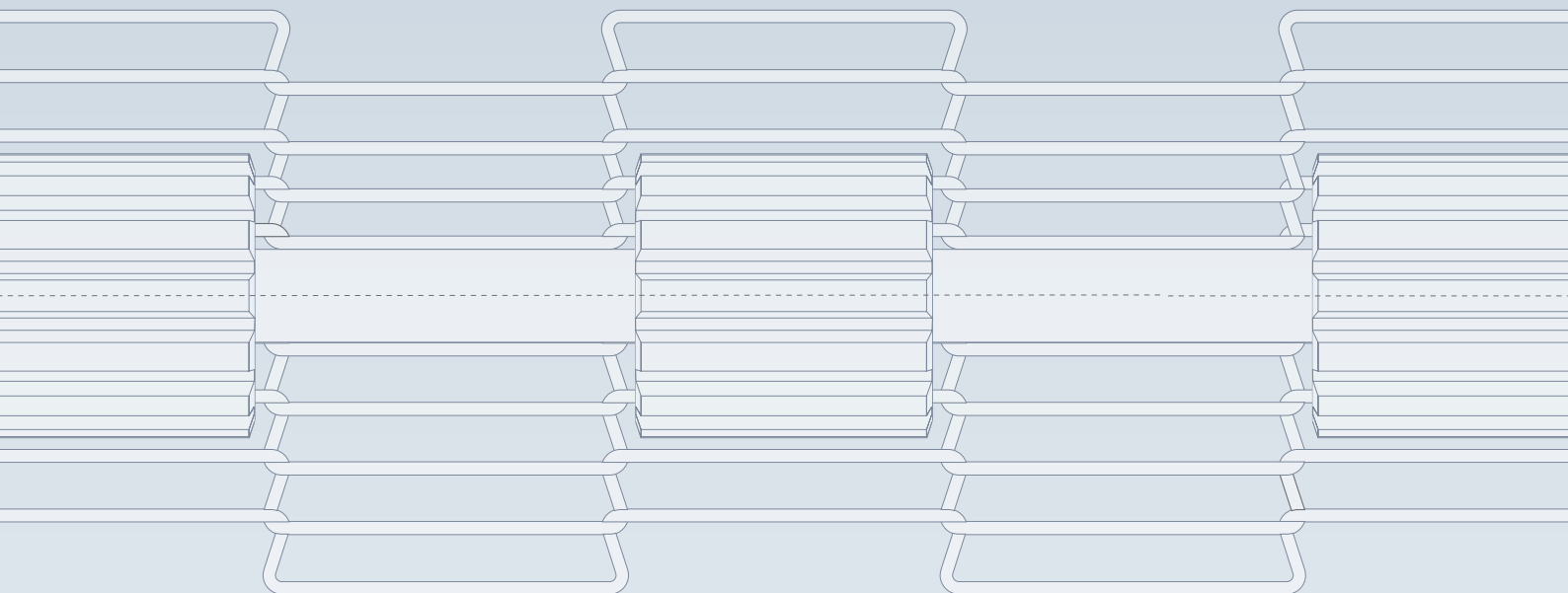
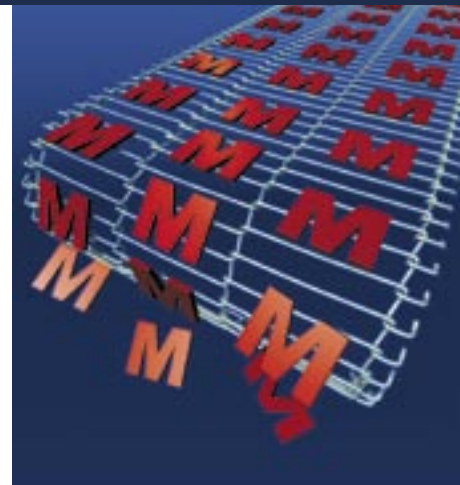
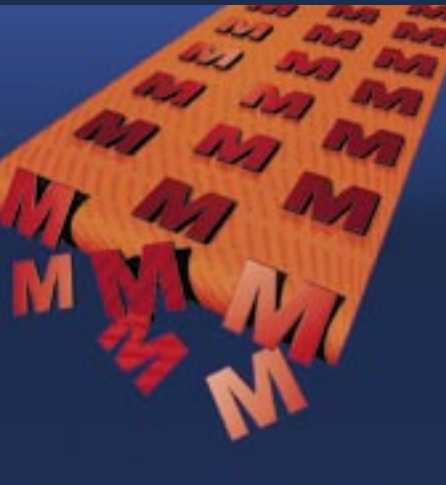




Transportbänder · Conveyor belts · Bandes transporteuses



WE KEEP YOUR PRODUCTS MOVING

## SUCCESSFUL BY SPECIALISATION

Since 1929 we have supplied conveyor belts into the food industry. By focussing on this target group we have gained substantial experience. This experience provides us with a superior "know-how" which we can pass on to new and existing customers.

We have benefited to a great extent by working with experts from our customers including well-known machine manufacturers.

We have become world wide market leaders in the supply of rod network belt, PU conveyor belts and special silicone conveyor belts.

**The main focus of our product range is represented in the following product groups:**

- **Rod network belts**

...are characterised by exact, maintenance-free belt run as well as by small deflection radii. The open woven structure provides free passage for liquid media and hot or cold air.

Our wire belt records comprises approximately 8000 different dimension combinations. A particular strength is the development of process belts with special dimensions and designs for the solutions of most difficult production challenges.

- **PU conveyor belts**

...are resistant to fats, oils and chemicals. Märtens PU conveyor belts are extremely long-lasting and very flexible due to special internal material and due to the unique production process. As a matter of course, the belts are of food quality to FDA/USDA guide lines.

Embossings with company names or logos offer branded companies in the chocolate industry a distinctive labelling of their high grade products.

- **Silicone conveyor belts**

...the advantages of this coating material are the excellent anti-adhesive effect as well as the resistance to many media. They are used for the transport of sticky masses e.g. dough, chocolate etc.

**Two world-wide unique special products belong to the group of silicone coated conveyor belts:**

- **Expanding belts**

...consisting of lateral elastic polyester fabric with a silicone coating. They are utilised in expanding machinery in order to separate or converge products during transport.

- **Silicone mould belts**

...for continuous production according to customer-defined patterns and shapes. The silicone moulds which are produced carry and form the material. Liquid is poured into the moulds and hardens during the transport.

In order to satisfy the requirements of our customers we add a multiplicity of complementary products to our range, i.e. metal conveyor belts, PVC conveyor belts, drive and deflection elements, endless woven conveyor belts etc.

It is our target to ensure a broad consulting service as well as a quick, uncomplicated and reliable delivery. For this purpose our sales team with a history of long service with the company are available to help with your requirements.

■	Rod network belts
■	Metal conveyor belts
■	Plastic conveyor belts
■	Accessories

## CONTENT

4	Rod network belt
5	Rod network belts with flights
6	Rod network belt with cleats
7	Rod network belt with chain guide
8	ELT-belt (extended life time)
9	Corner rod network belt
10	Rod network belts drive shafts and sprockets
11	Rod network belts transfer media
12	Rod network belts measurement + material
13	Rod network belts measurement + material
14	Rod network belts technical information
15	Rod network belts endless connections using connection tubes
16	Rod network belts endless connections by interweaving a wire rod
17	Rod network belts enquiry
19	Wide spiral link belt
20	Round wire link belt
21	Wire mesh belt
22	Loop-joined wire belt
23	PU conveyor belts
24	PVC conveyor belts
25	Silicone conveyor belts
26	Silicone mould belt
27	Expanding belts
28	Endless woven conveyor belts
29	Conveyor discs
30	Welding presses
31	Finger punching device

## ROD NETWORK BELT



- hygienic
- permeable
- guided and driven by sprockets

### Material:

- music wire 1.1211
- stainless steel 1.4310
- special wire on demand

### Characteristics:

- precise, maintenance-free belt driven by means of toothed drive sprockets and grooved transfer rollers
- small back flex radii due to flexible belt construction
- free transmission through the belt of liquid media, hot and cold air etc due to the open woven structure

### Dimension table:

Wire – Ø		0,9	1,0	1,2	1,25	1,4	1,6	1,8	2,0	2,35	2,8
width	max.	2000	3000	4000	4000	4000	5000	5000	5000	5000	5000
	min.	50	50	50	50	60	70	75	80	90	100
mesh width	max.	10,1	12,6	13,8	13,75	18,6	18,4	16,2	16,0	13,65	17,2
	min.	2,6	2,8	4,3	4,25	4,6	4,8	6,0	8,0	10,35	9,90
spacing	max.	11,0	13,6	15,0	15,0	20,0	20,0	18,0	18,0	16,0	20,0
	min.	3,5	3,8	5,5	5,5	6,0	6,4	7,8	10,0	12,7	12,7
mesh length	max.	90,0	120,0	170,0	170,0	170,0	170,0	170,0	170,0	170,0	170,0
	min.	19,0	19,0	25,0	25,0	40,0	40,0	55,0	55,0	65,0	70
gear wheel edge	max.	20,0	20,0	20,0	20,0	20,0	15,0	20,0	-	-	-
	min.	5,5	6,0	7,0	7,0	10,0	15,0	15,0	-	-	-

All dimensions are specified in mm. The dimensions can be varied in steps of 0.05 mm within the specified ranges.

