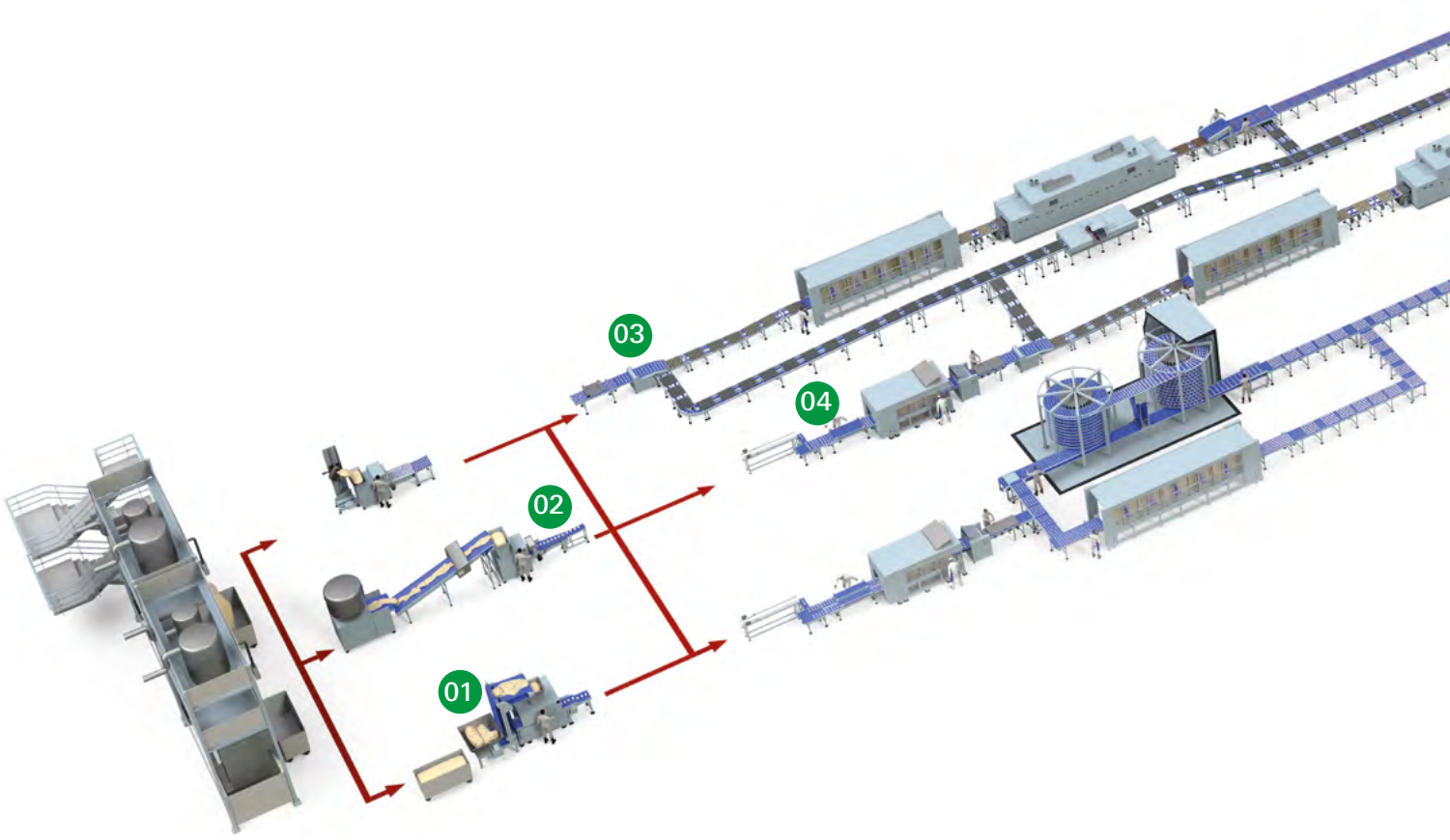
Bread and Buns

Food-safe belting innovation

Industry process

Bread and buns processing – understanding the journey

The production of bread and buns follows a detailed and highly controlled process to ensure consistent quality, taste, texture, and safety. The variety of bread types, such as artisan bread, industrial bread, buns, and hundreds of other products, requires different equipment and dedicated processes.



