



Solutions for the
Vegetable Industry

Learn How to Improve Production Efficiency





Table of contents

1 Introduction

2 The Importance of Hygiene
in the Vegetable Industry

3 Case Studies

4 Pictures

5 Homogeneous Belts
vs Modular Belts

6 Benefits

7 Testimonials

8 About Volta

9 Let's Talk



Introduction

Over the last few decades, demand for fresh vegetables has been growing steadily while the vegetable farming industry has been struggling to keep up.

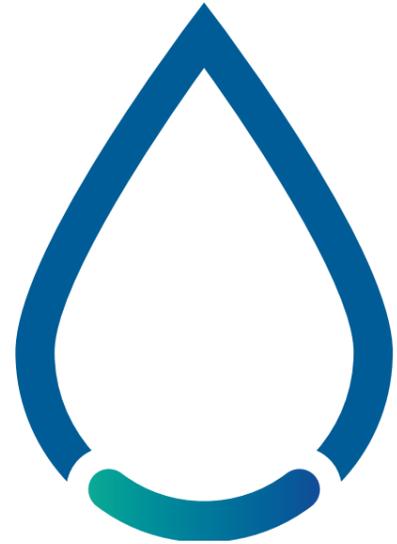
At the same time, Volta Belting has continued to develop solutions for safe, hygienic processing for the vegetable industry. In this e-book, you will read about case studies, solutions, applications, and customer testimonials illustrating the advanced solutions that we have to offer.

The Importance of Hygiene in the Vegetable Industry

The most affordable source of vitamins and minerals, fresh produce is an essential part of our diet. The food processing industry must be prepared to maximize the short shelf-life that vegetables have in order to deliver quality produce to the consumer. The journey from farm to fork is a long one, and when vegetables are offloaded and processed in a facility, the utmost care must be taken to **guarantee hygiene** and **prevent contamination**.

Since vegetables are grown outdoors they must be cleaned, packaged, and stored properly so that by the time they reach the consumer they are not only clean enough for consumption but groomed for maximum freshness. If anything goes wrong along the way, it can lead to contamination, food poisoning, and lawsuits. This is why when processing vegetables it is imperative to use reliable, durable equipment that is up to the task.

Conveyor belts are one of the only forms of plastic that are permitted to come into direct contact with food. Food processing conveyor belts are typically used for many hours on end without undergoing cleaning. Exposure to pathogens in this kind of setting can easily spell disaster. We at Volta have pioneered innovative production techniques and belt products that proactively prevent causes of contamination, ensuring the **highest levels of hygiene** and **food safety**.



Case Studies

Case #101

The pickle processing plant that found itself in a pickle of its own

The Problem:

A whole and sliced pickle processor in Latin America had been using plied belts with glued cleats. The use of these traditional belts had caused the pickles to stick to the belt in addition to tracking issues that caused edge fray and cleat breakage. Over time there was also stretching and elongation. One problem led to another resulting in extended sanitation time for belt surface cleaning as well as the scheduling of additional maintenance time in order to “shave and stitch” the belt. Furthermore, fibers from the fraying belt edge and parts from the broken or loose cleat material could potentially contaminate the final product.

Volta's Solution:

After three years of struggling with risky, ineffective pickle processing, this company approached Volta belting for a better solution. We provided them with our Homogenous Flat Belt - The FEMB-ITO50 with RoundFlex™ Lace and ITO-50 textured cleats.

The Latin American company quickly saw the many benefits of the ITO50:

- ✓ The ITO50 texture provides excellent product release and improves tracking.
- ✓ The homogenous and monolithic characteristics of the belt lower cleaning and sanitation time, thereby reducing water, chemical and labor consumption.
- ✓ Its HF welded flights will not break and contaminate the final product.
- ✓ With the homogeneous surface of Volta belts, customers reduce the risk of foreign material leaching from the belt compared to old technologies.
- ✓ The presence of an embedded finish on the contact point of the pulleys increases the friction and grip of the belt, minimizing tracking issues due to shock loads during production.





Case #102

Potato Product Problems that Result from Sticky Potatoes

The Problem:

When a French fry is still raw and wet, it tends to stick to the surface of the belting due to surface tension, thus products (i.e., dirt, sand, mud, vines, and rocks that are already adhered to the potato) can travel around the head pulley and then drop - often onto the floor. This was previously corrected by spraying water on the head pulley or attempting to blow the fries off the belt with an air jet. However, water is ever more expensive and now considered a finite resource, so avoiding this is necessary.

Volta's Solution:

Volta SuperDrive™ with the ITO-50 texture allows processing plants to put an end to spraying water on the head pulleys as it allows the fries to easily drop off of the belting. The texture is easy to clean and features the benefits of all Volta food-grade materials. Volta belts are highly resistant to the aggressive nature of starch, don't contain fibers, and do not deposit fragments and belt parts into the product flow. A thick SuperDrive™ is preferred for conveying whole potatoes to absorb impact and prevent bruising should the potatoes be dropped onto these conveyors. The ease with which a Volta belt can be welded on site has eliminated the use of lacing - another benefit from the changeover and another bonus for the processor.



