BEHAbelt®

Made in Germany

Elastic monolithic conveyor belts

Product overview, applications, features and accessories



FDA USDA

“ Where the **advantage**
of the monolithic **elastic belt design**
will improve the **food safety**
and/or **customer handling,**
this will **influence**
actual and future **machinery designs**
and replace **continuously**
traditional **conveyor belts**. “

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Elastic monolithic conveyor belts

BEHAbelt aims to offer innovative solutions in high quality to customers. There is already a huge variety of belting categories and design variations available on the market. However, the increasing automation of industrial production processes and machines requires ongoing evolution. Only if all components and their features keep pace, real improvements in terms of efficiency, capacity and safety can be achieved.

This is where the new elastic monolithic conveyor belts by BEHAbelt deliver an important contribution. These products enable longevity improvements and minimize risks like layer delamination or edge fraying versus conventional coated conveyor belts with fabric carcasses.



ADVANTAGES

PRODUCT DESIGN	HANDLING
No risk of contamination based on exposed belt fabrics or due to mechanical damage to belt edges	Easy installation of elastic belt versions due to elasticity
Part of a preventive hygienic machinery design concerning food safety	Softer belts allow even a hand mounted possibility with fixed centre to centre machinery designs without any take up
Excellent cleanability and microbial resistance	Butt-end weldings can be made with user-friendly tool, which ensures no loss of surface structure, homogeneity and elasticity in the joining
Homogeneously added product feature options: Metal detectable, X-ray detectable, UV-C resistant, antistatic discharging	Excellent welding/application of accessories like sidewalls, cleats and V-guides

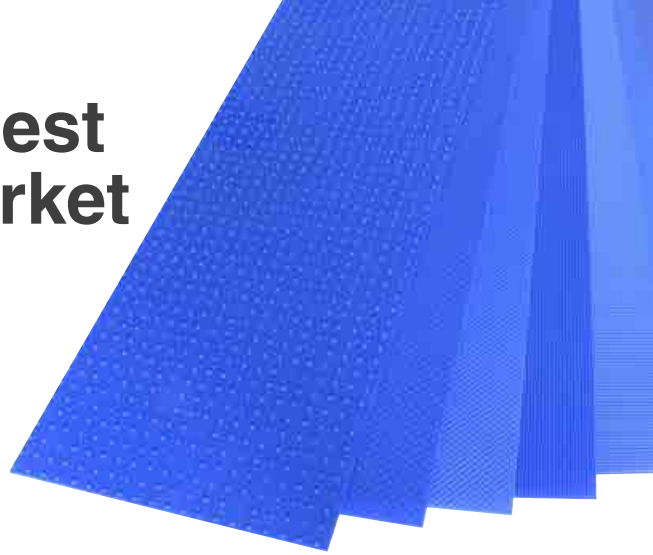
INDUSTRIES AND APPLICATIONS

Elastic monolithic conveyor belts are especially beneficial for the various applications to convey unwrapped foodstuff. Furthermore, this design and the special features are opening up interesting opportunities way beyond that, for example in:

INDUSTRIES	APPLICATIONS
Food (Fish, Meat, Poultry, Fruit & Vegetable, Confectionery and Bakery)	General conveying, Separation and Acceleration
Packaging (Food and Non-Food)	Weighing, Sorting, Portioning
Pharmacy	Feeding, Cutting, Detecting (metal detectors)
Logistics and Material Handling	and many more

BEHAbelt has the broadest product range in the market

We are keen to understand the challenges and applications of our customers, to provide support through our enhanced product portfolio and know-how. The variety of options to combine surface structures, material features and colors of monolithic conveyor belts, offered by BEHAbelt, are unmatched in the market.



SURFACE STRUCTURES

We currently offer eight different structures for the top side, which can be combined with three structures for the bottom side. Five of these structures (nipples, diamond, smooth matt, transversal and longitudinal grooves) are also available with the unique „MICROclean“ finish.

MATERIAL FEATURES

BEHAbelt elastic belts additionally offer several useful features that enable them to cope even with demanding applications.

FDA EC USDA — FDA/EC conformity for structured surfaces
FDA/EC/USDA conformity for smooth surfaces

Antistatic conveyor belts to ensure electrical discharge in sensitive applications

METAL — Metal detectable belts for utmost food safety. These products are part of the PU SAFE product line

X-RAY — X-ray detectable belts for utmost food safety. These products are part of the PU SAFE product line

Hydrolysis resistant conveyor belts for optimal performance in warm, wet and humid environment

Microbe-resistant materials do not provide a breeding ground for microorganisms

UV — Protection against UV-C waves generated by respective disinfection device

MICRO CLEAN — Unique surface finish for improved release of sticky goods and excellent cleanability

BEHAbelt is offering a broad spectrum of possible and even individual color options.

2C — The 2-component production enables the combination of different material hardness grades, properties and colours.

HARDNESS

BEHAbelt distinguish between two hardness ranges.

SOFT	PU65A, PU75A, PU80A
HARD	PU95A, TPE55D, TPE63D

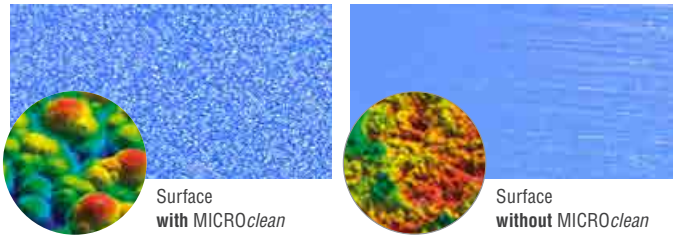
THICKNESS

Conveyor belts are available in different thicknesses from 0,9 - 4 mm.

0,9 mm
1 mm
1,2 mm
1,6 mm
2 mm
3 mm
4 mm

Special features

MICRO*clean* – UNIQUE SURFACE FINISH



Surface **with** MICRO*clean*

Surface **without** MICRO*clean*



Traditional conveyor belt surface smooth glossy (SG)

MICRO*clean* surface smooth matt (SM)

MICRO*clean* offers **improved belt cleaning** thanks to its wave-like surface. This makes it easier to remove product residues.

In addition, MICRO*clean* provides for **improved product release**, which especially simplifies the transfer of the product to the next transport section.

2 HARDNESS BELT DESIGN



The production with two components allows a wide range of possibilities to combine different belt hardnesses and structures. As a development partner, we are thus in a position to perfect your machine design.

For example, with the belt design for inclined conveyors the transport side has more grip, but the running side has good gliding properties.

UV-C RESISTANCE



To support regular cleaning and keep bacteria counts on food contact surfaces under control, even during the production hours, more and more machines and conveyors are equipped with UV-C disinfection device. The UV-C rays that are emitted can attack unprotected synthetic materials, like conveyor belts. This results in brittleness and discoloration of surfaces, which bears a certain hygiene risk. Therefore, we provide UV-C protected belts to support longevity and food safety under such circumstances.

ANTISTATIC DISCHARGE



Some sensible applications or process elements (like measure or control units) could be affected by electrical charge that is build up on conveyor belt surfaces. Therefore, we can provide products that are specially equipped with antistatic discharge features to ensure smooth and trouble free performance.

Feel free to ask BEHAbelt, we will check if such products are suitable for your application.

