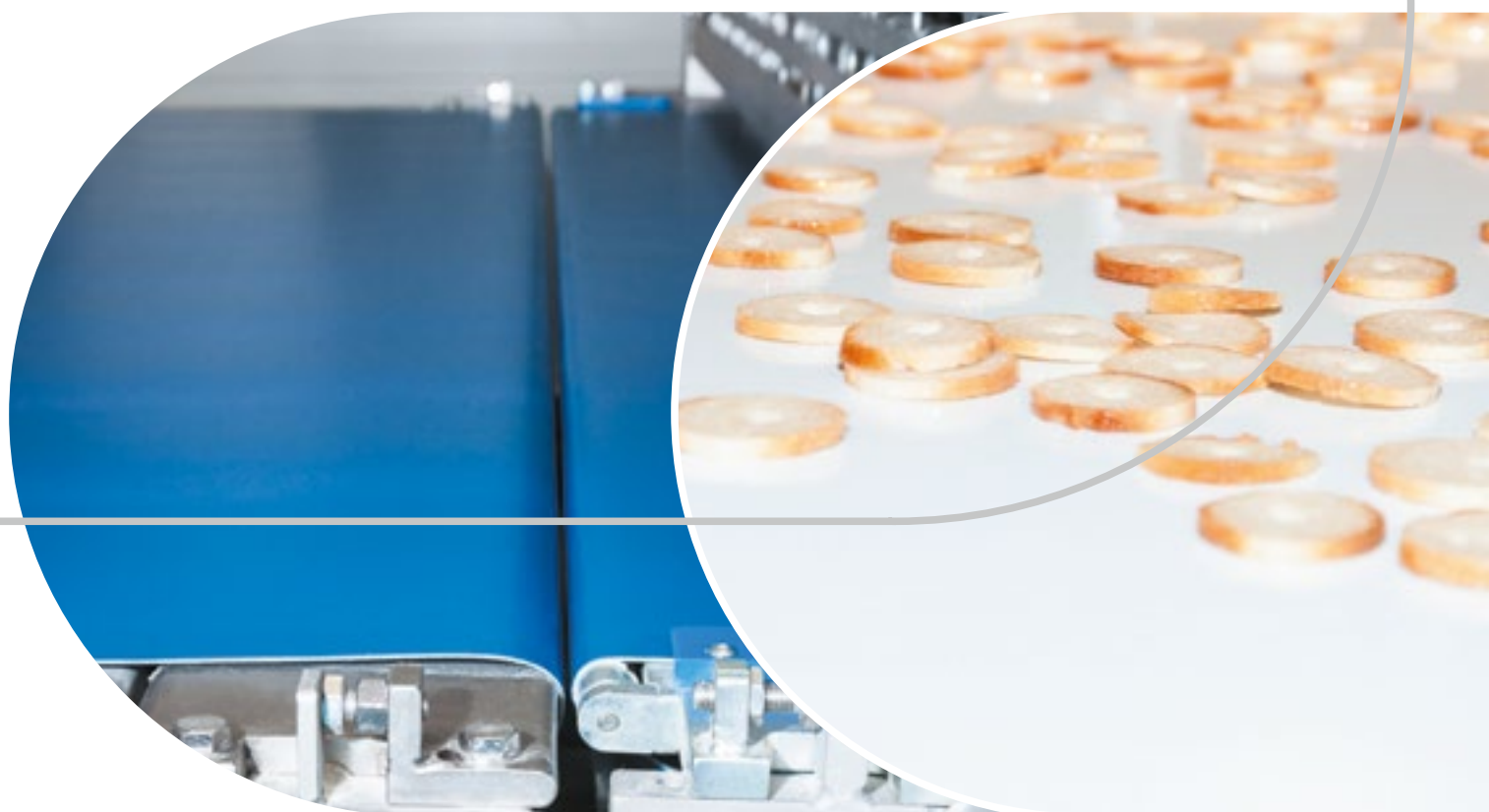


Habasit Premium TPU Food Belts



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Hard-working belts for the food and packaging industries

Habasit TPU-coated fabric belts are widely used in the food processing and packaging industries thanks to their versatile properties. The high abrasion resistance of the thermoplastic material helps to keep the belt surface smooth and easy to clean for longer. This also results in the belts maintaining very good release properties over their entire lifetimes. TPU belts are suitable for operation in a wide range of temperatures and remain flexible in cold conditions. They do not influence taste, which makes them particularly suitable for use in the food industry.