### Special versions:

- rod network belts with chain, with cleats, with flights, corner rod network belts, ELT belts

### Application areas:

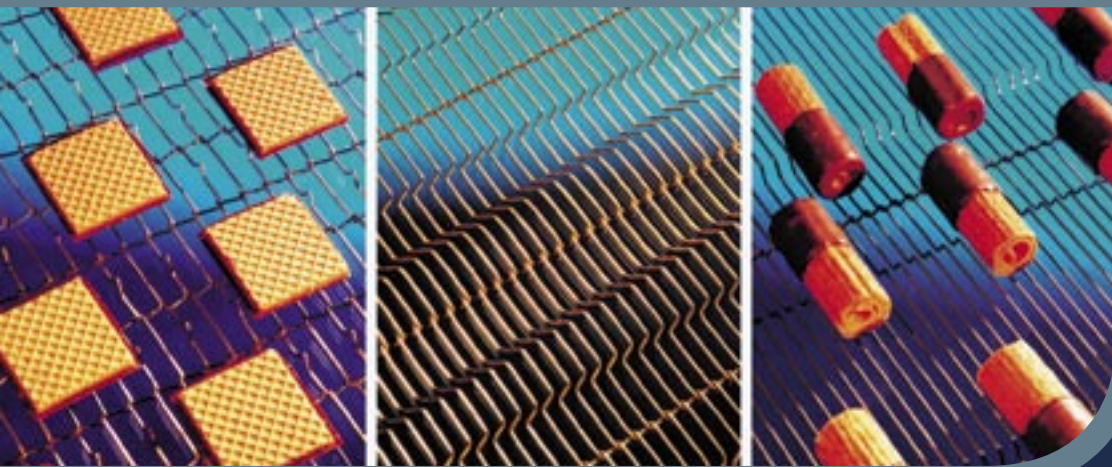
For enrobing, cooling, drying, spreading, breaching, packing, heating, cleaning...

- coating grids in the chocolate industry
- meat and fish industry
- poultry
- baking
- textile dryers
- transport of printed circuit boards

### Joining methods:

- by connection tubes
- by wire weaving
- with single meshes

## ROD NETWORK BELTS WITH FLIGHTS \*



- punctual product contact
- exact positioning
- precise feeding

### \* points, humps and troughs

For special application the rod network belts are equipped with flights, humps or troughs. The alignment depends on the individual purpose of use, i.e. sorting, arranging, feeding, with punctual product contact, with ascending or inclined conveyors.

#### Characteristics:

Shapes and functions are manifold, alignments are individual and variable.

#### Special versions:

These very specific belts offer numerous possibilities with regard to the shape of the points, humps and troughs. Their division can be varied within a wide range in connection with different mesh length combinations.

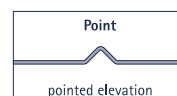
#### Material:

- music wire 1.1211
- stainless steel 1.4310
- special wire on demand

#### Joining methods:

- by connection tubes
- by wire weaving
- with single meshes

#### Application areas:



fixing products, lifting  
(in order to avoid imprints),  
arranging, sectional coating  
(with liquids, breaching etc)

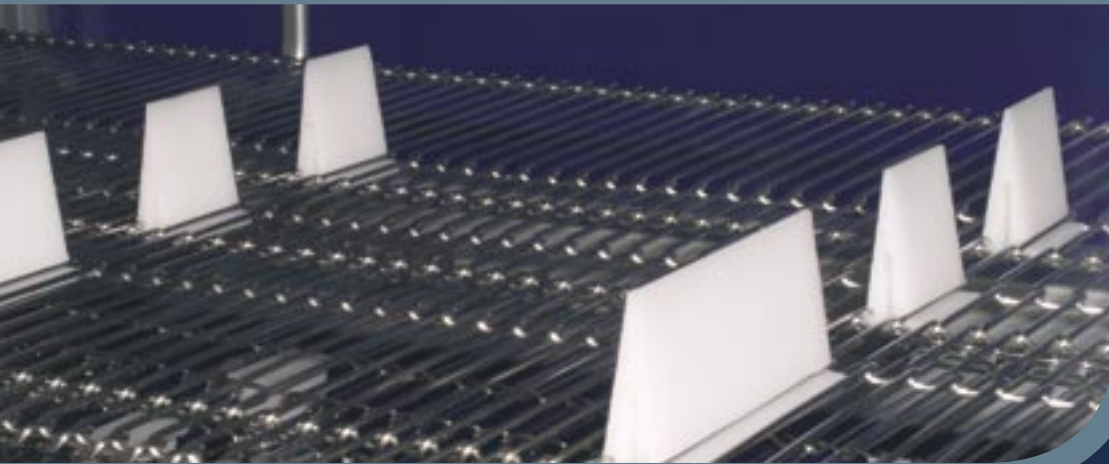


separating of products,  
like cleats, as demarcation,  
restriction, adjustment



aligned guidance  
(i.e. adjust square products)

## ROD NETWORK BELT WITH CLEATS



- for ascending and descending slopes
- free permeability for gaseous and liquid media
- hygienic

### Construction:

- metal conveyor belt made of formed wire with inserted plastic cleats

### Characteristics:

- exact, maintenance-free belt driven by geared drive rolls and grooved transfer rolls
- small transfer feeds by flexible belt construction
- free permeability for gaseous, liquid and solid media through the open weave structure (e.g. heating, cooling, steam, liquids, salt, etc.)
- conveyance of larger products across inclines and declines
- sorting, arranging
- feeding
- excellent cleaning characteristics

### Application areas:

- any incline and decline applications (e.g. fish and meat)
- vegetable cleaning and cutting facilities etc.

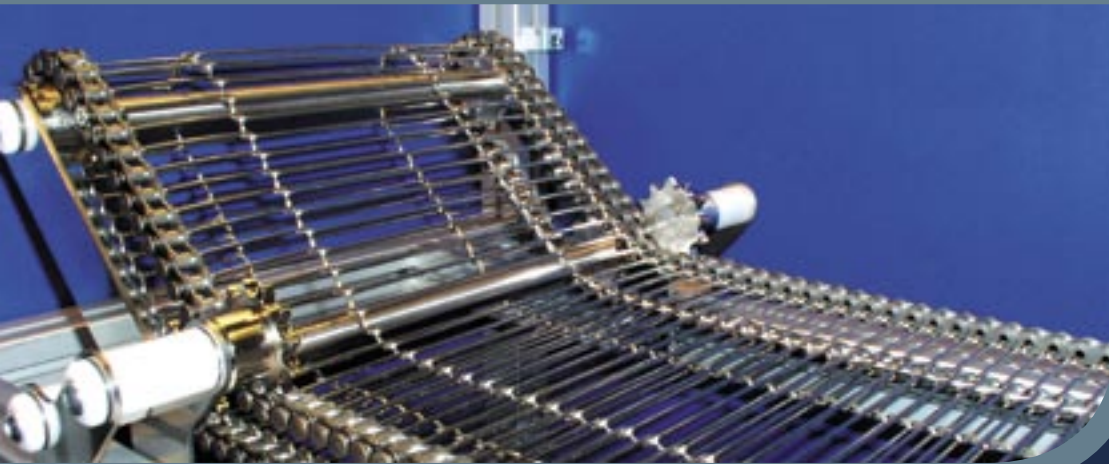
### Material:

- music wire
- stainless steel 1.4310
- cleats of UHMW (ultra high molecular wearing)

### Joining methods:

- by connection tubes
- by single wire weaving
- by single mesh weaving

## ROD NETWORK BELT WITH CHAIN GUIDE



- best grade of power transmission
- top stability
- for special applications with larger widths

### Construction:

Märtens rod network belt mounted between bilateral hollow-roller chain

### Characteristics:

- exact, maintenance-free belt being driven by hollow-roller chain
- free permeability for gaseous, liquid and solid media due to open net structure (e.g. heating, cooling, steam, liquids, fat, bread crumbs, etc.)
- large belt lengths possible
- adaptable belt path due to belt being chain driven
- bi-directional belt run possible
- excellent cleaning characteristics

### Application areas:

- pizza ovens
- drying tunnels out feeds on enamel machines
- frying facilities
- dough frying facilities
- swan neck conveyors

### Special designs:

- with inserted plastic cleats
- with flights, humps or troughs

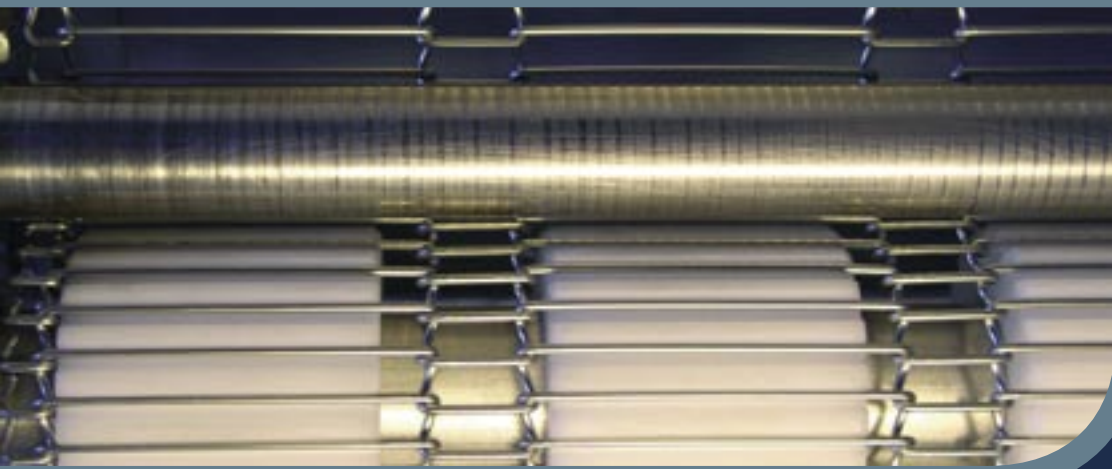
### Material:

- stainless steel 1.4310
- stainless steel 1.4301

### Joining methods:

- by connection tubes
- by single mesh weaving

## ELT-BELT (extended life time)



- extended life time
- reduced downtime
- with extreme conditions

Specific application conditions require specific conveyor belts. For this purpose we have enhanced our established rod network belts.

### Characteristics:

By means of additional short meshes there are several advantages compared to the conventional belt construction, this considerably improves the life time.

