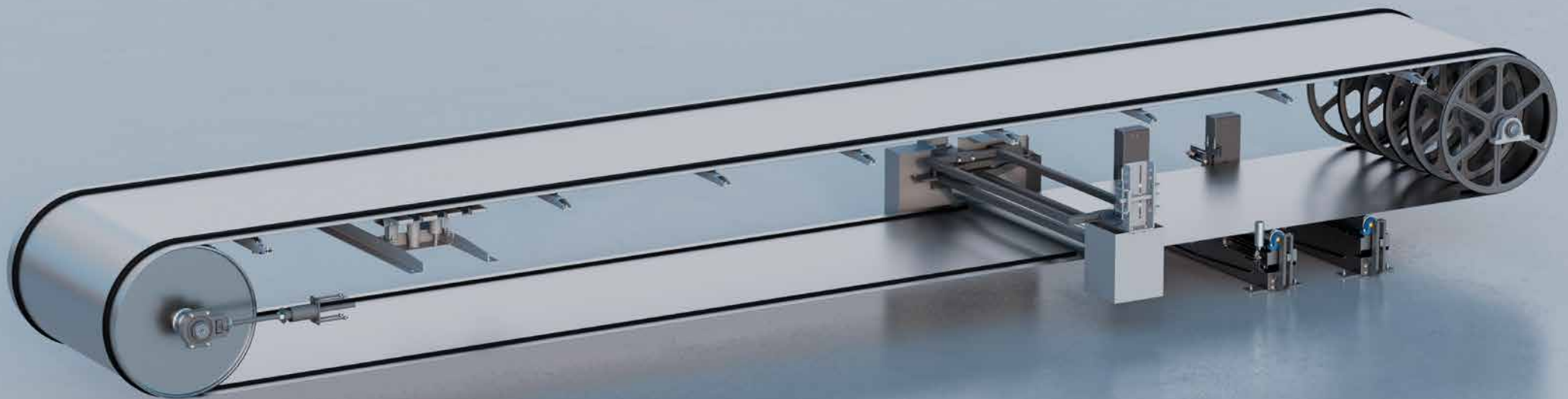


CONVEYOR & COMPONENTS FOR STEEL BELTS & BELT SYSTEMS



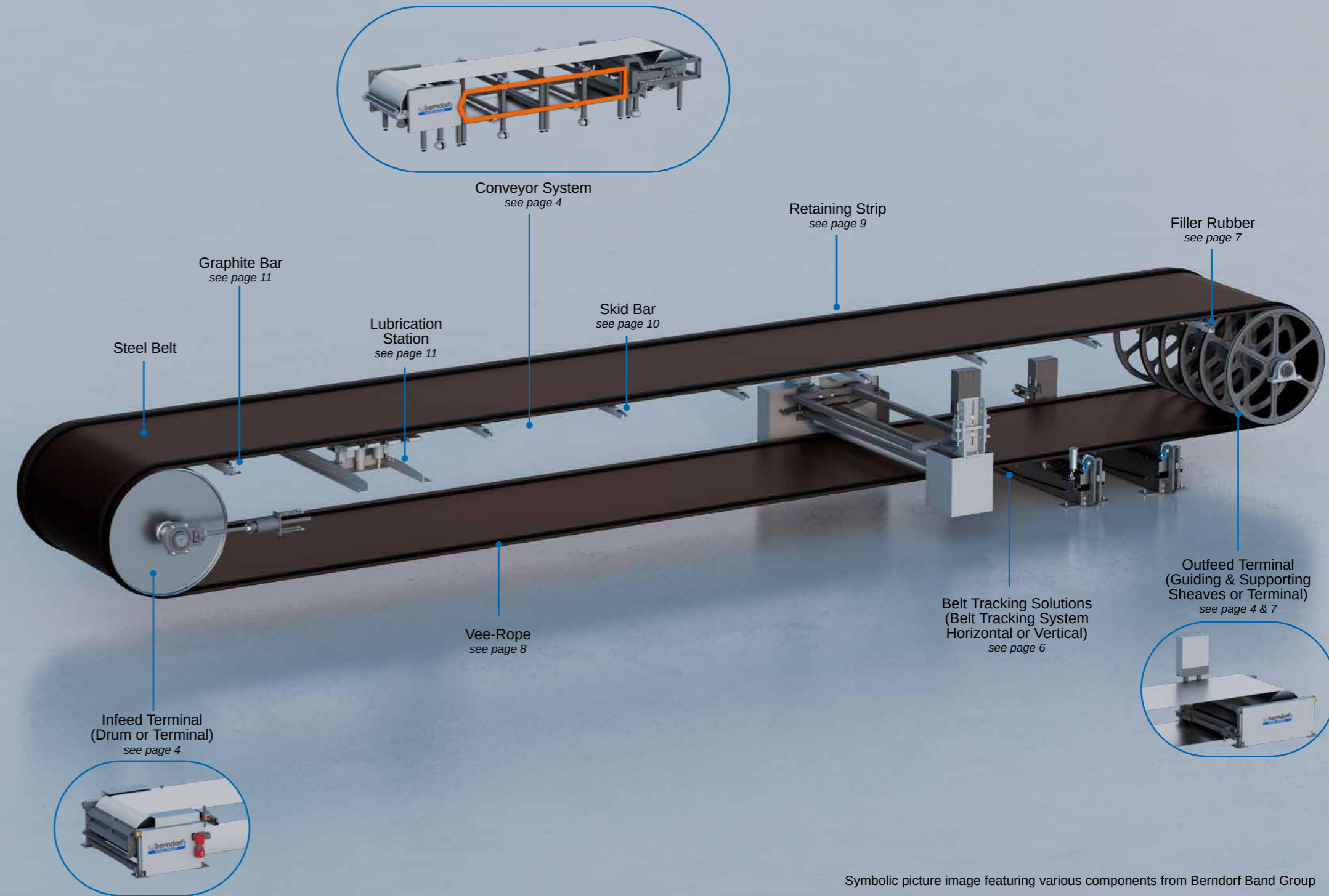
THE RIGHT COMPONENT FOR YOUR NEED

The Berndorf Band Group is the world's leading supplier for Steel Belts, Belt Systems and worldwide service. Our turnkey products are used in continuous production processes of various industries. Ongoing development and quality assurance are paramount to us, enabling us to tailor the features of our product portfolio to precisely match our customers' needs. For many years, we've specialized in manufacturing conveyors and components that enhance our customers' production processes. We are globally recognized for our high-quality products and extensive range of services. Our experts continually strive to enhance these processes by developing additional components tailored for special applications. This brochure provides you with an overview of our comprehensive portfolio of conveyors and components designed for diverse applications.

CONTACT US TODAY FOR YOUR INDIVIDUAL SOLUTION



Conveyor System



Symbolic picture image featuring various components from Berndorf Band Group

CONVEYOR & TERMINAL

CONVEYOR

Berndorf Band Group offers a wide range of customized Conveyor Systems in various lengths and widths*. The conveyor system features a welded frame of profiled tubes. We provide a range of Tensioning and Tracking Systems tailored to our customers' specific process requirements, complemented by options for frames manufactured from carbon or stainless steel. Versatile for diverse production types, this machine delivers noticeable improvements in both production efficiency and quality. Furthermore, remote maintenance ensures a quick and flexible service.



