully to martensite. The effectiveness of the quench depends on primarily on two factors: The geometry of the chain and the composition of the steel material.





Snow Chains for passenger car and light truck applications



Snow Chains For Passenger Car
And Light Truck Applications

X-TraC

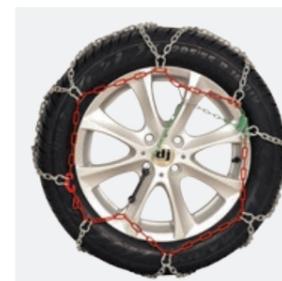
Zintaş X-TraC

ZINTAŞ X-Trac cross member links are made of alloyed steel, allowing them to be shorter, narrower and lighter than conventional chain links. This reduces "fly-off" during the journey and provides more gripping points. The low-mass square links also contributes wear resistance and the contacting surface between the road and the cross members is increased. It can easily be operated in the typically small clearances allowed around the drive tires on today's cars and light trucks.



X-Trac's Highlights

- Perfect for drivers, who want to be prepared for all wintery conditions.
- Easy installation and removal, with no need to move the vehicle.
- Better all-around traction performance and a smoother ride than conventional traction products.
- Best durability of any link-style chain for cars and light trucks.
- X-Trac provides excellent compatability with ABS and traction control systems.
- The heavy-duty hook situated at the back side allows for easy and fast mounting of the chain.
- Convenient nylon carrying/storage case.
- Comes with illustrated step-by-step installation instructions.



S-TraC

Zintaş S-TraC

Durable traction, light weight, and economical. Tightening elements guarantee exact and better chain tension. Durable and easily attached inside lock system.

S-TraC's Highlights

- Ideal for city driving.
- Heat-treated chain elements
- Silver-zinc finished.
- Durable lock system
- Plastic coated flexible steel wire



Ice-Trac Double

Zintaş Ice-Trac + Double

- Ideal for city driving
- Tough carbon steel cross links
- Silver-zinc finished
- Lever end fastener for easy mounting
- Plastic coated flexible steel wire
- Convenient plastic carrying/storage case



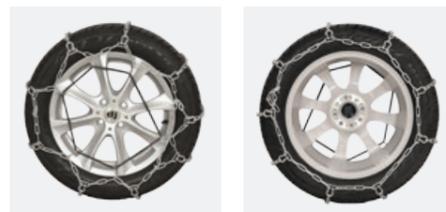
Snow Chains For Passenger Car
And Light Truck Applications



Ice-Trac

Zintaş Ice-Trac

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- Tough carbon steel cross links
- Silver-zinc finished
- Lever end fastener for easy mounting
- Plastic coated flexible steel wire
- Convenient plastic carrying/storage case



Tract

Zintaş Extra Heavy Duty Traction

Oversized square chain, combined with heavier side chain, deliver the off-road traction in deep mud. Cross chains that are made from high-grade alloy steel, provides safe driving.

- Durable Manganese Nickel alloy steel construction.
- Unique case hardening process reinforces construction
- Great in snow, ice and mud.
- Square links provide superior strenght and grip on mud.



V-Bar

Zintaş V-Bar Twist Link Chain

- Proven traction on icy, snowy, and muddy terrain
- Tough carbon steel twist link cross chain with welded V-bar
- Perfect for off-road use on light or heavy truck
- Adjusters included.
- Light weight and easy to install
- Lever end fastener for easy mounting
- Great for your car, truck, van or SUV



For Trucks, Buses & Utility Vehicles



For Passenger Cars

Double Twist

Zintaş V-Bar + Double Twist Link Chain

- Tough carbon steel twist link cross chain with welded V-bar
- Lever end fastener for easy mounting
- Double spaced means twice as many V-Bar cross chains
- Never worry about losing grip in steep hills
- Great for your car, truck, van or SUV
- Adjusters included.



