

Tobacco Industry Conveyor Belts for Cigarette Manufacturing

Habasit – Solutions in motion



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Product liability, application considerations

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Tobacco processing requirements

Tobacco processing requires a wide range of conveyor and processing belts. These are key machine elements that ensure the efficient and trouble-free flow of materials through every manufacturing stage. Habasit has developed an extensive array of solutions to allow you to choose the best conveyor belt for each application. All our developments are focused on meeting the rising safety standards within the tobacco industry. As a result, our P-Line products fully comply with pyrolysis regulations and FDA guidelines.

The innovative P-Line

This comprehensive product range of polyolefine-coated belts for the tobacco industry is now extended by products with a new thermoplastic polyester elastomer coating. "P" stands for:

- **P**olyolefine and **P**olyester - the raw materials used
- **P**yrolysis compliant
- **P**hysiologically safe
- **P**ure coatings and product construction - since there are no bonding layers or adhesives, when burning takes place no dangerous substances are set free, ensuring an environmentally friendly solution
- **P**olyvalent – these belts can be used in a wide variety of applications in addition to tobacco

Competence and experience

Habasit application engineers, technicians and joining specialists are at your disposal for professional consulting, superb customer service, and excellent support. Founded in 1946, Habasit has proven its profound understanding of customer needs for more than 60 years. Thanks to our comprehensive global network, Habasit can respond to any request with nothing less than outstanding belting solutions of the highest quality, tailored in every case to your specific needs.





Process step	Process sequence	Application	Challenges
Blending and tipping	Tobacco hands	Blending tables	<ul style="list-style-type: none"> • Heavy dust • Abrasion
		Tipping and butting cutters	
	Tips processing	Tips metal rake belt	
		Tips weigh belt	
		Incline conveyor to "hump backs"	
		Tips horizontal feeder belts	
		Main collection belt	
	Butts processing	Butts incline and regulating feeder	
		Butts weigh belt	
		Butts incline to "hump backs"	
		Butts horizontal feeder belts	
		Butts main collection conveyor	
Butts incline to ordering cylinder			
Threshing	Butts threshing	Butts incline to threshing line	
		Butts proportional main feeder	
		Butts proportional threshing stations	
		Butts infeed belt separators	
Re-drying and pressing	Lamina processing	Butts separators discharge belt	
		Lamina main collection conveyor	
		Incline to sweep feeder	
	Stem packaging	Incline to tobacco packaging press	
		Incline to stem feeding system	
		Incline to stem packaging line	
Leaf and stem warehouse (export) – primary processing			



Process step	Process sequence	Application	Challenges
Virginia, Oriental, Burley 	Depacking and slicing lamina	Depacking and feeding bale slicer	<ul style="list-style-type: none"> • Heavy dust • Abrasion
		Discharging belt from bale slicer	
Stems 	Depacking	Depacking, feeding weighing device	<ul style="list-style-type: none"> • Dust
		Feeder, chain-driven	
		Weighing device	
Virginia, Oriental, Burley stems 	Conditioning	Infeed to ordering cylinder	<ul style="list-style-type: none"> • Steam • Condensate • Pollution
Virginia, Oriental stems 	Casing/heavy casing (Burley)	Discharging belt from casing cylinder/ Burley toaster	<ul style="list-style-type: none"> • Steam • Condensate • Pollution build-up



Process step	Process sequence	Application	Challenges
Virginia, Oriental, Burley stems	Blending and storing	1 st bottom belt, silo, chain-driven	<ul style="list-style-type: none"> • Dust build-up
		Shuttle conveyors on top of silo	
		Through belt conveyor – discharging	
		2 nd bottom belt, silo, pulleys	
		Shuttle conveyors on top of silo	
	Concave belt conveyor – discharging		
	Tobacco scanning	High-speed double belt	<ul style="list-style-type: none"> • Dust • High speed • High temperature
Virginia, Oriental stems	Tobacco cutting	Discharging from cutter	<ul style="list-style-type: none"> • Dust • Moisture
Virginia, Oriental, Burley stems	Drying (Burley toasting)	Discharging from dryer	<ul style="list-style-type: none"> • High temperature
	Weighing	Weigh belt	<ul style="list-style-type: none"> • Dust build-up
Virginia, Oriental	Flavoring	Flavoring	<ul style="list-style-type: none"> • Dust build-up • Flavor • Chemicals • Risk of explosion
Cut tobacco	Final storing	1 st bottom belt, silo, chain-driven	<ul style="list-style-type: none"> • Dust
		2 nd bottom belt, silo, pulleys	
	Cut tobacco feeding	Feeder belt	
Common conveying		Side sealing – dust curtain	<ul style="list-style-type: none"> • Dust • Friction



