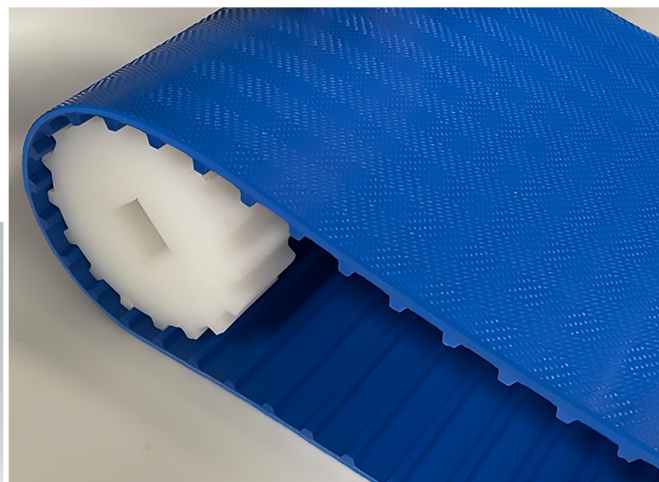


esbelt.com



ISO 9001:2015

## SMART DRIVE

Positive Drive  
Conveyor Belts

# SMART DRIVE

## Flexible, hygienic and safe design

Smart Drive is the new proposal from **esbelt** that replaces modular and homogeneous belts. It is a positive drive belt that meets the most demanding needs. Smart Drive is made of Premium TPU with high resistance to animal and vegetable fats, abrasion, and hydrolysis, complying with FDA and EU food regulations.

The flexibility of its design and material quality are its key to excellent performance.

### Flexibility in the configuration of cleats and toothed profiles.

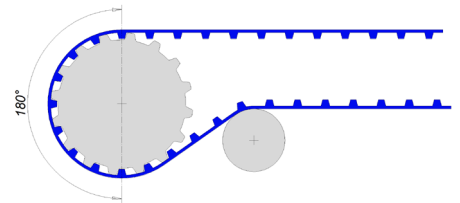
Smart Drive adapts to conveying needs and can be configured in multiple ways to guarantee its best performance in each application.

The toothed profiles, on the bottom cover of the belt, can be distributed in various ways to maximize self-centering on each type of conveyor.

On the top cover, different cleats (flights) and sidewalls can be added to meet the requirements of each particular convey.

### Optimal centering of the belt.

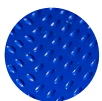
The toothed profiles, on the bottom cover, enable optimal centering, prevent damage due to misalignment, save costs and maintenance time.



### Choose the finishings of the belt.

■ Color blue 06 or white

■ A2 pattern on one side and matt on the other

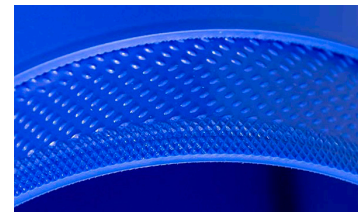


**Positive A2 pattern.** It allows the cover to work on a slider bed and on rollers. It is easy to clean and release food residue. It has a low coefficient of friction under humid conditions.



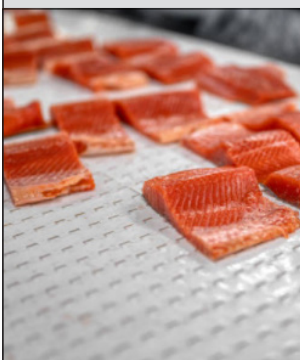
**Silk-matt finish.** Homogeneous and non-porous. It guarantees a good release of products and easy cleaning

■ Sealed edges for additional safety and hygiene.



## Why choose SMART DRIVE over homogeneous and modular belts

### Advantages over modular belts



- Easy to clean, reduced risk of contamination. More security.
- Water savings, reduction in cleaning hours, less waste water treatment.
- Less noise pollution.
- Less weight, energy saving.
- More cost-effective solution.

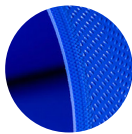


## **Anti-Hydrolysis.**

TPU with high resistance to hydrolytic degradation. Resistant to hot water and steam, lengthens the life of the belt.

## **Easy to clean, savings in water consumption.**

Its design and material allow easy cleaning and maintenance of the belt. Due to its anti-hydrolysis quality, it can withstand frequent washing sessions and stay in perfect condition.



## **Sealed Edges.**

The sealed edges of the belt are an additional measure of safety and protection. They prevent the accumulation of dirt that proliferates microbial growth and ply separation.



