BEHAbelt®
Made in Germany

Meat/Sausage and Cheese Industry

Weldable conveyor belts and belt profiles for the meat/sausage and cheese industry as well as vegan plant based food

CONTENT

Precision and hygiene in food processing

The food industry is one of the most important industrial sectors. Food products must meet high quality standards, be inexpensive and available in large quantities.

Therefore, the most important factors in industrial food production are repeatable product quality, compliance with hygiene regulations, high plant availability and product safety.

BEHABELT – YOUR PARTNER

ALL FROM ONE SOURCE

As a manufacturer of these products, we are also in a position to produce the right product solution for special individual product solutions for special application requirements.

Due to our in-house toolmaking and the large number of available optional material and design variants, we are always in a position to manufacture and develop the optimal product for you.

COMPETENCE AND EXPERIENCE

Our decades of experience are the foundation for for our comprehensive consulting competence. Conveyor belts and belt profiles from BEHAbelt have been used successfully for years in food processing worldwide.

FOR YOUR APPLICATIONS

BEHAbelt offers product solutions for most conveying and transport sections for food processing technology, such as

APPLICATIONS

- Slicer
- Check weighers
- Detection systems
- Spreading applications
- Compensators
- Picker systems
- Labelling systems
- Packaging machines
- Positioning in and out
- Buffer sections

Process requirements

PRODUCT IN-FEED

Process description / requirement

In addition to optical systems, such as X-ray scanners or LED camera systems, the loading or feeding process in product preparation also includes belt markings for the correct pre-positioning of the raw material.

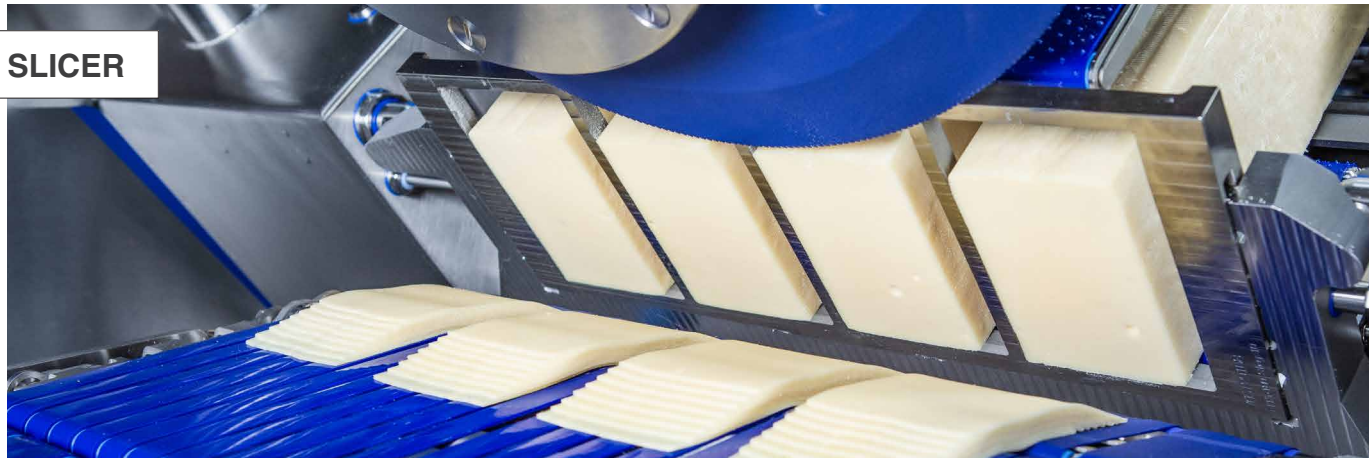
If the preparation process functions are optimal, a repeat accuracy by the subsequent work steps can be carried out efficiently.

Suitable products

The raw product (sausage, ham and cheese) is usually still comparatively heavy.

- Harder, smooth elastic monolithic conveyor belts (PU95A)
- Positionally accurate feeding with slip-free hygienic AT5 belts

SLICER



Process description / requirement

Whether soft cheese or hard raw ham: slicing systems are designed to deliver excellent performance through simple operation.

