



Steel Belts for the Automotive Industry

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Steel Belts from Berndorf for Automotive Testing

Premium-grade steel belts made by Berndorf Band Group

Fuel consumption, driveability and safety take top priority in the development of motor vehicles and tires. Therefore, tests in the automotive industry are especially important. To make the test situations as real as possible, the test systems are equipped with steel belts from Berndorf Band Group. Different surface options enable customer specific requirement simulations.

The test systems are operated with high-precision and resistant steel belts from Berndorf Band Group. Thanks to the specialized and detailed production method, the belts can be operated at speeds up to 350 km/h. Additionally a large number of surface coatings can be selected to reproduce excellent conditions.



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“The Rolling Road System with the Berndorf Steel Belts is a key component in our state-of-the-art wind tunnel for aerodynamic development. Here we’re glad to have Berndorf as a reliable partner beside us who claims the same quality standards as we demand of ourselves.”

*Steffen Schrodt
Managing Director Sauber Aerodynamics*

Highlights

- Stellar operating characteristics as well as perfect flatness and straightness
- High tensile strength and resistance
- Increased belt lifetime thanks to our special manufacturing processes
- Longitudinal and spiral welded seams for various belt dimensions
- Large variety of specially developed surface options
- Service options of steel belts for the entire belt lifetime

“Your road on our belts”

The available belt dimensions for automotive applications start at 0.3 mm thickness, 1.5 m length and 200 mm width. Depending on the customer needs, the dimensions can be adjusted individually.

To meet the high requirements of automotive testing applications, innovative manufacturing processes and special raw materials are needed. Nicro 52.6 is a high-strength material, which is characterized by excellent tensile strength and perfect elongation.

Nicro 52.6 was developed and has been optimized for decades to withstand the extreme conditions during the test operation. Thanks to the specially developed heat and surface treatment concept, the mechanical properties of the steel belt are optimized, which results in a longer steel belt lifetime.

Material		NICRO 52.6
Type		CrNiCuTi 15 7
Tensile strength	at 20 °C	1.550 N/mm ²
0,2%-yield offset strength	at 20 °C	1.500 N/mm ²
Hardness		48 HRC 480 HV 10
Elongation	50 mm	6 %
Welding factor		0,80
Fatigue strength under reversed bending stress*	at 20 °C	700 N/mm ²
Modulus of elasticity	at 20 °C at 200 °C	200.000 N/mm ² 188.000 N/mm ²
Density		7,74 kg/dm ³
Mean coefficient of thermal extension	at 20-100 °C at 20-200 °C at 20-300 °C	10,9 10 ⁻⁶ m/m °C 11,5 10 ⁻⁶ m/m °C 11,7 10 ⁻⁶ m/m °C
Specific heat		0,50 J/g °C
Thermal conductivity	at 20 °C	16 W/m °C
Specific electric resistance	at 20 °C	0,80 Ω mm ² /m
Max. permissible operating temperature		350 °C 662 °F
Tensile strength at max. permissible operating temperature		1.250 N/mm ²
0,2%-Dehngrenze bei max. zulässiger Arbeitstemperatur		1.180 N/mm ²

* 50% of the test specimens withstand 2,000,000 load cycles.
Typical values. Subject to change due to technological progress. Information provided without guarantee.

Steel Belts | Belt Systems | Worldwide Service

