



# The Next Step in **Belting**



Simply Safe  
& Hygienic  
Conveying Solutions

## Governments & Consumers Demand More Stringent Safety Procedures from Farm-to-Fork

The issue of food hygiene has become an issue of paramount importance in food processing. Pressure has come from a number of different directions; a change in eating habits in industrialized and developing nations away from fresh, market-sourced foodstuffs; the conglomeration of the food industry around the world; the tenuous supply chain that exists for many products and a general increase in awareness, health culture and the resulting proliferation of legislation and regulations.

Consumer awareness has resulted in governments being lobbied to introduce more stringent controls on food safety and incidents of recalls and even food poisoning due to contaminated product have risen.

Independent organizations are beginning to examine the concept of 'food grade' which does not in most cases cover the belt production technology but merely the plastic from which it is made. The most recent is the EHEDG organization which has, for the first time, brought some 'food grade' belt types into question.

Food manufacturers are keenly aware of the need to reduce their liability to product claims and food suppliers such as supermarkets go to great lengths to audit the products they stock their shelves with and will visit processors at all levels to ensure compliance with safety standards and good practice.

Of all the machinery parts and processing devices that come into direct contact with food at all stages of processing, from raw treatments, through washed and frozen to cooked, conveyors are routinely employed to enable factories to increase throughput. The surface of the conveyors is one of the only non-processing elements to touch food prior to packaging and, as such, is in need of extra care and attention when it comes to improving and maintaining hygiene levels and reducing the risk of contamination.

### Using Conveyor Belts as part of a Food Safety Strategy

Conveyor belts should exhibit the following characteristics:

- | **Strong and consistent (abrasion resistant):** to handle products of various sizes, weights, shapes and consistencies (including sharp elements) without displaying wear and tear that turns the belt into a hazard point.
- | **Non-porous material:** impermeable to fats, liquids, and chemicals and not prone to harbor bacteria or other micro organisms.
- | **Non-Stick surface:** preventing product from sticking to the conveyor belt and thereby reducing the repeated contact of dirt with material subsequently conveyed.
- | **Homogeneous:** made from dense (extruded) material with no fabrics to fray or soak up fluids and cleaning agents. No links, joints and pins which harbor bacteria and involve long and frequent chemical soaks to bring back to working condition.
- | **Easy to operate and maintain:** a positive drive belt with an off-tracking system such as Volta's SuperDrive<sup>™</sup> can reduce the amount of working parts in a conveyor and allow for an open and hygienic conveyor design. Upgrading conveyors will actually reduce the cost of ownership as well as provide a safer processing environment.
- | **Easy to sanitize:** Homogeneous belts offer the fastest wash down regimes with no removal of belts from conveyors. Water consumption and labor is saved; the environmental cost is low and production time is freed up.

As a manufacturer of food grade conveyor belts with over 60 years of industry experience, Volta has designed belts that conform to all these considerations and do not just meet the expectations and demands of food processors, but exceed them. Volta offers tested and certified food grade belts for all food processing needs and allow for true compliance with HACCP principles.

For more information on HACCP visit the official site at [www.haccpalliance.org](http://www.haccpalliance.org)

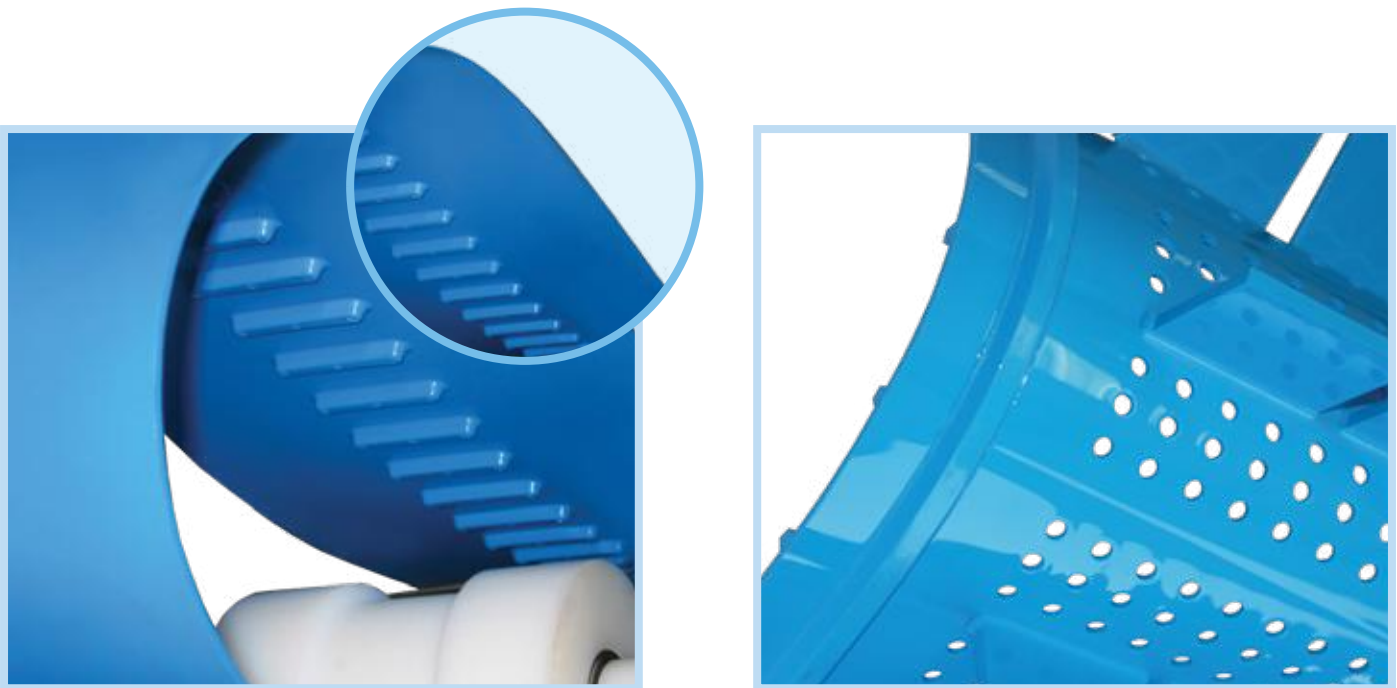
For download of EHEDG Guideline 43 visit [www.ehedg.org](http://www.ehedg.org)