Conveyor System



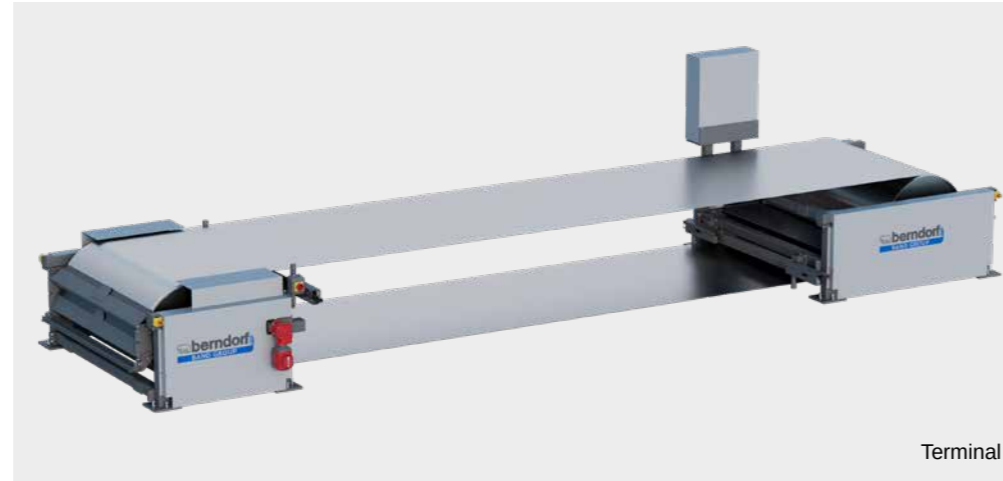
BELT SYSTEM, STEEL BELT & SERVICE FROM ONE SOURCE



CUSTOMIZED INTERFACES FOR THE IMPLEMENTATION OF BAKING OVENS, FREEZING TUNNELS, ETC.

TERMINAL

In addition to Conveyor Systems, we provide Terminals tailored to our customers' specifications. Similar to the Conveyor System, the machine frame is constructed from welded profiled tubes. However, the Steel Belt is tensioned and tracked by various systems at the pulley drums, and depending on the process and the length of the Steel Belt, it may also utilize a tracking roller. Determining the optimal components for your machine is a straightforward process, facilitated by an inspection and assessment from one of our experts.



Terminal

BERNMATIC®

The BernMatic® belt tension and tracking solution utilizes horizontal adjustment of the deflection drum position for optimal performance. The deflection drum automatically aligns itself to maintain consistent belt tension and ensure accurate belt tracking. In the event of a deviation from the correct tracking line, the system promptly self-corrects, which leads to an extended belt lifespan. The speed-independent control is remarkably accurate and dependable, even at high speeds. Additionally, the system offers user-friendly operation through a graphical touch panel and provides ample analysis features for effective belt tracking.

The belt tension and tracking solution is available in three different systems:

- » BernMatic® Pneumatic System
- » BernMatic® Hydraulic System
- » BernMatic® Electrical System

	PNEUMATIC*	HYDRAULIC*	ELECTRIC
Operating media	<ul style="list-style-type: none"> » Voltage: 380 - 480 V » Frequency: 50/60 Hz » Compressed air: min. 6 bar 	<ul style="list-style-type: none"> » Voltage: 380 - 480 V » Frequency: 50/60 Hz » Oil: approx. 200 bar 	<ul style="list-style-type: none"> » Voltage: 380 - 480 V » Frequency: 50/60 Hz
Belt widths	0,6 - 1,5 m 1,97 - 4,92 ft		0,6 - 3 m 1,97 - 9,84 ft
Belt tracking tolerance	± 2 - 4 mm ± 0,08 - 0,16 in		± 1 - 2 mm ± 0,04 - 0,08 in
Max. belt tension	5 - 50 N/mm ² 725 - 7,252 psi		20 - 200 N/mm ² 2,901 - 29,008 psi
Belt tension tolerance		± 5 %	
Max. belt speed		100 m/min**	
Belt edge detection		<ul style="list-style-type: none"> » Mechanical (rollers) » Optical (light curtain) 	

*Standard equipment
**Max. speed of the mechanical sensor 20 m/min | 65.62 ft/min

ADVANTAGES



PRECISE DRUM ADJUSTMENT USING POSITION FEEDBACK



CONTINUOUS CONTROL AND MONITORING OF BELT POSITION AND TENSION



CONSTANT BELT TENSION EVEN DURING HEATING AND COOLING PHASES



REAL-TIME DISPLAY OF THE MOST IMPORTANT DATA (POSITION OF BELT AND DRUM, HYDRAULIC PRESSURE)