## **Antimicrobial.**

Antimicrobial belt, prevents the formation of biofilms. The formulation in its TPU layers, not just the surfaces, reduces microbial growth by more than 99%.



## **Contributes to the application of a HACCP system.**

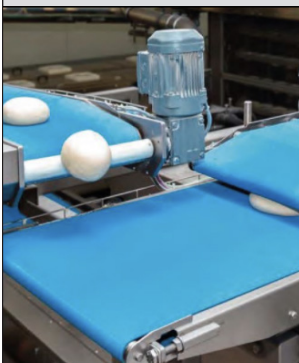
We are committed to the highest quality standards, our Smart Drive helps in the implementation of a HACCP system.



## **FDA and EU food regulations.**

Smart Drive complies with FDA and EU food regulations to come in direct contact with food products.

## **Advantages over homogeneous or monolithic belts**



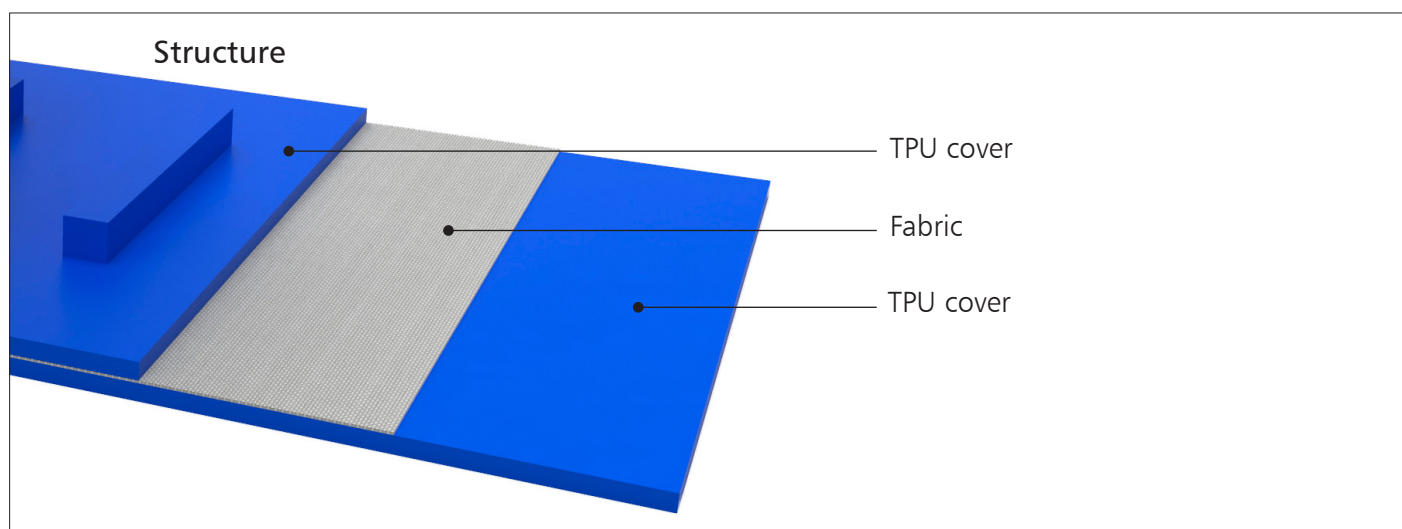
- Less elongation.
- No misalignment if there is an accidental cut.
- High dimensional stability, avoiding undulations and deformations on the surface.
- Allows for the design and manufacture of long conveyors.
- Anti-microbial formulation.
- More cost-effective solution.

# Configuration SMART DRIVE

## 1 Belt

Type of base belt	Top cover					Bottom cover		Constant (intermittent) temperature °C	Fabrics		Belt thickness mm	Belt weight kg/m <sup>2</sup>	at 20° C		Working load at 1% elongation N/mm	Max. roll width mm
	Material*	Hardness °ShA	Color	Thickness mm	Finish	Color	Finish		N° plies	Weft			A	B		
NPX09UA2MT-AM	TPU	85	blue 06	0,3	Matt	blue 06	A2 Pattern	-25 (-30)+90 (110)	2	Rigid	2,10	2,20	30	50	9	1250
NPX20UA2MT-AM	TPU	85	blue 06	0,5	Matt	blue 06		-25 (-30)+90 (110)	2	Rigid	3,15	3,20	100	100	12	1250
CPX09UA2MT-AM	TPU	85	white	0,3	Matt	white		-25 (-30)+90 (110)	2	Rigid	2,10	2,20	30	50	9	1250

