



Renold confectionery chain

Keep your business moving by reducing downtime

For over 140 years, the Renold group has delivered high precision engineered and power transmission products to customers across the globe.

Our market-leading products can be seen in diverse applications from cement making to chocolate manufacturing, subway trains to power stations, escalators to quarries; in fact, anything that needs to be lifted, moved, rotated or conveyed.

To find out more about our capabilities and how Renold can get your business moving, visit our website www.renold.com.

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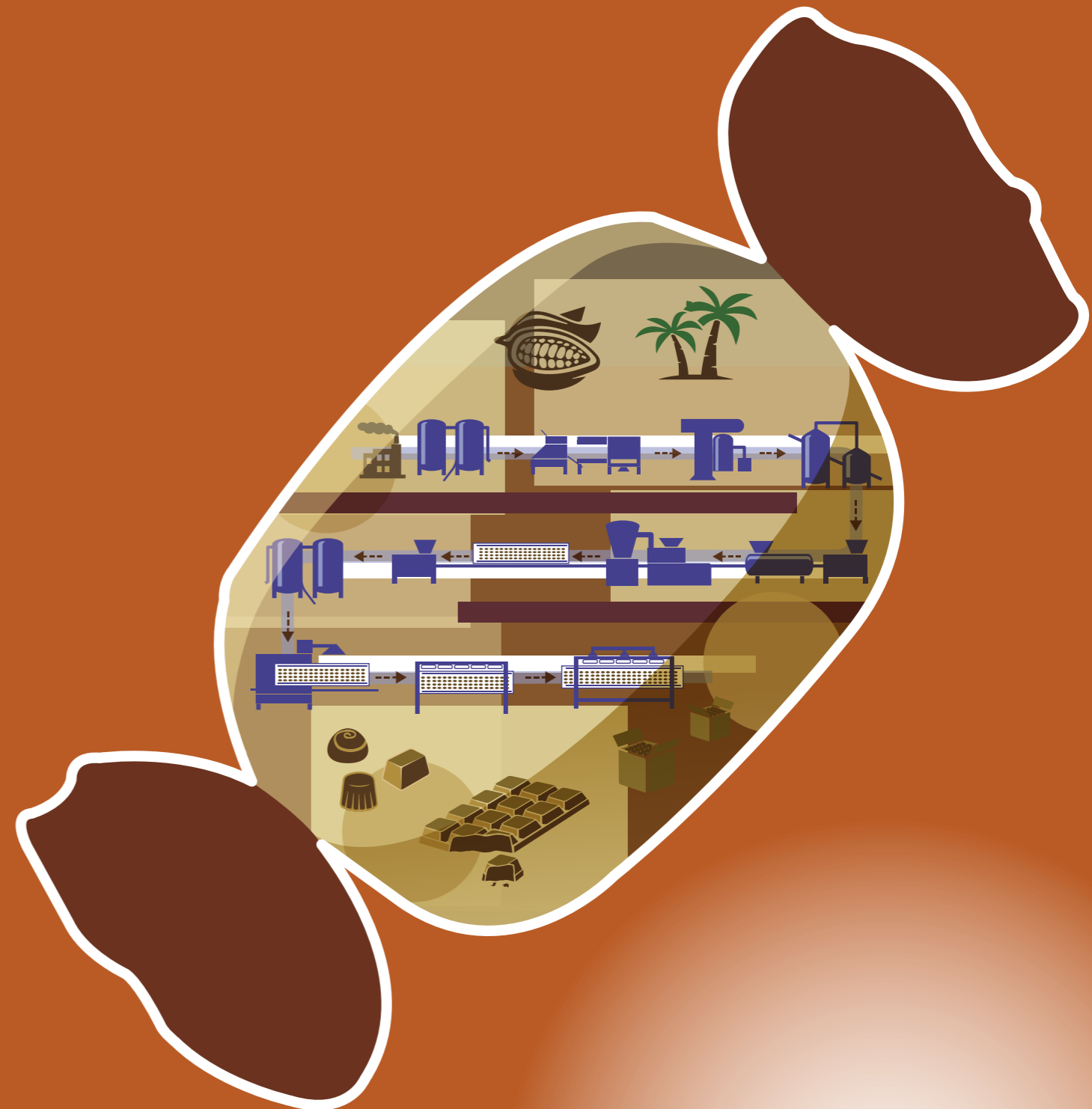