### Application areas:

- with all industries
- with difficult operating conditions
- with high speed
- with high belt tension

### Material:

- music wire
- stainless steel 1.4310
- special wire on demand

### Advantages:

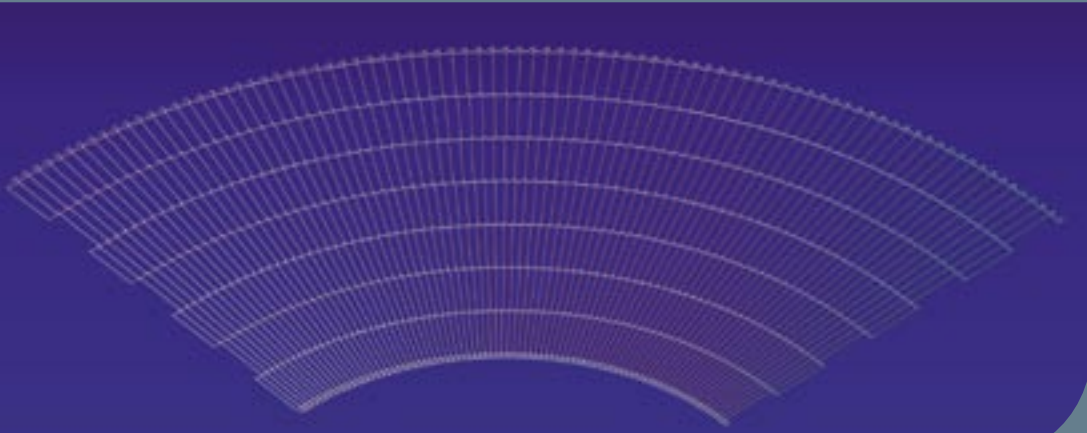
- improved allocation of the traction forces to a larger quantity of mesh junctions
- quick joining by simply inserted single meshes
- hygienic joint because of no use of connection tubes
- easy repair possibilities
- smooth belt operation by tighter sprocket guidance
- axial distribution of points, humps and troughs

### Joining methods:

- with single meshes



## CORNER ROD NETWORK BELT



- hygienic
- permeable
- positive tracking

### Material:

- stainless steel 1.4310
- special wire on demand

### Characteristics:

- precise, maintenance-free belt run
- right hand and left hand version
- small back-flex radii due to flexible belt construction
- free transmission through the belt of liquid media, hot and cold air etc. due to the open woven structure

### Dimensions:

Wire - Ø	1,4 mm	1,6 mm	1,8 mm	2,0 mm
Width	from 200 mm to 1.300 mm			
Inner radius	from 200 mm to 1.000 mm			

### Application areas:

- transport around corners of lightweight goods without dislocation
- corner angles from 30° to 180°
- spare belts for all known corner systems
- dimensions for individual requirements

## Rod network belts DRIVE SHAFTS AND SPROCKETS

Rod network belts are driven by shafts with mounted drive sprockets. The layout of the drive sprockets is shown in the sketch.

### Drive sprocket width (guide value)

Mesh length - 10 mm

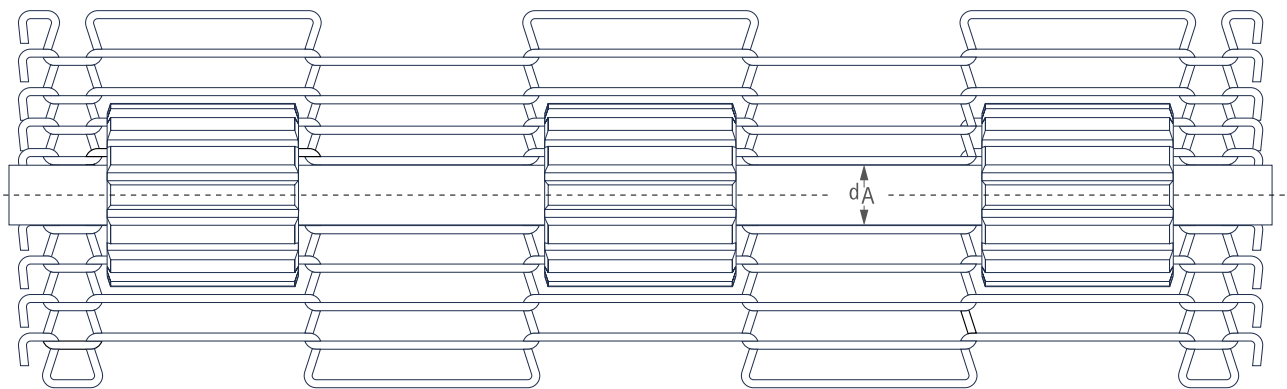
### Material

Shafts = steel, stainless steel

Drive sprockets = POM, PEEK, steel, stainless steel

### Application

POM is used for standard applications while PEEK, steel and stainless steel are used for high temperature applications.

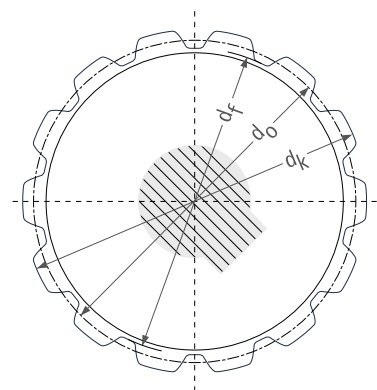


$d_A$  = Shaft diameter

### Drive sprocket calculation

Reference circle circumference = Number of teeth x pitch  
 Reference circle-Ø ( $d_o$ ) = Reference circle circumference  $\div \pi$   
 Root circumference-Ø ( $d_f$ ) = Reference circle-Ø - wire-Ø  
 Outside-Ø ( $d_k$ ) = Root circle + 2 x tooth height\*

*Tooth height/mm	Wire-Ø/mm
2,0	0,9 and 1,0 in spacing range 3,5 - 4,4 mm
3,0	0,9 - 1,4
4,0	1,6 - 2,0
5,0	2,35 - 2,8



$d_o$  = Reference circle - Ø/mm  
 $d_f$  = Root circle - Ø/mm  
 $d_k$  = Outside - Ø/mm

## Rod network belts TRANSFER MEDIA

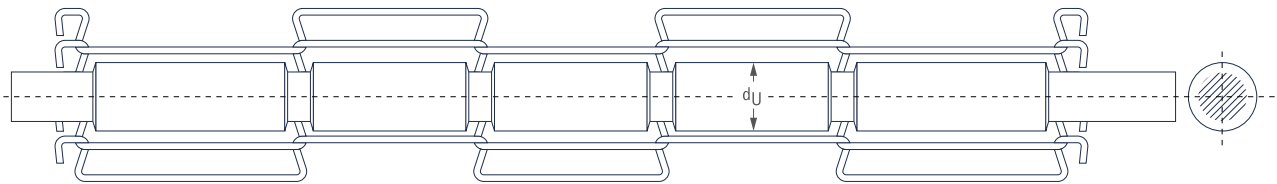
### Transfer roller

with recesses for accommodating the mesh bends for:

- Auxiliary guidance
- Preventing wire abrasion

**Material:** steel, stainless steel

$d_U$  = Shaft- $\varnothing$  / Transfer roller / mm



### Plastic nose bars

As an alternative to a shaft made of steel or stainless, we also supply plastic nose bars.

Recesses are not required.

The plastic nose bars reduce belt wear to a minimum.

**Material:**

**Section:**

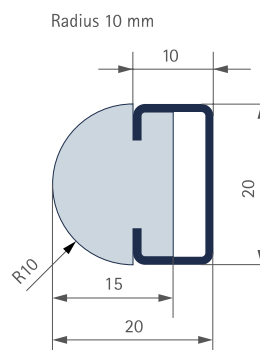
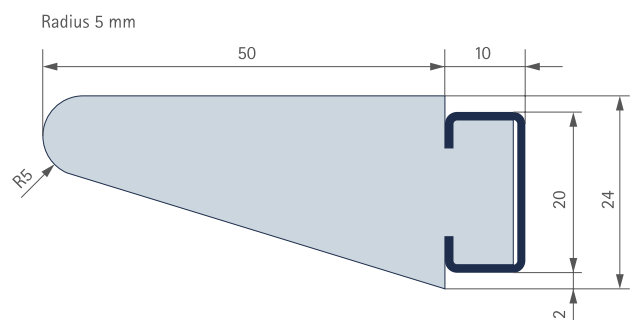
low-pressure polyethylene, white,  
foodstuff-proof

**Fastening rails:**

stainless steel

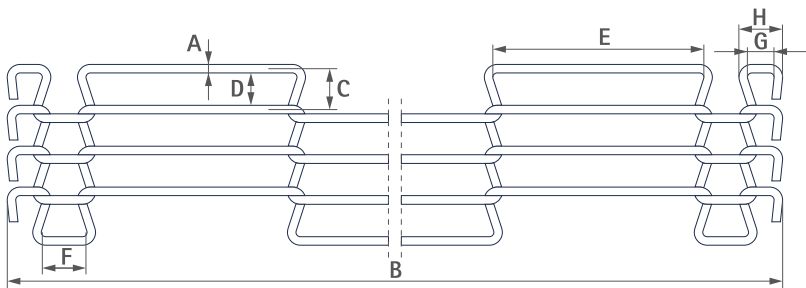
**Standard delivery length:**

2,000 mm

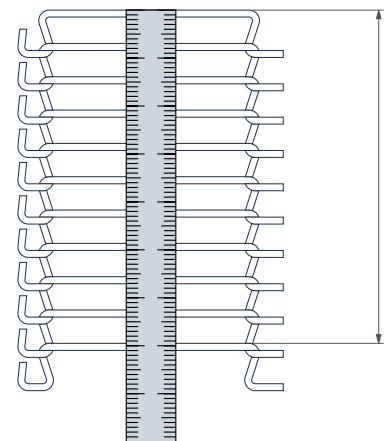
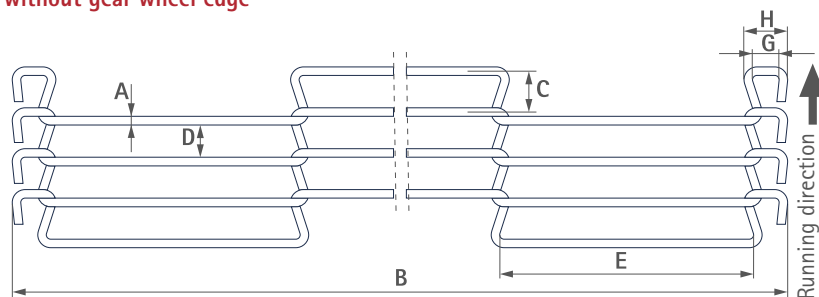


## Rod network belts MEASUREMENT + MATERIAL

with gear wheel edge



without gear wheel edge



- |                      |                         |
|----------------------|-------------------------|
| A Wire-Ø/mm          | E Mesh length/mm        |
| B Width/mm           | F Gear wheel edge/mm    |
| C Pitch (spacing)/mm | G Final loop/inside/mm  |
| D Mesh width/mm      | H Final loop/outside/mm |

The spacing will be measured over 10 rods or according to the spacing of the sprocket.

