



Producer of special conveyor and function belts

Manufacturing of customer-specific transport belts









Ordering example, inches

Neo-timing belt 270L200 Glascord - Sleeve / Linatex 6mm

 $27 \cdot 25,4$ mm = 685,8 mm long $2 \cdot 25,4$ mm = 50,8 mm wide

Ordering example, millimeters

PU-timing belt 100 T10 / 1440 Kevlar - V / Silikone 2mm

100 mm wide 1440 mm long

Explanation

Belt Width
Cog pitch
Length
Coating
Fabric / cord

Cut pieces in metre (M) / welded (V) / (W)

The information in this catalogue is based on our experience and knowledge at the time of writing. Considering the variety of possible influences on our products during their processing and use the information does in no way release customers of carrying out their own examinations and testing. No binding legal warranty regarding particular characteristics or the aptitude for a specific application can be derived from our information. Any property rights as well as existing laws and regulations must be observed by the recipient of our products at their own responsibility.

Subject to alterations due to technical developments or adaptations to changed norms or regulations.

Photographs shown in this catalogue are examples for demonstration and are not binding for the final finish of the goods supplied.

All prices available on request.

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About us

Norditec Antriebstechnik was founded in 1994 when it started coating timing belts. Over the years, with the help of its dedicated team, Norditec has developed into a leading supplier of special conveyor belts.



On a production area of 3.000 sq.m. 50 employes produce customer-specific conveyor belts such as cam-belts, coated belts and belts treated with mechanical CNC-technology. Our already versatile product range is continuously expanding and as a result this brochure can only give you a global overview of our possibilities. Feel free to ask! Our R&D department is eager to develop new and innovative solutions in conjunction with our customer.

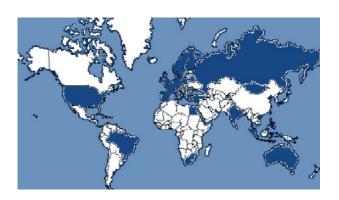
Our determined product and technology development and the improvement of traditional methods ensures our success.



Being awarded the Ludwig-Bölkow-Technology Award for the development of an endless silicone coating and the application for several patents also speaks for the innovative nature of the company.



From the headquarters in Mecklenburg-Vorpommern, Germany we supply to over 40 countries around the world. With our fast processing we make sure delivery times remain as short as possible.





Our product range

The manufacturing of all our products is based on the purchase of industrially produced drive belts, such as timing belts, Poly-V belts, V-belts and belts that are refined into special conveyor belts.



Important basic equipment at Norditec includes:

- PU spraying facilities
- Vulcanising technology (presses and autoclaves)
- Water-jet cutting technology
- CNC-machines
- Construction department and mechanical workshop for quick construction of production equipment
- State-of-the-art plastics joining technology
- Silicone coating equipment
- Comprehensive belt grinding and coating machines

Refining techniques

- Open ended and endless coating
- Mechanical CNC processing
- Welding of cams
- Special solutions

There is almost no end to the refinement options of belts. If you have a special application and are looking for a solution, please contact us.

In addition to the refining of timing belts Norditec offers the following services:

Equipment and Appliances

- Welding presses
- Portable cutting maschines

Services

- Water-jet cutting
- PU spraying
- Measurment of electric conductivity

Trade goods

- Toothed washer
- Belts





Coatings



Norditec Antriebstechnik offers an extensive range of coatings. The various coatings can be used to achieve the requested conveying characteristics, high or low friction, soft, hard or elastic surfaces. The application of a soft synthetic foam to the belt surface, for example, can help protect the product, while the application of a heat resistant felt coating can protect the belt from heat when hot products need to be transported.

For special conveying tasks the belt can be further treated, either on the transport side or on the teeth side. In case of very thick coatings the flexibility of the entire belt can be enhanced by slotting, or a v-guide can be applied on the teeth side of the belt to improve tracking.

