



RAMSEY

new products and patents with Accelerated Research and Development

In more than 50 years of activities in supplying chain to glass manufacturers, Ramsey has continued to develop and improve its products, introducing new glass conveying products which have earned eight US and European patents.

Glass conveying has changed a lot over the past 50 years. Today, with production lines running at speeds which were once thought to be impossible, the demand for innovative conveying chain solutions is stronger than ever. Glass producers expect products which run better, wear

less, and last longer, with minimal maintenance. Comments like these from customers have fuelled Ramsey's growing investment in new product development and improvement. In this article, Ramsey highlights some recently developed products and discusses their impact on glass production.

BACKGROUND

When Ramsey began supplying chain to glass manufacturers, more than 50 years ago, silent chain was just beginning to be used as a conveyor. At the time, transport speeds were relatively slow and the problems of bottle spacing, mishandling, and breakage were less important.

RESEARCH AND DEVELOPMENT

Additionally, with slower speeds came less conveyor wear, making maintenance and downtime a lesser concern. However, as production speeds steadily increased through the years, new problems emerged. Faster speeds meant more risk for breakage, higher costs for downtime, and increased wear on equipment.

PATENTED CONVEYING PRODUCTS THAT IMPROVE BOTTLE CONVEYING

Recognizing the challenges inherent in higher conveying speeds, as well as customer interest in improved productivity and reduced maintenance, Ramsey began a decade long period of intensive research and development. These efforts produced a multitude of improved conveying chains and related products. Three of these products, Lifeguard®, R-Select®, and Ramsey's RKO Knock Out Tool®, are so unique and innovative they have earned a total of eight patents in the United States and Europe. A fourth product, Sentry™ conveying chain, is the only two pin conveying chain which has recessed pin heads and is also pre-stressed.

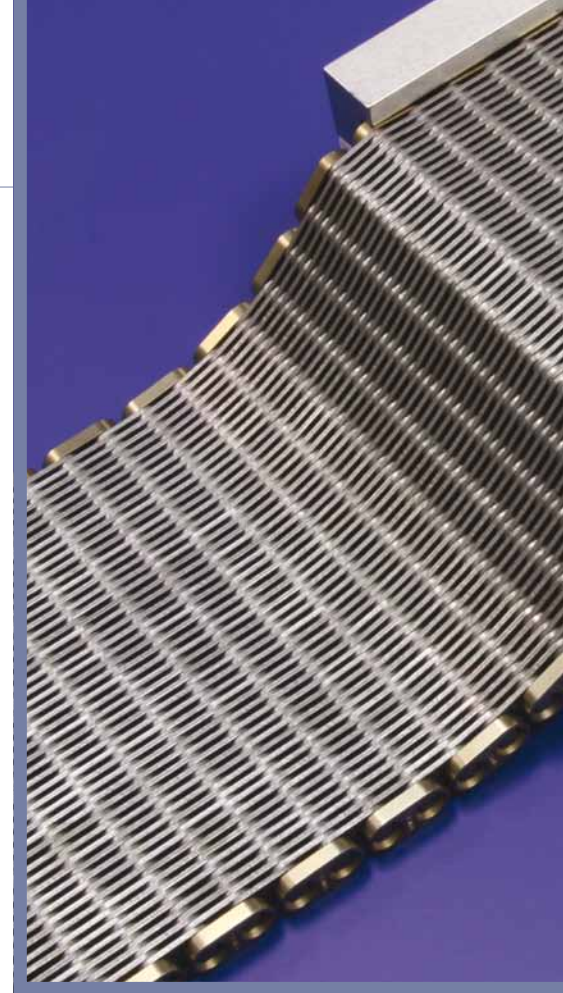
LIFEGUARD – REDUCED WEAR AND IMPROVED PRODUCT HANDLING

Designed to improve conveying chain performance and life, Lifeguard® chains utilize unique interlocking side links that not

only guard against pin head wear, but also greatly reduce the size of gaps between adjacent side plates. With much smaller gaps between the links, smooth product transfer on and off the conveying surface is assured and the potential for snagging on lateral guides is reduced. As a result, Lifeguard chains can be run in direct contact with lateral guides. The Lifeguard link design also reduces the need for expensive, complicated guide profiles and is especially beneficial when transporting small glass products, which are less prone to tipping as gaps in the conveyor are minimized. In a production environment, these features translate directly to fewer ware handling problems, extended chain life, and improved productivity.