Habasit offers solutions that guarantee food safety and high productivity, limiting unscheduled downtime:

- A complete range of belts for all bread and buns production lines.
- Solutions designed to guarantee productivity, safety, and sustainability.
- Service guarantees in over 70 countries, supported by local teams of experts.
- Commitment to reducing costs and downtime through innovative technologies, materials, and solutions.

01 Dough loader chunker

02 Dough dividers

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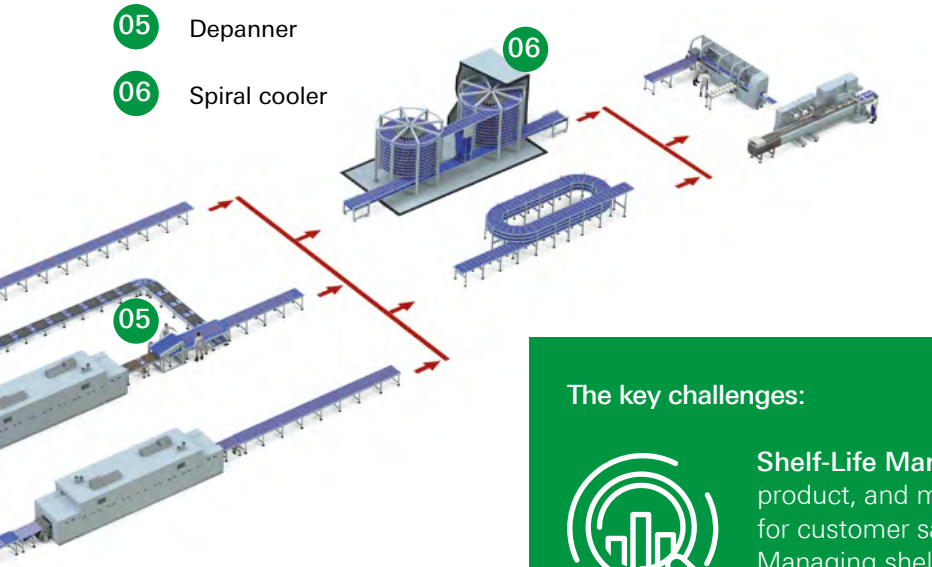


The key challenges:

Shelf-Life Management: Bread is a perishable product, and maintaining freshness is crucial for customer satisfaction and minimizing waste. Managing shelf life effectively requires careful attention to production processes, packaging, and distribution.

Allergen Control: With increasing awareness of food allergies, the bread and buns industry must be vigilant about allergen control to ensure the safety of their products. This includes proper labeling, ingredient control, and preventing cross-contamination.

Ensuring food safety: Bread and buns lines must follow strict safety standards to prevent contamination, maintain product integrity, and protect consumer health, avoiding recalls and regulatory issues.

Evolving Consumer Preferences: Consumers are increasingly seeking healthier options, artisanal breads, sourdough, clean-label products, and vegan alternatives. Bakeries need to adapt their product offerings and production methods to meet these changing demands.

Sustainability and ESG Expectations:

- **Environmental:** Reducing plastic packaging, lowering oven energy use, sustainable palm oil.
- **Social:** Ensuring safe working conditions in factories and fair labor in raw material sourcing.
- **Governance**: Transparent labeling, ethical sourcing policies, food safety compliance, audits.

Process details

01 Dough loader chunker

Pain points:

- Processing sticky dough. Depending on its hydration level, dough can become very sticky.
- Belt tracking and slippage are the main causes of belt damage, resulting in fraying.
- Frequent washing with aggressive chemicals causes premature aging of the belts.

Solution:

The Cleandrive positive drive product range is the ideal solution for dough chunker systems. The positive engagement of the teeth with the sprockets prevents problematic slippage, the absence of fabrics, resistance to oils and fats and washing with chemical products make Cleandrive the most effective and high-performance choice.

Find out more on our website:

Habasit® Cleandrive

Benefits for customers:

- Enhanced line efficiency
- Improved cleanability
- Reduced risk of product contamination

Recommended solutions:

Key feature	Family	Product	Material	Ømin	Surface
Hygienic solution	Monolithic	CD.P25-A-UC	TPU	60.1 mm	Glossy
		CD.P40-A-UC	TPU	101.6 mm	Glossy
		CD.P50-A-UC	TPU	80.8 mm	Glossy
Easy belt cleaning	TPU Scraper	E-BS38-HC+M	TPU Metal detectable version		

02 Dough dividers

Pain points:

- Presence oil, fat and large quantities of flour.
- Stickiness of the conveyed dough.
- Risk of contamination.