Upper side of belt (flat surface)



Underside of belt (interrupted by braiding knots)

# Rod network belts

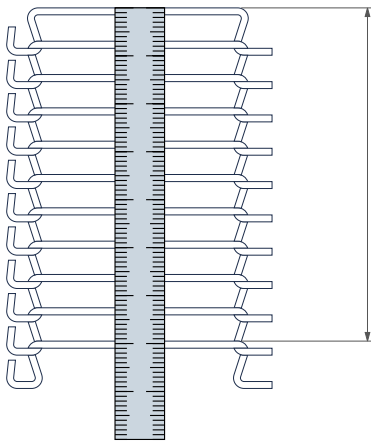
## MEASUREMENT + MATERIAL

### Spacing ("C")

The exact spacing is very important for smooth operation of the wire mesh belts through the toothed drive element with identical spacing: The pitch (spacing) is defined as the distance from the middle of the wire to the middle of the next wire in the running direction of the belt (dimension "C").

To measure the spacing, proceed as follows (also refer to the explanatory sketch):

1. Place the wire mesh belt on a ruler in a tensioned state
2. Place the first wire rod on "0"
3. Count 10 wire rods from the second wire rod
4. The result should be divided by 10.  
The spacing accuracy is 1/10 mm.



### Mesh length ("D")

Mesh width ("D") is the open space between two wires in the running direction. (spacing – wire diameter = mesh width)

### Mesh length ("E")

= Dimension of a mesh transversal to the running direction.  
The measurement is made in the middle of the bends of the individual meshes from the middle of the wire to the middle of the wire.

#### Standard:

All meshes are of the same size.

- There is an uneven number of meshes (e.g. 5 – 7 – 9)

(In the case of an even number of meshes, the open end has a final loop in the running direction of the belt.)

#### Non-standard:

- Different mesh length can be produced in many combinations within one wire rod
- Even numbers of meshes if the operation conditions do not permit other facilities.

### Gear wheel edges ("F")

Rod network belts are available with and without gear wheel edges.

The gear wheel edges are measured in the same way as the mesh length. They are only used to stabilize the rod network belts and do not have any additional functions.

### Final loops ("G" und "H")

The final loops have an internal dimension ("G") and an external dimension ("H"). These two dimensions are dependent on the wire Ø.

A differentiation is made between standard loops ("S-edge") and wide loops ("B-edge").

Wire Ø	Standard loop end "S"		Large loop end "B"	
	H	G	H	G
0,90	5,0	4,0	-	-
1,00	5,2	4,0	-	-
1,20	6,4	5,0	-	-
1,25	6,5	5,0	8,3	7,0
1,40	8,3	6,8	8,3	7,0
1,60	8,7	7,0	11,5	9,8
1,80	9,5	7,5	11,5	9,5
2,00	10,2	8,0	-	-
2,35	12,5	10,0	15,5	13,0
2,80	13,0	10,0	-	-

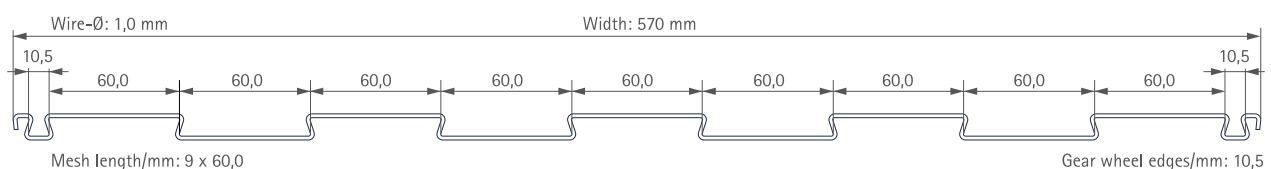
Apart from the main loop sizes specified here, we can also produce other dimensions if this is necessary. (For example when replacements have to be supplied for existing rod network belt which are equipped with other loops).

If the final loops are not adapted to the existing conditions, this has the following consequence:

As a result of the loops having a different dimension than those previously used on the existing belt, the mesh bends are displaced. This difference has a snowball effect and can result in the drive and transfer elements no longer fitting properly into the meshes.

### Standard rod network belt

This is a standard version with nine equal meshes and gear wheel edges. The length of meshes can be designed individually. This allows numerous variations.



# Rod network belts

## TECHNICAL INFORMATION

The service life of rod network belts depends on the operating conditions  
Here are a few guidelines which must be observed when using rod network belts.

### Excessive belt tension

In general the belt tension should be set so that the belt is carried perfectly in the drive sprockets. Do not over tension the belt.

### Take-up and jockey rollers

To ensure an optimum service life, the diameter of the roller should be at least twice the size of the pitch (spacing) of the wires in the belt i.e. a 7.26 mm pitch (spacing) should be at least 15 mm diameter. This figure is not the minimum but it will give optimum belt life. The diameter of the take-up and jockey rollers when the belt is back flexing should be at least five times the belt pitch (spacing) i.e. 7.26 mm pitch (spacing) should be at least 36 mm. We recommend this as a minimum diameter.

### Using rollers without grooves

The underside of the belt will wear if transfer rollers without grooves are used. This will shorten the belt life expectancy.

### Alignment of the drive sprockets

To ensure smooth operation of the belts, the drive sprocket teeth must be in true alignment. This is ensured by using Mär-tens drive sprockets as a mark is machined into the side. If all the drive sprockets are mounted with the mark on the same side then the drive teeth are in line.

### Inaccurate pitch of the drive sprockets

When using drive sprockets produced by other manufacturers, it is possible that the pitch and tooth shape are inaccurate. In order to obtain an optimum run of the belt, Mär-tens drive sprockets should be used.

### Oscillations during the belt run

Oscillations cause excessive belt wear but often cannot be prevented. To obtain an optimum service life, oscillations should be avoided/minimized.

### Faulty connection

The wire rods in the connection area must be straightened again after establishing the connection. This applies both to connections made by means of an interwoven wire rod as well as when using connection tubes. Drive problems can occur if the wire rods in the connection area are badly bent.

### In addition, the following points must be observed

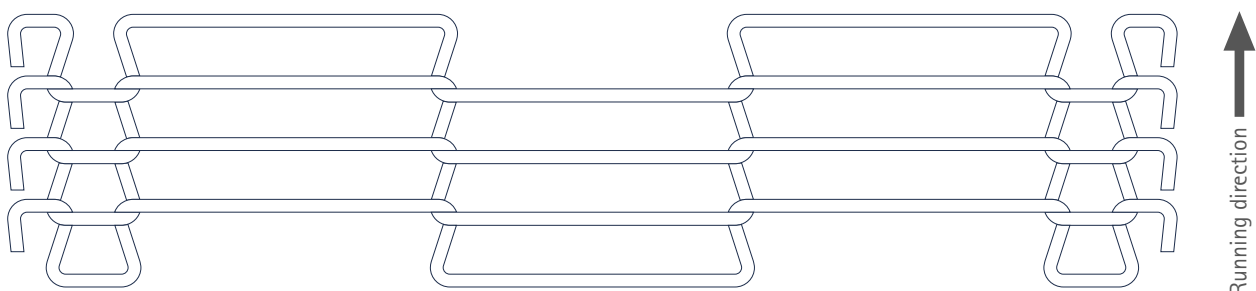
Straighten or replace bent or broken wire rods.

Connecting tubes are available for repairs.

It is possible that we may require a longer delivery period to supply a replacement for a worn rod network belt. It is therefore advisable to stock spare lengths. All transfer and drive elements should be checked for wear and replaced, if necessary, before a new rod network belt is drawn into the conveyor. The conveyor must be carefully cleaned.

