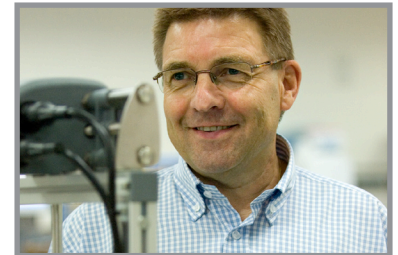


Production logistics tools improve productivity in the FMCG industry

The fast moving consumer goods (FMCG) industry is extremely competitive, characterized by disloyal consumers with high demands on price and quality – not hesitating to choose a different brand or product if the other offer appears better.



"We have been able to create a conveyor platform with double speed and half the noise level compared to today's solutions", says Anders Jonsson, project leader, X85 conveyor platform.

Challenges

Recently, the rise of private-label goods has led to increased competition within the FMCG industry. The focus on bringing high volume products to the market at lower prices has created greater demands on all actors, and the producers must differentiate their products and rapidly present them to the market. The struggle to achieve the best positioning on the market has spurred the rise of many more product variants and frequent replacement of products. To win the battle on the shelf, manufacturers must adapt and be able to produce products in smaller batch sizes. It is crucial to have the freshest product. The demand is often seasonal, calling for particularly flexible manufacturers, able to produce different goods at different times. It also means that fast time to market is crucial in order to win over customers and fast installation and ramp up of a production line is a crucial part in achieving this.

The competitive market makes availability of the product a necessity at the time the consumer is prepared to make a purchase. If not, the consumer buys another product. This requires a high production uptime at all times. A stop in production can cause empty shelves and lost market shares. Hence, line uptime must be on a high level, keeping the mean time between failures (MTBF) as long as possible.

Moreover, consumers are not willing to buy damaged products. They have the right to expect good quality and easily reject a damaged or dented product.

Improved production logistics solutions are major factors of productivity development. With the new X85 conveyor platform, FlexLink has aimed for factor two in all aspects of the conveyor system's performance – for instance, doubled speed and uptime while the noise level is reduced to its half.

Increased capacity

What was considered high speed yesterday is common speed today. New packaging solutions and machine generations open up for higher capacity levels. Balancing capacities in packaging and filling lines can be done by increasing line speed capacity. Normally, conveyors in packaging lines operate within a speed range of 40 to 60 m/min, corresponding to a capacity of 24 000 milk packages per hour. New lines are often designed for a speed of 80 m/min and filling and packaging machinery speed increases day by day. Looking into the tissue converting industry which is leading the development today, capacity demands are 10 products per second, corresponding to 36 000 products per hour and a conveyor speed up to 120 m/min in a single lane flow – which is what FlexLink's new X85 conveyor system is capable of.

Easy line balancing

However, speed in itself is not enough. The ability to control the speed, and thus the capacity, has a major impact on line efficiency. Dynamic control of the speed in the conveyor sections allows dynamic buffering in the conveying sections, with a consistent impact on line throughput. The speed can be varied seamlessly up and down - balancing the product flow between up- and downstream machines, minimizing the waiting time. Using divert and merge functions, product flows can be directed to specific machines, either to balance the capacity and/or to make product variants. FlexLink supplies lines with dynamic matrix layouts, making it possible to produce any mix of variants at optimum line efficiency. All products can be individually combined at a cycle time as low as 0,1 second.

Lower power consumption

Environmental issues and cost consciousness goes hand in hand and are great matters of concern today. The power consumption of production systems must be minimized. With FlexLink's distributed line con-



Eliminating the risk of products falling in the transfer between conveyor sections – a standard in-line transfer module.

trol, the power consumption is 30-60% less than comparable drive systems for conveyors under normal running conditions. Over time, it has a significant impact on the investment's life cycle cost.

Silent design – good working environment

The most significant areas for improvements of the working environment in the industry are operator safety and noise level. FlexLink has developed installations that are safe, yet efficient. An example is the wheel bends that have closed de-

sign without pinch points, but still are very flexible, providing easy and gentle transport through tight bends. Another chain example is the overlapping chain with no horizontal openings.

