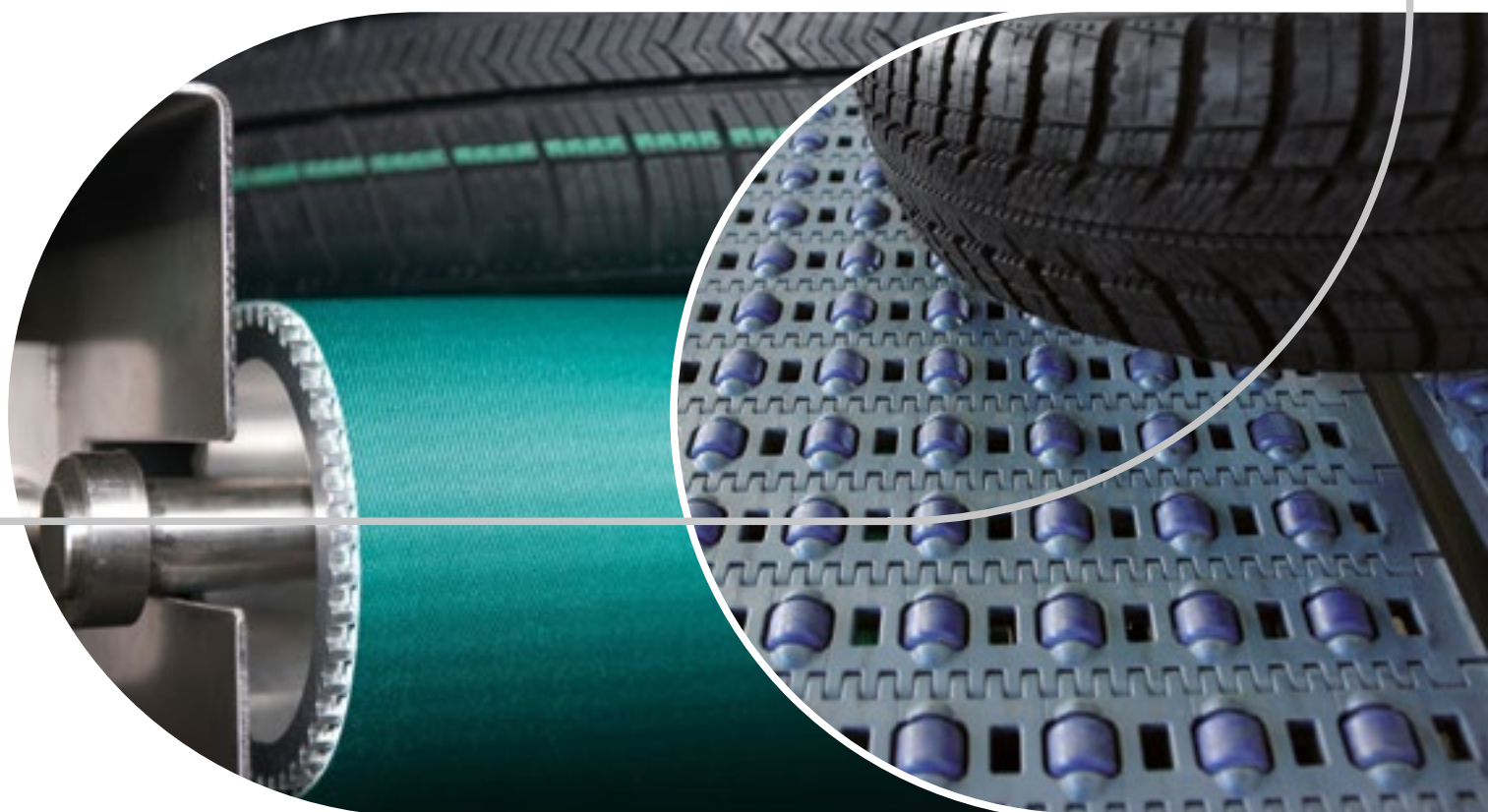


Tire Industry

Belts for Rubber Handling and Tire Manufacturing



Introduction	3
Process overview	4
Processes	6
HabaFLOW® Fabric based conveyor belts	11
HabaSYNC® Timing belts	15
HabaSYNC® Wide timing belts	17
HabasiLINK® Plastic modular belts	18
Application table	20
Solutions in motion	22
Contacts	24

Solution provider for the rubber and tire industry

Habasi is the full-range belting supplier and solution provider for the rubber and tire industry. With our product range you find belting solutions for handling of uncured rubber in the mixing room, in the extrusion section, and on cooling lines. Belting products must provide excellent temperature and chemical resistance, combined with superior release properties and highest abrasion resistance.

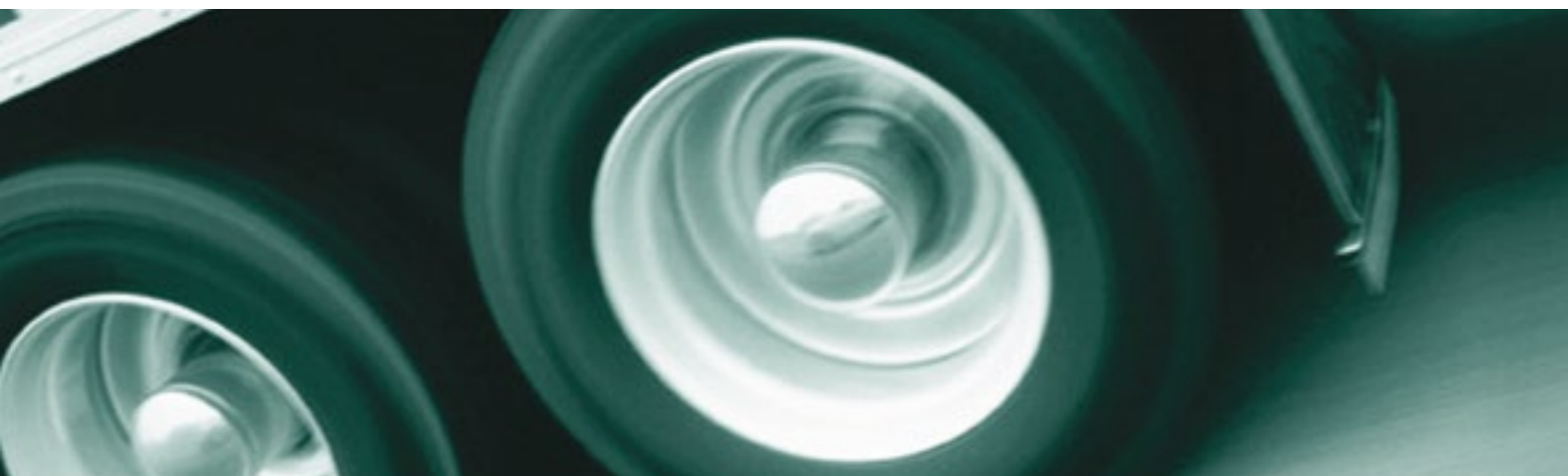
For tire building, tire cooling and tire handling we offer a wide range of belts, such as fabric-based conveyor and processing belts, HabasiLINK® plastic modular belts and timing belts.