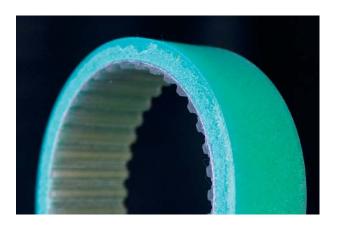
Application methods

Coatings can be applied to the belts in the following ways:

- Welding
- Glueing
- Vulcanising
- Spraying

Which method is chosen depends on the belt and coating material and whether the customer prefers a butt joint or a seamless joint.

A sandwich coating is possible too. The picture below shows a silicone-sealed green Sylomer coating.



On the next pages you will find the various coatings. Should the coating of your choice not be in the list, please feel free to ask one of our sales engineers; our material database is steadily expanding. If required we'll be pleased to send you a coating sample.



Polyurethane

Sylomer (PU Foam)



Yellow Type G: VW: 150 kg/m³ Blue Type R: VW: 220 kg/m³ Green Type L: VW: 300 kg/m³ Brown Type M: VW: 400 kg/m³ Red Type P: VW: 510 kg/m³ Grey Type V: VW: 680 kg/m³



Vulkolan foam Yellow-brown VW: 400 kg/m³

PU Foil, clear / HV sheet



Clear Hardness: 85° Shore

Vulkolan D15



Yellow-brown Hardness: 70° Shore

PU Foil D44



Brown Hardness: 72° Shore

PU Foil FDA



White Hardness: 90° Shore

PU Grip



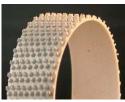
White

PU Foil



White, hardness: 60° Shore Milky, hardness: 85° Shore Natural, hardness: 92° Shore

PU Nipple



White Hardness: 86° Shore

PU Foil Longitudinal Rib



Transparent Hardness: 86° Shore

Sprayed PU



Yellow (standard) Other colours optional Hardness: 50° Shore seamles possible FDA possible

PU Fishbone



White Hardness: 86° Shore



Rubber

Linatex



Red Hardness: 40° Shore

Linatril



Orange Hardness: 55° Shore

Rudex



Red Hardness: 40° Shore

Rubber - Supergrip



Beige Black

Rubber non-skid



Blue Supergrip Non-skid

Correx



Beige Hardness: 40° Shore

APLN



Red Hardness: 60° Shore

Linaplus



White FDA-quality Hardness: 40° Shore

Remaline

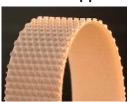


Ochre Hardness: 35° Shore

Orange

Hardness: 50° Shore

Rubber - Nipple



White Hardness: 40° Shore

RP 400



Yellow Hardness: 40° Shore

G / GSTR



Blue Coarse structure



Rubber

Neoprene



CR/ SBR 63 Black Hardness: 60° Shore

Perbunan



NBR/ SBR 65 Black Hardness: 65° Shore

Porol



Cell rubber CR Black Vol.weight: 175 kg/m³

Textured rubber



Beige-white

Viton



Fluoric rubber Black Hardness: 75° Shore

Neoprene FDA



CR/ SBR 60 Bright Conform FDA Hardness: 60° Shore

Peruban



NBR 60 Bright KTW-certification for contact with drinking water Hardness: 60° Shore

Para



SBR / NR 40 Grey Hardness: 40° Shore

Sponge rubber



Vol.weight: 200 kg/m³

Elastomer



Green Hardness: 65° Shore



PVC

PVC



White FDA Hardness: 40° Shore Blue Hardness: 40° Shore

PVC Supergrip



Green/petrol White

PVC Fishbone



White Hardness: 40° Shore

PVC Diamond (Waffle)



