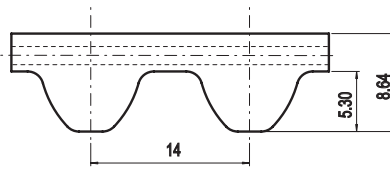
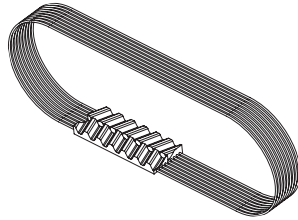


## EAGLE 14M ELA-flex SD™

### 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 14 mm
  - **Extremely reduced noise generation**
  - The special profile allows most compact drive
- Width tolerance:  $\pm 1,2$  [mm]
  - Thickness tolerance:  $\pm 0,4$  [mm]

### Technical data

Belt width [mm]	35	52,5	70	105
Allowable tensile load [N]	11050	17000	22950	34850
Weight [kg/m]	0,4	0,6	0,8	1,2

### Tooth shear strength

rpm [min <sup>-1</sup> ]	M <sub>spez</sub> [Ncm/cm]	P <sub>spez</sub> [W/cm]	rpm [min <sup>-1</sup> ]	M <sub>spez</sub> [Ncm/cm]	P <sub>spez</sub> [W/cm]	rpm [min <sup>-1</sup> ]	M <sub>spez</sub> [Ncm/cm]	P <sub>spez</sub> [W/cm]
0	35,65	0,000	1200	20,07	25,222	3200	12,19	40,849
20	34,98	0,733	1300	19,46	26,495	3400	11,68	41,581
40	34,36	1,439	1400	18,89	27,698	3600	11,19	42,201
60	33,79	2,123	1440	18,68	28,160	3800	10,73	42,715
80	33,25	2,786	1500	18,36	28,834	4000	10,30	43,129
100	32,76	3,430	1600	17,85	29,909			
200	30,76	6,441	1700	17,37	30,926			
300	28,94	9,090	1800	16,92	31,888			
400	27,43	11,491	1900	16,49	32,798			
500	26,12	13,677	2000	16,07	33,659			
600	24,97	15,689	2200	15,30	35,243			
700	23,95	17,553	2400	14,59	36,656			
800	23,03	19,290	2600	13,93	37,912			
900	22,19	20,915	2800	13,31	39,023			
1000	21,43	22,439	2880	13,07	39,429			
1100	20,73	23,872	3000	12,73	39,999			

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<sub>spez</sub> = specific power

M<sub>spez</sub> = specific torque

Z<sub>e</sub> = number of teeth in mesh of the small pulley

Z<sub>emax</sub> = 12

Z<sub>k</sub> = number of teeth of the small pulley

b = belt width in cm

A = centre distance [mm]

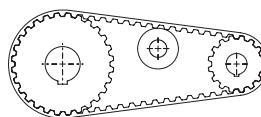
t = pitch

### Flexibility

#### Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley  $z_{\min} = 32$
- Idler running on belt teeth  $d_{\min} = 160$  mm



Drive with reverse bending and double sided belt

- Timing pulley  $z_{\min} = 32$
- Idler running on belt back  $d_{\min} = 250$  mm