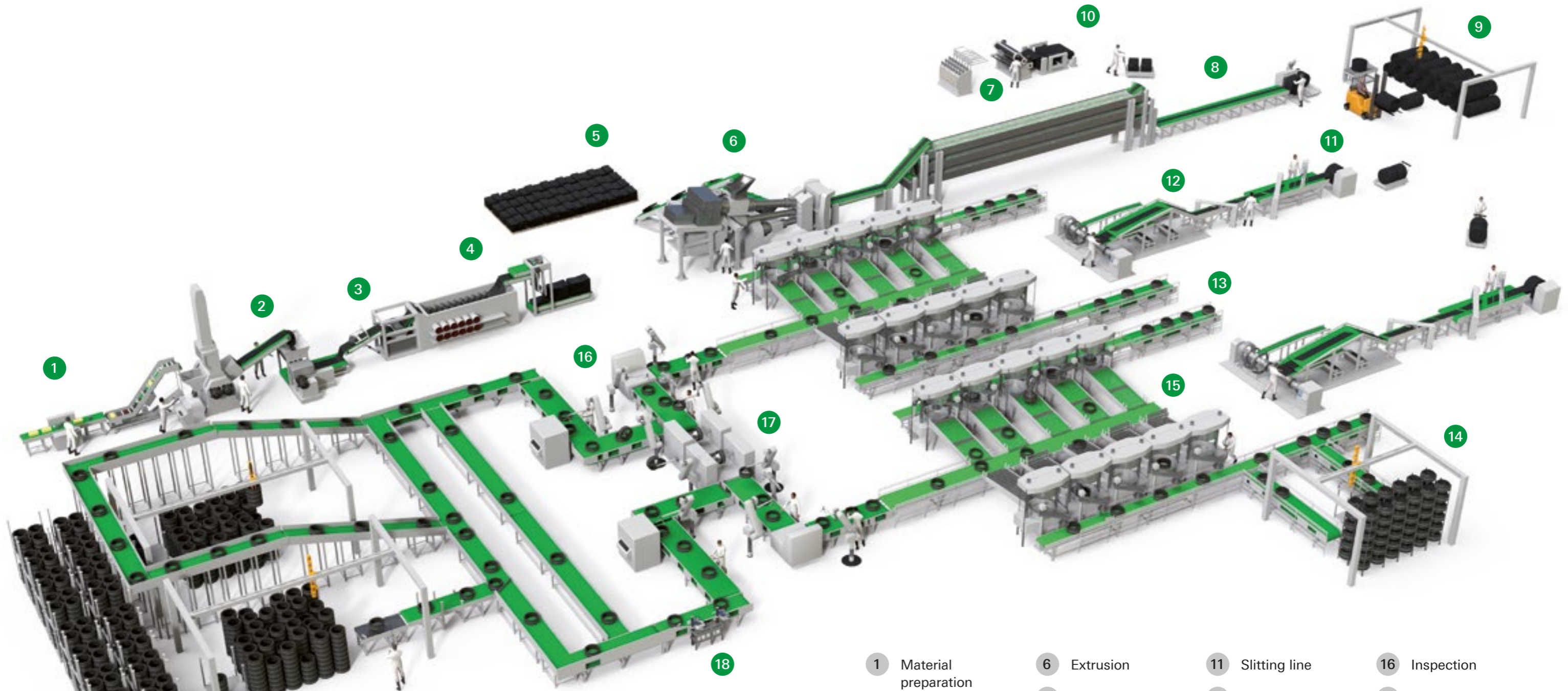
Innovation is a key word at Habasi

Our extensive range of solutions enables our customers to choose the best product for their applications.

Competence and experience

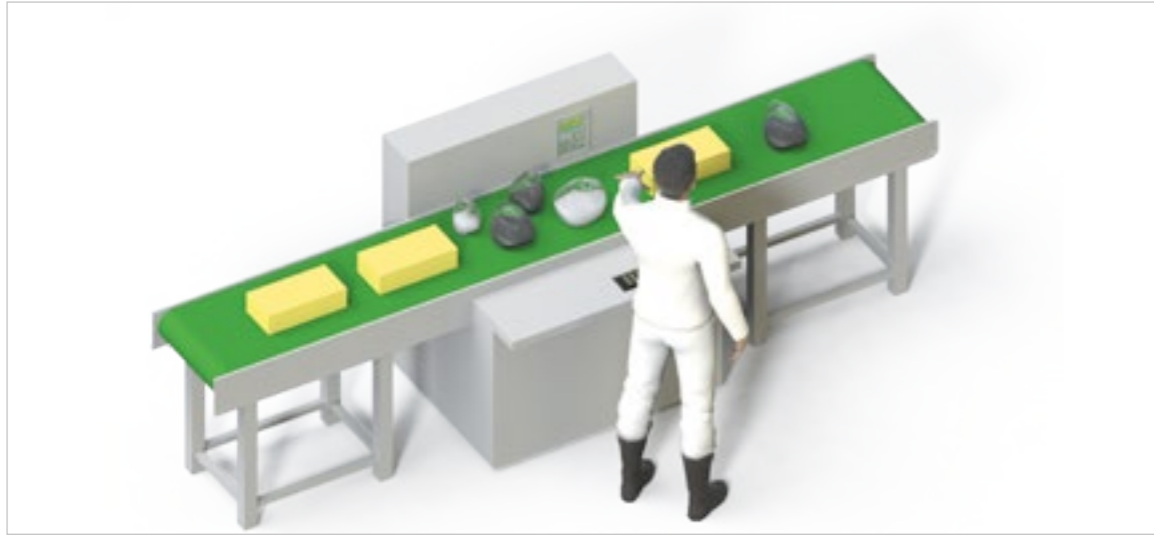
Habasi application engineers, technicians and joining specialists are at your disposal to provide professional consulting, superb customer service and excellent support. Since its foundation in 1946, Habasi has proven its understanding of customer needs for more than 70 years. With a comprehensive global network, Habasi is able to respond to any request that you may have with nothing less than outstanding belting solutions of premium quality, tailored to your specific needs.





- | | | | |
|------------------------|-----------------------------|------------------------|--------------------------|
| 1 Material preparation | 6 Extrusion | 11 Slitting line | 16 Inspection |
| 2 Mixing | 7 Cooling line | 12 Tire building | 17 Uniformity checker |
| 3 Dip tank | 8 Treadliner | 13 Green tire handling | 18 Labeling |
| 4 Batch off | 9 Rubber rolls storage area | 14 Green tire storing | 19 Storage and warehouse |
| 5 Rubber sheet storage | 10 Calendaring | 15 Trench conveyor | |

