



**Best Practices** for Increasing Hygiene,  
Reducing Downtime, and Achieving  
Low Operational Expenditure (OPEX)  
in Bread and Cake Bakeries



# Looking to maximize the operating efficiency and hygiene of your bakery production line?

This easy-to-follow e-book provides comprehensive information on how to choose and utilize conveyors belts for improved performance.

This e-book covers a range of topics, including how to:



**Select**  
the right conveyors



**Installation**



**Maintain**  
your belts

After reading this e-book, you will be equipped with enough knowledge to make informed decisions on how best to handle your products between processes, or while undergoing transformation on belts.



## Introduction: Bakery Production Lines

Bread and cake bakeries handle large batches of dough and use specialized machinery to form their various bakery products.

A typical production line consists of a series of processing machines, some with integrated belts, others connected by generic conveyors. Dough consistency and content vary from sticky dough with a low-fat content to butter-rich dough. Additional fillings and ingredients are often added on the production line, making dispensing areas messy.

Traditionally, fabric-based plied belts are chosen because of their flexibility. However, these belts, particularly those that work on small transfer pulleys, suffer from mechanical damage and are not long lasting. Maintenance can waste time changing belts, often during production hours, and poor condition belts may shed fragments and fibers into the product flow. Cleaning regimens that include wet chemical washdowns also destroy the working surface of the belt and contribute to reducing their performance lifespan.

**But there are things that can be done to avoid all of this and increase efficiency...**

## Optimal belt selection should consider:

- 1 Belt material that resists or reduces the accumulation of product residue.
- 2 A reliable joint without fasteners.
- 3 No exposed fabric base or edges if a wet wash down is planned.
- 4 No fiber release from the edges, even with dry applications.
- 5 Product weight support, a hygienic base, and no protruding fibers when elevated with cleats.
- 6 Conformity to conveyer design, especially pulley diameters.



## Lets talk about food safety...

The increasing demand for “Ready to Eat” in modern households means that more and more processes are performed outside the control of the home and its consumers. Dangers include foreign bodies, physical contamination by small unwanted particles, chemical and bacterial adulteration, and undisclosed allergenic presence.

When choosing a belt, one should ensure that the belt type conforms to the highest and latest hygienic standards. In Europe, these include directives such as:

- ✓ Articles 1935/2004/EC and 10/2011, which relate to the material itself.
- ✓ Article 2023/2006/EC, that targets direct food contact.
- ✓ Article 852/2004/EC, which requires the processor to determine a frequency for rendering food contact and choosing materials free from risks of contamination.

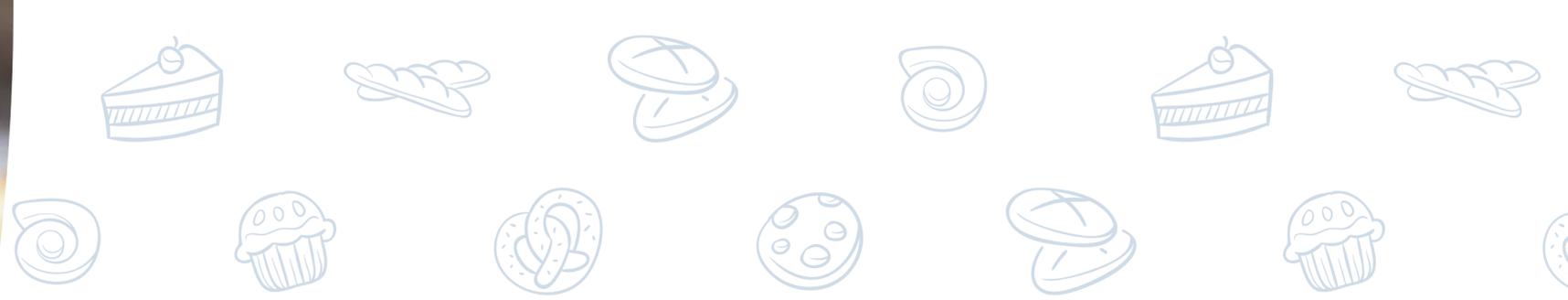


Almost  
**1 in 10**

**people around the world**  
fall ill after eating contaminated food

and **420,000** die every year,  
resulting in the loss of 33 million  
healthy life years (DALY).