Solution:

There are various types of equipment used for portioning bread dough, such as “Dough dividers with finger belts,” “Volumetric dough dividers,” and “Dough dividers with single belts”. The equipment can be fitted with monolithic belts without fabric, frayless fabric belts, or modular belts. Belts should feature easy-release surfaces to ensure smooth dough handling, maintain food safety by preventing contamination, and deliver reliable performance. Habasit’s extensive product range provides all these benefits while fully meeting the technical requirements of your equipment.

Benefits for customers:

- High performance with various laminated doughs
- Precise and even cutting of the dough sheet
- Long lifetime

Find out more on our website:

CD.F12-N-YC+PN/EH

Recommended solutions:

Key feature	Family	Product	Belt surface	Color	Thickness mm	Frayless
Elastic belt Fabric-free	Monolithic	CD.F12-N-YC+PN/EH	Inverted pyramid structure	Cobalt Blue	1.20 mm	N/A
		CD.F12-N-FC+EH/EH	Medium textile structure	Cobalt Blue	1.20 mm	N/A
Release properties	Fabric	CNW-6EBC-A1	Waffle structure	Cobalt Blue	1.5 mm	●
		CNW-6EB-A1	Waffle structure	White	1.5 mm	●
		FMW-6EZCH-P1	Waffle structure	Cobalt Blue	1.8 mm	●
		FMW-6EZWH-P1	Waffle structure	White	1.8 mm	●
		FAW-8EOCV	Inverted pyramid structure	Cobalt Blue	2.1 mm	X
		FAW-8EOWV	Inverted pyramid structure	White	2.1 mm	X
Robust and easy release properties	Modular	M1220 Flat Top 0.5"	Flat Top	Blue	10 mm	N/A

03 Dough buns rounder

Pain points:

- Highly abrasive application
- Processing sticky dough
- Dough containing oil and fat
- The rolling up depends on the grip of the belt

Solution:

High belt speeds, friction between dough portions, contact with transverse plastic bars and the belt surface, and handling greasy dough make this application particularly demanding. To address these challenges, Habasit has developed two specialized products with polyurethane covers that offer exceptional resistance to abrasion, oil, and fat, ensuring uniform rolling and easy release of dough portions to the next stage of the process.

Benefits for customers:

- Consistent rolling of dough portions
- Long lifetime thanks to highly abrasion-resistant polyurethane coating
- High resistance to oils and fats

Find out more on our website:

TT191/AS

Recommended solutions:

Key feature	Family	Product	Material	Min. pulley Ømin	Knife edge Ømin	Thickness mm	Belt surface
Abrasion resistance	Fabric	TT191/AS	TPU	40 mm	-	1.80 mm	Silk Finish
		XVT-2304	TPU	20 mm	8 mm	1.25 mm	Matt

04 Longitudinal molder

Pain points:

- The roll up process must be uniform and consistent
- High friction and mechanical stress
- Belt lifetime may be limited under demanding conditions

Solution:

The type of dough determines which belt is best suited for the process. High-performing belts withstand mechanical stress and abrasion during rolling, handle various dough types, resist oils and fats, feature a non-stick surface, and provide the right grip for accurate rolling. Even under pressure from the upper belt, they remain fray-free, preventing contamination from loose fibers.

Benefits for customers:

- Abrasion-resistant surfaces
- Uniform rolling
- Enhanced food safety
- Resistance to oils and fats

Find out more on our website:

FMW-6EZCH-P1

Recommended solutions:

Key feature	Family	Product	Belt surface	Color	Thickness mm	Frayless
Abrasion and impact resistant surfaces	TPU Fabric	FMW-6EZCH-P1	Waffle structure	Cobalt Blue	1.8 mm	●
		FMW-6EZWH-P1	Waffle structure	White	1.8 mm	●
		FAW-7EIC	Inverted pyramid structure	Cobalt Blue	1.7 mm	x
Good grip	PVC Fabric	FAW-8EOCV	Inverted pyramid structure	Cobalt Blue	2.1 mm	x
		FAW-8EOWV	Inverted pyramid structure	White	2.1 mm	x
		FNR-5RFWR	Polyester/Cotton fabric	White	2.5 mm	x
		FNR-5RIW	Polyester/Cotton fabric	White	2.0 mm	x
Good grip	Fleece	PM100-W	Impregnated fleece	White	2.5 mm	x

05 Depanner

Pain points:

- Damage to products during depanning.
- Poorly aligned belts can cause inconsistent positioning of products, making robotic or vacuum depanners less effective.
- Hygiene and cleaning challenges: crumbs, oils, and debris from buns/bread can accumulate quickly.
- Damage or detachment of silicone suction cups.
- Belt and splice damage from pans.