When developing the new Habasit Premium TPU food belt range, our engineers focused on the biggest challenges that food processors and packaging professionals encounter. From product recalls due to contamination by foreign bodies, to cost control and process automation, the two dominating topics for the industry today are food safety and operational efficiency.

Find out more about the benefits of Habasit Premium TPU food belts and their key features:



Temperature resistance



Low-wicking



Hydrolysis resistance



Frayless



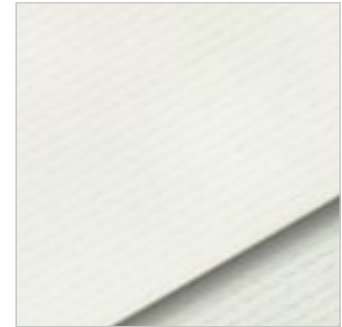
Working towards reduced total cost of ownership

Cost-effective operations depend on striking the right balance of product output, yield, and uninterrupted line running. Unplanned downtime due to belt failure, extended cleaning time caused by belt damage, or frequent machine stops for belt replacements have a substantial impact on overall productivity.

Designed for enhanced hygiene performance

Food safety remains the key concern for the food processing and packaging industry. Recalls due to foreign bodies or bacterial contamination are costly, damaging the reputation of the brand and the trust of consumers. The industry puts a high priority on appropriate hygiene protocols, and invests in solutions to prevent unnecessary incidents impacting food safety.

Habasit Premium TPU food belts offer improved cost of ownership and enhanced food safety, addressing the key challenges arising from the demands of the production environment.



Challenge	Habasit Premium TPU performance	
	Improved operational efficiency	Better food safety
Continuous operation at elevated temperatures	- Suitable for continuous operation at belt temperatures up to 110 °C / 230 °F - Lower risk of joint damage and extended belt lifetimes result in fewer stops for belt replacement	- No delamination caused by high operating temperatures - Suitable for cleaning with steam – reduced belt ageing caused by high temperatures
Risk of foreign object contamination	Frayless fabric eliminates the need for edge sealing to reduce belt edge damage	A combination of spun fabrics and knitwear limits the risk of long fibers tearing and entering the product
Moist and oily production environment impacts belt performance	Increased resistance to hydrolysis and stable chemical resistance reduce the belt degradation caused by water and the effects of frequent cleaning	Innovative impregnation prevents the ingress of water and oils into the belt fabric, improving hygiene and inhibiting microbial and biofilm growth that could cause a food safety risk
Need to avoid product waste and improve yields	- Good release properties limit the loss of product leading to yield waste - The combination of longitudinal flexibility and lateral stiffness of the belts permits tight transfers (nosebar suitable) of small or fragile goods	The reduction in food residue on the belt resulting from good release improves food safety by preventing microbial growth