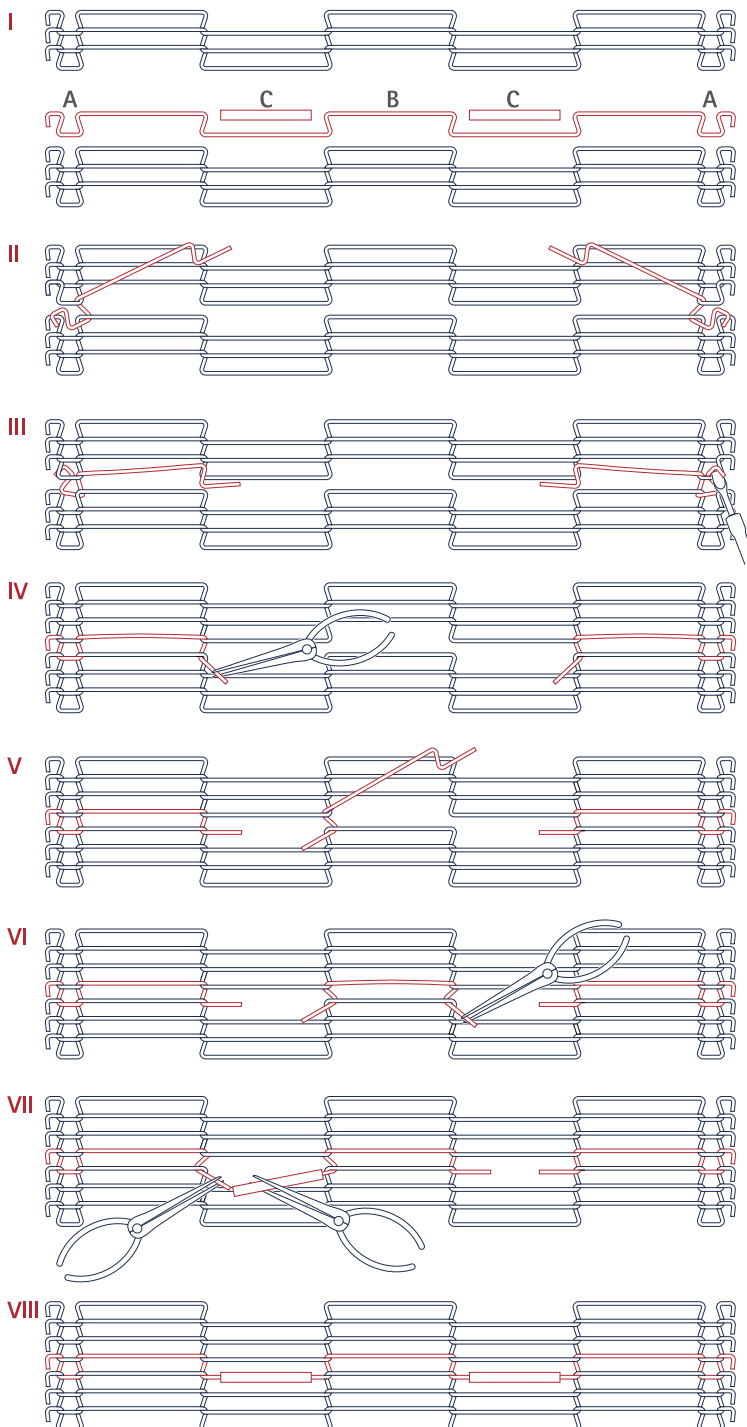
After installing the belt, it must be checked that the belt runs straight and the drive engages correctly. The conveyor must be readjusted without delay if there are any problems. Attention must be paid to the running direction of the rod network belt.

Any build-up of product in/on the rod network belt, the drive an/or transfer elements must be removed without delay.



## Rod network belts

### ENDLESS CONNECTIONS USING CONNECTION TUBES



- I** 1. Remove a wire rod from the belt.  
2. Cut this wire rod according to the figure.  
3. Attention: No tubes may be inserted in driven meshes.

- II** Hook gear wheel edge "A" through both belt ends.

- III** Hook the final loops by means of a screw driver.

- IV** Thread in a wire end using pointed pliers.

- V** Begin of insertion of individual mesh "B".

- VI** Completion of insertion of individual mesh "B" using pointed pliers.

- VII** 1. Push tube "C" on to a wire end.  
2. Push the wire lying opposite into the other opening in the tube (using two pointed pliers makes this easier).  
3. The tubes can be fixed by squashing the ends by means of pliers.  
4. If necessary: Straighten bent wire pieces.

- VIII** The rod network belt is ready for use.

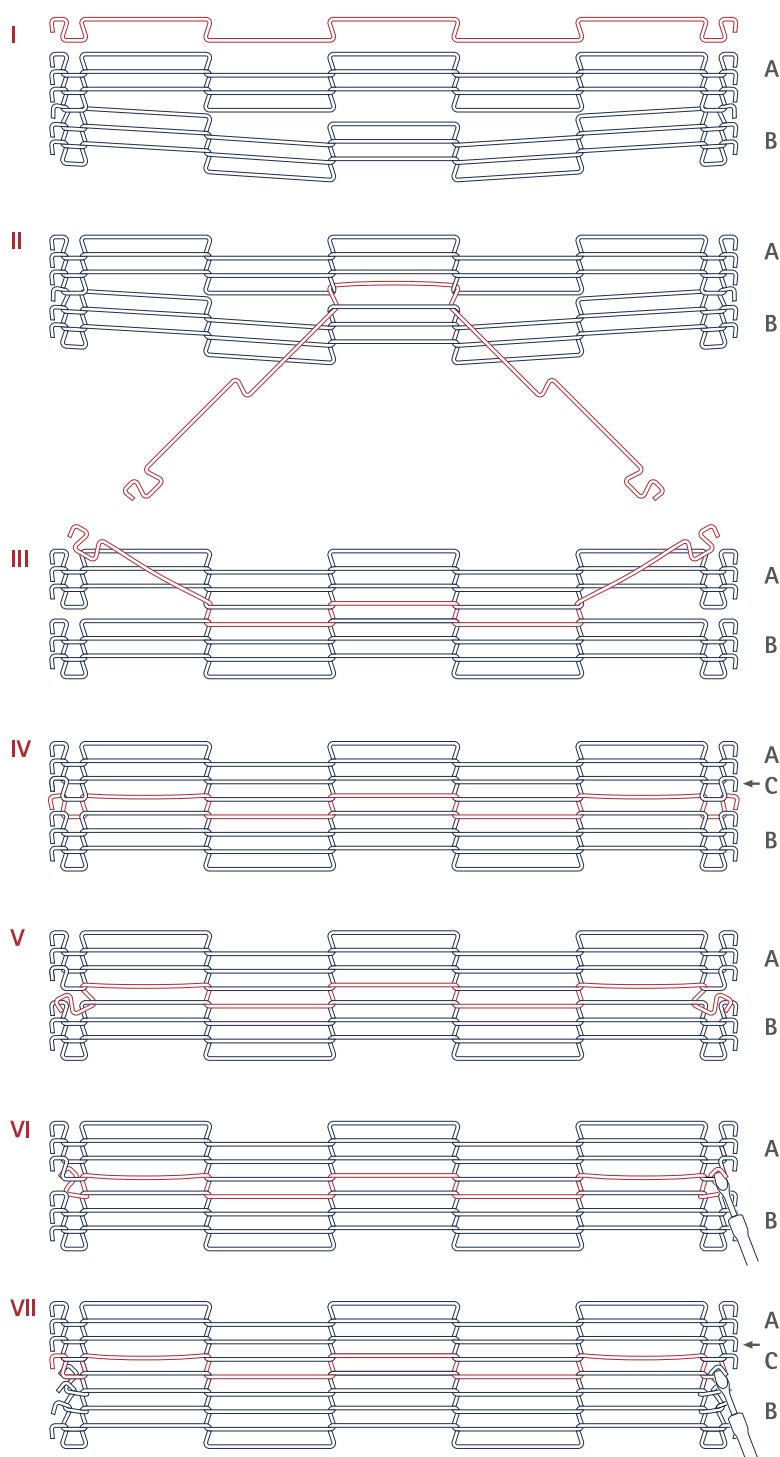
#### Attention

- a) Rod network belts without a gear wheel edge are connected according to the above instructions.
- b) Tube length:  
Mesh length minus approx. 10 mm.
- c) The tubes can also be used for repairs.
- d)

Outside tube Ø/mm	Wire Ø/mm	Standard length/mm
2,0	0,9/1,0/1,2	20/30/40/50
	1,25	
2,5	1,4/1,6	20/30/40/50
3,0	1,8/2,0	20/30/40/50
3,5	2,35	40/50/70
4,0	2,8	50
		(special sizes upon request)

## Rod network belts

### ENDLESS CONNECTIONS BY INTERWEAVING A WIRE ROD



Before making the connection, remove a wire rod from the belt. This is then used as a connecting wire rod.

- I** Place the ends of the drawn in belt parallel to each other and hook the two final loops on belt ends **A** and **B** together. (It is not necessary to hook together the final loops on small belts.)
- II** Weave the wire rod removed earlier into the meshes of belt ends **A** and **B** (if possible start with the two middle meshes).
- III** 1. Unhook the final loops in fig. I.  
2. Beginning with the mesh which has already been interwoven, weave the connecting wire rod, as illustrated here, to the right and left through both belt ends up to the gear wheel edge.
- IV** Unhook final loop **C** from belt end **A**.
- V** Hook the first bend of the gear wheel edge on the connecting wire rod to the first bend on the gear wheel edge on belt ends **A** and **B**.
- VI** Use a screw driver to hook the final loops on the connecting wire rod to the gear wheel edge on belt end **A**.
- VII** 1. Hook final loop **C** on belt end **A** to the gear wheel edge on the wire rod above and hook the final loop on belt end **B** to the connecting wire rod.  
2. Then align the connecting wire rod.

#### Note:

Items **V+VI** are not applicable in the case of rod network belts without a gear wheel edge. Instead, hook the final loop on belt end **A** to the outer mesh bend on belt end **B**.

