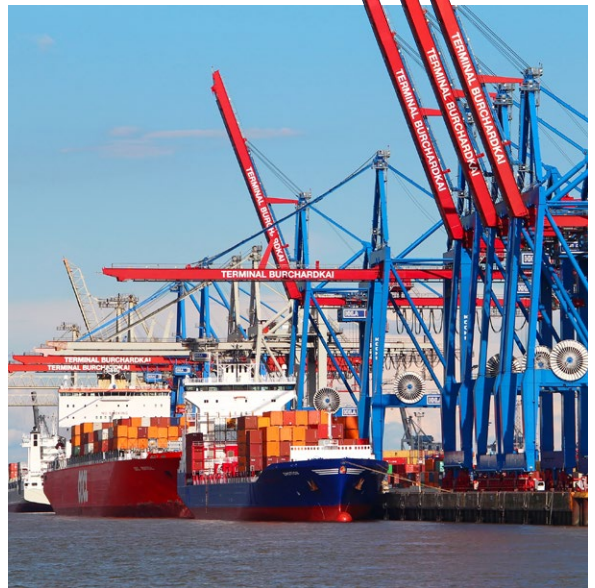




Solutions for chains in corrosive applications

The challenge: In many areas of application, chain drives can be exposed to **corrosive environments**. In such environments, liquid or gaseous media, which depend on the drive or material transportation requirements or the type of cleaning performed during maintenance operations, can have a considerable impact on the service life and product safety of chains.

Our solution: The iwis portfolio comprises a wide range of **anti-corrosion chains** which offer the ideal solution for practically every application. We distinguish between our **corrosion-free, corrosion-resistant** and **corrosion-protected** chains which help ensure optimum running and wear behaviour thanks to their different technical product characteristics.



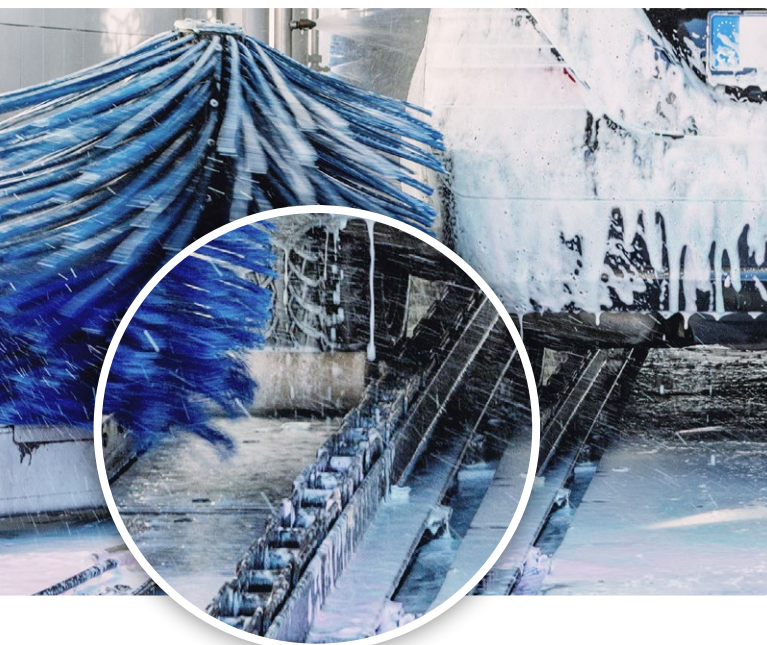
Anti-corrosion chains – from small challenges to extreme operating conditions

Anti-corrosion protection is one of the most important parameters when choosing an appropriate chain solution. In direct competition with endurance and wear resistance, it therefore has a decisive impact on the chain's service life.

In corrosive environmental conditions, uncoated carbon steel chains tend to corrode rapidly at the surface and the bearing areas. The use of zinc- or nickel-plated coatings can offer only limited protection. Chains made from stainless steel offer the greatest possible level of anti-corrosion protection.

Another possibility is to use hardened highly alloyed steels which exhibit outstanding anti-corrosion protection and are also much stronger than stainless steel chains.

Our extensive portfolio contains solutions to overcome small challenges to chains for extreme operating conditions of every type. Our sales engineers and expert product specialists will find intelligent solutions, however demanding your tasks are. Just contact us.



What are corrosive media?

These substances may result from the production materials, the employed operating materials or other external sources. The corrosive effect of such media can differ depending on the ratios in which they are combined. This effect is exacerbated by dusts, which attract aggressive substances and adhere to the chain.