Process step	Process sequence	Application	Challenges
Filter manufacturing	Machine process	No belt in operation	
Cigarette making	Filter rod transfer	Transfer belt Waste removal belt	<ul style="list-style-type: none"> • Guarantee smooth and gentle mass flow
Packaging	<ul style="list-style-type: none"> • Wrapper cardboard/cellophane • Parceller • Over-wrapper • Dispatch carton to stock 	Generic materials handling applications with power transmission belts/live roller belts, fabric conveyor belts, plastic modular belts or slat and conveyor chains	<ul style="list-style-type: none"> • Mistracking • Package damages

For all these challenges, Habasit provides exactly the right solution!

P-Line

Specifically developed for the tobacco industry using the unique features of TPO and TPEE coating.

Read about its variety, features and benefits.



Belt cover materials

Green leaf and primary processing mainly:

TPO Thermoplastic polyolefine

TPEE Copolyester thermoplastic

PET Polyester fabric, impregnated

Secondary manufacturing and packaging applications mainly:

PVC Polyvinylchloride

NBR Nitrile-butadiene-rubber (acrylonitrile-butadiene-rubber)

Belt surface structures

The belt surface plays a key role in each specific process step or function. The various surface structures and material properties support a multitude of functions.

The following is a selection of the wide variety of belts, surface structures and properties available.



Impregnated fabric, non-adhesive

Belt series: **ONI**-...



Blank/smooth surface, adhesive

Belt series: **PAB**-...



Blank/smooth surface, non-adhesive

Belt series: **PNB**-...



Tear-drop structure, adhesive

Belt series: **PAP**-...



Knob structure, adhesive

Belt series: **PAK**-...

The HabasitLINK® plastic modular belts

Drawing on our comprehensive experience and leadership in traditional fabric belting, Habasit's state-of-the-art HabasitLINK® plastic modular belts complete our offering as a single-source supplier and partner for your success. Plastic modular belts are used in a wide range of industries.



Modular belt materials

- PE Polyethylene
- PP Polypropylene

Modular belt surfaces and structures

A wide variety of surfaces and structures are available for straight running and radius belts, including flat top, perforated flat top, grip top, flush grid, mesh, and nub top, as well as accessories such as ribs or flights (to hold product on inclines and declines), side plates (to stop material falling off) and/or high friction inserts (to prevent product slipping).

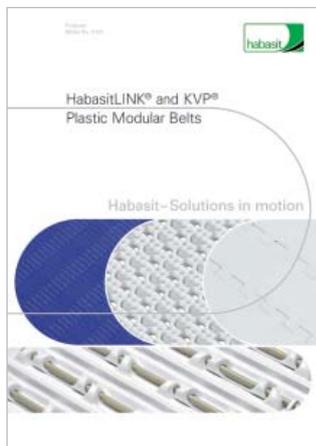


Flat Top modular belt, straight running (M1220, 0.5")



Radius Flush Grid, radius and straight running (M2540, 1")

For more details, please consult Habasit brochure 4128



The HabaCHAIN® slat and conveyor chains

As a high-quality range of slat- and conveyor chain products, HabaCHAIN® chains are suitable for a multitude of applications in the tobacco, beverage, bakery, packaging, and many other industries.

Chain materials

- PP Polypropylene (glass reinforced)
- PBT Polybutyleneterephthalate (natural, unmodified)



Chain shapes, surfaces and structures

Different surface shapes and design variations are available in both straight-running and radius/sideflexing versions. HabaCHAIN® chains run on most systems and sprockets on the market today, and are fully compatible with industry standards enabling retrofits. The product range consist of slat top chains, low back pressure chains, flexi and multiflex chains, snap-on chains, and case chains.