SPEED-INDEPENDENT CONTROL



AUTOMATIC AND FAST BELT GUIDANCE SYSTEM FOR SMOOTH PRODUCTION START-UP AND SHUTDOWN

TRACKING SOLUTIONS

Temperature fluctuations, mechanical stress, contamination, and high pressure cause strain on Steel Belts during daily use. This can lead to premature wear of the Steel Belt and imperfect belt tracking, eventually leading to operational downtime. Our BernTrack® system is used to control continuous steel, mesh, or plastic belts. Its automatic horizontal or vertical adjustment ensures the optimal belt position during start-up, production and stopping. The BernTrack® system serves as a compact and sturdy addition to any machinery. It finds applications in the food, chemical, and film industries, including clean room and explosive environment settings. Berndorf Band Group experts are dedicated to defining the ideal solution and seamlessly integrating it into your Belt System.

- The BernTrack® solution is available in three different systems:
- » BernTrack® Roller Vertical (BTRV)
 - » BernTrack® Roller Horizontal (BTRH)
 - » BernTrack® Drum Horizontal (BTDH)

	HYDRAULIC*	ELECTRIC
BTRV*	» Used with existing hydraulic systems, especially when high tension and actuation forces are required	» Used for low to high tension forces
BTRH	» Continous control » Electrical interfaces	» Continous control » Small actuation distances » Electrical interfaces
BTDH	» Graphical operation & chart display	» Graphical operation & chart display
Operating media	» Voltage: 380 - 480 V » Frequency: 50/60 Hz » Oil: approx. 200 bar	» Voltage: 380 - 480 V » Frequency: 50/60 Hz
Belt widths	0.6 - 3 m 1.97 - 4.92 ft	
Belt tension	Max. 5 - 100 N/mm ² Max. 725 - 14,504 psi	
Belt edge detection	» Mechanical (rollers) » Optical (light curtain)	
Belt tracking tolerance	± 1 - 2 mm ± 0.04 - 0.08 in	
Belt speed	Max. 1.200 m/min*	

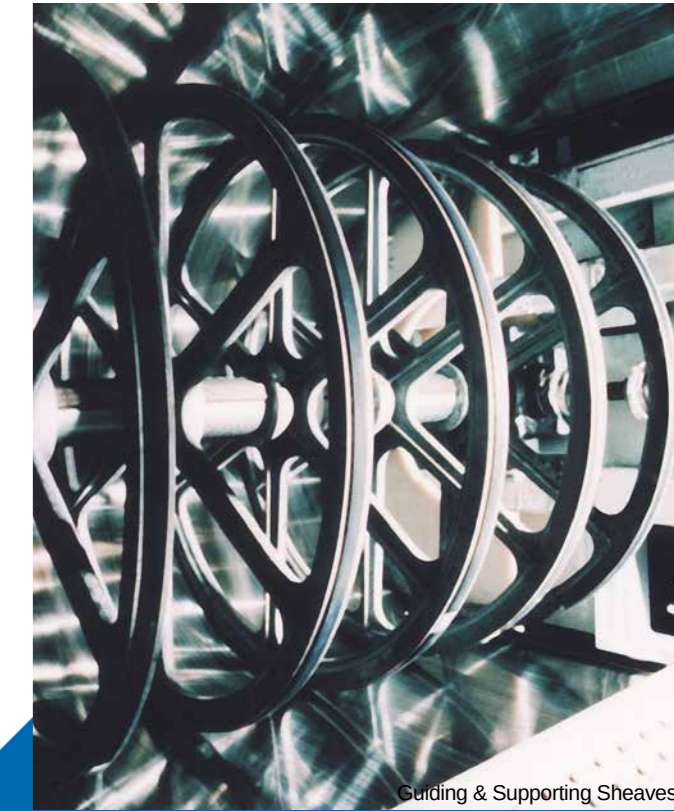
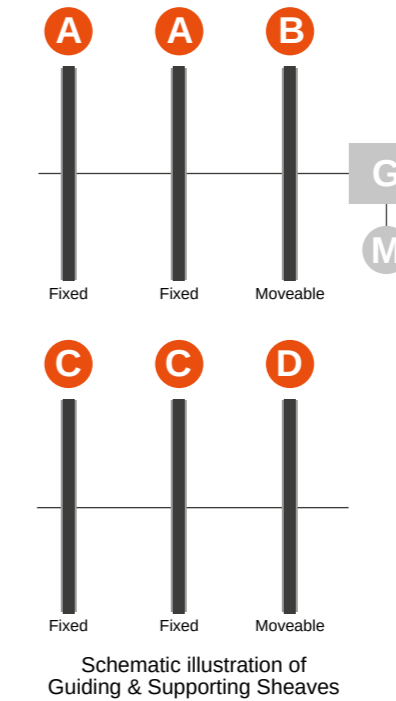
*By using the mechanical sensor, the max. speed is limited to 20 m/min

