

**RENOLD** | Tooth Chain

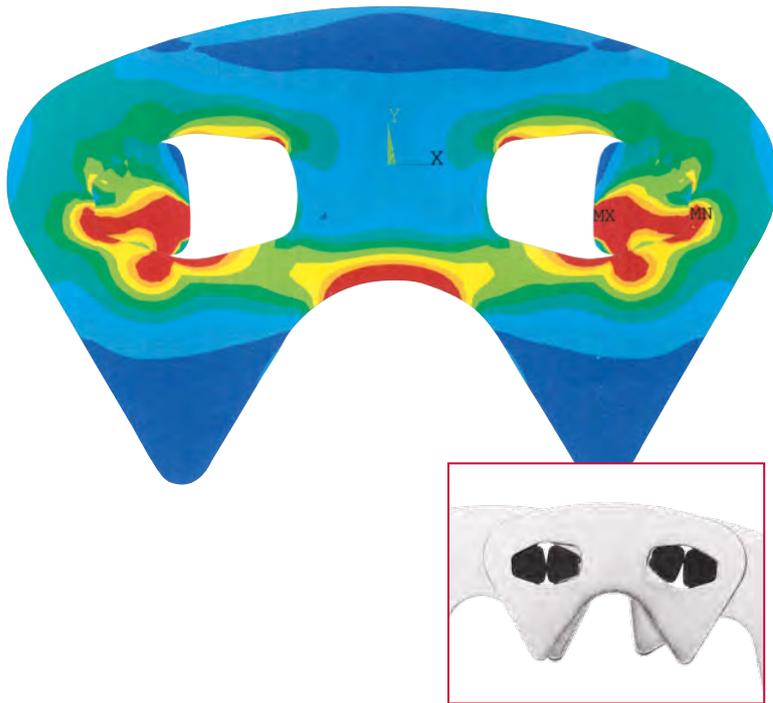
# Inverted Tooth Chains

Drive and Conveyor



# Drive and transport solutions

Packed with power and precision. Inverted tooth chains:  
A brilliant idea, perfected in every detail



Optimized link plates

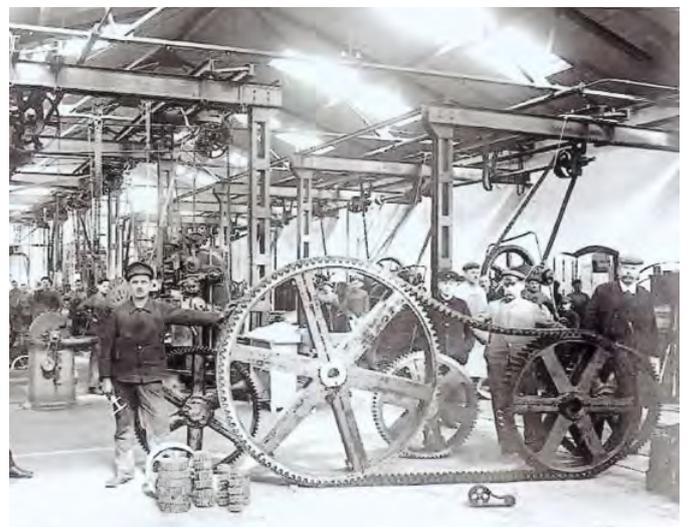
## Tailor-made for your application: drive and transport solutions with inverted tooth chains

The secret to our high-quality inverted tooth chains lies in their construction – a combination of numerous link plates and profile pins. The result: a powerful and flexible chain drive that can be perfectly adapted to the task at hand. Two-pin rolling pivot joints are just one unique feature.

- ➔ Technology leader for inverted tooth chain applications
- ➔ Unparalleled variety – the right inverted tooth chain for any application
- ➔ Over 100 years of experience, active worldwide

We have worked in close cooperation with our customers for decades to consistently optimize our products and systems. This allows us to provide efficient solutions for increasing demands for top quality and productivity. Renold inverted tooth chains not only fulfill today's requirements, but are also a future-oriented technology with unique advantages. We are always striving to create even better solutions. Our customers should be utterly confident that they are receiving state-of-the-art inverted tooth chain technology together with the best possible service.

*Like many great ideas, Leonardo da Vinci had it first: constructing a drive based on a chain and sprocket. 400 years later, the concept finally found a taker. We used it to develop our cutting-edge inverted tooth chain technology and have perfected it in every detail. Today, it is the ideal solution for countless applications.*



1908 – Tooth chain production in Gronau.  
We have shaped inverted tooth chain technology from its inception and maintain the world's largest delivery program.

