Volta™
Belting Technology

The True Cost of Conveyor Belts

How to Save Up to **55% in Resources**

Volta is synonymous with hygiene. Companies ask for advice that goes beyond belt selection when designing new processing lines or upgrading existing ones.

As both lifespan and running costs should be considered, the Hygienic Design and Engineering of conveyors and belts become a combination of cross-disciplinary elements with performance being paramount. Performance is low maintenance with no stoppages during shifts, low equipment wear, a clean quality product, low-cost running and sanitation and sustainability.

There is far more risk to performance from incorrect selection than ever before even with food certified belts. This can be a major stumbling block to all the goals mentioned above.

Volta has developed a holistic approach that offers profound solutions to problems in the realm of hygiene, cost of ownership and sustainability. This expertise is available for both new projects and refitting existing machinery.

1 Cost of Ownership

2 Micro and Nano plastics

3 Retrofit tips

Here are three connected discussions which highlight the approach.

1. Cost of Ownership

Selection of equipment must not be compromised by budgetary constraints. This lack of foresight will prove disproportionately expensive. Current technologies may become obsolete before the amortized lifespan is reached, production volumes might increase beyond capacity, regulations might render machinery unusable.

However, if Hygienic Design is employed together with comparing the cost of ownership of belt types, the economic benefits accrue almost immediately, thus outweighing the long-term uncertainties noted. Savings result in energy and water, labour costs, maintenance/downtime, and product yield and quality.

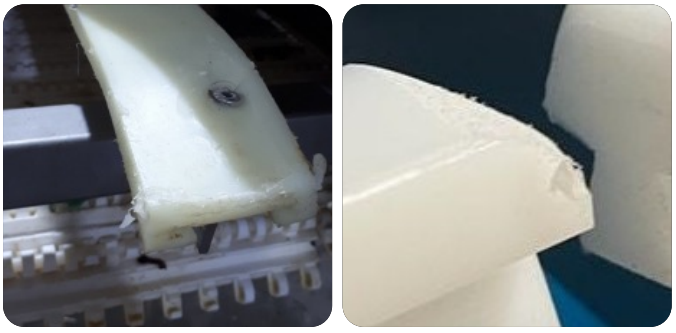
An independent study proved that Volta belts save 50-**55% of resources** compared to modular belts. For many processors this is not news. However, the study did not allow for additional savings in cleaning the conveyor. Volta has case studies revealing a total of 75% savings, often by preventing the ingress of material into the conveyor.

2. Micro and Nano plastics: The Hidden Food Safety Risk

With less residual particles, Volta homogeneous materials avoid the build-up of pathogens. A new pathogenic threat is now perceived from plastic particles called Micro or nano particles MNP. Public awareness has been raised regarding MNPs in the blood stream but new research points to plastic particles acting as delivery systems for pathogens.

A Science Alert summary notes that **ultra-processed foods contain more microplastics (MNP) than minimally processed foods** due to more steps of contact with **plastic processing equipment and conveyors**, increasing the load of micro- and nano- plastics in the final product[1].

A 2022 article quantified MNPs released from wear strips by attrition noting that over 20,000–30,000 operating hours on about 1250 running metres of wear strips can generate a volume of abraded plastic equivalent to **roughly 27 liters of microplastics**[2].



Wear Strips Used Under Plastic Modular Belts

Use of modular belts results in attrition to the belt and the wear strips and their constituent plastics have been shown to be some of the **dominant plastics detected in microplastic studies of foods.**

Other studies have shown that microplastics can act as carriers for chemicals, potentially transferring these prohibited chemicals into food, as well as pathogens[3,4].

Modular Belts Shedding Plastic

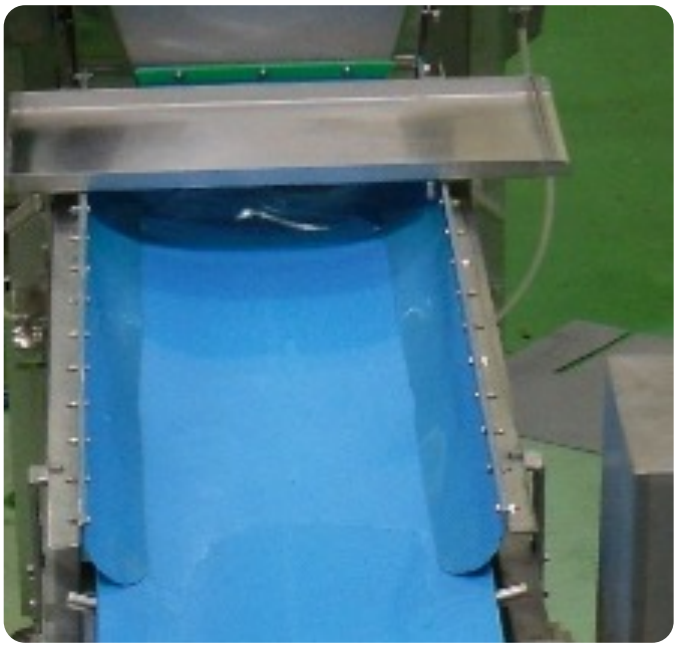
1. https://www.sciencealert.com/your-food-packaging-is-shedding-microplastics-into-every-meal-study-reveals/
2. https://www.industrysearch.com.au/minimizing-microplastics-in-the-food-processing-line/f/23630
3. https://www.foodsafetynews.com/2025/06/nanoplastics-pollution-found-to-make-foodborne-pathogens-more-dangerous/
4. c.f. https://foodpackagingforum.org/news/studies-detect-microplastics-in-food-and-link-it-to-packaging-processing-equipment