7 June, 2022 | World Food Safety Day 2022  
Food Security Cluster



## ...and worker safety

Worker safety is paramount to all other considerations in a factory. This includes noise-free and flexible thermoplastic belts that can handle heavy duty applications, eliminating yet another source of trouble caused by modular belts.

Volta's homogeneous materials can also be formed into funnels, pipes, and chutes, which are lighter in weight than steel elements and can prevent injury when being serviced or cleaned.

# Best Practices

Read on for best practices  
in bakery production...



# Practice No.1

Select the right materials for your conveyor belt system

When selecting materials to use in a conveyor belt system, it is important to consider the size of the items being processed, to avoid any product damage or misalignment. Additionally, you should ensure that all components are compatible and regularly maintained.

Your belt product choice should be hygienic, run smoothly, be easy to install, and have the proper surfaces or textures to ensure the desired production performance.

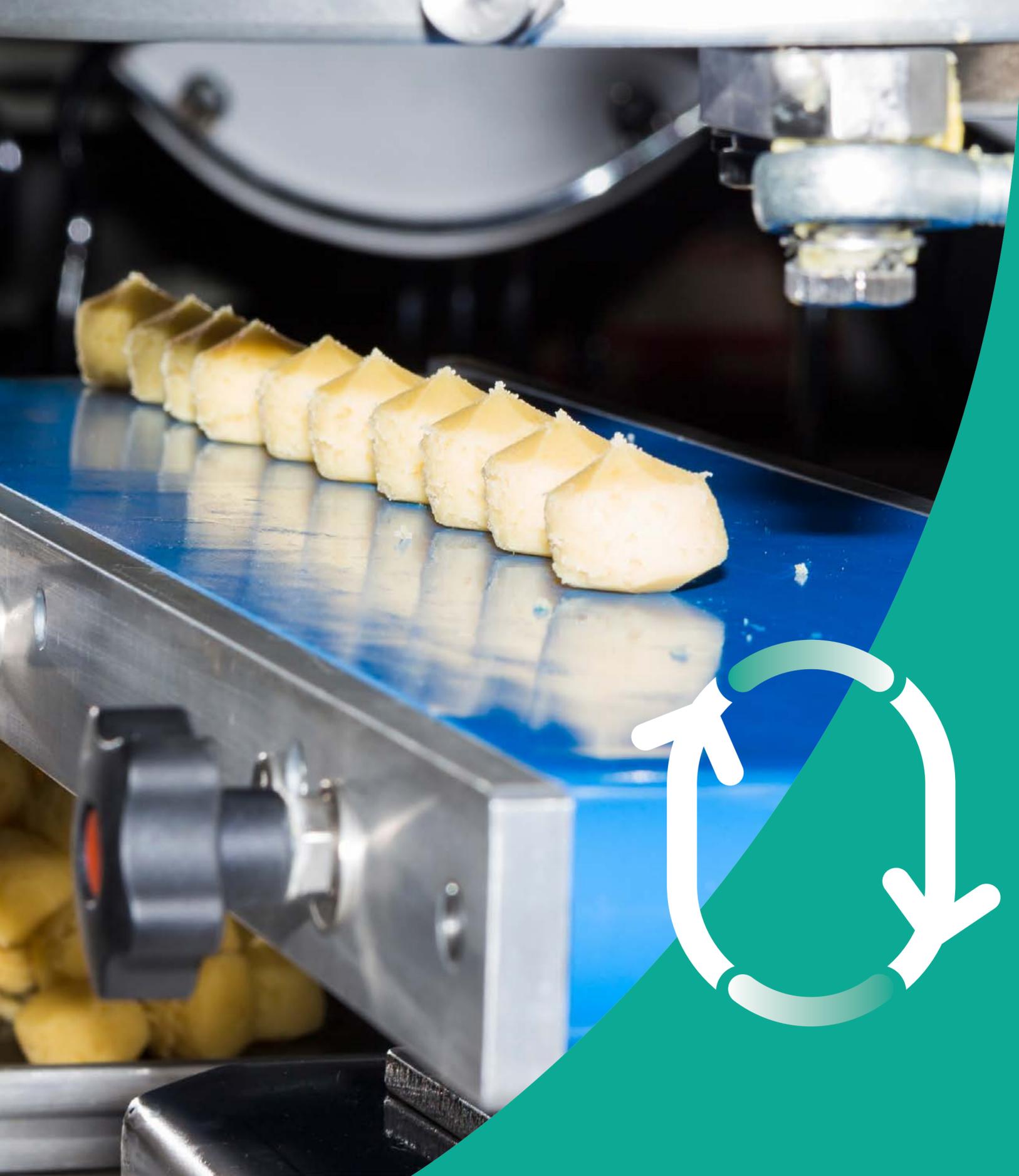


Volta belts last up to

**5 times longer**

*and are easier to clean!*

Volta conveyor belts have a denser top surface than traditional belts. As a result, they retain less dough and are easier to keep clean than any other industry belt. Additionally, Volta belts perform for nearly five times (!) the working life in bakery production times compared to other solutions.



## Practice No.2

### Set Up your production line properly

Setting up your production line correctly involves adhering to guidelines, as provided by manufacturers or suppliers.

You will also need to place guards around moving parts, to ensure that safety protocols are strictly followed at all times while using machinery on the line. It is essential that tension systems are checked and adjusted according to manufacturer instructions or recommendations.

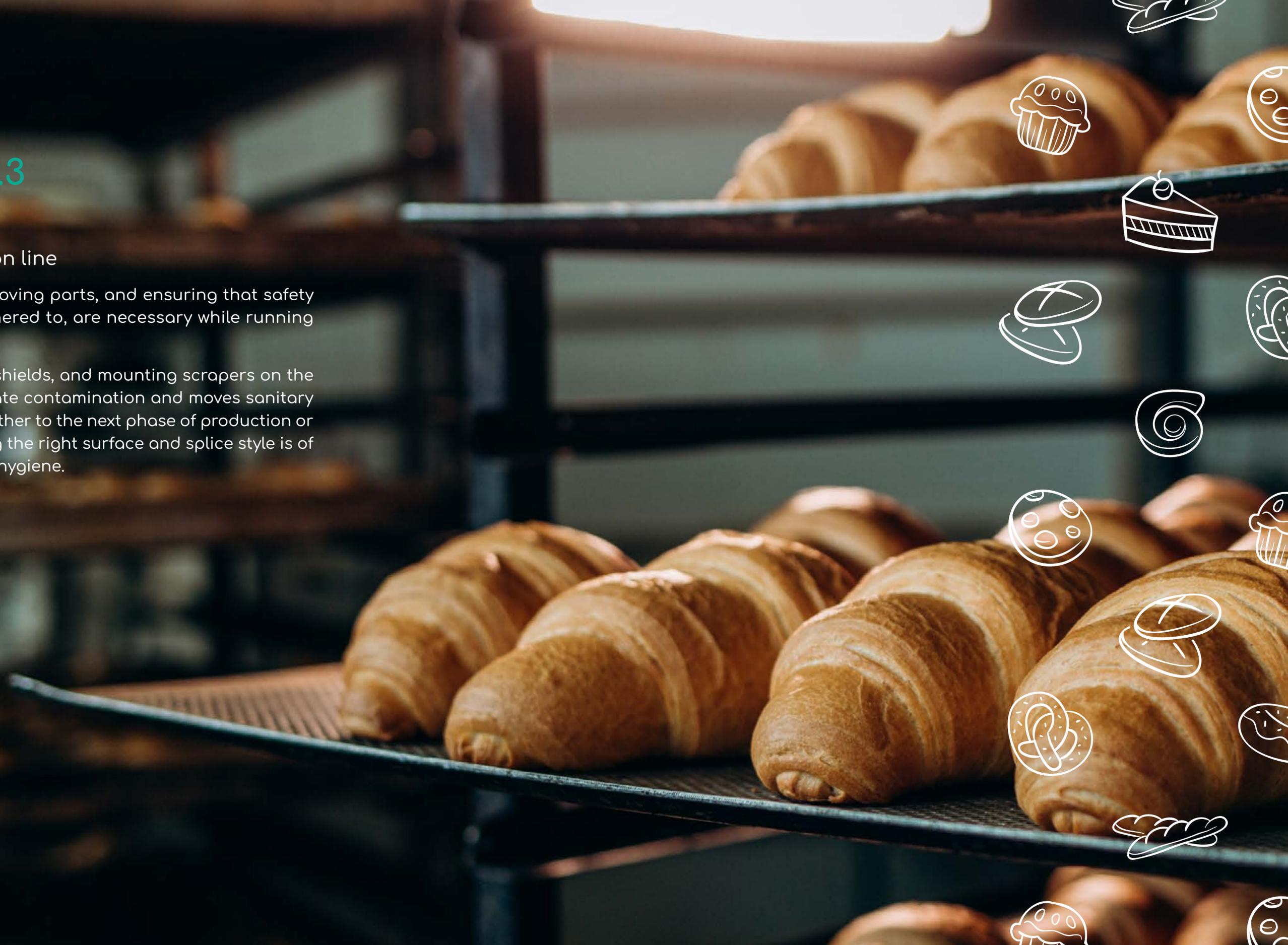
Lastly, lubrication should be applied where necessary, depending on the type of system employed.