White

PVC Nipple



White Hardness: 65° Shore

PVC Sawtooth



White Hardness: 40° Shore

PVC MiniGrip



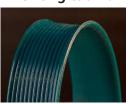
Blue

PVC Triangle



White

PVC Longitudinal Rib



Blue Black



Other Coatings

PA Fabric



green

Silicone



Direct coating or on PA fabric. Transparent

Seamless: hardness: 30°sh

thickness <8mm; Butt joint: hardness: 40°sh

thickness <10mm; hardness: 60°sh thickness<20mm

Chrome Leather



Silver grey

PU v-guide smooth



Red / white Hardness: 85° Shore

Transparent

Hardness: 70° Shore

Antistatic surfaces



Lacquered black or PAZ and PAR antistatic

Novo Felt



Bright grey

Wool Felt



On PA fabric Mottled

PU V-guide notched



Red / white Hardness: 85° Shore

Transparent

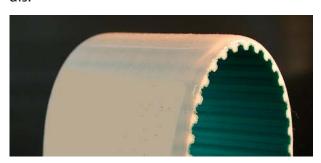
Hardness: 70° Shore

Special Coatings

In addition to the standard coatings Norditec also offers a range of special coatings. This range in particular is constantly further developed in order to fulfill the various requirements of our customers.

Silicone Coating

Neoprene and PU timing belts can be coated with silicone. The silicone can be applied seamless to the belt up to a thickness of 8 mm. The advantages of the silicone coating are its heat resistance up to 220° C, anti-adhesiveness (adhesive- and dirt-repellent), its elasticity and excellent durability. The seamless silicone has a hardness of around 30° Shore, is transparent and FDA-compliant. Based on its high friction to steel and paper it is well suited for conveying these materials.



APLN Coating

An APLN coating offers an alternative to the traditional Linatex coating.

APLN has a hardness of 60° Shore. It can be supplied as a coating on endless belts or on



open-ended belts that are supplied per metre. APLN is weldable; it can be made endless by means of a finger joint.

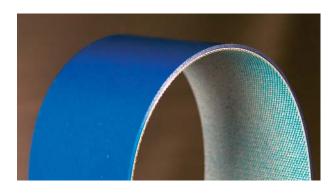
Teflon Coating PTFE

A Teflon coating lends itself for applications where a non-stick coating with a low friction coefficient is needed. Teflon has very good slip characteristics.



Seamless PU Spray Coating

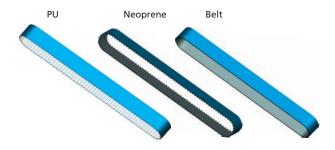
This sprayed PU coating is of FDA quality and is wear and abrasion-resistant. The spraying provides a high surface quality even without grinding and enables a variable cover thickness of 0.2 to 2 mm.



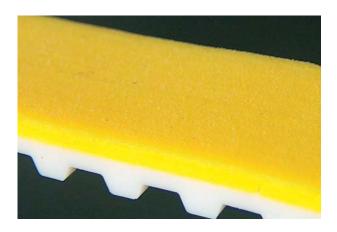
The PU coating is temperature-resistant up to 95° C and has a Shore hardness of 82°.



This permanently elastic coating can not only be used for timing belts and conveyor belts, but can also be sprayed on rigid items like rollers, e.g. for noise control and wear protection. The polyurethane can be applied to polyurethane and neoprene timing belts as well as conveyor belts.



This coating is supplied in blue or bright grey (preferential colours) as well as black or yellow.



Felt Coating

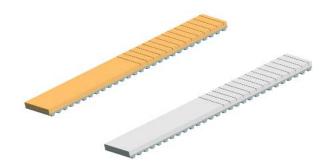
For the felt coating a high quality Kevlar felt is applied temperature-proof on to the timing belt. A felt coating is outstandingly suitable for conveying hot goods.



Application areas include the aluminium industry, glass industry and steel extrusion. The yellow Kevlar felt can resist temperatures up to 500°C (temporarily 550°C), the white Kevlar felt up to 250°C.



The coating can be applied to open ended or to endless belts. For a higher flexibility thin lateral cuts can be milled into the Kevlar felt.