## Rod network belt ENQUIRY

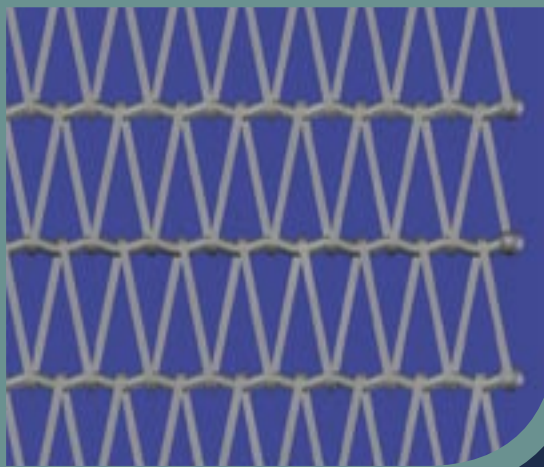
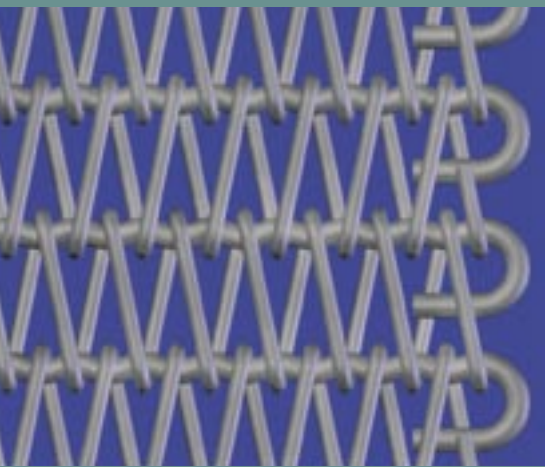
for your enquiry

A Wire-Ø/mm			
B Width/mm			
C Pitch (spacing)/mm			
D Mesh width/mm *			
E Mesh length/mm		no. of meshes (e. g. 17 x 60,0)	
F Gear wheel edge/mm			
G Final loop/inside/mm			
H Final loop/outside/mm			
If you need a special design we will of course advise you individually. <span style="float: right;">(* this size is not absolutely necessary.)</span>			
Material	<input type="checkbox"/> music wire	<input type="checkbox"/> stainless steel	
Martens article no. (when you are familiar with it)			
wanted belt length/m			

company			
contact person			
street			
post code		city	
phone			
fax			
e-mail			
date		signature	



## WIDE SPIRAL LINK BELT



- permeable to air and liquids
- temperature resistant

### Material:

- stainless steel
- special wire on demand

### Characteristics:

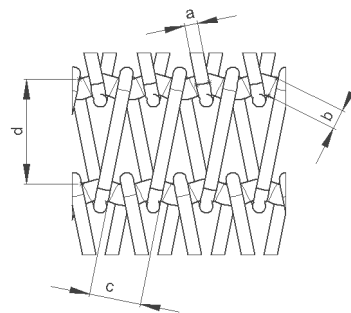
- looped or welded belt edges
- right/left woven
- corrugated cross bars
- round or flat wire
- several types, i. e. with chain guide, cleats or edge profile possible

### Application areas:

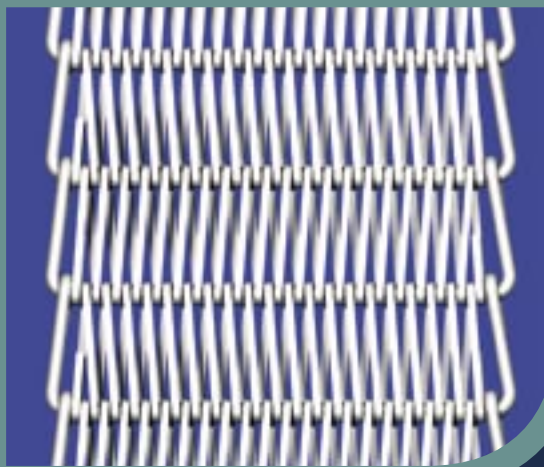
- continuous furnaces in bakeries
- for drying, roasting, cooling
- continuous freezer
- cooking facilities
- transport of lightweight and medium-weight goods

### Dimensions:

- belt width
- diameter of spiral wire (a)
- diameter of cross bar (b)
- pitch (c)
- spacing (d)
- material
- type of edges



## ROUND WIRE LINK BELT



- permeable to air and liquids
- temperature resistant

### Material:

- normal steel
- stainless steel 1.4310
- special wires on demand

### Characteristics:

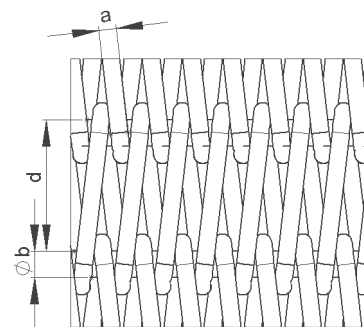
- with looped edges
- right/left woven
- round or flat wire
- several special types, i. e. with chain guide, cleats or edge profile possible

### Application areas:

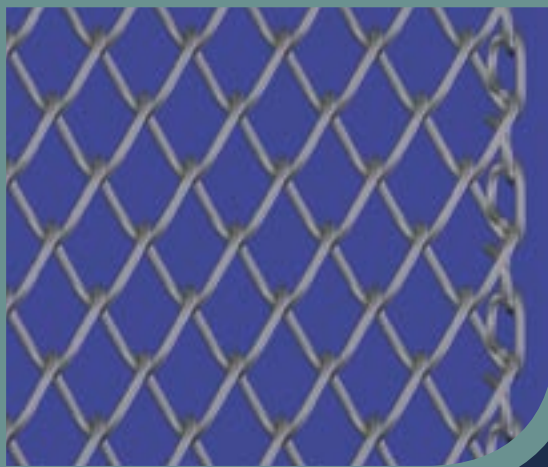
- continuous furnaces in bakeries
- for drying, cooling, hardening
- continuous freezer
- cooking facilities
- transport of lightweight to heavy goods

### Dimensions:

- belt width
- diameter of spiral wire (a)
- diameter of cross bar (b)
- pitch (c)
- spacing (d)
- material
- type of edges



## WIRE MESH BELT



- permeable to air and liquids
- temperature resistant

### Material:

- normal steel
- stainless steel 1.4301
- special wires on demand

### Characteristics:

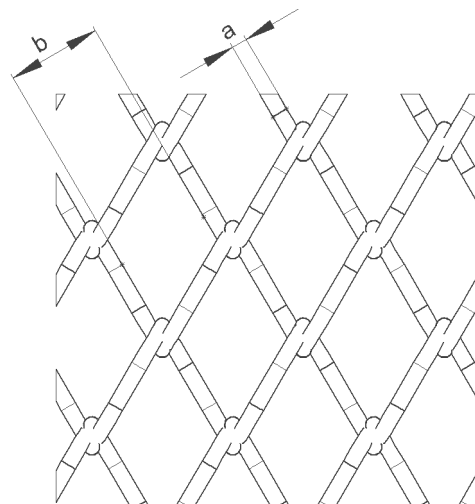
- woven or welded belt edges
- right/left woven
- round or flat spirals
- several special types, i. e. with chain guide, cleats or edge profile possible

### Application areas:

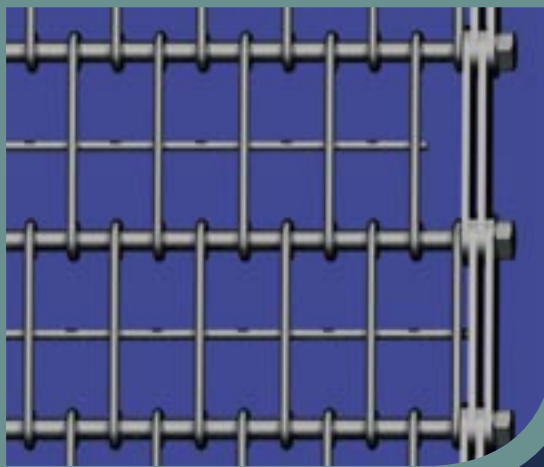
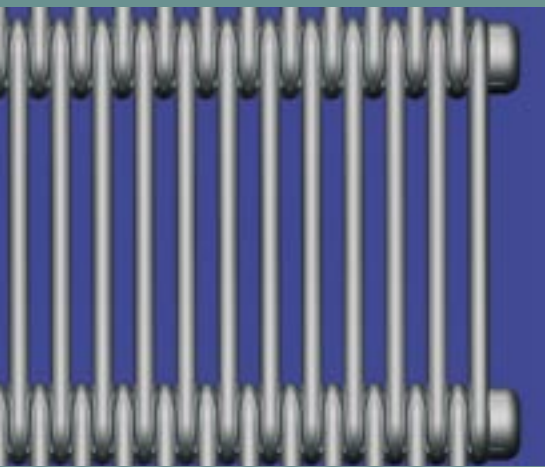
- baking and chocolate products
- safety curtains and claddings for the transport of lightweight goods

### Dimensions:

- diameter of spiral wire (a)
- mesh width
- material
- pitch (b)
- type of edges



## LOOP-JOINED WIRE BELT



- hygienic
- permeable to air and liquids
- positive tracking

### Material:

- normal steel
- stainless steel 1.4301
- special wires on demand

### Characteristics:

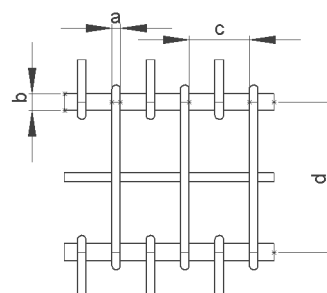
- welded belt edges
- several gap widths due to inserting of rings, springs, bushes or from the underside welded cross wires
- several special versions as chain guide, cleats or side limits possible
- drive by toothed rollers (also available)

### Application areas:

- continuous freezer
- washing plants
- pasteurising and sterilising plants
- foundry plant
- for the transport of medium-heavy and heavy goods

### Dimensions:

- belt width
- diameter of loop-joined wire (a)
- diameter of cross bar (b)
- gap width (c)
- pitch (d)
- number of meshes and sectioning
- material



wire loop



fish plate

## PU CONVEYOR BELTS



- flexible
- oil and fat resistant
- embossable

### Material:

- PU conveyor belts consist of one or two layers of polyester. They are coated with thermoplastic polyurethane.

### Characteristics:

- PU conveyor belts are extremely long-living and excel through their exceptional resistance to greases, oils and chemicals. These belt types are approved for foodstuffs in accordance with FDA/USDA guidelines.