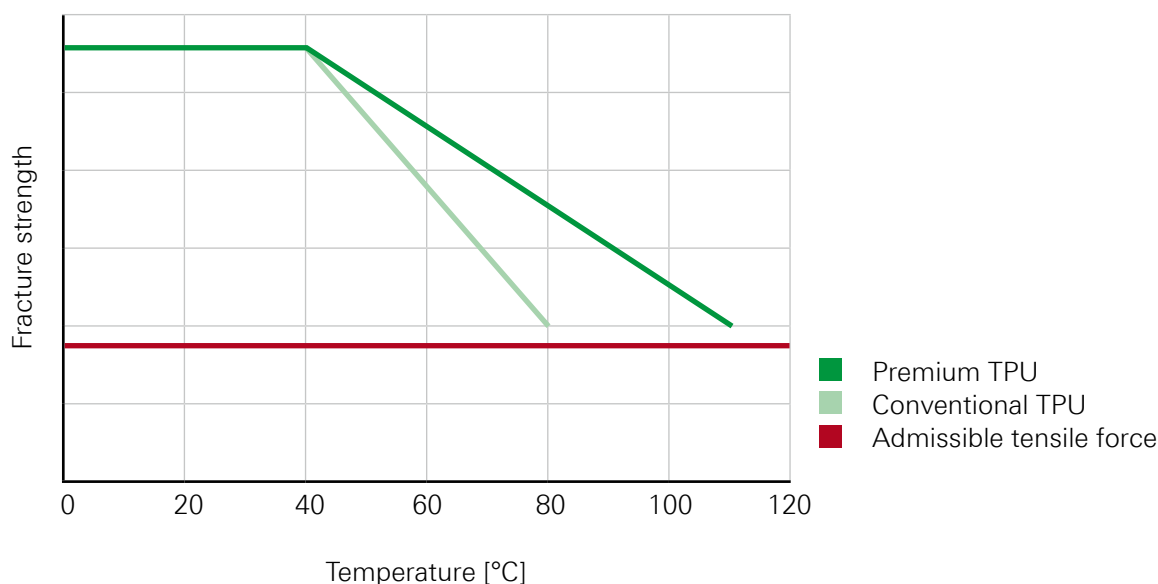
**Temperature resistance up to 110 °C**

Conveyor belts require an inherent tensile force to correctly fulfill their function of moving goods.

Elevated temperatures impact the admissible force, limiting the use of conventional TPU belts to maximum temperatures of around 80 degrees Celsius. Above that temperature the fracture strength and conveying properties of conventional TPU belts are weakened and the risk of joint failure is higher. The belt surface may age more quickly as well, leading to a greater risk of hygiene problems. To avoid unnecessary belt failure and frequent replacements, conventional TPU belts are therefore not recommended for operation at higher temperatures.

Habasit Premium TPU food belts are designed to withstand higher temperatures at the required tensile force while maintaining a high level of functionality. Due to their lower risk of joint damage and delamination, they offer an extended lifetime at temperatures ranging as high as 110 degrees Celsius, which means fewer belt replacements and better overall line productivity.

Admissible tensile force at high temperature (indicative)

**Low-wicking**

Moist and oily operating conditions can influence the ease of maintaining the level of food safety you require. With conventional TPU belts, over time the fabric can absorb liquids and oil or fats on the belt's running side, which leads to loss of belt performance and reduces the belt's hygienic properties, resulting in a higher risk of microbial growth and biofilm formation.

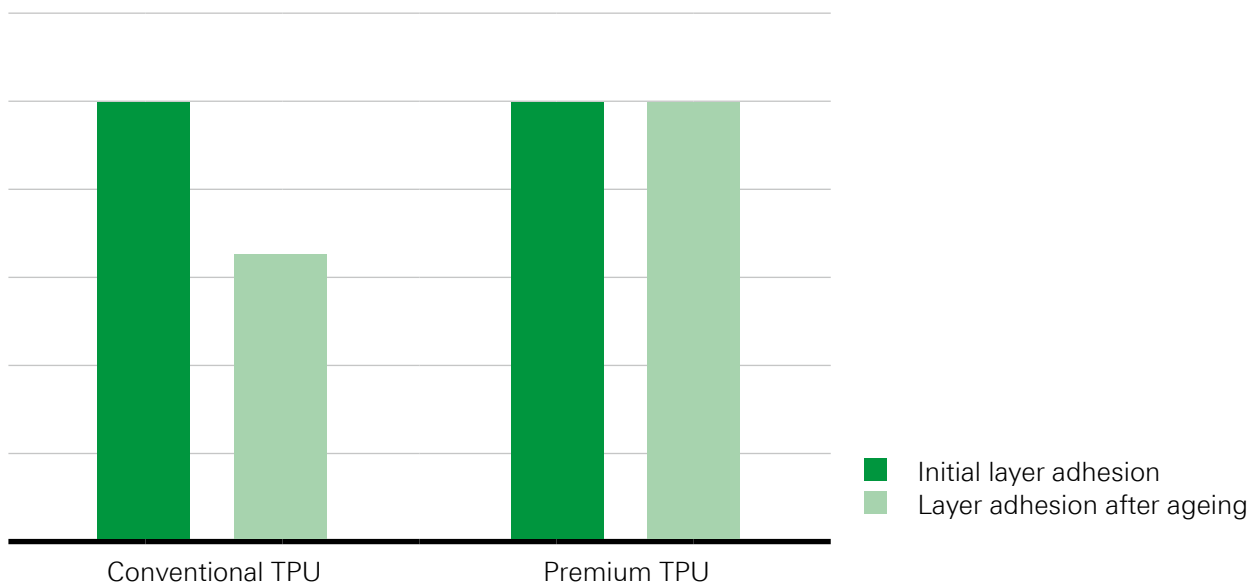
Habasit Premium TPU belts feature strong wicking protection to reduce this risk. The innovative impregnation of the belt's running side offers high impermeability, preventing the ingress of water, oil or fats. With no liquids penetrating the fabric of the belt, overall hygiene performance is improved. The impregnation used for Habasit Premium TPU belts makes it easier to ensure reliable food safety.

