

RENOLD | Tooth Chain

Quality & Perfection
Renold Chains for the Glass Industry



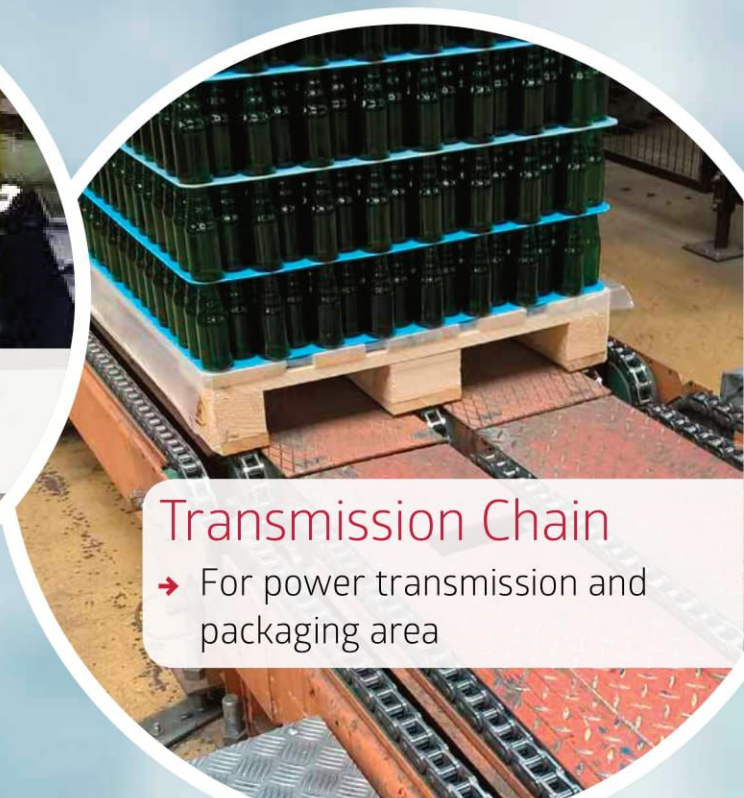
Tooth Chain

- IS machine and cross conveyors



Conveyor Chain

- Scraper conveyors



Transmission Chain

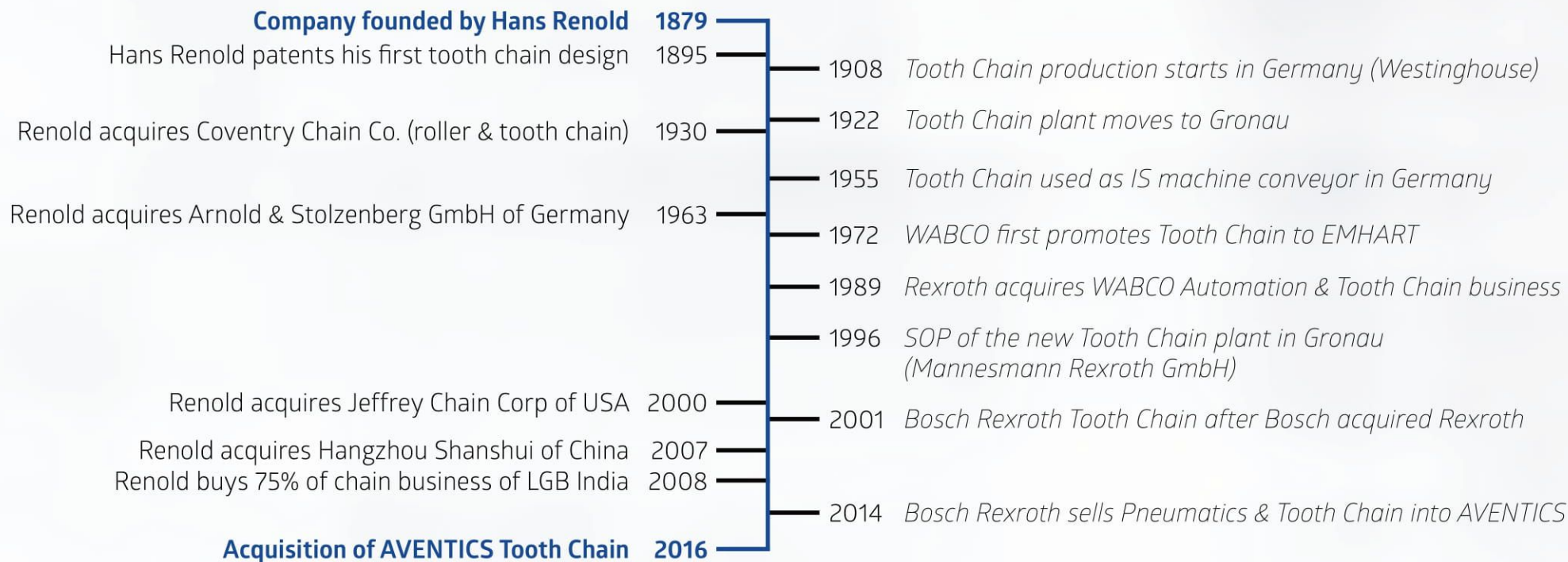
- For power transmission and packaging area