Requirements and solutions

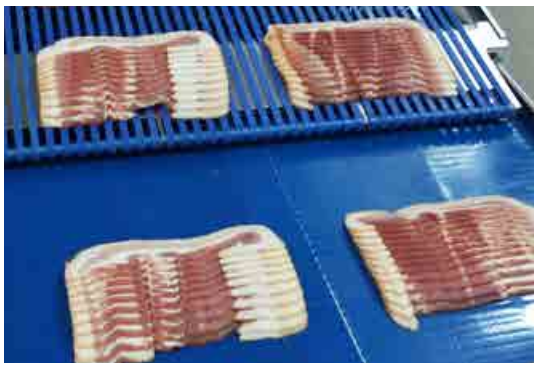
As manifold as the design options and fabrication varieties for conveyor belts, as versatile are the special requirements in the various industries, processes and applications. Some important criteria and applicable BEHAbelt solutions are summarized in the following charts.

INDUSTRY	REQUIREMENTS	BEHABELT SOLUTIONS AND FEATURES OF ELASTIC MONOLITHIC CONVEYOR BELTS
FOOD	Reliable product conveying, waste reduction	The specific selection of PU-Shore hardness and conveyor belt surface structures enable an optimal alignment with your goods in terms of grip, positioning and release properties.
	Food safety	Our elastic food conveyor belts are made of FDA/EC compliant materials. Especially for demanding applications in food processing, we can equip our belts with features like hydrolysis or UV-C resistance, detectable, antistatic or the unique MICROclean surface finish. The monolithic product design and use of FDA/EC compliant materials support safety and HACCP in food processing.
	Cleanability and longevity	Wear resistant, durable and hydrolysis resistant raw materials guarantee longevity, even in a warm, wet and humid environment and if regular cleaning is applied.
PACKAGING	Precise positioning and grip of goods on belts, even at elevated speed	The choice of different surface structures enables a specific alignment between coefficient of friction, grip and release features of a conveyor belt. At the same time the selected belt design allows small pulleys, hence gentle transfer of goods.





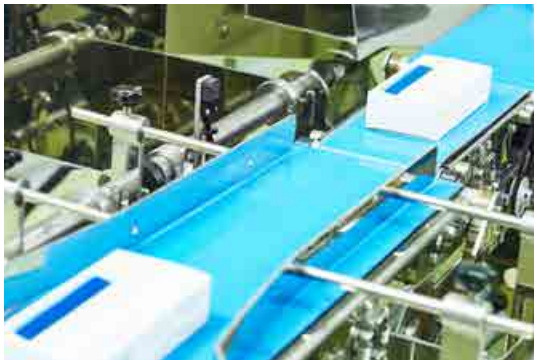




Besides all mentioned features in these charts, the BEHAbelt elastic monolithic belts are offered with the unique MICRO*clean* surface finish. Detailed information on that can be found on page 5.

INDUSTRY	REQUIREMENTS	BEHABELT SOLUTIONS AND FEATURES OF ELASTIC MONOLITHIC CONVEYOR BELTS
PHARMACY	Ensure high process safety and hygiene conditions	The conformance with utmost hygiene standards is ensured by FDA/EC compliant materials and belts that are easy to clean.
LOGISTICS	Longevity and reliability	Wear resistant raw materials, antistatic features and the selection of a specific conveyor belt design are the basis for longevity and reliability of our products in your conveyor system.
MATERIAL HANDLING	Longevity, reliability and gentle handling of goods	BEHAbelt has many years of experience and well trained application engineers, to define the optimal combination of conveyor belt material, design and special features for each individual customer.
ACROSS ALL INDUSTRIES	Avoid downtime	BEHAbelt elastic monolithic belts can be supplied tailor made and fabricated to the final dimension or quick and easy installed onsite. This reduces downtime to an absolute minimum.
	Efficiency and process safety	Carefully selected and configured conveyor belts, made of durable, wear resistant materials, guarantee a reliable performance and minimal maintenance in your application, thus reduce your TCO's (Total Cost of Ownership).
	Optimized equipment design	Elastic belts are extremely easy to install. Therefore, complicated tensioning device can be avoided in many cases, which enables a more simple and user friendly conveyor design.



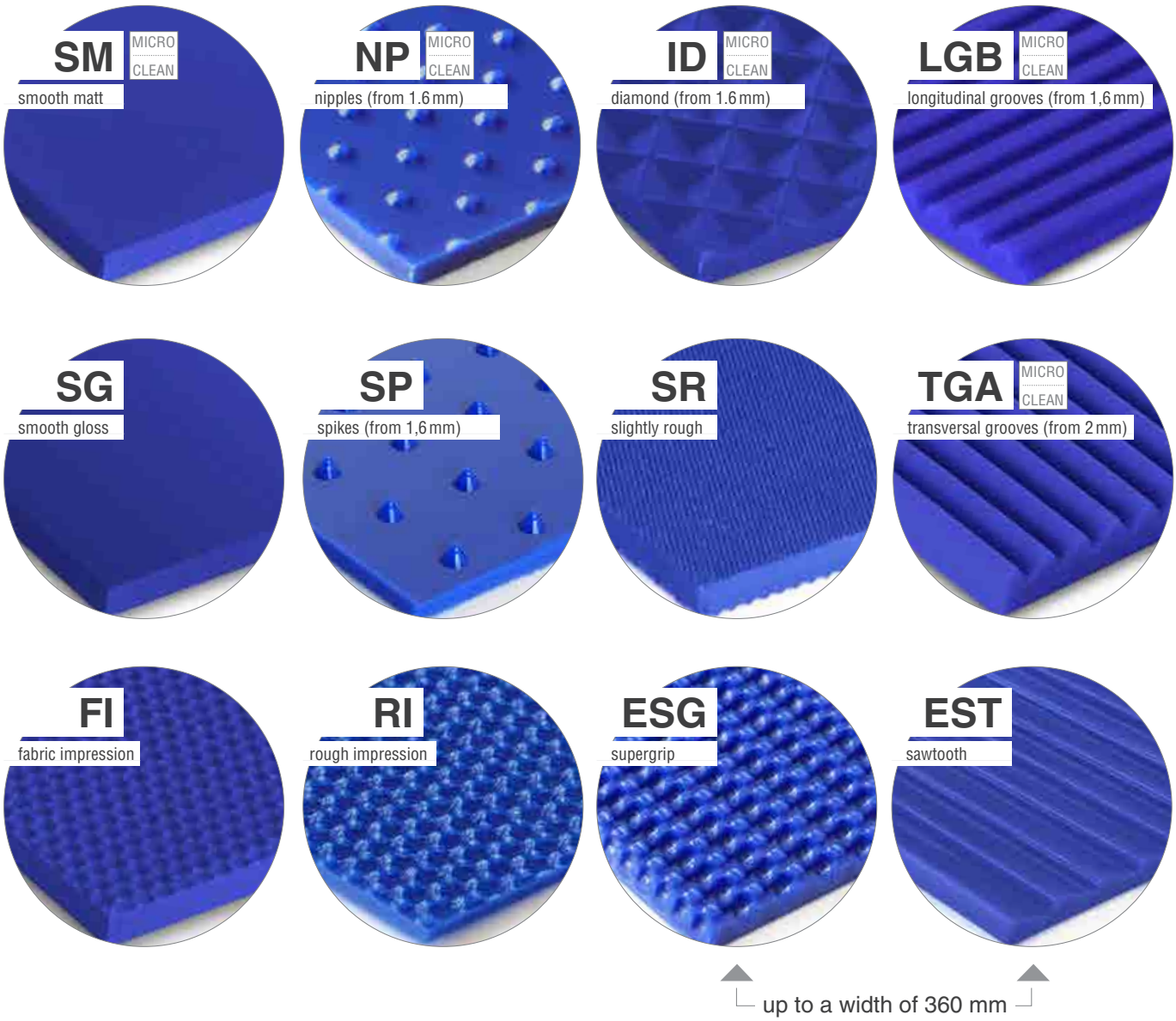






Overview belt structures / Features

The belt structures shown here can be combined almost arbitrarily. In addition, you have the option of individual colouring and dedicated product properties, such as UV-C resistance or antistatic conductivity; refer to page 4 and 5.