Flexi chain, straight and radius running (C7100HA radius)



Flexi chain, straight and radius running (C7100HW radius)

For more details, please consult Habasit brochure 4122



Fabric-based coated belts



Key features

- High temperature resistance
- No deformation

- Easy to track

- Smooth and pore-free belt surface
- Good release properties

- Durable
- Laterally flexible fabric traction

- Non-absorbent material
- Edge fray resistance

- FDA approved
- Atoxic material
- Pyrolysis tested

Your benefits

- Longer service life in applications with steam and hot tobacco
- No fiber contamination due to edge damage against the conveyor frame
- No contamination by old tobacco due to easy belt cleanability
- Less maintenance work
- Suitable for through applications
- Less cleaning effort
- No fiber contamination of tobacco, for safe production
- Suitable for direct tobacco contact

HabasisLINK® plastic modular belts



- Positive drive and tracking by belt engaged with sprockets
- Guided belt alignment
- Very small transfers due to improved modular belt design

- Straight running, even under influence of transversal forces
- Exact positioning of goods
- No need for tensioning devices
- No re-adjustments, no downtimes
- Smooth transfers between conveyors (radius = 8 mm / 0.31 in)
- Efficient and safe product handling

HabaCHAIN® slat and conveyor chains



- For linear and curve conveying
- Wear resistant
- Low noise generation
- Compatible with other chains
- Soft cigarette handling
- Easily cleaned

- Versatile application
- Less maintenance
- Improves workers' environment
- Easy to retrofit
- No cigarette damage
- No cigarette contamination

This application / belt matrix does not claim to be complete and shall serve as indication of potential solutions. For detailed material and belt selection please contact your local Habasit partner: www.habasit.com			Material		
1) Pyrolysis compliance: Material meets given industry regulations (Pyrolysis compliance) for areas where the belt materials have direct contact to tobacco. 2) fabric = impregnated fabric 3) double coated = double side coated			Property or kind of product		
Process	Process step	Process sequence	Belt type		
Green leaf processing	Blending & tipping	Tobacco hands	Blending tables Tipping and butting cutters		
		Tips processing	Tips metal rake belt Tips weigh belt Incline conveyor to «hump backs» Incline tips «hump backs» 9 stations Tips horizontal feeder belts Main collection belt		
			Butts processing	Butts incline and regulating feeder Butts weigh belt Butts incline to «hump backs» Butts «hump backs» 14 stations Butts horizontal feeder belts Butts main collection conveyor Butts incline to ordering cylinder Butts incline to threshing line	
				Butts threshing	Butts proportional main feeder Butts proportional threshing stations Butts inclined infeed belt separators Butts separators discharge belt
					Lamina processing
		Stem packaging			
	Threshing	Butts threshing	Butts proportional main feeder Butts proportional threshing stations Butts inclined infeed belt separators Butts separators discharge belt		
			Re-drying & pressing	Lamina processing	Lamina main collection conveyor Incline to sweep feeder Incline to tobacco packaging press Incline to stem feeding system
	Primary processing	Virginia; Oriental; Burley		Depacking and slicing lamina	Depacking and feeding bale slicer Discharging belt from bale slicer Incline discharging belt from bale slicer
		Stems	Depacking	Depacking, feeding, weighing device Feeder (chain-driven) Weighing device	
		Virginia; Oriental; Burley; Stems	Conditioning	Infeed to ordering cylinder lamina Infeed to ordering cylinder stems Incline infeed to ordering cylinder stems	
		Virginia; Oriental; Burley	Casing/heavy casing (Burley)	Discharging belt from casing cylinder / Burley toaster 1 st bottom belt, silo, chain-driven Shuttle conveyors on top of silo Concave belt conveyor – discharging	
Virginia; Oriental; Burley; Stems		Blending and storing	2 nd bottom belt, silo, pulleys Shuttle conveyors on top of silo Concave belt conveyor – discharging		
Virginia; Oriental; Stems		Tobacco cutting	Discharging from cutter		
Virginia; Oriental; Burley; Stems		Drying (Burley toasting)	Discharging from dryer		
Stems		Weighing	Weigh belt		
Virginia; Oriental		Flavoring	Discharging from flavoring drum		
Cut tobacco		Final storing	1 st bottom belt, silo, chain driven 2 nd bottom belt, silo, pulleys		
			Cut tobacco feeding	Feeder belt	
			Cut tobacco feeding	Incline feeder belt	
Common conveying	Common conveying	Common conveying	Side sealing, dust curtain		
Secondary manufacturing (cigarette making)	Filter manufacturing	Machine process	No conveyor belt in operation		
	Cigarette making	Filter rod transfer	Transfer belt/chain Waste removal belt		
	Packaging	Various processes	Various kinds of belts		