GUIDING & SUPPORTING SHEAVES

As a cost-efficient alternative to steel drums, Berndorf Band Group also manufactures Guiding and Supporting Sheaves made of casted aluminum. We offer a wide range of different Guiding and Supporting Sheaves* with diameters ranging from 600 to 1,200 mm | 23.62 to 47.24 in.

FILLER RUBBER

When using Supporting Sheaves, it's essential to use Filler Rubber. Customers can choose between two types of filler rubber (EU and US profiles) based on the type of sheaves used. All Filler Rubbers are available in nitril and natural rubber. It is crucial to replace the Filler Rubbers whenever the Steel Belt is replaced.



Guiding & Supporting Sheaves

ADVANTAGES



RELIABLE BELT TRACKING AND LONG BELT LIFE



SIMPLE RETROFIT FOR PRECISE BELT TRACKING



CONTACT-FREE DETECTION OF BELT SPEED USING AN INDUCTIVE SENSOR



CONTINUOUS DETECTION OF THE BELT EDGE POSITION BY OPTICAL OR MECHANICAL BELT EDGE SENSORS



SIMPLE INSTALLATION AND COMMISSIONING DUE TO THE COMPACT DESIGN



BELT TRACKING CONTROL INDEPENDENT OF SPEED

NOMINAL DIAMETER	600 mm 23.62 in	700 mm 27.56 in	800 mm 31.50 in	900 mm 35.43 in	1,000 mm 39.37 in	1,200 mm 47.24 in	
BORE DIAMETER	50 - 100 mm 1.97 - 3.94 in according to customer specifications**						
MATERIAL	G-Al Si6 Cu4						
ORDER NUMBER	Supporting Sheaves Typ A: Guiding Sheaves Typ A:	51264 51235	51271 51244	51275 51248	51279 51252	51283 51256	51287 51260
	Supporting Sheaves Typ B: Guiding Sheaves Typ B:	51265 51236	51272 51245	51276 51249	51280 51253	51284 51257	51288 51261
	Supporting Sheaves Typ C: Guiding Sheaves Typ C:	51266 51237	51273 51246	51277 51250	51281 51254	51285 51258	51289 51262
	Supporting Sheaves Typ D: Guiding Sheaves Typ D:	51267 51238	51274 51247	51278 51251	51282 51255	51286 51259	51290 51263
	Natural Filler Rubber Endless EU:					130125	
	Nitrile Filler Rubber Endless EU:					130118	

ADVANTAGES



OPTIMAL COST-BENEFIT RATIO



DURABLE SYSTEM



GENTLE OPTION FOR THE STEEL BELT

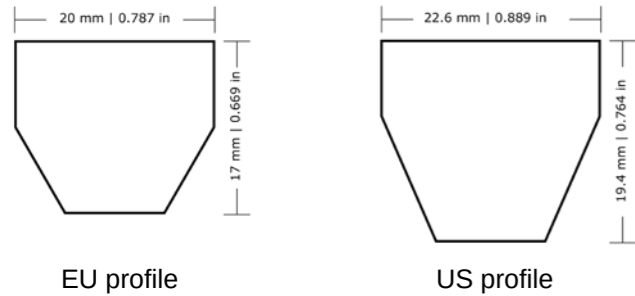
*Filler Rubbers are always included with Supporting Sheaves
**Max. belt tension 10 N/mm²