3. Retrofit tips

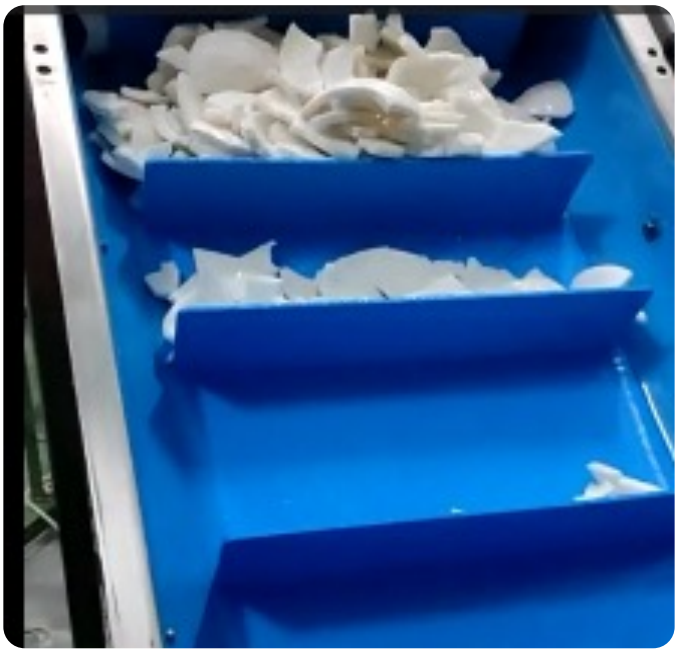
Volta's most effective insights apply to projects and new conveyors, but many retrofits can be converted to hygienic upgrades with a modicum of thought and investment.

Replacing modular and fabric-based belts for monolithic belts does not improve the conveyor but these hygienic belts can enable improved processing both mechanically and hygienically.

Example 1: **Skirting**



The addition of Volta skirting prevented acidic fluid from corroding the conveyor frame and bearings.
The belt gave **7 years of hygienic lifetime**.



The Volta skirting protected the conveyor frame from coconut water and particles and **reduced cleaning costs by 75%.**

Example 2: **Eliminate dirt traps**

Belt replaced and maintenance were shown how to adjust the machine to prevent the trap.

Belt replaced and new hold downs designed and installed

Belt replaced and build-up on rollers eliminated

Testimonials

"Volta is not only a supplier of exceptional products, but above all a partner whose commitmen helps us strengthen our business every day."

Stawomir Prachetko, CEO

ARCHIMEDES®

"Volta Belting is distinguished by its high-quality products and continuous integration of cutting-edge technology to ensure optimal performance across a wide range of applications."

Polybandas Ltda, Chile

Polybandas
Su inversión en movimiento

"At COMRISA, we are proud to be official Volta distributors."

José García, Owner

GRUPO COMRISA

Volta Belting at a Glance

At Volta Belting, we know that smooth operations and reliable production aren't optional, they're critical. For over 60 years, we've been helping companies worldwide keep their lines moving with advanced homogeneous thermoplastic belts, engineered for superior hygiene, durability, and performance in demanding environments.

Our technology eliminates common failure points found in conventional belts, reducing downtime, simplifying maintenance, and improving operational consistency. Whether it's retrofitting existing systems, or engineering sophisticated hygienic solutions, we avoid the pitfalls of contamination and design failure with unique preemptive solutions so our customers can stay focused on their business.

With a global presence and decades of innovation, we combine deep material expertise, application know-how, and hands-on partnership to deliver measurable reliability on the production floor.

Veteran Company 60+ Years

Decades of experience delivering solutions that work from day one.

Global Reach

Serving operations in 60+ countries.

Customized Belting Options

comprehensive advice for projects and upgrading existing equipment

Wide Product Range

Thermoplastic flat & positive drive belts.

Solution-based Support

Trained, well-equipped, response team

Explore solutions that reduce total cost of ownership and support hygienic processing.

Speak with a Volta specialist

volta™ Belting Technology

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