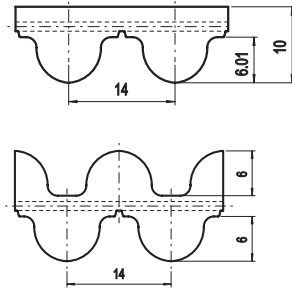
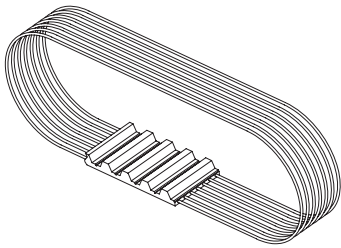


HTD14M ELA-flex SD™



Belt characteristics

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords. Produced according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile, allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 200 kW
- Rpm up to 4.000 [1/min]
- Maximum width: 150 mm
- Width tolerance: $\pm 1,0$ [mm]
- Thickness tolerance: $\pm 0,2$ [mm]

Technical data

| Belt width [mm] | 40 | 55 | 85 | 115 | 150 |
|----------------------------|-------|-------|-------|-------|-------|
| Allowable tensile load [N] | 10800 | 14800 | 22800 | 30900 | 41000 |
| Weight [kg/m] | 0,42 | 0,57 | 0,89 | 1,24 | 1,7 |

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 | 28,966 | 0,000 | 1200 | 16,335 | 20,526 | 3400 | 9,630 | 34,286 |
| 20 | 28,452 | 0,596 | 1300 | 15,852 | 21,578 | 3600 | 9,242 | 34,837 |
| 40 | 27,978 | 1,172 | 1400 | 15,398 | 22,573 | 3800 | 8,872 | 35,303 |
| 60 | 27,540 | 1,730 | 1440 | 15,225 | 22,957 | 4000 | 8,521 | 35,688 |
| 80 | 27,136 | 2,273 | 1500 | 14,972 | 23,516 | 4500 | | |
| 100 | 26,762 | 2,802 | 1600 | 14,569 | 24,408 | 5000 | | |
| 200 | 24,458 | 5,122 | 1700 | 14,187 | 25,254 | 5500 | | |
| 300 | 23,239 | 7,300 | 1800 | 13,824 | 26,056 | 6000 | | |
| 400 | 22,100 | 9,257 | 1900 | 13,478 | 26,816 | 6500 | | |
| 500 | 21,091 | 11,042 | 2000 | 13,148 | 27,536 | 7000 | | |
| 600 | 20,195 | 12,688 | 2200 | 12,530 | 28,865 | 7500 | | |
| 700 | 19,394 | 14,216 | 2400 | 11,960 | 30,056 | 8000 | | |
| 800 | 18,672 | 15,641 | 2600 | 11,431 | 31,121 | 8500 | | |
| 900 | 18,014 | 16,976 | 2800 | 10,938 | 32,069 | 9000 | | |
| 1000 | 17,410 | 18,230 | 3000 | 10,476 | 32,908 | 9500 | | |
| 1100 | 16,853 | 19,411 | 3200 | 10,041 | 33,645 | 10000 | | |

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]

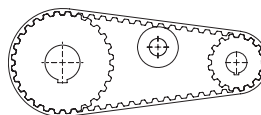
t = pitch

Flexibility

Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley $z_{\min} = 28$
- Idler running on belt teeth $d_{\min} = 120$ mm



Drive with reverse bending and double sided belt

- Timing pulley $z_{\min} = 28$
- Idler running on belt back $d_{\min} = 180$ mm