MATERIAL FEATURES

- FDA EC USDA — FDA/EC/USDA conformity for smooth surfaces
- FDA EC — FDA/EC conformity for structured surfaces
- UV — Protection against UV-C waves
- 2C — Belt is made of 2 components for top and bottom side
- Hydrolysis resistant
- X-RAY — X-ray detectable
- METAL — Metal detectable
- Microbial resistant materials
- MICRO CLEAN — Unique surface finish
- Antistatic conveyor belts

COLORS

ultramarine blue · capri blue · sky blue · black · transparent · white

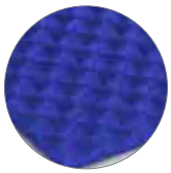
Conveyor belts 750 mm



BOTTOM SIDE: SMOOTH GLOSS (SG), WIDTH 750 mm

FDA EC USDA

Top side	Colour	Features	Quality	Hardness Shore	Profile thickness mm	Profile thickness inch	Weight* per m² approx. kg	Recommended Min. pulley ∅ mm	Recommended Min. pulley ∅ inch	Pull force for k1% pretension N/mm	Pull force for k1% pretension lbs/inch	Standard Roll m	Standard Roll ft	Recommended pretension	Order No.
smooth gloss (SG)		FDA EC USDA	PU95A	95 A	2,0	5/64	1,80	35	1,40	1,00	5,60	50	164	0,5-3%	FBFL750X20LC
					3,0	1/8	2,70	50	2,00	1,50	8,40	50	164	0,5-3%	FBFL750X30LC
smooth gloss (SG)		FDA EC USDA	PU95A	95 A	2,0	5/64	1,80	35	1,40	1,00	5,60	50	164	0,5-3%	FBFL750X20LG
					3,0	1/8	2,70	50	2,00	1,50	8,40	50	164	0,5-3%	FBFL750X30LG



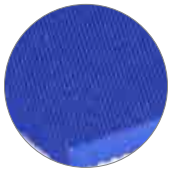
BOTTOM SIDE: INVERTED DIAMOND (ID), WIDTH 750 mm

FDA EC USDA, MICRO CLEAN

Top side	Colour	Features	Quality	Hardness Shore	Profile thickness mm	Profile thickness inch	Weight* per m² approx. kg	Recommended Min. pulley ∅ mm	Recommended Min. pulley ∅ inch	Pull force for k1% pretension N/mm	Pull force for k1% pretension lbs/inch	Standard Roll m	Standard Roll ft	Recommended pretension	Order No.
smooth gloss (SG)		FDA EC USDA, UV	PU80A	84 A	1,8	7/96	2,16	18	0,71	0,36	2,03	50	164	1-5%	FBFJ750X18LK
		FDA EC USDA			2,0	5/64	2,40	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X2LA
smooth gloss (SG)		FDA EC USDA	PU95A	95 A	2,0	5/64	2,40	35	1,40	1,00	5,60	50	164	0,5-3%	FBFM750X2LC
					3,0	1/8	3,60	50	2,00	1,50	8,40	50	164	0,5-3%	FBFM750X3LC
smooth gloss (SG)		FDA EC USDA	PU95A	95 A	2,0	5/64	2,40	35	1,40	1,00	5,60	50	164	0,5-3%	FBFM750X2LD
					3,0	1/8	3,60	50	2,00	1,50	8,40	50	164	0,5-3%	FBFM750X3LD
smooth matt (SM)		FDA EC USDA, 2C, UV, MICRO CLEAN	PU80A PU65A	84 A	1,8	7/96	2,16	15	0,60	0,26	1,46	50	164	1-5%	FBFGJ750X18L
slightly rough (SR)		FDA EC	PU80A	84 A	1,0	2/50	1,20	10	0,40	0,20	1,10	50	164	1-5%	FBFJ750X10LK
		FDA EC, UV			1,2	3/64	1,44	12	0,47	0,24	1,35	50	164	1-5%	FBFJ750X12LJ
					1,8	7/96	2,16	18	0,71	0,36	2,03	50	164	1-5%	FBFJ750X18LJ
diamond (ID)		FDA EC USDA, MICRO CLEAN	PU80A	84 A	2,2	1/24	2,64	22	0,87	0,44	2,48	50	164	1-5%	FBFJ750X22LO
diamond (ID)		FDA EC USDA, 2C, UV, MICRO CLEAN	PU80A PU65A	84 A	2,2	1/24	2,64	18	0,71	0,28	1,58	50	164	1-5%	FBFJG750X22L
transversal (TGA)		FDA EC, MICRO CLEAN, UV	PU80	84 A	2,8	7/64	2,76	25	1,00	0,46	2,59	50	164	1-5%	FBFJ750X28LP
spikes (SP)		FDA EC, UV	PU80	84 A	2,0	5/64	2,64	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X20LI
rough impression (RI)		FDA EC	PU80	84 A	2,0	5/64	2,4	20	0,8	0,40	2,25	50	164	1-5%	FBFJ750X20LJ
					3,0	1/8	3,6	30	1,2	0,60	3,38	50	164	1-5%	FBFJ750X30LJ

* Belt width 750 mm

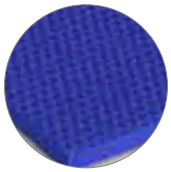
Conveyor belts 750



BOTTOM SIDE: SLIGHTLY ROUGH (SR), WIDTH 750 mm

FDA EC

Top side	Colour	Features	Quality	Hard-ness	Profile thickness		Weight* per m²	Recommended Min. pulley ∅		Pull force for k1% pretension		Standard Roll		Recommended pretension	Order No.
				Shore	mm	inch	approx. kg	mm	inch	N/mm	lbs/inch	m	ft		
diamond (ID)		FDA EC, MICRO CLEAN	PU80A	84 A	1,0	2/50	1,20	10	0,40	0,20	1,10	50	164	1-5%	FBFJ750X10LK
		FDA EC, UV, MICRO CLEAN			1,2	3/64	1,44	12	0,47	0,24	1,35	50	164	1-5%	FBFJ750X12LJ
					1,8	7/96	2,16	18	0,71	0,36	2,03	50	164	1-5%	FBFJ750X18LJ
smooth gloss (SG)	transparent	FDA EC	PU80A	84 A	1,6	1/16	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16T