## Practice No.3

### Guard your production line

Placing guards around moving parts, and ensuring that safety protocols are strictly adhered to, are necessary while running machinery.

Protecting products with shields, and mounting scrapers on the belt surface, helps eliminate contamination and moves sanitary products safely forward, either to the next phase of production or into totes or boxes. Having the right surface and splice style is of the utmost importance in hygiene.



# Why choosing the right belt can save you time and money, and increase your productivity

## Practice No.4

Select the right belt compound and surface for cutting or trimming

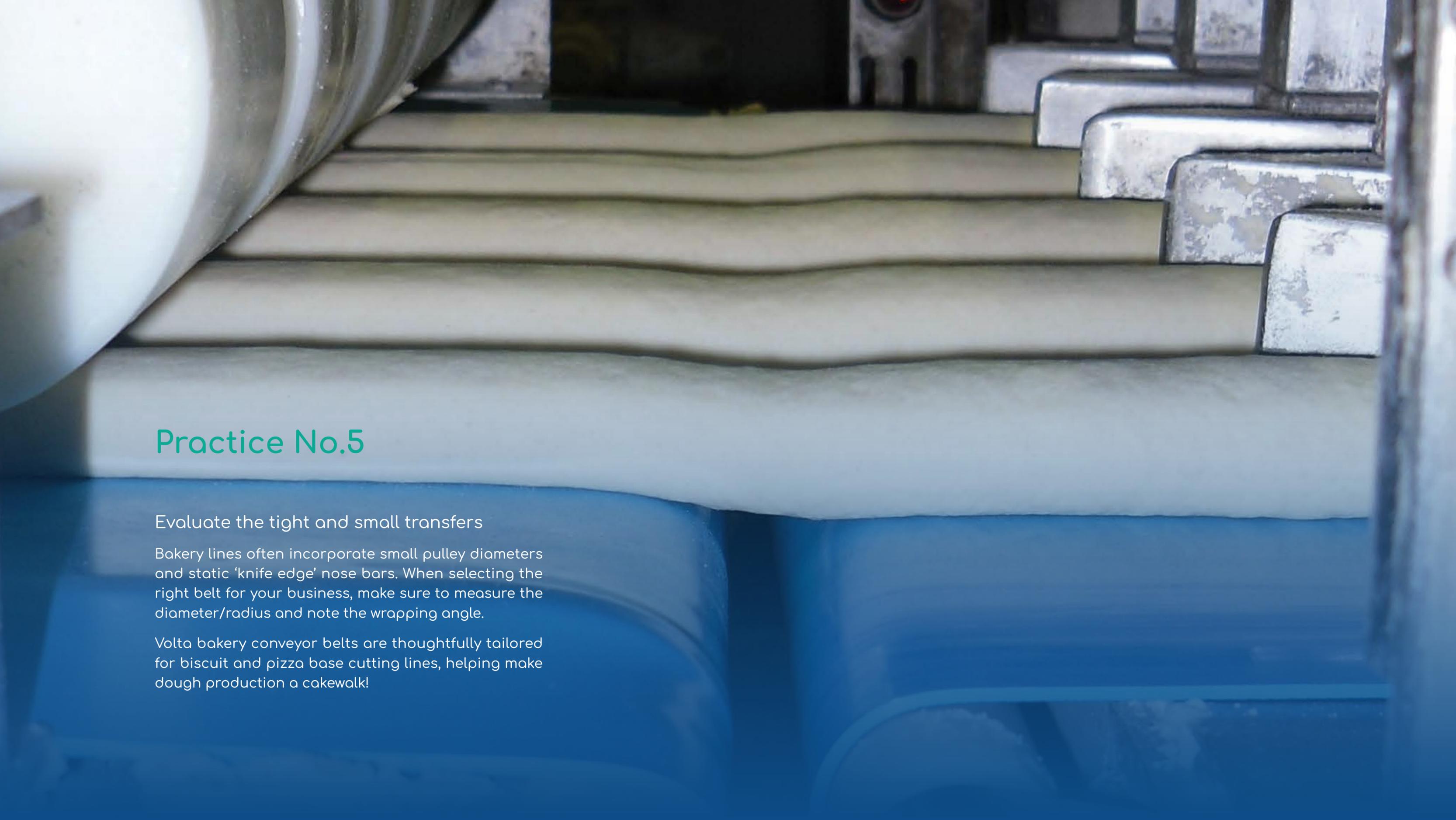
When choosing a conveyor belt, you need to think about cuts and abrasions. Choosing the wrong belt can lead to expensive repairs, downtime, and loss in revenue.

