



OPTIBELT

TECHNICAL DOCUMENT

optibelt **CONVEYOR POWER RB**



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1 PRODUCT DESCRIPTION



The **optibelt CONVEYOR POWER** range comprises, in addition to V-belts, round belts and timing belts, also elastic and non-elastic ribbed belts. The elastic ribbed belt is described below.

TECHNICAL HIGHLIGHTS OF THE ERB

The **optibelt CONVEYOR POWER ERB** is a high performance ribbed belt for the field of transport and logistics. The elastic ribbed belts were especially developed to meet the mechanical requirements for fixed distances between centres. The unique tension cords of high-quality polyamide provide the required elasticity for the ribbed belt and consequently increase the permanent resistance also for frequent start/stop cycles. Thanks to the material composition used, the belt is optimally prepared also for the coldest conditions. Laboratory examinations do not reveal any impact on the properties up to -40°C . The rubber mixture on the profile side combines a high abrasion resistance with maximum grip.

FIELDS OF APPLICATION

The elastic ribbed belts of the **optibelt CONVEYOR POWER RB** series are applied in all fields of the transport and logistics industry. Straight roller conveyors – curved paths – accumulating conveyors – continuous conveyors – sorters – transfer lines – outfeed & infeed systems, semi-automatic & fully automatic storage systems, etc. With the optimized performance values, which were especially adjusted to the industry needs, existing drives can be easily upgraded and new systems ideally designed. With an efficiency of up to 97%, the **optibelt CONVEYOR POWER** is applied with transport weights of 1 to 1200 kg depending on conveying speed and acceleration. Also for the use in curved paths, the **optibelt CONVEYOR POWER** was further optimized. Thanks to the excellent spring rate, the required pretension is retained.

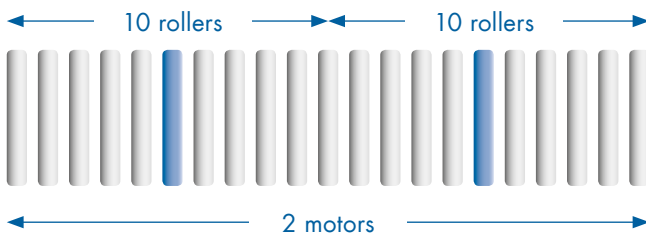
INSTALLATION AND MAINTENANCE

Due to the elastic characteristic of the belts, general tolerances in the centre distances are likewise no problem. This simplifies the installation and re-tensioning is not necessary.

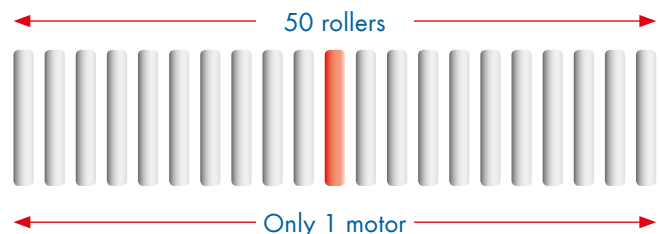
COST SAVINGS

The design is optimised to suit this type of application, which results in increased operating capability, reduced maintenance costs and longer intervals between servicing. This minimises both work and expenditure and increases the efficiency of the belt, which in turn reduces the electricity consumption of the motor. The number of ribs required can be adapted to suit the weight being conveyed, without having to replace the roller. **optibelt CONVEYOR POWER** products will shortly be available from our sales partners.

ROUND BELTS (2 MODULES)



optibelt CONVEYOR POWER (1 MODULE)



Thanks to the outstanding mechanical properties of the **optibelt CONVEYOR POWER RB** belt, savings of at least 30 % per module can be achieved, since only one motor is needed to drive up to 50 rollers.

2 FEATURES



TECHNICAL FEATURES

- Cold-resistant up to -40 °C*
- Temperature-resistant up to 80 °C
- Following ISO 1813 antistatic
- From 0.1 m/s to 3.0 m/s
- Up to 97% efficiency
- Shock-absorbing
- Suitable for start and stop cycles
- Maintenance-free
- Simple installation
- Optimized tension and elongation features

DESIGN

Pulley diameter	Ø 43 mm		Ø 56 mm	
Conveyed weight	1 kg	••••• 400 kg	•••••	1200 kg
Number of ribs	2	4		8

The applied belt length is crucial for the optimum belt selection. It is decisive for the elongation, the pre-tension and the operating reliability.

A simple rule of thumb is

$$\begin{aligned}
 L &= \pi \cdot d + 2 \cdot a \\
 &= \pi \cdot 43,3 \text{ mm} + 2 \cdot 75 \text{ mm} \\
 &= 286 \text{ mm}
 \end{aligned}$$

PRODUCT RANGE

43 mm pulleys		56 mm pulleys	
Drive centre distance ± 1 mm	Nominal belt length = L _{applied}	Drive centre distance ± 1 mm	Nominal belt length = L _{applied}
55	246	56	286
60	256	60	296
63	263	63	302
65	265	65	306
68	272	70	316
70	276	80	336
73	282	85	346
75	286	90	356
78	292	100	376
80	296	105	386
83	302	125	426
85	306	150	476
90	316	200	576
95	326	250	676
100	336	300	776
105	346		
110	356		
115	366		
120	376		
125	386		
150	436		
155	446		
175	486		
200	536		
215	566		
250	636		
300	736		

If you do not find the required length in our comprehensive product range, please contact our technical department.



Optimal absorption of drive vibrations



Optimized for start and stop cycles



Suitable for curved path

* Constructional measures are to be taken on the application side.

Optibelt GmbH

Corveyer Allee 15
37671 Höxter
GERMANY

T +49 (0) 5271-621
F +49 (0) 5271-976200
E info@optibelt.com



www.optibelt.com