Material preparation



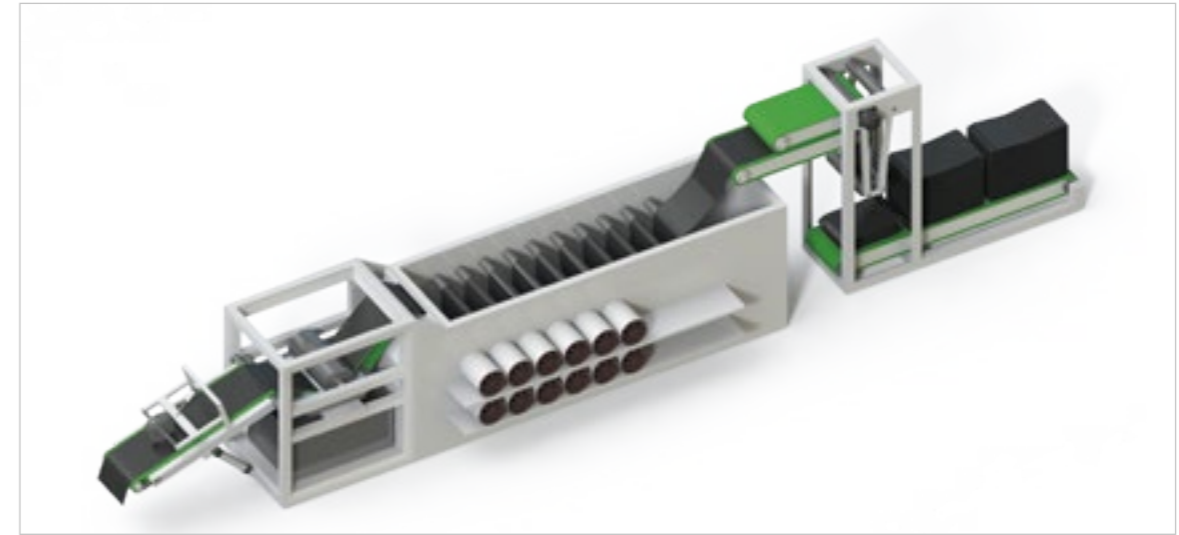
For the material preparation process a non sticking, chemical resistant, standard room environment belt surface is needed.

Rubber mixing process



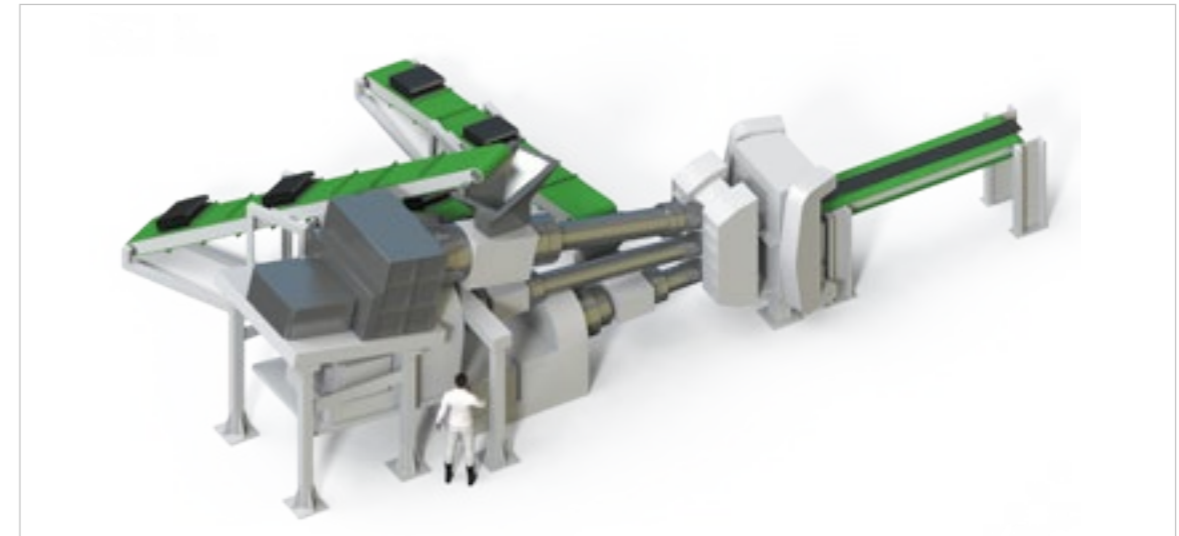
Infeed: Has similar properties to Material preparation. Often designed as an incline conveyor, where gripping characteristics are necessary.
 Outfeed: Outcoming raw rubber mix is hot, wet and sticky. Very good releasing properties and high temperature resistance is required as well as resistance to chemicals migrating from the rubber. Sometimes heavy load impacts from fallen rubber material.

Dip tank/Batch off – “wig-wag”



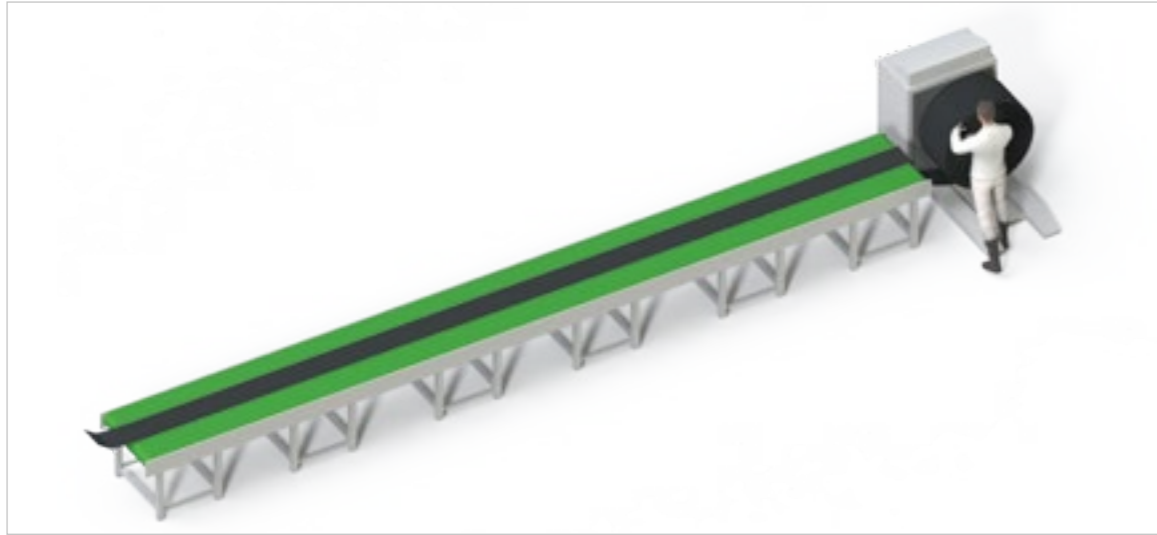
In the dip tank, rubber from the mixing process is coated with an anti-sticking agent to avoid the rubber layers sticking together when stored.
 The “wig-wag” process folds the continuous rubber material into stacks which can be easily stored on pallets. Chemical resistance against the separating powder is required.

Rubber extrusion



Infeed belts transfer the folded rubber mixes from the “wig-wag” into the extruder. Good incline properties and chemical resistance are needed.
 The outfeed from the extruder requires additional temperature resistance, and again, good releasing properties.