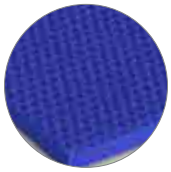


BOTTOM SIDE: FABRIC IMPRESSION (FI), WIDTH 750 mm

FDA EC

Top side	Colour	Features	Quality	Hard-ness	Profile thickness		Weight* per m²	Recommended Min. pulley ∅		Pull force for k1% pretension		Standard Roll		Recommended pretension	Order No.
				Shore	mm	inch	approx. kg	mm	inch	N/mm	lbs/inch	m	ft		
smooth gloss (SG)		FDA EC,	PU65A	72 A	2,0	5/64	2,40	12	0,50	0,16	0,90	50	164	1-5%	FBFG750X20LA
smooth gloss (SG)		FDA EC,	PU75A	80 A	1,6	1/16	1,92	15	0,60	0,24	1,30	50	164	1-5%	FBFI750X16LD
					2,0	5/64	2,40	20	0,80	0,30	1,70	50	164	1-5%	FBFI750X20LB
					3,0	1/8	3,60	30	1,18	0,45	2,53	50	164	1-5%	FBFI750X30LB
					4,0	5/32	4,80	40	1,57	0,60	3,38	30	100	1-5%	FBFI750X40LC
smooth matt (SM)		FDA EC, MICRO CLEAN,	PU75A	80 A	1,0	2/50	1,20	10	0,40	0,15	0,85	50	164	1-5%	FBFI750X10LA
					1,6	1/16	1,92	15	0,60	0,24	1,30	50	164	1-5%	FBFI750X16LA
					2,0	5/64	2,40	20	0,80	0,30	1,70	50	164	1-5%	FBFI750X20LA
					3,0	1/8	3,60	30	1,20	0,45	2,50	50	164	1-5%	FBFI750X30LA
smooth matt (SM)		FDA EC, MICRO CLEAN,	PU75A	80 A	1,0	2/50	1,20	10	0,40	0,15	0,85	50	164	1-5%	FBFI750X10WA
					2,0	5/64	2,40	20	0,80	0,30	1,70	50	164	1-5%	FBFI750X20WA
smooth matt (SM)		FDA EC, MICRO CLEAN	PU80A	84 A	1,0	2/50	1,20	10	0,40	0,20	1,10	50	164	1-5%	FBFJ750X1LD
					1,6	1/16	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16LD
					2,0	5/64	2,40	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X20LD

* Belt width 750 mm



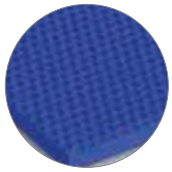
BOTTOM SIDE: FABRIC IMPRESSION (FI), WIDTH 750 mm

FDA EC

Top side	Colour	Features	Quality	Hard-ness	Profile thickness		Weight* per m²	Recommended Min. pulley ∅		Pull force for k1% pretension		Standard Roll		Recommended pretension	Order No.
				Shore	mm	inch	approx. kg	mm	inch	N/mm	lbs/inch	m	ft		
 smooth matt (SM)		FDA EC, MICRO CLEAN, METAL, X-RAY	PU80A SAFE	84 A	1,0	2/50	1,38	10	0,40	0,18	1,01	50	164	1-5%	FBFJ750X1LA
					1,6	1/64	2,21	15	0,60	0,29	1,60	50	164	1-5%	FBFJ750X16LE
					2,0	5/64	2,76	20	0,80	0,36	2,00	50	164	1-5%	FBFJ750X20LE
					3,0	1/8	4,14	30	1,20	0,54	3,00	50	164	1-5%	FBFJ750X30LE
 smooth matt (SM)		FDA EC, MICRO CLEAN	PU95A	95 A	1,0	2/50	1,20	18	0,71	0,50	2,81	50	164	0,5-3%	FBFL750X10LA
					1,6	1/64	1,92	25	1,00	0,80	4,50	50	164	0,5-3%	FBFL750X16LA
					2,0	5/64	2,40	35	1,40	1,00	5,60	50	164	0,5-3%	FBFL750X20LA
					3,0	1/8	3,60	50	2,00	1,50	8,40	50	164	0,5-3%	FBFL750X30LA
					4,0	5/32	4,80	75	3,00	2,00	11,20	30	100	0,5-3%	FBFL750X40LA
 smooth matt (SM)		FDA EC, MICRO CLEAN	PU95A	95 A	1,6	1/64	1,92	25	1,00	0,80	4,50	50	164	0,5-3%	FBFL750X16WA
					2,0	5/64	2,40	35	1,40	1,00	5,60	50	164	0,5-3%	FBFL750X20WA
					3,0	1/8	3,60	50	2,00	1,50	8,40	50	164	0,5-3%	FBFL750X30WA
 slightly rough (SR)		FDA EC	PU80A	84 A	1,0	2/50	1,20	10	0,40	0,20	1,10	50	164	1-5%	FBFJ750X10L
					1,2	3/64	1,44	10	0,40	0,25	1,40	50	164	1-5%	FBFJ750X12L
					1,6	1/16	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16L
					2,0	5/64	2,40	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X20L
 slightly rough (SR)		FDA EC	PU80A	84 A	0,9	1/32	1,05	8	0,31	0,18	1,01	50	164	1-5%	FBFJ750X09LA
					1,2	3/64	1,44	10	0,40	0,25	1,40	50	164	1-5%	FBFJ750X12LA
					1,6	1/64	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16LA
 spikes (SP)		FDA EC	PU80A	84 A	1,2	3/64	1,68	12	0,50	0,25	1,20	50	164	1-5%	FBFJ750X12LG
					2,0	5/64	2,60	25	1,00	0,40	2,25	50	164	1-5%	FBFJ750X2LG
 spikes (SP)		FDA EC	PU95A	95 A	2,0	5/64	2,60	40	1,57	1,00	5,60	50	164	0,5-3%	FBFM750X2LA
 nipples (NP)		FDA EC, MICRO CLEAN	PU65A	72 A	2,0	5/64	2,40	15	0,60	0,16	0,90	50	164	1-5%	FBFG750X2LB
 nipples (NP)		FDA EC, MICRO CLEAN	PU80A	84 A	1,6	1/16	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16LF
					2,0	5/64	2,40	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X20LF

* Belt width 750 mm

Conveyor belts 750



BOTTOM SIDE: FABRIC IMPRESSION (FI), WIDTH 750 mm

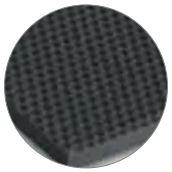
FDA EC

Top side	Colour	Features	Quality	Hardness Shore	Profile thickness mm	Profile thickness inch	Weight* per m² approx. kg	Recommended Min. pulley ∅ mm	Recommended Min. pulley ∅ inch	Pull force for k1% pretension N/mm	Pull force for k1% pretension lbs/inch	Standard Roll m	Standard Roll ft	Recommended pretension	Order No.
 diamond (ID)		FDA EC USDA, MICRO CLEAN	PU80A	84 A	1,6	1/16	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16LL
					2,0	5/64	2,40	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X2LB
 longitudinal (LGB)		FDA EC, MICRO CLEAN	PU80A	84 A	1,6	1/16	1,92	15	0,60	0,30	1,70	50	164	1-5%	FBFJ750X16LK
 transversal (TGA)		FDA EC, MICRO CLEAN	PU80A	84 A	2,5	1/10	2,40	20	0,80	0,40	2,25	50	164	1-5%	FBFJ750X25LL
 transversal (TGA)		FDA EC, MICRO CLEAN	PU95A	95 A	2,5	1/10	2,40	40	1,57	1,00	5,60	50	164	0,5-3%	FBFM750X25LB



CONVEYOR BELTS FOR LOGISTICS

Elastic conveyor belts reduce the costs of system design, as tensioning device can often be avoided. Depending on the goods to be conveyed or the type of conveyor (e.g. accumulation mode, inclined conveyor), a wide variety of belt features are required. With BEHAbelt's new 2C process, two different degrees of hardness can be combined in one belt, for example to provide the transport side with more grip for inclined conveyors.