Air	Humidity, vapours, industrial gases
Water	Salt water, chlorinated water, demineralised water
Acids	Fruit acids, lactic acid, degreasing agents
Alkalis	Cleaning agents (in particular chlorinated), caustic soda or potash, ammonia
Salts	Pickling salts, sea salt (NaCl), industrial salts



Corrosion-free chains

Specially selected chromium steels ensure that the CF stainless steel chains have the best possible level of anti-corrosion protection. Alongside humidity, CF chains can also withstand **acids, alkalis** and even **extreme temperatures** from -80 °C to +400 °C! Stainless steel chains are at no risk from coating particles released through abrasion and are ideal **for sensitive applications and applications with high hygiene requirements.**

Product solutions

JWIS CF stainless steel chains

Corrosion-free chains at their best! Precision-manufactured individual parts counteract material-related constraints and ensure outstanding positioning accuracy, reliability and wear reduction.

JWIS CF b.dry chains

Maintenance-free stainless steel chains with high-performance polymer links. These reduce wear even when used dry without any lubrication whatsoever. b.dry chains are extremely reliable, corrosion-free and capable of withstanding high dynamic loads.

ELITE CF stainless steel chains

Corrosion-free chains suitable for use in acidic or alkaline environments. ELITE stainless steel chains possess seamless rollers, work-hardened pins and bushes, giving them a high level of wear resistance.

Applications

- For applications with exacting hygiene requirements
- For continuous contact with acids and alkalis
- In environments with extreme temperatures



Corrosion-resistant chains

The highly alloyed, hardened chromium steel gives JWIS CR chains their **high level of corrosion resistance** and also makes them **considerably stronger** than the iwis CF chains. This permits more compact dimensions, e.g. **when installation space is limited.** This product is the ideal solution when coated chains do not offer adequate anti-corrosion protection and standard CF chains do not have the required strength.

Product solutions

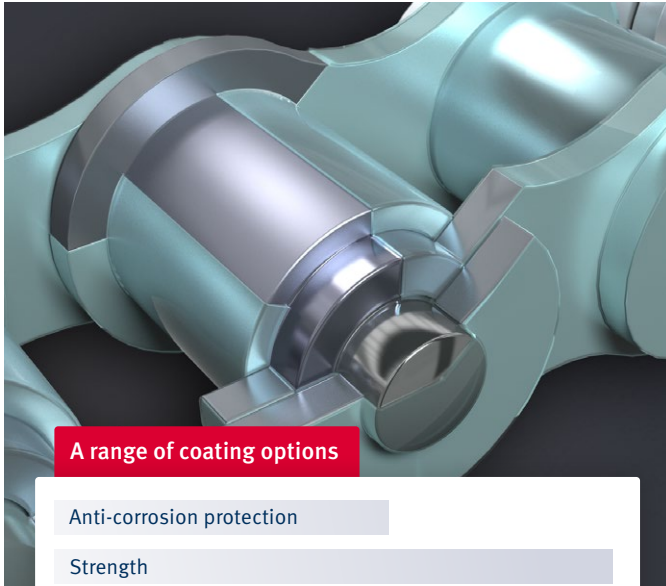
JWIS CR chains

Since chains in contact with corrosive media have to exhibit a high level of endurance and wear resistance, chains made from ordinary steels corrode quickly, while stainless steel chains manufactured from V2-A steel have only limited endurance and wear resistance properties.

CR chains can be used for all applications where chains need to remain flexible despite corrosive environments or must not rust for reasons of hygiene or appearance. Lubrication of CR chains is recommended.

Applications

- In applications with high hygiene-related and strength requirements
- When chains must remain flexible
- No contamination due to abraded coatings
- ...and in many other fields of application.



iwis Service – Value-added for the customer

- Salt spray test as per ISO 9227
- Laboratory analysis of the causes of corrosion
- Extensive range of initial lubricants and relubricants
- Individual consulting and design



CCM-S
Keeping a close eye on chain wear



CLA
Automatic chain relubrication system

Corrosion-protected chains

A range of proven and newly developed high-tech coatings protect iwis chains with passive right through to active corrosion protection. High-strength carbon steels form the basis for the chain and the product is chosen in the light of the required resistance

Product solutions

JWIS MEGAlife chains

Maintenance-free roller chains for an outstanding service life, requiring no relubrication and with additional corrosion protection for mildly corrosive applications.

JWIS b.triton triton

Low-maintenance chains with outstanding active corrosion protection and specially coated links.

Nickel-plated chains

The nickel coating protects roller chains against corrosion and is resistant to various acids and alkalis. Thanks to the hard surface, this coating offers additional wear protection for the links.

level, for example resistance to vapours, humidity and aggressive media. In addition to the coating itself, the coating process also has a major impact on subsequent performance.

Zinc-plated chains

The barrier effect provided by the zinc coating protects roller chains and also provides active cathodic corrosion protection. Even if the surface is damaged, the base material remains unaffected for a long period.

Applications

- Temporary contact with media
- High strengths
- Outdoor applications
- ... and many others

In passing: Anti-corrosion protection and chain lubrication

If the application permits, anti-corrosion chains should always be given suitable initial lubrication and relubrication. This provides extra protection and greatly extends the service life of the chains.

Contact the experts at iwis for individual information and advice.