Treadliner conveyor and roller



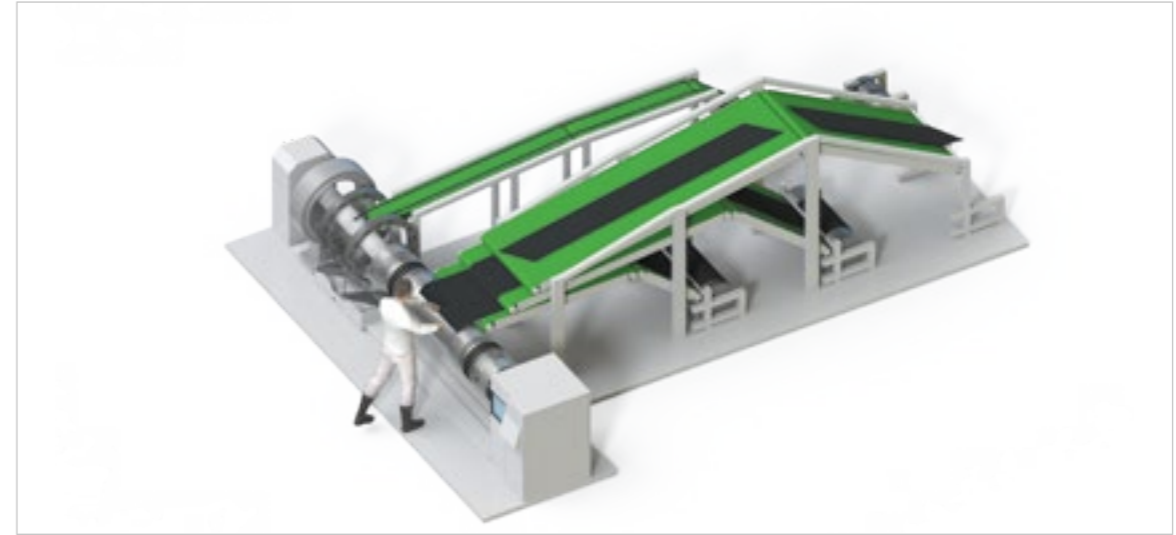
In the treadliner application there is a transfer conveyor where reliable chemical resistance and release properties are required. Much higher belt demand is in the non-conveying application of the roller. Here, belting material is wound together with the rubber in a coil. The belt is used to separate the rubber windings from each other. These coils are stored until transfer to the slitting lines.

Slitting line



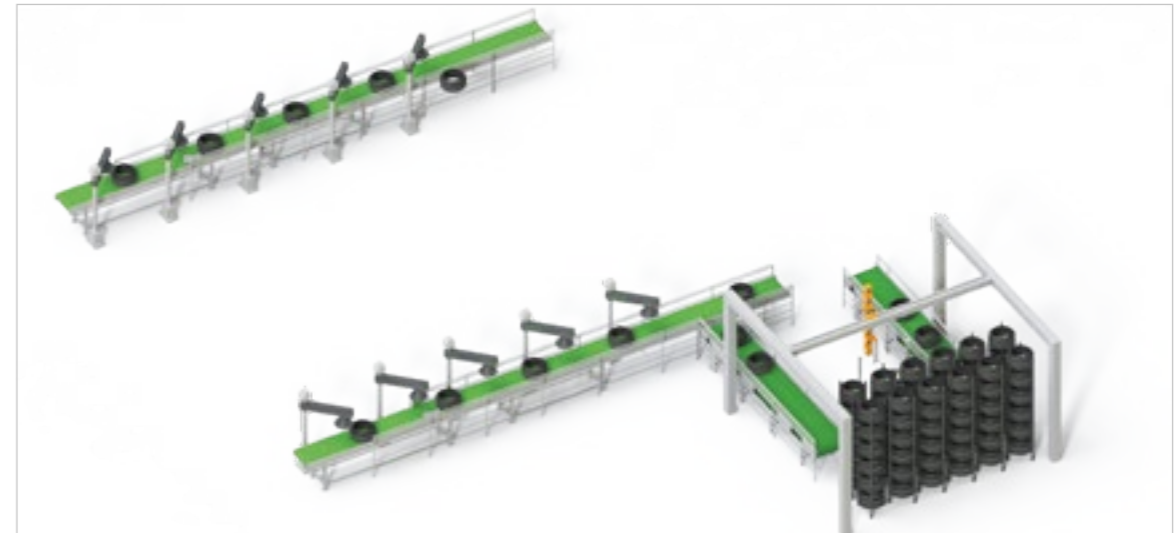
In the slitting lines the main belt types are timing belts due to the precise positioning required. However, fabric belts are sometimes utilized. Releasing properties, as well as good cut resistance, and lateral stiffness to bear transversal forces are needed. The cut rubber sheets are to be used as individual components in the tire building machines.

Tire building process



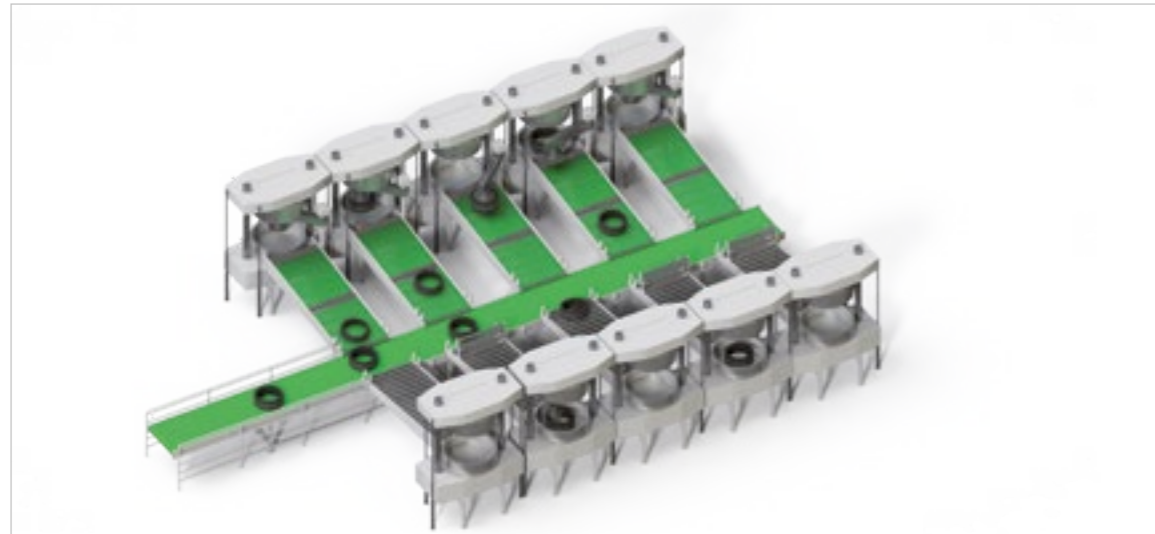
In the tire building process high accuracy is necessary. Also here timing belts are most common, but in some machines fabric belts are still in use. Often these belts use guiding profiles to avoid mistracking. Long lifetime is the goal due to the complexity of the replacement of the belts. A big advantage of Habasit timing belts with hinge joint which solves this issue.

Green tire handling and storage



The green tires are very sensitive to marking, scratches or deformation. It's necessary to carry them smoothly and separate them while stored. Transfer lines equipped with fabric belts ensure a safe and smooth transfer. Mechanical fasteners are not possible because of potential marks. Roller top plastic modular belts can also be used. For storage, often cones made from fabric belt material with the fabric side up are used to ensure the green tire can be released easily after storing.

Trench conveyor



Finished tires exit a curing press and are placed on a short live roller where they move to a holding gate for cooling. Once cooled, the tires slide onto a trench conveyor. Roller top belts are used to improve movement of tires onto the line and to eliminate tire abrasion and jams. Significant temperature resistance is required as tires can still be over 100°C when entering the line.

