



# PREMIUM DONGHUA X<sup>3</sup> FOR HIGH PERFORMANCE



NEW ROLLER CHAIN WITH UNIQUE  
PIN COATING, HIGH PRECISION AND  
OPTIMISED PLATE GEOMETRY

# DONGHUA'S PREMIUM QUALITY FOR DEMANDING APPLICATIONS

As one of the largest manufacturers of roller chains in the world, Donghua keeps on innovating for its strategic customers. We are proud to present our latest innovation: the premium X<sup>3</sup> series of roller chains. The X<sup>3</sup> roller chain lasts three times longer, has an improved fatigue strength, three times higher wear resistance and guarantees a unique performance in terms of precision and service life. Specifically for this series, Donghua invested in a completely new production line that safeguards quality and availability.





## DONGHUA COMPETENCE CENTRES

Our competence centres translate the future needs of buyers into key target markets, such as the industry and agriculture, for innovative products. These products are produced in China. It's the combination of European/Chinese innovation and production strength of our parent company that makes these developments possible.

The Donghua X<sup>3</sup> is a premium roller chain that perfectly meets the market requirements and a product that allows Donghua to set the tone worldwide in terms of quality, precision and wear resistance. It is the ideal addition to the range for our MRO partners, enabling them to meet the demand for low-maintenance, high-performance roller chains.



**DONGHUA** is one of the largest manufacturers of chains and chain systems in the world. Over 3,000 employees in Hangzhou fabricate more than 150,000 tonnes of chains and chain systems per year. To guarantee a perfect quality, all chains are given a unique traceable production code. In addition, all chains are certified under ISO9001-2000 and API. By choosing Donghua, you are opting for availability, expertise in design and market-oriented product development.



**Donghua's main sites** manufacture products such as transmission chains, conveyor chains, agricultural chains, lifting chains, oil field chains, escalator chains, automotive chains and many special chains.





## DELIVERY FROM STOCK

Apart from being key worldwide distribution centres, the Donghua sites are the primary competence centres for R&D, engineering and customer-specific solutions. Our competence centres build important bridges between the needs of European OEMs and MRO partners and our high-quality production in China. The high-end X<sup>3</sup> is a premium product that was created based on the demand and requirements of our customers for high-performance transmission roller chains.

Our customers require a new standard regarding precision and service life, both for newly built machinery and for replacement parts. The competence centre's are therefore focused on developing a product series that offers three times the service life and greater precision. The seamless transition from development to production not only ensures that this new chain meets the latest market demand, but also that it is immediately available.

# TECHNICAL SPECIFICATIONS

Donghua's X<sup>3</sup> series of premium chains are manufactured based on new production techniques and new surface treatments. These innovations result in a three times longer service life, increased product durability and a general cost reduction for our partners.



## HIGHER WEAR RESISTANCE

Three times  
longer service life

## HIGHER FATIGUE RESISTANCE

Maximises the  
usable life

## GREATER PRECISION

Increases the quality  
of the production process  
and output

## COST REDUCTION

In various industries, the requirements for transmission chains for production are becoming increasingly strict. Examples are agriculture or the pharmaceutical and food industry. Guaranteeing the continuity of production requires the amount of repair work on the machines to be minimised. This prevents unnecessary downtime and minimises production losses.

The premium X<sup>3</sup> chain series with a three times longer service life has been specifically developed for industries where continuity is important. As a whole, the longer service life, higher wear resistance, higher fatigue resistance and greater precision yield a cost reduction for the end user.

## MORE SUSTAINABLE BUSINESS MODEL DUE TO QUALITY

Sustainability starts with high-quality products. The premium quality of the high-end X<sup>3</sup> chain series ensures that end users are less likely to face malfunctions or loss of quality due to wear and tear or downtime in production processes. This reduced efficiency is not sustainable, as more production resources need to be applied to get the same output.

Resolving disruptions to production processes also requires the use of people and replacement products, which require logistical processes to remedy the situation. Apart from cost reduction, the use of the Donghua X<sup>3</sup> premium chain also leads to a more sustainable business model.



## MAIN CATEGORIES:

- High-precision loaded drive roller chains
- Highly dynamically loaded drive roller chains
- Highly wear-resistant drive roller chains

- High-precision single and parallel conveyor roller chains

## SUBCATEGORIES:

- Industrial drive roller chains
- Industrial conveyor roller chains
- Industrial extended pin roller chains
- Food industry

- Glass, steel, paper and wood industry
- Packaging industry
- Electronics industry

# CHARACTERISTICS



## UNIQUE PRODUCTION TECHNIQUE

The prolonged service life of the premium X<sup>3</sup> chain series is made possible by the innovative and unique pin coating, optimised plate geometry and high-precision stamping.







## HIGH-PRECISION STAMPING

New technologies make higher precision stamping possible. This maximises the quality of the product's function.