In addition to the precise slicing processes, hygiene and maintenance are very important factors. The open frame design makes cleaning and maintenance easy.

- Sausage, ham, meat, bacon, cheese, products made from vegetable proteins
- Highest precision
- Easy maintenance and cleaning

Suitable products

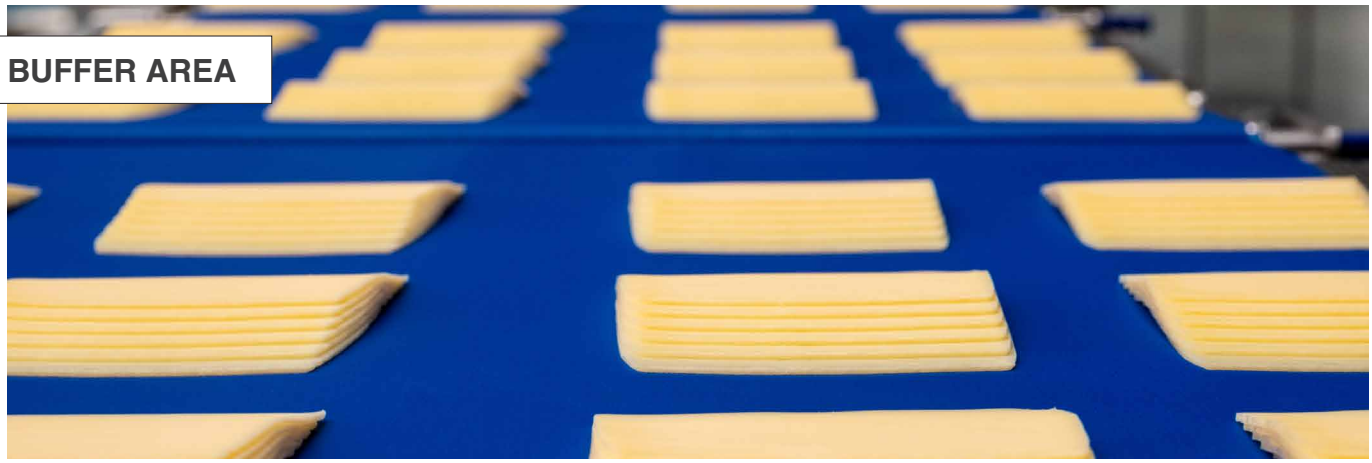
Elastic monolithic belts do not have any fabric, thus providing no opportunity for microbial growth and are resistant to water and moisture due to hydrolysis resistance. The AT5 variants also offer slip-free transport, which is perfect for slicers.

Both the friction and slip-free belts can be produced with different surfaces (spike, nub top, diamond).

- Elastic monolithic conveyor belts (PU80A)
- Positioning precise slip-free AT5 belts (PU80A)
- T-Profiles (PU80A)
- Round belts (PU80A)

and suitable product solutions.

BUFFER AREA



Process description / requirement

This area between slicer and packaging can contain a wide variety of operations:

Cassette systems, lateral overlapping, buffer operation, compensator, positioning in and out, spreading, grouping or separating. Depending on the material being conveyed, the release properties are a big factor in the right choice of conveyor belt.

BEHAbelt conveyor belts allow to minimize the radii of the transfer points.

Suitable products

- The unique surface finish „MICROclean“ not only ensures the best cleanability, but also provides optimum release properties.
- The slip-free AT5 conveyor belts are ideal for the precise and continuous feeding of indexing packaging machines. They offer the highest precision and the best hygiene.
- For spreading applications, smaller belts are used and for wider angles, belt profiles (round, wedge and T-profiles) are preferred.

PACKAGING

Process description / requirement

Efficiency and the highest hygiene requirements ensure optimum production life and thus cost-effectiveness in packaging.

After the upstream processes of feeding, cutting and transporting, seamless connection integration is essential here.