Chain solutions

2

Chain solutions for glass production – The one stop shop!

- Tooth Chains are exclusively Made in Germany, Quality standard ISO 9001:2015
- Conveyor and Transmission Chains are made according to the highest international standards!



Our joint History

- Committed to excellence in product quality, engineering innovation, and customer service, Renold has over 130 years experience in power transmission together with our extensive application knowledge.



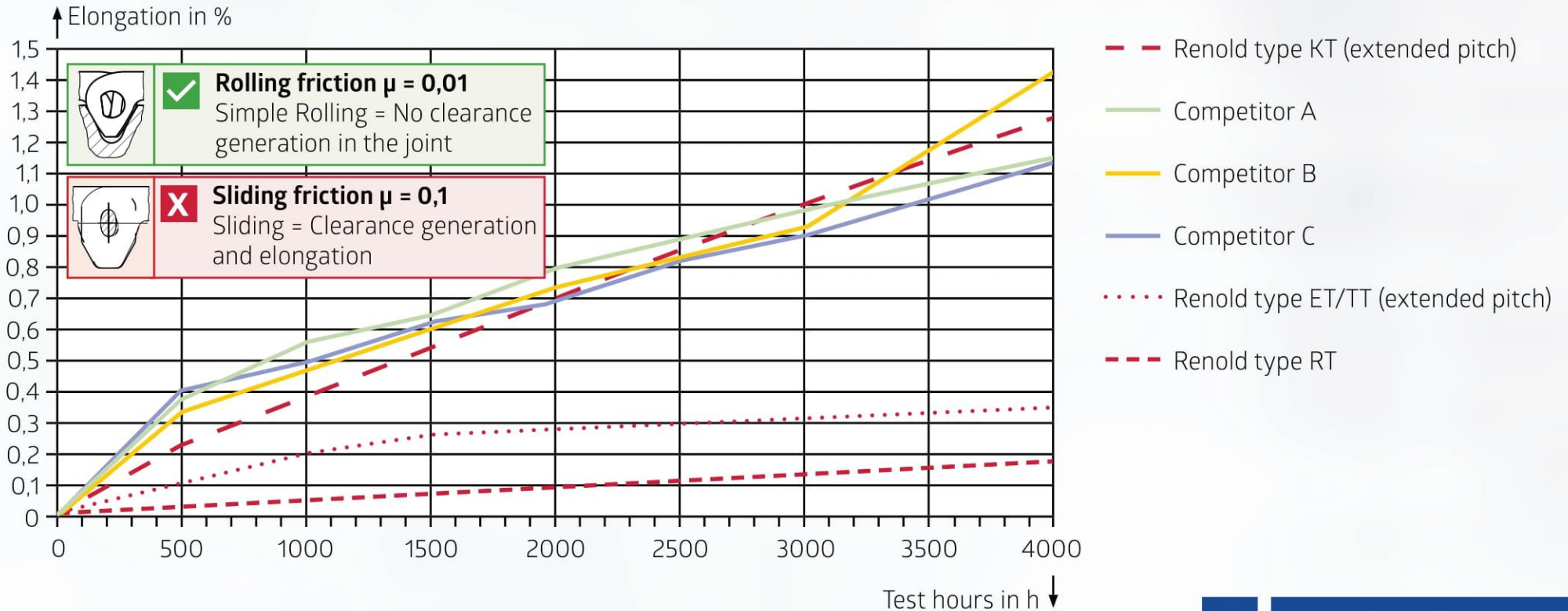
Requirements IS

4

Tooth Chain solutions for hot end production

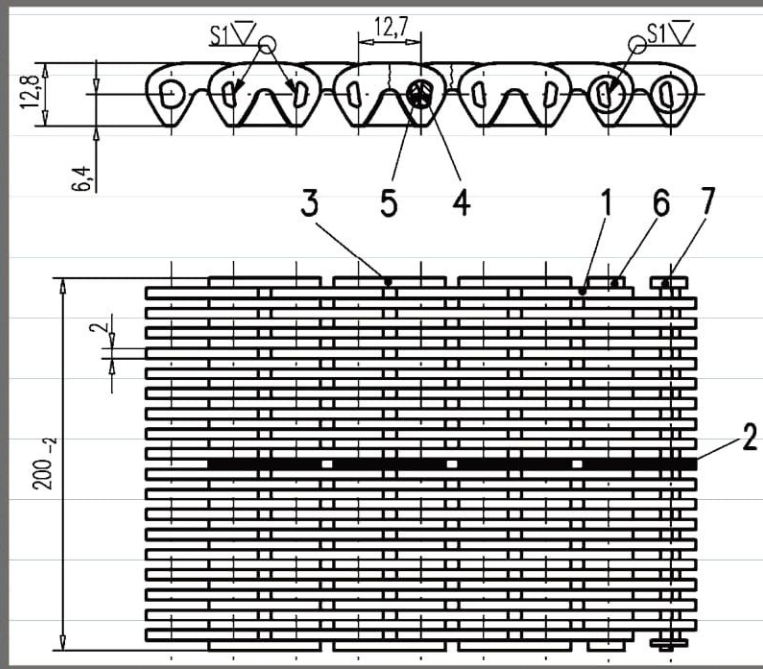