VEE-ROPES FOR STEEL BELTS

MORE VEE-ROPE INFO



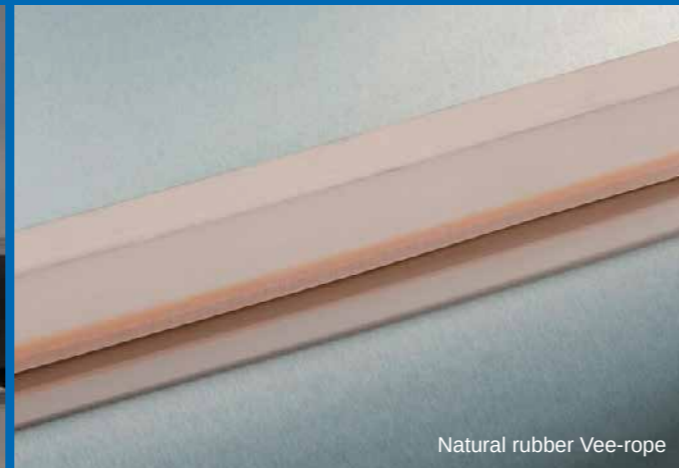
Additional to Guiding & Supporting Sheaves Vee-ropes are needed to accurately guide the Steel Belt. The appropriate Vee-rope is selected from a wide variety of options, based on the material and type of the Guiding and Supporting Sheaves.



TYPE	MATERIAL	COLOR	HARDNESS SHORE A [AT 20 °C]	OPERATING TEMPERATURES [°C °F]	ORDER NUMBER
Nitrile rubber standard (EU profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	50132
Nitrile rubber standard (US profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	50133
Nitrile rubber standard (Japan profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	Upon request
Natural rubber standard (EU profile)	Natural rubber	Bright	70 ± 5	-40 °C to +60 °C -40 °F to +140 °F	50131
Natural rubber standard (US profile)	Natural rubber	Bright	70 ± 5	-40 °C to +60 °C -40 °F to +140 °F	50130
Natural rubber low temperature Vee-rope (EU profile)	Natural rubber	Bright	50 ± 5	-60 °C to +60 °C -76 °F to +140 °F	130124
Spiral Vee-rope made of stainless steel	Belt material	Stainless steel	Belt material	Up to the max. permissible operating temperature of the specific Belt material	130223



Nitrile rubber Vee-rope



Natural rubber Vee-rope

RETAINING STRIPS FOR STEEL BELTS

MORE RETAINING STRIP INFO



Retaining strips are crucial for safely pouring viscous products onto the Steel Belt surface, preventing spillage over the edges. Depending on the type of Retaining Strip, it can be attached to the Steel Belt using bolts and screws or with a special adhesive.

TYPE	MATERIAL	COLOR	HARDNESS SHORE A [AT 20 °C]	OPERATING TEMPERATURES [°C °F]	ORDER NUMBER
Nitrile rubber standard (EU profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	50132
Nitrile rubber standard (US profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	50133
Nitrile rubber standard (Japan profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	Upon request
Nitrile rubber (High profile)	Nitrile rubber	Black	63 ± 5	-20 °C to +100 °C -4 °F to +212 °F	50129
Natural rubber standard (EU profile)	Natural rubber	Bright	70 ± 5	-40 °C to +60 °C -40 °F to +140 °F	50131
Natural rubber standard (US profile)	Natural rubber	Bright	70 ± 5	-40 °C to +60 °C -40 °F to +140 °F	50130
Natural rubber low temperature retaining strip (EU profile)	Natural rubber	Bright	50 ± 5	-60 °C to +60 °C -76 °F to +140 °F	130124
Silicone rubber retaining strip	Silicone rubber	Grey	50 ± 5	-80 °C to +300 °C -112 °F to +572 °F	130332 130233 130302
Fluorine rubber retaining strip (VITON)	Fluorine rubber	Bright	75 ± 5	-40 °C to +160 °C -40 °F to +320 °F	Upon request



