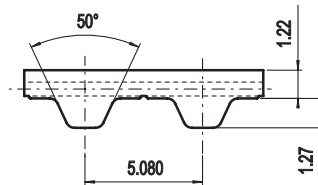
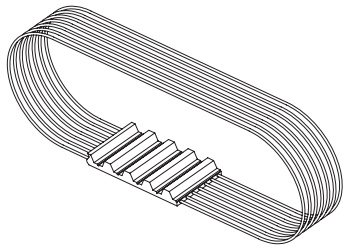


XL ELA-flex SD™



Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to DIN/ISO 5296.
- Imperial pitch 1/5" = 5,08 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage
- Transmissible power up to 5 kW
- Rpm up to 10.000 [1/min]
- Maximum width: 150 mm
- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

Technical data

| | | | | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Belt width [inch] | 0,25 | 0,31 | 0,37 | 0,50 | 0,75 | 1,00 | 1,50 | 2,00 | 4,00 |
| Allowable tensile load [N] | 220 | 280 | 330 | 440 | 650 | 870 | 1300 | 1720 | 3440 |
| Weight [kg/m] | 0,016 | 0,020 | 0,024 | 0,033 | 0,049 | 0,065 | 0,098 | 0,130 | 0,260 |

Other widths are available on request

Tooth shear strength

| rpm [min ⁻¹] | M _{spez} [Ncm/cm] | P _{spez} [W/cm] | rpm [min ⁻¹] | M _{spez} [Ncm/cm] | P _{spez} [W/cm] | rpm [min ⁻¹] | M _{spez} [Ncm/cm] | P _{spez} [W/cm] |
|--------------------------|----------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
| 0 | 2,029 | 0,000 | 1200 | 1,294 | 1,626 | 3400 | 1,006 | 3,581 |
| 20 | 1,978 | 0,041 | 1300 | 1,273 | 1,732 | 3600 | 0,990 | 3,730 |
| 40 | 1,932 | 0,081 | 1400 | 1,252 | 1,836 | 3800 | 0,974 | 3,877 |
| 60 | 1,894 | 0,119 | 1440 | 1,245 | 1,877 | 4000 | 0,960 | 4,020 |
| 80 | 1,860 | 0,156 | 1500 | 1,234 | 1,938 | 4500 | 0,926 | 4,362 |
| 100 | 1,830 | 0,192 | 1600 | 1,216 | 2,037 | 5000 | 0,896 | 4,690 |
| 200 | 1,717 | 0,360 | 1700 | 1,200 | 2,136 | 5500 | 0,868 | 5,001 |
| 300 | 1,635 | 0,514 | 1800 | 1,184 | 2,231 | 6000 | 0,843 | 5,298 |
| 400 | 1,570 | 0,658 | 1900 | 1,169 | 2,326 | 6500 | 0,820 | 5,580 |
| 500 | 1,518 | 0,795 | 2000 | 1,155 | 2,418 | 7000 | 0,798 | 5,849 |
| 600 | 1,473 | 0,926 | 2200 | 1,129 | 2,600 | 7500 | 0,779 | 6,115 |
| 700 | 1,434 | 1,051 | 2400 | 1,104 | 2,776 | 8000 | 0,759 | 6,360 |
| 800 | 1,400 | 1,173 | 2600 | 1,082 | 2,945 | 8500 | 0,741 | 6,599 |
| 900 | 1,370 | 1,291 | 2800 | 1,061 | 3,110 | 9000 | 0,725 | 6,835 |
| 1000 | 1,342 | 1,405 | 3000 | 1,041 | 3,271 | 9500 | 0,709 | 7,053 |
| 1100 | 1,317 | 1,517 | 3200 | 1,023 | 3,427 | 10000 | 0,695 | 7,272 |

The total power "P" and the total torque "M" transmitted by the belt, are calculated with the following formulas:

$$P \text{ [Kw]} = P_{\text{spez}} \cdot Z_e \cdot Z_k \cdot b / 1000$$

$$M \text{ [Nm]} = M_{\text{spez}} \cdot Z_e \cdot Z_k \cdot b / 100$$

$$Z_e = \frac{Z_k \cdot \arccos \left[\frac{t \cdot (z_g - z_k)}{2 \cdot \pi \cdot A} \right]}{180}$$

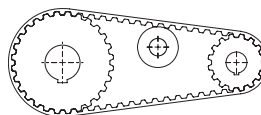
- P = power in Kw
- M = torque in Nm
- P_{spez} = specific power
- M_{spez} = specific torque
- Z_e = number of teeth in mesh of the small pulley
- Z_emax = 12
- Z_k = number of teeth of the small pulley
- b = belt width in cm
- A = centre distance [mm]
- t = pitch

Flexibility

Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley $z_{\min} = 10$
- Idler running on belt teeth $d_{\min} = 30 \text{ mm}$



Drive with reverse bending and double sided belt

- Timing pulley $z_{\min} = 15$
- Idler running on belt back $d_{\min} = 30 \text{ mm}$