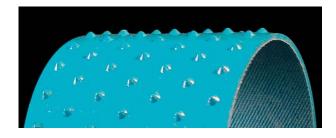
FDA Coatings for the Food Industry

For coatings in the food industryNorditec supplies a variety of different coating materials. Depending on materials and dimensions coatings can be welded, glued or sprayed on. A seamless surface can be achieved by spraying on the FDA-compliant coating (PU blue) on the belt. The coatings specified in this brochure constitute a selection. The nipple material for example can be supplied in several versions. Please contact us for more information.

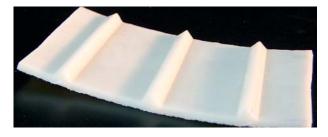
PU Spikes, bright Thickness ≈ 4mm



PU Nipple, blue Thickness ≈ 1.2mm



PU Crossbar Thickness ≈ 2.5mm



Flat material:

PU blue and white: thickness ≈ 1-2mm, 85° Shore

Rubber white: thickness ≈ 1-10mm,

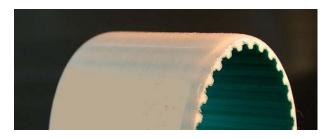
60° Shore

PVC white: thickness ≈ 1-2mm, 40° Shore

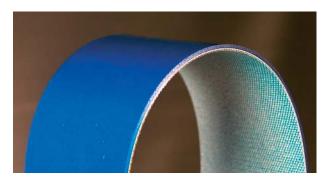


Transparent Silicone Coating

On PU or Neoprene surfaces. Thickness up to 8 mm optionally seamless. hardness: ~30° Shore



Seamless PU Spray Coating On PU or Neoprene surfaces bright grey or blue thickness ≈ 2 mm, 82° Shore



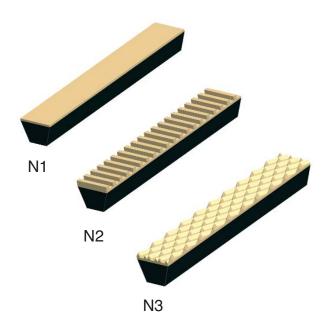
* PU: up to w=100mm welded, w>100mm glued PVC and rubber: glued



Coated Conveyor V-belts

The coating of v-belts is an advantage when goods with fragile surfaces are conveyed. Applications include the wood, ceramics and glass industries.

The interleaving/teeth enables non-slip transmission and synchonous running.



 ${\bf Conveyor}\ {\bf v}\hbox{-}{\bf guides}\ {\bf coated}\ {\bf with}\ {\bf white}\ {\bf rubber}.$

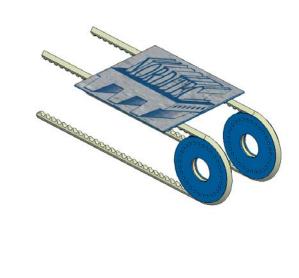
Coated and where appropriate profiled surfaces can aid conveying, as they increase the belt's friction coefficient.

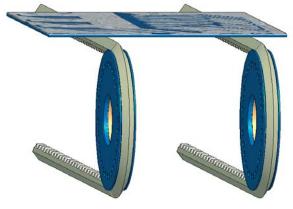


Interleaved ridgetop v-belt is a gear belt coated with a v-guide.









TYP ASSEMT HAVE LAYOUT GROSSE-IN

Other Special Solutions

As refiners of timing belts, Norditec are specialists in uncommon constructions. We can manufacture according to your specifications or team up with you to develop a solution for a special application.

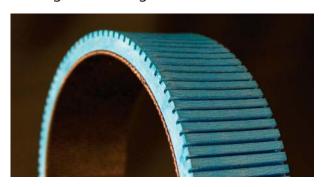


Processing

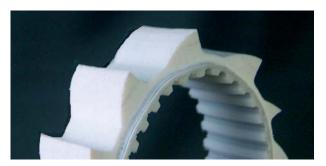
Guide slots, holes and slits are standard fabrication options. Additionally we can supply special fabrication options according to your demands. Processing of the surface enables adaptation of the belt to the requirements. The procesing of untreated as well as refined timing belts can be carried out in a number of ways. With the technology available at our facilities there are hardly any boundaries to what is possible. We can treat belts according to your requirements. The following options are at our disposal:

- Cutting
- Milling
- Milling with CNC technology
- Grinding
- Punching
- Perforation
- Water-jet cutting

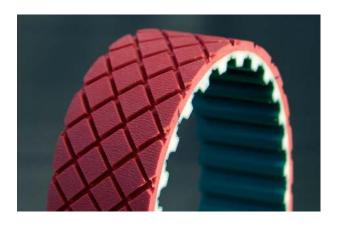
In order to improve the flexibility of thick coatings crosswise grooves can be milled in.



Piece goods can be more easily positioned if the surface has grooves.



The conveying of smooth objects is easier if the friction coefficient of the coating is increased through treatment.



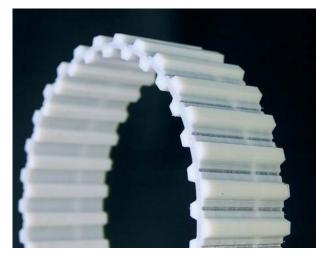
Perforated belts are mostly used as vacuum belts.





Dual Timing Belts

A dual timing belt has cogs on the inside as well as the outside of the belt.



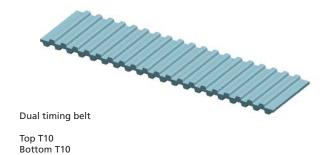
The cogged sides do not necessarily have to be synchronous, but can also have varying pitches. Norditec offers a variety of dual timing belts.

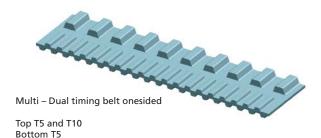


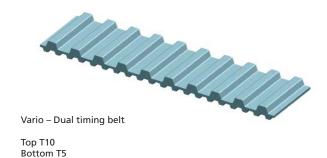
The original dual timing belt has the same pitch on both sides. If the pitch differs we speak of Vario-Dual timing belts.

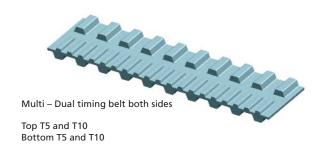
A Multi-Vario-Dual timing belt can have different pitches on each side of the belt.







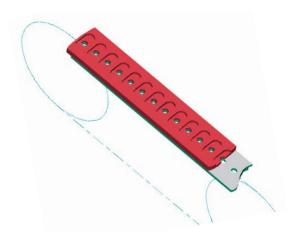






Vacuum Timing Belts

A vacuum timing belt is a coated belt with slots and holes in the back of the belt. Such belts are used mostly in the packaging industry. It enables fast transportation of light piece goods such as paper, as well as vertical removing of foils.

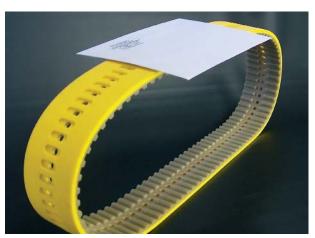


Norditec Antriebstechnik can apply all coatings to these belts. The most varied patterns can be applied to the material by means of CNC-controlled milling machines.





We have detailed a considerable number of technical drawings in our special catalogue. We can, however, also supply according to your parameters.







Cam Belts

Cam belts are used for conveying piece goods. The cams enable fixation of the product during transportation.

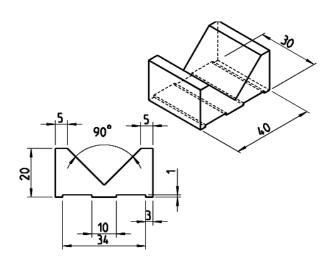
We have a comprehensive cam catalogue, currently detailing over 300 different designs. The catalogue is continuously being further completed and extended. It will be our pleasure to send you our free catalogue for cleat cams without commitment.

Individual demands to conveyor belts require a large variety in cleat cams – you will get your own bespoke solution with us.



