



Steel Belts for the Baking Industry

Your comprehensive solution for all steel belt needs in the baking industry

Premium-quality steel belts for baking ovens made in Berndorf

Berndorf Band manufactures steel belts capable of withstanding the high loads of mechanical and thermal stress typically occurring during the production of baked goods. Even though subjected to frequent temperature changes and a high number of load cycles, steel belts made in Berndorf always perfectly retain their shape and flatness. As the central element of the belts, the special carbon steel we use, is subjected to an elaborate tempering process during production, which gives the belts the tensile strength and surface quality required for their demanding applications. Allowing for operating temperatures of up to 400 °C | 752 °F, CARBO 13 has proven to be the material of choice. Its dark surface also absorbs heat, saves energy and ensures consistent product quality. Falling into the two categories of smooth and perforated endless belts, Berndorf belts are a possible alternative to wire mesh belts.

The abrasion-resistant and easy-to-clean steel belt surfaces show that the conversion of the belt to steel can bring many advantages. Berndorf Band Group complements their products with an extensive set of global services: From steel belt installations, repairs and inspections of belts and systems to the planning of new installations to upgrades of existing machines. Furthermore the company accommodates specific requirements by developing customized solutions together with the customer.

HIGHLIGHTS

- Perfect belt geometry
- Long belt life and low machine downtimes
- Effortless belt cleaning satisfies the highest sanitary standards
- Excellent conductivity of temperatures of up to 400 °C | 752 °F
- Consistently high product quality
- Belt acceptance and quality control in Berndorf



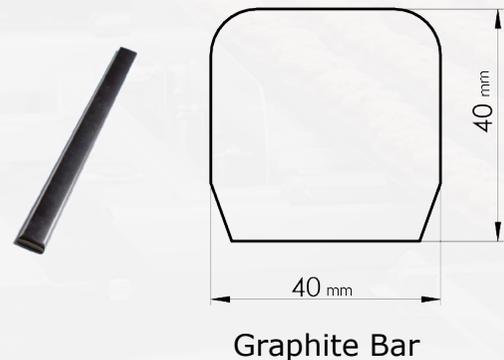
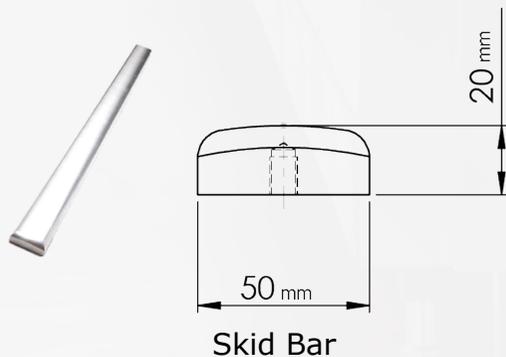


© Haas Meincke's state of the art test bakery in Skovlunde, Denmark.
The test oven is equipped with a solid CARBO 13 steel belt from Berndorf Band.



Skid- and graphite bars

On request, Berndorf Band Group can deliver skid bars made of cast iron to support the steel belt, as well as graphite bars for better lubrication according to customer specific requirements.



Retaining strips for the baking industry

Silicone rubber

for operating temperatures
from -80 °C to +300 °C



Standard perforations*

■ Hole diameter:	2.5 mm	3.0 mm	3.1 mm
■ Triangular pitch:	5.0 mm	6.5 mm	5.0 mm
■ Open area:	22.68 %	19.32 %	34.87 %

* Other perforations available on request.

Berndorf conveyor systems

In their capacity as an all-in-one service provider, Berndorf Band Group offers conveyor systems for various applications that are geared towards optimizing production and conveying processes. Suitable for various types of production, the machine achieves visible enhancements in production and product quality and also allows an optional remote control. For reliable operation, a hydraulic, pneumatic or electromechanical belt tensioning and tracking system is used, depending on the dimension of the belt system.



Standard dimensions

- Belt widths between 800 mm and 1,500 mm*
- Belt deflection diameter 800 - 1,200 mm

*Default values. More details and dimensions on request.

Components supporting the controlled belt running

Another recommended option to ensure exact and reliable belt tracking is the installation of Berndorf's belt tracking system **bertrack**[®]. After subjecting the machine to a thorough inspection by one of our experts, we will compose the most suitable system and install it within a few weeks.



“The **bertrack**[®] system can significantly reduce downtime and increases the production quality, especially in machines which do not have an active belt tracking system. **bertrack**[®] detects even the slightest deviations in the belt run due to mechanical or thermal conditions and compensates them immediately.”

*Patrick Kristen, MSc
Project Manager*

Physical and mechanical properties of the steel belts

Standard dimensions

Material			CARBO 13
Type			Ck 67
Similar material no.		DIN	1.1231
Tensile strength at 20 °C		N/mm ²	1,200
0.2% yield offset strength			970
Hardness	Rockwell HRC		36
	Vickers HV 10		350
Elongation 50 mm		%	8
Welding factor			0.80
Fatigue strength under reversed bending stress*	at 20 °C	N/mm ²	450
Modulus of elasticity	at 20 °C	N/mm ²	210,000
Density		kg/dm ³	7.85
Mean coefficient of thermal expansion	at 20-100 °C	10 ⁻⁶ m/m °C	11.1
	at 20-200 °C	10 ⁻⁶ m/m °C	11.9
	at 20-300 °C	10 ⁻⁶ m/m °C	12.5
	at 20-400 °C	10 ⁻⁶ m/m °C	12.9
Specific heat			0.46
Thermal conductivity	at 20 °C		46
Specific electric resistance	at 20 °C	Ohm mm ² /m	0.13
Max. permissible operating temperature		°C	400
		°F	750
Tensile strength at max. permissible operating temperature		N/mm ²	850
0.2% yield strength at max. permissible operating temperature		N/mm ²	720

Width (mm)*	Thickness (mm)		
	800	1.0	1.2
1,000	1.0	1.2	1.4
1,200	1.0	1.2	1.4
1,500	-	1.2	1.4

* Other widths available on request.

* 50 % of the test specimens withstand 2,000,000 load cycles.

Typical values. If not otherwise specified, the values given apply at room temperature. Subject to change due to technological progress. Errors and omissions excepted.

Steel Belts | Belt Systems | Worldwide Service



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Berndorf Band GmbH
Leobersdorfer Strasse 26
2560 Berndorf, Austria

E: band@berndorf.co.at
T: +43 2672 800 0 | F: +43 2672 841 76
www.berndorfband-group.com