Volta belts are highly resistant to cuts and abrasion. They are also easily repaired in the event of mechanical damage, making them robust, cost-effective, and literally the best thing since sliced bread ;-)

 **Volta belts enable big savings on running costs**  
*and comply with industry standards!*

**Volta belts** provide numerous advantages, including decreased running costs. They are also in line with increasingly strict legislation. Volta materials comply with European Regulation (EU) 10/2011 (amended by 2017/752 and 2020/1245), regarding plastic materials and articles of FCM; German Regulation BfR XXI, 1935/2004 and 2023/2006; and US Food and Drug Administration 21 CFR 177.2600 (Rubber Articles). They are also HACCP compatible.





## Practice No.5

Evaluate the tight and small transfers

Bakery lines often incorporate small pulley diameters and static 'knife edge' nose bars. When selecting the right belt for your business, make sure to measure the diameter/radius and note the wrapping angle.

Volta bakery conveyor belts are thoughtfully tailored for biscuit and pizza base cutting lines, helping make dough production a cakewalk!



## Practice No.6

### Choose the correct dough elevator conveyor belts

Dough pump conveyors are used to process raw dough in large-scale production bakeries. These conveyors elevate dough at a sharp incline and commonly use plied belts with bottom guides. Due to uneven loads, bakery belts often suffer from off-tracking and slippage. This can cause fraying, tearing, and the need for additional belt tension, leading to belt failure.

A retrofit to SuperDrive™ solves all of this, making raw dough production... as easy as pie.