Finished tire handling



Before moving on to storage, warehousing or shipping, the finished tires usually run through several quality control steps, including inspection, uniformity checking and labeling. That finished tire conveying can be accommodated by a variety of plastic modular and fabric belt.

Introduction

Habasit's conveyor belt selection includes hundreds of different belts to satisfy application requirements that range from straight-inclined or declined operations, to accumulation and diverters, to swan neck (Z) conveyors, and numerous other needs. We offer a wide variety of tension members and cover materials, as well as structural conveying- and running-side patterns to optimize your system's performance.

Belt material

The materials and designs are selected to cope with a broad range of application requirements, including resistance to wear or chemical agents, and to high or low temperatures. Furthermore, they maintain excellent stress-strain behavior through the use of carefully selected tension members.

Belt design

Habasit conveyor and processing belts are generally made of different layers, with tensile strength provided by synthetic fabric plies. These fabrics are connected with layers of thermoplastic materials. The material, thickness and texture of the conveying side depend on the function of the belt.

Cover coatings are mainly made of thermoplastic materials like TPU, TPO, PVC, etc., and elastomer-like rubbers, PUR, etc. – or feature a fabric cover.

The running side is usually a fabric, often impregnated with a thermoplastic material, or with special wear-resistant PUR that provides a low and constant coefficient of friction. There are also pulley-side fabrics that feature special low-noise running capabilities.

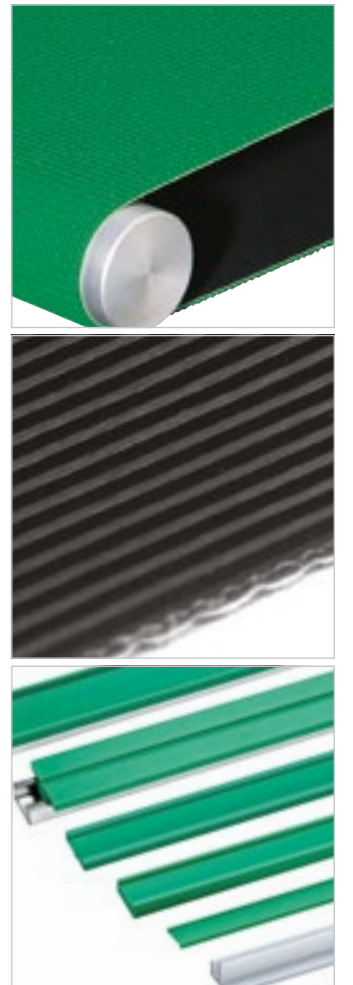
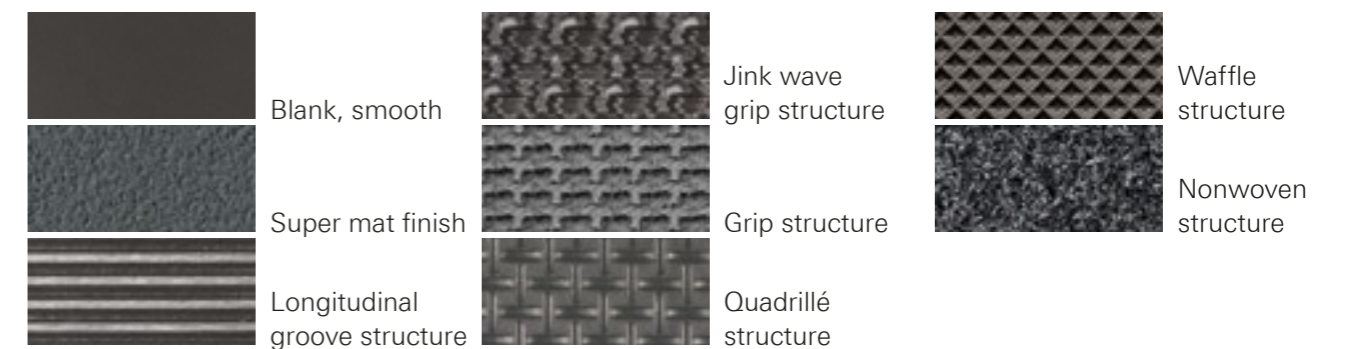
Attachments and profiles

Guides, cleats and side walls are the most common modifications applied to conveyor and processing belts. While V-shaped profiles are mostly attached to the running side as guides, various cleat designs can be welded or bonded to the conveying side to ensure proper transport either horizontally or on an incline. Side walls positioned close to the edges of the belt stop loose goods from falling off.

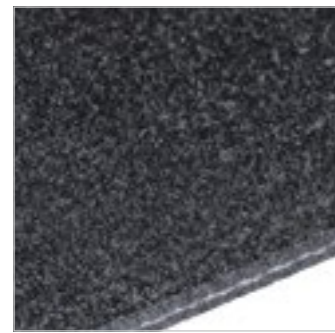
Surface structure

A well-designed belt surface supports both the secure transport of the goods conveyed as well as the process where the belt is employed. Careful selection is essential in order to find the right belt for each conveying or processing application. The belt surface plays a key role in meeting each specific process step or function.

Surface structures (selection only)

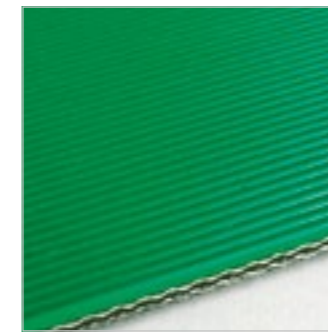


Nonwoven belts



Key features	Your benefits
<ul style="list-style-type: none"> Impact- and wear-resistant 	<ul style="list-style-type: none"> Durable and forgiving belt surface Gentle, soft and safe handling of goods Extended belt service life
<ul style="list-style-type: none"> Excellent abrasion resistance 	<ul style="list-style-type: none"> Reliable conveying properties Long belt life
<ul style="list-style-type: none"> Superior edge fray resistance 	<ul style="list-style-type: none"> No stringing or fraying Extended belt service life
<ul style="list-style-type: none"> PES traction layer 	<ul style="list-style-type: none"> Stable modulus of elasticity after running-in No retensioning required, no downtimes

Rubber-coated belts



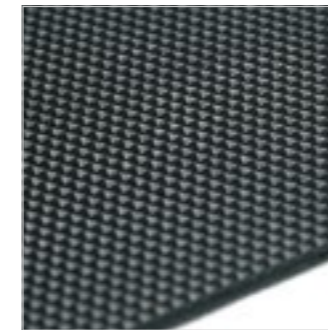
Key features	Your benefits
<ul style="list-style-type: none"> Excellent release properties 	<ul style="list-style-type: none"> No sticking of rubber Process reliability Low maintenance costs
<ul style="list-style-type: none"> Longitudinal flexibility 	<ul style="list-style-type: none"> Copes with small pulley diameters Smooth and trouble-free product transfer
<ul style="list-style-type: none"> Permanently antistatic 	<ul style="list-style-type: none"> No interference with electronic devices Less dust and dirt attraction Process reliability
<ul style="list-style-type: none"> High-grip rubber surface available 	<ul style="list-style-type: none"> Constant coefficient of friction Reliable product flow in acceleration sections or within inclines/declines