Case #103

Intolerable Tomato Belt Failures

The Problem:

Tomatoes contain naturally corrosive acids that can leach out during processing creating pathogen-harboring micro-fissures that weaken and then break traditional conveyor belts. The tomato processing industry is an extremely large one, and since it is based on seasonal work, belt failures during production are too costly to be tolerated.

Volta's Solution:

Volta thermoplastic belting resists the destructive degradation caused by tomato juices making them the top performing belt in vegetable handling. They help prolong shelf-life by reducing bacteria counts. This, in turn, reduces logistic considerations such as delivery frequency, the incidence of rejected shipments, as well as product waste.



Case #104

Perforated Drainage Belts

The Problem:

The first step for vegetable processing plants is to wash off field soil on the intake belts. There is further washing and rinsing prior to and after peeling. Inevitably, there is an exchange of water after each loading. Since subsequent batches are exposed to some pre-used water, it is essential for later stage washing that the first rinses are as free from pathogenic contamination as possible and that the belts only retain a bare minimum of this bacterial condition.

Volta's Solution:

Volta homogeneous belts can be perforated with custom-made designs. The belts are strong and provide excellent drainage. The perforation edges are clean and do not absorb contamination. They do not require pressurized cleaning needed for removing dirt from crevices and joints as in traditional belts. Fewer work hours are needed to effectively clean Volta homogeneous belts, thereby reducing labor costs.



Case #105

Food Grade Belts for Cut-Mixed Vegetables

The Problem:

While in the past, vegetables were only washed or cut during processing, today's busy lifestyle demands ready-to-eat salads. This complicates the processing as equipment must now handle raw materials of various chemical content, shapes (cut vegetables), and stickiness. Traditional conveyor belts were difficult to clean. Flights tore off and there were spots with vegetable juices where water had been absorbed.

Volta's Solution:

We decided to replace them with food-grade belts that are easy to clean and impervious to vegetable juices and bi-products. Their non-fabric cleats don't detach or absorb juices, ensuring long and hygienic service.

Pictures



Homogeneous Belts vs Modular Belts

Unlike modular belts, homogeneous thermoplastic belts are very smooth and don't contain mechanical parts, joints, or crevices. The flat, uniform surface of homogeneous belts prevents bacteria from forming in any of these places. This reduces product waste and increases shelf-life. Moreover, Volta's homogeneous belts are cut and abrasion resistant, making them easy to clean, saving on time and water costs. This significantly decreases the amount of chemicals required to clean the belts and eliminates the need for the intensive, pressurized cleaning needed for removing dirt from the drive and joints found in modular belts. Homogeneous belts' material preserve their own hygienic condition, reducing wear and tear, and extending their life.

Benefits

Our Belts are Made to Last



Belt Longevity



Durable Materials



High Material Resistance



Handles Extra Heavy Loads



Reduce Electrical Consumption



Reduce Downtime



Metal Detectable



Works Underwater



“When looking for customized solutions we can rely on professional support from Volta!”

Stefan Bolter

Technical Commercial Advisor,
Vonblon Tech GmbH, Switzerland.

“With Volta as our business partner, we have the best-in-class technical solutions to offer.”

Daragh Fogarty

Founder, Expert Belting Services, Ireland.

“Volta products are used wherever the highest efficiency, reliability, no downtime and hygiene is required.”

Sławomir Płachetko

Founder, Archimedes Ltd, Poland.



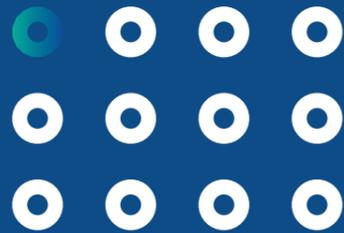
Certifications

With over 50 years of experience manufacturing food-grade conveyor belts, we know how to meet food safety standard requirements.



Volta's food-grade belts have been keeping vegetables safely moving for over 50 years.

Our belt products are leading the industry by improving sanitation and eliminating the risk of contamination. While our belts are used across multiple industries, at the heart of Volta's mission is the goal of exceeding the expectations of the food sector by constantly pushing the technology forward and solving the challenges of modern-day food processing.



Have a unique problem?

Share your experience with us and let's find a solution together



Providing exceptional sales and technical support is one of our core values. We currently service over 60 countries throughout North and South America, Europe, Asia, Australia and Africa.

In business since 1965, we at Volta look forward to continuing to provide exceptional products and services to our customers.





CORPORATE
HEADQUARTERS
Sales and Manufacturing
sales@voltabelting.com

USA
Tel. +1 973 276 7905
Toll Free. 1-877-VOLTAUS
voltaus@voltabelting.com

EUROPE
Tel. +31 546 580166
voltaeu@voltabelting.com

Volta Belting makes no warranty with respect to any of its products for a particular purpose. See Volta General Terms and Conditions.

Copyright© Volta Belting Technology Ltd.

www.voltabelting.com