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RENOLD

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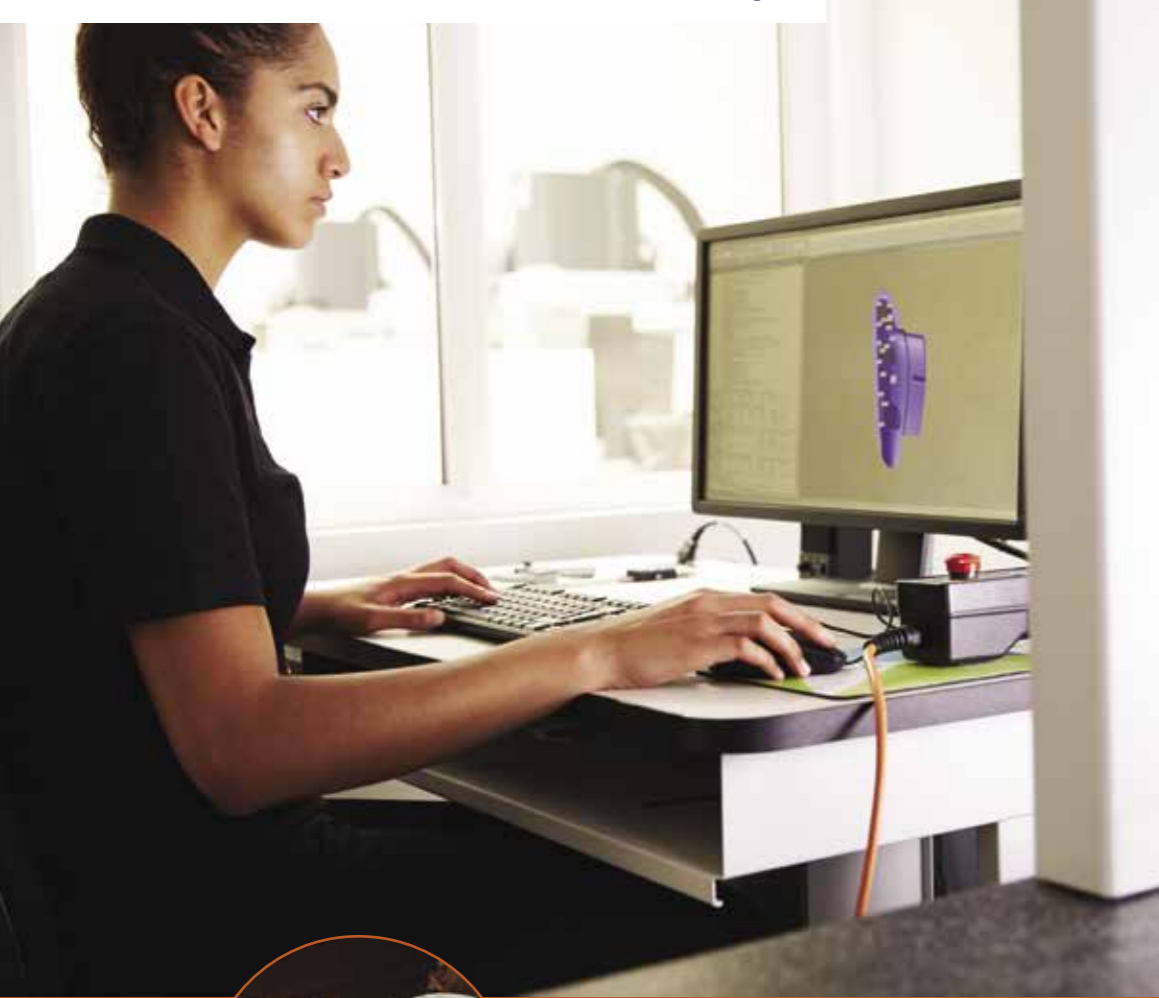


RENOLD

www.renold.com

Leaders in chain technology

Power, precision and durability



From the inception of our business in the 19th Century when our founder, Hans Renold invented the bush roller chain, Renold has continued to grow and innovate and today we manufacture an enviable portfolio of chain, gears and couplings.