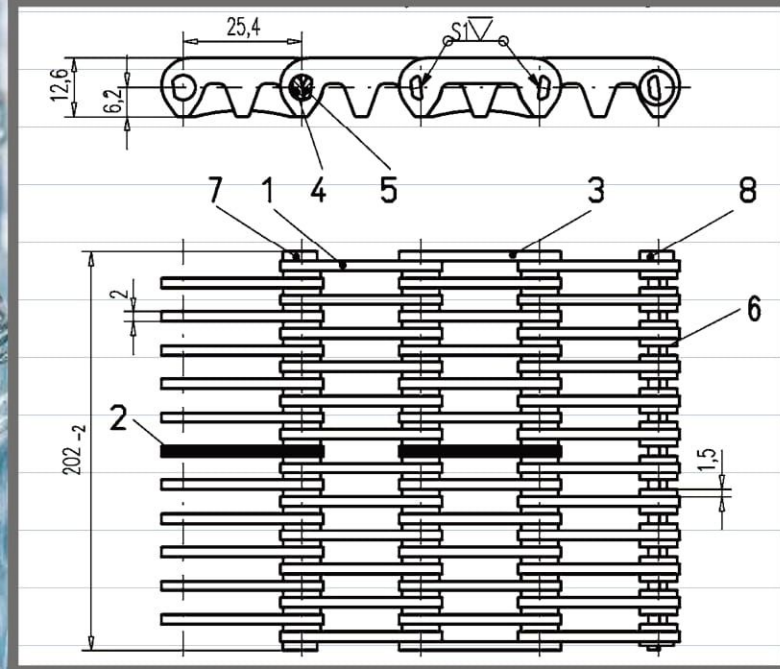
- High life time and reduced maintenance down time
- Low elongation to keep the exact position over the lifetime
- No gap with the transfer plates
- Air flow through the chain for product cooling and stabilisation
- Safe footprint for precise and stable transport of the products
- Low sliding friction with the products
- High abrasion resistance of the plates due to sliding friction with the machine table
- Low heat dissipation through the chain
- High temperature resistance
- Chemical resistance against coating products

Renold can answer all!