## Simply Hygienic

Volta Belting has been developing and designing conveyor belting products since 1964. Volta's thermoplastic elastomeric (TPE) food grade belts fully comply with the strictest hygiene requirements of the food industry and are used in thousands of installations worldwide.

Volta's hygienic belting technology is known for its versatility, durability and, above all, its hygienic safety. It offers the largest range of materials and surface textures and supports state of the art fabrications which are designed with preventing product residue and bacteria traps.

The materials are all extruded and can be welded piece to piece by heat or HF welding, eliminating the use of adhesives and giving a solid unbreakable bond. The features which are welded on, such as flights, guides and side walling, will not detach or fragment which this renders the need for metal detectable material obsolete. The positive drive systems, especially the SuperDrive™, are designed to make permit the flushing out of the bottom side when cleaning and the teeth are formed as part of the extrusion and not welded-on or machined (inferior production techniques that can make the teeth a hygienic hazard point by trapping dirt and fluids).



## Material Quality

Volta belts outperform conventional belt types for hygienic stability:

- | Produced from dense TPE with resistant properties suited to difficult conditions: water, oils, fat, cold and freezing temperatures. The belts will not crack, delaminate or deteriorate over time.
- | Smooth non-porous surfaces which repel bacteria.
- | Especially strong and thick belts which can convey heavy loads, handle accumulation and take impact from problematic material and food waste.
- | Suited to Volta's in-house hygienic fabrications.
- | Easy to clean (wash down only; no soaking), keeping water consumption and handling time to a minimum.
- | Complies with EU, FDA and USDA regulations. Consistent with EHEDG Guideline 43.

## SuperDrive™ - the World's Best Hygienic Conveyor Belt

SuperDrive™ is the most hygienic positive drive belt on the market. It uses all of the advantages of the TPE materials and the fabrication system common to Volta's other belts and goes further.

The belt is designed with integrally extruded teeth on the underside of the belt which have the safest and most reliable design for positive drive which can work in or under water and with humid and greasy foodstuffs. The teeth are sued to prevent off-tracking. Asides from the impressive mechanical capabilities, the SuperDrive™ teeth are the only positive drive teeth designed to facilitate washing and even allow trapped product to flush out during production to minimize the accumulation of fallout.

The belts are ultra-hygienic and also allows new standards of hygiene to be adopted in conveyor construction by allowing streamlined and minimalistic conveyor designs, that, when coupled with superior materials and finishing by a competent OEM, give the most advanced hygiene system available in the world.