All our products benefit from the same attention to detail, skills and expertise that have seen the Renold name become synonymous with quality, precision and engineering innovation.

Company Overview

- More than 140 years of experience in the design and manufacture of precision roller and engineering class chain
- Continuous investment in people, process technology and manufacturing
- Highest specifications, with proven performance in diverse industries worldwide
- One stop for drive systems, including roller and conveyor chain, gears, motors and couplings
- Experienced applications engineers ensure the optimum solution with the aid of the latest computer aided design technology.
- ISO 9001 & ISO14001 certified

Renold Solutions Offer

- Longer Chain Life
- Reduced Downtime
- Safe & Dependable Operation
- Cost Effective
- High Reliability
- Excellent Fatigue Performance
- Durable & Hard Wearing
- Easy to Maintain
- Resistant to corrosion
- Flexibility to use wide a range of attachments



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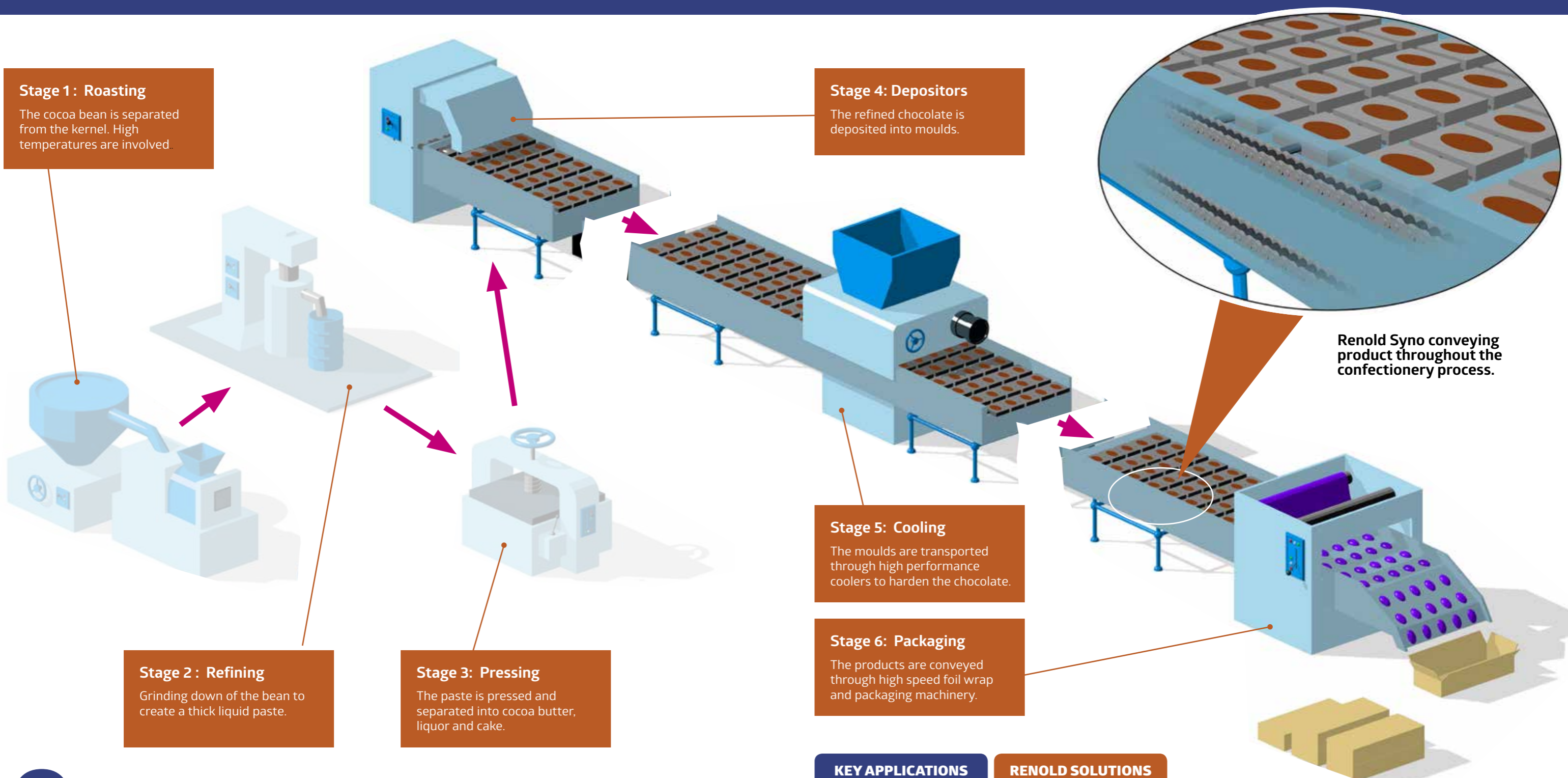
Chain for every stage of chocolate manufacture