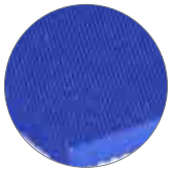
BOTTOM SIDE: FABRIC IMPRESSION (FI), WIDTH 750 mm

FDA EC

Top side	Colour	Features	Quality	Hardness Shore	Profile thickness mm	Profile thickness inch	Weight* per m² approx. kg	Recommended Min. pulley ∅ mm	Recommended Min. pulley ∅ inch	Pull force for k1% pretension N/mm	Pull force for k1% pretension lbs/inch	Standard Roll m	Standard Roll ft	Recommended pretension	Order No.
 smooth matt (SM)		FDA EC, MICRO CLEAN	PU75A	80 A	1,6	1/16	1,92	15	0,60	0,24	1,35	50	164	1-5%	FBFI750X16SB
 slightly rough (SR)		FDA EC	PU80A	84 A	1,2	3/64	1,44	10	0,40	0,25	1,40	50	164	1-5%	FBFJ750X12SB
					1,6	1/16	1,92	15	0,60	0,32	1,80	50	164	1-5%	FBFJ750X16SB
 longitudinal (LGB)		FDA EC, 2C, MICRO CLEAN	PU80A PU65A	84 A 72 A	2,2	1/24	1,44	18	0,71	0,28	1,58	50	164	1-5%	FBFGJ750X22S
 rough impression (RI)		FDA EC	PU80	84A	2,0	5/64	2,4	20	0,8	0,40	2,25	50	164	1-5%	FBFJ750X20SJ

* Belt width 750 mm

Conveyor belts 360 and 140

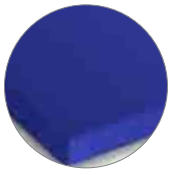


BOTTOM SIDE: SLIGHTLY ROUGH (SR), WIDTH 360 mm

FDA EC

Top side	Colour	Features	Quality	Hardness Shore	Profile thickness mm	Profile thickness inch	Weight* per m² approx. kg	Recommended Min. pulley ∅ mm	Recommended Min. pulley ∅ inch	Pull force for k1% pretension N/mm	Pull force for k1% pretension lbs/inch	Standard Roll m	Standard Roll ft	Recommended pretension	Order No.
 sawtooth (EST)		FDA EC	PU75A	80 A	3,0	1/8	2,40	25	1,00	0,30	1,70	25	82	1-5%	FBFI360X30LB
					4,0	5/32	3,60	35	1,40	0,45	2,50	25	82	1-5%	FBFI360X40LB
 supergrip (ESG)		FDA EC	PU75A	80 A	4,0	5/32	3,60	35	1,40	0,45	2,50	25	82	1-5%	FBFI360X40LA
 supergrip (ESG)		FDA EC	PU95A	95 A	4,0	5/32	3,60	60	2,40	1,50	8,40	25	82	0,5-3%	FBFM360X40LA

* Band width 360 mm



BOTTOM SIDE: SMOOTH GLOSS (SG), WIDTH 140 mm

Top side	Colour	Features	Quality	Hardness Shore	Profile thickness mm	Profile thickness inch	Weight* per m² approx. kg	Recommended Min. pulley ∅ mm	Recommended Min. pulley ∅ inch	Pull force for k1% pretension N/mm	Pull force for k1% pretension lbs/inch	Standard Roll m	Standard Roll ft	Recommended pretension	Order No.
 smooth gloss (SG)		FDA EC USDA	PU75A	80 A	1,0	3/64	1,20	10	0,4	0,15	0,85	50	164	1-5%	FBFI150X1LG
					1,6	1/16	1,92	15	0,6	0,24	1,3	50	164	1-5%	FBFI150X16LG
					2,0	5/64	2,40	20	0,8	0,30	1,7	50	164	1-5%	FBFI150X2LG
					3,0	1/8	3,60	25	1,0	0,45	2,5	50	164	1-5%	FBFI150X3LG
					4,0	5/32	4,80	35	1,4	0,60	3,4	50	164	1-5%	FBFI150X4LG
 smooth gloss (SG)		FDA EC USDA METAL X-RAY	PU80A SAFE	84 A	2,0	5/32	2,76	20	0,8	0,36	2,0	50	164	1-5%	FBFJ150X2LGM
					3,0	1/8	4,14	30	1,2	0,54	3,0	50	164	1-5%	FBFJ150X3LGM
 smooth gloss (SG)		FDA EC USDA	PU80A	84 A	1,6	1/16	1,92	15	0,6	0,32	1,8	50	164	1-5%	FBFJ150X16OG
					2,4	3/32	2,88	25	1,0	0,48	2,7	50	164	1-5%	FBFJ150X24OG
					3,2	1/8	3,84	30	1,2	0,64	3,6	50	164	1-5%	FBFJ150X32OG
 smooth gloss (SG)			PU85A	88 A	1,0	3/64	1,20	15	0,6	0,23	1,3	50	164	1-5%	FBFK150X1GG
					1,6	1/16	1,92	20	0,8	0,37	2,1	50	164	1-5%	FBFK150X16GG
					2,0	5/64	2,40	30	1,2	0,46	2,6	50	164	1-5%	FBFK150X2GG
					3,0	1/8	3,60	35	1,4	0,69	3,9	50	164	1-5%	FBFK150X3GG
					4,0	5/32	4,80	45	1,8	0,92	5,2	50	164	1-5%	FBFK150X4GG

* Belt width 140 mm

COEFFICIENT OF FRICTION μ_{dyn} FOR FLAT BELT SURFACES ON STEEL (DRY)

Quality	smooth gloss (SG)	smooth matt (SM)	fabric impression (FI)	rough impression (RI)	Inverted diamond (ID)	Slightly rough (SR)
PU65A	0,85	0,80	0,65	0,60	0,65	0,65
PU75A	0,70	0,65	0,55	0,50	0,55	0,55
PU80A	0,65	0,60	0,45	0,40	0,45	0,45
PU95A	0,45	0,40	0,25	0,20	0,25	0,25
TPE55D	0,35	0,30	0,20	0,15	0,20	n/a

Please consider a coefficient of friction of μ = 0.15 for a roller conveyor support.

INSTALLATION, PULLEY DIAMETER, CENTER DISTANCE RELATED TO SHORE HARDNESS

Minimum pulley diameter range	
Shore 72A / 80A / 85A	10...30 mm
Shore 95A	35...80 mm

General belt hardness choice based on center to center design	
Shore 72A / 80A / 85A	max. 3m
Shore 95A	3...10 m

- On conveyors with fixed center distance between the pulleys, belts with lower shore hardness can be installed manually.
- Harder materials require tension device to install the belts
- Attention: The actual pre-tension may require a verification of the maximal possible load on the belt and the admissible bearing load to avoid overstress on pulleys and bearings.

Please contact us for the optimal belt design.

DRIVE PULLEY DESIGN CONVEYOR BELT: CALCULATION

Length of cylindrical area **b_C**

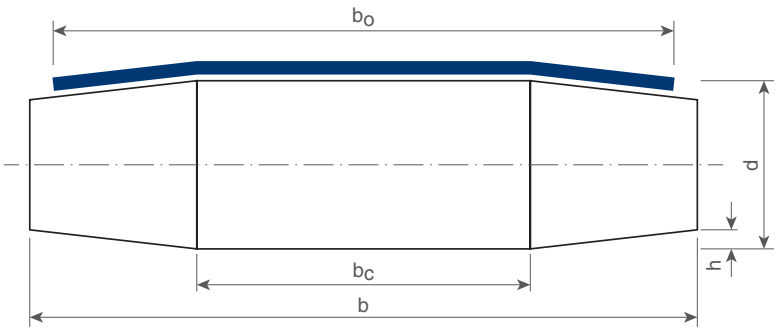
$b_C = b_O / 2$

Pulley width **b**

$b = b_O \times 1{,}1$

Crown bow **h**

$h = (d + 100) / 450$ mm



As a rule, machine designers traditionally use a drum design with the pitch 1/3 / 1/3 / 1/3.
However, the 1/4 / 1/2 / 1/4 pitch has proven to be particularly suitable for soft belt types.