The processing requirements are very different:

- Various pack sizes (single or multiple varieties)
- Labelling and quality inspection
- Classic thermoformed, tray and pouch packaging
- Skin / shrink packaging
- Picker systems

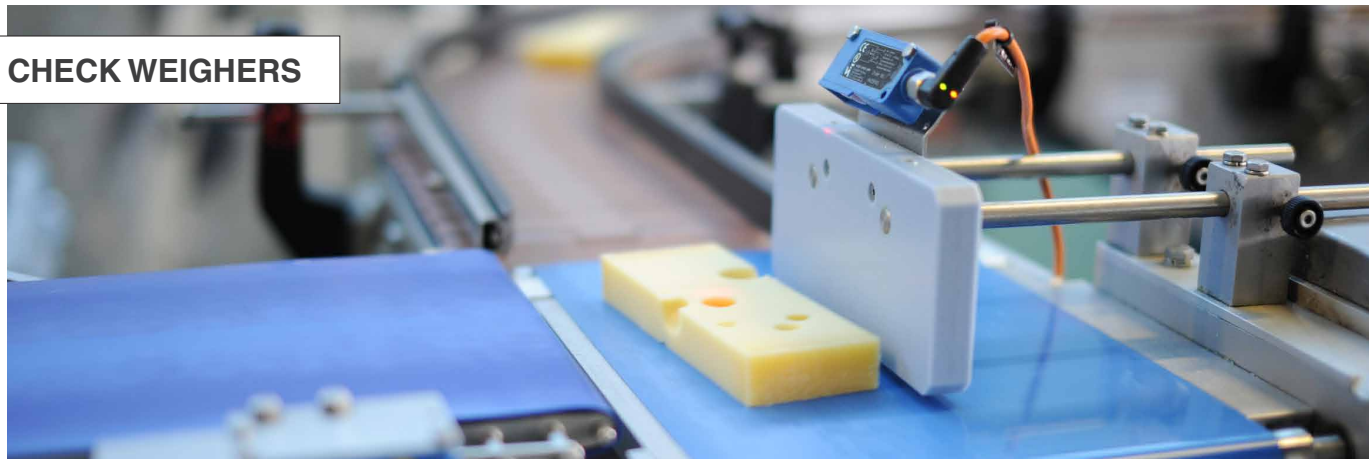
Suitable products

In order to meet the high level of automation and precision, it is essential to coordinate the products to be processed with the conveyor belt. This is the only way to ensure that positioning accuracy, release properties and thus slippage are prevented.

- Elastic monolithic conveyor belts (PU80A)
- Slip-free AT5 belts (PU80A)
- T-Profiles (PU80A)
- Round belts (PU80A)

Product inspection

CHECK WEIGHERS



Process description / requirement

Weight detection ensures compliance with legal requirements and industry regulations. The mostly automated weight inspection with maximum performance and repeatability contributes significantly to high economic efficiency and process reliability.

Depending on the nature of the objects to be weighed, very good release properties and good cleanability are required. For this purpose, BEHAbelt offers an optimal surface refinement with the unique MICROclean surface.

Suitable products

For exact weight determination, the thinnest possible belts should be used, which also allow very small transfer points.

- Thin elastic monolithic conveyor belts (from 0.9 mm, PU80A)
- Bias splice
- Antistatic belt versions

DETECTORS

Process description / requirement

Product inspection systems for foreign object detection and quality control make a very important contribution to protecting the health of your customers.

With these detectors (metal or X-ray technology), contamination of food by foreign bodies can be reliably detected.

The detection sensitivities can be individually adjusted as required and are not normally affected by packaging.

- Packed and unpacked food
- Bulk goods (powder or grains)
- Pasty masses

Suitable products

Both the elastic monolithic belts and the non-reinforced belt profiles are suitable for trouble-free transport through the inspection area of metal and X-ray detectors. Thanks to the homogeneous design, the measurement results of the detectors are neither distorted nor influenced.

For upstream process sections, the PU80Asafe product series offers the possibility to detect and remove inadvertently inserted strip pieces downstream with a detector. This product series thus makes a preventive contribution to product safety.

- Round and V-belts, conveyor belts
- Coatings and weld-on accessories for conveyor belts
- PU80safe series for upstream processes

Characteristics of conveyor belts

We are very interested in our customers‘ applications so that we can continuously improve them by further developing our product range and our know-how.