# Not a day goes by ...

Undercover artists, indispensable and ultra-efficient



## Our inverted tooth chains are indispensable components in a variety of applications

These "modest" components are often inconspicuous, but should not be underestimated in terms of their importance for a wide variety of production processes. Powerful, precise, fast, smooth-running, temperature-resistant, and durable, inverted tooth chains are often the superior drive and transport solutions.

## Customer care, product development, and design – our expertise lies in creating seamless links

Using the latest technical methods and field-specific knowledge of our customers' tasks, we calculate and develop the most suitable configuration.

- ➔ Industry-specific product innovations
- ➔ Components with needs-based add-ons
- ➔ Customer-specific overall solutions

## Not a day goes by ...

Inverted tooth chains in our daily lives:



**07:00**

**Breakfast.** Inverted tooth chains most likely had a hand in producing the packaging for your juice. And your eggs!



**08:00**

**Your daily commute.** Inverted tooth chains probably helped to safely guide your car along the assembly line.



**11:00**

**Meeting.** Several inverted tooth chains moved these water bottles through different production stages, even at more than 500°C!



**14:00**

**Lunch.** Inverted tooth chains were used to produce the real wood veneer on your table, not to mention the elegant wine glasses.



**18:00**

**Back home.** Your solar collectors were probably produced by vacuum coating equipment with inverted tooth drive chains.



**20:00**

**At the theater.** You were moved and so was the stage. You guessed it: all thanks to inverted tooth chains.

# Inverted tooth chain drives

The concept with unsurpassed characteristics:  
Powerful, precise, fast, and silent

## Inverted tooth chains for demanding drives

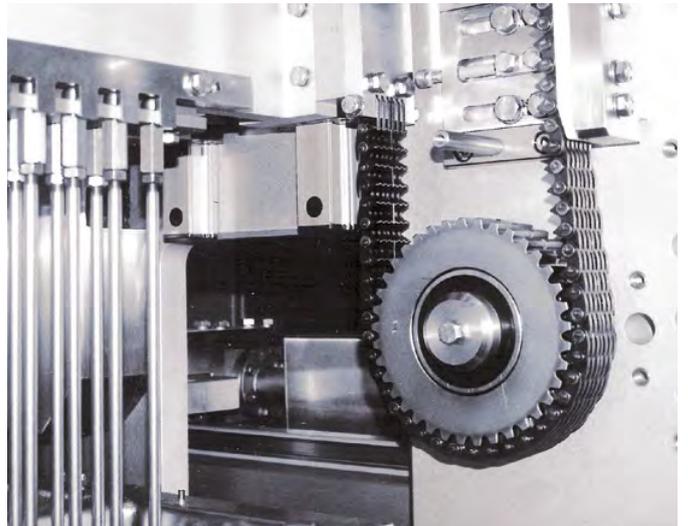
Our inverted tooth chain drives make the grade when it comes to precise, fast, and silent drives. Modern machinery production requires top-performing drives that offer a high degree of economic efficiency and reliability. Renold inverted tooth chain drives are the perfect solution for these requirements.

- Small dimensions, high efficiency
- Long service life, easy assembly
- High speeds, extremely quiet operation
- High torques

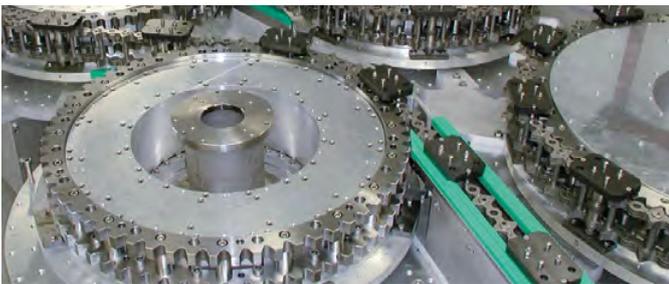
The design advantages mainly result from the unique two-pin rolling pivot joint and the excellent meshing conditions of the inverted tooth chain and sprocket. In conjunction with the low impact typical for tooth chains, this drive solution is distinguished by extremely smooth, even running, with the highest precision. The interlocking power transmission between the inverted tooth chain and the sprocket teeth eliminates slippage and the need for pre-tensioning. With high-quality materials and production processes, inverted tooth chains can even be used in harsh environments, at high temperatures, or with aggressive agents.