### Special versions:

- embossed with company writings, logos or neutral patterns

### Application areas:

- cooling lines in the sweets, chocolate and bakery industry
- feeding, transfer and take-off stations
- automatic weighing machines and sorting devices in the packaging industry
- transport of lightweight and moderately heavy goods in many industry areas
- corner conveyor belts on round tables

### Joining methods:

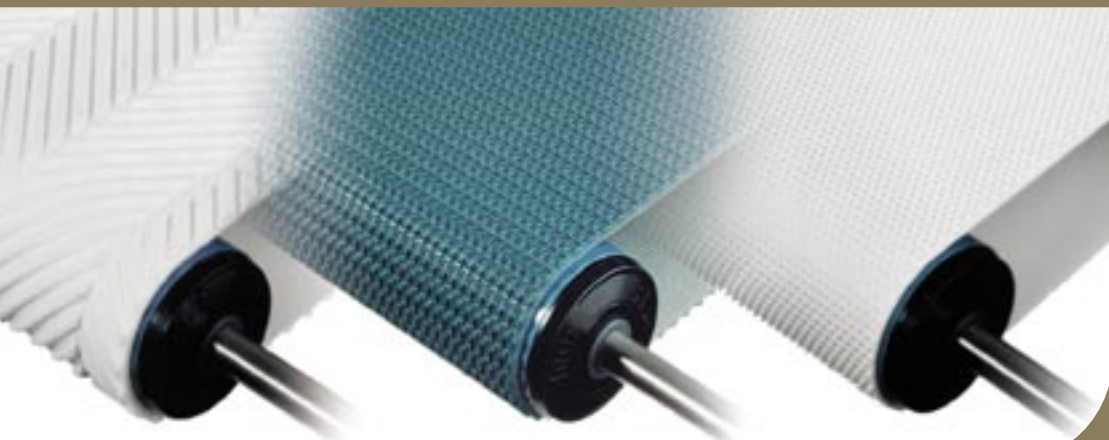
- welding by finger splice
- overlapped welding
- cold gluing with special glue
- stainless steel fasteners
- plastic spiral fasteners

### Product table:

PU conveyor belts	PU-A/1	PU-M/1	PU-G/1	PU-W/1	PU-G/2
fabric	Poly., monofil	Poly., monofil	Poly., monofil	Poly., monofil	Poly., monofil
number of plies	1	1	1	1	2
coating on carrying side	PU-impreg.	Polyurethane	Polyurethane	Polyurethane	Polyurethane
coating on running side	PU-impreg.	PU-impreg.	PU-impreg.	PU-impreg.	PU-impreg.
colour	light green	ochre	white	white	white
antistatic	no	no	no	yes	no
embossable	no	yes	yes	yes	yes
thickness/mm	0,6	0,65	0,7	1,2	1,45
weight g/m <sup>2</sup>	450	620	700	1.100	1.800
maximum width/mm	2.040	2.040	2.040	2.040	2.020
temperature range/°C	-20/+120	-20/+120	-20/+120	-20/+120	-20/+80

additional types on request

## PVC CONVEYOR BELTS



- high stability
- different surface structures
- long lasting

### Material:

- These belt types consist of one, two or more layers of polyester and are coated with thermoplastic PVC.

### Characteristics:

- PVC conveyor belts are extremely long-lasting, highly flexible and excel through their exceptional resistance to greases, oils and chemicals. Depending on design these belt types are approved for foodstuffs in accordance with FDA/USDA guidelines.

### Special versions:

- with profiles, as well as with cleats and corrugated edges
- with various surface structures

### Application areas:

- meat and fish processing
- cooling lines in sweets, chocolate and bakery industry
- packing devices
- transport of lightweight and moderately heavy goods in many industry areas
- corner conveyor belts on round tables
- with cleats and corrugated edges on ascending conveyors

### Joining methods:

- welding by finger splice
- overlapped welding
- cold gluing with special glue
- stainless steel fasteners
- plastic spiral fasteners

### Product table:

PVC conveyor belts	35/9 R	35/11 W	35/17 G	35/25 GRG	35/54 W	35/84 G
fabric	Poly., monofil	Polyester	Polyester	Polyester	Polyester	Poly., monofil
number of plies	2	2	2	2	2	2
coating on carrying side	none	PVC	PVC	PVC (with texture 35/3)	PVC	PVC
coating on running side	none	PVC (with texture 35/1)	PVC (with texture 35/1)	none	none	none
colour	white	white	green	green	white	green
antistatic	no	no	yes	yes	no	yes
embossable	no	no	neo	no	yes	no
thickness/mm	1,7	3,1	3,1	5,5	2,4	2,4
weight g/m <sup>2</sup>	2.100	3.400	3.400	4.000	2.700	2.700
maximum width/mm	2.000	2.000	2.000	2.000	2.000	2.000
temperature range/°C	-10/+90	-10/+90	-10/+90	-10/+90	-10/+90	-10/+90

additional types on request

# SILICONE CONVEYOR BELTS



- adhesive
- flexible
- antiadhesive effect

## Characteristics:

The advantages of silicone are obvious – it is not only resistant to many chemicals, greases and oils but also to higher temperatures. A further big advantage of silicone is its exceptional anti-adhesive effect.

## Application areas:

- ascending conveyors
- cooling conveyors
- for sticky masses as caramel, nougat, granulate or adhesives

## Material:

- Silicone conveyor belts consist of one or two layers polyester and are coated with silicone rubber.

## Joining methods:

- welding by finger splice
- overlapped welding
- cold gluing with special glue
- stainless steel fasteners
- plastic spiral fasteners

## Special versions:

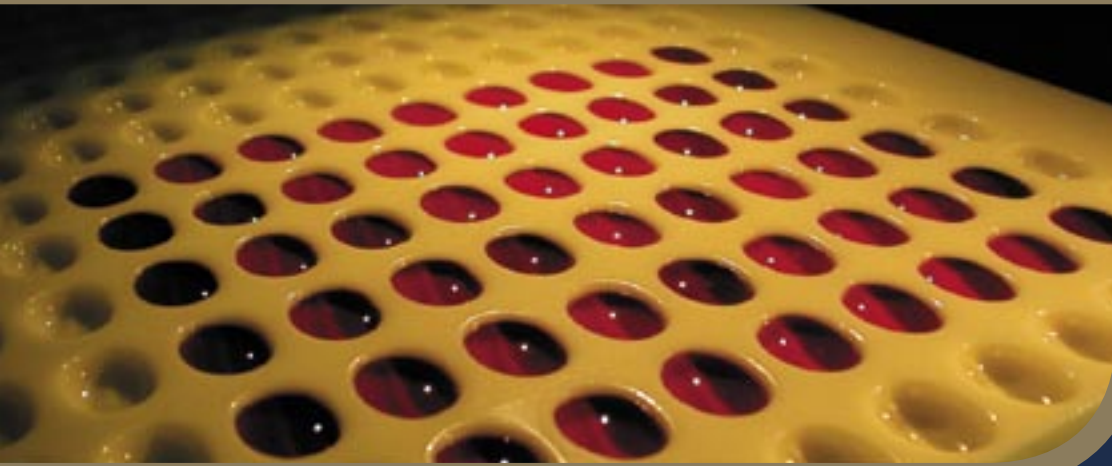
- separating belts
- Silicone mould belts

## Product table:

Silicone conveyor belts	SI/1 AS 1261	SI/2 02:0 A white
fabric	Polyester, monofil	Polyester, monofil
number of plies	1	2
coating on carrying side	Silicone	Silicone
coating on running side	PU-impregnation	PU-impregnation
colour	white	white
antistatic	yes	yes
embossable	no	no
thickness/mm	0,7	1,5
weight g/m <sup>2</sup>	650	1.700
maximum width/mm	3.000	3.000
temperature range/°C	-30/+100	-30/+120

additional types on request

## SILICONE MOULD BELT



- molding, cooling and transport in 1 step
- shaping according to customer requirement

### Construction:

- 2-ply strand polyester fabric belt with silicone rubber coating with variable thickness and surface structure

### Characteristics:

- hydrolysis resistance (water proofed)
- temperature resistance
- high release belt surface
- even belt thickness in the joint area
- lateral stability
- belt width up to 1.300 mm
- food suitability according to FDA/USDA
- high carrying and tensile strength

### Application areas:

- sweets industry
- chocolate products
- hard candy
- bar production
- jelly products
- candle production
- pharmaceutical industry
- sorting facility
- frozen food
- animal food

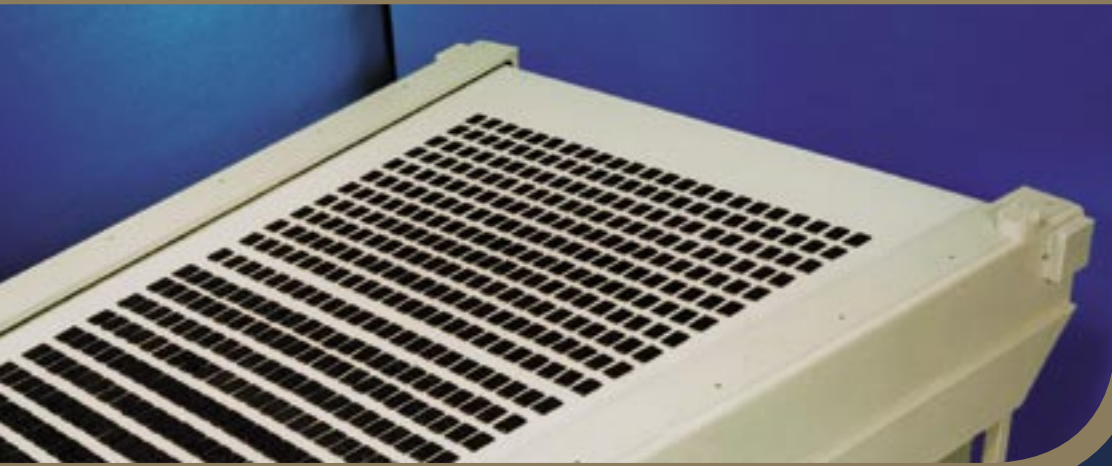
### Material:

- polyester fabric strand
- FDA/USDA certificated silicone rubber

### Joining methods:

- belt supply in endless length according to customer requirement
- welding
- fastener

## EXPANDING BELTS



- elastic
- antiadhesive effect
- chain guided

Conveyor belt for expanding tables. Our partners for the construction of these expanding tables are in Germany, Great Britain, France, Italy, Spain, USA and Australia.