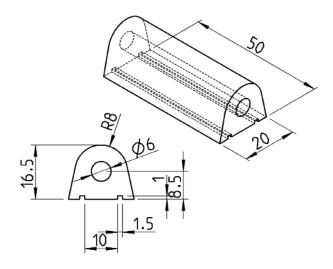


We supply according to your requirements and will produce cams conform your engineering drawings.



We construct cams according to your parameters. Our customer specific cam constructions enable the fabrication of belts for the most varied applications.

To save time we can supply cams made in our own injection die-casting facilities.



On the PU belts the cams are applied through welding. We can also offer a removable-cam system (see Removable-Cam Systems)



Among our latest developments is the application of cams by use of magnets (see Special Solutions)



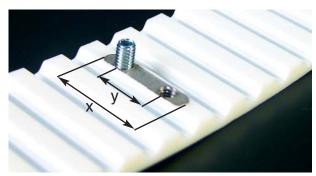
Removable-Cam Systems

The removable-cam system enables quick replacement of cams at all times, also when the belt is fitted. This will help you reduce installation and replacement costs.

The cam material can be chosen at will and also the pitch between the cams is flexible keeping in mind the pitch of the cogs.

Two types of the removable-cam system are available:

Removable-cam system Type – N A fitting key is inserted in the cam.



Cogside view



Bottomside view

In the following table the standard sizes are indicated. Other sizes are available on request.

Zahnriemen	B [mm]	X [mm]	Y [mm]
AT10	12	10	5
	25	22	12
	32	22	12
	50	35	25
	75	60	2x25
AT20	50	45	25

Removable-cam system Type – M
For Type – M the entire cog is milled off and an insertion bar is fitted.



Depending on the width of the timing belt the insertion bar has one, two, three or four thread inserts (see table)

Profil Riemen	Breite Riemen	Typ Gewinde	Anzahl Gewinde	Abstand Gewinde
AT10	32*	M4	2	20
	50*		2	
	75		3	25
	100		4	
AT20	25	M5	1	-
	50		2	
	75		3	25
	100		4	

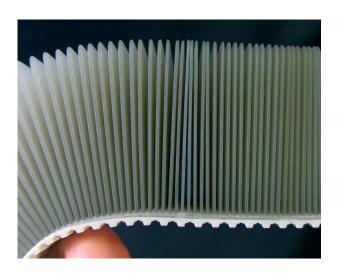
Available in brass or plastic.

* Also available in plastic without thread inserts.

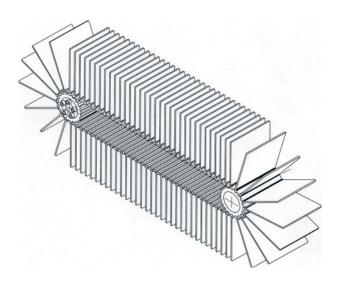


Pocket Timing Belts

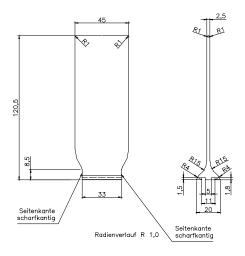
Pocket timing belts are characterised by the long, flat cams that are fixed on the belt. These belts are used, for example, in conveying of hygiene products such as babies' nappies and sanitary towels.



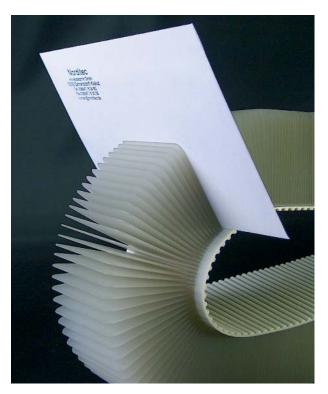
The pocket timing belt is one of our top products. The pockets can be fixed on the belt starting from a pitch of 2mm.



The pockets are manufactured on site out of glassfibre-reinforced material, which enables the supply of a multitude of different shapes.



A catalogue is available detailing the various pockets.