Solution:

The depanner belt for buns, industrial bread, and other types of rolls must be extremely sturdy to withstand the strong pressure created by the vacuum suction effect. Furthermore, as it has large holes where the silicone suction cups are installed, its fabrics must remain compact over time.
Heat, oil, and fat make the application even more demanding.

Habasit has developed a belt specifically for this application, with three layers of fabric to ensure a strong hold and correct attachment of the suction cups. The food-grade PVC is resistant to oil, fat and to temperatures up to 70 °C, ensuring optimal performance over time.

Benefits for customers:

- Tracking stability
- Strong belt suitable for vacuum perforations
- Resistance to heat up to 70 °C
- Oil and fat resistance
- Belt suitable for metal joining

Find out more on our website:

NAB-20EHWV-D1

Recommended solutions:

Key feature	Family	Product	Belt surface	Color	Thickness mm	Suitable for drilling and fixing silicone suction cups.
Robust oil and fat resistance	PVC Fabric	NAB-20EHWV-D1	Matt	White	4.6 mm	●

06 Spiral cooler

Pain points:

- Spiral systems equipped with stainless steel belts require lubricants to ensure proper belt sliding, which poses a risk of contamination of the final product.
- Repairing a damaged metal mesh belt is a complex and time-consuming operation.
- The design of metal mesh belts often makes them difficult to clean and sanitize.

Solution:

HabasitLINK spiral belts are designed for reliable operation and trouble-free maintenance. With to reduced system wear, low tension, and quick, and thorough belt cleaning, machine downtime is minimized.
HabasitLINK belts prevent contamination by eliminating metal wear debris and lubricants, while removing the risk of stainless steel blackening. Their lightweight design lowers energy costs, and modular construction ensures quick, easy maintenance.

Benefits for customers:

- Reliable and durable system
- Minimizes maintenance time
- Easy to clean and safe for chemical cleaning processes.
- Removes risk of blackening from stainless steel

Find out more on our website:

HabasitLINK Spiral Belts

Recommended solutions:

Key feature	Family	Product	Nominal pitch [mm]	Collapse factor
Hygienic solution for food safety	Modular	M2540 Radius Flush Grid 1"	25.6 mm / *1.01 inch*	2.2
		M2544 Tight Radius 1"	25.8 mm / *1.02 inch*	From 1.6 to 3.0
		M3398 Radius Flush Grid CT 1.3"	33 mm / *1.3 inch*	From 1.6 to 3.0
		M3840 Radius Flush Grid 1.5"	38.2 mm / *1.5 inch*	2.2
		M529X	50.8 mm / *2 inch*	From 1.6 to 4.3
		PR620X	50.8 mm / *2 inch*	From 1.8 to 3.0
		CT610R	25.4 mm / *1 inch*	2.2

How to replace in a Spiral cooling system a Stainless-steel belt with a modular plastic belt, improving product safety and line performance?

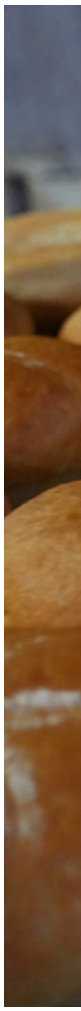
Product. Stainless steel chain

Application: Cooling spiral system for bakery products.

Case: The system was equipped with a stainless-steel belt that had serious problems with premature wear and continuous breakage on the outside of the belt. The downtime caused by the malfunctioning of the steel belt had a significant economic impact, especially unscheduled downtime.

Proposed solution: Plastic modular belt M5293 in Polyamide

Results: After careful technical analysis, it was decided to use the M5293 version with a collapse factor of 1.6 to allow for the correct replacement of the previously installed belt. Since the spiral was located after the oven, FRF material, a low moisture absorption and flame-retardant nylon (UL94-V2), was chosen to prevent any risk of fire.
In addition to ease of use and maintenance, and the reduced total weight of the belt, thanks to the easy-to-clean design of the modules, the customer now spends 30 minutes less on weekly cleaning of the system, which equates to 2,400 liters of water per cycle, or 124,800 liters per year.



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