Volta™
Belting Technology

Solving Fish & Seafood Processing Challenges: The Volta Solutions Guide

Eliminate Contamination Risks & Reduce Cleaning Costs Over 55%

Why Old Conveyor Equipment Could Be Your Biggest Food Safety Risk

The global seafood industry stands at a critical crossroads where unprecedented growth meets devastating safety failures that threaten the survival of processing operations worldwide.

The Crisis by the Numbers:

- Between 63% and 71% of specific fish processing operations — such as smoked, vacuum-packed, and ready-to-eat products — lacked adequate hazard controls
- Average recall costs **$10 million** in direct expenses
- 77% of companies experiencing recalls face **total costs up to $30 million**
- Listeria accounts for **30% of all seafood recalls**

While processors focus on visible contamination sources, **traditional fabric-reinforced and modular belts create microscopic traps for bacteria,** turning conveyor systems into contamination highways. With **only 11% of FDA warning letters receiving proper follow-up inspections** (Report GAO-21-231), processors cannot rely on regulatory oversight to identify problems before they become million-dollar disasters.

The EHEDG Solution Standard

In an industry where **46% of recalls are classified as Class I** (highest risk category), EHEDG Guidelines represent the gold standard for eliminating bacterial hiding places. Volta's **SuperDrive™** and **Mini SuperDrive™** systems go beyond basic compliance — providing seamless, homogeneous surfaces that leave contaminants nowhere to hide.

Your conveyor choice determines whether you join the 24% of compliant processors or become another costly statistic.

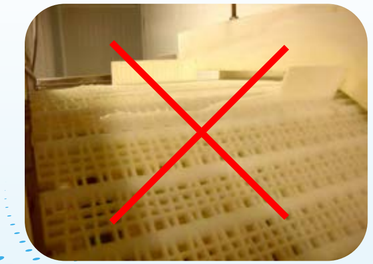
Old Conveyor Belt Technologies vs. the Volta Hygienic System

For decades, the food industry has relied on two main conveyor belt technologies: fabric-coated (“ply”) belts and modular belts. While both have served their time, modern hygiene standards, efficiency demands, and maintenance realities have **revealed significant flaws in these older systems.** The emergence of Volta’s SuperDrive™ technology offers a cleaner, safer, and more cost-effective alternative.

Fabric-Coated Belts (“Ply” Belts)

Made from layers of woven fabric coated with TPU, PVC, or rubber, these belts are flexible but flawed

- **Fraying & Delamination** – Belts require sealing on the edges and underneath as well as frequent inspection.
- **Hygiene Risks** – Damage exposes fabric layers and hidden cavities that trap bacteria, making thorough cleaning nearly impossible.
- **High Maintenance** – Sealing, patching, and replacements drive up long-term costs.

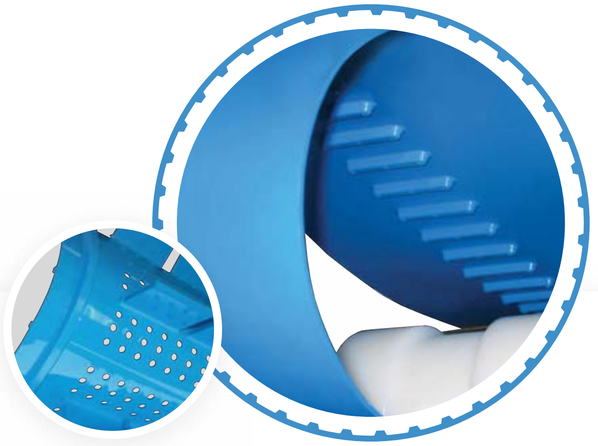


Modular Belts

Built from interlocking plastic segments and pins, modular belts are easy to repair but hygienically problematic.

- **Inaccessible Surfaces** – Over 30% extra surface area, much of it unreachable during cleaning.
- **Uncleanable from Day One** - Joints and moving parts harbor debris and bacteria.
- **Breakage Hazards** – Brittle parts can break off and enter the product stream unnoticed.
- **Costly to Operate** – Frequent cleaning, part replacements, and downtime make them expensive.

EHEDG does not recognize modular belts as hygienic and although in wide use for reasons of convenience, they are both expensive to maintain and to disinfect.



The Volta SuperDrive™ Advantage

Designed to eliminate the weaknesses of older belt systems, SuperDrive™ offers unmatched hygiene and reliability.