### Material:

- transversely elastic fabric with silicone coating
- with reinforced belt edges
- with loops for the chain guide intake

### Characteristics:

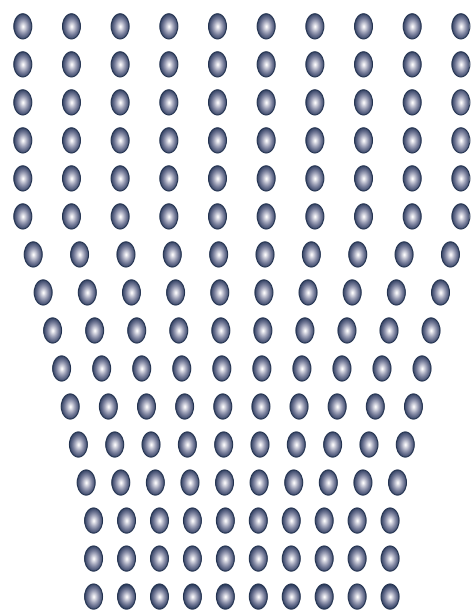
- continuous conveyor belt for various product alignments
- separating area up to 30 %, on demand variable if required
- larger separating area by use of two devices
- chain retainer guided by special connector chain
- cleansing friendly by anti-adhesive coating

### Application areas:

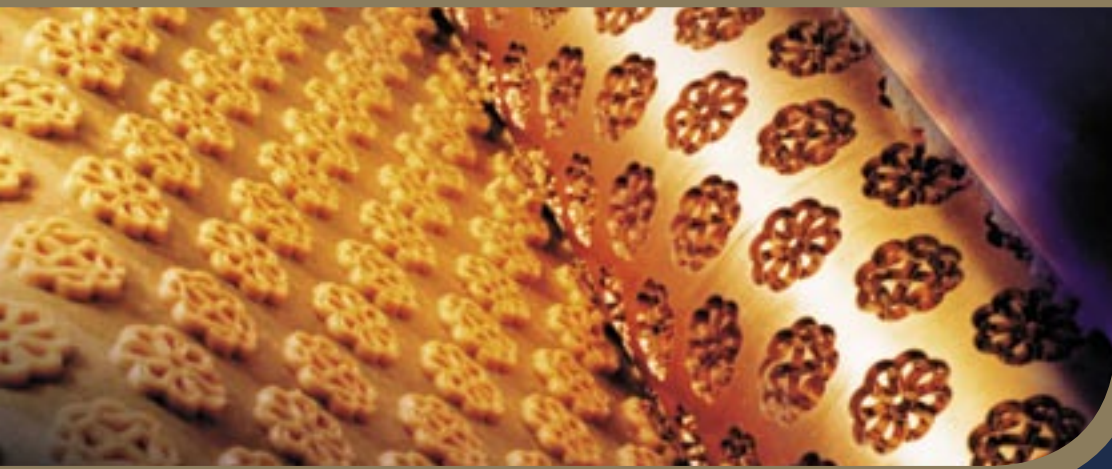
- product separating in order to avoid product contact
- bringing together before the packing in the chocolate and sweets industry
- expanding tables for robot packing

### Advantages:

- with this kind of closed belt it is possible to transport any user-defined product rows (limited only by the width of the device) contrary to the application of narrow laces



## ENDLESS WOVEN CONVEYOR BELTS



- no connection area
- temperature resistant
- flexible

### Material:

- different kinds of threads are used: i.e. cotton, fibre glass, aramid, nylon, polyester
- partially, a combination of varied kinds of threads is possible
- blended fabric and cotton belts can be reinforced by variably broad nylon or polyester edges

### Characteristics:

This group is special due to the fact that there is no subsequent joint due to the weaving of an endless warp thread.

Thus this belt construction is ideal for small deflections and devices with wipers.

### Coatings:

- in most cases endless woven conveyor belts are furnished with transparent (optional also coloured) impregnations or coatings
- the synthetics used for this are: polyurethane, PVC, silicone, PR-special impregnations
- it is possible to vary in the coating thickness

### Special versions:

- the surface of silicone coated fabric can be ground:
  - absolute smooth surface
  - reduction of the adhesiveness
- silicone coated endless woven belts with glued on and additionally sewed cleats made of silicone
- open ended belts with mechanical connectors

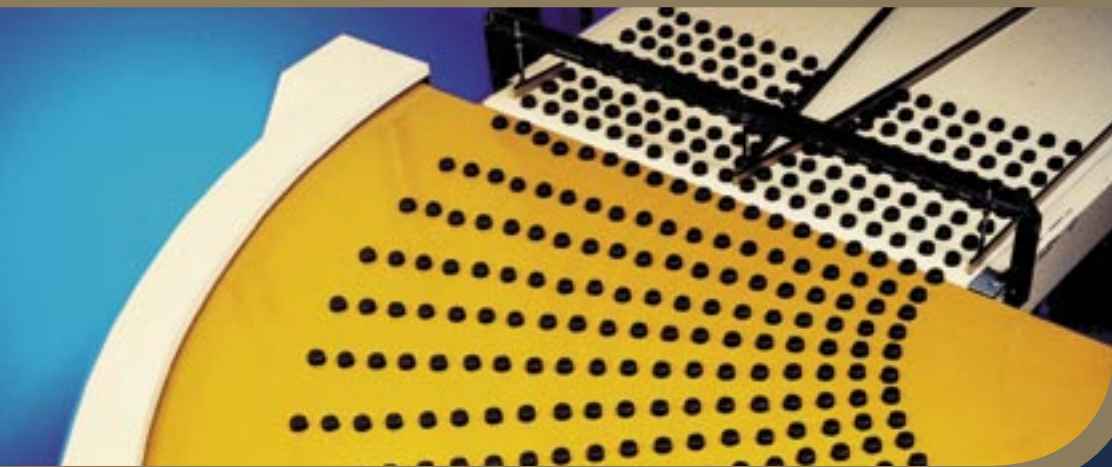
### Application areas:

- bakery industry
- sweets
- packing machines
- foil shrinking devices
- drying channels
- production of non-woven fabrics
- calander feeding

### Dimensions:

- max. length 34.000 mm
- min. length 850 mm
- max. width 2.200 mm
- min. width 10 mm

# CONVEYOR DISCS



- flexible
- for various OEM conveyor manufacturers
- made of different materials (PU, PVC, Silicone)

## Application areas:

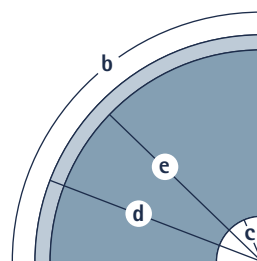
- equipment for corner conveyors for the transport of lightweight and medium-weight products in all industry areas
- for all corner conveyors from 35° to 180° and even more

## Dimensions:

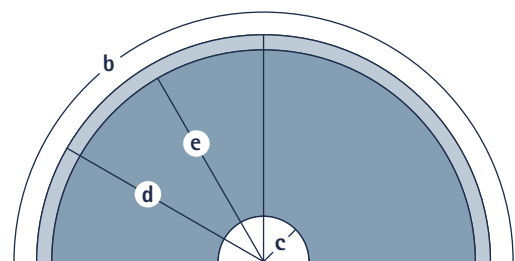
- material
- corner angle (b)
- inner radius (c)
- outer radius (d)
- loop radius (e)
- number of loops
- manufacturer of the plant (if possible)
- belt layout (if possible)
- mounting type

## Special version:

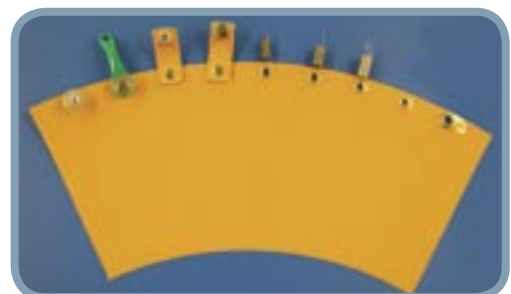
- Connection of belt and chain with elastic strips



90°-Conveyor disc



180°-Conveyor disc



Several connection systems available

## WELDING PRESSES



- simple operation
- mobile
- light weight
- for 60° and 90° joints

Welding presses for the welding of plastic conveyor belts



### Advantages:

- light weight
- flat construction
- simple operation

### Accessories:

Sufficient accessories, tools and expendable materials are supplied as standard equipment, e. g.:

- soldering gun
- temperature control unit
- foot pump
- welding foil
- teflon glass fibre fabric
- finger marking foil 90°
- finger marking foil 60° etc.

### Technical data:

#### Working widths

The standard working widths are specified taking into account an angular connection of 60°. Devices for special widths are available upon request.

belt width	max. heating area
420 mm	700 mm
620 mm	900 mm
820 mm	1.200 mm
1.050 mm	1.400 mm
1.600 mm	1.700 mm

#### Dimensions

height	240 mm
width	175 mm
length	max. heating area + 270 mm

#### Weight for standard widths

max. heating area	kg
700 mm	25
900 mm	31
1.200 mm	41
1.400 mm	46
1.700 mm	56

## FINGER PUNCHING DEVICE



- simple operation
- for all belt widths
- patented
- mobile
- for 60° and 90° connections

Finger punching device for the preparation of finger splices

### Advantages:

- light weight (19 kg)
- simple and quick operation
- suitable for every belt width
- shortened production downtime during the belt assembly

### Accessories:

- punching tool, 1.000 mm long (other lengths available)
- operating manual

### Functional characteristics:

In order to prepare a welded joint a finger punching device and a suitable knife are necessary. The hydraulic system of the punching device generates the necessary pressure for cutting the fingers. The punch cuts the finger shape into the belt by means of the knife. The first fingers are cut at the belt edge. The remaining fingers are now cut into the whole belt width by moving the punching device along the belt. It is equipped with rollers in order to move it easily. The punching device is shifted app. 100 mm with every section.

You are able to provide professional finger joints for belts with optional widths – easily, firmly and quickly – by the power generation by means of this hydraulic system as well as by the light and functional design.

**MÄRTENS Transportbänder GmbH & Co. KG**

Lise-Meitner-Str. 18

DE-24941 Flensburg

Germany

**phone:** +49 461 9047- 0

**fax:** +49 0461 9047-150