The following information provides an initial overview of the characteristics and possible applications of monolithic belts for processes.

In which temperature ranges are the belts used?

Typically, monolithic conveyor belts work best in the -30° to +60°C (-22° to +140°F) temperature range.

What is the maximum conveying speed?

Depending on the material being conveyed, the maximum speed is 2 m/s.

What are the approximate feasible belt lengths?

For the soft belt types (Shore 72°/80°/84° A) approx. 10 m and for the harder types (Shore 95°A, 55°D/63°D) 30 m.

What does k1% mean for the belt design?

k1% (N/mm) means the modulus of elasticity of the respective conveyor belt (constant of elasticity). This value indicates how much force (N) is required per mm of belt width, to stretch a belt by 1%.

Can small pulley diameters also be used in the design?

The elastic belts are produced from a thickness of 0.9 mm. Especially for the soft materials in this thickness, pulleys with a diameter of 10 mm can be used.

MATERIAL FEATURES

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

FDA/EC conformity for structured surfaces

FDA/EC/USDA conformity for smooth surfaces

Antistatic conveyor belts to ensure electrical discharge in sensitive applications

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

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

Protection against UV-C waves generated by respective disinfection device

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.

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.

Elastic monolithic conveyor belts

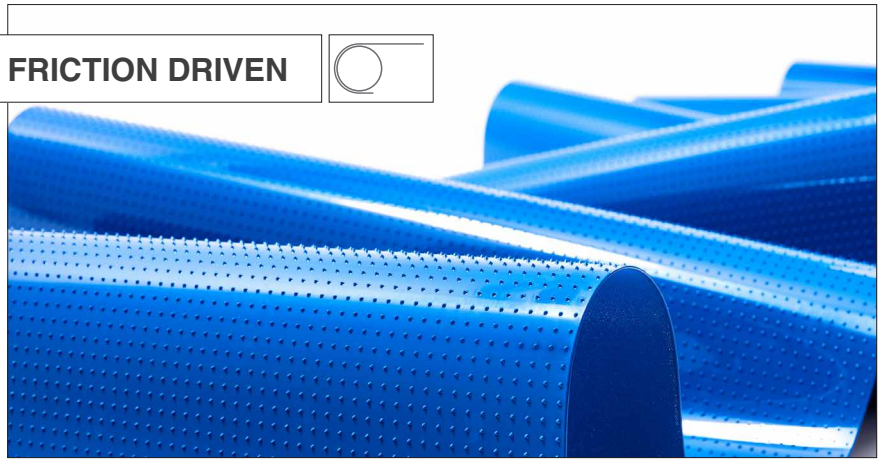
ADVANTAGES

- No risk of contamination from exposed fabric or mechanical damage to belt edges.
- Excellent cleanability. Resistant to hydrolysis and microbes.
- Additional material properties; e.g. metal and X-ray detectable, UV-C resistance, antistatic discharge.

HANDLING

- Softer belt types can be installed by means of quick tensioners
- Butt welds are possible on site and ensure, no loss of structure or elasticity occurs in the weld area
- Accessories, such as side walls, cleats or V-guides, can be easily welded on welded on excellently