## Contrasting Volta's Hygienic System with Older Technologies

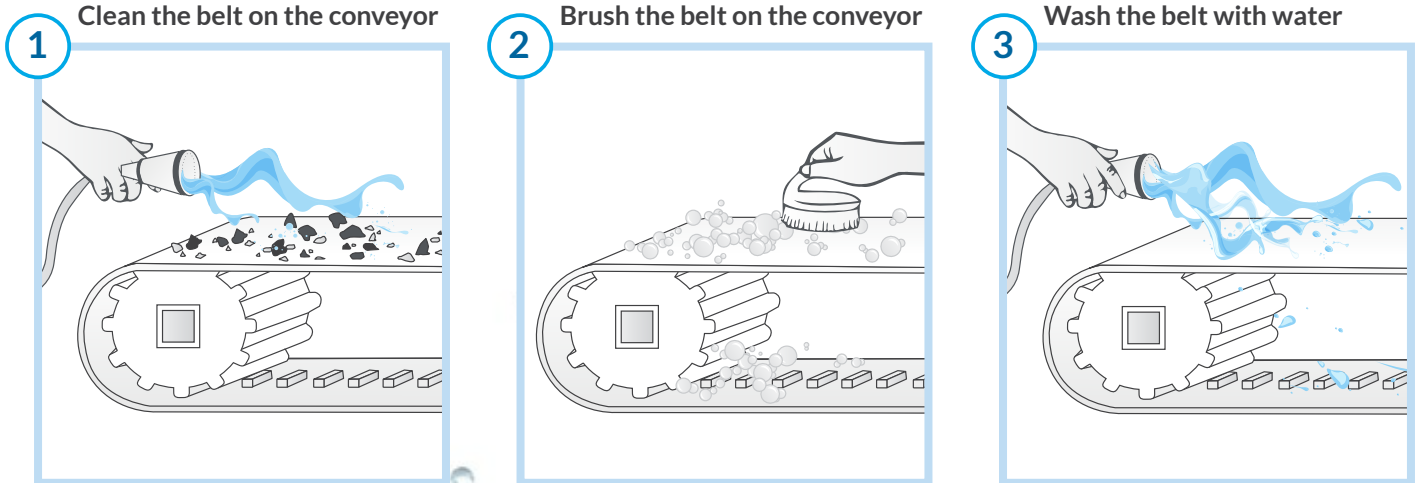
The belting industry still offers two main alternative systems: fabric coated belts ("ply" belts) and modular belts. The use of both these types has been called into question by EHEDG Guideline 43. Ply belts require sealing on the edges and underneath as well as frequent inspection; modular belts are not considered hygienic under any circumstances.

**Fabric coated belts** fray easily and are the fabric layers, overlaid with thin deposits of TPU, PVC or rubber coating crack on impact, from changes in humidity and temperature and from exposure to water, oils and fats. They are prone to delaminate at the joints from even moderate wear and in general across the surface from contact with abrasive materials such as salts, seasonings, frozen goods, bone fragments and the like. Not only exposed fabric layers but even light scratching can expose cavities inside the plastic which form breeding grounds for bacteria and micro-organisms and severely reduce belt cleanability.



**Modular Belts** have been widely sold to the food industry for over a decade; their overall hygienic condition and cleanability is not suited to food processing. From day one, modular belts cannot be cleaned effectively. Modular belts are composed of moving parts which are brittle and easily damaged and can enter the product flow unnoticed and untraced. The joints and pins and shaped link plates offer over 30% extra surface area, much of which is inaccessible to normal sanitation practices. Cleaning regimes are understandably stricter with such belts and the hidden cost of maintaining them in good condition makes them expensive. Coupled with their propensity to break or wear, the frequent replacement of parts makes them the most expensive and least cost-effective alternative available as well as being hygienically questionable at best.

## Three steps to clean your belt:



### This is what they are saying about us

End Users' Reports on Volta's Hygienic Advantages

"We changed over our last non-Volta modular belt to SuperDrive<sup>™</sup>.  
That was the last weak point in the factory."  
QA Manager, Australian Dry Fruit Company

"We managed to increase shelf life by 25% on a Volta Z conveyor. As we do the logistic shipping  
across Europe, this is a major saving in fuel, manpower and lost product."  
Salad Processor Plant in the South of Italy

"We installed Volta's three-feed conveyor. We couldn't believe the quick change over time from  
batch to batch - it came down to under 10 minutes!"  
Multinational Food Processing Plant in France

"We installed SuperDrive<sup>™</sup> belts in place of modular and this gave us a saving in electricity, lower  
decibel counts, and fewer maintenance issues with motors, less waste and a cleaner product. I  
can bring my customers into the factory now with a clear conscience."  
Indian Seafood Processor, Mumbai

## Quality & Food Safety

### Standards

Volta Belting has implemented and maintains a Quality Management System (QMS) that is in compliance with ISO 9001:2015 requirements for the production of conveyor belts and conveyor belting systems.

Volta Belting's positive drive and food-grade belting comply with the following international standards:

- ✓ **USDA** Guidelines of the Sanitary Design and Fabrication of Dairy processing Equipment
- ✓ **USDA - NSF/ANSI/3-A SSI-14159-3-2019** - Hygiene Requirements for the Design of Mechanical Conveyors used in Meat and Poultry Processing
- ✓ Requirements of Code of Federal Regulations (**CFR21**) **USDA FDA** article 21 CFR 177.2600
- ✓ **European Food Contact Regulations (EU)** No.-10/2011, 1935/2004 2023/2006 and relevant amendments
- ✓ German Regulation BfR XXI

### Associations

Volta Belting is a member of these prestigious professional industry organizations.



**EHEDG** (European Hygienic Engineering and Design Group)



**NIBA** (National Industrial Belting Association)

Volta manufactures its food grade conveyor belts at its production facility, which supports a sizeable R&D unit. The company has distribution centers in Europe, the USA, and Asia to serve its global markets, locally. Find out more about us or contact us for sales & service support center nearest you.