TPU-coated belts



Key features	Your benefits
<ul style="list-style-type: none"> Longitudinal flexibility 	<ul style="list-style-type: none"> Can cope with small pulley diameter Smooth and trouble-free product transfer
<ul style="list-style-type: none"> Excellent abrasion resistance 	<ul style="list-style-type: none"> Reduced belt wear No marking of goods Long belt life
<ul style="list-style-type: none"> Stable modulus of elasticity 	<ul style="list-style-type: none"> No retensioning No downtimes No maintenance
<ul style="list-style-type: none"> Permanently antistatic 	<ul style="list-style-type: none"> No interference with electronic devices Less dust and dirt attraction Process reliability

PVC-coated belts



Key features	Your benefits
<ul style="list-style-type: none"> Wide range of surface types, structures and belt strengths available 	<ul style="list-style-type: none"> Selection of suitable belt for specific application
<ul style="list-style-type: none"> Stable modulus of elasticity after running-in 	<ul style="list-style-type: none"> No retensioning No downtimes No maintenance
<ul style="list-style-type: none"> Permanently antistatic belts available 	<ul style="list-style-type: none"> No interference with electronic devices Less dust and dirt attraction Process reliability
<ul style="list-style-type: none"> Simple and fast joining method (Flexproof) 	<ul style="list-style-type: none"> Easy handling Adhesive-free joint Minimum equipment needed

PET-fabric or impregnated-fabric belts



Key features	Your benefits
<ul style="list-style-type: none"> • Excellent release properties 	<ul style="list-style-type: none"> • No sticking of rubber • Process reliability • Low maintenance costs
<ul style="list-style-type: none"> • Excellent abrasion resistance 	<ul style="list-style-type: none"> • Reduced belt wear • Reliable conveying and process flow • Long belt life
<ul style="list-style-type: none"> • Impregnated fabric surfaces 	<ul style="list-style-type: none"> • Less soiling = less maintenance • Constant low coefficient of friction
<ul style="list-style-type: none"> • Permanently antistatic (except NNT-8EFWE) 	<ul style="list-style-type: none"> • No interference with electronic devices • Less dust and dirt attraction • Process reliability

Cotton fabric and silicone-coated belts



Key features	Your benefits
<ul style="list-style-type: none"> • Excellent release qualities 	<ul style="list-style-type: none"> • No sticking of rubber • Process reliability • Extended belt life
<ul style="list-style-type: none"> • High-temperature resistant 	<ul style="list-style-type: none"> • Long belt life • No downtimes • Lower costs
<ul style="list-style-type: none"> • Stable modulus of elasticity after running-in 	<ul style="list-style-type: none"> • No retensioning • No downtimes • No maintenance
<ul style="list-style-type: none"> • Special folded-edge version available 	<ul style="list-style-type: none"> • Improved edge wear properties • No contamination of rubber • Less rejects, lower costs

Introduction

HabaSYNC® timing belts are used in linear movement and conveying applications requiring precise component positioning and product placement. Tailored timing belt solutions to meet your needs are produced in our state-of-the-art manufacturing facility and provided with high-quality materials specific for the application.

Habasit open-ended and truly endless timing belts are utilized in numerous industries, including the tire industry. They are the perfect choice for situations in which traditional belt designs will not provide ideal synchronization. Synchronization is achieved by meshing the belt teeth into a similar-pitch pulley. HabaSYNC® belts are available in metric and imperial pitches. Joining of the belts can be achieved with finger punch joining, mechanical clamps, or the Habasit patent-pending Hinge-Joint.

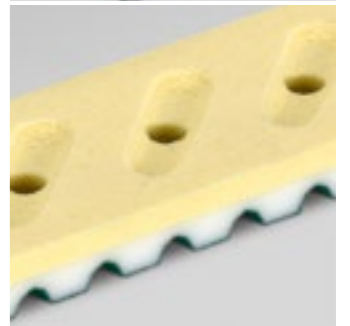
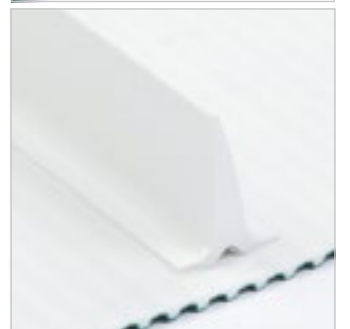
Materials

Timing belts within the HabaSYNC® line are made with thermoplastic polyurethane (TPU) and high-strength steel or aramide cords. The belts can be provided with various Shore A hardness. Timing belt covers are available in polyurethane, elastomere, or polyvinyl chloride. Special material covers can also be provided as required.

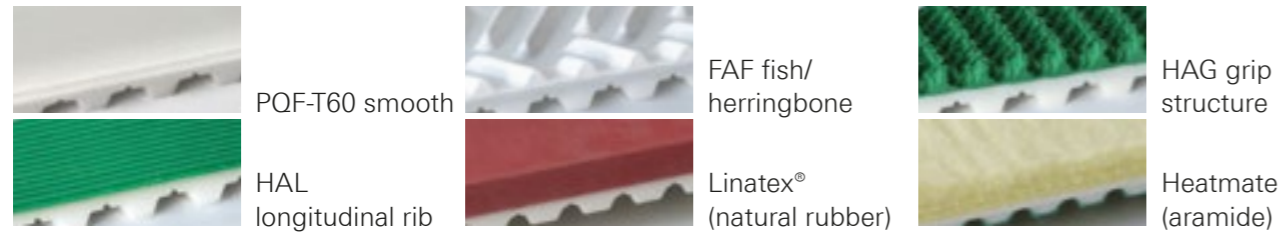
Attachments and modifications

Thermoplastic profiles to assist in conveying and product placement can be welded to the conveying side of the belt. Alternatively, mechanically mounted profiles are also offered and are available in thermoplastic, as well as multiple other materials, such as aluminium or UMHW. Mechanical profiles are custom made for your specific requirements. On the tooth side of the belt, weld-on guides are offered to support tracking for long narrow belt product conveying applications.

Application-specific modifications to both the back and tooth side of HabaSYNC® belts are possible to enhance performance. Examples of modifications would include profile grinding, surface grinding, lateral machining, hole punches and perforations.



Surface structures (selection only)



Key features	Your benefits
<ul style="list-style-type: none"> • Polyamide on conveying and tooth sides of belt 	<ul style="list-style-type: none"> • Low friction • Low noise • Slip during accumulation (conveying side)
<ul style="list-style-type: none"> • Good wear, hydrolysis, and chemical resistance 	<ul style="list-style-type: none"> • Longer belt life • Dimensional stability in hot and humid conditions • Operate in harsh chemical environments
<ul style="list-style-type: none"> • Higher strength with no-joining HabaSYNC® flex belts 	<ul style="list-style-type: none"> • Ability to handle high loads • Feasible for power transmission application • Full tensile member strength in an endless belt
<ul style="list-style-type: none"> • Wide range of covers, modifications, and attachments 	<ul style="list-style-type: none"> • Ideal belt selection for specific applications • Flexibility in design

The widest available solution on the market

Belts used in tire building machines very often are comprised of a number of narrow belts joined longitudinally, or belts running in parallel to achieve the desired width. With a wide timing belt, the need for longitudinal joining, which can be a failure-prone point, is eliminated, as is the need to install multiple parallel belts. Wide timing belts also improve positioning through precise alignment, which can be challenging for parallel belts. At 600 mm, HabaSYNC® wide timing belts offer the widest timing belt solution available in the market. This opens new possibilities for tire building productivity and the construction of equipment used in this application.