R-SELECT – WEAR RESISTANT ALLOY CHAINS

Over time, conveying chains wear at the link tips and within the chain joints. This causes chains to elongate, also known as “stretch”, and link height to decrease, conditions which lead to product breakage and more frequent chain maintenance. R-Select chains are Ramsey's solution to these problems. R-Select chains are built with special wear resistant steel alloy links, which have been shown to last up to twice as long as standard steel links. Because of their improved resistance these links reduce both link tip wear and chain joint wear. But what makes R-Select chains unique is the chains can be assembled so the wear resistant links are only used in the parts of the chain which are expected to wear the most. Other parts of the chain, which are less subject to wear, can be made with standard, more economical links. This results in a chain with improved resistance to wear and only a modest increase in cost. Alternatively, customers who are looking for optimum wear char-



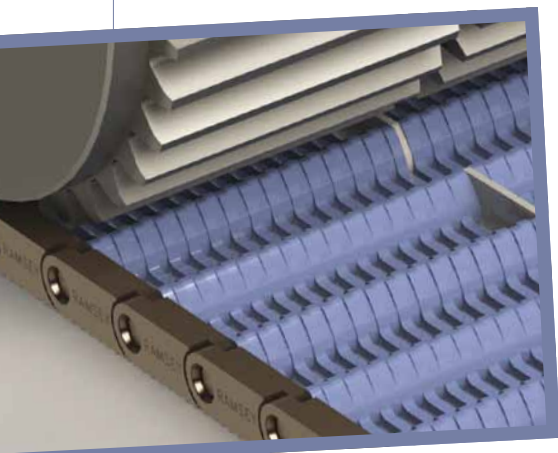
acteristics, and are less concerned about added cost, can have chains made entirely from R-Select links.

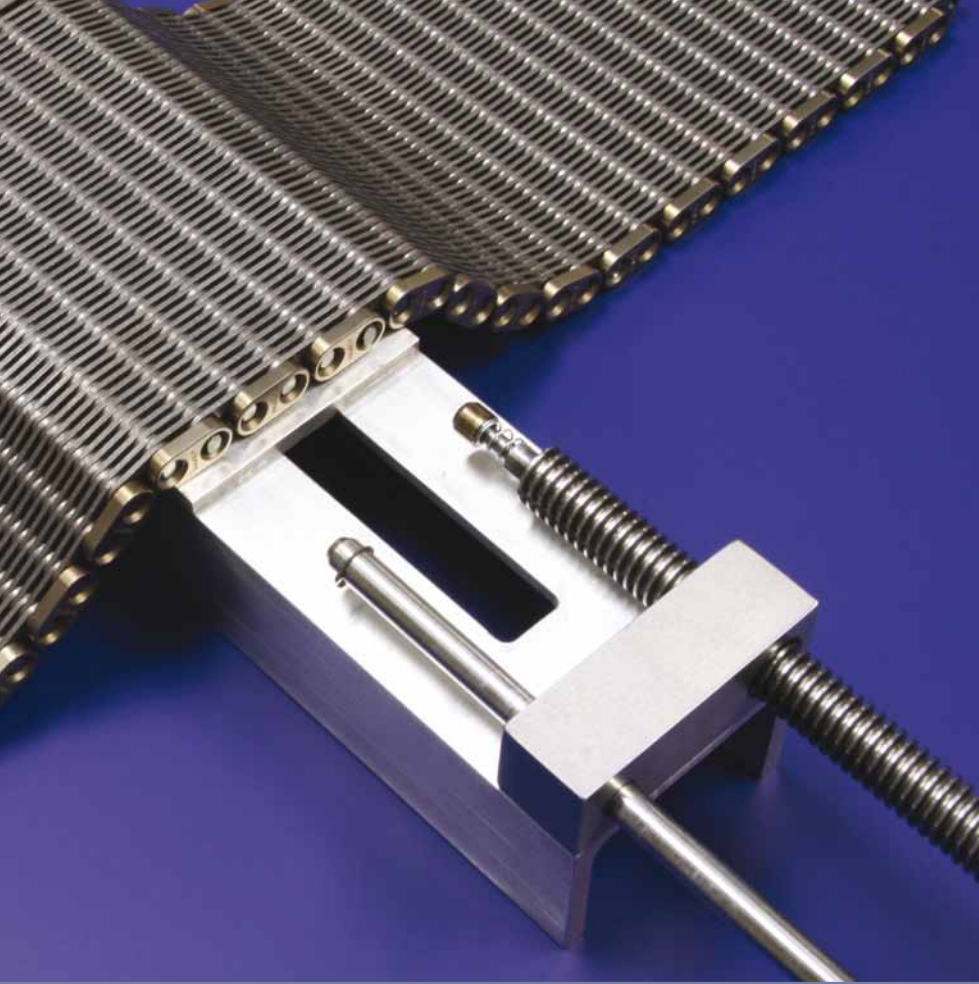
The development of R-Select required years of research, as well as testing in both laboratory and production settings. The results have shown that R-Select chains elongate much more slowly than standard chains, resulting in fewer maintenance shut downs to remove excess chain length. Some customers have reported a doubling of chain life with R-select chains.

