

# Technical Data Sheet

## optibelt RR

### PU Round Belt, Open-Ended, Endless Joined



#### Dimensions, Tolerances

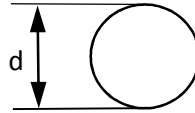
Diameter: 2 - 20 mm

#### Diameter Tolerances:

2 - 7 mm: ± 0.2mm  
 8 - 12 mm: ± 0.3mm  
 13 - 20 mm: ± 0.5 mm

#### Construction

Polyurethane: Thermoplastic, 85 Shore A FDA, light blue



| Belt elongation, tension, length and weight                       |                |     |      |      |      |      |
|---|----------------|-----|------|------|------|------|
| Diameter d [mm]   | 2 <sup>1</sup> | 3   | 4    | 5    | 6    | 7    |
| Belt tension [N] at 3% elongation, tension 1.15 N/mm <sup>2</sup> | 4              | 8   | 14   | 23   | 32   | 44   |
| Belt tension [N] at 6% elongation, tension 1.80 N/mm <sup>2</sup> | 6              | 13  | 23   | 35   | 51   | 69   |
| Belt tension [N] at 8% elongation, tension 2.15 N/mm <sup>2</sup> | 7              | 15  | 27   | 42   | 61   | 83   |
| Recommended pre-tension [%]                                       | 6-8            | 6-8 | 6-8  | 6-8  | 5-6  | 5-6  |
| Minimum pulley diameter d <sub>min</sub> [mm]                     | 20             | 25  | 30   | 40   | 50   | 60   |
| Weight per metre [g/m]  | 3.7            | 8.4 | 15.0 | 23.5 | 33.9 | 46.1 |
| Roll length on a reel [m]   | 200            | 200 | 200  | 200  | 100  | 100  |
| Minimum belt length, joined [mm]                                  | 200            | 200 | 200  | 200  | 200  | 300  |

| Elongation, belt tension, belt length, belt weight                |      |                |      |       |       |
|---|------|----------------|------|-------|-------|
| Diameter d [mm]   | 8    | 9 <sup>1</sup> | 10   | 12    | 15    |
| Belt tension [N] at 3% elongation, tension 1.15 N/mm <sup>2</sup> | 58   | 73             | 90   | 130   | 203   |
| Belt tension [N] at 6% elongation, tension 1.80 N/mm <sup>2</sup> | 90   | 114            | 141  | 203   | 218   |
| Belt tension [N] at 8% elongation, tension 2.15 N/mm <sup>2</sup> | 108  | 137            | 169  | 243   | 378   |
| Recommended pre-tension [%]                                       | 5-6  | 5-6            | 5-6  | 3-5   | 3-5   |
| Minimum pulley diameter d <sub>min</sub> [mm]                     | 70   | 80             | 90   | 100   | 120   |
| Weight per metre [g/m]  | 60.3 | 76.3           | 94.2 | 135.7 | 212.0 |
| Roll length on a reel [m]   | 100  | 100            | 100  | 50    | 50    |
| Minimum belt length, joined [mm]                                  | 300  | 300            | 300  | 400   | 400   |

<sup>1</sup> Non-stock item, minimum order quantity on request. Intermediate size possible on request.

#### Elongation

3 % Elongation  
 6 % Elongation  
 8 % Elongation

#### Tension

1.1 N/mm<sup>2</sup>  
 1.8 N/mm<sup>2</sup>  
 2.1 N/mm<sup>2</sup>

#### Belt speed and temperature

Maximum speed v<sub>max</sub>: 10 m/s  
 Temperature: applicable from -25°C to + 70°C

#### Coefficient of friction

Polished steel:  
 Aluminium:  
 Polyethylene:

#### RR smooth

0.90  
 0.80  
 0.35

#### Calculation of assembling length L

**L = L<sub>nom</sub> – pre-load [mm]**  
 Nominal length L<sub>nom</sub> [mm]  
 Selected pre-load [%]