Quality tires are made on quality belts

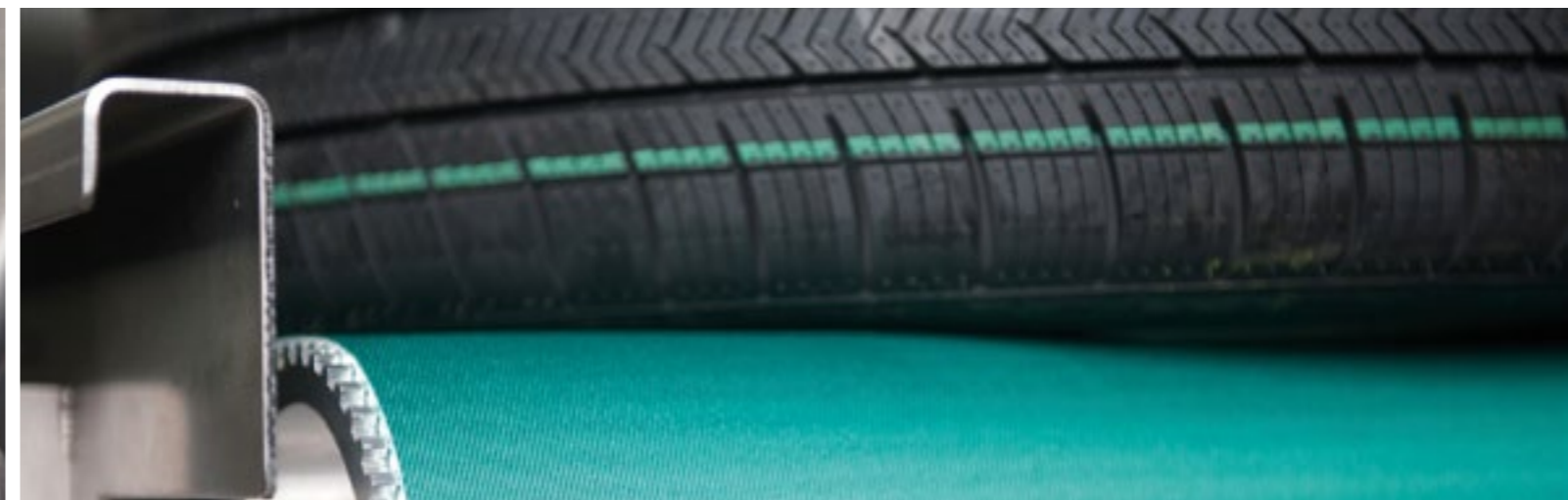
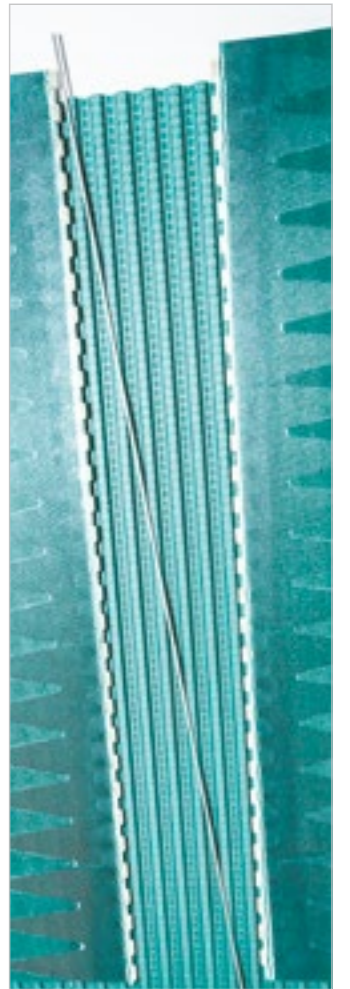
The uncured rubber used in tire building applications requires materials with a high chemical resistance. HabaSYNC® wide timing belts are made using a special TPU material with high resistance to chemical agents, oil and grease. The material is also abrasion resistant, which increases belt lifetime and reduces the frequency of belt changeovers.

Up to 8 times faster belt replacement

Traditional belt joining methods provide a robust joint able to withstand the operating conditions of the tire building process. However, when traditionally joined belts need replacing, it can take up to 8 hours, and as many as 6 operators, resulting in high costs and lost productivity. HabaSYNC® wide timing belts can be joined with a hinge joint. This solution can reduce the replacement related downtime to less than an hour and requires only 2 operators for the change.

Tailored for your process requirements

With Habasit advanced fabrication capabilities you can customize the belt for a precise fit to your tire building line. From the joining method, including the hinge joint, to profiles, transversal or lateral grooves on the conveying or tooth side, various covers, and punched or water-jet cut holes and pockets, there are solutions for even the most demanding process needs.



Introduction

The modular belt is an aggregation of individual plastic modules made by high-precision injection molding and connected by lateral rods. Its robust design is optimized for efficient conveying and easy cleaning procedures.

Plastic modular belts eliminate the need for high-tension systems by positively engaging the sprocket with the running belt and maintaining proper belt tracking. They are widely used in many industries where their specific product features provide numerous benefits to our customers.

Materials

Habasit modular belts are available with a variety of state-of-the-art features, including special materials for: low friction, self-lubrication, chemical resistance, food-approved materials, as well as with antistatic, flame-retardant, magnetic detectable, electrically conductive, submersible, antimicrobial, special-impact, cut-resistant, high-temperature, and super high-temperature properties.

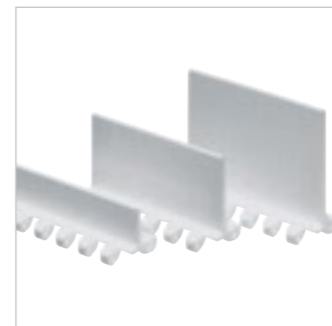
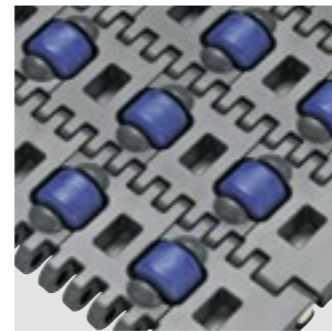
Sprockets and rods

Injection-molded sprockets have a specific open design that allows easy access for sanitation across the width of the conveyor shafts. Smooth lines and rounded corners eliminate virtually all areas where debris can be trapped.

The full-width rods ensure belt connection and lateral stiffness. HabasitLINK® modular belts come with two rod solutions, depending on the belt type: Smart Fit and Snap Fit.

Accessories

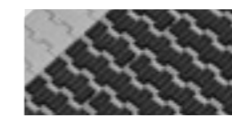
Habasit offers a wide range of modular belt accessories including cleats, flights, scoops, side guards, finger transfer plates, and hold-down tabs for elevators with back bending (Z-conveyors), as well as HabiPLAST guide rails.