\*Consult us for PVC



## General outline of nomenclature

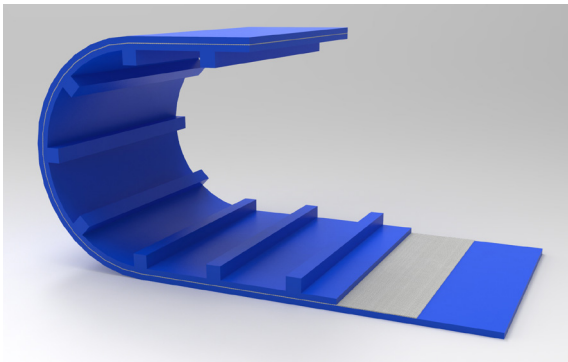
Smart Drive	<b>SD</b> 4-20 / NPX-09UA2 MT-AM SD4-20 / NPX-09UA2 MT-AM SD4- <b>20</b> / NPX-09UA2 MT-AM	<b>SD</b> Smart Drive <b>4</b> Trapezoidal profile 4x6mm; <b>7</b> Square profile 7x7mm <b>20</b> Pitch 20mm ; <b>40</b> Pitch 40mm
Base Belt	SD4-20 / <b>NPX</b> -09UA2 MT-AM SD4-20 / NPX- <b>09</b> UA2 MT-AM SD4-20 / NPX-09 <b>U</b> A2 MT-AM SD4-20 / NPX-09UA <b>2</b> MT-AM SD4-20 / NPX-09UA2 <b>MT</b> -AM SD4-20 / NPX-09UA2 MT- <b>AM</b>	Belt Code: <b>NPX</b> Novak Premium ; <b>CPX</b> Clina Premium Working load at 1% elongation N/mm: <b>09</b> ; <b>20</b> <b>U</b> Thermoplastic Polyurethane cover <b>A2</b> Cover pattern <b>MT</b> Matt finish <b>AM</b> Antimicrobial quality

## Toothed Profiles

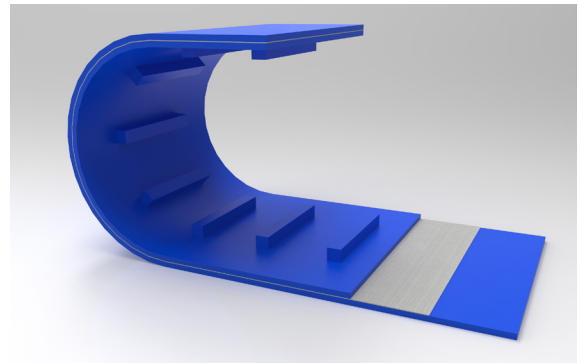
The toothed profiles can be configured in different ways on the bottom cover of Smart Drive to achieve maximum self-centering of the belt. It is possible to define the length and arrangement of the toothed profiles according to each conveyor. They can be welded along the entire width of the belt, only at the center, or arranged in different rows.

The distance between toothed profiles (pitch) can be either 20 mm or 40 mm.

- **Toothed profiles along entire belt width.**



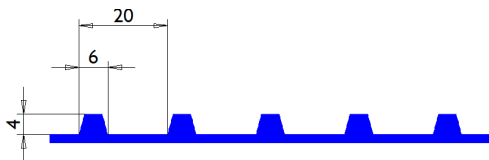
- **Centered toothed profiles.**



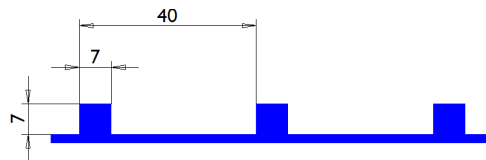
## Pitch between toothed profiles

The endless length of the Smart Drive belt must be a multiple of the toothed profile pitch.