Retaining Strips

MUST-HAVE FOR THE BAKING PROCESS: SKID BARS

The use of Skid Bars is very important in the baking process, to facilitate smooth and nearly frictionless support of the Steel Belt as it moves through the heating zone. For this reason, Berndorf Band Group offers Skid Bars made of special gray cast iron with an elementary graphite component to support the Steel Belt. In addition to our standard profiles for Skid Bars, we provide other profiles according to customer specific requirements*.

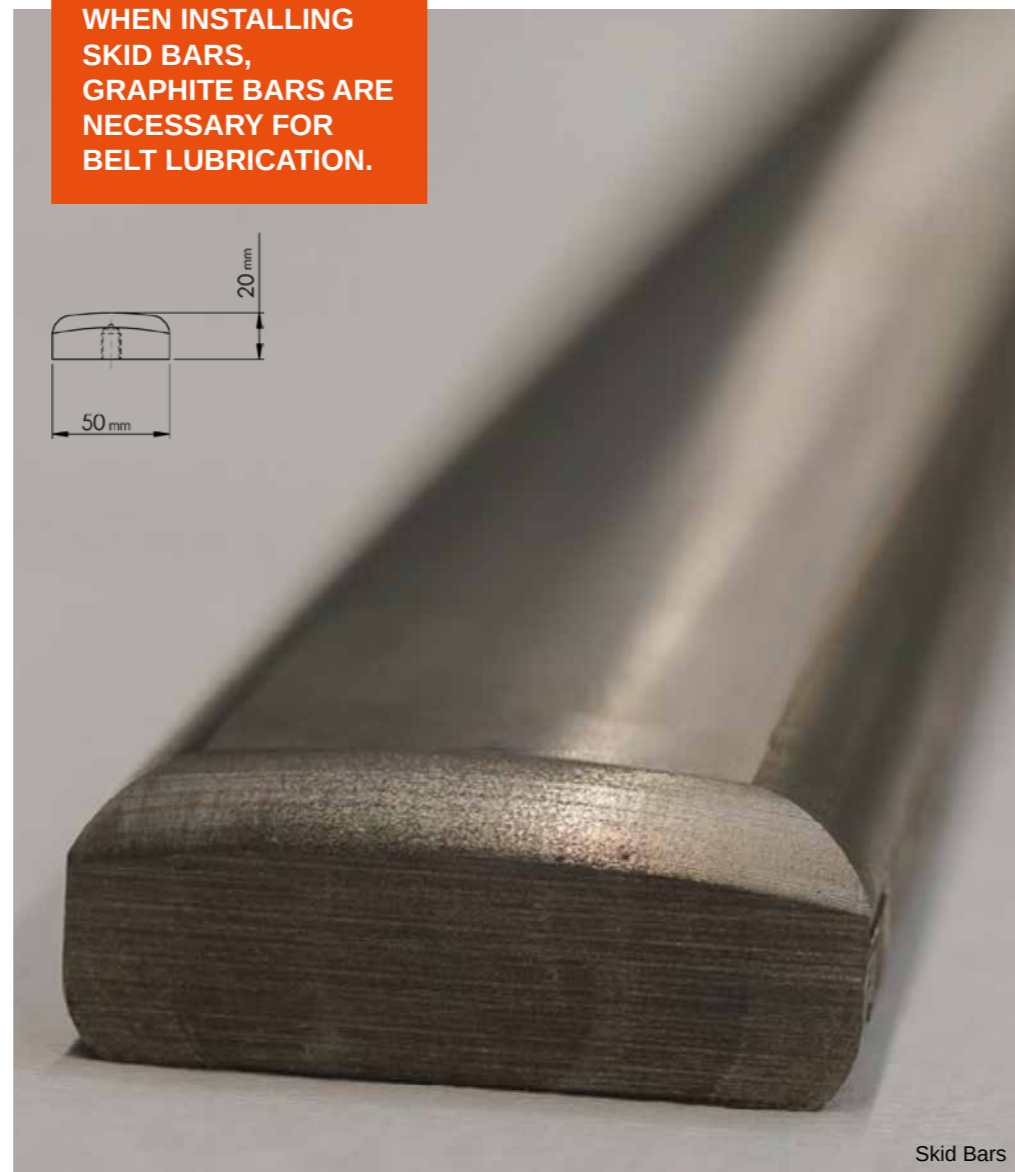
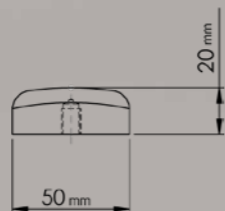
When replacing the Steel Belt, it is essential that the Skid Bars are also renewed in order to maintain excellent sliding properties and to extend the lifetime of the Steel Belt.