Technological Special Solutions

We are proud to offer you a multitude of technological special solutions. We supply according to your requirements or will cooperate with you to find a solution for your specific 'belting problem'.

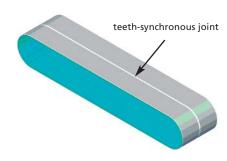
Wide PU timing belts

Wide timing belts, with widths up to 500 mm, are currently only available in the market fitted with Kevlar cords. Norditec can produce wide timing belts with kevlar or steel cords.



Wide silicone coated timing belts with perforations

Narrow belts can be joined to one wide timing belt by a teeth-synchronous joint.



Wide PU timing belt



Wide PU timing belt with teeth-synchronous joint

Available sizes (teeth-synchronous joint):

Teilung	max. Breite	
T5	400 mm	
AT5	400 mm	
T10	400 mm	
AT10	400 mm	
Н	18" = 457,2 mm	

For other pitches and widths please contact our sales staff.

In a different process narrow belts are joined by welding an HV-foil into the surface. With this process we have reached widths up to 1,000 mm.



Wide timing belts with welded-in HV-foil.



Magnetic Timing Belts

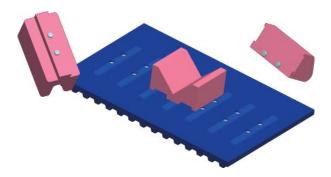
The latest conveyor belt of Norditec is permanently magnetic.

It enables fixed positioning of magnetic parts on the back of the belt, which can be magnetised according to your specifications.





We apply the magnets to the surface of the belt according to customer specifications, with strength, polarisation and geometry adaptable according to your requirements.



Form-fit rapid-exchange system for various types of cams

Surfaces can be supplied with a variety of coatings depending on your requirements, to provide the desired friction coefficient.



The attractive force of the belt is variable depending on belt geometry and direction change. By using an antipolar construction alternating attraction and repulsion can be achieved.

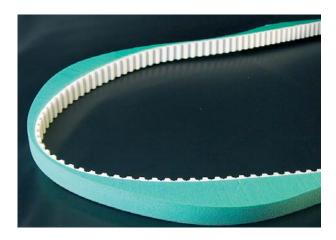


In addition to the classic transportation of metal parts the belt can also be used for conveying paper and foils, in which the transported goods are clamped in between two tightening belts or between a low-friction surface and the magnetic belt.

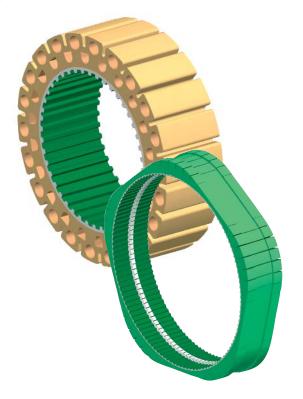


Water-jet Cutting

The latest addition to our technology is the cutting process by means of a water-jet. Water-jet cutting enables the milling of holes and outlines in timing belts, coatings, conveyor belts and other materials.

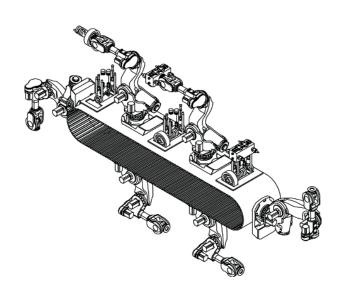


The cuts are neat and precise, even in foam plastics.

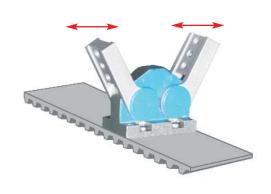


Timing Belt Robotics

So far timing belts have always been passive. With the patented timing belt robotics this is going to change. By energy and signal transmission within the timing belt it becomes active. Our construction kit for timing belt robotics is available to the automisation industry.



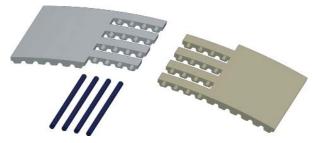
As an example, cams can be made to move by bringing energy into the timing belt. Now small grippers could be fitted.





