Transport Belts

Berndorf Band is one of the world´s leading manufacturers of high-quality transport and process belts. Innovative production methods and new materials enable us to adapt the belt features to suit our customers´ needs exactly.

Though not being exposed to physical or chemical changes, conveyed products may create severe operating conditions due to high abrasion or extremely high operating speeds. These circumstances set high demands to the steel belt.
One example is the high abrasion resistance when transporting bulky mineral material or the required dynamic fatigue strength for high speed transport and the resulting high level of necessary endurance.

Combined with expertise advice Berndorf Band ensures that, with regards to the choice of material and construction, the ideal solution for every application can be found.

Industrial area of Berndorf.

GZ13.088/152-1.4/00

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Our maxim: **“Continuous reliability”**

Vee-ropes and product retaining strips

Transport belts can also be fitted with vee-ropes and/or product retaining strips.
Berndorf Band guarantees perfect adhesion of vee-ropes and product retaining strips within a wide range of operating temperatures. This makes Berndorf Band steel belts excellent for use in transport.

Material of vee-ropes

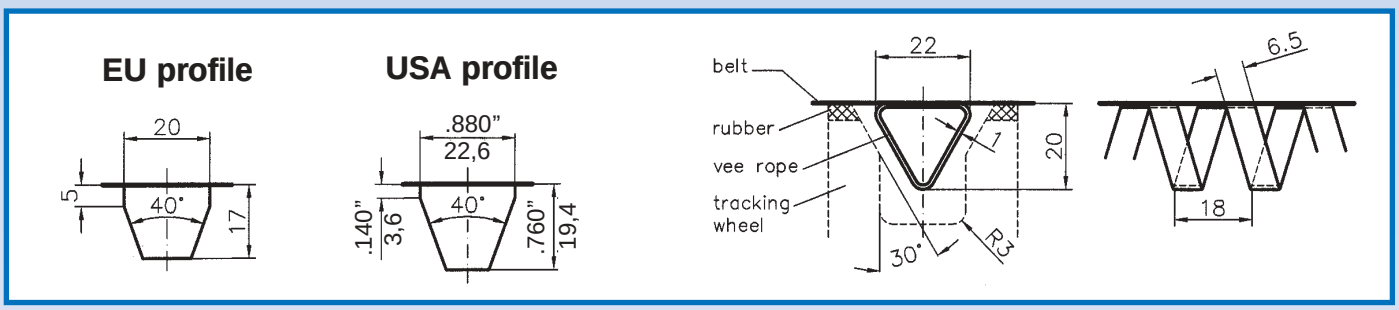
- Natural or nitrile rubber (standard) for operating temperatures from -20°C up to +100°C
- Natural rubber for operating temperatures from -60°C up to +60°C
- Spiral vee-ropes made of stainless steel for operating temperatures exceeding +100°C

Material of product retaining strips

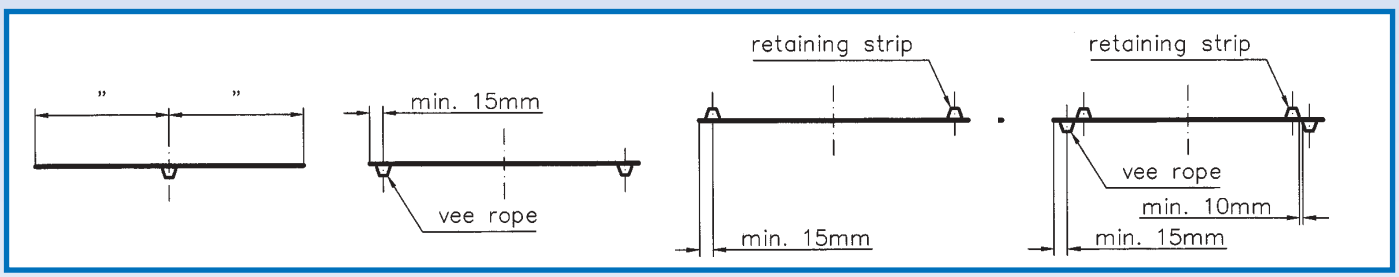
- Nitrile rubber for operating temperatures from -20°C up to +100°C
- Natural rubber for operating temperatures from -60°C up to +60°C
- Silicone rubber for operating temperatures from -80°C up to +200°C

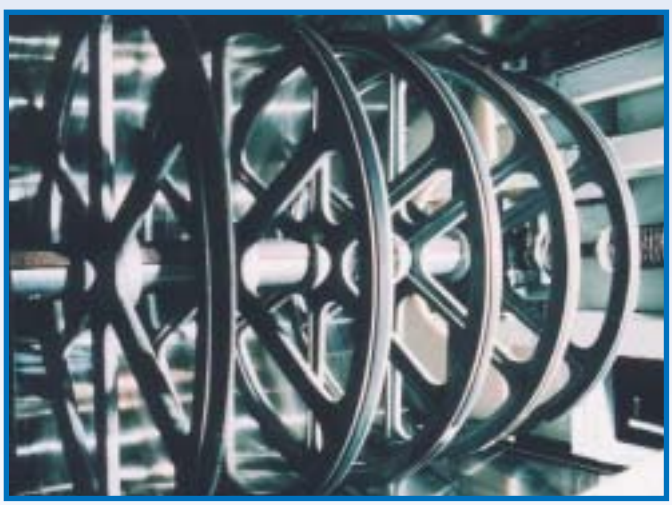
Standard profiles

Spiral vee-ropes



Standard versions





Guiding Sheaves

Transporting bulky material

Sorting Belts

Sorting belts have to meet high demands:

- High dynamic fatigue strength
- Precise and straight tracking
- Perfect flatness and axial straightness of the steel belt
- Smooth surface

Several years of experience, coupled with expertise advice has turned Berndorf Band into a highly competent partner in this field. Sorting belts with a total length of 300 m and minimal straight tracking deviations have been produced and successfully installed by the Berndorf Band Customer Service team. Not only was the steel belt installed and endless welded, the whole sorting line was recalibrated and various steel belt touching components such as edge rollers, idler rollers and spring assemblies were replaced as well.

The exact assembly process is discussed in advance between the customer and Berndorf Band. This is co-ordinated by a service technician, who, if necessary, also supervises the installation on-site. This results in individually tailored packages for each and every application.

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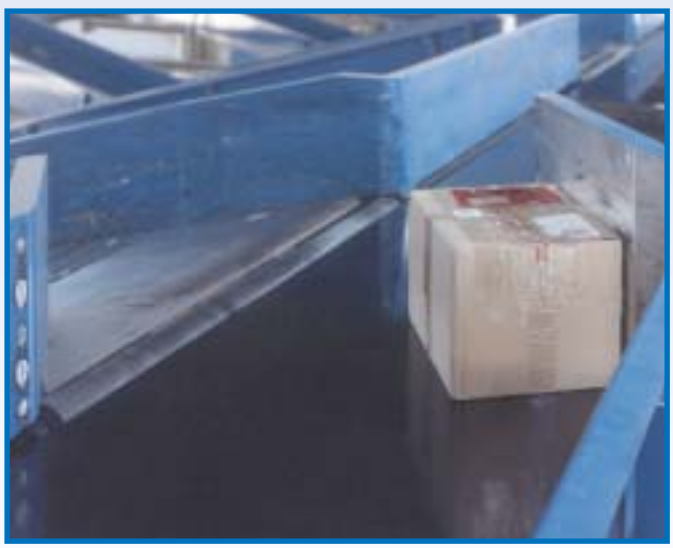

Technical Data

Physical and mechanical properties. Typical values.

Material			NICRO 12.1	CARBO 13	CARBO 24	CARBO 32
Type			CrNi 17 7	Ck 67	-	-
Similar material		DIN	1.4310	1.1231	-	-
		AISI	301	-	-	-
Tensile strength	RT	N/mm²	1150	1200	1420	1280
0.2% yield offset strength	RT	N/mm²	950	970	1320	1220
Hardness		Rockwell HRC	37	36	44	42
		Vickers HV 10	360	350	440	410
Elongation 50 mm		%	18	8	6	5
Welding factor			0,70	0,80	0,80	0,80
Fatigue strength under reversed bending stress*)	RT	N/mm²	480	450	550	550
Modulus in elasticity	at 20°C	N/mm²	200.000	210.000	210.000	205.000
	at 200°C	N/mm²	180.000	-	-	-
Density		kg/dm³	7,90	7,85	7,85	7,82
Mean thermal expansion coefficient	20-100°C	10^{-6}m/m°C	16,0	11,1	12,0	11,8
	20-200°C	10^{-6}m/m°C	17,0	11,9	12,5	12,4
	20-300°C	10^{-6}m/m°C	-	12,5	13,0	12,6
	20-400°C	10^{-6}m/m°C	-	12,9	-	12,9
Specific heat		J/g°C	0,50	0,46	0,45	0,46
Thermal conductivity	at 20°C	W/m°C	15	46	40	38
Specific electric resistance	at 20°C	Ohm mm/m²	0,73	0,13	0,20	0,20
Max. permissible operating temperature		°C	250	400	250	350
		°F	480	750	480	660
Tensile strength at max. permissible oper. temp.		N/mm²	940	850	1300	1100
0.2% yield offset strength at max. permissible oper. temp.		N/mm²	770	720	1100	1050

*) 50% of the test specimens withstand 2,000,000 load cycles.
If not mentioned separately, indicated figures are valid at room temperature.
Data are stated without warranty and are subject to change as a result of technical developments.

Applications	Key products	Process	Belt material	Your Benefits
Sorting lines	Parcels	Sorting	CARBO 24 CARBO 13 NICRO 12.1	High operating safety Smooth surface
Bulky material & unit load	Limestone bricks Bricks Metal filings Foundry cores	Transporting	CARBO 24 CARBO 13 CARBO 32 NICRO 12.1	Long lifetime

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Berndorf Band GmbH & Co, A-2560 Berndorf, Austria
Tel (+43) 2672 / 800-0, Fax (+43) 2672 / 84 176, band@berndorf.co.at

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