CALCULATION HELP FOR BELTS

Pretension force belt (N) =
k1% x belt width (mm) x pretension (%) x 2

Axe load (N) =
k1% x belt width (mm) x pretension (%) x 2 / number of axes

Theoretical max. conveyor load (kg) =
k1% x belt width (mm) x pretension (%) / coefficient of friction μ_{dyn} bottom surface belt to contact surface

The mentioned coefficient of friction is the dynamic coefficient of friction. Due to the higher coefficient of friction μ_{stat} when starting the belt, we recommend to consider 2x the dynamic coefficient of friction as a reference value. This is particularly relevant if the conveyor belt is subjected to many start/stop operations. (☞ for μ_{dyn} see also table above)

Quick guide for belt calculation

The following tables provide information on the most important parameters for designing a conveyor belt as a function of the belt thickness, material quality and preload applied. By means of the following formulas and the belt width you use, you can quickly and easily determine the preload force, axe load and maximum transport weight.

Pretension force (N)	**Axe load (N)**	**max. transport weight (kg)**
Table value x belt width used (mm)	Value from table x actual belt width used (mm) / number of axes (shafts)	Table value x belt width used (mm) x 0,05

For belt designs not listed, check the k1% value on the respective data sheets and determine the necessary parameters using the general formulas on page 14.

Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
1,0	PU65A	72A	0,08	0,08	0,16	0,24	0,32	0,40	0,48	0,56	0,64	0,72	0,80
	PU75A	80A	0,15	0,15	0,30	0,45	0,60	0,75	0,90	1,05	1,20	1,35	1,50
	PU80A	84A	0,20	0,20	0,40	0,60	0,80	1,00	1,20	1,40	1,60	1,80	2,00
	PU80Asafe	84A	0,18	0,18	0,36	0,54	0,72	0,90	1,08	1,26	1,44	1,62	1,80
	PU95A	95A	0,50	0,50	1,00	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00
	TPE55D	55D	0,75	0,75	1,50	2,25	3,00	3,75	4,50	5,25	6,00	6,75	7,50

Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
1,2	PU65A	72A	0,10	0,10	0,20	0,30	0,40	0,50	0,60	0,70	0,80	0,90	1,00
	PU75A	80A	0,18	0,18	0,36	0,54	0,72	0,90	1,08	1,26	1,44	1,62	1,80
	PU80A	84A	0,24	0,24	0,48	0,72	0,96	1,20	1,44	1,68	1,92	2,16	2,40
	PU80Asafe	84A	0,22	0,22	0,44	0,66	0,88	1,10	1,32	1,54	1,76	1,98	2,20
	PU95A	95A	0,60	0,60	1,20	1,80	2,40	3,00	3,60	4,20	4,80	5,40	6,00
	TPE55D	55D	0,90	0,90	1,80	2,70	3,60	4,50	5,40	6,30	7,20	8,10	9,00

Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
1,6	PU65A	72A	0,13	0,13	0,26	0,39	0,52	0,65	0,78	0,91	1,04	1,17	1,30
	PU75A	80A	0,24	0,24	0,48	0,72	0,96	1,20	1,44	1,68	1,92	2,16	2,40
	PU80A	84A	0,32	0,32	0,64	0,96	1,28	1,60	1,92	2,24	2,56	2,88	3,20
	PU80Asafe	84A	0,29	0,29	0,58	0,87	1,16	1,45	1,74	2,03	2,32	2,61	2,90
	PU95A	95A	0,80	0,80	1,60	2,40	3,20	4,00	4,80	5,60	6,40	7,20	8,00
	TPE55D	55D	1,20	1,20	2,40	3,60	4,80	6,00	7,20	8,40	9,60	10,80	12,00

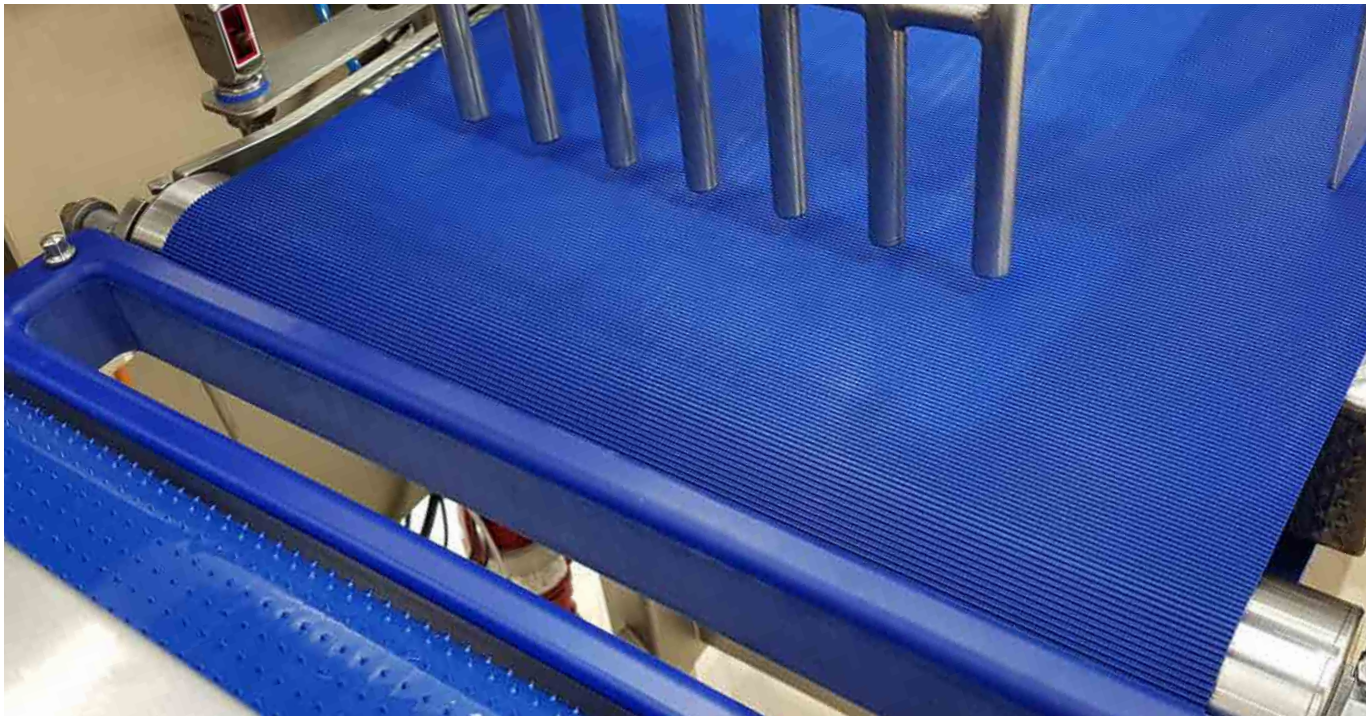
Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
1,8	PU65A	72A	0,14	0,14	0,28	0,42	0,56	0,70	0,84	0,98	1,12	1,26	1,40
	PU75A	80A	0,27	0,27	0,54	0,81	1,08	1,35	1,62	1,89	2,16	2,43	2,70
	PU80A	84A	0,36	0,36	0,72	1,08	1,44	1,80	2,16	2,52	2,88	3,24	3,60
	PU80Asafe	84A	0,32	0,32	0,64	0,96	1,28	1,60	1,92	2,24	2,56	2,88	3,20
	PU95A	95A	0,90	0,90	1,80	2,70	3,60	4,50	5,40	6,30	7,20	8,10	9,00
	TPE55D	55D	1,40	1,40	2,80	4,20	5,60	7,00	8,40	9,80	11,20	12,60	14,00

