Embedding smart conveyor design in your bakery

Few things are more disruptive to a busy bakery than unplanned downtime. Whether it's a jammed conveyor, a worn-out bearing, or a belt that takes too long to clean, even small interruptions can cascade into lost batches, missed delivery windows, and rising costs. With energy prices and labour pressures continuing to mount, it's no surprise that bakeries are looking more closely at how equipment choices can support smoother, more efficient production.

Fortunately, many of the answers can be found in the engineering and components of bakery systems. From belts and motors to bearings and connection systems, thorough mechanical design considerations can make a substantial difference – both in reducing maintenance time and in improving overall energy performance.

"It's not just about preventing breakdowns," explains Fabrizio Camparini, Product Marketing Manager Food & Beverage – Regal Rexnord. "It's about making it easier to service equipment, minimizing interruptions, and improving how efficiently the system runs day to day.

"That's where smart design really earns its place."

Designed for uptime

In busy baking environments, speed and simplicity are critical when it comes to service and cleaning. While complex components can offer plenty of theoretical benefits, these are often more than outweighed when small errors take production offline for hours at a time.

This focus on simplicity and ease-of-use was the driving force behind Regal Rexnord's PowerKey™ connection system, featured on the Rexnord® 6400 Series KleanTop™ spiral belts. This patented design allows the belt to be disassembled using only a standard screwdriver—no cutting, no specialist tools, and often, no tools at all.

What might normally be a time-consuming, overly complicated task becomes quick, safe, and repeatable, making it easier for operators to carry out maintenance and inspections without extended stoppages.

That same principle of ease carries through to other technologies in Regal Rexnord's portfolio. The latest development in Cambridge™ flat wire belt range (known as PacTitan™ Pro) offers a service life up to six times longer than conventional metal belts, drastically reducing replacement frequency. And, when it does need to be changed, its design supports simple, tool-free splicing; another way to keep maintenance short and uptime high.

Less wear, more efficiency

Sometimes, reliability is about more than longevity – it's about how systems function under pressure. Spiral conveyors, for instance, are essential to many bakery processes but are also prone to tension-related wear and complexity. Traditional systems rely on friction and speed differentials between the drum and belt, which can introduce vibration and increase the risk of damage or misalignment.

Regal Rexnord's Cambridge Active Drive™ system takes a different approach. By using a positive engagement between the belt and the drum via integrated drive pins it eliminates the need for tension-based drive altogether. The result is smoother movement, reduced wear, and more consistent product handling, all of which contribute to more reliable throughput and lower energy use.

“This is about reliability, repeatability, and simplicity,” Camparini adds. “Less vibration means less risk, and less downtime when things go wrong.”

Maintenance that doesn’t interrupt production

Maintenance and energy savings often go hand-in-hand, particularly when it comes to supporting components like bearings and motors. For example, Sealmaster™ bearings are lubricated for life and sealed against contamination, helping eliminate the need for routine greasing while also improving bearing life in demanding conditions. Their IP69K-rated stainless-steel design makes them ideal for regular washdowns, reducing servicing frequency and cleaning effort.

Meanwhile, Bauer™ HiflexDrive geared motors deliver robust performance in a compact, easy-to-clean package. Available in both aseptic-coated and stainless-steel variants, they offer smooth, energy-efficient motion for food-grade environments, helping operators minimise power consumption without sacrificing throughput.

When these technologies are deployed as part of a wider system – one where motors, belts, bearings and drives all work together – bakeries can unlock meaningful improvements in availability and output.

Smarter systems, better results

More and more bakeries are recognising the value of this system-wide approach. Rather than specifying components in isolation, they’re turning to suppliers like Regal Rexnord to deliver matched, compatible technologies designed to work together seamlessly. The benefits of a single partner with wide-ranging application and engineering experience go beyond faster installations or simpler maintenance—they extend to smoother line performance, reduced friction losses, and better long-term energy management.

It’s also a matter of adaptability. Equipment that’s easier to clean, repair, or adjust helps manufacturers respond more flexibly to changes in demand or process requirements. That flexibility is crucial in today’s fast-moving production environments, where the ability to maintain uptime is often as valuable as increasing it.

Image captions:

Image 1: The PowerKey™ connection system, featured on the Rexnord® 6400 Series KleanTop™ spiral belts, allows the belt to be disassembled using only a standard screwdriver.

About Regal Rexnord

"Regal Rexnord's 30,000 associates around the world help create a better tomorrow by providing sustainable solutions that power, transmit and control motion. The Company's electric motors and air moving subsystems provide the power to create motion. A portfolio of highly engineered power transmission components and subsystems efficiently transmits motion to power industrial applications. The Company's automation offering, comprised of controllers, drives, precision motors, and actuators, controls motion in applications ranging from factory automation to precision tools used in surgical applications.

The Company's end markets benefit from meaningful secular demand tailwinds, and include discrete automation, food & beverage, aerospace, medical, data center, energy, residential and commercial buildings, general industrial, and metals and mining.

Regal Rexnord is comprised of three operating segments: Industrial Powertrain Solutions, Power Efficiency Solutions, and Automation & Motion Control. Regal Rexnord is headquartered in Milwaukee, Wisconsin and has manufacturing, sales and service facilities worldwide. For more information, including a copy of our Sustainability Report, visit RegalRexnord.com."

Press contact:
Regal Rexnord Corporation
Suzan van Schie
Marketing Communication Manager – Conveyance Solutions
Tel.: + 31 (0) 6 10 24 53 72
suzan.vanschie@RegalRexnord.com

PR agency:
DMA Europa
Zoe Taylor
Account Manager
Progress House, Great Western Avenue, Worcester, WR5 1AQ, UK
Tel.: +44 (0) 1905 917477
zoe.taylor@dmaeuropa.com
news.dmaeuropa.com