

OPTIBELT
TECHNICAL DOCUMENT
optibelt CONVEYOR POWER RB



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1 PRODUCT DESCRIPTION

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

TECHNICAL HIGHLIGHTS OF THE ERB

The **optibelt CONVEYOR POWER** 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 also optimally prepared 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. This includes 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. The **optibelt CONVEYOR POWER** was further optimized for use in curved paths. 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 no problem. This simplifies the installation, and re-tensioning is not necessary.

COST SAVINGS

Thanks to the optimized design for the application, the applicability is increased, the maintenance effort is reduced, and the service intervals are shortened. This minimizes both time and costs.



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

$$L = \pi \cdot d + 2 \cdot a$$

$$= \pi \cdot 43,3 \text{ mm} + 2 \cdot 75 \text{ mm}$$

$$= 286 \text{ mm}$$



Suitable for curved path

PRODUCT RANGE

| 43 mm pulleys | | 56 mm pulleys | |
|---|---|---|---|
| Drive centre distance $\pm 1 \text{ mm}$ | Nominal belt length $= L_{\text{applied}}$ | Drive centre distance $\pm 1 \text{ mm}$ | Nominal belt length $= L_{\text{applied}}$ |
| 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 Optibelt's comprehensive product range, please contact your local Applied branch.



Optimized for start and stop cycles

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