Comprehensive services are central to Habasit’s belting solution approach.

As committed partners to our customers, we are dedicated to sharing our knowledge and to providing full support.



Comprehensive consulting and technical support

Habasit offers the best consulting and technical support on the belting market. Everything revolves around our customers and each affiliate has its own belting experts. The Habasit team is proud to provide the highest levels of support together with top-quality products that have been leaders on the global market for over 60 years.



Assistance with belt selection and calculation

We will select and calculate the most suitable belt for your specific application. You also may do this yourself with our state-of-the-art Habasit selection and calculation program “SeleCalc.” To order this program free of charge, simply call your nearest Habasit partner or contact: info@habasit.com.



Fabrication, assembly and local installation services for quick reaction times

We make belts endless or assemble modular belts or chains, either at our own locations or on-site directly on your machine or system. Habasit operates over 30 affiliated companies worldwide, each with its own inventory, fabrication, assembly and service facilities. Together with our representative offices and numerous qualified distributors, we can react quickly, competently and reliably to satisfy all your demands.



Customer training programs

Habasit offers training programs and provides support tools to ensure optimal use of our products and to prolong their lifetimes. Training on fabrication, installation, assembly, maintenance and belt repair takes place at Habasit sites or at your location.



Belt monitoring, inspections, analyses and process optimization proposals

We organize and handle belt maintenance, inspections, analyses and surveys for your locations. On request we will also work with you to develop optimization proposals, for example, to achieve added value from the machinery or process output.



Design assistance for customized solutions

Habasit believes in partnership. Our engineering team will work closely with your engineers on joint design developments, preferably from a very early stage. We particularly recommend this for projects involving new technologies or large-scale modifications and adaptations.



Customers first

At Habasit we understand that our success depends on your success. This is why we offer solutions, not just products; partnership, not just sales. Since our foundation in 1946, Habasit has brought this understanding of customer needs to life every day and for every application. That's why we're the No. 1 in belting today. Worldwide. Learn more on www.habasit.com

Committed to innovation

Habasit is strongly committed to the continuous development of innovative, value-added solutions. Over 3% of our staff are dedicated exclusively to R&D, and our annual investment in this area exceeds 8% of turnover.

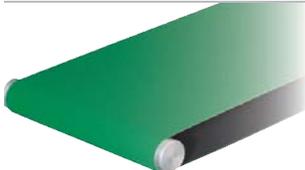
Certified for quality

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 9001:2000.



Worldwide leading product range

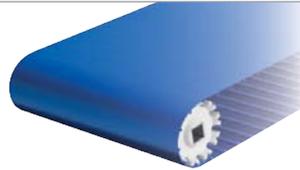
Habasit offers the largest selection of belting, conveying, processing and complementary products in the industry. Our response to any request is nothing less than a specific, tailor-made solution.



Fabric based conveyor and processing belts
HabaFLOW®



Plastic modular belts
HabasitLINK® /KVP®



Positive drive conveyor and processing belts
Habasit Cleandrive™



Power transmission belts
HabaDRIVE®



Timing belts
HabaSYNC®



Chains (slat and conveyor chains)
HabaCHAIN®



Machine tapes



Round belts



Seamless belts



Profiles, Guides, Wear strips
HabiPLAST®



Fabrication tools (joining tools)



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Motion control

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Rossi is one of Europe's largest manufacturers of gear reducers, gearmotors, inverters, standard and brakemotors, and is a member of the Habasit Group.

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