*Biflex inverted tooth chains in vacuum coating equipment for solar cells*



*HPC inverted tooth chains in chocolate dosing equipment in the food industry*



*Inverted tooth chains in special pitches with special link plate shapes*



*Biflex inverted tooth chains. Roller drives with specially coated inverted tooth chains for use in vacuum applications*

Inverted tooth chains are used for classic circuit operation. Their technical features also make them ideal for reverse-operation drives. Renold inverted tooth chain drives help you significantly increase the service life of your application, minimize downtimes, and thus ensure absolutely efficient operation.

Our online Chain Calculator can help you with the first steps to finding the right inverted tooth chain solution. Take advantage of this online tool to submit your request. To apply our calculation tool and get further information, visit us at: [www.renoldtoothchain.com](http://www.renoldtoothchain.com)

## Inverted tooth conveyor chains

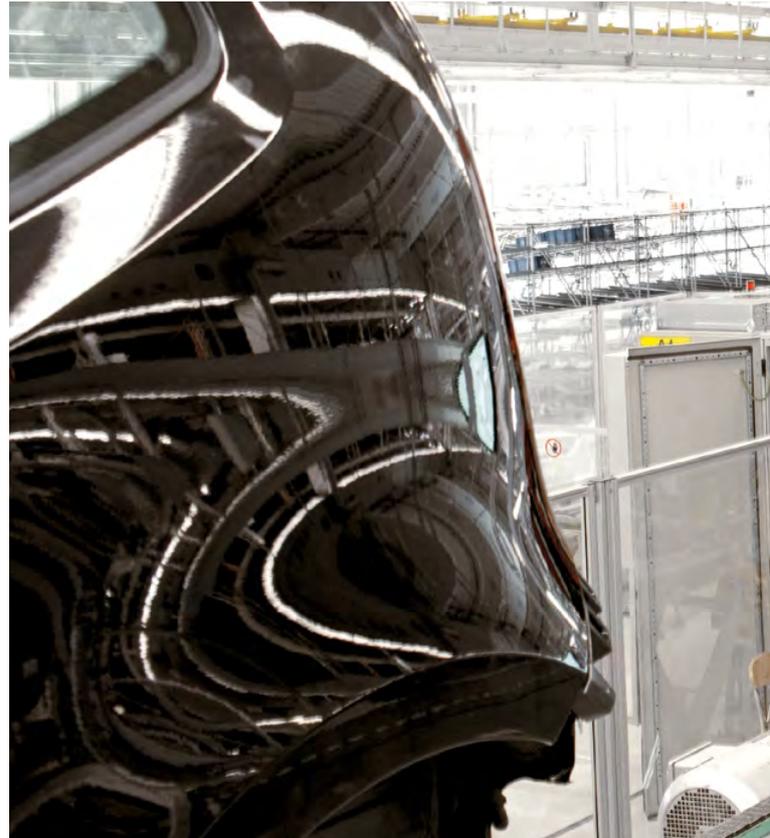
Systematic advantages: Variable, versatile, reliable, and durable

### Inverted tooth chains for conveying and linkage systems

Renold has extensive experience in creating optimum conveyor belt designs with inverted tooth chains. For our conveyor technology, we focus on cost-effective, user-friendly solutions that provide unparalleled durability and availability.

- Space-saving and variable in both form and width due to the chain's link plate construction
- Slip-free, quiet operation with involute toothing
- Functional reliability and a long service life with low wear and tear
- Resistant to extreme temperatures and ambient conditions

The automotive industry and hollow glass manufacturers have relied on inverted tooth chains for decades, a sure sign of their unsurpassed advantages.



Machine conveyors on IS-machines of hollow glass manufactures take the hot bottles and transport them to the ware transfer



Heavy duty multi-lane storage systems for cast iron or forged parts



*For forged parts in hot areas*



*Easy integration of special links as drivers*

### Limitless application opportunities

Whether large or small, heavy or light, circular or square, our inverted tooth conveyor chains convey it all, with accuracy and reliability. Precise, safe, cost-efficient.

- ➔ Versatility thanks to application-specific designs
- ➔ Interlocking driving with link plate form or special drivers

Talk to us today! Tell us about your applications; we'll supply the solutions. [toothchain@renold.com](mailto:toothchain@renold.com)

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