**Hydrolysis resistance**

Keeping your production process food safe means using cleaning protocols that guarantee impeccable hygiene. Steam or water-based cleaning methods are frequently applied, creating a hot and humid environment for the belt.

With conventional TPU belts, humidity, especially at elevated temperatures, can speed up belt degradation - an effect known as hydrolysis. Belt layer adhesion will also deteriorate, causing delamination. The higher risk of surface damage will decrease the belt lifetime, as it will become harder to clean and maintain appropriate hygiene levels.

The material used for the Habasit Premium TPU range shows excellent resistance to hydrolysis. Lab tests and field experience demonstrate that the belts maintain their layer adhesion regardless of exposure to hot and humid conditions. The belt surface remains unaffected even by demanding cleaning procedures, which ensures better cleaning results and leads to improved shelf life for your product. With enhanced durability, the belts have a significantly longer operating lifecycle, which reduces the frequency of replacements.

Layer adhesion after ageing at high temperature and humidity levels**Frayless**

A frequent industry headache is the risk of contamination of the product by foreign objects, which may also come from the conveyor belt. The belt edge running against equipment may become damaged, with the risk that long strings of the fabric will get into the product. To avoid this undesired effect, belt edges are often sealed for extra protection.

The unique design of Habasit Premium TPU belts incorporates a special combination of fabrics that limits the risk of long fibers tearing. The edge of the belt is better protected against damage and does not require the additional costs of protection using a sealant.

Surface structure features

The first belts launched in the Habasit Premium TPU range include several two-ply designs with five surface structures. These offer added flexibility to food and packaging processors, enabling you to select the best belts for your application requirements.

Surface structure	Features
Matt	
	 • Good mechanical resistance • Excellent performance in frequently cleaned areas • Suitable for lines equipped with food scrapers • Good product release • Suitable for high-speed operations • Excellent longitudinal flexibility for a nosebar radius down to 2 mm
Glossy	
	 • Good mechanical resistance • Excellent performance in frequently cleaned areas • Suitable for lines equipped with food scrapers • Good product adherence • Suitable for incline and decline conveying • Improves precise positioning of dry or semi-dry product • Excellent longitudinal flexibility for a nosebar radius down to 2 mm
Structured	
	 • Good grip and release properties • Recommended for incline and decline conveying • Prevents vacuum effect
Impregnated fabric*	
	• Low coefficient of friction, good push-off • Recommended for product accumulation • Ideal for applications requiring precise positioning of product
Open fabric*	
	• Good dough release • Recommended for dry, moist and oily environments • Prevents product damage in a raw state

* In order to optimally serve the target applications, this belt does not feature frayless fabrics and low-wicking impregnation

Bakery



Challenge	Belt feature
Dough handling	
Sticky residues	Good release, scraper resistant coating
Sticky dough	Good grip and release surface
Dough transfer to oven	
Hot, moist environment	Hydrolysis and temperature resistance
Oven outfed	
Hot goods	Elevated temp. resistance
Steam/moisture	Hydrolysis resistance
Biscuits and crackers - oil spray (after oven)	
Oily, hot, moist environment	Hydrolysis and oil resistance
Pastry - lamination	
Flour spread on conveyor	Bottom fabric protects against dirt ingress and shrinkage

Meat & Poultry, Fish



Challenge	Belt feature
End of line processing	
Sticky residues	Good release, scraper resistant coating
Secondary processing	
Moist environment	Low-wicking bottom

Food - general



Challenge	Belt feature
General conveying	
• Cleaning with steam	• Hydrolysis resistance
• Fraying of belt edges	• Frayless fabric design
• Tight transfers	• Design suitable for a tight nosebar radius down to 2 mm
• Cleaning with water-based systems	• Hydrolysis resistance
Confectionery - sweets handling	
• Sticky residues	• Good release, scraper resistant coating
Fruit & Vegetables - secondary processing	
• Moist environment	• Low-wicking bottom

The FMW-6EZCH-P1 saves a bakery costly belt replacements through a 4 x longer belt lifetime for its dough divider

A bakery was struggling with short belt lifetimes in the dough divider section, where a lot of fat is required to divide dough and keep it separated. The oil was invading the belt material via the edges, which caused fraying and delamination. Due to this the belt needed to be replaced every six to twelve weeks, creating frequent costly application downtimes.