- **Solid, Seamless Construction** – Made from durable TPE with no fabric layers, moving parts, or hidden cavities.
- **Hygienic Positive Drive Teeth** – Prevent off-tracking and allow debris to flush out during production, reducing contamination risk.
- **Minimalist Conveyor Integration** – Enables cleaner, simpler conveyor designs with fewer areas for bacteria to hide.
- **Long-Term Cost Efficiency** – Resistant to cracking, delamination, and abrasion, reducing maintenance and replacement needs.

SuperDrive™ isn’t just an improvement – it redefines what a truly hygienic conveyor belt can be.

Why Volta Belts Set the Standard for Hygienic Conveyor Performance

Material Quality & Hygienic Performance

Made from dense TPE that resists water, oils, fats, cold, and freezing temperatures - without cracking, delaminating, or deteriorating over time.

Smooth, non-porous surface naturally repels bacteria and prevents microbial growth.

Extra-strong and thick construction handles heavy loads, accumulation, and high-impact materials with ease.

Designed for Volta's in-house hygienic fabrications to ensure maximum cleanliness and durability.

Easy to clean — requires only wash-down (no soaking), reducing water use and cleaning time.

Fully compliant with EU, FDA, and USDA food safety regulations and aligned with EHEDG Guideline 43.

Proven ROI: Real Results from Real Plants

Industry: Seafood Processing
Previous System: Modular belt system
Solution Implemented: Volta SuperDrive™ homogeneous belts

The Challenge

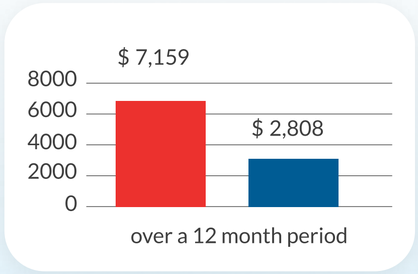
Hinh Puh Fish Processing Plant was using a modular belt system that demanded frequent maintenance, complex cleaning procedures, and carried a risk of bacterial contamination due to multiple joints and gaps in the belt design. This not only increased operational costs but also raised concerns over food safety compliance.

The Volta Solution

The plant replaced its modular belts with SuperDrive™ homogeneous positive drive belts, designed with a seamless, non-porous surface and integrally extruded teeth to eliminate off-tracking while ensuring superior cleanability.

The Results

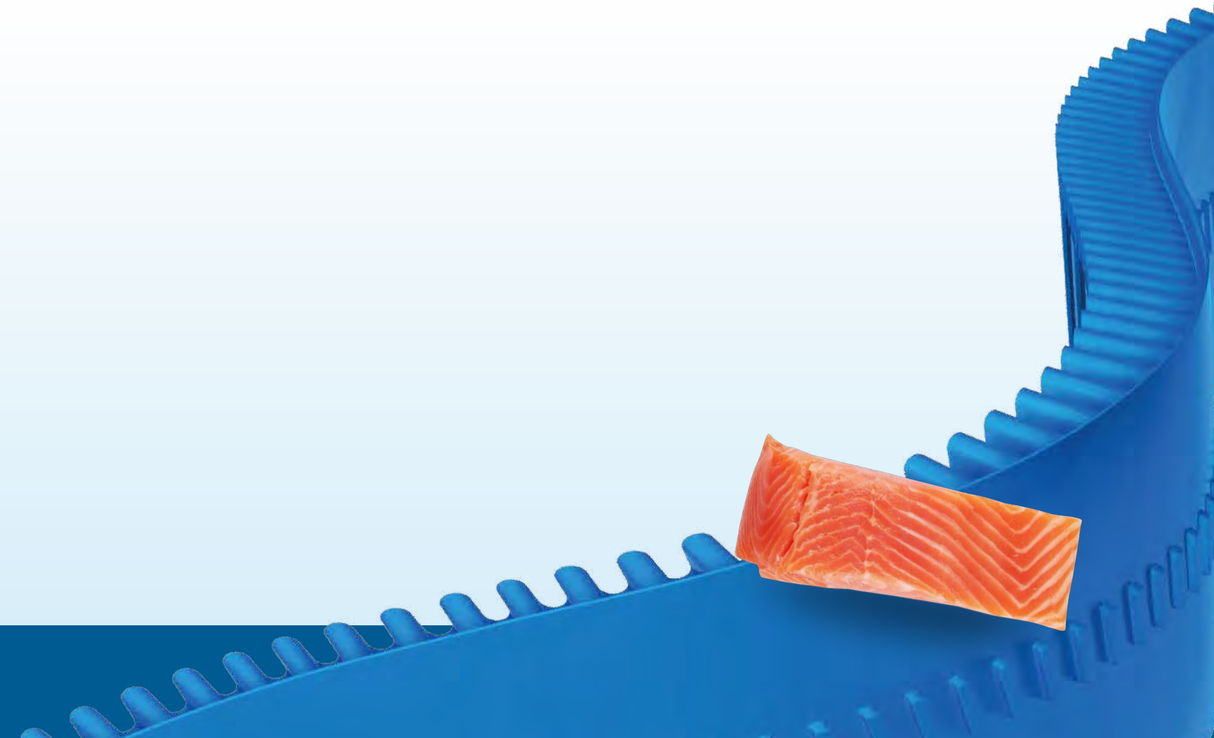
- Total Cost Reduction: Operating costs dropped from $7,159 to $2,808 per year — a 61% savings.
- Cleaning Efficiency: Wash-down times were significantly reduced, eliminating the need for time-intensive disassembly.
- Contamination Prevention: Zero contamination incidents recorded after installation.
- Maintenance Savings: Minimal upkeep compared to the previous modular system.