Unique 2-pin rolling pivot joint design

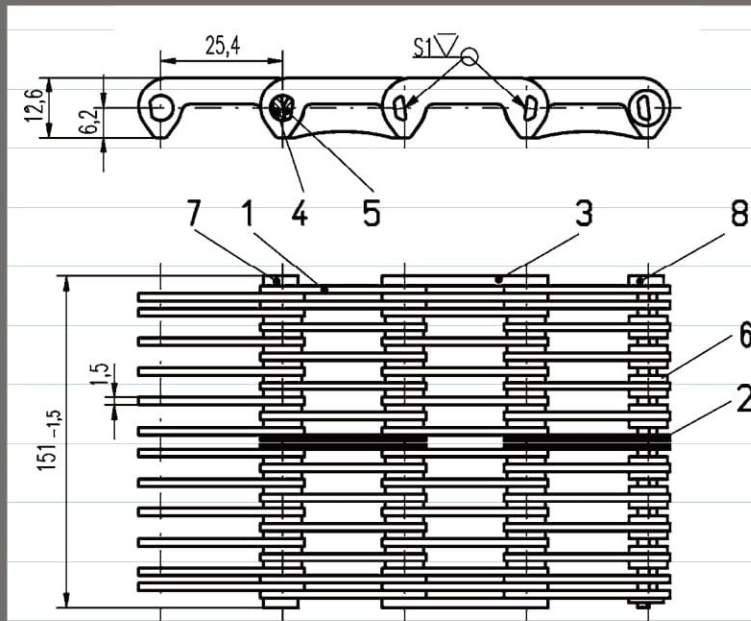
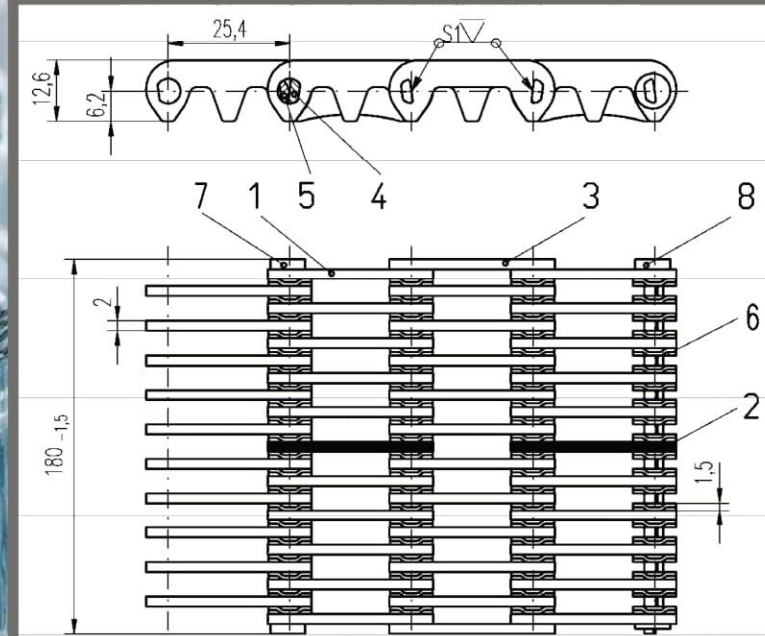
- The 2-pin rolling pivot joint considerably decreases elongation and thus increase life time
- Rolling of two pins versus sliding between the plates and the pin with a single pin pivot
- Low elongation to keep the exact position over the lifetime
- Every layout possible, also in stainless steel without influence on the life time