Quick guide for belt calculation

Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
2,0	PU65A	72A	0,16	0,16	0,32	0,48	0,64	0,80	0,96	1,12	1,28	1,44	1,60
	PU75A	80A	0,30	0,30	0,60	0,90	1,20	1,50	1,80	2,10	2,40	2,70	3,00
	PU80A	84A	0,40	0,40	0,80	1,20	1,60	2,00	2,40	2,80	3,20	3,60	4,00
	PU80Asafe	84A	0,36	0,36	0,72	1,08	1,44	1,80	2,16	2,52	2,88	3,24	3,60
	PU95A	95A	1,00	1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00
	TPE55D	55D	1,50	1,50	3,00	4,50	6,00	7,50	9,00	10,50	12,00	13,50	15,00

Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
3,0	PU65A	72A	0,24	0,24	0,48	0,72	0,96	1,20	1,44	1,68	1,92	2,16	2,40
	PU75A	80A	0,45	0,45	0,90	1,35	1,80	2,25	2,70	3,15	3,60	4,05	4,50
	PU80A	84A	0,60	0,60	1,20	1,80	2,40	3,00	3,60	4,20	4,80	5,40	6,00
	PU80Asafe	84A	0,54	0,54	1,08	1,62	2,16	2,70	3,24	3,78	4,32	4,86	5,40
	PU95A	95A	1,50	1,50	3,00	4,50	6,00	7,50	9,00	10,50	12,00	13,50	15,00
	TPE55D	55D	2,25	2,25	4,50	6,75	9,00	11,25	13,50	15,75	18,00	20,25	22,50

Belt thickness mm	Quality	Hardness Shore	k1% N/mm	Table values (at x% pretension) 0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%
4,0	PU65A	72A	0,32	0,32	0,64	0,96	1,28	1,60	1,92	2,24	2,56	2,88	3,20
	PU75A	80A	0,60	0,60	1,20	1,80	2,40	3,00	3,60	4,20	4,80	5,40	6,00
	PU80A	84A	0,80	0,80	1,60	2,40	3,20	4,00	4,80	5,60	6,40	7,20	8,00
	PU80Asafe	84A	0,72	0,72	1,44	2,16	2,88	3,60	4,32	5,04	5,76	6,48	7,20
	PU95A	95A	2,00	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00
	TPE55D	55D	3,00	3,00	6,00	9,00	12,00	15,00	18,00	21,00	24,00	27,00	30,00



Welding tools for conveyor belts

BEHAbelt developed two special tools for the butt-end welding of elastic monolithic belts, **HS400** and **HS800**. To optimize the design of our welding tools, we intensively studied the operational procedures to ensure best repeatability and welding quality.

HS400 & HS800

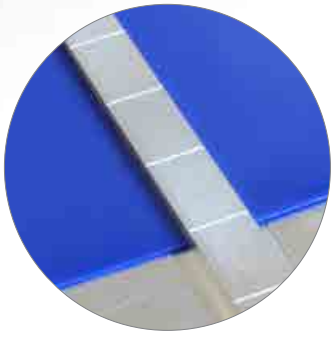


WELDING TOOL FOR BUTT WELDING OF CONVEYOR BELTS

- HS400 for welding up to 400mm belt width
- HS800 for welding up to 800mm belt width
- Sophisticated design best repeatability of welding results
- Clamping lever with fixing
- Robust and handy finish of individual tool components
- Precise temperature regulation through control unit
- Teflon coated welding paddle to avoid adhesion of PU or TPE material
- Coated heating-paddle is easy to clean with a cotton cloth
- Welding tool delivered in solid trolley box for easy transportation



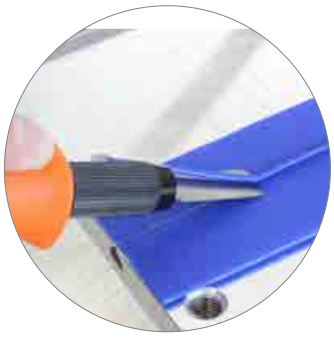
Stopper for precise, repeatable welding



Precise and aligned insertion of the belt ends



Clamping bars with chamfer for optimum shaping of the welding bead



Easy removal of the welding bead with the supplied tool

Adapter plates for HS400 & HS800

For optimum alignment and clamping of the belts to be welded in the joining table, optional adapter plates for more complex structures are available (not included in the standard product range).





Locking pins ensure the correct positioning of the adapter plates on the joining table.

EErgo 90 for flat belt stripes < 80 mm

BEHAbelt EErgo 90 has been specially developed for welding PU and TPE flat belt strips.
The operation is self-explanatory and the ergonomic design supports the working process.

WELDING PADDLE FOR BUTT WELDING OF FLAT BELT STRIPES AND PROFILES

- EErgo 90 for welding flat belt stripes up to a width of 80 mm
- Very fast heating time of approx. 3 minutes
- Strong, fiberglass-reinforced ergonomic housing
- Easy to use temperature selector regulates correct temperature to weld PU or TPE profiles
- Constant welding temperature at different ambient temperature
- No adhesion of PU and TPE materials, thanks to Teflon-coated welding paddle
- Easy cleaning with cloth



Intuitive operation with only 2 buttons





Suitable guide clamp for welding flat belt stripes up to a width of 80mm

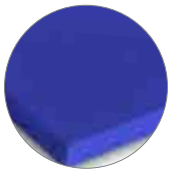
PU sheet material



BEHAbelt offers PU panels from 4-8 mm in 2 categories:

- blue FDA-compliant versions with smooth surfaces in Shore 84A and 95A
- black industrial quality with smooth/fine structured surface in Shore 84A

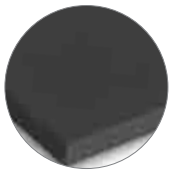
Typical areas of application are: Welded-on profile (cleats), scraper, skirts, impact (damping) protection or seals.



TOP SIDE: SMOOTH MATT (SM), WIDTH 750 mm

FDA EC MICRO CLEAN

Bottom side	Colour	Features	Quality	Hardness	Sheet thickness		Weight* per pc.	Sheet length		Order No.
				Shore	mm	inch	approx. kg	m	ft	
 smooth gloss (SM)		FDA EC	PU80A	84 A	4,0	0,16	4,3	1,2	4,0	FBPJ12754L
					5,0	0,20	5,4	1,2	4,0	FBPJ12755L
					6,0	0,24	6,5	1,2	4,0	FBPJ12756L
					8,0	0,31	8,6	1,2	4,0	FBPJ12758L
 smooth gloss (SM)		FDA EC	PU95A	95 A	4,0	0,16	4,3	1,2	4,0	FBPM12754L
					5,0	0,20	5,4	1,2	4,0	FBPM12755L
					6,0	0,24	6,5	1,2	4,0	FBPM12756L
					8,0	0,31	8,6	1,2	4,0	FBPM12758L



TOP SIDE: SMOOTH MATT (SM), WIDTH 750 mm

Bottom side	Colour	Features	Quality	Hardness	Sheet thickness		Weight* per pc.	Sheet length		Order No.
				Shore	mm	inch	approx. kg	m	ft	
 fabric impression (FI)			PU80A	84 A	4,0	0,16	4,3	1,2	4,0	FBPJ12754S
					5,0	0,20	5,4	1,2	4,0	FBPJ12755S
					6,0	0,24	6,5	1,2	4,0	FBPJ12756S
					8,0	0,31	8,6	1,2	4,0	FBPJ12758S

Other sheet lengths available on request

APPLICATION EXAMPLES



Buffer protection in the pellet depot



Cleats on conveyor belt



Work skirt e.g. in wood industry

Weldable accessories for conveyor belts

Synthetic conveyor belts are used in manifold applications. Depending on the industry, conveyed goods and the machinery design, conveyor belts aren't only tailored to specific dimensions (length and width) but also equipped with cleats, sidewalls or guiding profiles. For this purpose, BEHAbelt offers a broad spectrum of extruded belt accessories, made of homogeneous PU in various shore hardness. Our belt accessories are composed of the same raw materials than the belts, to ensure an optimal weldability and longevity in the final application.