Total Cost of Ownership: **Modular**
Total Cost of Ownership: **Volta**

> **I think Volta belts are the best because they are easily installed and cleaned. There are no spaces in the belt for bacteria to harbor, leaving no bad odor caused by bacteria.**

Mt. Hung, Director, Hinh Puh Fish Processing Plant, Vietnam



Fish & Seafood Challenges vs Volta Solutions

The Industry's Most Critical Pain Points – Solved

The fish and seafood industry faces unique challenges that traditional belting systems cannot address effectively. Here's how Volta's innovative technology solves each critical issue:

The Complete Solution Advantage			
Challenge	**Traditional Belt Problems**	**Volta Solutions**	**Key Benefits**
Environment	Deterioration in harsh conditions	Cold/wet/saline resistance	Consistent performance
Belt Failure	Frequent replacements	Superior durability & strength	Longer service life
Product Handling	Sticking and yield loss	Non-stick surfaces	Improved efficiency
Cleaning	Complex, time-consuming	Simple hygienic design	Reduced downtime
Hygiene	Bacterial hiding places	Homogeneous construction	Zero contamination risk

Specialized Solutions for Every Application

Tuna Processing

Challenge: Oil absorption, bacterial decay, abrasion resistance

Solution: Smooth, non-absorbent surface with superior cut resistance

Benefits: Easy cleaning, no odor retention, extended belt life

Salmon Processing

Challenge: Sharp fins puncture traditional belts, creating contamination sites

Solution: Homogeneous construction

Benefits: Cut-resistant, bacteria-proof, on-site repairable

Shellfish Processing

Challenge: Sharp shells damage belts, creating irregular surfaces

Solution: More strach-resistant material with thermo-welded features

Benefits: Impact resistance, smooth product flow, no cracking

Deep Freeze Applications

Challenge: Traditional belts become brittle and break in freezing conditions

Solution: Low Temperature (LT) material maintains flexibility

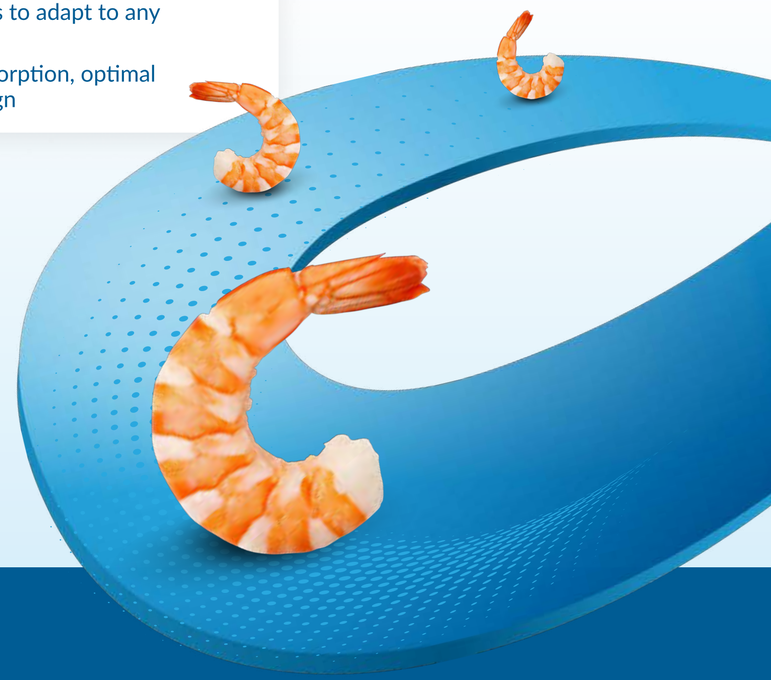
Benefits: Performs well below zero, ideal for glazing lines

