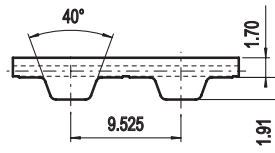
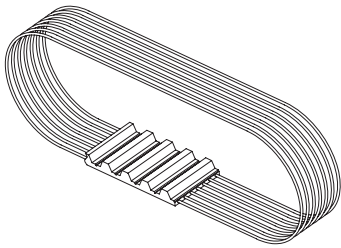


L ELA-flex SD™



Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to DIN/ISO 5296.
 - Imperial pitch 3/8" = 9,525 mm
 - Mainly used in applications where inch pitch is an advantage
 - Transmissible power up to 20 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]	0,50	0,75	1,00	1,50	2,00	3,00	4,00	6,00
Allowable tensile load [N]	1220	1820	2430	3640	4850	7260	9680	14520
Weight [kg/m]	0,05	0,08	0,10	0,15	0,20	0,30	0,40	0,60

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	5,852	0,000	1200	3,393	4,263	3400	2,441	8,689
20	5,673	0,119	1300	3,321	4,521	3600	2,388	9,000
40	5,518	0,231	1400	3,256	4,774	3800	2,336	9,295
60	5,383	0,338	1440	3,230	4,871	4000	2,288	9,581
80	5,266	0,441	1500	3,194	5,017	4500	2,177	10,258
100	5,165	0,541	1600	3,137	5,255	5000	2,077	10,874
200	4,789	1,003	1700	3,082	5,486	5500	1,986	11,437
300	4,516	1,419	1800	3,029	5,709	6000	1,903	11,953
400	4,304	1,803	1900	2,980	5,930	6500	1,827	12,433
500	4,131	2,163	2000	2,933	6,143	7000	1,755	12,867
600	3,984	2,503	2200	2,845	6,555	7500	1,689	13,263
700	3,857	2,827	2400	2,765	6,949	8000	1,627	13,626
800	3,744	3,137	2600	2,692	7,330	8500	1,569	13,965
900	3,644	3,434	2800	2,623	7,689	9000	1,513	14,258
1000	3,553	3,721	3000	2,559	8,039	9500	1,461	14,537
1100	3,470	3,997	3200	2,498	8,371	10000	1,411	14,779

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

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

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

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

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_{e,max} = 12

Z_k = number of teeth of the small pulley

b = belt width in cm

A = centre distance [mm]

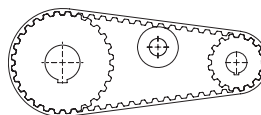
t = pitch

Flexibility

Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley $z_{\min} = 15$
- Idler running on belt teeth $d_{\min} = 60 \text{ mm}$



Drive with reverse bending and double sided belt

- Timing pulley $z_{\min} = 20$
- Idler running on belt back $d_{\min} = 60 \text{ mm}$