All accessories can be supplied in FDA/EC/USDA compliant design and on request equipped with special features like detectable, UV-C or hydrolysis resistant.



THE BEHABELT FLAT BELT ACCESSORY PORTFOLIO CONTAINS:

- Cleats with foot (height 20 - 70 mm)
- Cleats without foot (sheet materials)
- V-guides and guiding profiles (notched/unnotched)
- Sidewalls (with and without foot; height 20 - 120 mm)
- Belt edges
- Customized profiles







THE BEHABELT FLAT BELT ACCESSORY PORTFOLIO CONTAINS:

Synthetic conveyor belts are often fabricated with accessories. Such special customization is often an important basis for a reliable performance in the target application. Tailored conveyor belts with cleats, sidewalls or guiding profiles are used to for example used to move light- and medium weighed goods in the food industry, logistics and material handling. In this context, weldable accessories are key elements to ensure the functionality of the belts.

CONVEYOR BELT ACCESSORIES	FIELD OF APPLICATION
Cleats	To hold and move bulk or light-/medium weight goods on inclined or declined conveyors.
Corrugated sidewalls	Are often combined with cleats to avoid that conveyed goods are falling down.
V-guides and guiding profiles	Can be applied on the conveying side instead of sidewalls to avoid that goods are falling down. Often used as guiding profile on the running side to support belt tracking or compensate lateral forces if goods are loaded on the belt from the side, usually handed over from another conveyor.
Belt edges	Enable tailored fabrication and optimal guiding of powerturn/curve belts.

Belt profiles and coatings

BEHAbelt is a German company based in the heart of Europe. We extrude a complete line of the highest quality Polyurethane and Polyester profiles and conveyor belts for transport and drive applications. True to the motto “smart conveying”, we have been supplying innovative drive and conveying technology products since 1974.



WELDABLE PROFILES MADE OF PU AND TPE

BEHAbelt offers a broad spectrum of belting profiles made of PU and TPE.
Our products are available in various shore-hardness grades to ensure optimal performance and longevity in power transmission and conveying applications.

At BEHAbelt you get extruded Round belts, V-belts and special profiles with smooth or rough surfaces as following:

- PU – from 65° to 95° Shore A
- TPE – from 40° to 63° Shore D
- different color variants - e.g. white, various blue colors, red, orange, green, beige, transparent and many more
- Round belts - from 2mm to 20mm diameter
- V-profiles - from 6x4mm to 32x20mm
- Special profiles like ridge top- or parallel V-belts, Profiles in U- or Rectangular shape and much more
- Profiles re-inforced with Polyester, Aramid, Steel and weldable glass fiber

AVAILABLE FEATURES



Antistatic Discharge | Hydrolysis resistance (HY) | Temperature flexibility | Reduced elongation | UV-C Resistance | Food Safety | metal detectable | X-ray detectable | 2-component production | No breeding ground for microbes | Color selection



MATERIALS FOR INDIVIDUAL TIMING BELT AND V-BELT COATINGS

Coating materials for better grip, accumulation or detachment of the conveyed material. High-quality coating belts made of TPU with excellent weldability for your individual coating of timing belts, V-belts or other products.

Available in the following versions:

- Coating thickness: 1 - 4 mm
- Coating width: 140 - 750 mm
- Hardness range: 45 A - 95 A

Welding tools for PU and TPE

A belt is only as good as it's fabricated to the final dimension. Therefore, BEHAbelt develops specific tools for the precise joining of PU and TPE profiles and belts. Depending on individual needs and products to be welded, customers can select between traditional or temperature regulated paddle welding tools, the unique BEHAbelt Friction welding machines, hot presses for overlap or butt-end welding and a broad range of accessories and spare parts.

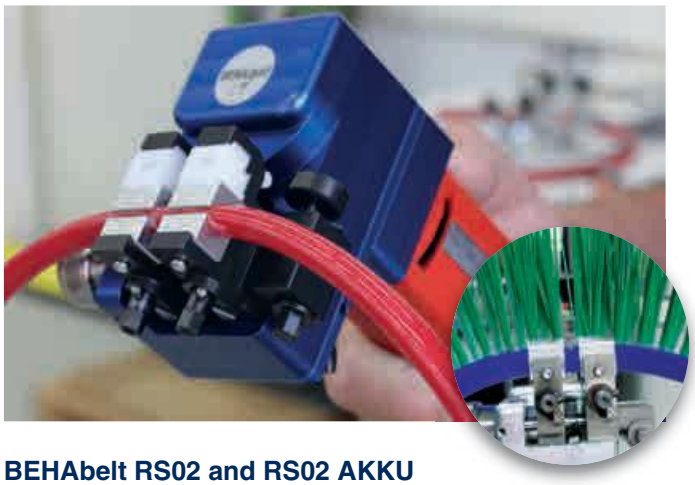
PADDLE WELDING



BEHAbelt EErgo together with Guide clamp

- Reaches melting temperature in less than two minutes.
- LED indicator tells you when it is ready to use.
- Built in protection to lay down on working table.
- FZ02/3 and FZ01 Vario: Robust and precise guide clamps for almost all profiles; special designs possible.

FRICTION WELDING



BEHAbelt RS02 and RS02 AKKU

- Aligns profile edges perfectly with special holding clamps.
- Makes perfect welds every time in seconds using friction to generate heat.
- Also available as cordless version.

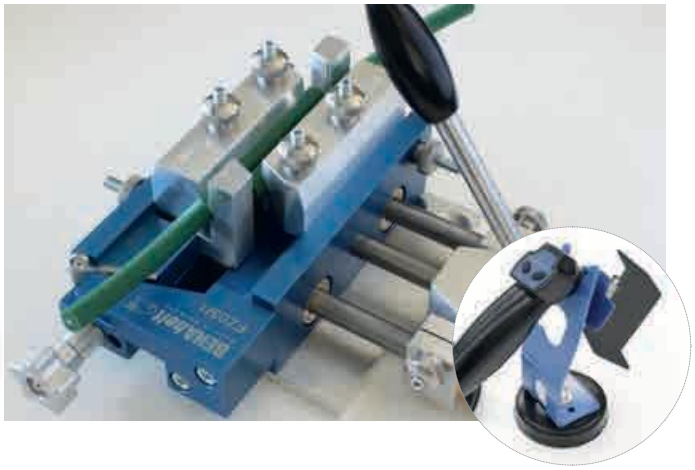
HOT PRESS



BEHAbelt HP01

- Controller guided hot press for perfect butt and overlap welds of PU and TPE profiles as well as flat belts and timing belts up to a width of 50mm.

OVERLAP WELDING SET



BEHAbelt FZ03/1 with EErgo Z

- Professional and easy to use guide clamps for overlap welding of reinforced profiles.
- Application range for round belts from 6-20mm and for V-belts from 8x5mm to 32x20mm.
- EErgo Z with special Z-paddle for overlap welding with guide clamp FZ03/1.

GET YOUR SAMPLES

We are happy to provide you with samples of your required products free of charge. We are looking forward to your message.

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