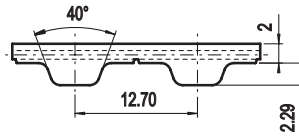
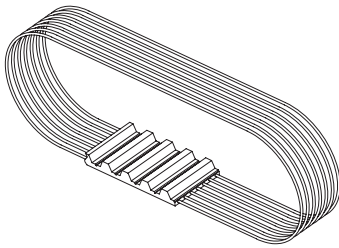


## H ELA-flex SD™



### Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to DIN/ISO 5296.
  - Imperial pitch 1/2" = 12,7 mm
  - Allow to use small diameter pulley
  - Mainly used in applications where inch pitch is an advantage
  - Transmissible power up to 30 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]	0,056	0,084	0,113	0,169	0,225	0,338	0,450	0,675

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	9,156	0,000	1200	5,318	6,682	3400	3,826	13,622
20	8,883	0,186	1300	5,207	7,088	3600	3,741	14,104
40	8,647	0,362	1400	5,104	7,482	3800	3,663	14,573
60	8,443	0,530	1440	5,063	7,635	4000	3,588	15,027
80	8,263	0,692	1500	5,007	7,864	4500	3,412	16,077
100	8,107	0,849	1600	4,916	8,236	5000	3,256	17,049
200	7,523	1,576	1700	4,829	8,596	5500	3,115	17,939
300	7,089	2,227	1800	4,748	8,949	6000	2,983	18,744
400	6,753	2,829	1900	4,671	9,293	6500	2,864	19,494
500	6,478	3,392	2000	4,596	9,626	7000	2,753	20,179
600	6,246	3,924	2200	4,461	10,277	7500	2,650	20,811
700	6,046	4,431	2400	4,334	10,891	8000	2,553	21,385
800	5,870	4,917	2600	4,218	11,485	8500	2,462	21,912
900	5,712	5,383	2800	4,111	12,054	9000	2,375	22,382
1000	5,569	5,831	3000	4,010	12,597	9500	2,294	22,821
1100	5,437	6,263	3200	3,915	13,119	10000	2,215	23,197

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,max</sub> = 12

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

b = belt width in cm

A = centre distance [mm]

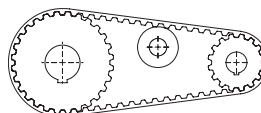
t = pitch

### Flexibility

#### Minimum number of teeth and minimum diameter

Drive without reverse bending

- Timing pulley  $z_{\min} = 14$
- 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  $d_{\min} = 80 \text{ mm}$