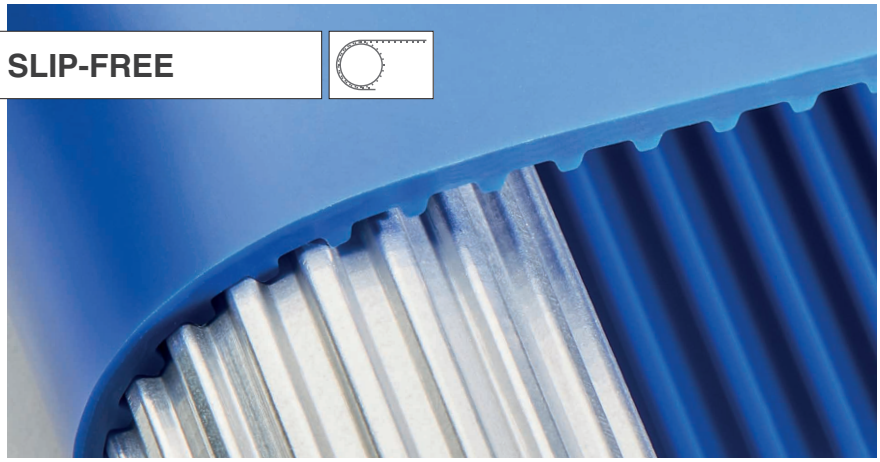
FRICTION DRIVEN



Friction-driven elastic conveyor belts

These conveyor belts are installed in the system with a pretension of 0.5-5%. The precise pretension ensures optimum power transmission and thus optimises the bearing load and ultimately your energy costs. The belts are guided e.g. via crowned pulleys or welded-on V-guides.

SLIP-FREE

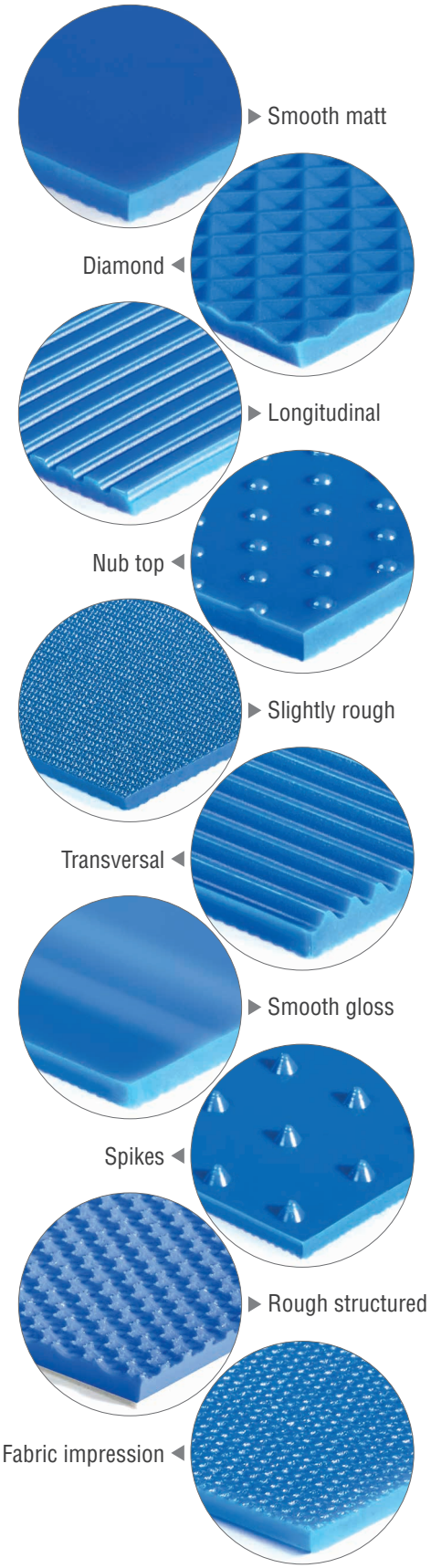


Positive driven elastic conveyor belts

The AT5 conveyor belts from BEHAbelt enable slip-free transport, even with the smallest pulley diameters of only Ø 18 mm. This means that even conveyor sections with the smallest transfer conditions can now be realised with a slip-free belt solution.

BELT SURFACES

The structures shown here can be combined in almost any way. With optional 2K production, even different hardnesses can be combined.

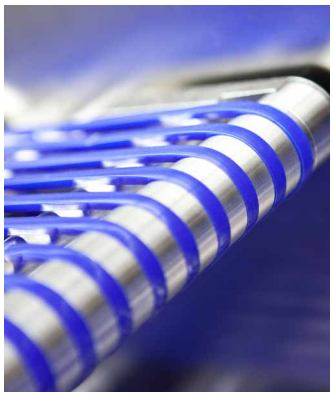


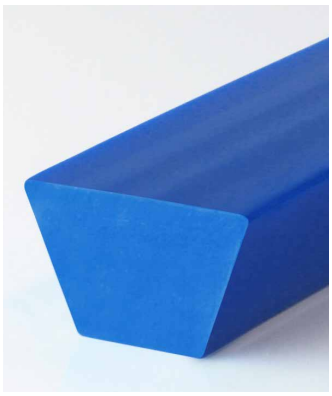
Belt profiles

Weldable belt profiles made of PU and TPE with food approval and important additional properties, such as hydrolysis and microbe resistance.