## HIGH PLATE LOAD LIMIT

The high plate load limit is ensured by selecting high-performance material, subjecting the material to isothermal heat treatment, using calibrated plate holes and having an improved press fit between pin and plate.

## UNIQUE PIN COATING

The use of new hardening technologies and special anti-friction coating technology on the pin surface minimises the friction coefficients between the pin and the bushing. This unique pin coating results in extreme wear resistance.

## GENERAL INFORMATION

All Donghua roller chains are pre-stretched and pre-lubricated. Donghua simplex, duplex and triplex roller chains are manufactured in accordance with ISO 606 DIN8187/DIN8188, are pre-stretched and pre-lubricated as standard, have seamless rollers and are marked with production batch code numbers for full traceability. All Donghua roller chains are sealed in plastic bags and packaged in cardboard boxes with clearly legible ISO 606 DIN descriptions and safety instructions. The standard packaging size in boxes is 5 metres. 1/2 DIN and 1/3 DIN length tolerances are possible.

Various types of lubricants are available for high temperature, low temperature, food applications or special environments. Ask our sales team about any special requirements you may have. We also recommend that you contact us for calculations on drive chains and for checking the correct dimensions.

# BENEFITS AT A GLANCE





- 1 Optimised plate shape
- 2 Calibrated pin and bushing holes
- 3 High press fit to guarantee maximum fatigue strength
- 4 Special heat treatment and surface-coated pins give exceptional wear life
- 5 Seamless bushings & rollers throughout
- 6 High performance pre-lubrication

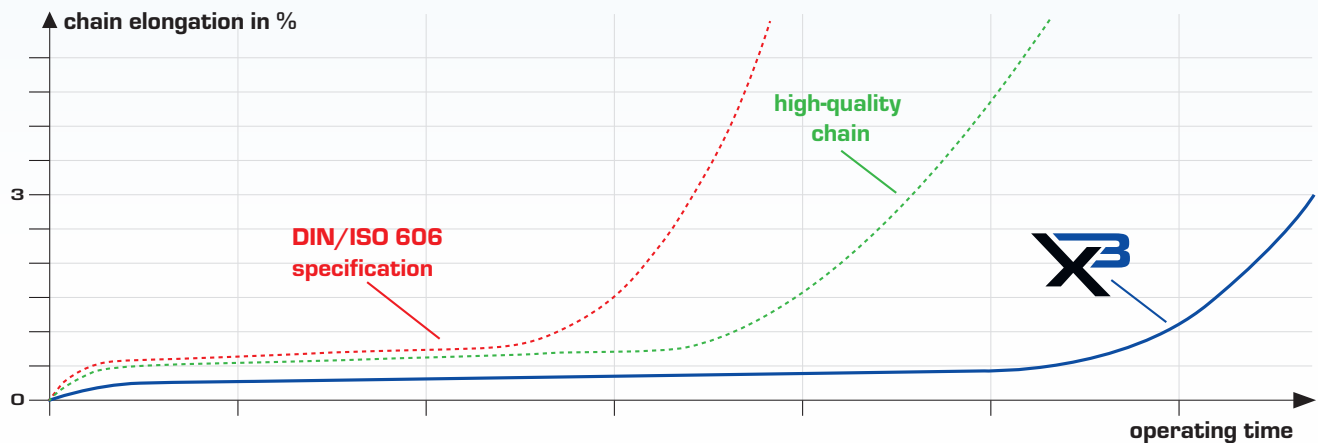
## FIRST-CLASS CHAIN

The Donghua X<sup>3</sup> roller chain is the premium roller chain within our product range. X<sup>3</sup> offers solutions and improved resistance to wear and fatigue and provides greater precision than our standard range of roller chains.

The superior quality, durability and excellent resistance to wear and fatigue are realised by the new hardened, shot-blasted plate shape, seamless rollers, seamless bushings and high-performance pre-lubrication.

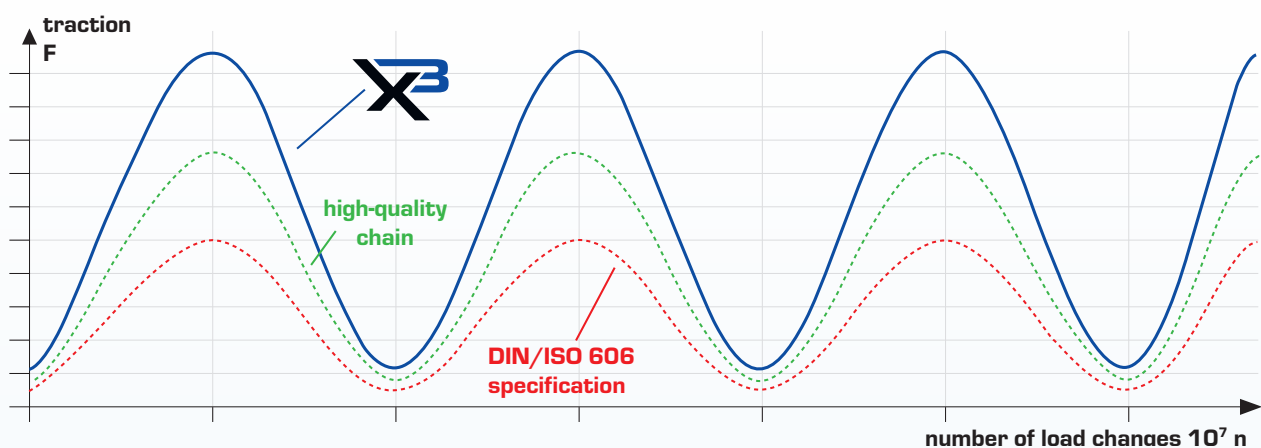
Donghua can deliver very quickly, because all premium X<sup>3</sup> series chains are stored at the European sites.

