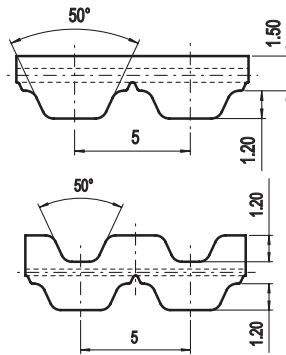
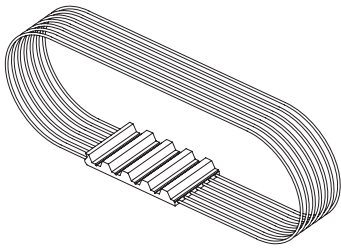


## AT5 ELA-flex SD™



### Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords. Metric pitch 5 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration and noise
- Transmissible power up to 15 kW
- Rpm up to 10.000 [1/min]
- Maximum width: 150 mm
- Width tolerance:  $\pm 0,5$  [mm]
- Thickness tolerance:  $\pm 0,2$  [mm]

### Technical data

Belt width [mm]	10	16	25	32	50	75	100	150
Allowable tensile load [N]	1000	1600	2400	3100	4800	7200	9600	14300
Weight [kg/m]	0,03	0,05	0,08	0,11	0,17	0,25	0,33	0,50

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	2,897	0,000	1200	2,027	2,547	3400	1,514	5,391
20	2,855	0,060	1300	1,990	2,709	3600	1,485	5,598
40	2,817	0,118	1400	1,955	2,866	3800	1,456	5,795
60	2,783	0,175	1440	1,942	2,929	4000	1,429	5,986
80	2,753	0,231	1500	1,923	3,020	4500	1,367	6,442
100	2,725	0,285	1600	1,892	3,170	5000	1,311	6,862
200	2,620	0,549	1700	1,863	3,316	5500	1,260	7,255
300	2,540	0,798	1800	1,836	3,460	6000	1,213	7,619
400	2,458	1,030	1900	1,809	3,599	6500	1,169	7,957
500	2,383	1,248	2000	1,784	3,736	7000	1,128	8,271
600	2,317	1,456	2200	1,736	4,000	7500	1,091	8,568
700	2,258	1,655	2400	1,693	4,256	8000	1,055	8,839
800	2,204	1,846	2600	1,653	4,500	8500	1,023	9,101
900	2,153	2,029	2800	1,615	4,734	9000	0,991	9,337
1000	2,108	2,207	3000	1,580	4,962	9500	0,961	9,555
1100	2,066	2,379	3200	1,546	5,181	10000	0,933	9,766

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]

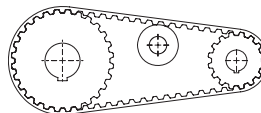
t = pitch

### Flexibility

#### Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley  $z_{\min} = 15$
- Idler running on belt teeth  $d_{\min} = 30$  mm



Drive with reverse bending and double sided belt

- Timing pulley  $z_{\min} = 25$
- Idler running on belt back  $d_{\min} = 60$  mm