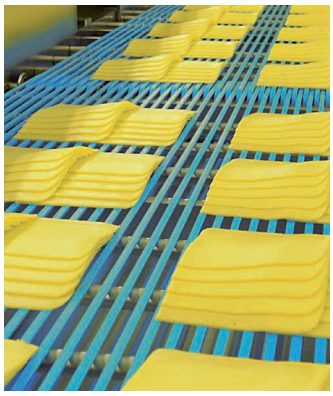
ROUND BELTS

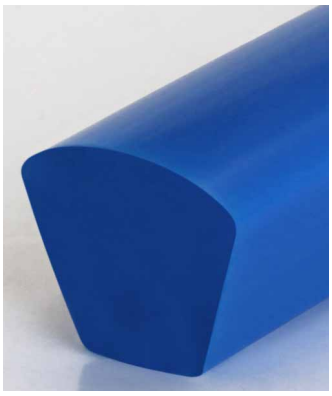
V-BELTS



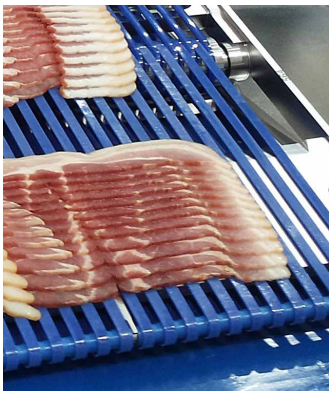


V-BELTS WITH VAULTED TOP



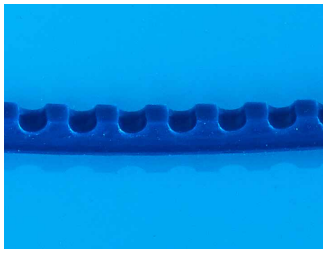


T-PROFILES



One-stop shop for belt accessories

NOTECHED V-GUIDES



Weldable V-guides are often used as guide profiles on the running side in order to support the straight running of e.g. short or under-square conveyor belts or to absorb cross forces in case of sidewise product feeding.

MARKING STRIPS

The PU strips, which are only 0.3 mm thin and 5 mm wide, can be thermally melted into the conveyor belt. This means that abrasion-resistant belt markings are also possible in the food sector.

SHEET MATERIAL / CLEATS

For carrying single or bulk goods on inclined conveyors.

3 versions available
- flat foot
- narrow foot
- Sheet material (up to 8mm thick) without foot

SIDEWALLS

Usually in combination with cleats on inclined or declined conveyor belts to prevent products from dropping sideways.

Welding tools

FOR BELTS UP TO A WIDTH OF 800 mm

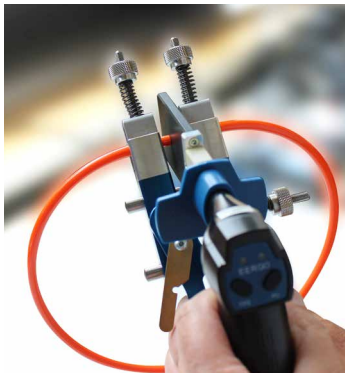
BEHAbelt has developed the welding tools **HS400** and **HS800** especially for butt welding of conveyor belts.

- HS400 for up to 400 mm belt width
- HS800 for up to 800 mm belt width
- Sophisticated design with positioning aids and stoppers ensures highly repeatable accuracy of weldings
- Clamping lever with locking device
- Exact temperature adjustment via control unit
- No adhesion of PU or TPE material due to Teflon-coated heating paddle

FOR BELT PROFILES AND FLAT BELT STRIPS UP TO A WIDTH OF 80 mm

The welding paddles BEHAbelt EErgo 60 and 90 have been especially designed for joining PU and TPE profiles and flat belt strips.