Detachable Belt Fasteners

In many cases installation of an endless timing belt is impossible due to constructional limitations. The belt then has to be fitted into the machine first, before being made endless.



New in our product range is a pin fastener for quick and easy fitting and unfastening of timing belts.



Further detachable fasteners can be supplied upon request.

Equipment

Portable cutting maschines and welding presses

We supply portable finger-cutting-maschines and welding presses for timing belts. In this way we enable our customers to weld their timing belts by themselves, quickly and flexibly on site. Besides, the portability of the equipment enables welding of the belt in the machine.

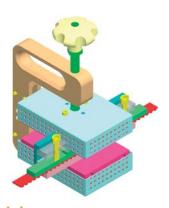
The hand operated hydraulic cutting maschine with exchangeable toothed profile plates punches fingers in the belt.



The finger joint increases the power transmission compared with a straight joint.



The timing belt is welded with a finger joint by means of the mobile press. The press is available as a heat press or a heat press with cooling.



Commercial

In addition to the refining of timing belts Norditec also supplies unrefined timing belts, tooth wheels and Poly-Net.



Services

Water-jet Cutting

Our latest investment is a water-jet cutting maschine which we purchased mainly for rubber and plastic cutting in 2-D operations in our own production. We do, however, also offer water-jet cutting services.

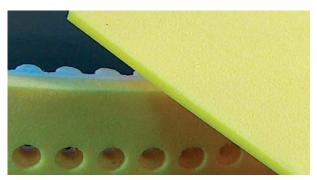


The abrasive-jet process enables the handling of the most diverse materials. Even metals and plastic foams can be neatly cut.

On the work surface of 1.2 m x 1.2 m cutting depths of up to 150 mm can be achieved depending on the material.

Polyurethane Spraying

We offer sprayed PU panels. The sprayed product has a hardness of 50° Shore. The standard panel measures 500 x 5,000 mm and can be supplied in thicknesses 2, 3, 4, 5, 6, 8 and 10 mm. Further non-standard panel thicknesses can be supplied on request. Please contact us for a copy of our pricelist.



Antistatic measurment

In many industrial sectors electrostatic charging of timing belts is undesirable (conveying of electronic components or in areas with danger of explosion). Antistatic characteristics of the belts are achieved by application of an electrical conductive coating on the belt surface. For this purpose the belts must be coated with a polyamide fabric (NFT/NFB or PAZ/PAR). A further possibility for reduction of surface resistance is coating with a special rubber that can reach values below 10° Ohm. According to DIN 22104 "Antistatic Conveyor Belts" the surface resistance must remain below 3 x 10° Ohm.

On request and at costs we will carry out a protocolised measuring.



As the conductiveness of the coating can diminish with age regular measurment is advisable. Measurment is carried out according to DIN EN 61 340-2-3 and DIN EN 340-4-1. A digital high-ohm meter is used for this purpose.



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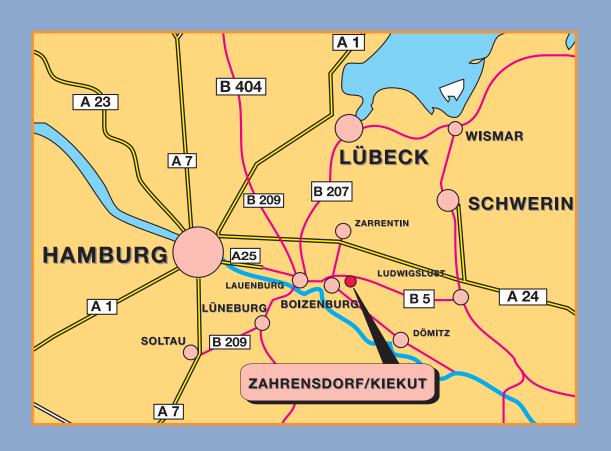
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