- **20 mm**



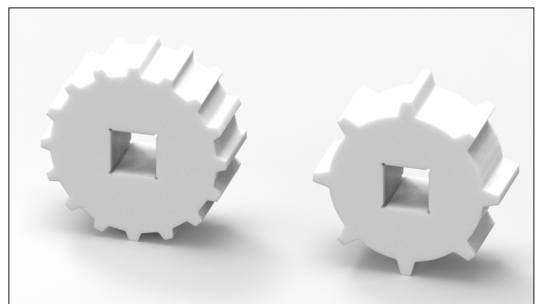
- **40 mm**



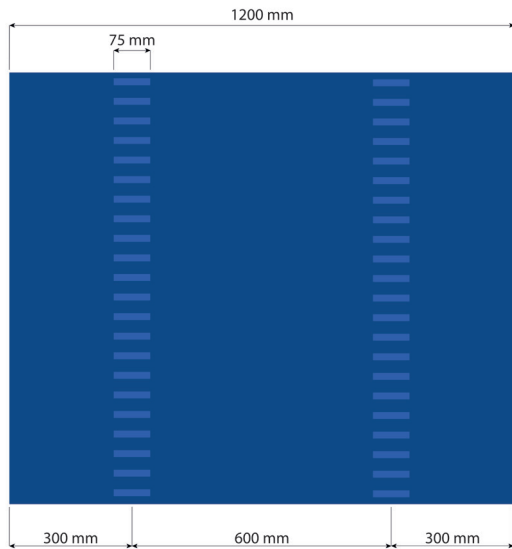
Contact **esbelt** for exact tooth profiles measurements.

## Sprockets

Typo	N° of toothed profiles	ø (mm)	Material	Square Hole (mm)	Round Hole (mm)	Width (mm)
Pitch between tooth profiles 20 mm						
SD/Z8 P20	8	51,2	PEHD	25-40	20-32	31
SD/Z16 P20	16	102,4	PEHD	25-40	20-32	31
Pitch between tooth profiles 40 mm						
SD/Z8 P40	8	102,4	PEHD	25-40	20-32	31
SD/Z12 P40	12	152	PEHD	25-40	20-32	31
SD/Z14 P40	14	178,8	PEHD	25-40	20-32	31
SD/Z16 P40	16	204,8	PEHD	25-40	32	31

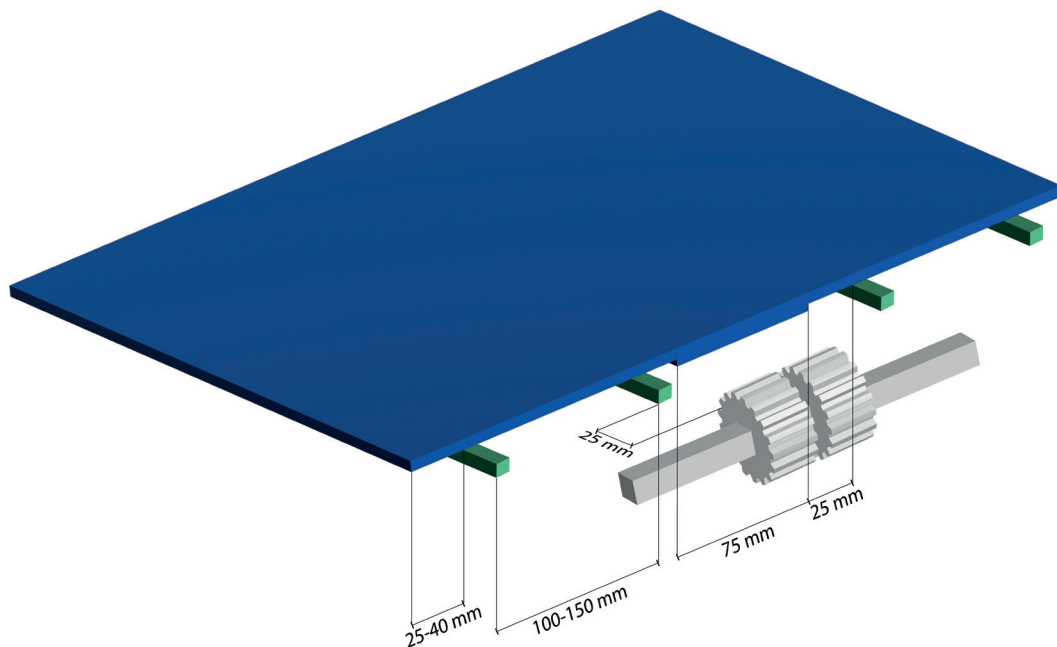


## Position of the toothed profiles



- Belt width  $\leq 600$  mm:  
1 row centered toothed profile.
- Belt width  $> 600$  mm:  
2 rows of toothed profiles.

## Position of support bars for Smart Drive





Recommended dimensions:

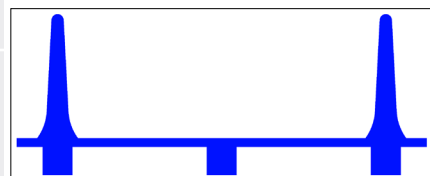
- Standard length of the centered profile: 75 mm.
- Lateral margin between belt edge and support bar: min. 25mm max. 40mm.
- Pitch between support bars: between 100 - 150 mm.
- Distance between end of support bars and sprockets: 25 mm.