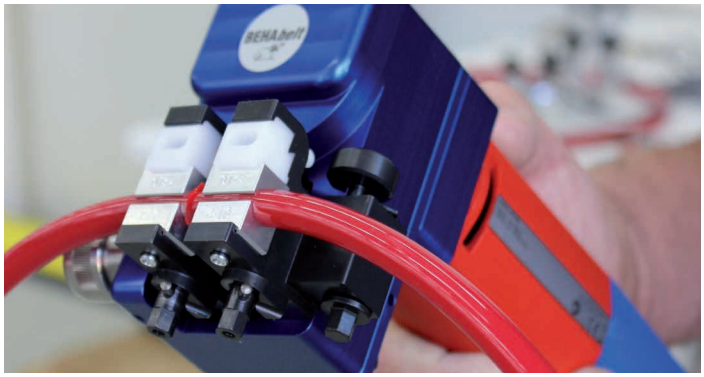
- EErgo 60 in combination with the guide clamp FZ01 Vario for butt welding of belt profiles
- EErgo 90 in combination with the guide clamp FZ02/3F for butt welding of flat belt strips up to a width of 80mm.
- Very fast heating time of approx. 5 minutes



FOR BELT PROFILES

Butt welds within seconds with the unique friction welding machine RS02 for PU profiles

- No long heating-up and set-up times, spliced within seconds.
- Precise pressure and automatical 0-positioning prevents uneven welds and premature failure.
- Automatic alignment ensures that the belt ends are aligned perfectly.
- Due to its small size the RS02 press can be used in confined spaces.



Service

BEHABELT HAS THE FIELD EXPERIENCE IN THE LOGISTIC INDUSTRY SINCE MORE THAN 45 YEARS

We have deep insight into the applications through our customers and our suppliers.
We are always developing innovative products and solutions for our customers based on our experience and know-how.

DETAILED ADVICE

It is important to us to support you with our experience in selecting the most suitable belt profile or belt for your application.

The know-how gained from many applications shows us that there is potential for optimisation in most processes.

CALCULATION AND DESIGN SUPPORT

BEHAbelt offers through its competent technical team with profound practical knowledge. We would be pleased to support you with calculations to optimise your application with the corresponding design of the belt profiles and belts and thus avoid downtimes.

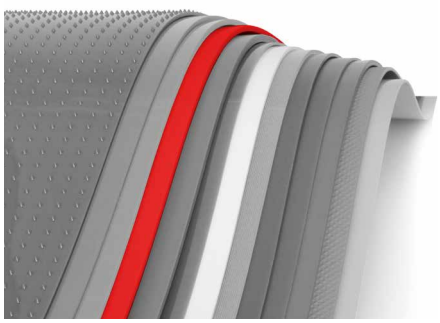
TECHNICAL TEAM: +49 7684 907 170 · info@behabelt.com

FABRICATION

Our customers not only require belts by roll but also endless joined belts.
This is why BEHAbelt offers “Express Confectioning Service”.

When we designed the machines of our tailoring shop our goal was to being able to fabricate both, small and big quantities, at attractive cost and to ensure delivery of orders within a couple of days only - therefore we optimized machine set-up times and lead times.

An automated welding process ensures consistent quality for all possible belt geometries and coated belts.



CUSTOMER-SPECIFIC BELTS

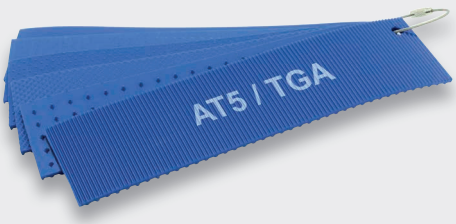
BEHAbelt offers you the exclusive and fast delivery of your desired profile or conveyor belt! If a standard profile does not meet the requirements of your application, BEHAbelt offers you the unique opportunity to develop a customer-specific product.

Thanks to our modern in-house tool shop, we are able to produce special profiles for you in the shortest possible time.

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.

Phone: +49 7684 907-0



Sample ring with positive-driven AT5 conveyor belts (20x5cm)

Sample ring with friction driven conveyor belts (20x5cm)

Sample folder with friction drive conveyor belts (19x14cm)

Your specialist dealer / system supplier

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