RT-200-CL air permeability of 12%

TS-200-CL air permeability of 53%


Every layout 6

Every layout possible without influence on lifetime

- ➔ The Renold 2-pin rolling pivot joint transfers all dynamic loads directly from pin to pin only
- ➔ No influence of the chain layout on the life time
- ➔ The widest range of airflow adjustment and reduction of product contact

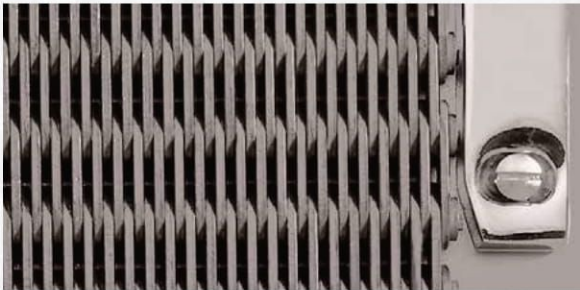
ES-150-CL with rim enforcement

TC-180-CL with cleaning washer


Special solutions

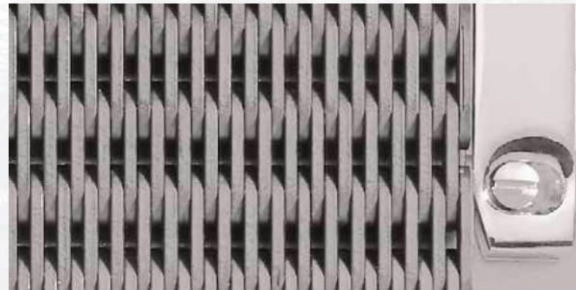
- ➔ Various common layouts like multi-guide/stacker versions, rim enforcement, double plates, inner loose sections with double rings, special thin washers (1 mm only!) to cope with all kind of products
- ➔ Special cleaning washers to keep chains flexible



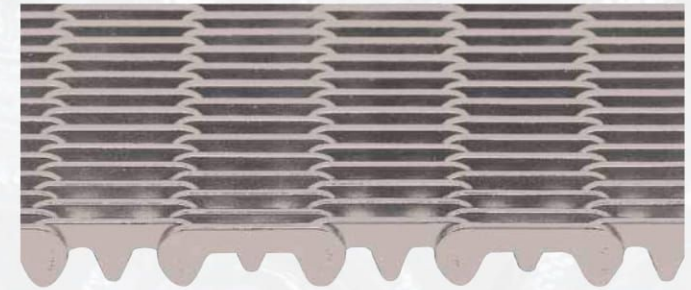
Riveted solution can lead to a collision with the guide rails



Riveted



Laser-welded



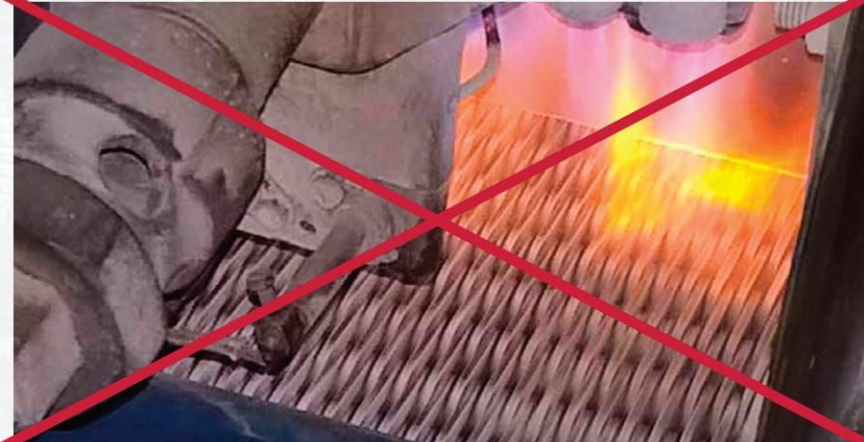
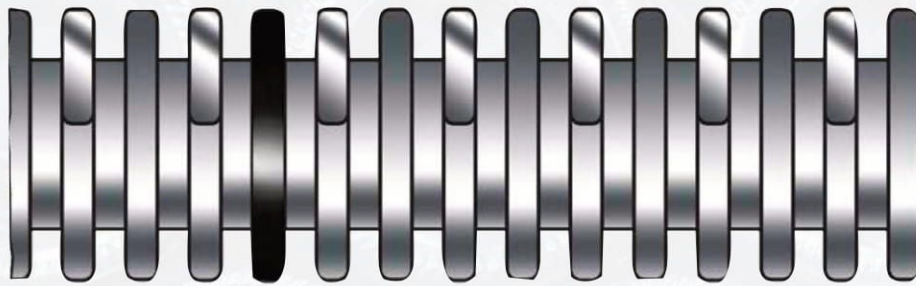
TRILEG: link plate form with extended pitch