Underwater Conveying

Challenge: Water absorption leads to bacterial growth and belt deterioration

Solution: Non-absorbent homogeneous material with custom perforations to adapt to any conveyor design

Benefits: Zero water absorption, optimal drainage, adaptable design



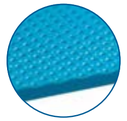
Complete Processing Stage Solutions

Recommended Belt Types by Application

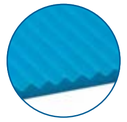
Process Stage	POSITIVE DRIVE																				
	FHW/FHB-SD	FMW//FMB/ FDR/FEDR-SD	FMB-SD LT	FMB-DD LT	FMW/FMB/ FDR-DD	FHW/FHB	FMW/FMB	FMB-LT	FMW/FMB	FEMW/FEMB	FRMW-CEBB/C	FEMB-ITO50	FRLW-ITO50	FEMB/FELB Spikes	FRG	FZ	FEZ	FK	FELB	FETB	RCW PROFILE
Fish Intake	●	●			●	●	●		●		●										
Wash Down - perforated belt	●	●			●	●	●		●												
Cleated incline- light to medium load	●	●	●		●	●	●		●	●	●										
Cleated incline- extra heavy load	●	●			●	●	●		●	●	●										
Gutting Lines		●			●		●														
Skinner Lines							●														
Filleting Lines	●	●			●	●	●		●	●	●	●	●	●							
Filleting Deboning/ Trimming/Portion Cutting	●	●			●	●	●		●	●	●	●	●								
Pin Boner Lines														●							
Tuna Squeezing							●			●	●										
Checkweighing							●												●	●	
Grading & Batching	●	●	●		●	●	●		●	●	●	●	●								
Freezing : IQF			●	●				●													
Sorting & cleaning after cooking	●	●			●	●	●		●	●	●										
Fried Fish conveyor							●						●								
Can Cleaning						●															
Metal Detector	●	●	●		●	●	●		●	●	●	●	●	●							
Magnetic Elevator						●									●	●	●	●			●

This information is based on our experience in the field over time and should be considered as a general recommendation only.

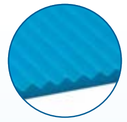
Volta Special Surfaces for particular processing requirements



ITO 50 - Impression Top Oval
Quick release, non-stick surface.



IRT - Quick release, non-stick surface
Gives high grip of oily or wet food products.



ITE Embossed texture
Non - stick top surface.

CT - Crescent Top belt for the high grip of bulky soft products such as fish and seafood. Crescent top is ideal on slicers and inclined conveyors.

SP - Spikes are designed for applications requiring grip of amorphous materials such as fresh fish. The spikes are extruded as one with the belt.

Ready to eliminate contamination risks and cut costs with Volta Belts?

The results speak for themselves:

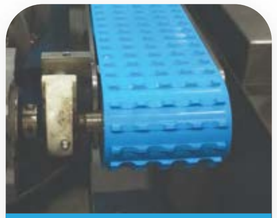
- **Save 40-80% cleaning time** per conveyor
- **Reduce water usage** by 50-80%
- Boost efficiency with **lower energy consumption**
- Achieve higher hygiene levels and **fewer recalls**

Volta Belts – Where clean design meets real savings.

Volta™ Belting Technology

Contact Volta Today:

sales@voltabelting.com



Special Belt for Surimi

Surimi Conveying

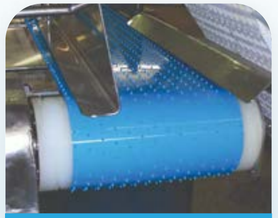
Fish Intake

Fried Fish Sorting

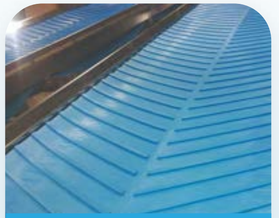
Tuna Squeezing

Portioning Line

On-site Washing



Belt with Spikes



Belt with Special Cleats

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All web sources accessed and verified January 2025. Links and data subject to updates by original publishers.

The Next Step
in Belting