Snow Chains For Truck, Bus And Utility Vehicle Applications



Twist

Zintaş Twist Link Chain

- Durable Traction, light weight, and economical.
- Tough, durable carbon steel twist link ladder type chain
- Adjusters included.
- Light weight and easy to install
- Lever end fastener for easy mounting
- Great for your car, truck, van or SUV



For Trucks, Buses & Utility Vehicles



For Passenger Cars

Astro

Zintaş Diamond Astro [Premium Alloy Truck Chain]

Diamond Astro cross chains are made from high grade alloy steel. Alloy tire chains wear considerably longer than regular carbon steel chains. This makes them ideal for trucks that use their chains often and/or for extended periods of time. Diamond Astro weights an average of 25% less than equivalent standard traction chains making them easier to install. The square links have more gripping power than round link chains. Combine that with the diamond pattern design of the cross chains, and they become some of the longest lasting, best gripping, easiest to use chains on the market.

- Square shaped alloy cross chain links
- Diamond pattern cross chains provide better lateral traction than ladder style chain.
- Chain tighteners are not required.
- Suitable for off-road use
- Silver zinc finish





SL Square

Zintaş Alloy SL Square Link Truck Chain



ZINTAŞ Alloy SL Square Link Truck chains are made from high grade alloy steel. Alloyed tire chains wear considerably longer than ordinary carbon steel chains. The "square section" links have more gripping power than round link chains.

The heavy duty cross chains will out perform any traditional ladder link chain on the market, lasting longer and providing much more aggressive traction. Alloy square link tire chains wear over four times longer than conventional twist link tire chains while giving you 32% more traction.

- Square shaped alloy cross chain links.
- Excellent grip for snowy and icy roads.
- More traction than conventional twist link.
- Excellent heavy duty chain for muddy terrain.

Cross

Zintaş Cross Twist Link Chain

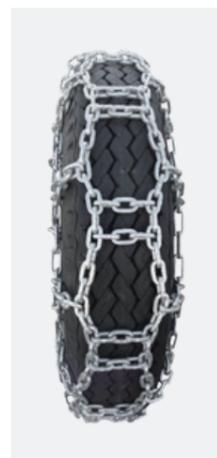
- Under hard winter conditions, tough, durable carbon steel twist link type chain.
- Adjusters included.
- Light weight and easy to install
- Lever end fastener for easy mounting
- Excellent grip for snowy and icy roads, fatigue resistance



Panther

Zintaş Panther Link Chain

- Proven traction on icy, snowy, and muddy terrain
- Ideal for military applications
- High grade reinforced alloy steel chain links
- Adjusters included
- Great for your truck, van and military vehicles



V-Bar Cross

Zintaş V-Bar Cross Twist Link Chain

- Proven traction on icy, snowy, and muddy terrain
- Tough carbon steel twist link cross chain with welded V-bar
- Perfect for off-road use on light or heavy truck
- Adjusters included.
- Light weight and easy to install
- Lever end fastener for easy mounting
- Great for your car, truck, van or SUV
- Double spaced means twice as many V-Bar cross chains
- Never worry about losing grip in river beds or steep hills





Square V-Bar

Zintaş Square V-Bar Twist Link Chain

- Proven traction on icy, snowy, and muddy terrain
- Tough carbon steel twist link cross chain with welded V-bar
- Perfect for off-road use on light or heavy truck
- Adjusters included.
- Light weight and easy to install
- Lever end fastener for easy mounting
- Great for truck and loaders
- Double spaced means twice as many V-Bar cross chains
- Never worry about losing grip in river beds or steep hills



Ongen

Zintaş Ongen for Loaders and Tractors

- Specially designed traction geometry and elements
- Improved stability and increased traction
- Forged shackles increase durability for extreme conditions
- Perfect for icy, snowy and muddy terrain



Tire Protection

Zintaş Tire Protection Chains

ZİNTAŞ tire protection chains provide protection to tyre treads and sidewalls of earth moving machines used in mining, quarrying, tunnelling, slag, dam construction and recycling applications.



- Multiplied tire life – significant reduction in tire costs
- Predictable service life of chains and tires – accurate budgeting at lower costs
- Improved stability, increased traction and better penetration for digging and break-out – increased
- Productivity in tonnage per hour



Additional benefits:

- Optimum tire protection – reduced tire maintenance
- Safe operation even in worst conditions



Zintaş Tire Protection Chains



Quality Certificates



TS 663



TSE 11987



TS 1363



IQNet Quality Certificate



Rina ISO



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