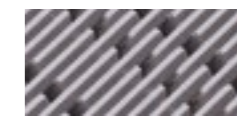
Surface structures (selection only)



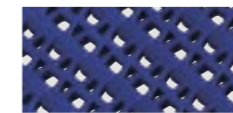
Flat Top



GripTop



Raised Rib



Flush Grid



Roller Top

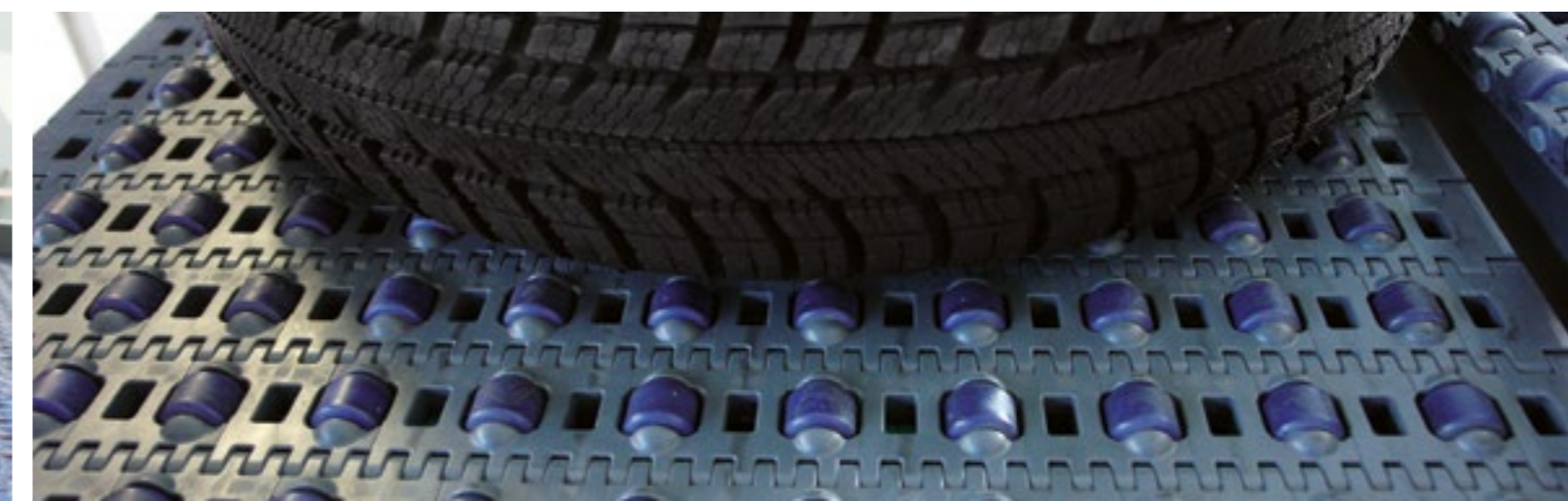


Key features

- 90° Roller Top
- Simple smart-fit or snap-fit assembly
- Large variety of plastic materials and characteristics
- Positive drive and tracking with belt-sprocket engagement

Your benefits

- Tire rolls smoothly avoiding jams
- No abrasion damage as with rubber belts
- Low maintenance/ease of maintenance
- Easy installation
- Can replace individual modules
- No need for special tools
- Optimum adaptation to needs of application
- Fulfills critical property requirements (eg. antistatic, electrically conductive, high temp., etc.)
- Straight running, even under influence of transversal forces
- No need for tensioning devices



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.



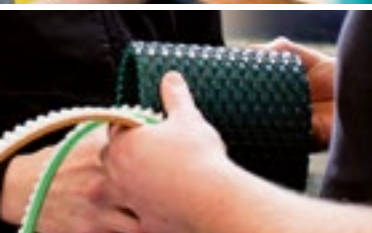
Habasit has over 30 affiliates worldwide, each with its own inventory, fabrication, assembly and service facilities.

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)

Australia

Habasit Australia Pty Ltd.
Silverwater, Sydney
Phone: +61 1300 945 455
www.habasit.com.au

Austria

Habasit GmbH, Wiener Neudorf
Phone: +43 1 690 66
www.habasit.at

Belgium & Luxembourg

Habasit Belgium N.V., Zaventem
Phone: +32 27 250 430
www.habasit.be | habasit.lu

Brazil

Habasit do Brasil, Barueri - SP
Phone: +55 11 4789 9022
www.habasit.com.br

Canada

Habasit Canada Ltd., Oakville
Phone: +1 905 827 41 31
www.habasit.ca

China

Habasit East Asia Ltd.
Fotan, Shatin, N.T., Hong Kong
Phone: +852 2145 0150
www.habasit.com.hk

Habasit (Shanghai) Co. Ltd.
Shanghai
Phone: +8621 5488 1218
www.habasit.com.cn

France

Habasit France SAS, Mulhouse
Phone: +33 3 89 33 89 03
www.habasit.fr

Germany

Habasit GmbH, Eppertshausen
Phone: +49 6071 969 0
www.habasit.de

India

Habasit India, Coimbatore
Phone: +91 422 666 78 00
www.habasit.in

Italy

Habasit Italiana SpA
Customer Care: 0438 911333
For int. calls: +39 0438 911444
www.habasit.it

Japan

Habasit Nippon Co., Ltd., Tokyo
Phone: +81 120 07 6339
www.habasit.co.jp

Korea (Republic of)

Habasit Korea Ltd., Seongnam
Phone: +82 31 737 9370
www.habasit.co.kr

Mexico

Habasit Rocua, Zapopan
Phone: +52 33 3824 2358
www.habasitrocu.mx

Netherlands

Habasit Netherlands BV, Nijkerk
Phone: +31 332 472 030
www.habasit.nl

New Zealand

Habasit New Zealand Pty Ltd.
Auckland
Phone: 0800 000 070
www.habasit.co.nz

Nordic countries

Habasit AB, Hindås, Sweden
Phone: +46 301 226 00
www.habasit.se

Poland

Habasit Polska Sp. z o.o.
Dąbrowa Górnicza
Phone: +48 32 639 02 40
www.habasit.pl

Russia

OOO Habasit Ltd.
Moscow Region
Phone: +7 495 966 1566
www.habasit.ru

Singapore

Habasit Far East Pte Ltd.
Singapore
Phone: +65 6862 5566
www.habasit.com.sg

South Africa

Habasit South Africa Pty Ltd.
Gauteng
Phone: +27 10 001 6770
www.habasit.co.za

Spain

Habasit Hispánica S.A.
Barberá del Vallés
Phone: +34 937 191 912
www.habasit.es

Switzerland

Habasit GmbH, Reinach
Phone: +41 61 577 51 00
www.habasit.ch

Taiwan

Habasit (Taiwan) Ltd.
New Taipei City
Phone: +886 2 2267 0538
www.habasit.com.tw

Turkey

Habasit Kayis San.
Ve Tic. Ltd. Sti., Istanbul
Phone: +90 444 70 43
www.habasit.com.tr

Ukraine

Habasit Ukraine LLC., Kyiv
Phone: +38 044 290 88 99
www.habasit.ua

United Kingdom & Ireland

Habasit UK Ltd., Elland
Phone: +44 333 207 6570
www.habasit.co.uk

USA

Habasit America
Suwanee, Georgia
Phone: +1 800 458 6431
www.habasitamerica.com

Habasit International AG

Römerstrasse 1
CH-4153 Reinach, Switzerland
Phone +41 61 715 15 15
Fax +41 61 715 15 55
www.habasit.com

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