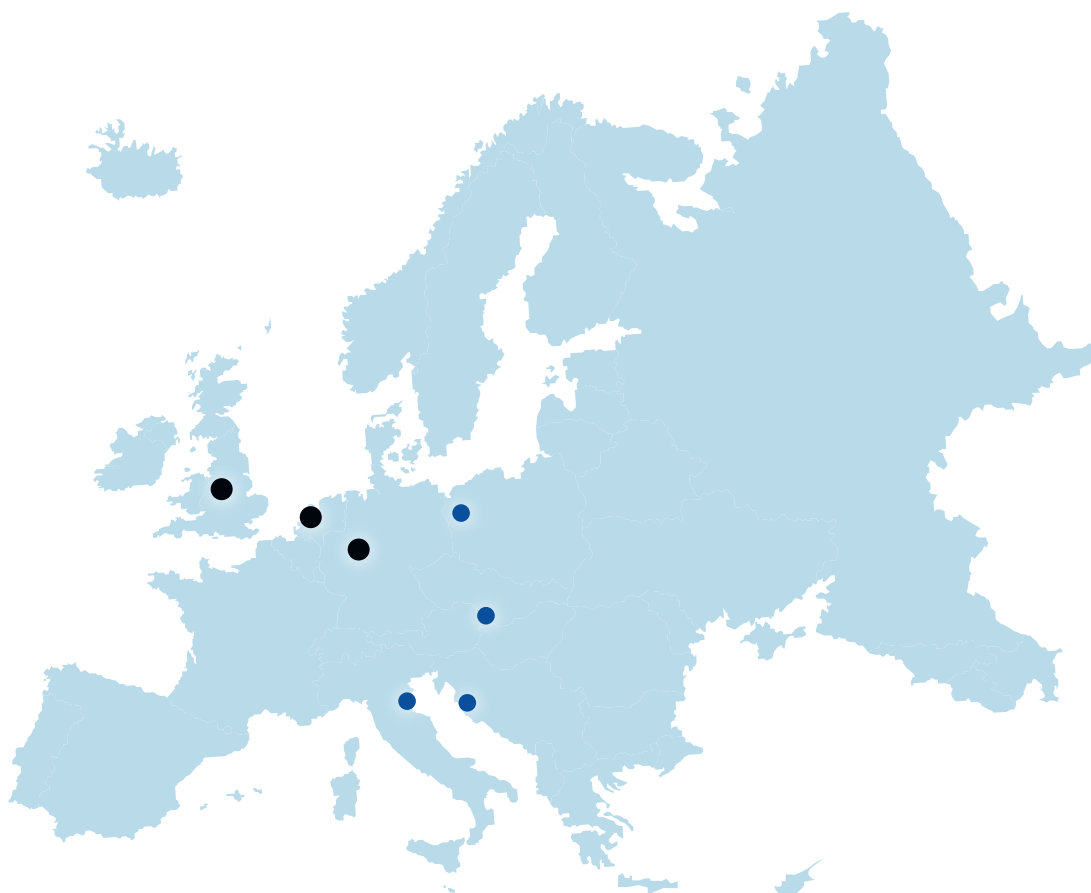
## QUALITY POSITIONING



	Donghua X3	Donghua EXL	Donghua Std	Donghua Reinforced
Wear Resistance	*****	****	**	**
Fatigue Resistance	*****	****	**	****
High Speed up to 2.5 mtrs/s	*****	***	**	**
Strength (MUTS)	***	***	**	**
Shock Load	***	***	***	***
High Strength / High Shock	***	***	***	***
Corrosion Resistance	*	*	*	*
Self-Lubricating	-	-	-	-
High Abrasion Resistance	-	-	-	-
Easy Break	-	*****	-	-
FDA Approved (Food)	-	-	-	-
Damp/Wet Environment	-	-	-	-
General Purpose	***	***	*****	****
High Temperature	*	*	*	*

Our recommendations Best \*\*\*\*\* Very Good \*\*\*\* Good \*\*\* Better \*\* Standard \*





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