Tobacco Industry
Conveyor Belts
for Cigarette Manufacturing

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

Green leaf processing



Process step	Process sequence	Application	Challenges
Blending and tipping	Tobacco hands	Blending tables	• **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	
		Butts incline to threshing line	
Threshing	Butts threshing	Butts proportional main feeder	
		Butts proportional threshing stations	
		Butts infeed belt separators	
		Butts separators discharge belt	
Re-drying and pressing	Lamina processing	Lamina main collection conveyor	
		Incline to sweep feeder	
		Incline to tobacco packaging press	
	Stem packaging	Incline to stem feeding system	
		Incline to stem packaging line	
Leaf and stem warehouse (export) – primary processing			

Primary processing (1st part)






Process step	Process sequence	Application	Challenges
Virginia, Oriental, Burley	Depacking and slicing lamina	Depacking and feeding bale slicer	• **Heavy dust** • **Abrasion**
		Discharging belt from bale slicer	
Stems	Depacking	Depacking, feeding weighing device	• **Dust**
		Feeder, chain-driven	
		Weighing device	
Virginia, Oriental, Burley stems	Conditioning	Infeed to ordering cylinder	• **Steam** • **Condensate** • **Pollution**
Virginia, Oriental stems	Casing/heavy casing (Burley)	Discharging belt from casing cylinder/ Burley toaster	• **Steam** • **Condensate** • **Pollution build-up**

Primary processing (2nd part)



Process step	Process sequence	Application	Challenges
Virginia, Oriental, Burley stems	Blending and storing	1st bottom belt, silo, chain-driven	• **Dust build-up**
		Shuttle conveyors on top of silo	
		Through belt conveyor – discharging	
		2nd bottom belt, silo, pulleys	
		Shuttle conveyors on top of silo	
		Concave belt conveyor – discharging	
	Tobacco scanning	High-speed double belt	• **Dust** • **High speed** • **High temperature**
Virginia, Oriental stems	Tobacco cutting	Discharging from cutter	• **Dust** • **Moisture**
Virginia, Oriental, Burley stems	Drying (Burley toasting)	Discharging from dryer	• **High temperature**
	Weighing	Weigh belt	• **Dust build-up**
Virginia, Oriental	Flavoring	Flavoring	• **Dust build-up** • **Flavor** • **Chemicals** • **Risk of explosion**
Cut tobacco	Final storing	1st bottom belt, silo, chain-driven	• **Dust**
		2nd bottom belt, silo, pulleys	
	Cut tobacco feeding	Feeder belt	
Common conveying		Side sealing – dust curtain	• **Dust** • **Friction**

Secondary manufacturing (cigarette making)



Process step	Process sequence	Application	Challenges
Filter manufacturing	Machine process	No belt in operation	
Cigarette making	Filter rod transfer	Transfer belt Waste removal belt	• **Guarantee smooth and gentle mass flow**
Packaging	• 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	• **Mistracking** • **Package damages**

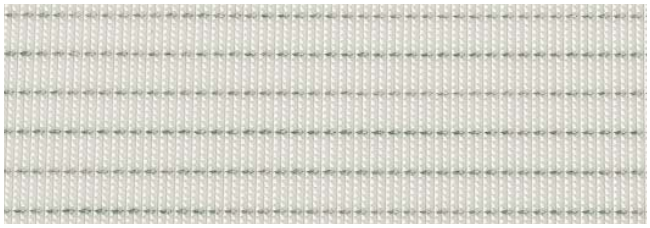
P-Line
Specifically developed for the tobacco industry using the unique features of TPO and TPEE coating.
Read about its variety, features and benefits.

Belt cover materials
Green leaf and primary processing mainly:
TPO Thermoplastic polyolefine
TPEE Copolyester thermoplastic
PET Polyester fabric, impregnated

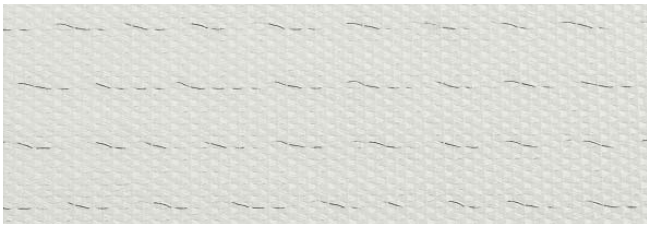
Secondary manufacturing and packaging applications mainly:
PVC Polyvinylchloride
NBR Nitrile-butadiene-rubber (acrylonitrile-butadiene-rubber)

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-**…

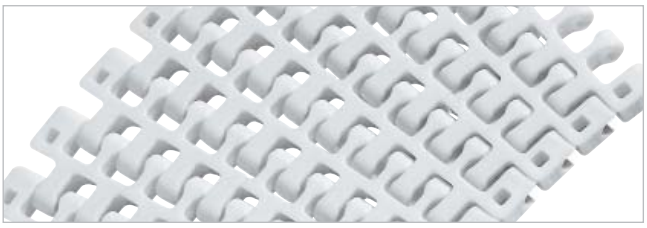
Modular belt materials

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")

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.

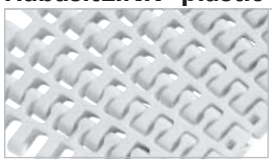
Flexi chain, straight and radius running
(C7100HA radius)

Flexi chain, straight and radius running
(C7100HW radius)

Features and benefits

Fabric-based coated belts	Key features	Your benefits
	• High temperature resistance • No deformation	→ Longer service life in applications with steam and hot tobacco
	• Easy to track	→ No fiber contamination due to edge damage against the conveyor frame
	• Smooth and pore-free belt surface • Good release properties	→ No contamination by old tobacco due to easy belt cleanability
	• Durable	→ Less maintenance work
	• Laterally flexible fabric traction	→ Suitable for through applications
	• Non-absorbent material	→ Less cleaning effort
	• Edge fray resistance	→ No fiber contamination of tobacco, for safe production
	• FDA approved • Atoxic material • Pyrolysis tested	→ Suitable for direct tobacco contact
		

HabasitLINK® 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

Application table

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

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

Process	Process step	Process sequence	Material / Property or kind of product / 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
	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
		Stem packaging	Incline to stem feeding system
			Incline to stem packaging line
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
	Virginia; Oriental; Burley; Stems	Blending and storing	1st bottom belt, silo, chain-driven
			Shuttle conveyors on top of silo
			Concave belt conveyor – discharging
			2nd 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
		Weighing	Weigh belt
	Virginia; Oriental	Flavoring	Discharging from flavuring drum
	Cut tobacco	Final storing	1st bottom belt, silo, chain driven
			2nd 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

	TPO[1]													TPEE[1]				TPO[1]	PVC				NBR		NBR		Plastic[1]				
	fabric[2]	coated												coated				coated	coated				coated		double coated[3]		modular belt			chains	
	ONI-5E	PAB-10EYWO	PAK-10EIWO	PAK-10EYWO	PAP-10EIWO	PAP-10EYWO	PNB-5EVWX	PNB-5EYWX	PNB-10EIWO	PNB-10EVWW	PNB-10EYWO	PNB-14EYWO	PNB-12EIWD	PNB-14EIWD	PAP-12EIWD	PNB-3EVWD	NVT-501	NAB-10ELBV	NAJ-8EEBV	NHB-10EKBV	NSL-10ELBV	HAT-8P	HAT-12P	S-10/15	S-18/20	M2510	M2520	M2540	C7100 radius	C820 straight
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