RKO KNOCK OUT TOOL – SIMPLIFYING CHAIN CONNECTION AND DISCONNECTION

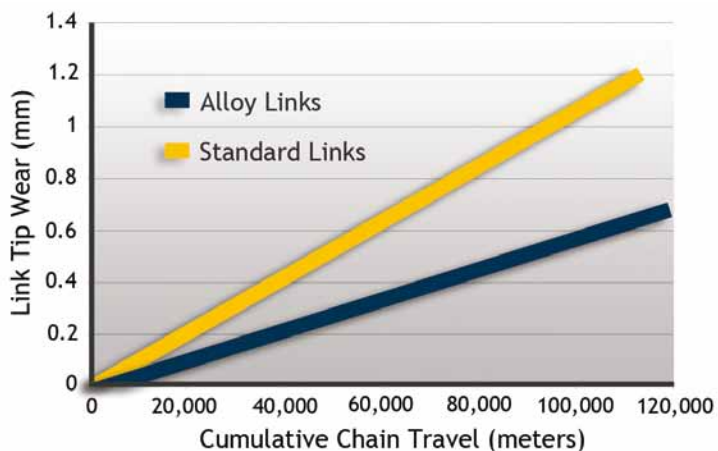
Chain connection and disconnection can be tedious and time consuming, especially with wear protected chains, where pin heads are recessed below chain link surfaces. The RKO tool can save hours when connecting the chains on a typical IS machine or cross conveyor.

Ramsey's RKO tool is designed to simplify connecting





IMPROVED WEAR RESISTANCE OF ALLOY LINKS



and disconnecting Allguard and Lifeguard conveying chains. The RKO tool provides three distinct stations for working with a chain. The first station has a ram screw which is used to break off the head of a pin during chain disconnection. The second stage allows the pin being removed to be driven out of the chain, using a hammer and a tapered assembly pin. This second stage is also useful for keeping chain components aligned when connecting chains that have spacers

between the links. The third stage maintains chain alignment during connection so that a drive pin and washer can be inserted in the end of the connecting pin.

SENTRY™ - WEAR PROTECTED AND PRE-STRESSED CONVEYING CHAIN

Following the success of Ramsey's established wear protected chains, customers who prefer two pin chain designs challenged Ramsey's engineers

to come up with a new chain. In response, our engineers developed an all steel, two pin chain design that offers the same wear protection as Lifeguard and Allguard FX. Unique in the industry, Sentry chains blend features which have been successfully used in Ramsey glass conveying chain for decades with totally new features which are only available from Ramsey. No other company offers chains comparable to Sentry!

Sentry chains utilize time tested assemblies, two pin joint designs, and wear protected recessed pin heads to produce chains that are strong, durable, and resistant to wear. In addition, the pin heads in the chains are "staked" using proprietary technology developed by Ramsey. Staked heads are very durable and more compact than heads formed by other methods. And since the pin heads are recessed, they will not wear like pin heads in laser weld style chains. Also, the guard links on Sentry chains are hardened alloy steel. No sintered metal parts are used in the chain. This results in a more robust and impact resistant chain. Lastly, Sentry chains are pre-stressed during manufacturing to fully seat components and to reduce chain "stretch". ■



Ramsey Products
CORPORATION

RAMSEY PRODUCTS CORPORATION

P .O. Box 66827
Charlotte, NC 28266-8827 - USA
Tel.: +1-704-3940322
Fax: +1-704-3949134
E-mail: sales@ramseychain.com
www.ramseychain.com