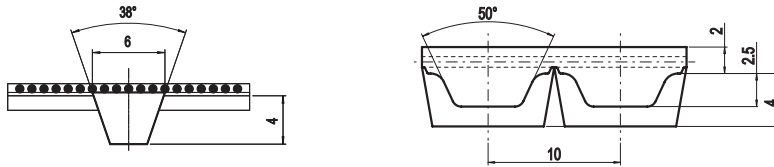


## ATK10 - K6 ELA-flex SD™

### Belt characteristics

- Polyurethane self track timing belt with steel tension cords
- Profile AT10 with central guide
- Central guide height 4 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product



### Technical data

Belt width [mm]	32	50
Allowable tensile load type V [N]	5100	7900
Weight [kg]	0,27	0,36

Other widths are available on request

### 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	12,048	0,000	1200	7,708	9,685	3400	5,317	18,931
20	11,871	0,249	1300	7,534	10,256	3600	5,180	19,529
40	11,706	0,490	1400	7,372	10,807	3800	5,048	20,088
60	11,550	0,726	1440	7,310	11,022	4000	4,924	20,625
80	11,403	0,955	1500	7,219	11,339	4500	4,636	21,846
100	11,265	1,180	1600	7,076	11,855	5000	4,377	22,915
200	10,684	2,238	1700	6,939	12,352	5500	4,140	23,841
300	10,215	3,209	1800	6,810	12,836	6000	3,923	24,648
400	9,793	4,102	1900	6,688	13,305	6500	3,724	25,348
500	9,424	4,934	2000	6,570	13,759	7000	3,538	25,933
600	9,097	5,716	2200	6,349	14,625	7500	3,365	26,423
700	8,808	6,456	2400	6,147	15,447	8000	3,202	26,825
800	8,547	7,159	2600	5,959	16,223	8500	3,048	27,127
900	8,309	7,831	2800	5,782	16,953	9000	2,903	27,358
1000	8,093	8,474	3000	5,618	17,649	9500	2,766	27,516
1100	7,893	9,091	3200	5,464	18,308	10000	2,636	27,598

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>e</sub>max = 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  $z_{\min} = 25$
- Idler running on belt teeth  $d_{\min} = 80 \text{ mm}$

Drive with reverse bending

- Timing pulley  $z_{\min} = 25$
- Idler running on belt back  $d_{\min} = 120 \text{ mm}$