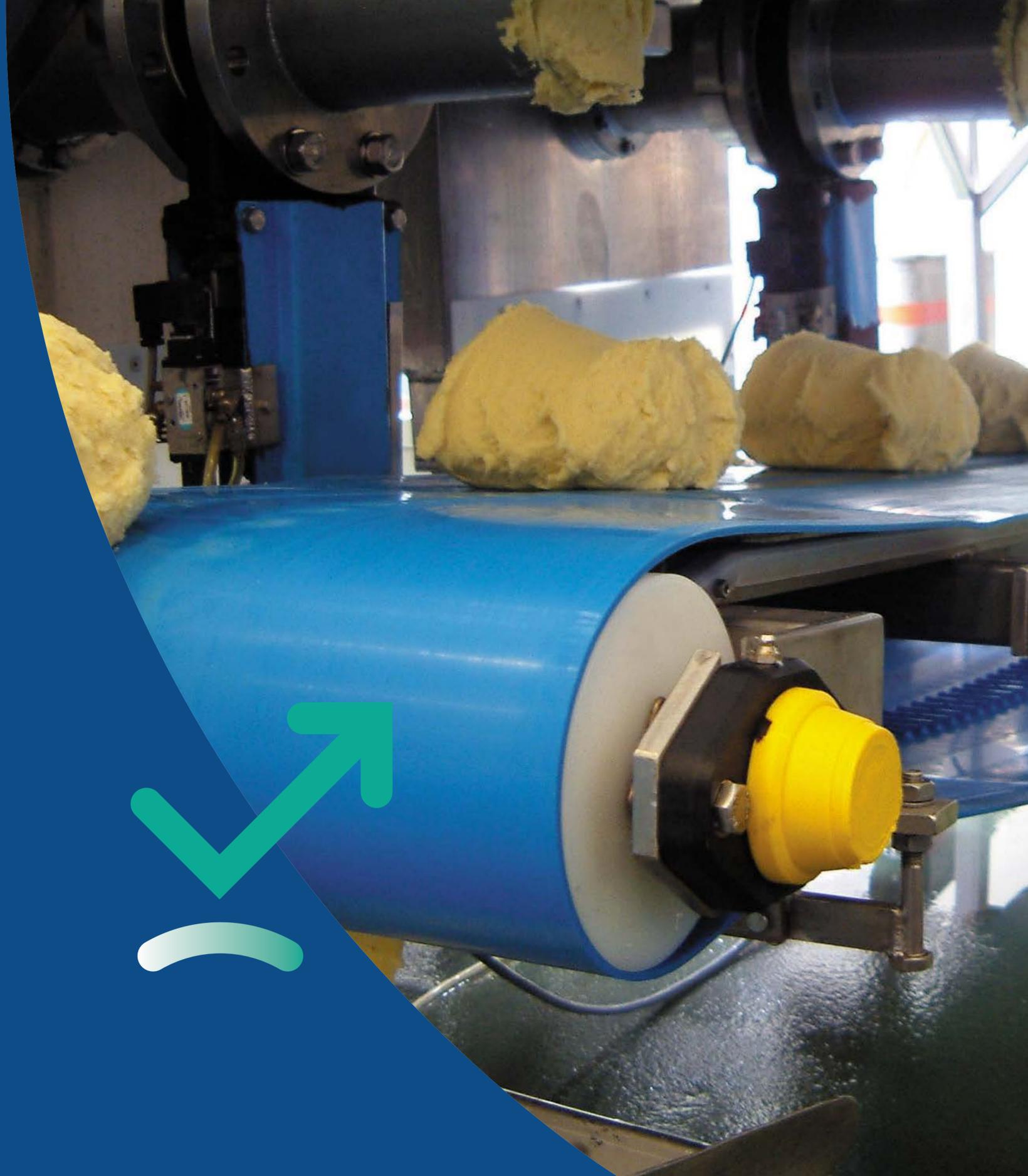
## Practice No.7

### Ensure non-stick conveyor surfaces

Top surface textures have been developed especially for the bakery industry, to reduce the overall contact area between the dough and the belt, providing improved product release and keeping the belt cleaner and for longer.

When switching to Volta, bakeries have documented up to 75% reduction of flour required to keep the product from sticking to the surface of our belt. The ITO-50 profile is the best non-stick surface in the industry.

- ✓ ITD 60 - Impression Top Diamond.
- ✓ ITO 50 - Impression Top Oval quick release, diamond impression non-stick surface.
- ✓ ITS 70 - Impression Top Square quick release, fine non-stick surface.
- ✓ ITE - Embossed texture, very fine non-stick surface, only available on Volta SuperDrive™ belt.
- ✓ ITM and ITM2 - Matt Top.





## Practice No.8

Choose a strong belt that is built to last

Long lasting Volta belts are made from strong, abrasion resistant homogeneous materials that do not contain the links and hinges found in modular belting.

Containing up to 8 times the amount of elastomer content in one dense layer for protection against oils, sticky materials, and mechanical abrasion, Volta belts are superior to ply belts in quality and hygiene.

Volta's hygienic belts generally outlive plied belts by at least 5 times. Conveyors where a dough cutter is used is a strong example of this extended belt-life.



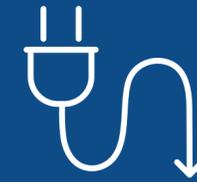
# Our Belts are Made to Last!



Durable  
Materials



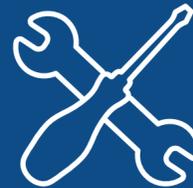
Belt  
Longevity



Reduced Electrical  
Consumption



Handles Extra  
Heavy Loads



Reduced  
Downtime



High Material  
Resistance



## Summary

By following these eight best practices when setting up your bakery production lines, you will be able to maximize efficiency and reduce downtime and OPEX, in addition to ensuring that safety standards are met at all times during operations.

*Happy Baking!*

Do you have a unique problem?

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

Challenge Us



The Next Step in Belting