In it for the long haul

Renold has a long and proven history in the supply of custom and standard chain solutions for confectionery manufacturing. Environmental requirements such as hygiene are catered for as well as considerations such as corrosion and wear resistance.

Standard and non-standard attachments are available to suit your needs.

Renold has the experience to provide products and support to keep your high volume production lines operational.



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KEY APPLICATIONS

- Chocolate depositing
- Moulding/De-moulding
- Shaking
- Cooling
- Packaging

RENOLD SOLUTIONS

- RN
- Syno
- Stainless Steel
- Nickel Plated

Solution chains

For use in the confectionery industry

RENOLD



Beginning with tightly defined raw material specifications right through to tightly controlled component geometries, Renold set the standard for safe, dependable and durable chains for confectionery applications.

Features

- Optimized wear life by control of pin and bush contact and ball drifting
- Special food approved lubricants for longer life and storage time and corrosion protection
- Highly fatigue resistant due to:
 - i. optimised fits between pin, bush and plates
 - ii. high plate hole quality
 - iii. ball drifted holes for cylindrical diameters
 - iv. shot peening

RENOLD Syno™



For use in hygiene-sensitive applications or situations where contamination from lubricant is to be avoided, Renold Syno Nickel Plated chain displays all the characteristics you need from a chain. With a food industry-approved lubricant within the sintered bush, this chain will in almost all instances not need re-lubricating.

Features

- Dry-to-the-touch
- Nickel plated plates, pins and rollers are FDA-approved. Plating will not chip or peel and provides exceptional corrosion resistance.
- Pin coating with minimized friction for improved wear life and reduced vibration
- Food industry-approved lubricant within the sintered bush
- USDA H1-approved lubricant within sintered bush (no need of re-lubrication)
- Runs on standard sprockets
- Temp. from -20°C (-40°C) to +150°C
- Dimensionally interchangeable with standard chain



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Solution chains

For use in the confectionery industry

RENOLD Stainless Steel



Renold Stainless Steel chain is made from high grade materials.

These perform extremely well in environments that are acidic, alkaline, where direct contact with food is a consideration, where the chain will be exposed to water, and for very high or very low temperature locations (-40° to +400°C) where resistance to corrosion is a requirement.

Features

- High grade austenitic rust-proof steel provides excellent chemical resistance
- Ideal for acidic or alkaline environments, where direct food contact is possible or if chain will be exposed to water
- Temp. -40°C to +400°C without limitations
- FDA approved materials and USDA H1-approved lubricant
- Tensile strength c. 65% of standard carbon steel chain
- All components receive surface finishing to remove stress raisers

Renold Nickel Plated



Renold Nickel Plated transmission chain delivers excellent corrosion protection. Ideal for applications such as bottling where spillages can lead to corrosion the specification for this chain is designed to optimise its performance.

Every modification is made to push the wear and fatigue resistance to the maximum as well as delivering corrosion resistance.