Laser welding

8

Laser welding of the external plates

- Smooth and large contact surface on both sides
- Minimum size gap (reliable transfer)
- No lateral movement of pins due to the welding
- Safe footprint for precise and stable transport of the products
- Patented TRILEG design for reduced wear abrasion and elongation



Renold solutions to avoid micro cracks

The base: Renold edge-rounded plates

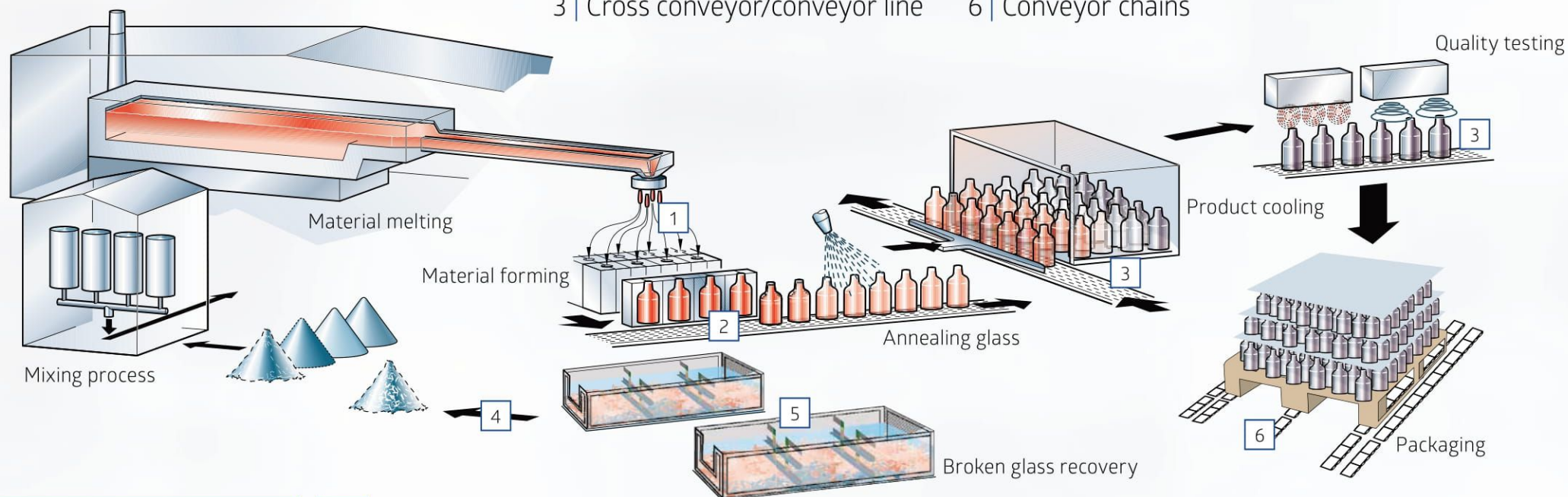
- Low sliding friction with the products
- Safe footprint for precise and stable transport of the products
- Reduces tipping of top heavy glass bottles
- Reduces forces for crosswise moving bottles

The premium: Use of stainless steel

- Lower heat dissipation rate
- Increase of resulting contact temperature glass to chain
- Improved heat resistance
- No pre-heating required

