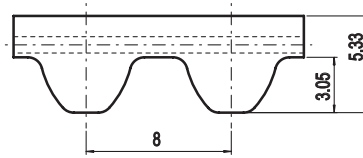
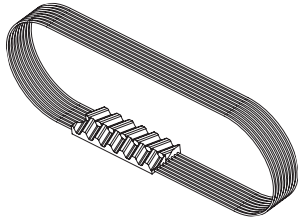


EAGLE 8M ELA-flex SD™



Belt characteristics

- Truly endless polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity.
 - **Self tracking no need of pulley flanges**
 - Metric pitch 8 mm
 - **Extremely reduced noise generation**
 - The special profile allows most compact drive
- Width tolerance: $\pm 0,8$ [mm]
 - Thickness tolerance: $\pm 0,3$ [mm]

Technical data

Belt width [mm]	16	25	32	50
Allowable tensile load [N]	2450	4170	5390	8590
Weight [kg/m]	0,085	0,145	0,180	0,300

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	10,82	0,000	1200	6,87	8,631	3400	4,90	16,422
20	10,67	0,223	1300	6,72	9,146	3600	4,77	16,991
40	10,52	0,441	1400	6,58	9,642	3800	4,65	17,531
60	10,38	0,652	1440	6,52	9,836	4000	4,53	18,044
80	10,24	0,858	1500	6,44	10,122	4500	4,42	18,531
100	10,11	1,058	1600	6,32	10,585	5000	4,17	19,647
200	9,52	1,994	1700	6,20	11,035	5500	3,94	20,627
300	9,04	2,840	1800	6,09	11,470	6000	3,73	21,486
400	8,65	3,623	1900	5,98	11,892	6500	3,54	22,234
500	8,34	4,368	2000	5,87	12,302			
600	8,07	5,068	2200	5,68	13,087			
700	7,82	5,732	2400	5,50	13,828			
800	7,60	6,363	2600	5,34	14,529			
900	7,39	6,966	2800	5,18	15,194			
1000	7,20	7,543	3000	5,12	15,450			
1100	7,03	8,098	3200	5,04	15,824			

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

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

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

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

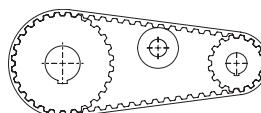
- P = power in Kw
- M = torque in Nm
- P_{spez} = specific power
- M_{spez} = specific torque
- Z_e = number of teeth in mesh of the small pulley
- Z_emax = 12
- Z_k = number of teeth of the small pulley
- b = belt width in cm
- A = centre distance [mm]
- t = pitch

Flexibility

Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley $z_{\min} = 20$
- Idler running on belt teeth $d_{\min} = 50$ mm



Drive with reverse bending and double sided belt

- Timing pulley $z_{\min} = 20$
- Idler running on belt back $d_{\min} = 100$ mm