Features

- Excellent corrosion protection
- Hexavalent chrome free
- Nickel plating on plates, pins and rollers is FDA-approved, will not to chip or peel and provides good corrosion resistance
- 400 hours corrosion protection during salt spray tests to DIN 50021
- Cold extruded, solid bush and roller delivering maximum Renold performance
- Pin coating with minimized friction for improved wear life and reduced vibration
- Tensile strength c. 85% of standard carbon steel chain



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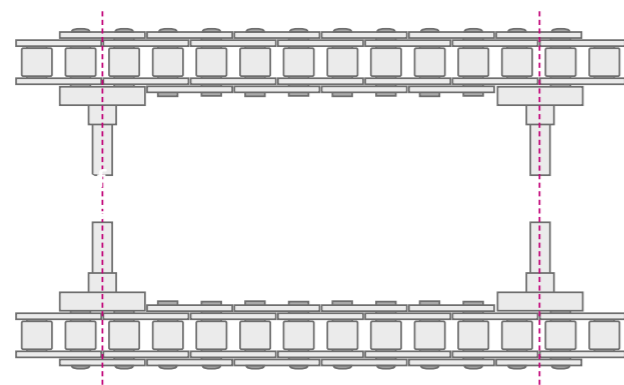
Pairing and matching

Precise engineering for smooth operation

Renold have developed Confectionery Chain Matching, which is for use when simultaneous operation(s) need to be carried out at different positions in a drive.

Perfect for areas such as chocolate moulding machinery, where 2 parallel chains are generally used to transport a large number of moulds through the system. In this

application it is necessary for the chain to simultaneously co-ordinate the position of the mould at several different stages.



uniformity of chain length is essential in all applications



For example, while one mould is being filled with chocolate, another mould, which could be several hundred feet of chain away, is being emptied after cooling.

In order to ensure proper deposition of the chocolate and release from the moulds it is essential that the moulds stop in exactly the right place once the machine is set up.

In these applications the uniformity of chain length over any given section of its length is essential.

When you need chain for an indexing application like this, our quality control delivers exactly what you need.

Renold's high accuracy pitch matching, ensures uniformity of chain length over any given section of the drive.

Standard adapted chain

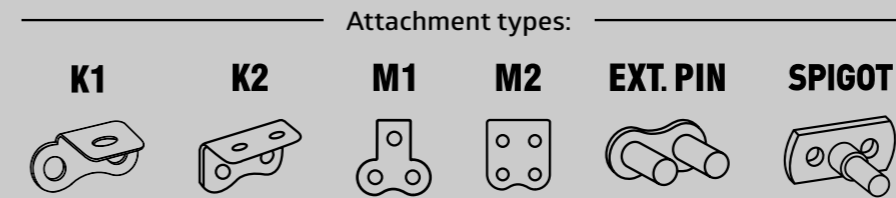
Specialist attachments

Renold offer a wide range of standard attachment chains specially designed for the confectionery industry. Attachment chain requires outstanding service, fast quotations, immediate availability and rapid delivery.

Renold are able to offer a 24 hour service for BS steel transmission chain, from half inch (08B) to one inch (16B)

pitch with standard M and K attachments, extended pins and in accordance with exact customer Specifications.

Attachment chain service is also available for Renold Syno, Nickel Plated and Stainless Steel brands but timescales on service may vary. Contact your local sales representative for more information.



Customer case study

Problem:

A chocolate manufacturer were having to change their chain every 6 months – causing costly downtime and hindering their efficiency. The customer was purchasing a commodity, standard chain.

Solution:

Renold's experienced engineers analysed the production facility and due to the application of lubricant being undesirable and difficult in areas, Renold recommended their Syno brand chain. We have over quadrupled the service life of the chain!

Savings:

By upgrading to Renold Syno, our customer has achieved tremendous cost savings due to:

- Reduced downtime/Improved productivity.
- Reduced maintenance costs.
- Quadrupling the service life of the chain.

This has resulted in an annual cost saving of \$21,442.

Specification:

Renold's Syno brand chain uses clever sintered bush technology. The bush works as a metal sponge - full of small holes that are impregnated with lubricant.

During operation, lubricant is released onto the bearing surfaces. When the chain is not operation, the lubricant returns to the sintered bush.

The chain itself is completely dry-to-the-touch making it perfect for hygiene sensitive environments like the Confectionery industry.

Cost savings: Figures that speak for themselves

Description	Previous	Renold
	12B1 Competitor Chain 60/2060	12B1 Renold Low Maintenance brand chain with K1 attachments every 8th pitch
Wear Life (days)	193	823
Total installation cost	\$15,340	\$8,005
Total annual cost	\$28,992	\$3,552
Cost savings over lifetime per chain		£6,755.05
Total annual savings		\$21,442

Annual Savings **74%**

from one of our happy customers.



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