One of Smart Drive's priorities is to efficiently adapt to the requirements of each application and the product to be conveyed. For this reason, different accessories such as cleats and sidewalls (runner) can be welded on its top cover in multiple configurations, depending on the requirements.

## TPU Cleats (Flights)

Section	Type	Dimensions		Material	Weight g/m	Minimum pitch mm	Minimum ø mm	Positioning
		b mm	h mm					
	UV.020	10	20	TPU	140	30	40	Transversal
	UV.030	10	30		180			
	UV.040	10	40		230			
	UV.050	10	50		300			
	UL.030	10	30	TPU	215	40	45	Transversal
	UL.040	10	40		255			
	UL.050	10	50		320			



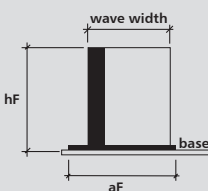
Cleats must be aligned with the toothed profiles

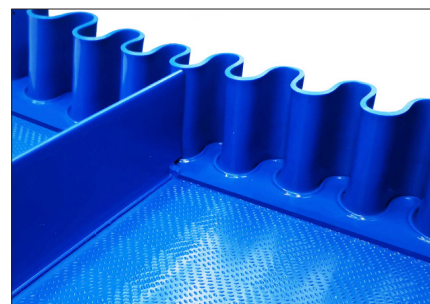
- To prevent damage on the return side, the transverse cleats must always be 10 to 20 mm lower than the RUNER sidewall.



Smart Drive with toothed profiles along the entire width of the belt and 2 rows of right-angled cleats on the top cover. Conveying of duck feathers.

## TPU "Runer" - with base

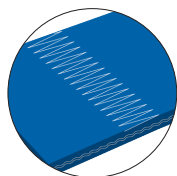
Section	Type*	hF mm height	aF mm width	mm Wave width	cF mm pitch	Minimum ø mm	Base thickness mm
	BB20	20	25	20	23	40	2,5
	BB30	30	25	20	23	60	2,5
	BB40	40	25	20	23	80	2,5
	BB50	50	47	34	40	90	2,5
	BB60	60	47	34	40	110	2,5
	BB80	80	47	34	40	140	2,5
	BB100	100	52	34	40	180	3,0



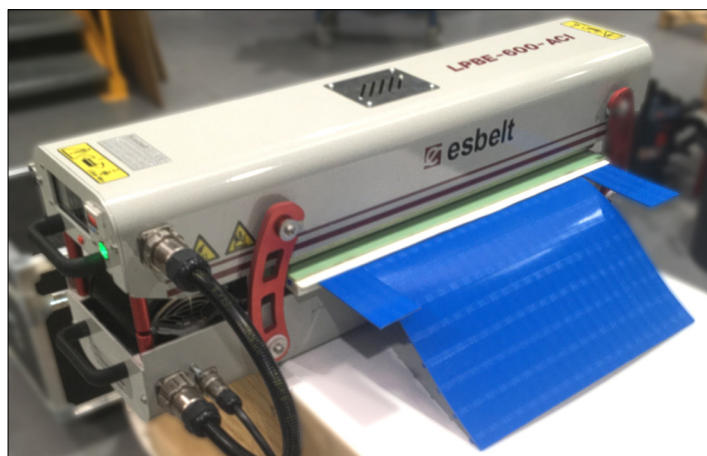
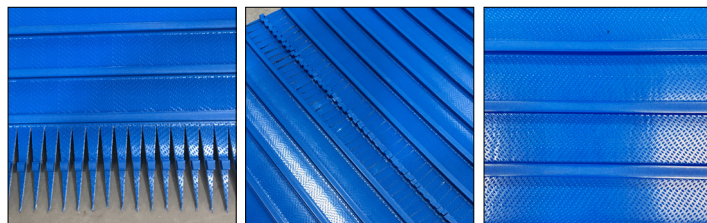
\*Available colors: White (WH) and Blue (BL)

# Types of joints

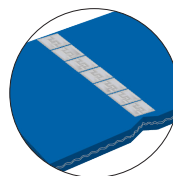
## Vulcanized



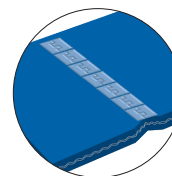
Maximum resistance and hygiene. In addition, with our air-cooled compact press, splices can be made on-site without the need for access to running water.



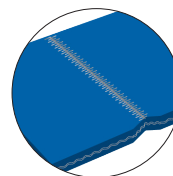
## Fasteners



Metalic



Plastic



Wire Hook

We have several types of fasteners, they are not as hygienic and resistant as vulcanized joint, but they facilitate fast installation and dismounting.



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