Example: hollow glass production process

- | | |
|----------------------------------|-------------------------------|
| 1 Chain drive/take-out gear | 4 Power transmission chains |
| 2 IS-machine conveyor | 5 Scraper chains |
| 3 Cross conveyor/conveyor line | 6 Conveyor chains |



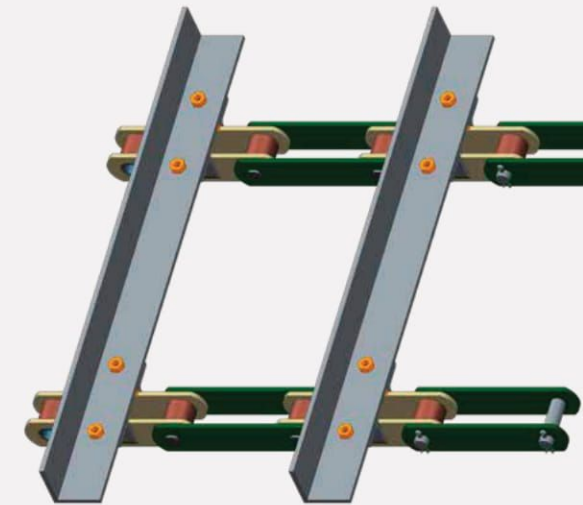
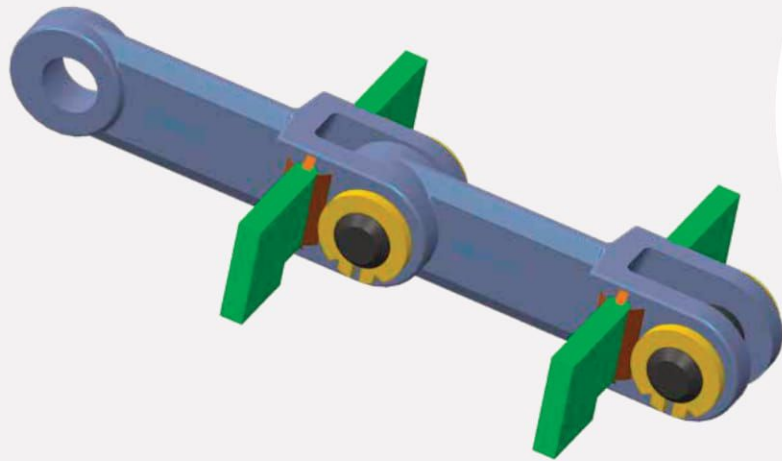
More chain solutions for glass production processes

Conveyors Chains - Scraper Conveyors

- ➔ More than 50 years experience in the production of conveyor chains
- ➔ Experience in all industry sectors
- ➔ Own engineering and development capacity

Certification

- ➔ QMS - ISO 9001-2008
- ➔ QMS - 14001
- ➔ QMS - API Spec - 7F
- ➔ QMS - 18001 - H&S



Conveyors – Scraper Chains

- Developed for high abrasive and wet environment
- Breaking loads of 100 to 550 kN are common
- Inboard or outboard roller design
- High impact loads are common with this type of system
- Pitch : 50.00 mm to 300.00 mm
- Scraper attachment (welded)
- Also available with special coating / hard chromed



Chain sprockets

12

Conveyor chain sprockets

Sprockets –
with shaft assembly

Sprockets –
with chain seating before despatch

Traction wheel –
OD Induction hardened for high
wear resistance



Renold Conveyor Chains and Scraper Conveyors are used in

- Glass industry
- Steel mill industry
- Cement industry
- Fertilizer industry
- Paper industry
- Mining industry
- Rice mill
- Food industry
- Poultry & slitter
- General conveyor application



Even more chain solutions

14

And even more chain solutions for glass production

Transmission chain for power transmission and packaging areas

- A global, market-leading supplier of chain
- Renold Synergy, offers unbeatable wear and fatigue performance
- Over 100 years experience
- 100% in house production
- Largest range of general transmission and solution chain

Chains made by Renold will help you to **increase lifetime** and **decrease maintenance downtime** at your production line.

You will **increase** your **productivity** and **decrease** total production **cost**.

Thank you for choosing Renold!

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RENOLD



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