We proposed our new fat and oil resistant FMW-6EZCH-P1 belt. With frayless properties and a low risk of delamination, it was the right choice. The belt lifetime was now at least four times longer. The bakery saved not only the costs of the belt material, but also avoided downtimes for belt exchanges. Nine months after the FMW-6EZCH-P1 was installed it was still running, without any signs of fraying or delamination.

The bakery customer benefited from:

- Reduced expensive downtimes for its application
- A belt lifetime that lasted at least four times longer
- Cost savings on three belts and three interruptions of the application for belt exchange, in the first nine months alone
- A new belt that was still running continuously after nine months

The customer almost forgot that there had been problems with this application in the past.



A bread producer achieves belt lifetimes up to 8 x longer with the FMW-6EZWH-P1 waffle structure

A multinational food producer tested many competitor belts, but struggled with short belt lifetimes of only two weeks to two months. The bread dough in this application is very sticky and scrapers cannot be used. The challenge was to find a belt robust enough to handle a heavy dough load, with low adhesiveness (very sticky bread dough), and able to maintain a constant width over the entire belt length to avoid fraying against the steel sidewalls. Another problem was cracking due to the very fatty and oily conditions.

The solution provided by Habasit was the FMW-6EZWH-P1, a very strong belt capable of handling the heavy, oily bread dough and strong lateral forces. With the FMW-6EZWH-P1 the bakery was able to increase the belt lifetime to four months, so by up to eight times, due to the new belt's properties. Three belts were aligned in the lamination section, where the very sticky dough is rolled out to a thinner layer. The bread producer replaced all three belts in this line and was very satisfied with the improved belt lifetime.

The bread producer benefited from:

- Belt lifetimes up to eight times longer than the belt used before
- No belt cracking or fraying
- Less residue due to better release properties
- Options to make further savings by replacing belts used for other applications

Each new belt lasts up to eight times longer.



A pizza producer gets 3 x longer belt lifetimes with the chemical and temperature resistant FNB-5EZCH-P1

A top player in the ready-made food market had to exchange the fabric conveyor belt in its pizza production line every six months. The belt was installed in an oven outfeed where the hot pizza is transferred to the belt and the toppings (tomatoes, cheese, ham and spices) are applied. Tomatoes contain organic acids that require daily cleaning of the belt with chemical agents. This, and the high temperatures from the oven, placed great demands on the belt.

The pizza producer was looking for a belt with a lifetime of at least 1.5 years. Habasit suggested the FNB-5EZCH-P1 for its high chemical and temperature resistance. Its Habasit Premium TPU, along with a frayless fabric and new impregnation, also make the FNB-5EZCH-P1 the perfect choice for this demanding application. The FNB-5EZCH-P1 was installed, and was still running without problems more than 18 months later. The customer saves money as there is no need to invest in a new belt every six months, and costly downtimes for belt exchange are avoided.

The food producer benefited from:

- A tripled belt lifetime over the formerly chosen belt
- Time savings due to less frequent belt replacements
- Less harsh cleaning requirements, as the frayless, impregnated fabric absorbs less fat and liquids

Belt lifetime has been more than tripled.



The FNI-5EIWH-P1 with Habasit Premium TPU is the perfect solution for a fine pastry producer's demanding application

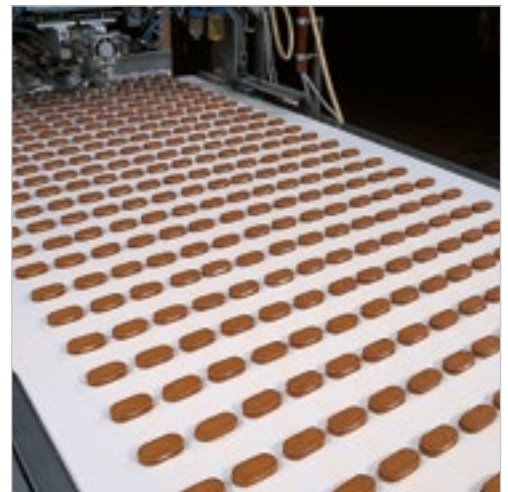
A large producer of fine pastry needed to replace a competitor's belt in a very demanding pastry application. The belt was running at surrounding temperatures of 80 °C, and was completely covered in butter, which poses big challenges for joining. An additional challenge was the use of radio frequency to prevent overbaking.