- ✓ UP TO 25 M/MIN BELT SPEED
- ✓ MATERIAL GG25 CAST IRON
- ✓ OPTIMAL SHAPE FOR MINIMIZED WEAR
- ✓ REDUCTION OF FRICTION

SKID BARS	BELT WIDTH	ORDER NUMBER
Typ A	800 mm 31.50 in	51212
Typ B	1,000 mm 39.37 in	51213
Typ C	1,200 mm 47.24 in	51214
Typ D	1,500 mm 59.06 in	51215

*More details on the portfolio available upon request

WHEN INSTALLING SKID BARS, GRAPHITE BARS ARE NECESSARY FOR BELT LUBRICATION.



Skid Bars

LUBRICATION SYSTEMS FOR THE BAKING INDUSTRY

GRAPHITE BARS

In continuous baking operations, the absence of lubrication is a common issue, especially with glide bar systems. The longevity of the Steel Belt is in direct connection with proper lubrication. If this is not fully taken into account, bare metal contact surfaces are created on the inside of the Steel Belt, which wear, scratch and lose their oxide layer over time, resulting in a deterioration of the belt geometry. Therefore, the Graphite Bars are used for dry lubrication on the inside of the Steel Belt and thus support the sliding process in the oven.

GRAPHITE BAR	BELT WIDTH	ORDER NUMBER
Typ A	800 mm 31.50 in	51178
Typ B	1,000 mm 39.37 in	51179
Typ C	1,200 mm 47.24 in	51180
Typ D	1,500 mm 59.06 in	51181



Graphite Bars

LUBRICATION STATION

The Lubrication Station is an extension of the Graphite Bar and combines the advantages in one system. The station concentrates the lubricating power for maximum performance & facilitates a more cost-effective quarterly maintenance check. **Quick tip:** To ensure optimal performance, the maintenance department will conduct a lubrication assessment directly on-site at the customer's premises. If a Belt replacement is necessary, it's imperative to replace the graphite bars to preserve superior glide characteristics and enhance the longevity of the Belt.

LUBRICATION STATION	BELT WIDTH	ORDER NUMBER
Typ A	800 mm 31.50 in	240865
Typ B	1,000 mm 39.37 in	240864
Typ C	1,200 mm 47.24 in	240862
Typ D	1,500 mm 59.06 in	240683



Lubrication Station

ADVANTAGES



THREE GRAPHITE BARS INSTALLED AT THE ENTRANCE OF THE OVEN



EASY INSTALLATION WITH QUICK INSTALLATION GUIDE



MAXIMUM PERFORMANCE ENSURED



THE AIM IS TO CENTRALIZE LUBRICATION FOR EFFICIENCY



QUARTERLY CHECKS CAN BE CONDUCTED MORE EFFICIENTLY AND AFFORDABLY

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