Noise from machines and equipment is one of the hottest issues in manufacturing environments today. With the new X85 conveyor, FlexLink claims a noise level of maximum 60 dB (A) at reference speed. FlexLink has spent considerable efforts to produce a silent design, reducing the noise level in conveyor systems as much as possible. A good working environment attracts qualified labour and can be a benefit for the company image - a crucial element in the eyes of the consumers. And the noise level requirements hardly will be less demanding in the future.



Extensive engineering and testing has resulted in a low noise level.

High uptime and long MTBF – it is all in the details

Unplanned, frequent stops in production can destroy the efficiency and the delivery service for any producer. With the X85 conveyor platform, considerable research has been spent on developing a conveyor that offers significantly less wear and increased mean time between failures (MTBF). The most important areas are the new strong chain design with optimized con-

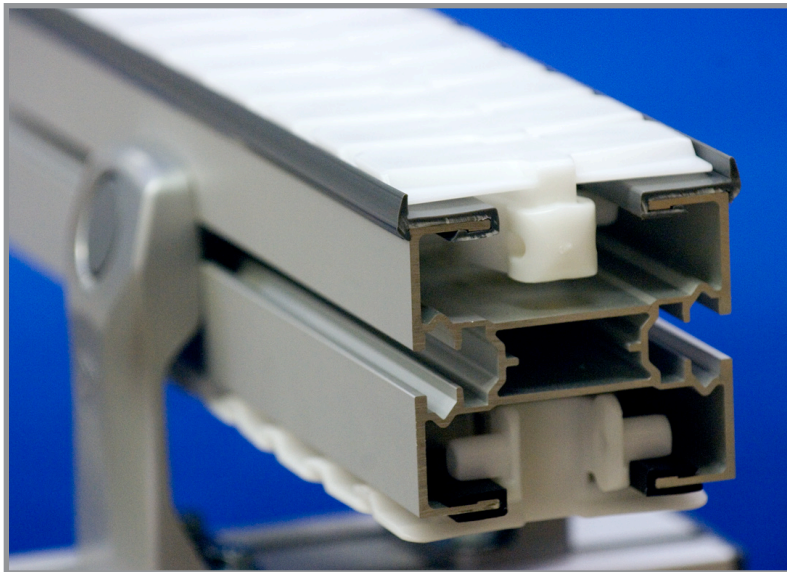
tact surfaces, resulting in low contact force even in plain bends. Apart from the refined design with the latest updates on materials, chain in- and outlets, motor and hypoid gear designs, different performance executions are available. It is easy to get the right unit, matching the application needs, but most importantly it provides high performance and a troublefree installation. Distributed line control offers soft starts and stops which have considerable impact on the installation service life. Wear is drastically reduced on all ingoing parts. Hence, the installation is run in a gentle, controlled manner - offering substantially increased MTBF.

Easy engineering - no worries

Fast line ramp-up and the right configuration make a big difference on the economy of the investment. FlexLink introduces state of the art engineering tools for conveyor system design. Available on-line through 'My FlexLink', the unique configuration tool allows easy and correct design of the conveyor according to every specific need. The conveyor layout required can be chosen directly on-line, corresponding to each application demand. It is easy to do it right, it is fast and it can be accessed around the clock.

Invest today – ROI is close

In the competitive FMCG industry of today, technical development must always continue in order to meet the reality of tomorrow. By optimizing the production flow, extensive investments in production machinery can be leveraged, but also within marketing and product development. Without the ability to deliver in time - at a competitive price and profitability - the competitiveness will wither away. The conclusion is easy. Improved competitiveness is an all day job without pauses. It can be small scale, such as minimizing small but significant sources of losses, and it can be on the larger scale by introducing new, high efficiency production systems. The important thing is that the work is done on a continuous foundation based on competitiveness and customer satisfaction – good luck!



Optimized guiding of chain elements, sophisticated materials and reduced contact pressure enable considerably increased MTBF (Mean Time Between Failures) and a reduced number of unwanted production stops.