Our FNI-5EIWH-P1 has all the required properties. It is highly resistant against fat, oil and high temperatures, and its antistatic design is compatible with radio frequency, with no risk of electrical discharge. The belt features a huge number of holes to drain the butter from the pastry. There are two radio frequency lines and both are now equipped with the FNI-5EIWH-P1. Thanks to the Habasit Premium TPU, the belts perform well in this very demanding environment, delivering a lifetime of four to six months.

The fine pastry producer benefited from:

- Habasit's reliable joining system that meets the requirements of high temperatures and tight transfers
- Habasit Premium TPU that withstands even harsh environments like radio frequency, high temperatures and fat
- An increased belt lifetime of four to six months

One belt really can satisfy every need.



Customers first

Your success is our goal. That is why we don't just offer products; we provide solutions. As committed partners to our customers, we are dedicated to sharing our knowledge and providing full support.

Since our founding in 1946, Habasit has been finding ways to meet customer-specific needs in every application. This is what differentiates us as the #1 worldwide belting provider in the industry today.



Comprehensive consulting and technical support

Profit from the best consulting and technical support in the lightweight belting industry. Local experts are always available to assist you with your belting needs. The Habasit team is proud to provide the highest level of support, together with top-quality products that have led the global market for decades.



Belt selection and calculation assistance

We are always glad to help you select the most suitable belt for any application for your convenience. We now also provide the free online tool 'SeleCalc' which allows you to easily make selections and calculations yourself. Simply register online at selecalc.habasit.com.



Fabrication, assembly and local installation services

As a full-service belting provider, we offer joining and assembly services either at our own locations or directly on your equipment.

Habasit has over 30 affiliates worldwide, each with its own inventory, fabrication, assembly and service facilities.

Together with representative offices and numerous qualified distributors, we can react quickly and efficiently to meet all your needs.



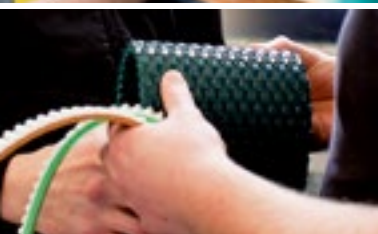
Customer training programs

To ensure the optimal performance and maximum lifespan of all our products, we offer training programs and various support tools. This includes proper procedures for fabrication, installation, assembly, maintenance and belt repair, all of which take place at a Habasit site or at your location.



Belt monitoring, inspections, analyses and process optimization proposals

We organize and handle belt maintenance, inspections, analyses and surveys at customers' sites. Upon request, we are ready to develop optimization proposals to ensure you're getting maximum value from your machinery and process output.



Design assistance for customized solutions

Habasit believes in building partnerships with our customers. Our engineering team will work closely with your engineers on joint design developments from initial design to final implementation. This expert service can be invaluable for projects involving new technologies or large-scale modifications and adaptations.





Committed to innovation

Because our customers' belting challenges and needs are always changing, we consistently invest a substantial amount of labor and resources into the research and development of new products and solutions.

Certified for quality

We deliver the highest quality standards not only in our products and solutions, but also in our employees' daily work processes. Habasit AG is certified according to ISO 9001:2015.



Worldwide leading product range

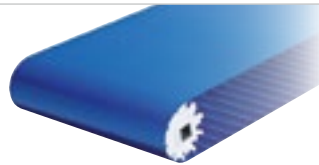
Habasit offers the largest selection of belting, conveying, processing and complementary products in the industry. Our response to any request is nothing less than a specific, tailor-made solution.



HabaFLOW®
Fabric-based conveyor
and processing belts



HabasitLINK®
Plastic modular belts



Habasit® Cleandrive
Monolithic reinforced
conveyor belts



HabaDRIVE®
Power transmission belts



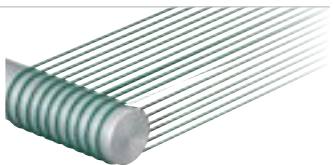
HabaSYNC®
Timing belts



HabaCHAIN®
Chains (slat and
conveyor chains)



Machine tapes



Round belts



Seamless belts



HabiPLAST
Profiles, Guides,
Wear strips



Accessories
(sprockets, flights,
welding profiles, etc.)



Fabrication tools
(joining, cutting &
preparing devices)

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